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Every child is a work of art.
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January 25, 2013

New York State Education Department
Contracts Administration Unit, 505 W EB
89 Washington Ave
Albany, New York 12234

Attn: Nell Brady, RFP # TA-11

Dear Ms. Brady:

Please find enclosed one original and one copy of the Rochester City School District's School Improvement Grant (SIG) RFP# TA-11 (2013) Application and FS10 for the following school:

- James Monroe High School - Transformation Model

The application has also been submitted electronically through the Review Room portal. Thank you very much for your continued support of the students of Rochester. If you have any questions or comments, please feel to call me at the above contact information or Susan Hasenauer-Curtis at 585-262-8482.

Sincerely,

Karen Jacobs

Enclosure

xc: A. Murphy
S. Hasenauer-Curtis
A. Ramirez
J. Schuster

Attachment A
Consultation and Collaboration Documentation Form

The U.S. Department of Education School Improvement Grant guidelines, under Section 1003 (g) require LEAs to consult and/or collaborate with various groups in the development of this SIG application. This form must be completed and submitted to NYSED as a part of this complete SIG application in order to document that appropriate consultation/collaboration has occurred or was attempted with constituency groups as follows:

1. Representatives of constituency groups who sign the form under their name/title are affirming that appropriate consultation has occurred. (The signature does not indicate agreement).
2. For representatives or constituency groups who have consulted with the LEA but whose signatures are unobtainable, supporting documentation providing evidence of consultation and collaboration efforts (e.g., meeting agendas, minutes and attendance rosters, etc.) must be maintained by the LEA and a summary of such documentation must be completed and submitted to NYSED on this form.

Principals Union President / Lead	Date	Summary Documentation if Signature is Unobtainable If the signature of the constituent identified above is unobtainable, provide a summary and description of the supporting documentation that provides evidence of consultation and collaboration on the Priority School identified in this SIG application.
Signature (in blue ink) <i>Deborah Rider</i>		
Type or print name Deborah Rider		
Teachers Union President / Lead	Date	Summary Documentation if Signature is Unobtainable If the signature of the constituent identified above is unobtainable, provide a summary and description of the supporting documentation that provides evidence of consultation and collaboration on the Priority School identified in this SIG application.
Signature (in blue ink) <i>Final meeting on 1/28/13 @ 2:10</i>		
Type or print name Adam Urbanski		
Parent Group President / Lead	Date	Summary Documentation if Signature is Unobtainable If the signature of the constituent identified above is unobtainable, provide a summary and description of the supporting documentation that provides evidence of consultation and collaboration on the Priority School identified in this SIG application.
Signature (in blue ink) <i>M. Malone</i>		
Type or print name Candice Lucas	1-25-13	

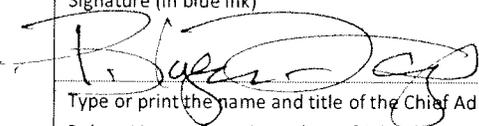
New York State Education Department
 Application Cover Sheet
School Improvement Grant (SIG) 1003[g]

DO NOT WRITE IN THIS SPACE	
Log Number	Date Received

District (LEA)			LEA Beds Code:
Rochester City School District			261600010000
Lead Contact (First Name, Last Name)			
Susan Hasenauer-Curtis			
Title	Telephone	Fax Number	E-mail Address
Executive Director of School Innovation	(585) 262-8482	(585) 263-3292	susanm.hasenauer-curtis@rcsdk12.org
Legal School Name for the Priority School Identified in this Application			School Beds Code
James Monroe High School			261600010066
Grade Levels Served by the Priority School Identified in this Application			School NCES #
7-12			362475003371
Total Number of Students Served by the Priority School Identified in this Application			School Address (Street, City, Zip Code)
1,109			164 Alexander Street Rochester, NY 14607
School Model Proposed to be Implemented in the Priority School Identified in this Application			
Turnaround <input type="checkbox"/>	Restart <input type="checkbox"/>	Transformation <input checked="" type="checkbox"/>	Closure <input type="checkbox"/>

Certification and Approval

I hereby certify that I am the applicant's Chief Administrative Officer, and that the information contained in this application is, to the best of my knowledge, complete and accurate. I further certify, to the best of my knowledge, that any ensuing program and activity will be conducted in accordance with all applicable application guidelines and instructions, and that the requested budget amounts are necessary for the implementation of this project. I understand that this application constitutes an offer and, if accepted by the NYSED or renegotiated to acceptance, will form a binding agreement. I also agree that immediate written notice will be provided to NYSED if at any time I learn that this certification was erroneous when submitted, or has become erroneous by reason of changed circumstances.

CHIEF ADMINISTRATIVE OFFICER	
Signature (in blue ink)	Date
	11/25/13
Type or print the name and title of the Chief Administrative Officer	RECEIVED
Bolgen Vargas, Superintendent of Schools	postmarked JAN 25 2013
DO NOT WRITE IN THIS SPACE	

CONTRACT ADMINISTRATION
 ORIGINAL

SUBMISSION CHECKLIST - Turnaround, Restart, and Transformation Models

Documents For Submission	Checked – applicant	Checked – SED
Application Cover Sheet <i>(with original signatures in <u>blue ink</u>)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proposal Narrative <i>(Including District-level Plan, School-level Plan)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment A Consultation and Collaboration Form	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment B School-level Baseline Data and Target Setting Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment C Evidence of Partner Effectiveness Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Attachment D Budget Summary Chart	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Two FS-10 Forms: one for the Pre-implementation Period and one for the Year One Implementation Period. (FS-10 available here: http://www.oms.nysed.gov/cafe/forms/)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Budget Narrative	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Memorandum of Understanding <i>(only if proposing a Restart model)</i>	<input type="checkbox"/> N/A	<input type="checkbox"/>
Assurances for Federal and Discretionary Program Funds	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SED Comments:

Has the applicant submitted all of the documents listed above? Yes No

Reviewer: _____ Date: _____

PROPOSAL NARRATIVE

1. DISTRICT-LEVEL PLAN - TRANSFORMATION MODEL

1.A DISTRICT OVERVIEW

1.A.i Theories of Action Guiding District Strategies To Support Lowest Achieving Schools

The Rochester City School District (RCSD) is identified as a Focus School District, with 86% of its 63 schools in accountability status, including 24 Priority Schools and 30 Focus Schools. RCSD is committed to the implementation of New York State's Regents Reform Agenda as a means to bring about school improvement at all RCSD schools to help all students prepare for post-secondary success. The District is in the process of aligning all its resources with the three elements of the Regents Reform Agenda. By centering instruction on the Common Core, implementing the Annual Professional Performance Review (APPR) as part of a data-driven culture, and strategically linking data to professional development, a true culture change will occur, and RCSD will succeed in its mission to prepare all students for success in a global economy.

In order to reach its District-wide goals of preparing every student for college and careers, RCSD is:

- Employing a strong core instructional program that will provide the framework for highly-effective instruction and equal access to academic opportunities for all students to occur through core program implementation, intervention courses and strategies (including the use of time), and acceleration prospects for all students;
- Implementing a strong ESOL/Bilingual program that will articulate rigorous grade level expectations in the areas of speaking, listening, reading, and writing;
- Building the capacity of teachers to deliver high-quality, highly effective instruction that is based on rigorous standards and curriculum and focused on the differing needs of students,
- Increasing the instructional expertise and effective coaching strategies of all Central Office and school leaders, and
- Holding everyone accountable for specific student and school outcomes by using the *Diagnostic Tool for School and District Effectiveness* at a higher frequency than the state for assessment

The guiding principles for RCSD's improvements in curriculum and instruction are grounded in the belief that college persistence dramatically increases life outcomes for all students. A coherent reform strategy will connect everything to improving teaching and learning. RCSD will be deliberate in instruction, defining the curriculum, standards of performance, and accountability standards for all students. Accountability systems will connect student outcomes with adult outcomes, and Central Office staff has been reorganized to flexible and agile to support changing school needs, with time and support being given to teachers and administrators, as well as students.

1.A.ii District Approach to Supporting School Turnaround

The District's Comprehensive Plan guides its work to improve student achievement and prepare students to be successful in the global economy. The plan outlines goals and strategies for improving schools and increasing student achievement and includes measurable targets for graduation rate, academic performance, and school tone. The plan was developed from the belief that every child can succeed. It is aligned with NYS's Regents Reform Agenda and is based on three core values:

- Achievement - Student achievement will improve with a total focus on teaching and learning with an emphasis on results and rigor and "vigor" of instruction.
- Equity - Resources will be distributed equitably based on the needs of schools and students with the Core Instructional Program being the foundation of resource allocation.
- Accountability - Data will be used to ensure that we hold adults accountable for the success of all students and extensive monitoring will occur.

To achieve the goals of the Strategic Plan, RCSD aligns its resources to ensure they are used where they are needed most, that is, in the classroom. Ongoing monitoring of plan implementation provides regular opportunities for the District to learn, reflect, and take quick and informed actions to make progress. RCSD uses data to recognize, intervene, and adjust in support of student achievement and strives to model the culture of learning expected in schools and classrooms throughout the District.

RCSD's Core Instructional Program anchors academic standards in the real world and requires all students to take a quality college and workplace-ready curriculum. Academic high school standards are aligned with the knowledge required for college and workplace success, and back-mapped to create a coherent, focused, grade-by-grade progression from pre-kindergarten through college. Specific course-taking requirements for high school graduation are defined in English, Mathematics, Social Studies, and Science, with core content for each course specified. Intervention, acceleration and the use of time will support students of all subgroups. The required curricular content can be individualized while keeping NYS standards and tests constant. All disciplines reinforce college and work place readiness expectations. A battery of assessments, including large-scale tests, performance-based tasks, and teacher-developed assessments measure what matters. Quality interim assessments evaluate mastery and are used to adjust instruction beginning in pre-kindergarten. High school graduation performance exams ensure that students meet standards before earning a high school diploma.

RCSD has rewritten the District Comprehensive Improvement Plan (DCIP), incorporating the vision of the Regents Reform Agenda. The DCIP is also aligned with the State's new *Diagnostic Tool for School and District Effectiveness* and RCSD's Core Instructional Program. Full implementation of the Plan will occur in 2013-2014. Rochester's DCIP is a living document and will be updated continually to reflect the District's new improvement plans and alignment with NYSED recommendations and requirements (e.g., incorporation of growth measures). School Comprehensive Education Plans (CEPs) will align with the objectives of the DCIP and all elements of the Core Instructional Program.

Three additional supports for Monroe High School have also recently been put in place:

1. The School Chief assigned to Monroe HS has been changed. The school will now report to Ms. Brenda Pacheco, who has been a successful principal for the past 19 years in the District's highest performing high school (School of the Arts). Ms. Pacheco has served as a mentor to new principals, and this year she has been an executive coach to Principals who are in Priority status.
2. RCSD's Deputy Superintendent of Administration will take an active role in supporting the Principal of this school by working with the Monroe principal and Rochester Teacher's Association president to ensure union issues are minimized so implementation of the transformational model can be capitalized.
3. The Executive Director of School Innovation will monitor turnaround efforts closely by collaborating and examining school wide data with the School Chief on a bi-weekly basis to ensure efforts are consistent and moving forward according to designated plan.

1.A.iii Evidence of District Readiness for System-Wide Improvement of Priority Schools

Beginning in Winter 2013, all RCSD leadership, both in central administrative offices and schools, are participating in targeted leadership academies delivered by the SUPES Academy. These academies will develop a foundation of strong leadership for improvement in the instructional core within a context unique to Rochester. District chiefs, directors, principals, and assistant principals are gaining a better understanding of the technical requirements for implementation of the Common Core State Standards through intensive workshops with associated executive coaching. Principals and assistant principals at Priority Schools are receiving additional support. All leaders are learning how to manage organizational elements coherently to support the District's instructional goals and use data to inform decisions. All workshop activities support the goals and objectives of the six tenets of the State's new *Diagnostic Tool for School and District Effectiveness's*: 1) district leadership and capacity, 2) school leadership practices and decisions, 3) curriculum development and support, 4) teacher practices and decisions, 5) student social and emotional developmental health, and 6) family and community engagement.

RCSD has demonstrated its commitment to building internal District capacity to improve student performance through implementation of the Regents Reform Agenda. One hundred and fifty (150) District and school leaders attended NYSED's Network Team Institutes in Albany last August and October. Follow-up support has been provided by senior research fellows from the Regents Research Fund in regard to the *Diagnostic Tool for School and District Effectiveness*.

1.B OPERATIONAL AUTONOMIES

1.B.i. Operational Autonomies for Monroe High School

Monroe HS has the autonomy to:

- Staff positions outside of the Core Instructional Program that are unique to this model,
- Determine how time is used after school,
- Select programs, and
- Select educational partners.

All RCSD schools will be staffed centrally to the District's Core Instructional Program and the standardized schedule that supports the varying needs of all students. The Monroe principal will have the autonomy to make staffing decisions that support implementation of positions beyond those required for the Core Instructional Program and are unique to the school's SIG transformation plan. Additionally, the Monroe principal will work with the Rochester Teachers Association (RTA) to be exempt from the voluntary teacher transfer process using the School Living Contract provision. The purpose of this exemption is to enhance Monroe HS's ability to recruit new staff, provide stability, and support school change.

A standardized schedule has been created within the Core Instructional Program to support students, but significant flexibility is allowed in its implementation to individualize programs at each school. The schedule was developed to provide better support for students who need remediation and acceleration and address the District's highly mobile student population, as well as sub-groups who are in accountability status (e.g., ELL and SWD). Monroe HS will have full autonomy to identify how the school day will be expanded to meet the Commissioner's requirement that Priority Schools add 200 or more additional student contact hours per year. They will seek a partnership with Generation Schools to fully implement the ideal model and desired hours above any beyond the requirement. Monroe HS will be able to determine whether the additional hours are added before or after school, on Saturdays, during school recess periods, or through intensive summer programming. How the additional time is used (instructional, socio-emotional, or recreational support, etc.) is also an autonomous decision that will be linked directly to Monroe HS's transformation plan.

Autonomy will also be provided to Monroe HS in the selection of educational programs. Programs will be identified that address the unique needs of the school within the framework of the Core Instructional Program and will reflect the needs of a high ELL and SWD population as well as take into account the suggestions made by NYSED during the last JIT review.

Educational partners will be selected by schools after consideration of school needs and partner strengths. As with the other autonomous decisions, partner selection will be done to individualize Rochester's Core Instructional Program to student and school needs.

Because 86% of RCSD schools are in accountability status, these autonomies are not unique to Monroe HS, but support decision-making at schools District-wide.

To increase school autonomy even further, Monroe HS will work with RTA to have a School-Level Living Contract. The purpose of the Living Contract is to establish a joint committee to provide for discussions and decision-making on matters relating to improved union-management relations and system operations. The Contract will allow Monroe HS to enter into contractual agreements different than provisions in the central collective bargaining agreement.

1.B.ii/iii Evidence of School Autonomies and Support

Sections 24.5(a) and 50 from the Contractual Agreement between RCSD and RTA provide the supporting labor-management documentation for the exemption from the voluntary teacher transfer process and School-Level Living Contract Committee respectively. Please see attached documentation.

1.C DISTRICT ACCOUNTABILITY AND SUPPORT

1.C.i Senior Leadership Responsible for Coordination of District Turnaround

The Office of School Innovation (OSI) serves as the District's "turnaround office." OSI was created five years ago to oversee the work of improving schools and opening new, high quality schools. The school design principles of rigor, personalization, and partnerships guide the work of OSI. There are high expectations and standards for students, and intermediary partners provide expertise in effective practices. OSI utilizes the latest in educational research and methodologies to help develop innovative schools, programs, and policies that increase school performance and evaluates progress on work to date. The Executive Director of OSI is responsible for providing oversight and support to schools.

Three School Chiefs, who report directly to RCSD's Deputy Superintendent of Teaching and Learning, are key instructional managers in the District. Each School Chief supervises a cluster of 20 or more schools in one of the District's three school zones. The School Chiefs have wide latitude for independent judgment and decision-making and assist in the formation of educational policy and practice.

RCSD's Director of Expanded Learning will provide additional support to schools as they expand learning time to meet the Commissioner's requirement of 200 additional student contact hours per year. Technical assistance is being provided by Generation Schools.

RCSD's Department of Teaching and Learning is responsible for the academic and instructional needs of the District. The department includes managing directors of content areas as well as Intervention Services, Special Education, and English Language Learners. The Deputy Superintendent for Teaching and Learning designs and implements "best practice" instructional systems and works to ensure the alignment of curriculum, instruction, research, assessment, and supporting resources. The focus is to ensure the alignment of curriculum to the NYS Standards so that all students are prepared for high school graduation and post-secondary education.

The School Zone Chief ensures consistency of implementation of the Regents Reform Agenda and Race to the Top initiatives that include the Common Core, data-driven instruction, and Annual Professional Performance Review (APPR). The 12-member team works with Priority Schools to utilize tools and technology-supported curriculum resources to analyze data and then use that data to inform instructional practices and necessary professional development. An organizational chart for RCSD's management structure is attached.

1.C.ii Providing High Quality Accountability and Support to Monroe High School

The Executive Director of School Innovation will oversee the transformation of Monroe HS. She will work with the School Chief, Deputy Superintendent of Administrations, Monroe principal, Monroe Community College, and Generation Schools (SIG partners) to review progress toward performance targets. The Executive Director will assess data from summative and formative assessments, conducting quantitative and qualitative reviews to determine progress toward performance targets. In collaboration with School Chief, she will inform the principal of implementation status, who will work with his school-based planning team to make adjustments to the implementation plan if needed.

A change has been made to better serve the turnaround efforts for this transformation model, and an experienced principal from the District's highest performing high school is a new School Chief who has been assigned to support Monroe High School. The OSI Executive Director will work with the new School Chief to ensure full understanding of the requirements of the transformation model and SIG plan so that the principal is evaluated effectively on performance targets associated with SIG implementation. In addition, an Executive Coach has been provided to the Monroe principal because of the school's Priority status. He will assist in the monitoring and implementation of the SIG plan.

The Director of Expanded Learning will support Monroe HS build an expanded learning program that meets criteria set by RCSD, NYSED, and Generation Schools' innovative and practical school design.

RCSD's Network Team and curriculum directors will provide more frequent and intensive support to Monroe HS, and other Priority Schools.

1.C.iii Timeframe and Person Responsible for Turnaround Support at this Priority School

Table 1. District Transformation Support Plan

Interaction	Frequency	Person Responsible
Programmatic Review	Quarterly	OSI Executive Director; South Zone School Chief
Fiscal Review	Quarterly	OSI Executive Director; Senior Budget Analyst
School Visit	Bi-weekly	OSI Executive Director; South Zone School Chief

Interaction	Frequency	Person Responsible
Support Visits for Expanded Learning Implementation	Weekly during Pre-Implementation Period; Bi-weekly during Year 1 Implementation; As needed in Years 2 and 3	Director of Expanded Learning
Network Team Visit	Monthly	RCSD Network Team
Integrated Intervention Team (IIT) Visit	Spring 2013	NYS IIT
IIT Visit	End of Years 1, 2, and 3	RCSD IIT

1.D TEACHER AND LEADER PIPELINE

1.D.i Recruitment Goals and Strategies to Ensure Equal Access to High-Quality Educators

Successful recruitment efforts rely heavily on strategic efforts throughout the year, not only when vacancies occur. The need to promote flexibility in teaching staff reaches beyond recruitment of new teachers. The benefit to the educational system to have teachers with multiple certifications is even more evident. RCSD is faced each year with displacement or elimination of teachers and/or administrators who are critical to programs within schools due to statutory and contractual requirements. The District has an urgent need to develop both depth and breadth in programs so that changes in personnel will not negatively affect student learning.

Due to declining enrollment, reductions in force, and reduction in Title IIA allocations for recruitment, the Division of Human Capital Initiatives (HCI) has established two overarching goals to ensure that students in SIG schools have equal access to high-quality leaders and teachers:

- 1) Increase efforts to recruit and re-train high-quality leader and teacher minority candidates to reflect the student population, and
- 2) Integrate a talent management module into the current Human Capital System of record.

RCSD will continue to provide the Master’s Degree Reimbursement Program as required for New York State professional teaching certification. RCSD also has a predetermined agreement to use funds to pay for a second Master’s Degree/Certification for those seeking additional certification in shortage areas. Efforts will be continuously made to publicize these benefits to fill high need areas with experienced qualified teachers. Reimbursement for tuition is the incentive to encourage teachers to obtain multiple certifications, especially in high needs areas.

Oracle’s eRecruit talent management module will support active management of the talent lifecycle, including planning, recruiting, candidate screening, hiring, and new employee on-boarding. Most data will be populated from information gathered during the recruitment process. eRecruit will be fully integrated with the core Human Capital system of record and allow HCI to track recruitment efforts. Data will be available to track recruitment trends such as

which institutions of higher education provide the most highly qualified candidates and if teacher and administrative retention correlates with degree preparation sites. Information will be used to query teachers' certification type and eligibility to identify teachers for high needs areas.

RCSD's Career in Teaching (CIT) and Career in Administration and Supervision (CIAS) programs are established cornerstones of RCSD's strategic approach to ensure each student is taught by a high-quality educator. CIT is a collaborative effort between the District and the Rochester Teachers Association. CIT's mentor/internship program provides full-year, one-on-one, intensive professional support aligned with the *Framework for Teaching* (2011 Revised Edition), the same criteria that are used in RCSD's teacher evaluation. New administrators are given the same opportunity for individual mentoring through CIAS. CIAS is a collaboration with the Association for Supervisors and Administrators which balances preparation in the areas of management and instructional leadership. Both panels provide one-on-one mentoring and engage educators in learning-focused conversations.

RCSD's recent NYSED's *Strengthening Teacher and Leader Effectiveness* (STLE) Grant will provide support for recruitment and teacher credentialing in shortage areas, development of a comprehensive coaching program, and enhancements to professional learning opportunities. Extra compensation will be paid for these positions. Salary guidelines also allow the District to offer additional compensation for newly hired teachers in shortage areas, as the Rochester Teachers Association contract includes a clause for schools classified as low performing. For low performing schools, the District may propose that openings be set aside for either Lead Teacher Mentors or national board certified teachers.

1.D.ii District Policies That Will Support the Required Changes

As discussed previously, the District has moved towards centralizing the master schedule process. This change will allow for the creation of consistent and compatible schedules throughout the District, which will in turn reduce the number of part-time and itinerant positions and increase the attractiveness of employment by the District. Centralized Master Scheduling will also allow the District to identify vacancies earlier in the staffing process to facilitate a more extensive search for qualified applicants. The Department of Human Capital Initiatives will be placing advertisements to recruit for all teacher tenure areas in or about late February 2013 and annually thereafter. Previously, the District did not recruit candidates until true vacancies were identified, which caused substantial delay in the hiring process and loss of qualified candidates. The District has also recently expanded its geographic area to nationally recruit highly qualified teachers and administrators. All vacant positions will be posted and will undergo a full recruitment process prior to selection of an applicant. Previously, the District allowed building and department supervisors to select candidates without undergoing a search or interviewing candidates. While supervisors selected individuals with whom they had work experience, this method of candidate selection could inadvertently preclude identifying high quality candidates.

1.D.iii District-Wide Training To Build Leadership Capacity for Leading Change

History and Past Funding. In efforts to promote leadership capacity for school leaders; RCSD has taken part in two comprehensive approaches: the Rochester Leadership Academy

(RLA) and Dream Schools – Transformation Leadership Cohort. RLA offered professional learning opportunities to sitting administrators. The RLA was coordinated jointly between RCSD and St. John Fisher College. The curriculum addressed the changing context, reforms, and role of the principal by focusing on the requisite skills, knowledge, and dispositions required for effective leadership and high performance management. The professional learning opportunities were based on:

- The unique and evolving context of school leadership in RCSD;
- Problem-based and applied learning methodologies and on the job experiences;
- Research, emerging theories, best practices, and field-based experiences;
- Participants' individual learning style and development needs;
- Current and emerging needs and interests of the participants, their schools and communities, and the District;
- A strength-based approach designed to build on existing knowledge and support continuous professional learning; and
- A collaborative, comprehensive and sustained approach to support continuous improvement in school performance.

RLA was funded by a Title I School Improvement Grant from April 2011 through June 2012.

Dream Schools - Transformation Leadership Cohort provided intensive supports to six schools. Each had a five-member leadership team with one member being a Central Office employee serving as a liaison, another an Executive Coach assigned for a two year term and the other three school leaders. Topics discussed included the change process, data-driven decision making, creating a new culture, use of technology, and instructional leadership. Other topics were customized based on individual school need. Through an anticipated three year cycle, 18 schools would have been impacted, 54 school leaders and 18 district office personnel. Records indicate the program was discontinued after Year Two. It was funded by local funds from July 2008 through June 2011.

Current. RCSD has embarked on a partnership with the SUPES Academy to leverage their experience in implementing capacity building plans and facilitating job-embedded professional development at the District- and school-level to provide RCSD with a solution that will reduce the burden of strategic implementation of the Regents Reform Agenda by only a handful of key RCSD administrators. The SUPES Academy is RCSD's partner organization to help operationalize the Regent Reform Agenda and will support four strands:

- District Capacity,
- Implementation of Common Core State Standards in English-Language Arts (ELA),
- Implementation of CCSS in Mathematics, and
- Data-Driven Instruction/Inquiry.

This approach will facilitate capacity-building across the District, from school-based leadership teams all the way up to the Superintendent's cabinet. The SUPES Academy will lead a customized, case-based, and experiential learning program in combination with consistent, intersession support from highly qualified coaches, identified strategically for different levels of the organization, provides the greatest opportunity for success in realizing increases in student

achievement. A shared learning environment will be created whereby additional RCSD leaders can gain a better understanding of the Reform Agenda and help guide its implementation.

1.D.iv District-Wide Training To Build the Capacity for Teachers To Be Effective

History and Past Funding. LEAPP (Leadership Empowerment Aspiring Principals Program) was a 12-month leadership development program for teachers aspiring to be school leaders who are committed to serving in the District for at least five years. The format was a workshop professional development model comprised of monthly weekend sessions and a monthly three-hour evening session that helps aspiring principals examine personal ideology in relation to RCSD's Seven Essential Standards, RCSD framework and Success Factors; and, a summer residency as a school principal under the guidance of an experienced principal (coach). LEAPP was supported through a Title I School Improvement Grant from April 2011 through 6/30/2012.

Current. RCSD is embarking on training all certified ELA and Math teachers in grades 7-12 on *Ramp Up Literacy* and *onRamp to Algebra*. This training is in response to the need for an intensive approach to improving classroom practice through proven instructional routines and support materials designed to increase literacy and math scores as expressed as a District priority. *onRamp to Algebra* is based on the instructional design of America's Choice, *Ramp-Up to Algebra* program. *onRamp to Algebra*, like *Ramp-Up to Algebra*, is designed to accelerate the learning of such students. These programs are designed to accelerate the learning of students who enter high school two to three years behind their peers. *Ramp-Up to Literacy* and *onRamp to Algebra*:

- Include everything RCSD teachers need to succeed: lesson plans, classroom activities, homework assignments, powerful assessment tools, and more
- Provide novice and veteran RCSD teachers with high-quality professional development, support, and guidance with classroom teaching.

ELL researchers participated fully in the course design, making *Ramp-Up to Literacy* and *onRamp to Algebra* highly responsive to ELLs' needs. The flexible curriculum and instructional materials can be easily adapted for students with special needs as well. At the core of *Ramp-Up to Literacy* and *onRamp to Algebra* is strong professional development for teachers combined with a rich array of instructional materials for teachers and students.

The current approach to building capacity among teachers has taken a different approach. RCSD has streamlined all instructional professional development to support District Capacity, Implementation of Common Core State Standards (CCSS) in English-Language Arts (ELA), Implementation of CCSS in Mathematics, and Data-Driven Instruction (DDI)/Inquiry. This approach aligns to the current practices to build capacity of District Leaders. Further, a comprehensive approach to developing teacher instructional leaders through Coaches Training ensued in September 2012.

1.D.v District-Offered Training Events

A chart of District-offered training events is included.

1.E. EXTERNAL PARTNER RECRUITMENT, SCREENING, AND MATCHING

1.E.i Mechanisms for Partner Selection and Evaluation

RCSD reviews every partnership to ensure that it 1) has a track record of demonstrated success in increasing student achievement (as measured by student data and other leading indicators), 2) is connected to the desired innovation, and 3) is aligned with RCSD's Core Instructional Program and the Regents Reform Agenda. Partners must meet programmatic needs, possess the needed organizational capacity, and report outcomes that are correlated with research.

It is the goal of the Purchasing Department to obtain the best value for goods and services for students, teachers, administration and staff. The Purchasing Department strives to secure goods and/or services of the right quality, in the right quantity, at the right price, from the right source, with delivery at the right time. In doing so, the Department contributes to the success of the educational process. RCSD's Purchasing and Legal Departments have established rigorous Request for Information, Request for Proposal, and contract processes to ensure standardization, compliance, and best value.

1.E.ii Processes to Ensure Access to Effective and Timely Partner Support

RCSD's Request for Information and Request for Proposal processes are used to recruit successful turnaround partners and support resources. Once partners are identified, the Legal Department has implemented a procedure to initiate the contract process in anticipation of a hopeful grant award. This process has been communicated to all staff members responsible for grant management, and training sessions have been held. RCSD's Executive Director of School Innovation and the school principal will work together to ensure that the partner selection for SIG grants aligns with school programming and initiate the Memorandum of Understanding process in order to have access to partner support by September 1, 2013.

The earlier application and notification dates of this SIG competition will support RCSD's timely completion of the procurement process.

1.E.iii Roles of the District and Principal in Partner Selection and Evaluation

The District and school principal have a unique opportunity for selecting partnerships. Prior to picking a partner, a comprehensive analysis is done to determine both the District and specific school needs. Currently, the District is fully committed to implementing NYSED's Regents Reform Agenda. This has helped the district streamline its priorities and look at effective partnerships that can assist with the execution of this initiative. At the school level, a Diagnostic Tool review or previous JIT, ESCA or SQR will identify the needs of a particular building and highlight statements of practice that need targeted interventions. After consideration of the review and/or needed interventions, characteristics of collaborative partnerships emerge.

RCSD will seek out collaborative partnerships through the “Request for Proposal” process that have a strong structure for organizing, planning, and implementing shared ideas. A key part of any partnership focuses strongly on the mechanism for designing comprehensive strategies.

The process of building a collaborative partnership is multidimensional and involves:

- Recognizing opportunities for change;
- Mobilizing people and resources to create changes;
- Developing a vision of long-term change;
- Seeking support and involvement from diverse and non-traditional partners;
- Building trust among collaborators; and
- Developing learning opportunities for partners.

Although this effort takes time and requires careful attention, it is essential to creating strong, viable partnerships that produce lasting change. The District is committed through a detailed contract process to confirm the partnerships chosen will be ready at the time of the grant release.

Once selected, a great deal of effort is exhausted in evaluating the partner. The Grant Monitor (the Executive Director of School Innovation for Monroe HS’s proposed SIG grant) will work directly with the partner to hold each partner accountable for following through with the Memorandum of Understanding and ensuring deliverables were completed in a timely manner. In addition, the selected partners and the District will meet quarterly to look at the performance targets set and monitor and adjust based on the outcomes.

To guarantee success of Monroe’s transformational plan, the District will hire an Outside Educational Expert (OEE) who will provide the needed technical assistance and assist with building the school’s capacity for dramatic change. The OEE will assist in the evaluation process of the school and the partnerships, ensuring that the partners are effective and that the school is making progress based on the *Diagnostic Tool for School and District Effectiveness*.

1.F. ENROLLMENT AND RETENTION POLICES, PRACTICES, AND STRATEGIES

1.F.i Comparison of Enrollment of Students In Need

Monroe HS serves 1,109 students and is one of six RCSD secondary schools that serve students in grades 7-12. Because Monroe HS offers a bilingual program for students arriving from Spanish-speaking countries, the only such program supporting grades 7-12, the percentage of ELLs at Monroe is greater than the RCSD average. Nearly one-third (29%) of Monroe students are ELLs, compared to 11% District-wide. Classes are taught in a transitional bilingual program in Spanish and English with the goal of achieving English fluency and maintaining Spanish literacy. These programs to help Spanish-speaking students meet academic success will be strengthened through activities in Monroe’s transformation plan and be key in making the desired change.

Twenty-two percent (22%) of Monroe’s students are Students With Disabilities (SWD); 17% of all RCSD students are classified as SWD District-wide.

Student achievement data for Monroe HS reported in the 2010-2011 NYS Report Cards are compared to District-wide data in Table 2.

Table 2. Student Achievement (2010-2011 NYS Report Card)

	All Students		SWD		ELL	
	Monroe HS	RCSD	Monroe HS	RCSD	Monroe HS	RCSD
Graduation Rate	36%	51%	16%	29%	23%	35%
Grade 8 ELA	8%	11%	0%	17%	2%	0%
Grade 8 Math	32%	20%	18%	6%	14%	10%
Secondary-Level ELA	44%	55%	10%	19%	19%	26%
Secondary-Level Math	50%	55%	12%	18%	30%	41%

*Reported as percentage of students achieving proficiency (i.e., scoring a 3 or 4)

1.F.ii District Policies to Ensure Students In Need have Access to Quality Programs

RCSD offers students an innovative portfolio of high-quality school options and continually works to improve the quality of all schools. RCSD students, inclusive of ELL, SWD, and students performing below grade level, are invited to participate in the District’s schools of choice selection application process for Kindergarten, Grade 7, and Grade 9. All schools are open for selection. Students in all other grades can submit a school transfer application if desired.

Students with Disabilities, ESL and Bilingual students are placed in their first choice schools first in the lottery as long as programs are available.

In late December, the District mails application booklets to families of students in sixth and eighth grade. This booklet describes each secondary school, including the school’s unique features. A Secondary School Expo is hosted by the District in early January, and school staff are present to provide families with general information and answer questions. Families must submit an application form that identifies the student’s top three school choices by January 31st. Student placement is completed using a computerized lottery system. Students are placed in their first choice school whenever possible.

In regard to placement, a student with a disability will be provided with appropriate special education in accordance with Individual Educational Plan (IEP). Students with disabilities will be provided special education in the least restrictive environment, as defined in Part 200 of the NYSED regulations. To enable students with disabilities to be educated with nondisabled students to the maximum extent appropriate, specially designed instruction and supplementary services may be provided in the regular class, including, as appropriate, providing related services, resource room programs and special class programs within the general education classroom. A student with a disability shall be provided the special education specified on the student’s IEP to be necessary to meet the student's unique needs. Students with disabilities will have equal access to all aspects of the RCSD curriculum. The services, supports,

and modifications must be designed, implemented, and progress monitored to ensure maximum educational benefit.

In regard to the placement of ELL students, new provisions have been put into place for 2013-2014 to address the buildings that are disproportionate or highly mobile populations. First, a standardized schedule with built in supports for all students is standard. For any SPED or ELL student not at a level of proficiency, the schedule allows for flexible periods that will permit double blocks of ELA and Math if students require ramp up protocols.

The major goal of the NYS Bilingual Common Core Initiative is to provide teachers with tools to enact this vision of bilingualism in the Common Core classroom. The new Language Arts Progressions (formerly known as English as a Second Language Learning Standards) and Home Language Arts Progressions (formerly known as Native Language Arts Learning Standards) that have been developed as part of this SIG initiative provide points of entry for students of all language proficiency and literacy levels to access grade level Language Arts content as described by the new NYS Common Core Learning Standards. These tools are designed primarily to meet the needs of English Language Learners; however, to support a broader goal of bilingualism for all students, these resources can also be used as a guide for planning instruction for students who are learning a foreign language or who are developing their home languages. RCSD has built these provisions into the core instructional program which will be a great support for the transformation of Monroe.

A similar process is used to place kindergarten students. Immediate placement is made for kindergarteners who have older siblings in a school, live within one-half mile of their first choice school, wish to attend their "home school."

1.F.iii Strategies to Ensure Priority Schools Do Not Receive More Students In Need

As described above, RCSD allows student selection for placement in District schools. All schools have a percentage of programming reserved for ELL and SWD students. These programs and the number of seats in each one are identified by the Department of Teaching and Learning to ensure both student and school support as designated by the master plan of equalizing services and school opportunities. The Departments of Specialized Services and English Language Learners projects programs for school and student level support offering a variety of options for schools and students.

Monroe is disproportionate due to the lack of programming throughout the district and the need for teachers who are dually skilled with bilingual certification. The STLE grant focuses on recruitment in this shortage area and the development of an in-District bilingual extension program. As the District acquires more highly qualified teachers in this area, programs will expand. In the meantime District resources are centralized and RCSD is putting protocols in place to address the sub-groups that remain in accountability status. In addition, Monroe has always been a feeder pattern for elementary schools that have bilingual programs, and services needed for ELL students are linked to Monroe.

1.G. DISTRICT-LEVEL LABOR AND MANAGEMENT CONSULTATION AND COLLABORATION

1.G.i Steps to Develop the District- and School-Level Implementation Plans

The process of informing the Monroe staff of their status began on March 14, 2012. In trying to be proactive versus reactive, the Superintendent went to the school to share notification of Monroe's preliminary "Persistently Lowest Achieving" (PLA) status. The Superintendent announced that once officially designated, the school would be seeking SIG dollars under one of the four models. A decision was made between the Rochester Teachers Association and the District to move forward with the Transformation Model. An announcement was made that as of July 1st, 2012, the current Principal Coretta Bridges would be replaced by Armando Ramirez. On March 26, 2012, the Executive Director of School Innovation briefed Monroe's School Based Planning Team on the elements found within the transformational model and provided templates to the school staff requesting feedback in four areas: 1) Parent and Community Engagement, 2) Infusion of the Arts, 3) Community Service Wrap-Around Model, and 4) Bilingual Programming.

The newly designated Principal was pulled out of his current assignment and was brought to Central Office to work collaboratively with his School Chief, Deputy Superintendent of Teaching and Learning, and the Executive Director of School Innovation for a three-month planning period. During this time he was instrumental in creating a timeline of activities that would occur for smooth implementation following his appointment, solidify board resolution for summer employment of his staff for intensive review of all records, hire needed teachers and administrative team, and understand his operating budget. Because Monroe HS will be undergoing a facilities modernization project, multiple meetings were held with architects to ensure that when moving forward the building would be designed for the rigorous academic programming to occur.

Immediately upon the school year opening, the Executive Director of School Innovation addressed the Monroe HS School-Based Planning Team again, discussing how the work they have done around brainstorming the needed characteristics of the transformation model should be seen in the school Comprehensive Education Plan and linked with the *Diagnostic Tool for School and District Effectiveness*.

The new Monroe Principal has held the required amount of School-Based Planning Team meetings and has worked collaboratively with his staff to keep them apprised of the application for SIG funding being released. Beginning in December, a focus on CTE classes and preparing students for career and college readiness became an essential component of the Monroe HS SIG application. Meetings occurred with Monroe Community College and Generation Schools to see if collaborative partnerships could be established.

In January, the school's RTA union leaders, the principal, leadership representatives, several teachers, the Deputy Superintendent for Teaching and Learning, the Superintendent, the Executive Director of School Innovation, and representatives from Monroe Community College, Wegmans Food Markets, and IBERO visited P-TECH, a NYS high school that offers dual enrollment and the opportunity for students to earn an Associate's Degree within a Grades 9 – 14

model. This visit inspired a strong need for access to career and college readiness specifically in the areas of Math, Science, and Language at Monroe. This visit was followed by a debriefing with Monroe's leadership team in regard to how both partners, MCC and Generation Schools can facilitate this without losing sight of all the preplanning that was completed around the four areas mentioned above and through an extended day design all elements can be included. Additional correspondence will be done with the newly appointed School Chief and Deputy with both staff and all unions.

1.G.ii Consultation and Collaboration Form

The signed Consultation and Collaboration Form is included with this application.

II. SCHOOL-LEVEL PLAN - TRANSFORMATION MODEL

2.A. SCHOOL OVERVIEW

2.A.i Vision, Mission, and Goals of SIG Plan

As RCSD embarks on dramatically changing the landscape of James Monroe High School, a straightforward vision guides its work:

Providing high-quality, highly effective instruction and equal access to academic opportunities is the most important service Monroe High School can provide to all of its students so that when they graduate, Monroe students will be college- and career-ready.

Monroe HS's mission is to ensure that all students have comparable academic programming options. These options will drive many of the scheduling and programmatic changes to be implemented in the 2013-14 school year as part of the SIG plan. As RCSD continues to build an infrastructure to better supports all schools, Monroe HS will realize the promise of offering engaging instructional opportunities via rigorous curriculum, content, and consistent academic programming for every child, in every classroom, every day, all built around Rochester's Core Instructional Program.

The three goals for the transformation of Monroe HS are:

GOAL 1 - Core Instructional Programming

To maximize support for Monroe students (e.g., intervention courses, acceleration opportunities) by building on Rochester's Core Instructional Program.

(Please see Rochester Core Instructional Program in DRAFT attached in "Other Documents.")

GOAL 2 -Expanded Learning Time

To use time differently and expand the school day beyond the State's requirement of 200 hours of additional time per year
(Partner: Generation Schools)

GOAL 3 - College Readiness and Access

To create academies in Science, Math and Language that will offer dual enrollment opportunities to jumpstart students' college experiences and link to career opportunities in the Rochester community.

(Partner: Monroe Community College)

Through the activities initiated in the proposed SIG project, Monroe students will demonstrate academic improvements and understand that what they are learning at Monroe HS directly links with future college and career opportunities.

2.A.ii Research-Based Design Elements and Strategies of Plan Implementation

The foundation of this SIG plan will focus on Rochester's Core Instructional Program. Supporting students in English Language Arts, mathematics, and science is the most proactive service the District can provide to its students. RCSD is engaged in the critical work of positioning all students for success in college and careers. Teachers who remain at Monroe HS must take full advantage of opportunities to focus on research-based instructional strategies that will improve literacy across all content areas. A specific emphasis will be placed on the bilingual and SWD populations at Monroe so that all teachers will have the strategies they need to teach diverse groups of students at a high level of rigor.

Monroe HS will seek support from highly regarded providers of professional development in math, science, and ELA to ensure instructional strategies are aligned to the Common Core Learning Standards (CCLS) and to go above and beyond what the District is offering. The intensive District-provided professional learning opportunities and the intensive professional development that will be offered to teachers at Monroe will deepen teachers' effectiveness and strengthen their capacity both in the classroom and among their peers by becoming teacher leaders who will turn-key professional development for others.

The District has demonstrated its commitment to professional learning by training a cadre of approximately 150 teachers and administrators in the ELA and math curriculum and assessments that are designed on the Common Core for grades Prek-5. RCSD is committed to the same level of support for the roll-out of CCLS for grades 6 – 12. These efforts are the beginnings of a massive instructional turnaround effort in the District to transform instructional practice and align it with the rigor of the Common Core.

Previously, the District provided Academic Intervention Services (AIS), to students scoring below proficiency on State exams using a variety of strategies, from content-specific AIS support from teachers in ELA and math to AIS "classes" for students with varying needs in a classroom with a teacher certified in neither ELA nor math. Still other schools may have had designated AIS teachers supporting students in a variety of subjects in an attempt to catch students up. In the 2013-14 school year, set protocols will be in place at Monroe HS and District wide for every student based on research and best practice initiatives.

English Language Learners must be held to the same level of standards expected of students who are already proficient in English. However, these students are acquiring both

English language proficiency and content area knowledge concurrently, so some students will require additional time, and all will require appropriate instructional support and aligned assessments. In compliance with regulations for ESL services, and cognizant of the needs of the language learner and their proficiency levels, ELL students are to be given access to all grade-level core instructional content.

Currently, only 20% of RCSD students are leaving middle school proficient or better in ELA. The performance in math is even more troubling; only 15% of RCSD students are entering high school proficient or better. RCSD is restructuring its instructional programs and academic supports across the middle grades and high schools to provide all students with access to high-quality and consistent core instruction and research-based intervention supports. To facilitate the use of the additional time each day, the District is supporting focused intervention strategies designed to accelerate the acquisition and mastery of ELA and math skills. Ramp-up protocols will be infused for students in grades 7-9 in both ELA and math. All students who need support will be scheduled for 90 minutes of both so that remediation and acceleration can occur simultaneously.

Using time differently and expanding student contact time by 300 hours per year at Monroe HS will help facilitate the implementation of Rochester's Core Instructional Program. It will also improve student outcomes across all subjects, broaden enrichment opportunities, and improve instruction by adding more planning and professional development time for teachers. The vision behind expanding the day in Rochester is to reshape the school calendar to provide all students with a well-rounded education that prepares them for full engagement and participation in the economic and civic life of our 21st century global society.

Generation Schools will be one of Monroe HS's partners in its school transformation. The Generation Schools model is the result of more than a decade of extensive research, development, and evaluation. The organization was launched formally in 2005.

It is Generation Schools' and RCSD's belief that teacher effectiveness is a leading indicator of student achievement. To increase teacher effectiveness, Generation Schools will address the organizational impediments that overwhelm many potentially good teachers, especially in high-need schools, so that they can provide well-prepared, engaging, and effective instruction to every student every day. Generation Schools will provide essential support and the needed technical assistance to Monroe HS as they shift from long-established and deeply internalized practices to new operational models. Generation Schools will help Monroe HS to: focus in order to assist with Monroe's transformation:

- Expand learning time by 300 hours for all students,
- Reduce class size in core foundation courses,
- Reduce the total teacher load,
- Increase professional development and provide common planning time daily for all teachers,
- Enhance the capacity of teachers to collect, analyze and respond continuously to data,
- Leverage current and emerging instructional technologies in the classroom.

Monroe Community College (MCC) will be the second partner in Monroe HS's transformation, solidifying the link between students learning at Monroe and their future education and career. This partnership will examine the economic climate of the Rochester area and create classes in the areas of math, science, and language (Spanish) that will support regional career/employment opportunities. These classes will be linked directly to the skills needed in Rochester's workforce. They will jumpstart college credit acquisition and demonstrate to Monroe students that they can be successful in college courses and allow them to earn college credits toward a degree that is in high demand in the Rochester/Finger Lakes region. By offering language courses in Spanish, students can work toward bilingual certification which can assist them in many occupations (e.g., education, healthcare) especially in the Rochester area where there is a demand.

Through RCSD's Facilities Modernization Plan (FMP), the District will improve the physical infrastructure of Monroe HS (built in 1921). Capital improvements will be made that will support the achievement of Monroe transformational goals. Updated math and science facilities will allow all students to become fully immersed in the study of science and math in an environment that supports rigor and relevance of instruction. Other spaces will be created to enhance areas such as music, art, and community engagement capacity. This school modernization plan will enhance all student experiences and provide a state-of-the-art campus that allows for enrichment not only during the day, but within the expanded learning time.

Monroe HS will achieve its vision, mission and goals by establishing clear cut performance targets and a critical path detailing all of the needed benchmarks and communication that will be executed and monitored on a quarterly basis with all of the following constituents: Generation Schools, Monroe Community College, the school principal, School Chief, Deputy Superintendent, Executive Director of School Innovation, Executive Coaches, and the Outside Educational Expert.

The pathway will be clearly articulated through the implementation of Common Core. The execution of this through the Core Instructional Program is at the forefront of this grant and RCSD's core instructional program is built around research based practices and the Regents Reform Agenda. The New York State P-12 Common Core Learning Standards (CCLS) are internationally-benchmarked and evidence-based standards. These standards serve as a consistent set of expectations for what students should learn and be able to do, so that we can ensure that every student across New York State is on track for college and career readiness.

The Common Core State Standards were created through a collaborative effort on behalf of the National Governor's Association Center for Best Practices and the Council of Chief State School Officers. The standards were developed by key stakeholders in the field, including teachers, school administrators, and content experts. The final standards were released in June 2010. They have been adopted by forty-five states across the United States, and three territories.

In the summer of 2011, NYSED, in conjunction with Student Achievement Partners, developed 12 instructional shifts from the Common Core that educators should adhere to so that curriculum materials and classroom instruction are aligned with the CCLS. There are six shifts in English Language Arts/Literacy and six shifts in Mathematics.

To enhance these shifts in both ELA and math, ramp-up protocols have been put in place to support students who are not meeting levels of proficiency so that remediation and acceleration can occur simultaneously. In math students will:

- Build understanding of core concepts necessary for success in algebra and geometry, stressing depth over breadth in keeping with the Common Core State Standards (CCSS),
- Provide explicit instruction in problem-solving and math skills,
- Increase proficiency in the CCSS mathematical practices,
- Use data to differentiate instruction and evaluate student growth,
- Administer assessments and generate reports with ARO, an Internet-based system
- Implement a workshop model that encourages active learning and helps students develop the work habits of motivated, productive learners
- Conduct conferences and math groups to meet individual students' needs

In ELA, the ramp-up protocol being put in place essentially encompasses the highlights above; however, it is also very appealing to the ELL population at Monroe for several reasons because it focuses on the following:

1. **Motivation**: This program is designed to increase motivation amongst ELL populations by utilizing background knowledge, language and culture to shape instruction in order to help students understand and connect with the ideas, concept and language.
2. **Explicit Instruction and Modeling**: Studies have shown that authentic comprehensive instruction and scaffolding are necessary components for second language learners.
3. **Vocabulary Instruction**: Allows students to bridge the gap and assists with creating the needed knowledge base to draw from when trying to attach meaning to new words.
4. **Authentic Reading and Writing Populations**: It allows ELL's to use words and express own ideas in ways that are meaningful and relevant to them.
5. **Differentiate Monitoring & Instruction**: Allows for a program that attends to differentiation and provides individualized instruction to meet the needs of every learner.

As teachers become versed in these protocols through an intense training program offered by the district, teacher leader effectiveness and capacity will grow and high quality instruction will occur not only during the day but within the expanded school year. Generation Schools have specific research based key design elements that will support the expanded school model and design. Generation Schools organization provides essential support to schools, districts and unions as they shift from long-established and deeply internalized practices to new operational models.

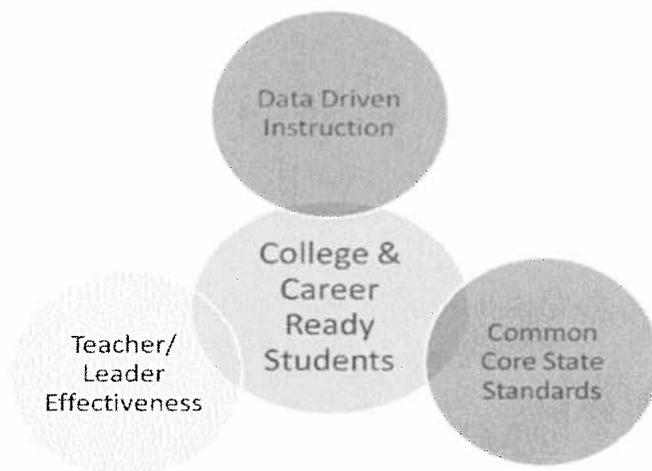
Generation Schools Network brings the experience and expertise to address each. They combine the flexibility of being formally outside the system with a comprehensive understanding of the responsibilities and challenges of both the system and reform efforts. This enables Generation Schools to develop and execute operational strategies that might be difficult for a district to pursue on its own. Their role will be critical in the rethinking of time, talent and the use of resources; supporting innovation and continuous improvement; and managing change. Specifically they will:

- a. **Present** - Sharing Generation Schools' signature model for understanding and share experience working with existing schools to implement reform.
- b. **Facilitate workshops** - Share tools and provide training for individuals and teams to advance the redesign process: reviewing data; articulating goals; developing coalitions of support with administrators; teachers; parents and community partners; rethinking time, talent and the use of other resources.
- c. **Coaching** - Generation Schools will provide coaching for school or district personnel driving the redesign, implementation and change management.
- d. **Technical Assistance** - Show how key partnerships, embedded professional development, social/emotional supports and recreational activities can be entrenched in an extended day.

The Generation Schools model is the result of more than a decade of extensive research, development and evaluation prior to formally launching the organization in 2005. This early work included substantial testing of alternative scheduling, staffing and instructional technology strategies in a variety of New York City schools.

MCC will also fit perfectly into the school day and the Expanded Learning Model by:

- Implementing **Common Core standards and developing curriculum and assessments** aligned to these standards to prepare students for success in college and the workplace.
- Building **instructional data systems** that measure student success and inform teachers and principals how they can improve their practice in real time.
- * Supporting the recruitment, development, and retainment of effective teachers and principal



*

A year-long planning period will occur where MCC and the RCSD will collaborate to define and create the dual enrollment classes that will allow students to earn college credits in

key areas of math, science and language. These classes will be linked to various Associate's Degrees that are in high demand in the Rochester area. Students will have the opportunity to get a "jumpstart" on a degree that will allow them to have an edge on their counterparts and be closer to the completion of a two year degree upon graduation. The courses will also be designed to link to four year degrees as well.

In order to ensure students are ready to experience this level of rigor, an RFP will be dispersed to colleges detailing the needed support in literacy at the middle school level with specific specifications regarding the ELL and SWD population. Through the execution of an intensive summer program at the middle school level, students and teachers will receive the expertise of literacy specialists who will train teachers research based literacy strategies and will provide on the ground coaching as RCSD teachers deliver instruction to their students. Demonstrations classrooms will be designed and teachers in all content areas will benefit from this level of expertise. This will also be integrated into the expanded day model.

2.B. ASSESSING THE NEEDS OF THE SCHOOL SYSTEMS, STRUCTURES, POLICIES, AND STUDENTS

2.B.i School-Level Baseline Data and Target-Setting Chart

The School-Level Baseline Data and Target-Setting Chart is attached.

2.B.ii Student Population Served

Monroe HS serves 1,109 students in grades 7-12. Three out of every ten Monroe students (29%) is classified as an English Language Learner. These students represent all levels of the language acquisition continuum: newcomers (less than a year of English Language instruction), beginning, intermediate and advanced English language proficiency, as well as SIFE (students with interrupted formal education). Nearly one quarter (22%) of the school population are classified as Students With Disabilities. Monroe HS's poverty level of 88% is only slightly greater than the District average.

Table 2 in Section 1.F.i summarizes student achievement data from the 2010-2011 NYS School Report Card.

In 2011-2012, only 4% of Monroe seventh graders and 9% of eighth graders scored a Level 3/4 on the NYS English Language Arts assessment. ELA scores have declined steadily since 2009 at grade 7. Grade 8 showed a 0.9% improvement in 2012 after a steady decline since 2009.

In Math, 15% of seventh graders and 28% of eighth graders scored at Levels 3/4. In Math 7 and 8, students show both improvement and regression since 2009, improving in Grade 7 and regressing in Grade 8 in 2012.

The percent of district graduations as reported in the District's student data warehouse increased by about 4% in 2012, from 52% to 56%.

District wide, there are large numbers of over-age, under-credited students. In the 2008 Cohort, 12% of cohort students (n=249) had fewer than five (5) credits as of Fall 2011. Approximately 90% of the parents of incoming RCSD pre-kindergartners did not attend college, and 43% of parents did not complete high school. More than one-quarter (27%) of incoming RCSD pre-kindergartners have experienced the death of a close family member, and 16% have a parent who has been incarcerated.

2.B.iii Systemic School Review to Determine Existing Capacity, Strengths, and Needs

A Joint Intervention Team (JIT) Review was conducted at Monroe HS in April 2011, prior to the assignment of the current school principal (Mr. Armando Ramirez was appointed as Monroe's new principal in 2012). Highlights of the key findings of the JIT Review are summarized in the next section. Additional information provided in the summary below comes from school walk-throughs and principal meetings conducted by the Network Team.

2.B.iv Results of the Systemic School Review

Highlights of the JIT review findings include:

- Specific NYS performance indicators are not addressed in lesson plans and essential questions.
- Lesson plans tend to focus on completion of activities rather than major understandings and skill development
- Expectations for instructional rigor are inconsistent.
- There are insufficient levels of implementation of essential elements of teaching and learning and an instructional model (Sheltered Instructional Observation Protocol) to impact student achievement.
- There is minimal evidence of best practices to support all students, especially SWD and ELLs.
- The rigor of what is taught does not equal the rigor of NYS assessments.
- The opportunity to use English as a Second Language and special education classes to prepare students for academic success and content mastery to meet NYS graduation requirements is not maximized.
- There is a lack of an articulated understanding of high quality instruction across disciplines.
- Administrative support for students with disabilities is inadequate.
- NYS requirements for beginning and intermediate ELLs and SWD who receive resource room services do not allow sufficient time in the regular, eight-period school day for the completion of all credit bearing classes required for graduation in four years.
- The use of data to inform instruction is not consistent, and it is not used consistently to make strategic decisions.
- Coaches are not modeling effective instructional practice to bring about change.

Findings of RCSD's Network Team recommend that Monroe aggressively focus on instructional practice. Both administrative and instructional staff are in need of professional learning in each of the six components of the Instructional Domain (#3) in Charlotte Danielson's *Framework for Teaching* (RCSD's approved APPR teacher evaluation rubric). While there is evidence of the Regents Reform Agenda in action, full implementation in each of the three elements is not obvious. Direct, whole group instruction is the pedagogical practice that has

been most observed during classroom walkthroughs. Administrators at Monroe supervise a specific department/area, and weekly leadership meetings are held with the principal. Each administrator is responsible for having data/report card conversations with the staff that they supervise.

Monroe has a professional development calendar that outlines school-based professional learning, department/faculty and School-Based Planning Team (SBPT) meetings, and District wide Professional Development. On the calendar, there are specific topics identified for school-based professional learning sessions, while the other sections consist only of a compilation of dates. Much of the planned professional development focuses on strategies to improve the achievement of English Language Learners and targets new staff. Absent is a focus on the three implementation areas of the Regents Reform Agenda: Common Core State Standards, Data-Driven Instruction, and Teacher/Principal Effectiveness.

There was a change in administration at the principal and assistant principal levels in the 2012-2013 school year. The new leadership team has focused on improving school safety and security. Since October, there has been an increase in the visibility of School Safety Officers, and hall sweeps occur more often. There has also been a drastic increase in the number of incidents and suspensions this year. To date, there have been 419 reported suspensions compared to 77 for the 2011-2012 school year. The number of incidents has increased by over 600% to 343, up from 58 for the entire 2011-2012 school year. Attendance has increased from 78% to 81%, with Freshman being the most truant cohort, having a reported attendance rate of only 75%.

In conclusion, the Network Team finds that Monroe HS has begun to address the safety and security of the school in an effort to improve the culture of the building and the classroom environment. It is imperative that the focus shift to instructional leadership and pedagogical practice to promote systemic change and improvement in academic achievement.

2.B.v Prioritization of Identified Needs in Implementation of the SIG Plan

Monroe HS will prioritize its needs based on what the data indicate regarding the student population and the academic needs of each individual student. When examining school-level baseline data, students' scoring proficient or higher on the NYS ELA assessment is a mere 6%. This clearly is a high needs area for the school and the foundation of where the work needs to begin. In order for students to be successful in any other content area, students' must increase their literacy skills upon entrance into Monroe. Specifically, the high ELL population must be supported to ensure instruction leads to inquiry and engagement. Support for ELLs will include:

1. Providing an intensive two-week summer institute for all students who will be in the 7th and 8th grades for the 2013-14 school year. This institute will focus specifically on the ELA common core shifts. Students will attend three hours per day. Following the students instruction, teachers will participate in three additional hours of professional development specifically aligned to the Common Core shifts and uniquely targeted to the ELL population. Teachers will learn how to do the following at a higher level of expertise:

- Have transparent targeted plans for students aligned to the shifts that are developed and informed by individual student data
- Employ instructional practices and strategies that are in alignment with the common core modules and support students with disabilities and the linguistic needs of all students
- Create short and long term goals based on data with learning trajectories for groups of students based on identified and timely needs that lead to student involvement in their own learning
- Use of explicit and systematic instructional practices, based on lesson plans tied to CCLS and curriculum maps
- Differentiate instruction based on data and the use of multiple strategies to address specific students
- Creation of an environment that acknowledges a diverse group of students and provides access to deep levels of thinking and questioning thought the use of instructional materials that contain high levels of text and content complexity.

This institute will be supported by a college who responds to the RFP process and meets the requirement of the conditions set in the proposal. In addition, specific consultants who are educational experts, particularly in literacy with bilingual expertise will be considered. Work in this area will significantly be incorporated into the expanded day and professional development in these areas will continue throughout the school year.

2. Monroe teachers will use ramp-up protocols during the instructional school day in both ELA and math to ensure a level of readiness for all students who need the support. In addition, an extension of the school day will allow students to immerse themselves in the instructional shifts in math and ELA at a higher frequency by teachers who are undergoing intense professional development in these key areas. Immersion in these shifts within the first year will allow students access to the opportunities that will be available in Year 2 though the collaboration with Monroe Community College. Students will have the opportunity to earn dual enrollment credits in three specific areas (math, science and language). Generation Schools will help Monroe facilitate an ideal schedule based on an intense data review to achieve our desired outcome.
3. Third, Monroe High School will reset its School Comprehensive Plan based on the Diagnostic School review that will be completed in the 2012-13 school year by NYSED's Integrated Intervention Team. Within this plan, Monroe will prioritize whole school reform in the following areas:
 1. School Leader Practices and Decision Making
 2. Curriculum Development and Support
 3. Teacher Practices and Support
 4. Student Social and Emotional Developmental Health
 5. Family and Community Engagement

It will be the District's role to know Monroe's priorities, set goals within these key areas that are linked directly to the needs of the school, and to monitor and adjust with the principal

and school. All partnering organizations will be apprised of the school's level of effectiveness and will use quarterly meetings to address any concerns and celebrate any successes that occur. All information will be dispersed to all stakeholders.

2.C. SCHOOL MODEL AND RATIONALE

2.C.i Rationale for the Selection of the Transformation Model

The theory of action underlying the transformation model is that the existing configuration of leadership and instructional personnel has not created a learning environment in which students are succeeding. The Rochester City School District recognizes the key design of this model and believes the framework is ideal because it allows for dramatic change and the elements of the model still correlate with the goals of our district.

Under transformation, change entails change in leadership as well as behavioral change of personnel. Monroe High School's data, school population, level of teacher and leader effectiveness, and overall graduation rate indicates that dramatic change must occur. In the senior cohort alone, 12.8% of students drop out. Cumulatively this means that in a 4 year period, Monroe loses up to 50% of its students. Graduation rate is at a measly 33% which is 16% lower than our district average. Only 6.2% of Monroe's students are at a level of proficiency on the ELA exam and only 21.5% are proficient in mathematics. A whopping 26.1% are retained in the ninth grade. When examining this data, it is clear that the school needs to make a histrionic adjustment.

The components below describe in detail the key design elements found within this Transformation Model:

1. **Replace principal:** Monroe's principal was replaced as of July 1st, 2012 in support of this model. Previous communication as early as March from the Superintendent notified the school of the change and the characteristics encompassed in the Transformation Model.
2. **Implement new evaluation system:** APPR agreement is in place and encompasses a student growth measure as a significant factor.
3. **Identify and reward staff who are increasing student outcomes; support and then remove those who are not:** The Teacher Incentive Fund is a PBCS (Performance Based Compensation System) operating in Monroe High School. As a TIF school, all RTA and ASAR members are eligible to earn stipends in pursuit of professional development surrounding the Regents Reform Agenda of APPR, Common Core State Standards and Data Driven Instruction. Further, teachers that are evaluated as Highly Effective may open their classroom as a model and receive an incentive of 10% of the average teacher's salary (approximately \$6,000). The building principal at Monroe High School is also eligible to earn an incentive bonus of 10% of the average principal's salary (approximately \$10,000) if he or she is rated as Highly Effective under the APPR rubric,

4. **Implement strategies to recruit, place, and retain staff:** STLE Grant focuses on this area and includes teacher recruitment for bilingual certification and strategies for retaining high quality staff.
5. **Select and implement an instructional model based on student needs:** RCSD's strong instructional core model focuses on all students, uses ramp up protocols entrenched in research that specifically addresses three factors that influence student motivation to learn. It allows for remediation and acceleration simultaneously. All elements of the Regents Reform Agenda are integrated into the model. It allows for differentiation of all students.
6. **Provide job-embedded professional development designed to build capacity and support staff:** Generation Schools will be our partner for this arena and will help facilitate a schedule that will allow for job embedded professional development to occur within the school day and common planning time to drive the instruction core model.
7. **Ensure continuous use of data to inform and differentiate instruction:** SUPES Academy, funded through NYSED's Systemic Grant will be training the school Principal and the Assistant Principals how to better use data to drive the instructional core program and support all tenets areas found in the Diagnostic Tool. Due to Monroe's Priority Status, executive coaching will occur through this academy to support the use of data as the primary driver to facilitate reform.
8. **Provide increased learning time:** In this model we are proposing to have an additional 300 hours added to the school year. During this time students will be immersed in the CCLS to ensure a level of readiness and opportunity for dual enrollment credits and higher levels of proficiency on state and Regents exams as well as take advantage of community programming that will assist with social and emotional development and recreational activities.
9. **Provide an ongoing mechanism for community and family engagement:** Monroe is in the process of redesigning its parent center to ensure the space is welcoming for parents and community members and that trust is at the heart of all relationships. Efforts will focus on building partnerships that link and engage all families with the community to support student learning and growth. In addition, the 1% set aside funding will help facilitate classes for parents in the area of literacy, life and job skills, college readiness and GED supports.
10. **Partner to provide social-emotional and community-oriented services and supports:** This is a key area that will utilize partnerships in the community that have a track record of proven evidence which will be built directly into the expanded day.
11. **Provide sufficient operating flexibility to implement reform:** The principal will have autonomies around hiring outside of the instructional core program, recruiting partners and in the use of time.
12. **Ensure ongoing technical assistance:** Generation Schools will provide the needed technical assistance to help facilitate the desired change.

2.C.ii Process by Which the Model Was Chosen

The transformation model was chosen for Monroe HS based upon the model's criteria. As described above, RCSD recognizes the key design of this model and believes the framework is ideal because it allows for dramatic change, and the elements of the model correlate with District goals. School transformation supports the strategic selection of partners that will facilitate the execution of Rochester's Core Instructional Program and aid in increasing the level of student competency in the areas of career and college readiness.

In order to engage the school staff, District leadership, school-level leadership, and labor unions have reached out to the school and to community stakeholders to ensure they are aware of the process. In March 2012, the Superintendent addressed the staff at Monroe to inform them of the school's preliminary identification as a Priority School based on low graduation rates and low performance in both ELA and math scores. During this presentation, staff were informed that upon official notification, action would be taken and the school would "convert" under the Transformation School Model and an application would be written to seek SIG funding. This meeting included the Rochester Teachers Association.

Following this outreach, the Bilingual Council held a meeting to discuss the designation and the Executive Director of School Innovation followed up with the School-Based Planning Team (SBPT) to answer any questions regarding the model. A template was provided and input was solicited from the school community. A new principal was named, and he worked at Central Office with his School Chief to begin the design of Monroe and ensure he was an integral part of the budget and hiring process for the upcoming year. During the months of April through June, planning meetings occurred with the Deputy Superintendent of Teaching and Learning, the School Chief, lead directors and the current Principal to begin to transition. Mr. Armando Ramirez was made permanent to Monroe High School on July 1, 2012.

During the summer, Mr. Ramirez worked collaboratively with staff to ensure he was aware of every student's transcript and graduation pathways were developed to ensure that not one student fell through the crack. As school opened, the Executive Director of School Innovation spoke with the SBPT again regarding the school's designation as a Priority School, what that meant for them, and how to write the School Comprehensive Plan around the elements needed for change within their school. The principal was also working simultaneously with RCSD's Facilities Department to begin planning for a major facilities modernization project that allowed him to take key ideas from teacher and parent planning sessions and begin to structure the academic setting around the key features needed to assist in moving the Core Instructional Program. Discussion of Monroe HS's transformation continued in SBPT meetings, and a special union meeting was held in December to review the model and what the focus would be.

In January, community stakeholders, the Superintendent, the Deputy Superintendent of Teaching and Learning, OSI Director, teachers, and a parent from Monroe High School visited P-TECH, a career-focused, early college high school in Brooklyn. The need for students to have a true level of readiness in order to access the opportunity of college immersion was apparent from this visit. The constituents from the school returned and discussed components of the P-

TECH model with the staff. A leadership meeting was held following the visit to discuss key aspects from the school and what should be incorporated into this SIG application.

2.D. SCHOOL LEADERSHIP

2.D.i Characteristics and Competencies of the School Principal

Because “major change” efforts only occur 30% of the time, the characteristics and competencies of the school principal are at the forefront of this design. First and foremost, the leader must be able to:

- Work collaboratively with all stakeholders in order to promote a distinctive vision for student well-being based on data and hold themselves accountable for all of the elements in the School Comprehensive Education Plan;
- Model excellence in the creation of the use of systems that is dynamic;
- Create and use robust systems and structures that afford students and teachers the ability to fully benefit from a thoughtful program that includes the use of extended time and is aligned to student achievement;
- Develop and implement an explicit and widely communicated system for frequently observing targeted teacher practices throughout the school year that result in relevant feedback and individualized teacher improvement plans;
- Conduct “check-ins” of other administrators who are supervising the sub-groups in accountability status to ensure a clear understanding of the next steps aligned to the SCEP plan are occurring and will lead to a positive year end evaluation rating; and.
- Identify leading indicators that can provide whether the school is on track or not, zealously monitor the indicators for signs of success or failure, and act on what the indicators reveal using data to target assistance or redirect focus areas.

Research suggests that successful turnaround leaders analyze a variety of data early on to develop detailed plans that explain to every actor what actions are needed, focusing first on steps to achieve early wins (Leading Indicators of School Turnarounds, Kowal & Ableidinger). In addition, a leader in Monroe HS has to think out of the box. The focus has to be on true transformation, not just day-to-day operational tasks. Systemic thinking has to occur in order to build an atmosphere that will improve instructional quality, teacher and leader effectiveness, and overall climate and culture.

2.D.ii Monroe High School Principal Identification and Biography

Mr. Armando Ramirez became the principal of James Monroe High School in 2012 and was charged with leading the school’s redesign. Mr. Ramirez is an experienced principal dedicated to helping underserved students and their families. He has demonstrated success in improving student and school performance in past school leadership roles.

Mr. Ramirez received B.S. (criminal justice) and M.S. (reading teacher) degrees from SUNY Brockport and his Master’s degree in Education Administration from St. John Fisher

College. He is certified in elementary education, reading, and administration. Armando was a participant in the Teacher Opportunity Corps as well as Fisher’s Urban Educators Partnership. He has been a teacher and administrator in RCSD for more than 20 years, beginning his career as a first grade teacher and being assigned his first leadership position in 2004.

Mr. Ramirez was part of the leadership team that opened the Joseph C. Wilson Foundation Academy in 2005. In its first year, only 9% of Wilson Foundation students met NYS standards, and almost half of the student enrollment had repeated multiple grades. As an Academy Director, Armando supervised the math, science, and social studies department and was in charge of school culture. Wilson Foundation was the first RCSD secondary school to offer acceleration programs to eighth grade students and gender-based classrooms. A full ninth grade schedule was offered to eligible eighth grade students, and a 90% passing rate was achieved in math, science, and US History. Students were clustered with support provided from a special education teacher, and student schedules were optimized to meet student needs. Wilson Foundation was removed from the SURR list in eleven months, making the school the first in NYS to be removed from this list in less than one year. Within two years, Wilson Foundation became the most selected RCSD school in the seventh grade school selection process after having been the least selected.

Prior to being assigned to Monroe HS, Mr. Ramirez was the principal of John Marshall High School, an RCSD school in the process of phasing out. Through initiatives that provided mentors for juniors and seniors, maintained a student support center, increased the number of school counselors, and gave students opportunities to make college visits and field trips, the school increased its graduation rate from 48% to 53%.

2.D.iv Job Descriptions and Duties

Mr. Ramirez is supported by an eight-member administrative team. Two Academy Directors provide the second level of decision-making and serve as the school’s instructional leaders. The Academy Directors are responsible for conducting teacher evaluations, coordinating the schools overall testing calendar and student management for specific grade levels. Three Assistant Principals and a Coordinator of Instruction provide support for student management, teacher evaluations and the operations of the building. A Coordinating Administrator of Special Education supervises support staff and the school’s special education department. Monroe HS’s Physical Education and Health Departments are supervised by an Athletic Director, who also oversees all extracurricular and athletic events.

Table 4. Monroe HS Leadership Team and Responsibilities

Leadership Position	Responsibilities (Department and Student Management)
Principal	Administration and Main Office staff
Academy Director	Science, School-Wide Testing, Credit Recovery, Grade 12 Student Management
AP Student Management	Social Studies, Student Support Center, Head Custodian, College-Level Coursework, School-Wide Operations, Grade 11 Student Management

Leadership Position	Responsibilities (Department and Student Management)
Academy Director	ESOL, LOTE, Bilingual Support, Grade 10 Student Management
AP Student Management	Art, Business, Computers, Family/Consumer Science, Music, School Safety Officers, Grade 9 Student Management
Coordinator of Instruction	Math, Grade 8 Student Management
AP Student Management	English, ISS/ATS rooms, Grade 7 Student Management
Coordinating Administrator of Special Education (CASE)	Special Education, Para-Professionals, Teaching Assistants, Specialized Services
Athletic Director	Physical Education, Health

2.D.v Supporting Leadership at Monroe High School

In addition to Mr. Ramirez, two other members of the Monroe HS leadership team are experienced school principals. Three administrators worked with Mr. Ramirez at his previous principal assignment at Marshall HS. Monroe’s CASE and Athletic Director have participated in Network Team training and are newly assigned to Monroe HS. Three members of the Monroe leadership team were members of the previous leadership team.

All of the current leadership team are supportive of the proposed SIG transformational plan and have been actively involved in the development of this application. There are no barriers to securing the buy-in of Monroe administration.

2.E. INSTRUCTIONAL STAFF

2.E.i School Staffing

Monroe HS’s student population consists of large percentages of both English Language Learners and Students With Disabilities. There is a distinct underrepresentation of highly qualified bilingual Special Education teachers and highly qualified content teachers with a Bilingual Extension. In order to best address student needs, it is paramount that more highly qualified bilingual Special Education teachers as well as highly qualified teachers with a Bilingual Extension be represented on the staff. This is a district-wide deficiency that is being addressed through RCSD’s *Strengthening Teacher and Leader Effectiveness* (STLE) grant. One of the major initiatives in the STLE project is the development of an in-District bilingual extension program to facilitate the process required for teachers to earn this credential.

In order to support Monroe teachers such that they may meet the needs of the student population, a variety of strategies will be implemented. These include, but are not limited to, side-by-side planning between bilingual, Special Education, and General Education teachers, SIOP training and implementation with instructional coaches, and collaboration between teachers across content areas.

To address the level of rigor and their alignment with Common Core standards, such that they inform the college and career readiness of the student population, other scaffolds will be put

into place. Teachers will be given the opportunity to collaborate with professors at local institutions in order to design and implement curriculum that will provide students the opportunity for dual-credit.

2.E.ii Key Instructional Staff

In order to support Monroe HS's instructional staff, it is imperative that the school provide highly qualified instructional coaches. These coaches will provide teachers with pedagogical support as well as training within the Common Core Learning Standards in order to help the Monroe student body reach its academic potential.

Eight coaching positions have been identified that will support Monroe's teaching staff. One Special Education coach will address the implementation of the Common Core within the ICOT setting. Specifically, they will examine instructional practices of Monroe teachers in order to modify them as needed to support Monroe students. Moreover this coach will focus on co-teaching, co-planning, compliance, and differentiated instruction through the lens of Special Education but also will serve as support for General Education teachers as needed.

One Response to Intervention (RtI) coach will address instruction at the foundational level as well as differentiating instruction in order to accelerate student academic achievement. The RtI coach will focus on the instructional practices that have already been implemented, the qualitative and quantitative data supporting or refuting these practices, and incorporating research-based strategies as they best support the students based on the available data.

Within the English Language Arts (ELA) and Math departments, two ELA coaches and one bilingual ELA/ELL coach, as well as two math coaches and one bilingual math coach will be identified. ELA and Math coaches will assist Monroe teachers with the implementation of Common Core shifts in ELA and Math, as well as a focus on data-driven instruction into their daily practices. Additionally, these coaches will concentrate on aiding teachers with Sheltered Instructional Observation Protocol (SIOP) strategies as they inform the Common Core standards. Lastly, both ELA and Math coaches will support Monroe teachers by providing pedagogical support, modeling, co-planning, and co-teaching in addition to content-specific curriculum implementation.

A Specialized Services Department Administrator will provide administrative district-level support for the coaching team as they implement SIOP strategies. These will include classroom walkthroughs as well as attending department meetings and supporting with professional development sessions.

2.E.iii Informing Staff of the School Redesign Model

As part of the school redesign development process, Monroe teachers who represent the District's teachers union (Rochester Teachers Association or RTA) visited the Pathways to Technology Early College High School (P-TECH) in Brooklyn. These teachers sit on the School-Based Planning Team and/or are RTA building representatives or building committee

representatives. They traveled to P-TECH along with the District Superintendent, school principal, key Central Office administrators, a Monroe HS parent, and representatives from the local community college and area businesses. These teachers had the opportunity to ask questions of the P-TECH principal and selected teachers, students, and parents. During the visit, much information was provided, including discussion of instructional programs, student climate, school schedules, and gains in student performance. Three days after the visit, these teachers presented a summary of the visit and the vision for Monroe's school transformation to all school staff at a scheduled staff meeting. Monroe's School-Based Planning Team, which includes teacher representation, will continue to be informed of all planning activities. The principal will continue to update all teachers on the transformation plan and seek their input.

Teachers have been informed of Monroe's transformation to a high school that incorporates an Expanded Learning Model that focuses on providing students access and opportunity to college readiness and infuses the opportunity to earn dual enrollment credits in math, science and language. This has been communicated to the staff prior to the deadline date for teacher transfer requests, allowing them the option to request a transfer to another school if they choose to do so.

2.E.iv Process for Screening and Selecting New Staff

The staffing process in the current teachers' contract provides for multiple rounds of teacher selection. The first round of this process is the "voluntary transfer" round. All eligible teachers may apply to up to 10 schools within the District. Teachers are not eligible to participate in the voluntary transfer round if their performance at the mid-year is deemed to be unsatisfactory by their current supervisors. Building principals and the school based planning team may interview and select eligible teachers who apply for voluntary transfer based upon merit. After the voluntary transfer round is completed, teachers have the ability to select vacant positions within their tenure area based upon seniority. Seniority based transfers restrict a principal's ability to select the candidate of choice. The teacher's contract provides mechanisms for schools to become exempt from the transfer process. Such exemption allows schools to select all teachers through a merit-based, interview process. Exemption must be agreed upon by the teachers union. In addition to exemptions, the District is planning an open house type event where teachers who are interested in transferring to new buildings will have an opportunity to meet with school leadership to determine whether the programs and culture of the school will be a good fit.

2.F. PARTNERSHIPS

2.F.i Identification of Partner Organizations and Selection Rationale

Generation Schools Network (GSN) supports schools and districts to transform public education through sustainable, scalable structures that drive student achievement and teacher effectiveness. Generation Schools has successfully created new schools implementing its signature model, working within districts and labor-management agreements to achieve far better

outcomes for districts, teachers, and students. Generation Schools has also worked with districts and existing schools to apply lessons learned from the signature schools.

As part of Generation School's work with RCSD, they will share their experience rethinking time, talent and the use of resources; supporting innovation and continuous improvement; and managing change. Generation Schools will share lessons learned implementing it's signature model in two different school districts. They will work with Monroe staff to help shift mindsets that will change practices.

Generation Schools proposes three strands of work:

Presentations. GSN will provide RCSD staff an opportunity to learn about GSN's signature model, its experience implementing the model with districts and unions, and its experience working with existing schools to implement reform. In the pre-implementation phase, presentations for district staff, school administrators, teachers and union representatives will focus on GSN's work outside of RCSD, to help change mindsets about what's possible. Later presentations for a broader constituent group - including the whole school staff, students, parents and community partners – will focus on benefits and tradeoffs of the model the school develops, and the changes in practices that are integral to the model's success.

Facilitated Workshops. GSN will provide RCSD staff tools and training to advance the redesign process: reviewing data; articulating goals; developing coalitions of support with administrators; teachers; parents and community partners; and rethinking time, talent and the use of other resources. In the pre-implementation phase, the district and school leadership with union representation, will: ensure a shared understanding of goals and priorities, needs and challenges; will allow the various stakeholders to articulate the parameters in which they will develop a great plan; focus leadership on the people impacted and the tools or systems necessary to ensure people are prepared to implement the plan that is developed. Later workshops, including the teaching staff, will prepare teachers to execute on the plan and facilitate the reflection over time which drives refinement, improved practices and better student outcomes.

Coaching. GSN's Co-Founder and/or senior staff will provide key personnel driving the redesign, implementation and change management support as they advance this challenging work. The coaching builds off in-person meetings, and is focused around clearly articulated and mutually agreed upon goals. The coaching can advance through regularly scheduled phone calls, either with individuals or with small groups doing parallel work.

Together, the presentations, workshops and coaching allow RCSD staff to draw on experience outside the district, to complement the expertise within the district, and to build the district's capacity to continue this work over time.

RCSD will partner with *Monroe Community College* (MCC) to better prepare Monroe HS students for college and for high demand jobs in the local economy. Specifically, the partnership will focus on enhancing math, science, and language skills. MCC will:

- Provide a comprehensive dual enrollment program offering specific pathways in math, science, and the Spanish language;
- Offer those integrated services so that as the dual enrollment program matures students are on track to earning credits toward a certificate or degree;
- Explore how to best introduce students to the needs and experience of the local economy, especially in high demand fields within the STEM area;
- Recognize the need to respond to the bilingual needs of this specific student population.

MCC and RCSD will

- Identify those degree programs that present a clear and direct career pathway for Monroe HS students, focusing on high demand needs in math, science, and language;
- Engage in curriculum mapping that aligns Monroe HS curricula to first-year gateway courses at MCC, promoting clear expressions of readiness;
- Establish a responsive process to identify potential dual enrollment students, to advise the student and family of the program, to test and enroll the student, and to facilitate payment;
- Identify potential faculty development activities focused on STEM, especially on high impact pedagogical practices;
- Design and fund a summer institute for Monroe HS students beginning in 2014.

Table 4. RCSD and Monroe Community College Partnership

Timeline	Area of Focus	Desired Outcome
Planning Period	Economic Development of Rochester/Monroe County	Determining three degrees that are key to this region and are in demand
Year 1	Intense Planning: Identify Courses for Summer Institute and consecutive years based upon degrees determined and desired sequence	Hire teachers from RCSD and MCC to work together to align curriculum so a syllabus can be created for each class offered within the respective subject areas
Year 2	Full execution of programming and close monitoring of rigor, student engagement, and proficiency levels	Students earning dual enrollment credits
Year 3	Full execution of programming and close monitoring of rigor, student engagement and proficiency levels	Double the amount of students earning dual enrollment credits

All dual-credit courses offered with MCC will

- Be aligned with college and work expectations;
- Be clear, understandable and consistent;
- Include rigorous content and application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Be informed by other top performing countries, so that all students are prepared to succeed in our global economy and society;
- Be evidence-based,

- Align academic standards in HS with the knowledge required for college and work place success (Common Core State Standards), and
- Back-map standards to create a coherent, focused program that truly addresses the needed skill set.
-

MCC and RCSD will identify KPIs for each strategy and establish a beginning benchmark and meet on a regular basis to evaluate the interventions and the programs and use evidence to determine future actions.

2.F.ii Evidence of Partner Effectiveness Chart

The Partner Effectiveness Chart is included with this application.

2.F.iii Holding Partners Accountable for Their Performance

Partner effectiveness is based on clear-cut goals, an articulated vision and measurable outcomes. RCSD will focus on productivity, efficiency and effective performance of the partners' systems and frameworks, its processes, and roles. It is about adding value through changes in the desired outcomes, and the way those outcomes are achieved. In summary, RCSD will hold partners accountable by looking at the following criteria:

1. Effective communication - Regular, straightforward communication based on trust and clear and simple reporting.
2. Common values - A clear understanding of each other's values with mutual commitment to shared goals and responsible behavior to each other.
3. Long-term commitment - Supports the core of the grant and sees through the goals and desired outcome by monitoring and adjusting based on leading indicators.
4. Transparency - Clear expectations and consistent meeting times where performance targets can be reviewed and all stakeholders are informed collaboratively of the progress being achieved or the need to adjust and change trajectories.
5. Shared Learning - Teacher by in and levels of student proficiency increasing based on in-depth professional development.
6. Contextual awareness - A deep understanding of the local context and work on the ground.
7. Organizational growth - Including both financial and non-financial support that allows partners to 'scale up' their work and support schools to move along the Diagnostic Tool and escalate their HEDI rating from one category to another based upon documented evidence within a specific tenet area.
8. Participatory processes - The importance of having a designated process for monitoring and evaluation is a key component of partnership effectiveness.
9. Moral Support - A key factor (both ways) for keeping all motivated.

In the end, partnership effectiveness is based on measurable outcomes that lead to student achievement. It requires being able to change and modify the conduit based on relevant data. A critical path that warrants accountability from Generation Schools, Monroe Community, and the District based on specific targets and outcomes is needed.

2.G. ORGANIZATIONAL PLAN

2.G.i Management and Team Structure

An organizational chart for Monroe HS is attached to this application.

2.G.ii Function of Day-to-Day Operations

Each member of the school leadership team is responsible for the management of a defined curricular department, grade level, and/or operational function as summarized in Table 4.

2.G.iii Implementation of the Annual Professional Performance Review

Implementation of the Annual Professional Practice Review (APPR) for Monroe's instructional staff will be the central theme for professional learning offered at the school level. Beyond the District-level professional development sessions that instructional staff will attend, the professional learning calendar sessions for Monroe HS will correlate to one of the Professional Practice domains from the Danielson *Framework for Teaching* used for teacher evaluation. These specific trainings will concentrate on the use of data in decision-making, implementation of the Common Core, and research-based instructional strategies to support English Language Learners and Students with Disabilities. Alignment of the elements of the Domains will further support instructional staff as they develop skills and practices of highly effective teachers. Additionally, department meetings will explicitly connect the identified highly effective teacher practices and the available data to best meet the needs of the students. The Teachscape *Framework for Teaching Effectiveness Series* will be utilized during department meetings to provide online examples of highly effective teachers and prompt collegial conversations. The documentation for teacher observations and classroom walkthroughs will be monitored by the principal and /or the principal's designee.

The Teacher Incentive Fund (TIF) is a Performance-Based Compensation System operating in Monroe High School. As a TIF school, all RTA and ASAR members are eligible to earn stipends in pursuit of professional development surrounding the Regents Reform Agenda of APPR, Common Core State Standards, and Data Driven Instruction. Teachers who are evaluated as Highly Effective may open their classroom as a model and receive an incentive of 10% of the average teacher's salary (approximately \$6,000). The building principal at Monroe High School is also eligible to earn an incentive bonus of 10% of the average principal's salary (approximately \$10,000) if he or she is rated as Highly Effective under the APPR rubric.

As additional incentive towards professional development, the RCSD offers all RTA members the option to earn a stipend should they complete specified numbers of hours of professional development. When combine with the Teacher Incentive Fund, tenured teachers could earn as much as \$2,400 in professional development stipends.

2.G.iv APPR Calendar Schedule

A calendar schedule of events is attached.

2.H. EDUCATIONAL PLAN

2.H.i Curriculum

The ELA curriculum will include an integration of NYS Common Core learning modules that focus on reading, writing, listening, and speaking in response to high-quality texts. Curriculum modules will sequence and scaffold content that is aligned to the CCLS for ELA and Literacy and the PARCC Frameworks. Modules may include several units and each unit may include a set of sequenced, coherent progressions of learning experiences that build knowledge and understanding of major concepts. Specific curriculum for Grade 9 (Introduction to Literature and Composition), Grade 10 (World Literature) and Grade 11 (American Literature) will be developed for implementation in 2013-14. The core instructional program for mathematics accounts for key grade-level focus areas determined by the CCSS. Teachers will continue to implement the Common Core using RCSD developed units and incorporating the NYS Common Core curriculum modules as they become available. Instruction will significantly narrow and deepen the scope and content of how time and energy is spent in the math classroom. The Social Studies core program integrates the CCLS for literacy in Social Studies, the NYS Social Studies framework and the Social Studies Practices to articulate skills necessary for college and career readiness. For grades 9-12, core courses include Global History and Geography I and II, U.S. History and Participation in Government and Economics. Science curriculum will incorporate the Next Generation Science Standards with the CCLS for literacy in Science. The core courses for grades 9-12 include Living Environment, Earth Science, Chemistry and Physics. The foreign language and bilingual core curriculum will utilize the New Language Arts Progressions and the Home Language Arts Progressions. These resources will be used as a guide for planning instruction for students who are learning a foreign language or who are developing their home languages.

In compliance with regulations for ESL services, and cognizant of the needs of the language learner and their proficiency levels, ELL students will be given access to all grade-level core instructional content instruction. Additionally, students with disabilities will have equal access to all aspects of the RCSD curriculum. The services, supports, and modifications will be designed, implemented, and progress monitored to ensure maximum educational benefit.

2.H.ii Instruction

The instructional strategies that will be used by Monroe teachers utilize both the NYS curriculum as well as existing resources to deliver instruction that is systematic and explicit, purposeful, and rigorous. There are six shifts that the Common Core Learning Standards (CCLS) require of Monroe HS if it is to be truly aligned in terms of curricular materials and classroom instruction. Continuation of training on the Common Core State Standards (CCSS) and instructional shifts combined with Monroe attendance and participation in the NYSED

Ambassador Training for the NYS Common Core Curriculum will correlate with District and school professional development sessions supported by administration, coaches, and Network Team Leaders. Events of instruction in both required and core courses will be arranged to reflect all six instructional shifts in both ELA and Math by accelerating learning by means of making meaningful improvements to the quality and quantity of instruction.

Common Core Learning Standards - ELA Shifts

Shift 1	Balancing information and literacy text	Students read a true balance of informational and literary texts.
Shift 2	Knowledge in the disciplines	Students build knowledge about the world (domains/content areas) through TEXT rather than the teacher or activities.
Shift 3	Staircase of Complexity	Students read the central, grade appropriate text around which instruction is centered. Teachers plan and incorporate more time and support in the curriculum for close reading.
Shift 4	Text-based Answers	Students engage in rich and rigorous evidence based conversations about text.
Shift 5	Writing from Sources	Writing emphasizes use of evidence from sources to inform or make argument.
Shift 6	Academic Vocabulary	Students constantly build the transferable vocabulary they need to access grade level complex texts. This can be done effectively by spiraling like content in increasingly complex texts.

Events of instruction in both required and core courses will be arranged to reflect all six instructional shifts by accelerating learning by means of making meaningful improvements to the quality and quantity of instruction.

Phonics/Foundational Skills. Teachers will continue to use Foundations as their core phonics program to address phonemic awareness, phonics, and vocabulary. Revised pacing guides and instructional guidance documents will support the CCLS implementation.

Whole Group Reading Instruction. The time that is typically spent using textbooks will now incorporate the CCLS Reading Comprehension Units. The reading units that have been developed will guide students through the higher order comprehension skills highlighted in the CCLS. Within each unit, the reading standards and skills have been broken down into teaching points. These teaching points will be taught through read-aloud focused lessons. Teachers will use think-alouds to model the teaching point within a given text (or part of a text) and will also provide students with opportunities to try out the new learning within the context of the read aloud. Students will not only watch the teacher model the teaching point, but will also be asked to think, talk, or write responses to the text. Lesson length will vary by grade level, but should take no more that 20 – 30 minutes, including vocabulary instruction. The commitment to daily

comprehension instruction via shared text (read aloud) ensures that all students have opportunities to meet the demands of the CCLS.

Vocabulary. When a teacher chooses to use a text other than the Current textbook Main Selection as the anchor text for read-aloud/think-aloud instruction, appropriate vocabulary words should be selected based on student needs as well as on criteria for choosing Tier 2 vocabulary words. If few words are selected carefully and instruction is explicit and appropriately sequenced, students should be able to successfully access both the vocabulary words taught through the whole group read-aloud instruction as well as vocabulary words introduced and taught during small group instruction.

Small Group Learning Instruction. Teachers should think about using weekly planners to guide their work with students in small groups. Reinforcement of CCLS and additional instruction targeting grade level key fluencies should be emphasized.

Writing. The writing topics in the NYS CCLS units have been designed to reflect the increased emphasis on writing instruction evident in the CCLS. Writing units are organized by writing type (argument, informational, narrative) and will be placed along corresponding reading units (e.g., when students are studying characters in fiction, they will be writing narratives). Each writing unit will have a rubric aligned to the CCLS. This rubric will guide students through the writing process: generating ideas, drafting, revising, and editing. Similar to the reading comprehension units, the writing standards and skills have been broken down into teaching points. These teaching points will be conveyed through daily 10-15 minute lessons in which the teacher quickly models the new writing strategy and students have a short opportunity for guided practice. After the short writing lesson, students will always have time to work independently on their writing, which teachers offer support to individuals or small groups. The CCLS emphasize the importance of volume and independence, so it is critical that students are provided with writing time each day to build stamina and skill.

Common Core Learning Standards - Math Shifts

Shift 1	Focus	Teachers significantly narrow and deepen the scope of how time and energy are spent in the math classroom. They do so in order to focus deeply on only the concepts that are prioritized in the standards.
Shift 2	Coherence	Administrators and teachers connect the skills and strategies within and across core classes so that students can build new understandings.
Shift 3	Fluency	Teachers use data to determine student needs in calculations and structures class time and/or homework for students to practice core functions.
Shift 4	Deep Understanding	Students deeply understand and can articulate this understanding through oral and written expression.
Shift 5	Application	Students can use their understanding by choosing the appropriate concept for application.
Shift 6	Dual Intensity	Students are practicing and understanding. There is balance between deep understanding and application to real world issues and problems.

Events of instruction in both required and core courses will be arranged to reflect all six instructional shifts by accelerating learning by means of making meaningful improvements to the quality and quantity of instruction.

Fluency: The CCLS explicitly call for fast and accurate computation. Fluency is best addressed through short daily routines such as times fact tests, mental math exercises and number talks. Elementary students should spend at least 25 minutes per week practicing the critical fluencies.

Conceptual Understanding. The heart of the CCLS is that teachers must support the development of deep conceptual understanding, not just algorithms and answer-getting. Class time should be structured to support students' ability to access concepts from a number of perspectives. Teachers are encouraged to use a variety of instructional strategies to build math knowledge so that students see math as more than just a set of discrete procedures. Approximately 150 minutes per week should be spent developing conceptual understandings.

Application. Students demonstrate deep conceptual understanding of core math concepts by applying them to new situations. Teachers must devote time for students to use math and choose the appropriate procedure for application without prompting. There should be a connection established between math and the real world. Approximately 50 minutes per week should be spent applying learned math.

2.H.iii Use of Time

Monroe HS will expand the hours and days in their school schedules to create integrated learning experiences for all students that are responsive to students' needs and the desired outcome for students to reach higher levels of proficiency and upon graduation have the necessary skills to be career and college-ready.

Monroe's core instructional program operates on an eight-period day. In Monroe's school redesign, an expanded learning model will be implemented, and the school will add two additional periods, one in the morning and one afterschool, making it a ten-period day. The longer school schedules will help Monroe improve student achievement, as well as motivate and engage students by:

- Providing more instructional time in math, literacy, science and other core subjects to enable students to meet state standards and have a level of readiness that will allow them to earn dual enrollment credits at Monroe Community College;
- Integrating enrichment and applied learning opportunities into the school day that complement and align with state standards and 21st century skills; and
- Scheduling and organizing more time for planning, analysis, lesson design and professional development for teachers including, in some cases, the professionals from their partnering community-based organizations.

In addition to expanding the school day, intensive summer institutes will occur for students in grades seven and eight that will focus on the CCLS ELA shifts. Teachers will also receive intensive professional development in the CCSL ELA shift during this institute. In Years 2 and 3 of the grant, students will have the opportunity to take college-level courses in math, science and language. The courses will be taught dually by an RCSD teacher and a college professor.

Generation Schools will be Monroe HS's partnering organization that will aide its work and help Monroe "rethink" time so that 300 additional student contact hours are available. They will provide technical assistance and guidance on how to create an ideal schedule to ensure professional development and common planning time is embedded in the school day. In addition, they will share their design model so Monroe can build in the needed supports that are essential to the transformation of the school.

2.H.iv Data-Driven Instruction/Inquiry (DDI)

As a function of Data-Driven Instruction/Inquiry, Math and ELA teachers, as well as other content area teachers, will schedule common interim assessments as provided by the District for each given curriculum. These Common Assessments/Performance Tasks will be administered by the content area teachers and will reflect Common Core state standards. Moreover, they will be administered in class with appropriate modifications at the minimum of one Common Assessment/Performance Task per marking period. These will be administered in a formal test setting.

Upon completion of the Common Assessments/Performance Tasks, these tests along with other student work will be deconstructed collectively by each of the given instructional teams during common planning time. Results will be shared with appropriate administrative members and counselors. There will be opportunities to analyze the Common Assessments/Performance Tasks and student work, collect data and artifacts, and exact alterations to instructional practices based on the data collected. Instructional coaches will be available to support teachers in the collection and analysis of the data, particularly as said data pertains to the SIOP model of instruction. Lastly, department meetings will be designated as times for student work to be revisited and re-analyzed in order to adjust instruction appropriately in each of the content areas based on the collected data.

2.H.v Student Support

RCSD's mission is to educate all students to their highest level of academic achievement and to foster each student's social and emotional development. Implicit in this mission is the need to address barriers to student success as they arise. Such barriers frequently include **educational and social challenges** (learning disabilities, language barriers, and attendance), **external stressors** (lack of basic needs such as food, shelter, medical care, or the presence of violent environments) and **socio-emotional issues** (depression, anxiety, school phobia, conduct disorders). Schools alone, however, cannot remove all the barriers to student learning and need partnerships with youth serving, health and human service agencies to assure student success and well-being.

Student and Family Support Centers are formally developed sites and support structures located in or adjacent to Rochester City Schools. Centers are designed to provide students and their families ready access to community services that respond to identified needs, support academic success and personal growth and are beyond the scope of what schools can offer to meet these needs. In 2010-2011, Monroe HS's Student Support Center served 53% of the student population (n=709). More than 330 students have been served to date this school year. Most students served are General Education students (84%) and have GPAs less than 2.0; 77% of those served have been promoted to the next grade level.

Agency partners at Monroe HS and the support services they provide are:

- Center for Youth - Alternatives to Suspension,
- Hillside Work Scholarship, and
- IBERO/PRYD - Bry's Mentoring, alcohol prevention services, pregnancy prevention services.

The University of Rochester School of Nursing will open a School-Based Health Clinic at Monroe HS in 2014. The clinic will provide access to primary health care and behavioral nurse practitioners.

In September of 2007, the NYS Board of Regents approved multiple amendments to 8 NY Code of Rules and Regulations that requires schools to establish an Response to Intervention (RtI) policy and procedures for students. All RCSD schools have instituted RtI, including Monroe HS, with interventions that may vary from research-based programs to strategies aligned to the CCLS. Response to Intervention integrates assessment and intervention within a multi-level prevention system to maximize student achievement. With RtI, Monroe HS can use data to identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student's responsiveness, and identify students with learning disabilities (NCRTI, 2010).

RCSD's RtI Framework uses a variety of assessments that are used to support decisions about a student's at-risk status, response to instruction/intervention, and the nature of the instruction. These include universal screening, progress monitoring, and diagnostic assessments. Each assessment type is used at different points within an RtI process for different purposes.

Screening is an assessment procedure used by the RCSD which is characterized by brief, efficient, repeatable testing of age-appropriate academic skills (e.g., identifying letters of the alphabet or reading a list of high frequency words) or behaviors. Screenings are conducted for the purposes of initially identifying students who are "at-risk" for academic failure and who may require closer monitoring, further assessment, or supplemental instruction.

When screening English Language Learners (ELLs), consideration of students' language dominance and language of literacy instruction is essential in determining which assessments best measure the reading level of English Language Learners. Additional assessment is often needed to determine the risk-status of students whose native language is not English. Students with strong native language literacy skills may require different instructional supports than students with the same English instructional profile and weak native language literacy skills.

Students with lower language proficiency in English are likely to need substantial language support in addition to strong reading instruction to achieve reading comprehension at expected levels. Collecting language proficiency data in addition to using the reading screening measures will help to determine the extent and kind of reading and language support students will need to meet important reading goals (NCRTI, 2010).

For screening Students with Disabilities, curriculum-based measures utilized for universal screening are assessment instruments, not teaching tools. Students should not receive practice administrations, extra time, or coaching beyond what is specified in the standard procedures. Administration accommodations may, in some cases, be made for students with special needs who receive accommodations in their general academic tasks. Accommodations that would provide an advantage, such as giving additional time, are not permitted.

Progress monitoring is the practice of assessing student performance using assessments on a repeated basis to determine how well a student is responding to instruction. Data obtained from progress monitoring can (1) determine a student's rate of progress; (2) provide information on the effectiveness of instruction and whether to modify the intervention, and (3) identify the need for further or additional information. Progress monitoring data is also used to inform decisions regarding a student's movement through tiers of more or less intensity. The frequency of progress monitoring is determined by the intensity of intervention; the higher the intensity of the intervention, the more frequent the need for progress monitoring.

Diagnostic Assessments provide greater detail about individual students' skills and instructional needs. They are typically administered to students who fall significantly behind an established benchmark or when such students have not demonstrated sufficient progress (Center on Teaching and Learning). Diagnostic assessments may be administered by specialized staff such as a school psychologist or a reading specialist. Diagnostic assessment can be a tool for crafting the most appropriate instruction for students. These assessments can provide valuable insight into a student's current level of performance, including strengths and areas in need of improvement. Inquiries regarding diagnostic assessments should be reviewed by the Building-Based Problem Solving Team.

2.H.vi School Climate and Discipline

Monroe HS is in the fifth year of its implementation of Restorative Practices. Restorative Practices bring people together to build community or repair harm caused by wrongdoing. Peace Circles, Restorative Conversations, Community Conferences, and Peer Mediation are all examples of Restorative Practices. At Monroe, all of these restorative techniques are used to build and strengthen relationships with one another thereby creating a sense of safety and belonging in all students and staff.

During the first four years of implementation, Restorative Practices were implemented building wide. This year, the focus has been placed on the eighth grade students. Out of 238 eighth graders, 92 have either repeated the seventh grade or are currently repeating the eighth grade. The use of Restorative Practices along with referrals to the school's Student and Family Support Center community agency programs such as Center for Youth, IBERO, and Hillside

Work Scholarship Connection play a critical part in helping students work toward achieving academic, social, and emotional success.

These efforts are supported by Monroe HS's In-School Support (ISS) room and Alternative to Suspension (ATS) room. The staff in these two sites affords students the opportunity to address areas of opportunity and correct behaviors that impact their ability to succeed in classroom. The Alternative to Suspension program is designed to offers students' academic and social/emotional support during the time they are assigned to the program. In the ATS room there is a certified RCSD teacher to offer academic support for three (3) hours of the day which is what the students need to complete the assignments from their core classes. The students also receive two (2) 45-60 minute workshops every day from research-based curriculum. The workshops that are offered cover a variety of subjects with a focus on violence and life skills. The workshops are delivered by the Social Learning Specialist who receives training from the Center for Youth. Students in the ATS room get to build positive relationships with adults and spend time in an alternative setting where they can get one on one support both in academics and social/emotional wellness. Students are able to build a relationship with adults who they can come to for help if the student faces obstacles in the future.

2.H.vii Parent and Community Engagement

One of Monroe HS's primary goals is to increase parent participation in all aspects of the school's operation. This effort has been addressed by increasing the number of parents previously participating on the School-Based Planning Team. The creation of a parent center has also been initiated that and provides a physical space for parents in the school and opportunities for parents to learn how to engage as partners in their child's education. Monroe HS is now providing parent leadership training workshops that are designed to help inform, empower, and celebrate parents. It is Monroe HS's belief that parents work very hard for their children and they need recognition for their efforts. The national council of RASA (NCLR) Parent Engagement, "Padres Comprometidos" curriculum was created to 1) provide parents with the tools to communicate positively with their children and the school, 2) inform parents and families of the role they play in educating their children, and 3) help parents understand the grading, testing, funding process and graduation requirements. Some workshop examples are: modeling positive behavior, funding that affects Monroe HS, a checklist for college, conversations with the principal, and understanding adolescents.

Moving forward Monroe HS is committed to hosting more community forums for the bilingual council, parent and community groups, having a standing item for the SIG on our SBPT agenda, providing updates in our school newsletter and the school's webpage. All these efforts should improve our ability to promote shared decision making with our parents constituents.

2.I. TRAINING, SUPPORT, AND PROFESSIONAL DEVELOPMENT

2.I.i Involvement of School Leadership and Staff in Plan Development

Describe the process by which the school leadership/staff were involved in the development of this plan.

Monroe's professional learning's plan was developed by one of Monroe's school administrators (Coordinating Administrator of Special Education) with the support of RCSD's Network Team. The plan was created after identifying the needs of teachers and school administrators using data collected during school walkthroughs, teacher interviews, classroom observations, and discussion with other members of the leadership team. District wide professional learning needs are also incorporated.

2.1.ii Pre-Implementation Events

A chart of pre-implementation period events is attached.

2.1.iii Implementation Period Events

A chart of implementation period events is attached.

2.1.iv Schedule and Plan for Regular Evaluation

As outlined in the Professional Development chart, Monroe HS will be participating in and providing Professional Development with a focus on RtI, co-teaching, School-Wide data review, and the implementation of the Common Core State Standards. The administrative team will meet on a weekly basis to evaluate the effects of this training by discussing the data collected through walkthroughs, formal observations, and student data. After examining these data, the team will adjust and modify the current Professional Development Plan as needed to accommodate the needs of Monroe staff, resulting in an increase in student achievement.

2.J. COMMUNICATION AND STAKEHOLDER INVOLVEMENT/ENGAGEMENT

2.J.i Updating Stakeholders on SIG Implementation

SBPT will be used as a method for communicating with parent representatives. It is our goal that this body will meet at least once a month and will schedule meeting with their constituents to provide updates. Minutes of these meeting will also be posted on our school's website. The parent constituency will be afforded a time and a place to hold monthly parent meeting on our campus.

Minutes of our meetings will also be available to all parents and community partners in Monroe's newly created Parent Center. At this location, parent will be able to access a hard copy of updated information or use the computer center to access this information.

Monroe will also publish a quarterly newsletter in English and Spanish that will be mailed to every parent's home. In this newsletter we will also publish the topics for our monthly parent workshops and updates will be provided to those who attend the meetings. Parents will be updated of the many opportunities by using our "Robo-calls" phone system which provide automated message in English and Spanish.

SIG Communication for Monroe community includes: bi-weekly Robo calls, quarterly parent newsletter updating parents of new information about SIG, update and post-information on the school website on a monthly basis, monthly informational workshops through the parent center, emails/contacts through Monroe community partners (Pencil partner, IBERO, Center for Youth, Hillside), attending neighborhood association meetings.

2.K PROJECT PLAN AND TIMELINE

2.K.i Goals and Key Strategies for the Pre-Implementation Period

Goals and strategies for the pre-implementation period are to:

- Partner with Generation Schools to re-organize existing resources at Monroe HS in preparation for implementation of the Expanded Learning operational model.
- Provide professional learning to Monroe HS teachers to support transformation plans.
- Identify MCC college degree opportunities that align with areas of greatest economic growth and employment opportunity in Rochester and Monroe County.
- Identify community organizations who will provide the social-emotional and recreational components of the expanded learning day.

2.K.ii Specific Actions/Activities That Are Aligned to Pre-Implementation Work

Activities to be delivered during the pre-implementation period include:

- Development of a new school schedule that incorporates expanded learning time. [Generation Schools, August 2013]
- Development of a new school-side staffing plan. [Generation Schools, August 2013]
- Deliver an intensive two-week summer institute focused on CCLS ELA instructional shifts. [RCSD, July 2013]
- Provide differentiated professional learning for all teachers based on caseloads linked to the Core Instructional Program (e.g., Ramp Up Literacy and onRamp to Algebra). [RCSD, Summer 2013]
- Hire an Outside Educational Expert (OEE) to evaluate, monitor, and help sustain Monroe HS's transformation plan. [RCSD, April 2013]
- Rewrite Monroe HS's Comprehensive Educational Plan using data from the NYSED Integrated Intervention Team (IIT) visit. [RCSD, June 2013]

2.K.iii Goals and Key Strategies of the Implementation Period

Goals and strategies for the Year 1 implementation period are to:

- Implement the expanded school day schedule in September 2013.
- Collaborate with Monroe Community College to align District courses and with MCC courses to facilitate college readiness.
- Identify students ready to take college-level courses.

- Align curricula of identified MCC courses with Monroe HS courses for dual-credit offerings.
- Deliver a summertime, dual-credit course to students demonstrating readiness.
- Ensure ELL and SWD populations are provided full access to the Core Instructional Program and all services needed for execution at the highest level of rigor.
- Provide ramp-up experiences for students to increase student achievement.

2.K.iv Early Indicators of Successful SIG Plan Implementation

Early indicators of successful implementation of this transformational plan are:

- 300 minutes/hours of student contact time added to the school year
- Development of dual-credit courses in math, science, and/or language.
- Acquisition of college credits by students.

2.K.v Leading Indicators of Success

Leading indicators of success will be examined on a quarterly basis. The data will be collected by the Executive Director of School Innovation in collaboration with the School Principal. For purposes of analysis, a team will be assembled that will include the Executive Director of School Innovation, Monroe principal, school chief, Deputy Superintendent, Network Team Leader, Director of Expanded Learning, and a parent representative.

School-level baseline data will be analyzed and monitored to see if growth is occurring toward measurable targets. Leading indicators of success will also be examined. Assistance from Generation Schools will be a priority to ensure the correct leading indicators are chosen and based on success. Once identified, they will zealously be monitored for impending success or failure. The team will collaboratively decide how to act on what the indicators reveal and will use concrete data to target assistance. These indicators will be finely tailored based on the specific school needs. The grant monitor will frequently visit the school to monitor in-between quarters, engage in communication with all stakeholders, and recruit key staff to assist in the management team that will prompt the organization to make strategic decisions.

If the school is not making progress on this, increased support from SUPES academy, the OEE and Generation Schools will provide additional support so that Monroe can immediately take steps to change the trajectory. If the school is making progress it will give the redesign the go ahead to continue the venture. Either way, immediately following the quarterly meeting, the Principal will ensure communication to all is being delivered to all stakeholders.

2.K.vi Goals and Strategies for Year-Two and Year-Three

Goals and strategies for the Years 2 and 3 Implementation periods are:

- Students will take dual-credit course from RCSD and Monroe Community College that will jumpstart credit acquisition for targeted MCC degree;
- All other initiatives (i.e., expanded learning, ramp up protocols, support of ELL and SWD populations) will continue;

- All work within the RCSD, both instructional and operational, will be driven by the Regents Reform Agenda;
- All RCSD leadership and teachers will possess a deep understanding of the Regents Reform Agenda and a common vision for District wide implementation;
- The physical infrastructure of the school building will be modernized to meet the ideal academic needs; and
- Teacher-Leader Effectiveness Continuum will be strengthened so that effective and highly effective teachers teach all students.

SUPPORTING LABOR-MANAGEMENT DOCUMENTATION FOR SECTION 1.B.III

A complete copy of the Contractual Agreement Between the Rochester City School District and the Rochester Teachers Association can be found at:

<http://digitalcommons.ilr.cornell.edu/cgi/viewcontent.cgi?article=2954&context=perbcontracts>

Section 24.5(a) - Exempting schools from the regular transfer process (P. 29 of Agreement)

a. By January 1st of each school year the Superintendent and RTA President may identify a number of specific positions and/or schools that will be exempted from the voluntary transfer process. The purposes for such exemption shall be to enhance the District's ability to recruit new staff, provide stability, and/or support organizational change as well as respect for a school's culture. Such positions and/or schools shall be mutually agreed to by the Superintendent and the RTA President.

Section 50 - Living Contract Committee (begins on P.86 of Agreement)

1. The parties agree to establish a joint committee to provide for regular, ongoing discussions and decision-making on matters germane to improved union-management relations and more effective overall system operations. The Living Contract Committee shall be co-chaired by the Superintendent of Schools and the President of the Rochester Teachers Association.

2. This joint committee shall be authorized to discuss any issue of mutual interest or concern and to reach tentative agreements on issues in a timely manner without delaying action until the expiration and renegotiation of the collective bargaining Agreement. The joint Committee shall also have the power to amend this Agreement, provided that any substantive amendments shall be subject to internal ratification and approval procedures of the District and Association.

...

4. The overall charge to this joint committee shall include but not be limited to the following:
a. To administer and implement the contractual Agreement, and to resolve disputes or problems in the interpretation and application of the Agreement as they arise;

....

5. The joint committee shall have the following powers and duties:

...

c. To revise the provisions of this Agreement in order to clarify language and meaning, correct contradictions or inconsistencies, remove outdated language, and organize and streamline it.

d. To consider and approve transfers of individual teachers between schools if reason is shown without regard to Section 24 of this Agreement. Such transfer may be proposed by the Superintendent or the RTA President. Transfers under this subdivision may be voluntary or involuntary, and shall not be grievable. Such transfers shall not impair the transfer rights of other teachers, or any transfer rights of the Superintendent.

...

9. a. The parties intend by this provision to establish School-Level Living Contract Committees (SLLCCs) pilots in no more than six (6) of the district's schools during the 2004-2005 school year.

b. The purpose of the SLLCCs is to increase school autonomy and to improve student achievement. The parties agree that SLLCCs at selected sites will be authorized to enter into contractual agreements different than provisions contained in the central collective bargaining agreement.

c. SLLCCs may not create agreements which suspend or change the contractual rights of employees at other work locations or change the terms and conditions for any KTA member at other work locations.

d. At each SLLCC pilot site, the principal and the designated RTA Faculty Rep shall be authorized to sign off on contractual provisions negotiated by the SLLCC.

e. Both the District and the KTA must establish their own "ratification" procedures for agreements reached by SLLCC.

f. In the initial selection process for SLLCC pilot schools, the RTA bargaining unit members must approve the school's participation in accordance with RTA ratification procedures.

g. The Joint living Contract Committee shall serve as a resource to the school-level committees. Any procedural issues which a SLLCC is unable to resolve will be referred to the central Living Contract Committee for immediate consideration.

h. The Joint LCC shall establish a mechanism for monitoring the progress of SLLCCs and for supporting the school-level implementation. The parties agree to jointly design an evaluation process for the SLLCC effort focusing on the stated purposes in item c above.

i. At any point during the life of this agreement, either party at a school engaged in the SLLCC pilot may terminate their participation by petitioning the Joint Living Contract Committee. The Joint Living Contract Committee will attempt to resolve problems leading to such requests; however, approval to end participation will not be unreasonably withheld.

j. For the initial implementation, the parties agree that the following contractual provisions shall be within the authority of SLLCC deliberations:

Section 16 Professional Dan and Responsibilities

Section 20 Parent-Teacher Conferences

Section 21 Teacher Conference and Visiting Days (e.g., resources for school-level professional development)

Section 22 Teacher Assignments

Section 23 Secondary School Teacher Assignments

Section 27 Teaching Conditions

Section 28 Teacher Facilities

Section 33 Flexible Length of the Pupil Day

Section 34 Reports to Parents

Section 46.5 "Activities" only

Section 5 1 Job Sharing

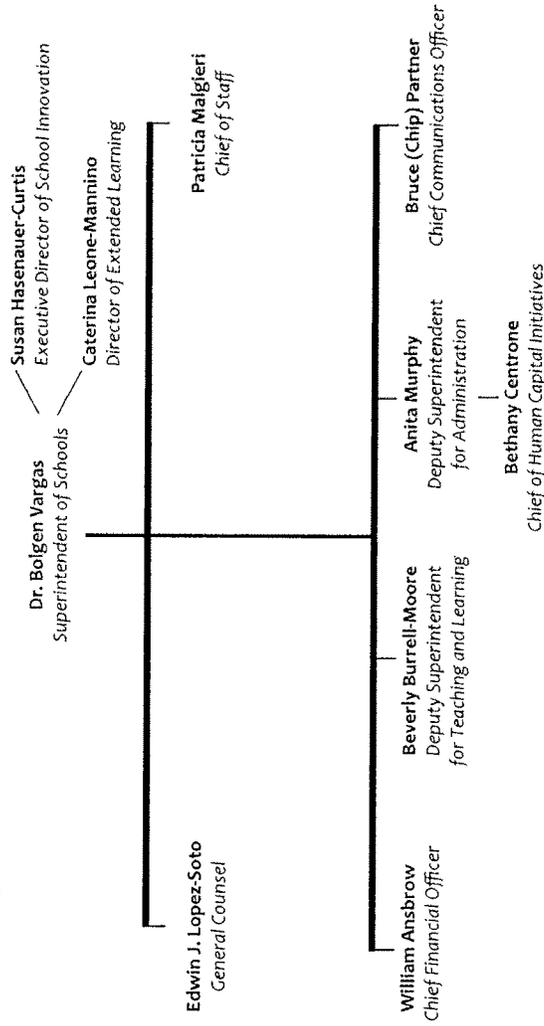
All other contract sections are **not within the authority of SLLCCs**, unless a SLLCC petitions the Joint Living Contract Committee for approval to address another contractual provision and receives approval to do so.

10. Labor Management collaboration shall be a required section of the School Improvement Plan.

District-Level Leadership Organizational Chart
 Section 1.C.1



Rochester City School District
 Executive Cabinet



District-Provided Training to Build the Capacity of Leaders

Superintendent's Academy (April 1, 2013 – August 31, 2013)				
Event	Agent/Organization Responsible for Delivery	Desired Measurable Outcomes	Reported Method	Rationale
01/16/13 Central Office SUPES ACADEMY Session 1	SUPES ACADEMY	Understanding of Roles and Responsibilities	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> will assure each administrator understands their role and function within the organization.
01/30/13 Principals SUPES ACADEMY Session 1	SUPES ACADEMY	Understanding of Roles and Responsibilities	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> will assure each administrator understands their role and function within the organization.
01/31/13 Assistant Principals SUPES ACADEMY Session 1	SUPES ACADEMY	Understanding of Roles and Responsibilities	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> will assure each administrator understands their role and function within the organization.
02/01/13 Assistant Principals SUPES ACADEMY Session 1	SUPES ACADEMY	Understanding of Roles and Responsibilities	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> will assure each administrator understands their role and function within the organization.

<p>02/26/13 Central Office SUPES ACADEMY Session 2</p>	<p>SUPES ACADEMY</p>	<p>Instructional and Operations Leadership</p>	<p>Survey</p>	<p>understands their role and function within the organization. Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure systems and infrastructures support instructional practice.</p>
<p>02/27/13 Principals SUPES ACADEMY Session 2</p>	<p>SUPES ACADEMY</p>	<p>Instructional and Operations Leadership</p>	<p>Survey</p>	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure systems and infrastructures support instructional practice.</p>
<p>02/28/13 Assistant Principals SUPES ACADEMY Session 2</p>	<p>SUPES ACADEMY</p>	<p>Instructional and Operations Leadership</p>	<p>Survey</p>	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure systems and infrastructures support instructional practice.</p>
<p>03/01/13 Assistant Principals SUPES ACADEMY Session 2</p>	<p>SUPES ACADEMY</p>	<p>Instructional and Operations Leadership</p>	<p>Survey</p>	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure systems and infrastructures support instructional practice.</p>
<p>03/25/13 Central Office SUPES ACADEMY Session 3</p>	<p>SUPES ACADEMY</p>	<p></p>	<p></p>	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the</p>

		Common Core Standards/ Data Driven Decision Making	Survey	<p>school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure CCSS are being taught and both formative and Summative assessment data is being used to support student learning.</p>
03/26/13 Principals SUPES ACADEMY Session 3	SUPES ACADEMY	Common Core Standards/ Data Driven Decision Making	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure CCSS are being taught and both formative and Summative assessment data is being used to support student learning.</p>
03/27/13 Assistant Principals SUPES ACADEMY Session 3	SUPES ACADEMY	Common Core Standards/ Data Driven Decision Making	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure CCSS are being taught and both formative and Summative assessment data is being used to support student learning.</p>
03/28/13 Assistant Principals SUPES ACADEMY Session 3	SUPES ACADEMY	Common Core Standards/ Data Driven Decision Making	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District</p>

				<p>Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> and adoption of the Core Instructional Program will assure CCSS are being taught and both formative and Summative assessment data is being used to support student learning.</p> <p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district' s shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.</p>
05/07/13 Central Office SUPES ACADEMY Session 4	SUPES ACADEMY	Social and Emotional Supports	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district' s shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.</p>
05/08/13 Principals SUPES ACADEMY Session 4	SUPES ACADEMY	Social and Emotional Supports	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district' s shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.</p>
05/09/13 Assistant Principals SUPES ACADEMY Session 4	SUPES ACADEMY	Social and Emotional Supports	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district' s shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.</p>
05/10/13 Assistant Principals	SUPES ACADEMY	Social and	Survey	<p>Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS' s new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district' s shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.</p>

SUPES ACADEMY Session 4		Emotional Supports		level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the district's shared responsibility to meet the social and emotional issues needs of students will assure the District is supporting the whole child.
06/25/13 Central Office SUPES ACADEMY Session 5	SUPES ACADEMY	Enhancing Parent/Community involvement in Schools	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the community at-large' shared responsibility to partner with Parents and Community members to provide wrap-around supports.
06/26/13 Principals SUPES ACADEMY Session 5	SUPES ACADEMY	Enhancing Parent/Community involvement in Schools	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the community at-large' shared responsibility to partner with Parents and Community members to provide wrap-around supports.
06/27/13 Assistant Principals SUPES ACADEMY Session 5	SUPES ACADEMY	Enhancing Parent/Community involvement in Schools	Survey	Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on

		Enhancing Parent/Community involvement in Schools	Survey	the community at-large' shared responsibility to partner with Parents and Community members to provide wrap-around supports
06/28/13 Assistant Principals SUPES ACADEMY Session 5	SUPES ACADEMY			Systems and supports are not in place at an optimal level and are insufficient to sustain capacity at the school level. District- and building-level administration and school leadership teams are all at different levels of understanding and states of implementation. Calibration of District Administrators to the NYS's new <i>Diagnostic Tool for School and District Effectiveness</i> 's component on the community at-large' shared responsibility to partner with Parents and Community members to provide wrap-around supports

Superintendent's Academy (September 1, 2013 – August 31, 2014): Training schedule to be identified at the conclusion of current sessions.

District/Executive Level

- Academy Sessions**
- 4 academy instructional days throughout school year
- Ongoing Support**
- 2-3 days of support per functional area + biweekly/upon request coaching
 - District Leadership & Capacity
 - School Leadership Practices and Decisions
 - Curriculum Development and Support
 - Teacher Practices and Decisions
 - Student Social and Emotional Developmental Health
 - Family and Community Engagement

Principal Level

- Academy Sessions**
- 4 full instructional days throughout school year
- Ongoing Support**
- Standard coaching for all schools
 - 1 school visit
 - Biweekly coaching calls with Principal and Assistant Principal

Assistant Principal Level

- Academy Sessions**
- 4 full instructional days throughout school year
- Ongoing Support**
- Standard coaching for all schools
 - 1 school visit
 - Biweekly coaching calls with Principal and Assistant Principal
 - Weekly coaching calls with Principal

District-Provided Training to Build the Capacity of Teachers to Be Effective

Ramp Up to Literacy and onRamp to Algebra (April 1, 2013 – August 31, 2013)	
Event	Rationale
Agent/Organization Responsible for Delivery	Reported Method
Desired Measurable Outcomes	
3/11/13 7-12 Teacher Ramp Up to Literacy	<p>Curriculum Overview; CCSS Shifts Development and Content Training</p> <p>Pearson Inc.</p> <p>Survey, Focus Groups</p> <p>In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.</p>
3/11/13 7-12 Teacher onRamp to Algebra	<p>Curriculum Overview; CCSS Shifts Development and Content Training</p> <p>Pearson Inc.</p> <p>Survey, Focus Groups</p> <p>In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.</p>
3/12/13 7-12 Teacher Ramp Up to Literacy	<p>Curriculum Overview; CCSS Shifts Development and Content Training</p> <p>Pearson Inc.</p> <p>Survey, Focus Groups</p> <p>In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.</p>
3/12/13 7-12 Teacher onRamp to Algebra	<p>Curriculum Overview; CCSS</p> <p>Pearson Inc.</p> <p>Survey, Focus Groups</p> <p>In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of</p>

			Shifts Development and Content Training		student performance in Rochester using Ramp Up and onramp to Algebra protocols. . . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
3/14/13 7-12 Teacher Ramp Up to Literacy	Pearson Inc.		Curriculum Overview, CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
3/14/13 7-12 Teacher onramp to Algebra	Pearson Inc.		Curriculum Overview, CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/13/13 7-12 Teacher Ramp Up to Literacy	Pearson Inc.		Curriculum Overview, CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/13 7-12 Teacher onRamp to Algebra	Pearson Inc.		Curriculum Overview, CCSS	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of

		Shifts Development and Content Training		student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/14/13 7-12 Teacher Ramp Up to Literacy	Pearson Inc.	Curriculum Overview; CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/14/13 7-12 Teacher onRamp to Algebra	Pearson Inc.	Curriculum Overview; CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/16/13 7-12 Teacher Ramp Up to Literacy	Pearson Inc.	Curriculum Overview; CCSS Shifts Development and Content Training	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
5/16/13 7-12 Teacher onramp to Algebra	Pearson Inc.	Curriculum Overview; CCSS	Survey, Focus Groups	In 2006, Henry May, Jonathan Supovitz, and David Perda published the findings of a longitudinal study of

		Shifts Development and Content Training		student performance in Rochester using Ramp Up and onramp to Algebra protocols. . Analyzing 11 years of data, including data from before the implementation of the model, the researchers found substantial long-term gains in student achievement, particularly for the lowest-performing students and minority students. These gains were measured by state tests and other nationally normed assessments.
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Common Core State Standards (CCSS) in English-Language Arts (ELA), Implementation of CCSS in Mathematics, and Data-Driven Instruction (DDI)/Inquiry	Event	Agent/Organization Responsible for Delivery	Desired Measurable Outcomes	Reported Method	Rationale
	4/2/2013 SPED_A Proactive Approach to Defiance and NonCompliance	RCSD	Strategy Use	AVTAR Online Survey	An introduction to the conflict cycle and proactive ways to prevent and/or diffuse problematic behaviors; learning classroom management techniques in efforts to enhance individual behavioral toolboxes to increase relationship building and positive interactions and reactions from students.
	4/4/2013 Gen_ELL and the Common Core	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey	Provides an in-depth analysis of ELLs' language acquisition, cognitive processes, the current demographic trends, and effective instructional practices concerning ELL Instruction. Focus on "The Five Stages of Language Acquisition"
	4/4/2013 Gen_ELL and the Common Core	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey	Provides an in-depth analysis of ELLs' language acquisition, cognitive processes, the current demographic trends, and effective instructional practices concerning ELL Instruction. Focus on "The Five Stages of Language Acquisition"

<p>4/8/2013MTH_Digging Deeper into the Secondary Mathematics of the CCSS: A Focus on Geometry</p>	<p>RCSD</p>	<p>Strategy Use Common Core Standards/ Data Driven Decision Making</p>	<p>AVTAR Online Survey, Pre-Post Test</p>	<p>All students are expected to develop both procedural and conceptual understandings of mathematics while Exhibiting the Standards for Mathematical Practice. In this course, participants will have opportunities to engage in mathematical experiences related to the development of the concepts and skills of the geometry strand that are expected of secondary students. Geometry in 8th and 10th grade is not the same old geometry. Ideas of similarity and congruence are developed using the ideas of transformations. There is an emphasis on developing geometric thinking as well as using modeling to solve real-life problems.</p>
<p>4/9/2013MTH_Developing Mathematical Ideas: Making Meaning of Operations (DMI:MMO)</p>	<p>RCSD</p>	<p>Strategy Use Common Core Standards/ Data Driven Decision Making</p>	<p>AVTAR Online Survey, Pre-Post Test</p>	<p>DMI courses are designed to bring together teachers from kindergarten through middle grades to: - Learn mathematics content - Learn to recognize key mathematical ideas with which their students are grappling - Learn to support the power and complexity of student thinking - Learn to appreciate the power and complexity of student thinking - Learn how core mathematical ideas develop across the grades - Learn how to continue learning about children and mathematics.</p>
<p>4/9/2013 SWPBS_ Universal Systems Team Training Session 7</p>	<p>RCSD</p>	<p>Strategy Use</p>	<p>AVTAR Online Survey; Interview and Student Observation</p>	<p>Building a Culture of Respect (Bullying Prevention) and Proactive Classroom Systems.</p>
<p>4/9/2013MTH_Understanding and Teaching the Common Core: A Hands-On Approach</p>	<p>RCSD</p>	<p>Strategy Use Common Core Standards/ Data Driven Decision Making</p>	<p>AVTAR Online Survey, Pre-Post Test</p>	<p>Exhibiting the Standards for Mathematical Practice. In this course, participants will have opportunities to engage in mathematical experiences related to the development of the concepts and skills of Common Core grade bands.</p>
<p>4/9/2013SPED_IEP Direct Open Lab</p>	<p>RCSD</p>	<p>Accurate Entry Submissions</p>	<p>AVTAR Online Survey</p>	<p>Provides a brief overview of the elements of a quality IEP with an emphasis on writing child specific PLEPs and Measurable Annual Goals. Participants will spend the remainder of the day developing IEPs for upcoming Annual Reviews.</p>
<p>4/10/2013OPE_Parent Liaison and Home School Assistant</p>	<p>RCSD</p>	<p>Communication</p>	<p>AVTAR Online Survey</p>	<p>The Office of Parent Engagement provides monthly Professional Development training for HSA & Parent</p>

Training-Summer Program					Liaisons. This is part of a series of professional learning opportunities.
4/11/2013 AAAS Approaches to Culturally Responsive Teaching & Learning	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey	Continuation of Summer Institute discussing the Center of Culturally Responsive Teaching & Learning founded by Dr. Hollie	
4/11/2013ARTS_2012-2013 Collegial Circle and Book Discussion (Teaching the Music of Six Different Cultures by L. George)	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey; Study Group	Series of PD sessions will focus on the text Teaching the Music of Six Different Cultures. Participants will read the text and engage in discussions about how to combine the RCSD music textbooks with the content of <i>Teaching the Music of Six Different Cultures</i> by L. George.	
4/18/2013SS_2012-2013 TAH Lecture Series - Civil Rights after MLK: Victories and Backlash	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey; Action Research	Offers a deeper understanding of Social Studies materials.	
4/18/2013UPK Getting to the Core (curriculum) From a Movement Perspective	RCSD	Strategy Use	AVTAR Online Survey	Connecting CCSS with children's developmental needs.	
4/23/2013GRN Using Creative Expression as a Resource	RCSD	Social Emotional Understanding	AVTAR Online Survey	Offers a deeper understanding of the dynamics of grief and loss and the effect on student learning and behavior.	
4/23/2013SWPBS Targeted Systems Team Training	RCSD	Strategy Use	AVTAR Online Survey; Interview and Student Observation	Introduction to the critical features of matched interventions for groups of students. Teams will work through designing and planning for one targeted intervention that they may implement in their schools. This will provide the framework for adding additional evidence based interventions.	
5/2/2013Gen Text Based Answers and Writing	RCSD	Strategy Use Common Core Standards/ Data Driven Decision	AVTAR Online Survey	Opportunity to understand and apply Text Based Answers for Writing. Shift Four of the CCSS emphasizes that we impress upon students the importance of not only citing specific evidence to support text, but also engage in rich dialogue surrounding those points of evidence. This course	

			Making			will allow participants to have a hands on task in which questions require rich and rigorous conversation.
5/8/2013 OPE_Parent Liaison and Home School Assistant Training-Conflict Resolution	RCSD	Communication	AVTAR Online Survey	AVTAR Online Survey	Training for HSA & Parent Liaisons: This is part of a series of professional learning opportunities.	
5/9/2013 SS_2012-2013 TAH Lecture Series - Civil Rights Legacies: Looking Ahead	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey	AVTAR Online Survey	Offers a deeper understanding of Social Studies materials.	
5/14/2013 SS_TAH Book Circle: The New Jim Crow	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey: Book Report	AVTAR Online Survey	Offers a deeper understanding of Social Studies materials: <i>The New Jim Crow: Mass Incarceration in the Age of Colorblindness.</i>	
5/14/2013 SWPBS Universal Systems Team Training Session 8	RCSD	Strategy Use	AVTAR Online Survey; Interview and Student Observation	AVTAR Online Survey; Student Work	Topics that will be covered are: Annual Planning, End of the Year Assessments, and End of the Year Wrap-up.	
5/16/2013 Gen_Differentiated Instruction in the Classroom	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey; Student Work	AVTAR Online Survey; Student Work	Exploration of the meaning of differentiating instruction and its importance, in addition to, study of strategies that can be used for differentiating lessons/curriculum.	
5/16/2013 Gen_Differentiated Instruction in the Classroom	RCSD	Strategy Use Common Core Standards/ Data Driven Decision Making	AVTAR Online Survey; Student Work	AVTAR Online Survey; Student Work	Exploration of the meaning of differentiating instruction and its importance, in addition to, study of strategies that can be used for differentiating lessons/curriculum.	
5/21/2013 GRN_Reflecting on Grief in Families, "The Gift of Grief"	RCSD	Social Emotional Understanding	AVTAR Online Survey	AVTAR Online Survey	Offers a deeper understanding of the dynamics of grief and loss and the effect on student learning and behavior.	

ARMANDO RAMIREZ

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Education

State University of New York
Brockport, New York

Bachelor of Science

Criminal Justice May 1991

Master of Science in Education

Reading Teacher May 1995

St. John Fisher College
Rochester, New York

Master of Science in Education

Education Administration 2003

Educational Background

Dean's List
Empire State Minority Honors Scholarship
Teacher's Opportunity Corps Scholarship
Presidential Committee on Women's Rights
CSTEP Scholarship

Certification

Elementary Education (N-6)
Reading Certification (N-12)
Administration (SAS) (SDA)

Experience - Rochester City School District

James Monroe High School
Rochester, New York

Principal
2012 - Present

Rochester City School District
Rochester, New York

Principal on Assignment
2012- 2012

Responsibilities:

- Planning period to develop a transformation plan at James Monroe High School

John Marshall High School
Rochester, New York

Principal
2010 - 2012

Wilson Foundation Academy
Rochester, New York

Assistant Principal - 2 years
Academy Director - 3 years
2005 - 2010

Responsibilities - Assistant Principal:

- Supervisor - Fine Arts Department
- Student Management and Discipline - 7th Grade
- PBIS Administrator
- Parent Support
- Student Recruitment
- Attendance Supervisor

Responsibilities - Academy Director:

- Supervisor - Math, Science and Social Studies Department

Roberto Clemente Elementary School
Rochester, New York

Assistant Principal
2004 - 2005

Responsibilities:

- Supervisor of grades 4-6
- School wide Discipline
- PBIS Administrator
- Development of Teacher Handbook
- Supervisor of Lunchroom Staff
- Attendance Supervisor

Henry Hudson Elementary School
Rochester, New York

Teacher
1991 - 2004

- 2003 – 2004 • Sixth grade Major Achievement Program
- 1993 – 2003 • Sixth grade teacher of all subject areas
- Numerous after-school activities with students
- 1991 - 1993 • First grade teacher of all subject areas

Professional Activities

Co-Host Homework Hotline Television Show WXXI
Member of the NYSUT Task Force on Minority Involvement
Academic Standards and Assessment Policy Committee
Executive Council Member, Rochester Teachers Association
Member of the Rochester City School Portfolio and Report Card Committee
Chairperson of AFT's Lessons for Life Campaign
Member of the Rochester Teachers Association Multicultural Education Committee
Member of the Rochester Teachers Association Negotiations Team

References

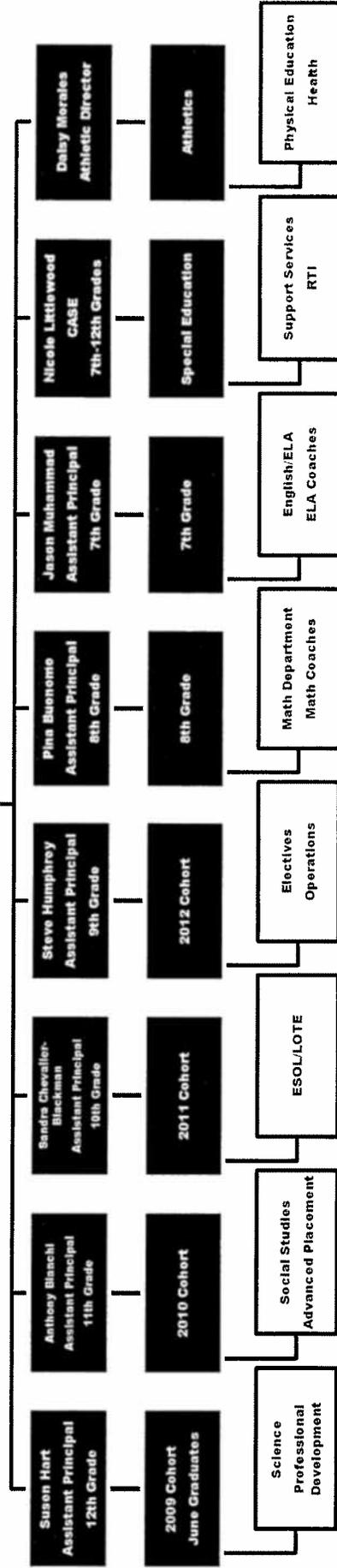
Available upon request

Miscellaneous

Bilingual in English and Spanish

JAMES MONROE HIGH SCHOOL Administrative Team 2012 - 2013

Armando Ramirez
Principal





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"Where academics, citizenship and social responsibility go hand in hand"

School-Based Professional Learning		Who is Responsible	Outcome	Evaluation
Spring 2013	RtI (SPA, SIOP, PBIS): Domains 1, 2, and 4	Extended Learning & Intervention Department School-wide Positive Behavior Support Department Department of English Language Learners Instructional Coaches	Effective planning and implementation of instructional strategies and use of data	Observation and walk-through data Available data sources
Summer 2013	Overview of the Framework for Teaching Observation Process and Schedule Outline Lesson Planning (focus on schedule and Ramp-Up): Domains 1, 3, and 4	Administrative Team Instructional Coaches Network Team	Increase awareness of APPR and effective instructional strategies	Observation and walkthrough data
September 18, 2013	RtI (whole group): Domain 1	Extended Learning & Intervention Department	Effective planning and implementation of instructional strategies and use of data	Observation and walk-through data
September 25, 2013	APPR Overview: Domains 1-4	Network Team	Learning focused conversations	Pre and Post-conference data
October 2, 2013	Goal Setting (drop-in): Domain 4	Network Team	Individual Professional Development Plan	ePerformance: Goal Setting completed

School-Based Professional Learning			Who is Responsible	Outcome	Evaluation
October 16, 2013	Co-teaching (whole group): Domain 1		Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
October 23, 2013	Student Learning Objectives(drop-in): Domains 1 and 3		Network Team	Clarification of process	Completed SLO's
October 30, 2013	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
November 6, 2013	Co-teaching(pairs)/Lesson planning: Domain 1		Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
November 20, 2013	Teachscope: Domains 1-4		Network Team	Clarity on the expectations of an effective and highly effective teacher	Observation and walkthrough data
November 27, 2013	School-Wide Data Review: Domains 1,2 and 3		Administrative Team Instructional Coaches	Targeted plans, adjusted instructional groups, and rigor	Observation and walkthrough data
December 4, 2013	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
January 15, 2013	NYS Testing Meeting: Domain 1		Administrative Team	Clarification of process	Testing schedule
January 29, 2014	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data

School-Based Professional Learning

Who is Responsible

Outcome

Evaluation

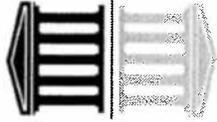
Date	Activity	Who is Responsible	Outcome	Evaluation
February 12, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
March 12, 2014	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
March 19, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
April 9, 2013	NYS Testing Meeting: Domain 1	Administrative Team	Clarification of process	Testing schedule
April 16, 2013	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
April 30, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
May 21, 2014	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
May 28, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
June 11, 2014	NYS Testing Meeting: Domain 1	Specialized Services Department Instructional Coaches	Clarification of process	Testing schedule

Department/Faculty Meetings*

Date	Department/Faculty Meeting: Domains 1 and 3	Administrative Team	Teaching aligned with proficiency levels on the Framework for Teaching	Observation and walk-through data Available data sources
September 11, 2013				
October 9, 2013				
November 13, 2013				
December 11, 2013				
January 8, 2014				
February 5, 2014				
March 5, 2014				
April 2, 2014				
May 7, 2014				
June 4, 2014				

*Integrating a focus on Data, RtI, Teachscape

Pre-Implementation Period Chart for Section 2.I.ii



Monroe High School

Academic Excellence

A United Nations School

Rochester, NY 14607

164 Alexander Street

Ph. 585.232.1530

Fax 585.262.8965

www.rcsdk12.org/monroe

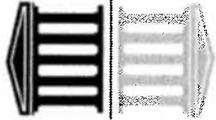
"Where academics, citizenship and social responsibility go hand in hand"

Wednesday Calendar Days 2013-2014

School-Based Professional Learning				
	Who is Responsible	Outcome	Evaluation	
Spring 2013	RtI (SPA, SIOP, PBIS): Domains 1, 2, and 4	Extended Learning & Intervention Department School-wide Positive Behavior Support Department Department of English Language Learners Instructional Coaches	Effective planning and implementation of instructional strategies and use of data	Observation and walk-through data Available data sources
Summer 2013	Overview of the Framework for Teaching Observation Process and Schedule Outline Lesson Planning (focus on schedule and Ramp-Up): Domains 1, 3, and 4	Administrative Team Instructional Coaches Network Team	Increase awareness of APPR and effective instructional strategies	Observation and walkthrough data

*Integrating a focus on Data, RtI, Teachscape

Implementation Period Chart for Section 2.I.iii



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"Where academics, citizenship and social responsibility go hand in hand"

Wednesday Calendar Days 2013-2014

School-Based Professional Learning		Who is Responsible	Outcome	Evaluation
September 18, 2013	Rtl (whole group): Domain 1	Extended Learning & Intervention Department	Effective planning and implementation of instructional strategies and use of data	Observation and walk-through data
September 25, 2013	APPR Overview: Domains 1-4	Network Team	Learning focused conversations	Pre and Post-conference data
October 2, 2013	Goal Setting (drop-In): Domain 4	Network Team	Individual Professional Development Plan	ePerformance: Goal Setting completed
School-Based Professional Learning		Who is Responsible	Outcome	Evaluation
October 16, 2013	Co-teaching (whole group): Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
October 23, 2013	Student Learning Objectives(drop-in): Domains 1 and 3	Network Team	Clarification of process	Completed SLO's
October 30, 2013	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors	Use of coherent curriculum aligned to the	Observation and walkthrough data

			Department of English Language Learners	CCSS implemented with fidelity	Observation and walkthrough data
November 6, 2013	Co-teaching(pairs)/Lesson planning: Domain 1		Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
November 20, 2013	Teachscape: Domains 1-4		Network Team	Clarity on the expectations of an effective and highly effective teacher	Observation and walkthrough data
November 27, 2013	School-Wide Data Review: Domains 1,2 and 3		Administrative Team Instructional Coaches	Targeted plans, adjusted instructional groups, and rigor	Observation and walkthrough data
December 4, 2013	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
January 15, 2013	NYS Testing Meeting: Domain 1		Administrative Team	Clarification of process	Testing schedule
January 29, 2014	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
School-Based Professional Learning					
Who is Responsible			Outcome		
February 12, 2014	Co-teaching(pairs)/Lesson planning: Domain 1		Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
March 12, 2014	CCSS Implementation/SIOP: Domains 1-4		Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented	Observation and walkthrough data

March 19, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	with fidelity Collaboration among staff and support services	Observation and walkthrough data
April 9, 2013	NYS Testing Meeting: Domain 1	Administrative Team	Clarification of process	Testing schedule
April 16, 2013	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
April 30, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
May 21, 2014	CCSS Implementation/SIOP: Domains 1-4	Network Team Lead Teachers Content Directors Department of English Language Learners	Use of coherent curriculum aligned to the CCSS implemented with fidelity	Observation and walkthrough data
May 28, 2014	Co-teaching(pairs)/Lesson planning: Domain 1	Specialized Services Department Instructional Coaches Administrative Team	Collaboration among staff and support services	Observation and walkthrough data
June 11, 2014	NYS Testing Meeting: Domain 1	Specialized Services Department Instructional Coaches	Clarification of process	Testing schedule

Department/Faculty Meetings*

<p>September 11, 2013 October 9, 2013 November 13, 2013 December 11, 2013 January 8, 2014 February 5, 2014 March 5, 2014 April 2, 2014 May 7, 2014 June 4, 2014</p>	<p>Department/Faculty Meeting; Domains 1 and 3</p>	<p>Administrative Team</p>	<p>Teaching aligned with proficiency levels on the Framework for Teaching</p>	<p>Observation and walk-through data Available data sources</p>
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*Integrating a focus on Data, RtI, Teachscape

SCHOOL NAME: James Monroe High School

Attachment B

School-level Baseline Data and Target-Setting Chart

SCHOOL-LEVEL BASELINE DATA AND TARGET SETTING CHART	School	NYS State Average	District Average	Baseline Data	Target for 2013-2014	Target for 2014-2015	Target for 2015-16
I. Leading Indicators							
a. Number of minutes in the school year	69,270		73,320		73,520	73,520	73,520
b. Student participation in State ELA 7-8 assessment grade 9-12	90.6% 5.7%		93.3% 6.0%		95% 65%	96% 80%	97% 95%
c. Student participation in State Math 7-8 assessment grade 9-12	92.8% 18.8%		93.5% 22.1%		95% 65%	96% 80%	97% 95%
d. Drop-out rate	12.8%		4.7%		3.3%	3.2%	3.1%
e. Student average daily attendance	77.9%		89.6%		93%	95%	97%
f. Student completion of advanced coursework	70		44		83	122	161
g. Suspension rate	Corrective	Action	See	Attach ment	Corrective	Action	See
h. Number of discipline referrals	Corrective	Action	See	Attach ment	Corrective	Action	See
i. Truancy rate	Corrective	Action	See	Attach ment	Corrective	Action	See
j. Teacher attendance rate	97.1%		93.14%		97.6%	98.5%	99.0%
k. Teachers rated as "effective" and "highly effective"	50.0%		82.5%		85.6%	88.6%	91.6%
l. Hours of professional development to improve teacher performance	1,488		1,451		1,524	1,600	1,680
m. Hours of professional development to improve leadership and governance	96		99		104	109	116
n. Hours of professional development in the implementation of high quality interim assessments and data-driven action	0*		85		89	94	98
II. Academic Indicators							
o. ELA performance index grade 7-8 grade 9-12	126 128		145 135		140 140	150 150	165 165
p. Math performance index grade 7-8 Grade 9-12	144 132		148 139		155 155	160 160	165 165
q. Student scoring "proficient" or higher on ELA 7-8 assessment grade 9-12	6.2% 5.7%		17.6% 6.0%		30.9% 30.0%	44.2% 50.0%	85.0% 85.0%
r. Students scoring "proficient" or 7-8 higher on Math assessment grade 9-12	21.5% 0%		21.7% 1.0%		34.3% 30.0%	46.9% 50.0%	85.0% 85%
s. Average SAT score	1070		1179		1,236	1,293	1,350
t. Students taking PSAT	167		2768**		200	250	320
u. Students receiving Regents diploma with advanced designation	2%		11.1%		13.0%	18.0%	25.0%
v. High school graduation rate	33%		49%		55%	65%	80%
w. Ninth graders being retained	26.1%		29.2%		15%	13%	10%
x. High school graduates accepted into two or four year colleges	65%		83%		70%	75%	80%

*N. Professional Development funding was removed in the 2011-12 school year, but reinstated plus TIF funding in 2012-13.

**T. District total



Every child is a work of art.
Create a masterpiece.

Anita M. Murphy
Deputy Superintendent of
Administration
Rochester City School District
131 West Broad Street
Rochester, New York 14614
Phone: 585-262-8514
Fax: 585-295-2616
anita.murphy@rcsdk12.org
www.rcsdk12.org

August 3, 2012

Mr. Jeff Baker
Data Director
New York State Education Department
89 Washington Ave., Room 865 EBA
Albany, NY 12234

Mr. Baker:

Today, the Rochester City School District certified the PD-8 Report reflecting suspensions of students with disabilities for the 2011-12 school year. Please accept this letter as supplemental documentation to be filed as part of our electronic submission.

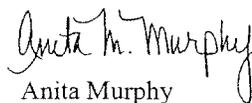
The data reported in the Rochester City School District's 2011-12 PD-8 Report accurately reflects the data reported through our student management systems. As content area and data specialists reviewed these reports, a concern arose that the figures seem not to reflect, in totality, the students with disabilities who were disciplined and then placed in what are referred to as "alternatives to suspension" programs. The Rochester City School District finds this data recording oversight unacceptable and has taken the following steps to ensure that all data reflecting the removal of students with disabilities from their least restrictive prescribed programming are recorded in our student management system:

- 1) Suspension practices for all of the District's students have been reviewed by the District's in-house counsel for compliance and recommended changes to account for all behavioral incidents - including students with disabilities - in the coming school year.
- 2) Data dashboards and report warning indicators will be developed that signal the number of students with disabilities who have been suspended and the scheduled/completion dates of nexus hearings.
- 3) Training on processes specific to the suspension of students with disabilities will be provided to all school administrators to ensure that the expectations and understandings of the requirements for suspension of students with disabilities is prescribed and documented.

In addition to the action steps above, additional measures may be implemented to ensure the overall objective that all processes are documented and recorded for reporting purposes.

Thank you in advance for your review of this additional request for documentation. Please address questions regarding the content of this letter to my attention.

Sincerely,


Anita Murphy

Attachment C
 Evidence of Partner Effectiveness Chart

Partner Organization Name and Contact Information and description of type of service provided.	Schools the partner has successfully supported in the last three years (attach additional trend-summary evidence of the academic success of each school, as well as any other systematic evaluation data to demonstrate the impact of partner-services.)	References / Contracts (include the names and contact information of school and district personnel who can provide additional validation of the successful performance of the partner in the increase of academic performance and turnaround of the identified schools)
<p>Generation Schools Network Jonathan Spear, Co-Founder Northeast Regional Office 540 President Street, 1G Brooklyn, NY 11215 347.410.5322</p> <p>Presentations, Workshops and Coaching</p>	<p>1. Brooklyn Generation School Brooklyn Generation was approved by the NYC DOE, with support of the United Federation of Teachers to implement an extended year model with many aspects of the signature model – all without increasing costs. The non-profit secured a side agreement signed by the Chancellor and UFT President that has since been renewed twice, each time for longer periods of time. See link re: performance at: http://www.generationschools.org/northeast/</p> <p>2. West Generation Academy Founded as part of the turnaround of West Campus in Denver, CO. Data shows students on track after first trimester to achieve 1.5 grade levels of growth during the school's first year.</p> <p>3. Tompkins Square Middle School*</p> <p>4. Young Women's Leadership School – Astoria*</p> <p>5. Victory Collegiate High School*</p> <p><i>* All of these schools are part of the NYC Department of Education. Generation Schools worked with Victory Collegiate since its founding in 2007. The other schools were existent schools when Generation Schools worked with them between 2009 and 2012. Data about each NYC school is available at http://schools.nyc.gov.</i></p>	<p>Lydia Colon Bomanj, Principal 718-968-4200</p> <p>Dr. Robert Villarreal, Principal, 720-423-5300</p> <p>Alyssa Whitehead-Bust, Superintendent of Innovation Denver Public Schools 720-423-2582</p> <p>Sonhando Estwick, Principal 212-995-1430</p> <p>Laura Mitchell, Principal 718-267-2839</p> <p>Marcel Deans, Principal 718-968-1530</p>

Partner Organization Name and Contact Information and description of type of service provided.	Schools the partner has successfully supported in the last three years (attach additional trend-summary evidence of the academic success of each school, as well as any other systematic evaluation data to demonstrate the impact of partner-services.	References / Contracts (Include the names and contact information of school and district personnel who can provide additional validation of the successful performance of the partner in the increase of academic performance and turnaround of the identified schools)
<p>Monroe Community College Emeterio M. Otero, Ph.D. Executive Dean and Community Partnerships Monroe Community College Damon City Campus 228 E. Main St. Rochester, NY 14604 Office: 585-262-1610 Fax: 585-262-1615</p> <p>Dual enrollment will offer Monroe HS the opportunity to earn college credit and work on high school graduation requirements at the same time. Dual enrollment courses are taught by MCC-certified teachers in your high school. These courses have the same curriculum and requirements as those offered on the MCC campus and hold the same college credit. Once a student successfully completes the dual enrollment course, you can apply credits toward a future MCC degree or transfer them to another college or university.</p>	<p>MCC has dual enrollment agreements with 52 high schools in Monroe County. Those schools include:</p> <ol style="list-style-type: none"> 1. Brighton HS 2. Fairport HS 3. East Rochester HS 4. West Irondequoit HS 	<p>Michael McDonough, Provost and Vice President of Academic Services, Monroe Community College</p>

Attachment D - (1003g) Budget Summary Chart

Agency Code	2	6	1	6	0	0	1	0	0	0	0
Rochester City School District											
Year 1 Implementation Period (September 1, 2013 - August 31, 2014)											
Categories	Code	Costs	Categories	Code	Costs	Categories	Code	Costs	Categories	Code	Costs
Professional Salaries	15	\$62,050	Professional Salaries	15	\$754,540	Professional Salaries	15	\$628,000	Professional Salaries	15	\$628,000
Support Staff Salaries	16	-	Support Staff Salaries	16	\$17,550	Support Staff Salaries	16	\$14,000	Support Staff Salaries	16	\$14,000
Purchased Services	40	\$101,324	Purchased Services	40	\$504,375	Purchased Services	40	\$420,000	Purchased Services	40	\$420,000
Supplies and Materials	45	\$15,000	Supplies and Materials	45	230,232	Supplies and Materials	45	\$192,000	Supplies and Materials	45	\$192,000
Travel Expenses	46	\$2,120	Travel Expenses	46	31,800	Travel Expenses	46	\$27,000	Travel Expenses	46	\$27,000
Employee Benefits	80	\$14,380	Employee Benefits	80	\$211,725	Employee Benefits	80	\$177,000	Employee Benefits	80	\$177,000
Indirect Cost (IC)	90	\$5,131	Indirect Cost (IC)	90	\$49,773	Indirect Cost (IC)	90	\$42,000	Indirect Cost (IC)	90	\$42,000
BOCES Service	49	-	BOCES Service	49	-	BOCES Service	49	-	BOCES Service	49	-
Minor Remodeling	30	-	Minor Remodeling	30	-	Minor Remodeling	30	-	Minor Remodeling	30	-
Equipment	20	-	Equipment	20	-	Equipment	20	-	Equipment	20	-
Total		\$200,005	Total		\$1,799,995	Total		\$1,500,000	Total		\$1,500,000
Year 2 Implementation Period (September 1, 2014 - August 31, 2015 – for Turnaround, Restart, and Transformation models only)											
Year 3 Implementation Period (September 1, 2015 - August 31, 2016 – for Turnaround, Restart, and Transformation models only)											
Total Project Period (April 1, 2013 - August 31, 2016 for Turnaround, Restart, and Transformation OR April 1, 2013 – August 31, 2014 for Closure models)											
Categories	Code	Costs	Categories	Code	Costs	Categories	Code	Costs	Categories	Code	Costs
Professional Salaries	15	\$419,000	Professional Salaries	15	\$1,863,590	Professional Salaries	15	\$1,863,590	Professional Salaries	15	\$1,863,590
Support Staff Salaries	16	\$9,000	Support Staff Salaries	16	\$9,000	Support Staff Salaries	16	\$40,550	Support Staff Salaries	16	\$40,550
Purchased Services	40	\$280,000	Purchased Services	40	\$280,000	Purchased Services	40	\$1,305,699	Purchased Services	40	\$1,305,699
Supplies and Materials	45	\$128,000	Supplies and Materials	45	\$128,000	Supplies and Materials	45	\$565,232	Supplies and Materials	45	\$565,232
Travel Expenses	46	\$18,000	Travel Expenses	46	\$18,000	Travel Expenses	46	\$78,920	Travel Expenses	46	\$78,920
Employee Benefits	80	\$118,000	Employee Benefits	80	\$118,000	Employee Benefits	80	\$521,105	Employee Benefits	80	\$521,105
Indirect Cost (IC)	90	\$28,000	Indirect Cost (IC)	90	\$28,000	Indirect Cost (IC)	90	\$124,904	Indirect Cost (IC)	90	\$124,904
BOCES Service	49	-	BOCES Service	49	-	BOCES Service	49	-	BOCES Service	49	-
Minor Remodeling	30	-	Minor Remodeling	30	-	Minor Remodeling	30	-	Minor Remodeling	30	-
Equipment	20	-	Equipment	20	-	Equipment	20	-	Equipment	20	-
Total		\$1,000,000	Total		\$1,000,000	Total Project Budget		\$4,500,000	Total Project Budget		\$4,500,000

Local Agency Information

Funding Source: Title I 1003(g) School Improvement Grant - Monroe

Report Prepared By: Karen Jacobs, Director of Financial Management and Grants

Agency Name: Rochester City School District

Mailing Address: 131 West Broad Street

Street

Rochester

NY

14614

City

State

Zip Code

**Telephone # of
 Report Preparer:** 585-262-8435

County: Monroe

E-mail Address: Karen.Jacobs@rcsdk12.org

Project Funding Dates: 4/1/2013 8/31/2013
 Start End

INSTRUCTIONS

- Submit the original FS-10 Budget and the required number of copies along with the completed application directly to the appropriate State Education Department office as indicated in the application instructions for the grant program for which you are applying. DO NOT submit this form to Grants Finance.
- The Chief Administrator's Certification on the Budget Summary worksheet must be signed by the agency's Chief Administrative Officer or properly authorized designee.
- An approved copy of the FS-10 Budget will be returned to the contact person noted above. A window envelope will be used; please make sure that the contact information is accurate and confined to the address field without altering the formatting.
- For information on budgeting refer to the Fiscal Guidelines for Federal and State Aided Grants at <http://www.oms.nysed.gov/cafe/guidance/>.

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PURCHASED SERVICES			
Subtotal - Code 40			\$101,324
Description of Item	Provider of Services	Calculation of Cost	Proposed Expenditure
Technical Support for Expanded Learning Implementation	Generation Schools		\$15,500
Contract for PD	Area College or Educational Consultant		\$81,200
Districtwide training of Common Core			\$4,624

Employee Benefits		
Subtotal - Code 80		\$14,380
Benefit		Proposed Expenditure
Social Security		\$4,747
Retirement	New York State Teachers	\$7,347
	New York State Employees	\$0
	Other - Pension	
Health Insurance		\$983
Worker's Compensation		\$993
Unemployment Insurance		\$310
Other(Identify)		
Civil Service Life Insurance		\$0

INDIRECT COST		
A.	Modified Direct Cost Base -- Sum of all preceding subtotals(codes 15, 16, 40, 45, 46, and 80 and excludes the portion of each subcontract exceeding \$25,000 and any flow through funds) **Manual Entry	\$138,674
B.	Approved Restricted Indirect Cost Rate	3.70%
C.	Subtotal - Code 90	\$5,131

For your information, maximum direct cost base = \$194,874

To calculate Modified Direct Cost Base, reduce maximum direct cost base by the portion of each subcontract exceeding \$25,000 and any flow through funds.

EQUIPMENT			
Subtotal - Code 20			\$0
Description of Item	Quantity	Unit Cost	Proposed Expenditure
			\$0

Local Agency Information

Funding Source: Title I 1003(g) School Improvement Grant -Monroe

Report Prepared By: Karen Jacobs, Director of Financial Management and Grants

Agency Name: Rochester City School District

Mailing Address: 131 West Broad Street

Street

Rochester

NY

14614

City

State

Zip Code

**Telephone # of
Report Preparer:** 585-262-8435

County: Monroe

E-mail Address: Karen.Jacobs@rcsdk12.org

Project Funding Dates: 9/1/2013 8/31/2014
Start End

INSTRUCTIONS

- Submit the original FS-10 Budget and the required number of copies along with the completed application directly to the appropriate State Education Department office as indicated in the application instructions for the grant program for which you are applying. DO NOT submit this form to Grants Finance.
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- For information on budgeting refer to the Fiscal Guidelines for Federal and State Aided Grants at <http://www.oms.nysed.gov/cafe/guidance/>.



ORIGINAL

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PURCHASED SERVICES

Subtotal - Code 40			\$504,375
Description of Item	Provider of Services	Calculation of Cost	Proposed Expenditure
Oustide Educational Expert			\$30,000
Technical Support for Expanded Learning Implementation	Generation Schools		\$24,375
Dual Credit School Year	MCC		\$50,000
Community Based Provider Expanded Learning Services	Various TBD		\$316,084
Districtwide training of Common Core			\$83,916

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Employee Benefits			
		Subtotal - Code 80	\$211,725
Benefit		Proposed Expenditure	
Social Security		\$59,065	
Retirement	New York State Teachers	\$122,613	
	New York State Employees	\$3,598	
	Other - Pension		
Health Insurance		\$6,375	
Worker's Compensation		\$12,353	
Unemployment Insurance		\$7,721	
Other(Identify)			
Civil Service Life Insurance		\$0	

INDIRECT COST		
A.	Modified Direct Cost Base -- Sum of all preceding subtotals(codes 15, 16, 40, 45, 46, and 80 and excludes the portion of each subcontract exceeding \$25,000 and any flow through funds) **Manual Entry	\$1,345,222
B.	Approved Restricted Indirect Cost Rate	3.70%
C.	Subtotal - Code 90	\$49,773

For your information, maximum direct cost base = \$1,750,222

To calculate Modified Direct Cost Base, reduce maximum direct cost base by the portion of each subcontract exceeding \$25,000 and any flow through funds.

BUDGET SUMMARY

SUBTOTAL	CODE	PROJECT COSTS
Professional Salaries	15	754,540
Support Staff Salaries	16	17,550
Purchased Services	40	504,375
Supplies and Materials	45	230,232
Travel Expenses	46	31,800
Employee Benefits	80	211,725
Indirect Cost	90	49,773
BOCES Services	49	0
Minor Remodeling	30	0
Equipment	20	0
Grand Total		1,799,995

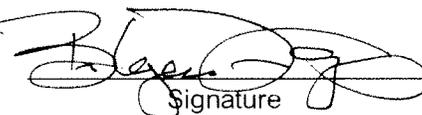
Agency Code:

Project #:

Contract #:

Agency Name:

CHIEF ADMINISTRATOR'S CERTIFICATION
I hereby certify that the requested budget amounts are necessary for the implementation of this project and that this agency is in compliance with applicable Federal and State laws and regulations.

1/15/13 
 Date Signature

Bolgen Vargas Superintendent
 Name and Title of Chief Administrative Officer

FOR DEPARTMENT USE ONLY

Funding Dates: _____ From _____ To _____

Program Approval: _____ Date: _____

<u>Fiscal Year</u>	<u>First Payment</u>	<u>Line #</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____ Voucher # _____ First Payment

Finance: Logged _____ Approved _____ MIR _____

BUDGET NARRATIVE

Budget Cost	Pre-Implementation	Year 1	Year 2	Year 3	Program Narrative Category	Explanation of Costs	Sustainability
Chief of School Transformation (District-Level Funding)	\$11,250	\$67,500	✓	✓		The Chief of School Transformation will serve as the Chief of Schools for Priority Schools. He/she will be knowledgeable about SIG requirements and compliance in order to support implementation of Monroe's transformational plan (and redesign plans for other RCSD schools) with fidelity.	It is RCSD's goal for schools to exit Priority status, and the work supporting these schools will transfer into other departments such as the Office of School Innovation and/or School Zone Chiefs.
Hourly Pay for Teachers/Summer Institutes - Instruction	\$31,000	\$31,000	✓	✓	2.B.v	A two-week summer institute will concentrate on literacy activities for students and staff (see below). The institute will include 3 hours of instruction for 7 th and 8 th graders. 20 teachers will provide the instruction at 1/400 th of the average teacher salary of \$62,000.	Summer school supports implementation of the Rochester Core Instructional Program and will be continued by Title 1 funding at the conclusion of SIG. As Districtwide initiatives at the elementary level produce gains in student achievement, fewer students should be in need of this intense support.
Hourly Pay for Teachers/Summer Institutes - Professional Learning	\$19,800	\$19,800	✓	✓	2.B.v	A two-week summer institute will provide 3 hours of intensive professional learning on the ELA Common Core Shifts and will target specific student populations, i.e. ELL, that are in accountability status.	At the conclusion of SIG, trained teachers will have deep understanding of the ELA Common Core Shifts and be able to turn-key train other Monroe teachers.
Teacher Salary - Expanded Learning	-	\$559,440	✓	✓	2.H.3	Monroe HS will implement an expanded learning model, adding two 45-minute periods to every school day. 56 teachers will be paid at the contractual rate of \$37/hour.	Expanded learning will continue through the use of Title I funding.
Hourly Pay for Curriculum Writing	-	\$39,600	✓		2.F.i	RCSD will work with Monroe Community College to deliver dual-credit courses in the areas of math, science, and language (Spanish). These courses will provide opportunities for students to earn college credit towards specific degrees at MCC. RCSD teachers will align RCSD course	Nine course curricula will be aligned in Years 1 and 2, providing a total of 18 dual-credit courses at Monroe HS at the conclusion of SIG.

BUDGET NARRATIVE

Budget Cost	Pre-Implementation	Year 1	Year 2	Year 3	Program Narrative Category	Explanation of Costs	Sustainability
Hourly Pay for Summer Dual Credit Courses	-	\$37,200	✓	✓	2.F.i	Teachers will be paid the contractual amount for teaching dual-credit courses in the summer. 12 teachers will teach a 3-credit course (15 days x 3 hours/day).	By the end of the grant period, the dual-credit courses will be built into general summer school programs and will be individually taught by RCSD teachers.
Clerical Staff	-	\$8,100	✓	✓	2.H.3	These three support staff positions are needed to support implementation of the expanded learning model.	Title I funding will be used to continue the expanded learning initiative at the conclusion of SIG.
Paraprofessional	-	\$4,050	✓				
Custodian	-	\$5,400	✓				
Outside Educational Expert (OEE)	-	\$30,000	✓	✓	1.E.iii	The OEE will provide technical assistance to Monroe HS in implementation of the transformation plan. He/she will monitor, evaluate, and help sustain Monroe's transformational plan.	By the end of the three-year grant period, the Monroe redesign process will be complete.
Generation Schools	\$15,500	\$24,375	✓	✓	2.F.i	Generation Schools will provide technical assistance with the implementation of the expanded learning model, including development of the new school schedule and staffing plan.	By the end of the three-year grant period, the Monroe redesign process will be complete.
Dual-Credit Course Fees	-	\$50,000	✓	✓	2.F.i	Tuition fees for MCC dual-credit courses are \$100 per course. The first dual-credit courses will be delivered in Summer 2014. Starting in Year 2, dual-credit courses will also be offered during the school year.	These courses are equivalent to AP courses and will replace that cost.
Summer Institute PD Contract	\$81,200	-	-	-	2.B.v	An educational consultant will be hired to train staff in the first summer institute.	Continuation of the Summer Institute in Years 1-3 will be done by RCSD staff.
Providers of Expanded Learning Services	-	316,084			2.H.3	Community-based organizations will support the socio-emotional and recreational activities delivered as part of the new expanded learning model.	Title I funding will be used to continue the expanded learning initiative at the conclusion of SIG.
Common Core Training (District-Level Funding)	\$4,624	\$83,916	✓	✓	1.D.iv	Training will be provided Districtwide to support implementation of CCLS and the	Intensive training will be complete by the end of SIG. Follow-up support will

BUDGET NARRATIVE

Budget Cost	Pre-Implementation	Year 1	Year 2	Year 3	Program Narrative Category	Explanation of Costs	Sustainability
Bilingual Program Instructional Supplies	-	\$70,000	✓	-	2.H.ii	Rochester Core Instructional Program. Books and other instructional supplies will be purchased to enhance instruction for ELLs.	be provided by District staff. These supplies will be reusable.
Professional Learning Supplies	\$15,000	-	-	-	2.I.i	Supplies will be purchase for Monroe teachers to use as they implement the Rochester Core Instructional Program, CCLS, and SIG activities.	Teachers will keep the supplies for continued reference and improvement.
ELA Materials	-	\$30,000	✓	-	2.H.ii	Assorted materials will be purchased to support literacy instruction.	These supplies will be reusable.
College Text Books	-	\$75,000	✓	-	2.F.i	Hard-cover and electronic college textbooks will be purchased.	These supplies will be reusable.
Instructional Materials/Science & Math	-	\$49,232	✓	-	2.H.ii	Books and other instructional supplies (including lab materials) will be purchased to support instruction in science and math.	These supplies will be reusable.
iPads	-	\$6,000	-	-	1.E.i	iPads will be purchase to provide face-time/video conferencing opportunities with coaches and the OEE.	iPads will remain the property of RCSD and all required inventory procedures will be followed.
Student Transportation/Summer Institute	\$2,120	\$31,800	✓	✓	2.B.v	Student transportation will be provided to students participating in the Summer Institutes.	Title I funding will be used to continue the expanded learning initiative at the conclusion of SIG.
Code 80: Employee Benefits	\$14,380	\$211,725	✓	✓	--	Employee benefits include retirement, Social Security (7.65%), Workers Compensation, and Unemployment Insurance, and health insurance (\$11,800 per 1.0 FTE)	Same as salaries.
Code 90: Indirect Costs	\$5,131	49,773	✓	✓	--	Indirect costs were calculated at the Approved, Restricted Indirect Cost Rate of 3.7%.	N/A

OTHER SOURCES OF INCOME THAT SUPPORT AND SUSTAIN THE TRANSFORMATION OF MONROE HIGH SCHOOL

Source of Income	Support Provided
Systemic Supports Grant	The SUPES Academy is providing training to all RCSD leadership in implementation of the

BUDGET NARRATIVE

Source of Income	Support Provided
Strengthening Teacher and Leader Effectiveness Grant	<p>Regents Reform Agenda and the Diagnostic Tool for School and District Effectiveness. Initiatives included in the STLE grant include the development of an in-District program for teachers to earn their Bilingual Extension and Autism Endorsement. Recruitment efforts in teacher shortage areas (including bilingual teachers) will be intensified.</p>
School Improvement Grant Section 1003(a)	<p>An Outside Educational Expert (OEE) participates on RCSD's Integrated Intervention Team.</p>
RCSD Facilities Modernization Plan	<p>Monroe HS is undergoing renovation beginning in the 2014-2015 school year. Improvements will be made to instructional facilities, especially for the delivery of science and math. Upgrades will also be made to support art, music, and community engagement.</p>

**A Memorandum of Understanding
is not required for the Transformation Model.**

Assurances and Waivers for Federal Discretionary Program Funds

The following assurances are a component of your application. By signing the certification on the application cover page you are ensuring accountability and compliance with State and federal laws, regulations, and grants management requirements.

Federal Assurances and Certifications, General

- Assurances – Non-Construction Programs
- Certifications Regarding Lobbying; Debarment, Suspension and Other Responsibility Matters
- Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions
- General Education Provisions Act Assurances

Federal Assurances and Certifications, NCLB (if appropriate)

The following are required as a condition for receiving any federal funds under the Elementary and Secondary Education Act, as amended by the No Child Left Behind Act of 2001.

- NCLB Assurances
- School Prayer Certification

New York State Assurances and Certifications (For discretionary grant programs only)

- Appendix A
- Appendix A-1G
- Appendix A-2

Waiver for the use of Title I Funding for Whole School Programs

If the LEA identified in this application is a Title I school for specific targeted activities only, signing the certification on the application cover page acts as a waiver request to use specific targeted activity funds from this grant for whole-school change programming.

ASSURANCES – NON-CONSTRUCTION PROGRAMS

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Education Department Program Contact listed in the Application. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, and by signing the Application Cover Page, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management, and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C §§ 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) "§§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§" 290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328), which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§ 276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §§874) and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1721 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.), which prohibits the use of lead-based paint in construction or rehabilitation of residence structure.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, Audits of States, Local Governments, and Non-Profit Organizations.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

Standard Form 424B (Rev. 7-97), Prescribed by OMB Circular A-102, Authorized for Local Reproduction, as amended by New York State Education Department

**CERTIFICATIONS REGARDING LOBBYING;
DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS**

Applicants should refer to the regulations cited below to determine the certification to which they are required to attest. Applicants should also review the instructions for certification included in the regulations before completing this form. Signature of the Application Cover Page provides for compliance with certification requirements under 34 CFR Part 82, "New Restrictions on Lobbying," and 34 CFR Part 85, "Government-wide Debarment and Suspension (Nonprocurement)." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Education determines to award the covered transaction, grant, or cooperative agreement.

1. LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 34 CFR Part 82, for persons entering into a grant or cooperative agreement over \$100,000, as defined at 34 CFR Part 82, Sections 82.105 and 82.110, the applicant certifies that:

(a) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal grant or cooperative agreement;

(b) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions; and

(c) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subgrants, contracts under grants and cooperative agreements, and subcontracts) and that all subrecipients shall certify and disclose accordingly.

2. DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

As required by Executive Order 12549, Debarment and Suspension, and implemented at 34 CFR Part 85, for prospective participants in primary covered transactions, as defined at 34 CFR Part 85, Sections 85.105 and 85.110--

A. The applicant certifies that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this application been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (2)(b) of this certification; and

(d) Have not within a three-year period preceding this application had one or more public transaction (Federal, State, or local) terminated for cause or default; and

B. Where the applicant is unable to certify to any of the statements in this certification, he or she shall attach an explanation to this application.

ED 80-0013, as amended by the New York State Education Department

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

This certification is required by the Department of Education regulations implementing Executive Order 12549, Debarment and Suspension, 34 CFR Part 85, for all lower tier transactions meeting the threshold and tier requirements stated at Section 85.110.

Instructions for Certification

1. By signing the Application Cover Page, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms “covered transaction,” “debarred,” “suspended,” “ineligible,” “lower tier covered transaction,” “participant,” “person,” “primary covered transaction,” “principal,” “proposal,” and “voluntarily excluded,” as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled “Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion-Lower Tier Covered Transactions,” without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification

(1) The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Section 1.01 ED 80-0014, as amended by the New York State Education Department

New York State Education Department General Education Provisions Act Assurances

These assurances are required by the General Education Provisions Act for certain programs funded by the U.S. Department of Education. These assurances are not applicable to certain programs, such as the No Child Left Behind Act. If you have any questions, please contact NYSED.

As the authorized representative of the applicant, by signing the Application Cover Page, I certify that:

- (1) that the local educational agency will administer each program covered by the application in accordance with all applicable statutes, regulations, program plans, and applications;
- (2) that the control of funds provided to the local educational agency under each program, and title to property acquired with those funds, will be in a public agency and that a public agency will administer those funds and property;
- (3) that the local educational agency will use fiscal control and fund accounting procedures that will ensure proper disbursement of, and accounting for, Federal funds paid to that agency under each program;
- (4) that the local educational agency will make reports to the State agency or board and to the Secretary as may reasonably be necessary to enable the State agency or board and the Secretary to perform their duties and that the local educational agency will maintain such records, including the records required under section 1232f of this title, and provide access to those records, as the State agency or board or the Secretary deem necessary to perform their duties;
- (5) that the local educational agency will provide reasonable opportunities for the participation by teachers, parents, and other interested agencies, organizations, and individuals in the planning for and operation of each program;
- (6) that any application, evaluation, periodic program plan or report relating to each program will be made readily available to parents and other members of the general public;
- (7) that in the case of any project involving construction –
 - (A) the project is not inconsistent with overall State plans for the construction of school facilities, and
 - (B) in developing plans for construction, due consideration will be given to excellence of architecture and design and to compliance with standards prescribed by the Secretary under section 794 of title 29 in order to ensure that facilities constructed with the use of Federal funds are accessible to and usable by individuals with disabilities;
- (8) that the local educational agency has adopted effective procedures for acquiring and disseminating to teachers and administrators participating in each program significant information from educational research, demonstrations, and similar projects, and for adopting, where appropriate, promising educational practices developed through such projects; and
- (9) that none of the funds expended under any applicable program will be used to acquire equipment (including computer software) in any instance in which such acquisition results in a direct financial benefit to any organization representing the interests of the purchasing entity or its employees or any affiliate of such an organization.

**New York State Education Department
No Child Left Behind Act Assurances**

These assurances are required for programs funded under the No Child Left Behind Act.

As the authorized representative of the applicant, by signing the Application Cover Page, I certify that:

- (1) each such program will be administered in accordance with all applicable statutes, regulations, program plans, and applications;
- (2) (A) the control of funds provided under each such program and title to property acquired with program funds will be in a public agency or in a nonprofit private agency, institution, organization, or Indian tribe, if the law authorizing the program provides for assistance to those entities; and
(B) the public agency, nonprofit private agency, institution, or organization, or Indian tribe will administer the funds and property to the extent required by the authorizing statutes;
- (3) the applicant will adopt and use proper methods of administering each such program, including—
 - (A) the enforcement of any obligations imposed by law on agencies, institutions, organizations, and other recipients responsible for carrying out each program; and
 - (B) the correction of deficiencies in program operations that are identified through audits, monitoring, or evaluation;
- (4) the applicant will cooperate in carrying out any evaluation of each such program conducted by or for the State educational agency, the Secretary, or other Federal officials;
- (5) the applicant will use such fiscal control and fund accounting procedures as will ensure proper disbursement of, and accounting for, Federal funds paid to the applicant under each such program;
- (6) the applicant will—
 - (A) submit such reports to the State educational agency (which shall make the reports available to the Governor) and the Secretary as the State educational agency and Secretary may require to enable the State educational agency and the Secretary to perform their duties under each such program; and
 - (B) maintain such records, provide such information, and afford such access to the records as the State educational agency (after consultation with the Governor) or the Secretary may reasonably require to carry out the State educational agency's or the Secretary's duties;
- (7) before the application was submitted, the applicant afforded a reasonable opportunity for public comment on the application and considered such comment;
- (8) the applicant has consulted with teachers, school administrators, parents, nonpublic school representatives and others in the development of the application to the extent required for the applicant under the program pursuant to the applicable provisions of the No Child Left Behind Act;

(9) in the case of a local educational agency, as a condition of receiving funds under the No Child Left Behind Act, the applicant is complying with the requirements of Education Law § 3214(3)(d) and (f) and the Gun-Free Schools Act (20 U.S.C. § 7151);

(10) in the case of a local educational agency, as a condition of receiving funds under the No Child Left Behind Act, the applicant is complying with the requirements of 20 U.S.C. § 7908 on military recruiter access;

(11) in the case of a local educational agency, as a condition of receiving funds under the No Child Left Behind Act, the applicant is complying with the requirements of 20 U.S.C. § 7904 on constitutionally protected prayer in public elementary and secondary schools;

(12) in the case of a local educational agency, as a condition of receiving funds under the No Child Left Behind Act, the applicant is complying with the requirements of Education Law § 2802(7), and any state regulations implementing such statute and 20 U.S.C. § 7912 on unsafe school choice; and

(13) in the case of a local educational agency, the applicant is complying with all fiscal requirements that apply to the program, including but not limited to any applicable supplement not supplant or local maintenance of effort requirements.

Section 1.02

Article II. School Prayer Certification

As a condition of receiving federal funds under the Elementary and Secondary Education Act, as amended by the No Child Left Behind Act of 2001 (NCLB), the local educational agency hereby certifies that no policy of the local educational agency prevents, or otherwise denies participation in, constitutionally protected prayer in public elementary schools and secondary schools, as detailed in the current guidance issued pursuant to NCLB Section 9524(a).

APPENDIX A

STANDARD CLAUSES FOR NYS CONTRACTS

The parties to the attached contract, license, lease, amendment or other agreement of any kind (hereinafter, "the contract" or "this contract") agree to be bound by the following clauses which are hereby made a part of the contract (the word "Contractor" herein refers to any party other than the State, whether a contractor, licenser, licensee, lessor, lessee or any other party):

1. EXECUTORY CLAUSE. In accordance with Section 41 of the State Finance Law, the State shall have no liability under this contract to the Contractor or to anyone else beyond funds appropriated and available for this contract.

2. NON-ASSIGNMENT CLAUSE. In accordance with Section 138 of the State Finance Law, this contract may not be assigned by the Contractor or its right, title or interest therein assigned, transferred, conveyed, sublet or otherwise disposed of without the State's previous written consent, and attempts to do so are null and void. Notwithstanding the foregoing, such prior written consent of an assignment of a contract let pursuant to Article XI of the State Finance Law may be waived at the discretion of the contracting agency and with the concurrence of the State Comptroller where the original contract was subject to the State Comptroller's approval, where the assignment is due to a reorganization, merger or consolidation of the Contractor's business entity or enterprise. The State retains its right to approve an assignment and to require that any Contractor demonstrate its responsibility to do business with the State. The Contractor may, however, assign its right to receive payments without the State's prior written consent unless this contract concerns Certificates of Participation pursuant to Article 5-A of the State Finance Law.

3. COMPTROLLER'S APPROVAL. In accordance with Section 112 of the State Finance Law (or, if this contract is with the State University or City University of New York, Section 355 or Section 6218 of the Education Law), if this contract exceeds \$50,000 (or the minimum thresholds agreed to by the Office of the State Comptroller for certain S.U.N.Y. and C.U.N.Y. contracts), or if this is an amendment for any amount to a contract which, as so amended, exceeds said statutory amount, or if, by this contract, the State agrees to give something other than money when the value or reasonably estimated value of such consideration exceeds \$10,000, it shall not be valid, effective or binding upon the State until it has been approved by the State Comptroller and filed in his office. Comptroller's approval of contracts let by the Office of General Services is required when such contracts exceed \$85,000 (State Finance Law Section 163.6.a).

4. WORKERS' COMPENSATION BENEFITS. In accordance with Section 142 of the State Finance Law, this contract shall be void and of no force and effect unless the Contractor shall provide and maintain coverage during the life of this contract for the benefit of such employees as are required to be covered by the provisions of the Workers' Compensation Law.

5. NON-DISCRIMINATION REQUIREMENTS. To the extent required by Article 15 of the Executive Law (also known as the Human Rights Law) and all other State and Federal statutory and constitutional non-discrimination provisions, the Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, sexual orientation, age, disability, genetic predisposition or carrier status, or marital status. Furthermore, in accordance with Section 220-e of the Labor Law, if this is a contract for the construction, alteration or repair of any public building or public work or for the manufacture, sale or distribution of materials, equipment or supplies, and to the extent that this contract shall be performed within the State of New York, Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex, or national origin: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. If this is a building service contract as defined in Section 230 of the Labor Law, then, in accordance with Section 239 thereof, Contractor agrees that neither it nor its subcontractors shall by reason of race, creed, color, national origin, age, sex or disability: (a) discriminate in hiring against any New York State citizen who is qualified and available to perform the work; or (b) discriminate against or intimidate any employee hired for the performance of work under this contract. Contractor is subject to fines of \$50.00 per person per day for any violation of Section 220-e or Section 239 as well as possible termination of this contract and forfeiture of all moneys due hereunder for a second or subsequent violation.

6. WAGE AND HOURS PROVISIONS. If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof, neither Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department. Furthermore, Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for

overtime pay, as determined by the State Labor Department in accordance with the Labor Law. Additionally, effective April 28, 2008, if this is a public work contract covered by Article 8 of the Labor Law, the Contractor understands and agrees that the filing of payrolls in a manner consistent with Subdivision 3-a of Section 220 of the Labor Law shall be a condition precedent to payment by the State of any State approved sums due and owing for work done upon the project.

7. NON-COLLUSIVE BIDDING CERTIFICATION. In accordance with Section 139-d of the State Finance Law, if this contract was awarded based upon the submission of bids, Contractor affirms, under penalty of perjury, that its bid was arrived at independently and without collusion aimed at restricting competition. Contractor further affirms that, at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the State a non-collusive bidding certification on Contractor's behalf.

8. INTERNATIONAL BOYCOTT PROHIBITION. In accordance with Section 220-f of the Labor Law and Section 139-h of the State Finance Law, if this contract exceeds \$5,000, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation has participated, is participating, or shall participate in an international boycott in violation of the federal Export Administration Act of 1979 (50 USC App. Sections 2401 et seq.) or regulations thereunder. If such Contractor, or any of the aforesaid affiliates of Contractor, is convicted or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the State Comptroller within five (5) business days of such conviction, determination or disposition of appeal (2NYCRR 105.4).

9. SET-OFF RIGHTS. The State shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the State's option to withhold for the purposes of set-off any moneys due to the Contractor under this contract up to any amounts due and owing to the State with regard to this contract, any other contract with any State department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the State for any other reason including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The State shall exercise its set-off rights in accordance with normal State

practices including, in cases of set-off pursuant to an audit, the finalization of such audit by the State agency, its representatives, or the State Comptroller.

10. RECORDS. The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter, collectively, "the Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The State Comptroller, the Attorney General and any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying. The State shall take reasonable steps to protect from public disclosure any of the Records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate State official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified; and (iii) designation of said records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, the State's right to discovery in any pending or future litigation.

11. IDENTIFYING INFORMATION AND PRIVACY NOTIFICATION. (a) FEDERAL EMPLOYER IDENTIFICATION NUMBER and/or FEDERAL SOCIAL SECURITY NUMBER. All invoices or New York State standard vouchers submitted for payment for the sale of goods or services or the lease of real or personal property to a New York State agency must include the payee's identification number, i.e., the seller's or lessor's identification number. The number is either the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. Failure to include this number or numbers may delay payment. Where the payee does not have such number or numbers, the payee, on its invoice or New York State standard voucher, must give the reason or reasons why the payee does not have such number or numbers.

(b) PRIVACY NOTIFICATION. (1) The authority to request the above personal information from a seller of goods or services or a lessor of real or personal property, and the authority to maintain such information, is found in Section 5 of the State Tax Law. Disclosure of this information by the seller or lessor to the State is mandatory. The principal purpose for which the information is collected is to enable the State to identify individuals, businesses and others

who have been delinquent in filing tax returns or may have understated their tax liabilities and to generally identify persons affected by the taxes administered by the Commissioner of Taxation and Finance. The information will be used for tax administration purposes and for any other purpose authorized by law. (2) The personal information is requested by the purchasing unit of the agency contracting to purchase the goods or services or lease the real or personal property covered by this contract or lease. The information is maintained in New York State's Central Accounting System by the Director of Accounting Operations, Office of the State Comptroller, 110 State Street, Albany, New York 12236.

12. EQUAL EMPLOYMENT OPPORTUNITIES FOR MINORITIES AND WOMEN.

In accordance with Section 312 of the Executive Law, if this contract is: (i) a written agreement or purchase order instrument, providing for a total expenditure in excess of \$25,000.00, whereby a contracting agency is committed to expend or does expend funds in return for labor, services, supplies, equipment, materials or any combination of the foregoing, to be performed for, or rendered or furnished to the contracting agency; or (ii) a written agreement in excess of \$100,000.00 whereby a contracting agency is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon; or (iii) a written agreement in excess of \$100,000.00 whereby the owner of a State assisted housing project is committed to expend or does expend funds for the acquisition, construction, demolition, replacement, major repair or renovation of real property and improvements thereon for such project, then:

(a) The Contractor will not discriminate against employees or applicants for employment because of race, creed, color, national origin, sex, age, disability or marital status, and will undertake or continue existing programs of affirmative action to ensure that minority group members and women are afforded equal employment opportunities without discrimination. Affirmative action shall mean recruitment, employment, job assignment, promotion, upgradings, demotion, transfer, layoff, or termination and rates of pay or other forms of compensation;

(b) at the request of the contracting agency, the Contractor shall request each employment agency, labor union, or authorized representative of workers with which it has a collective bargaining or other agreement or understanding, to furnish a written statement that such employment agency, labor union or representative will not discriminate on the basis of race, creed, color, national origin, sex, age, disability or marital status and that such union or representative will affirmatively

cooperate in the implementation of the contractor's obligations herein; and

(c) the Contractor shall state, in all solicitations or advertisements for employees, that, in the performance of the State contract, all qualified applicants will be afforded equal employment opportunities without discrimination because of race, creed, color, national origin, sex, age, disability or marital status. Contractor will include the provisions of "a", "b", and "c" above, in every subcontract over \$25,000.00 for the construction, demolition, replacement, major repair, renovation, planning or design of real property and improvements thereon (the "Work") except where the Work is for the beneficial use of the Contractor. Section 312 does not apply to: (i) work, goods or services unrelated to this contract; or (ii) employment outside New York State; or (iii) banking services, insurance policies or the sale of securities. The State shall consider compliance by a contractor or subcontractor with the requirements of any federal law concerning equal employment opportunity which effectuates the purpose of this section. The contracting agency shall determine whether the imposition of the requirements of the provisions hereof duplicate or conflict with any such federal law and if such duplication or conflict exists, the contracting agency shall waive the applicability of Section 312 to the extent of such duplication or conflict. Contractor will comply with all duly promulgated and lawful rules and regulations of the Governor's Office of Minority and Women's Business Development pertaining hereto.

13. CONFLICTING TERMS. In the event of a conflict between the terms of the contract (including any and all attachments thereto and amendments thereof) and the terms of this Appendix A, the terms of this Appendix A shall control.

14. GOVERNING LAW. This contract shall be governed by the laws of the State of New York except where the Federal supremacy clause requires otherwise.

15. LATE PAYMENT. Timeliness of payment and any interest to be paid to Contractor for late payment shall be governed by Article 11-A of the State Finance Law to the extent required by law.

16. NO ARBITRATION. Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration (except where statutorily authorized), but must, instead, be heard in a court of competent jurisdiction of the State of New York.

17. SERVICE OF PROCESS. In addition to the methods of service allowed by the State Civil Practice Law & Rules ("CPLR"), Contractor hereby consents to service of process upon it by registered or certified mail, return receipt requested. Service hereunder shall be complete upon Contractor's actual receipt of process or upon the State's

New York State Education Department:
Local Education Agency (LEA) 1003(g) School Improvement Grant Application
Under 1003(g) of the Elementary and Secondary Education Act of 1965
Albany, New York 12245
Telephone: 518-292-5220
Fax: 518-292-5884
<http://www.empire.state.ny.us>

A directory of certified minority and women-owned business enterprises is available from:
NYS Department of Economic Development
Division of Minority and Women's Business Development
30 South Pearl St -- 2nd Floor
Albany, New York 12245
Telephone: 518-292-5250
Fax: 518-292-5803
<http://www.empire.state.ny.us>

The Omnibus Procurement Act of 1992 requires that by signing this bid proposal or contract, as applicable, Contractors certify that whenever the total bid amount is greater than \$1 million:

(a) The Contractor has made reasonable efforts to encourage the participation of New York State Business Enterprises as suppliers and subcontractors, including certified minority and women-owned business enterprises, on this project, and has retained the documentation of these efforts to be provided upon request to the State;

(b) The Contractor has complied with the Federal Equal Opportunity Act of 1972 (P.L. 92-261), as amended;

(c) The Contractor agrees to make reasonable efforts to provide notification to New York State residents of employment opportunities on this project through listing any such positions with the Job Service Division of the New York State Department of Labor, or providing such notification in such manner as is consistent with existing collective bargaining contracts or agreements. The Contractor agrees to document these efforts and to provide said documentation to the State upon request; and

(d) The Contractor acknowledges notice that the State may seek to obtain offset credits from foreign countries as a result of this contract and agrees to cooperate with the State in these efforts.

21. RECIPROCITY AND SANCTIONS PROVISIONS. Bidders are hereby notified that if their principal place of business is located in a country, nation, province, state or political subdivision that penalizes New York State vendors, and if the goods or services they offer will be substantially produced or performed outside New York State, the Omnibus Procurement Act 1994 and 2000 amendments (Chapter 684 and Chapter 383, respectively) require that they be denied contracts which they would otherwise obtain. NOTE: As of May 15, 2002, the list of discriminatory jurisdictions subject to this provision includes the states of South Carolina, Alaska, West Virginia, Wyoming, Louisiana and Hawaii. Contact NYS

receipt of the return thereof by the United States Postal Service as refused or undeliverable. Contractor must promptly notify the State, in writing, of each and every change of address to which service of process can be made. Service by the State to the last known address shall be sufficient. Contractor will have thirty (30) calendar days after service hereunder is complete in which to respond.

18. PROHIBITION ON PURCHASE OF TROPICAL HARDWOODS. The Contractor certifies and warrants that all wood products to be used under this contract award will be in accordance with, but not limited to, the specifications and provisions of Section 165 of the State Finance Law, (Use of Tropical Hardwoods) which prohibits purchase and use of tropical hardwoods, unless specifically exempted, by the State or any governmental agency or political subdivision or public benefit corporation. Qualification for an exemption under this law will be the responsibility of the contractor to establish to meet with the approval of the State.

In addition, when any portion of this contract involving the use of woods, whether supply or installation, is to be performed by any subcontractor, the prime Contractor will indicate and certify in the submitted bid proposal that the subcontractor has been informed and is in compliance with specifications and provisions regarding use of tropical hardwoods as detailed in §165 State Finance Law. Any such use must meet with the approval of the State; otherwise, the bid may not be considered responsive. Under bidder certifications, proof of qualification for exemption will be the responsibility of the Contractor to meet with the approval of the State.

19. MACBRIDE FAIR EMPLOYMENT PRINCIPLES. In accordance with the MacBride Fair Employment Principles (Chapter 807 of the Laws of 1992), the Contractor hereby stipulates that the Contractor either (a) has no business operations in Northern Ireland, or (b) shall take lawful steps in good faith to conduct any business operations in Northern Ireland in accordance with the MacBride Fair Employment Principles (as described in Section 165 of the New York State Finance Law), and shall permit independent monitoring of compliance with such principles.

20. OMNIBUS PROCUREMENT ACT OF 1992. It is the policy of New York State to maximize opportunities for the participation of New York State business enterprises, including minority and women-owned business enterprises as bidders, subcontractors and suppliers on its procurement contracts.

Information on the availability of New York State subcontractors and suppliers is available from:

NYS Department of Economic Development
Division for Small Business
30 South Pearl St -- 7th Floor

Department of Economic Development for a current list of jurisdictions subject to this provision.

22. COMPLIANCE WITH NEW YORK STATE INFORMATION SECURITY BREACH AND NOTIFICATION ACT. Contractor shall comply with the provisions of the New York State Information Security Breach and Notification Act (General Business Law Section 899-aa; State Technology Law Section 208).

23. COMPLIANCE WITH CONSULTANT DISCLOSURE LAW. If this is a contract for consulting services, defined for purposes of this requirement to include analysis, evaluation, research, training, data processing, computer programming, engineering, environmental, health, and mental health services, accounting, auditing, paralegal, legal or similar services, then, in accordance with Section 163 (4-g) of the State Finance Law (as amended by Chapter 10 of the Laws of 2006), the Contractor shall timely, accurately and properly comply with the requirement to submit an annual employment report for the contract to the agency that awarded the contract, the Department of Civil Service and the State Comptroller.

24. PROCUREMENT LOBBYING. To the extent this agreement is a "procurement contract" as defined by State Finance Law Sections 139-j and 139-k, by signing this agreement the contractor certifies and affirms that all disclosures made in accordance with State Finance Law Sections 139-j and 139-k are complete, true and accurate. In the event such certification is found to be intentionally false or intentionally incomplete, the State may terminate the agreement by providing written notification to the Contractor in accordance with the terms of the agreement.

25. CERTIFICATION OF REGISTRATION TO COLLECT SALES AND COMPENSATING USE TAX BY CERTAIN STATE CONTRACTORS, AFFILIATES AND SUBCONTRACTORS.

To the extent this agreement is a contract as defined by Tax Law Section 5-a, if the contractor fails to make the certification required by Tax Law Section 5-a or if during the term of the contract, the Department of Taxation and Finance or the covered agency, as defined by Tax Law 5-a, discovers that the certification, made under penalty of perjury, is false, then such failure to file or false certification shall be a material breach of this contract and this contract may be terminated, by providing written notification to the Contractor in accordance with the terms of the agreement, if the covered agency determines that such action is in the best interest of the State.

November, 2010

APPENDIX A-1 G

General

- A. In the event that the Contractor shall receive, from any source whatsoever, sums the payment of which is in consideration for the same costs and services provided to the State, the monetary obligation of the State hereunder shall be reduced by an equivalent amount provided, however, that nothing contained herein shall require such reimbursement where additional similar services are provided and no duplicative payments are received.
- B. This agreement is subject to applicable Federal and State Laws and regulations and the policies and procedures stipulated in the NYS Education Department Fiscal Guidelines found at <http://www.nysed.gov/cafe/>.
- C. For each individual for whom costs are claimed under this agreement, the contractor warrants that the individual has been classified as an employee or as an independent contractor in accordance with 2 NYCRR 315 and all applicable laws including, but not limited to, the Internal Revenue Code, the New York Retirement and Social Security Law, the New York Education Law, the New York Labor Law, and the New York Tax Law. Furthermore, the contractor warrants that all project funds allocated to the proposed budget for Employee Benefits, represent costs for employees of the contractor only and that such funds will not be expended on any individual classified as an independent contractor.
- D. Any modification to this Agreement that will result in a transfer of funds among program activities or budget cost categories, but does not affect the amount, consideration, scope or other terms of this Agreement must be approved by the Commissioner of Education and the Office of the State Comptroller when:
 - a. The amount of the modification is equal to or greater than ten percent of the total value of the contract for contracts of less than five million dollars; or
 - b. The amount of the modification is equal to or greater than five percent of the total value of the contract for contracts of more than five million dollars.
- E. Funds provided by this contract may not be used to pay any expenses of the State Education Department or any of its employees.

Terminations

- A. The State may terminate this Agreement without cause by thirty (30) days prior written notice. In the event of such termination, the parties will adjust the accounts due and the Contractor will undertake no additional expenditures not already required. Upon any such termination, the parties shall endeavor in an orderly manner to wind down activities hereunder.

Safeguards for Services and Confidentiality

- A. Any copyrightable work produced pursuant to said agreement shall be the sole and exclusive property of the New York State Education Department. The material prepared under the terms of this agreement by the Contractor shall be prepared by the Contractor in a form so that it will be ready for copyright in the name of the New York State Education Department. Should the Contractor use the services of consultants or other organizations or individuals who are not regular employees of the Contractor, the Contractor and such organization or individual shall, prior to the performance of any work pursuant to this agreement, enter into a written agreement, duly executed, which shall set forth the services to be provided by such organization or individual and the consideration therefor. Such agreement shall provide that any copyrightable work produced pursuant to said agreement shall be the sole and exclusive property of the New York State Education Department and that such work shall be prepared in a form ready for copyright by the New York State Education Department. A copy of such agreement shall be provided to the State.
- B. All reports of research, studies, publications, workshops, announcements, and other activities funded as a result of this proposal will acknowledge the support provided by the State of New York.
- C. This agreement cannot be modified, amended, or otherwise changed except by a written agreement signed by all parties to this contract.
- D. No failure to assert any rights or remedies available to the State under this agreement shall be considered a waiver of such right or remedy or any other right or remedy unless such waiver is contained in a writing signed by the party alleged to have waived its right or remedy.

- E. Expenses for travel, lodging, and subsistence shall be reimbursed in accordance with the policies stipulated in the aforementioned Fiscal guidelines.
- F. No fees shall be charged by the Contractor for training provided under this agreement.
- G. Nothing herein shall require the State to adopt the curriculum developed pursuant to this agreement.
- H. All inquiries, requests, and notifications regarding this agreement shall be directed to the Program Contact or Fiscal Contact shown on the Grant Award included as part of this agreement.
- I. This agreement, including all appendices, is, upon signature of the parties and the approval of the Attorney General and the State Comptroller, a legally enforceable contract. Therefore, a signature on behalf of the Contractor will bind the Contractor to all the terms and conditions stated therein.
- J. The parties to this agreement intend the foregoing writing to be the final, complete, and exclusive expression of all the terms of their agreement.

Appendix A-2

American Recovery and Reinvestment Act of 2009 (ARRA) ADDITIONAL CONTRACT RECORD KEEPING REQUIREMENTS

This contract, is funded, in whole or in part, by the American Recovery and Reinvestment Act of 2009 (ARRA). The United States Office of Management and Budget (OMB) has released, "Implementing Guidance for Reports on Use of Funds Pursuant to the American Recovery and Reinvestment Act of 2009." (M-09-21) This guidance provides detailed information on reporting requirements included in Section 1512 of the Recovery Act.

Recipient vendors receiving ARRA funding will be required to submit quarterly information which will include at a minimum the following information:

- Vendor name and zip code of Vendor headquarters;
- Expenditures (per quarter and cumulative);
- Expenditure description; and
- Estimates on jobs created or retained via the expenditure of these funds by the Vendor.

Additional data may be required from vendors as a result of guidance issued by OMB.

Vendors will be required to submit the ARRA data in a form and format to be determined by the New York State Education Department (NYSED). NYSED anticipates that the reporting information will be provided to Vendors no later than August 30th. There will be no additional compensation for this reporting activity and it is anticipated that the Quarterly Reporting forms will be required in both paper and electronic formats.

An employee of any non-federal employer receiving ARRA funds may not be discharged, demoted, otherwise discriminated against as a reprisal for disclosing to law enforcement and other officials information that the employee reasonably believes is evidence of:

- Gross mismanagement;
- Gross waste of covered funds;
- A danger to public health and safety;
- An abuse of authority; or
- A violation of law.

RCSD Additional Documents

- 1) Letter of Support from
Generation Schools

- 2) Letter of Support from
Monroe Community College

- 3) Rochester Core Instructional Program



January 23, 2013

Dr. Bolgen Vargas
Rochester City School District
131 West Broad Street
Rochester, NY 14614

Dear Dr. Vargas:

Generation Schools Network is pleased to offer its support, and is enthusiastic about the potential of working with the RCSD staff to support the turnaround of Monroe High School.

Generation Schools Network supports schools and districts to transform public education through sustainable, scalable structures that drive student achievement and teacher effectiveness for all kinds of students and teacher. Generation Schools has successfully created new schools implementing our signature model, working within districts and labor-management agreements to achieve far better outcomes for districts, teachers, and students. Generation Schools has also worked with districts and existing schools to apply lessons learned from the signature schools to meet their particular needs.

Generation Schools feels that Rochester City School District is well positioned to engage the difficult work of transforming this high school. You and your district leadership are clear about the needs, goals and opportunities. You have committed the leadership of the school and engaged a range of essential constituents including the teachers' union leadership and community partners.

Generation Schools is committed to sharing experience implementing our model in two districts and our work with existing schools in those districts. We know we can affect mindsets and policies. We think that the engagements described will help build the leadership and management capacity of the district and school staff to change structures, align resources and change practices as well.

We look forward to the commencement of this work.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Spear". The signature is written in a cursive, flowing style.

Jonathan Spear
Co-Founder

Anne M. Kress, Ph.D.
President



January 24, 2013

Dr. Bolgen Vargas
Superintendent
Rochester City School District
131 West Broad Street
Rochester, NY 14614

Dear Dr. Vargas:

This letter provides my enthusiastic support for the Rochester City School District's School Improvement Grant Application to the New York State Education Department. This project benefits the Rochester City School District and Monroe Community College in important ways and we are pleased to be a major partner in the Rochester City School District's proposal. In short, this partnership will allow us to better prepare Monroe HS students for college and for high demand jobs in the local economy. Specifically, the partnership will focus on enhancing math, science, and language skills.

The dual enrollment portion of this project aligns well with the current work being done in the Rochester City School District to open the door to higher education for inner city youth, to break down the barriers that hinder students from entering college, and to provide support that empowers all students to succeed. The program will create academies in Science, Math and Language and will offer dual enrollment opportunities to jumpstart students' college experiences and link to career opportunities in the Rochester community. By offering language courses in Spanish, students can work toward bilingual certification which can assist them in many high demand occupations, especially in the Rochester area. Monroe Community College has the proven ability to collaborate on service delivery.

We look forward to being a partner in this innovative model and to serve Rochester's youth. The potential outcomes are significant – both for the students and for the greater Rochester community. I endorse this effort without hesitation. I believe that MCC and RCSD are both committed to the success of this ambitious project. This grant would be a huge achievement for not only the youth of Rochester but for local employers also.

Sincerely,



Anne M. Kress

AMK:sms

Rochester City School District

Common Core

Instructional Guide

6-12

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Introduction

Providing high-quality, highly effective instruction and equal access to academic opportunities is the most important service we can provide our students. Ensuring that all students have comparable academic programming options has been a primary driver for many of the scheduling and programmatic changes from 2012-13 to 2013-14. As the district continues to build an infrastructure that better supports all schools, we will realize the promise of offering engaging instructional opportunities via rigorous curriculum and content and consistent academic programming for every child, in every classroom, every day.

While this guide is not intended to provide ALL of the information you will need to support your teachers and students all year, it provides an overview of expectations regarding service delivery for core program implementation, intervention courses and strategies (including use of time), and acceleration opportunities for our students. Please refer to this as your guide for making the best use of instructional time for students as we move forward with the rollout of the Common Core Learning Standards, NYS developed curriculum units supported by various curricular resources, and external support. As the district's work progresses this year, many of the items contained within this document will evolve as well. The District is committed to keeping you apprised of the work we are all engaged in so that you can best support your teachers.

The guide begins with an overview of the changes that will occur in academic programming for the upcoming year as we transition to a comprehensive method of curricular delivery to support the more rigorous New York State Common Core Learning Standards. The sections following provide an overview by subject area of standards, curriculum, and sample lesson plans that are aligned to Common Core Learning Standards. There is a section dedicated to the new Bilingual Common Core Initiative. The final section consists of Test Guides and Common Core sample questions for English Language Arts and Mathematics.....

Supporting Academic Acceleration in the Rochester City School District

Supporting students in English Language Arts and mathematics is the most proactive service the district can provide to students, and the Rochester City School District is engaged in the critical work of positioning all of our students for success in college and careers. Teachers of grades PreK-3 must take advantage of opportunities to focus on research-based instructional strategies to improve literacy in our youngest learners. The district is seeking support from highly regarded providers of professional development in math instructional strategies aligned to the Common Core Learning Standards (CCLS). A cadre of approximately 150 teachers and administrators were involved in the training ELA and math curriculum and assessments that are designed based on the CCLS for grades Prek-5 for use as the Common Core is rolled out. The District is committed to the same level of support for grade 6 – 12 roll out. These efforts are the beginnings of a massive instructional turnaround effort in the district to transform instructional practice aligned with the rigor of the Common Core.

Current Status:

Currently, only 20% of RCSD students are leaving middle school proficient or better in ELA. The performance in math is even more troubling: just 15% of RCSD students are entering high school proficient or better. RCSD is restructuring its instructional programs and academic supports across the middle grades and high schools to provide all students with access to high-quality and consistent core instruction and research-based intervention supports.

Content Specific Supports:

Schools have done their best to offer academic supports to students with the staff available. Previously, the district has provided Academic Intervention Services (AIS), to students scoring below proficient on state exams using a variety of strategies. Some schools have offered content-specific AIS support from teachers in ELA and math. Others have offered AIS “classes” for students with varying needs in a classroom with a teacher not certified in ELA or math. Still other schools have had designated AIS teachers supporting students in a variety of subjects in an attempt to catch students up.

Grade 9:

Students in grade 9 in need of additional support in ELA and/or math will receive an additional period of each or both subjects—depending upon student need—from English and math certified teachers in their respective high schools.

English Language Arts and Literacy:

To facilitate the use of the additional time each day, the district is supporting focused intervention strategies designed to accelerate the acquisition and mastery of ELA and math skills. All grade 9 students scoring below proficient will receive a double-period of ELA instruction structured with the *Ramp Up to Advanced Literacy* protocol. All teachers of Grade 9 ELA who will be teaching caseloads of students scoring Level 1 or Level 2 on the Grade 8 ELA state assessment will receive training in *Ramp Up to Advanced Literacy* in the 2012 – 2013 school year. Teachers who do not attend the training will not be able to deliver the instructional intervention protocol, so training is required to teach these sections of supportive English 9 instruction.

Supporting Academic Acceleration in the Rochester City School District – cont.

Successful completion of Integrated Literacy and Composition (Ramp Up to Advanced Literacy) will result in students receiving their English 9 course credit, as well as an elective credit.

If a student's decoding deficit is so severe that s/he will not benefit from the Integrated Literacy and Composition course, students will receive support using the -- intervention. The assessment (indicated by SRI levels) data will identify such students at the beginning of the school year.

Mathematics:

Students in grades 8 and 9 scoring a Level 1 on the Grade 7 and Grade 8 math state assessment will be scheduled into a double-period math class using *the Ramp Up to Algebra protocol*. This protocol is designed to accelerate mathematics achievement in students performing more than 2 years behind grade level in math. Students in grade 8 will be taking Algebra Readiness, and students in grade 9 will be taking Foundations of Algebra. Students who successfully complete Algebra Readiness will be assessed for their readiness to take Intensified Algebra or Algebra I in 9th grade. Students who successfully complete Foundations of Algebra (using the Ramp Up to Algebra intervention protocol) will receive a math credit and an elective credit. Students successfully completing Foundations of Algebra will be assessed for their preparedness to take Intensified Algebra or Algebra I the following year. Students in grade 8 in need of only math intervention will receive an additional period of math support using the Ramp Up to Algebra protocol each day. Students in grade 8 needing ELA and math support will receive the Ramp Up to Algebra protocol every other day, on an A-B rotating schedule. Students in grade 8 in Algebra Readiness should be assigned two continuous math periods with the same teacher—both in an everyday dosage or an every other day dosage—to receive the full benefits of the intervention.

All teachers of Grade 8 and 9 math who will be teaching caseloads of students scoring Level 1 on the grade 7 or 8 state assessment will receive training in Ramp Up to Algebra in the 2012 - 2013 school year. Teachers who do not attend the training will not be able to deliver the instructional intervention protocol, so training is required to teach these sections of supportive grade 8 and 9 math—Algebra Readiness and Foundations of Algebra—instruction. In middle schools, scheduling by Math 6, Math 6A, and Math 6AB (and Math 7, Math 7A, Math 7AB, Math 8, Math 8A, Math 8AB, Algebra Readiness) will help distinguish both the types of classes students are taking as well as account for dosage of math and ELA instruction for evaluation purposes.

Students in grade 9 scoring a Level 2 on the grade 8 math state assessment will receive a double-period of math instruction each day using an intervention designed for students performing up to 2 years behind in math. Intensified Algebra prepares students for the Algebra Regents exam at the end of the course. Successful completion of Intensified Algebra results in students receiving an algebra credit, a math elective credit, and prepares students to receive a passing score on the Algebra Regents exam. Students who successfully complete Intensified Algebra successfully will enter Geometry the following year.

All teachers of grade 9 math who will be teaching caseloads of students scoring Level 2 on the grade 8 math state assessment will receive training in Intensified Algebra during the 2012 – 2013 school year. Teachers who do not attend the training will not be able to deliver the instructional intervention protocol, so training is required to teach these sections of supportive grade 9 math Intensified Algebra instruction.

Supporting Academic Acceleration in the Rochester City School District – cont.**Foreign Language**

In order to focus intensively on our students' ELA needs, RCSD is offering foreign language (Spanish) to students in grade 8 during 2013-14. Students who are proficient or better in ELA and math will all be taking a foreign language class, and students in all schools receiving ELA and/or math support may also choose to take foreign language in grade 8. IB feeder schools will also offer Spanish to students scoring proficient or better in grades 7.

Exceptions

While some students may technically meet the criteria for the interventions and supports described here, these classes may not be appropriate for every child. Students who are very beginning ELL students are best served in Newcomer and Bilingual classes. Students with profound disabilities and are non-readers and are enrolled in highly specialized self-contained classrooms or with dedicated special education support services, or programs and services designed for particular language and skill acquisition needs. For students who may qualify for multiple services (RTI and ELA or math tutorial, for example), the leadership of each school will determine which services are most appropriate for each student based on previous experience and knowledge of each student's performance. If needed, School Chiefs, content coordinators and supervisors, and the Teaching and Learning Division will assist in making these decisions for each student.

For non-tested students, schools will need to look at historic student data to make the best course selection for each student. When there is conflicting information, such as when a student scores a Level 1 on the state ELA exam but his or her reading level is not more than 2 years behind, the principal should make the best possible decision for the child. Principals know individual students best and should use their discretion when students who are "borderline" or have incomplete or inconsistent performance histories are being scheduled.

English as a Second Language-Grades PK-12

The Common Core Learning Standards for English Language Arts (ELA) articulate rigorous grade-level expectations in the areas of speaking, listening, reading, and writing to prepare all students to be college and career ready, including English language learners. English Language Learners (ELLs) must be held to the same level of standards expected of students who are already proficient in English. However, these students are acquiring both English language proficiency and content area knowledge concurrently, so some students will require additional time, and all will require appropriate instructional support and aligned assessments. In compliance with regulations for ESL services, and cognizant of the needs of the language learner and their proficiency levels, ELL students are to be given access to all grade-level core instructional content instruction.

The following charts outline how ELLs are to be scheduled for ELA and ESL instruction based on their NYSESLAT or LAB-R proficiency levels:

Middle Level Schools

Proficiency Level	ELL students receive English Language Arts	ELL students receive English as a Second Language
Beginner level ▪ <i>72 minutes ESL daily</i>	ESL classroom instruction for prescribed minutes- pull-out	ESL classroom instruction during ELA-pull-out
Intermediate level ▪ <i>72 minutes ESL daily</i>	ESL classroom instruction for prescribed minutes- pull-out	ESL classroom instruction during ELA-pull-out
Advanced level ▪ <i>36 minutes ESL daily</i>	During ELA classroom instruction	ESL instruction in ESL classroom- pull-out (not during ELA) or ELA classroom push-in

Grades 6-8 ESL Course Offerings:			
	Beginner	Intermediate	Advanced
Grade 6-8	Pull-out section (2 units or class periods)	2 units or class periods: <i>1 push-in and one pull-out or 2 pull-out content-based support depending on student need</i>	1 unit or class: <i>push-in or one pull-out content-based support depending on student need</i>

In order to facilitate ESOL program design and targeted instructional delivery schools are **strongly recommended**, to the greatest extent possible, to cluster students by language proficiency and grade level. For example - "A 6th Grade ESL Beginner class" or "A 7th Grade Beginner ESL /ELA credit bearing class".

High Schools

Proficiency Level	ELL students receive English Language Arts	ELL students receive English as a Second Language
Beginner level <ul style="list-style-type: none"> ▪ <i>108 minutes daily or 540 minutes weekly</i> 	ESL classroom instruction for prescribed minutes-pull-out	ESL classroom instruction during ELA- pull-out Double period 96 minutes daily Alternating days 48 minutes
Intermediate level <ul style="list-style-type: none"> ▪ <i>72 minutes daily or 360 minutes weekly</i> 	ESL classroom instruction for prescribed minutes-pull-out	ESL classroom instruction during ELA-pull-out Double period 96 minutes daily
Advanced level <ul style="list-style-type: none"> ▪ <i>36 minutes ESL daily</i> 	During ELA classroom instruction	ESL instruction in ESL classroom-pull-out (not during ELA) or ELA classroom push-in

English as a Second Language (ESL) students in grades 9-12 are allowed to receive an ELA unit of credit for one year of study in ESL, for up to 2 units of ELA credit earned for the respective successful completion of two yearly ESL courses (beginner level 1, and intermediate level 2 would provide 2 ELA units towards the 4 required for graduation).

Due to the language limitations of newly arrived beginner level ELL students it is recommended that the following courses are considered for ELLs at the high school level for their first year: math, science, health and electives. Social Studies and ELA coursework have language demands that are above the ability of students who are at the beginning levels of acquiring the new language.

Course Offerings - High School ESL (schools without Bilingual Programs).

In order to facilitate ESOL program design and targeted instructional delivery schools are **strongly recommended**, to the greatest extent possible, to cluster students by language proficiency and grade level. For example, - “A 9th Grade ESL Beginner class” or “A 11th Grade Beginner ESL /ELA credit bearing class”.

	Grade 9 - 10	Grade 11 - 12
Large ELL Population Schools	<u>Beginner:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) pull-out section (ELA Common Core based course) ELA Credit bearing Content Support (2 units) - pull-out or push-in* 	<u>Beginner:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) pull-out section (ELA Common Core based course) ELA Credit bearing Content Support (2 units) - pull-out or push-in**
	<u>Intermediate:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) (ELA/Common Core based course) ELA Credit bearing for Intermediate students Content Support (1 unit) - pull-out or push-in* 	<u>Intermediate:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) (ELA/Common Core based course) ELA Credit bearing for Intermediate students Content Support (1 unit) - pull-out or push-in**
	<u>Advanced:</u> <ul style="list-style-type: none"> Content Support (1 unit) - pull-out or push-in* 	<u>Advanced:</u> <ul style="list-style-type: none"> Content Support (1 unit) - pull-out or push-in**
Small ELL Population Schools	<u>Beginner:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) pull-out section (ELA Common Core based course) ELA Credit bearing Content Support (2 units) - pull-out or push-in* 	<u>Beginner:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) pull-out section (ELA Common Core based course) ELA Credit bearing Content Support (2 units) - pull-out or push-in**
	<u>Intermediate:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) (ELA/Common Core based course) ELA Credit bearing for Intermediate students Content Support (1 unit) - pull-out or push-in* 	<u>Intermediate:</u> <ul style="list-style-type: none"> ESL/ELA (1 unit) (ELA/Common Core based course) ELA Credit bearing for Intermediate students Content Support (1 unit) - pull-out or push-in**
	<u>Advanced:</u> <ul style="list-style-type: none"> Content Support (1 unit) - pull-out or push-in* 	<u>Advanced:</u> <ul style="list-style-type: none"> Content Support (1 unit) - pull-out or push-in**

* In most instances these courses will be Global History content based.

** In most instances these courses will be US History content based or Regents ELA based.

RCSD Native Language Arts for Bilingual Programs

The Rochester City School District's Bilingual Programs honor and value students' native language and cultures as a resource to our diverse community and as a means of acquiring English. It embraces bilingualism as an advantage, focusing on preparing lifelong learners and productive citizens capable of succeeding in a multilingual, multicultural, interdependent world. Our students achieve a high level of proficiency in English and Spanish which is an asset that prepares them for the demands of the 21st Century, increasing their opportunities for further education and future employment.

A Core Instructional Program for students enrolled in a bilingual program will:

<p><u>Establish a strong foundation in Native Language Arts (Spanish).</u></p> <p>"A child's competence in first language significantly affects the amount of time it takes to become proficient in a second language". (Brock, 2001, p. 468)</p>	<p>"Children with limited English proficiency who are taught using at least some of their native language perform significantly better on standardized tests those similar children who are taught only in English". (Green, 1998, p.1 as cited by Markham and Gordon, 2007)</p>	<p><u>Allow for a gradual transition to the English language.</u></p> <p>"If a child has had excellent academic preparation in their first language, the literacy proficiencies and academic competence in their first language will transfer to their second language". (Cummins, Farman, Flood, and Lapp (1994) as cited by Brock, 2001, p. 468)</p>
<p><u>Increase the amount of students meeting state standards on the ELA.</u></p> <p>"Students who have received little to no academic or cognitive development in their first language tend to do increasingly poorly as academic and cognitive demands increase after fourth grade and into upper grades" (Thomas and Collier, 2002 as cited in <i>Common Assumptions and Evidence Regarding English Language Learners in the United States</i>)</p>	<p>"Thomas and Collier demonstrated that students who were schooled in bilingual programs would outperform their counterparts in monolingual programs in academic achievement across curriculum after an estimated 4 to 7 years of dual language program instruction (Thomas and Collier, 2002 as cited in <i>Common Assumptions and Evidence Regarding English Language Learners in the United States</i>)</p>	<p><u>Afford students the opportunity to achieve high levels of proficiency in English and Spanish.</u></p> <p>"</p> <p>On July 31, 2012, Governor Cuomo signed into law a bill to recognize New York State high school graduates who demonstrate academic excellence in attaining proficiency in one or more languages other than English with a state seal of biliteracy. The seal will be attached to diplomas and transcripts of graduates who excel in listening, speaking, reading, and writing in multiple languages. (July 31 press release from the Governor's office)</p>

Special Education

Special Education is a Service and Not a Place

A student with a disability shall be provided with appropriate special education in accordance with Individual Educational Plan (IEP).

Students with disabilities shall be provided special education in the least restrictive environment, as defined in Part 200 of the NYSED regulations. To enable students with disabilities to be educated with nondisabled students to the maximum extent appropriate, specially designed instruction and supplementary services may be provided in the regular class, including, as appropriate, providing related services, resource room programs and special class programs within the general education classroom. A student with a disability shall be provided the special education specified on the student's IEP to be necessary to meet the student's unique needs.

Students with disabilities should have equal access to all aspects of the RCSD curriculum. The services, supports, and modifications must be designed, implemented, and progress monitored to ensure maximum educational benefit.

Middle Grades Program

Approximately one-third of RCSD students are transient, moving from school to school throughout the school year for various reasons. In order to provide consistency across all middle schools for students, as well as allow for the sharing of staff across schools, a common middle school schedule is suggested. This schedule intends to offer rich academic experiences to students while meeting the regulations of the New York State Education Department.

Grade 6

ELA	
Social Studies	
Math	
Science	
ELA or Math-A-B rotation OR enrichment	
P.E./Technology-A-B schedule	
Visual Art/Music-quarter each	Family and Consumer Science

Grade 7

ELA	
Social Studies	
Math	
Science	
Technology	Health
P.E./ Visual Art/Music -A-B schedule	
ELA or Math tutorial or elective	

Grade 8

ELA
Social Studies
Math (accelerated)
Science (accelerated)
P.E./ Visual Art/Music -A-B schedule
Foreign Language/Art/Music/CTE Elective
ELA or Math tutorial or elective

High School Program

Approximately one-third of RCSD students are transient, moving from school to school throughout the school year for various reasons. In order to provide consistency across all high schools for students, as well as allow for the sharing of staff across schools, a common high school schedule will be based on an 8 period day (where every period is 45 minutes). This schedule intends to offer rich academic experiences to students while meeting the regulations of the New York State Education Department. The core academic program will be supplemented by each student having the opportunity to receive foreign language and arts (music or visual arts) as well as STEM and CTE opportunities.

High School Core Course Sequence

Courses in bold represent the District CORE sequence

English Language Arts			
Grade 9	Grade 10	Grade 11	Grades 12
Integrated Literacy and Composition <i>(See Intervention Course Enrollment Guidelines)</i>	ELA 10 – CCSS World Literature	ELA 11 – CCSS American Literature	ELA 12 – CCSS School Choice(s)
ELA 9 – CCSS* Introduction to Literature and Composition	ELA 10 – CCSS* World Literature	ELA 11 / Regents – CCSS* American Literature	ELA 12 – CCSS* (School Choice(s))
		AP English Language IB English Literature Other	AP English Language AP English Literature College Articulated English Technical Writing IB English Literature HL2 Other

*Common Core State Standards – Course to be developed

Mathematics			
Grade 9	Grade 10	Grade 11	Grades 12
Foundations of Algebra (Ramp-Up) <i>(See Intervention Course Enrollment Guidelines)</i>	Intensified Algebra - Regents	Geometry - Regents	Algebra 2
	Algebra - Regents		Algebra 2 / Trigonometry - Regents
Intensified Algebra – Regents	Geometry - Regents	Algebra 2	Trigonometry - Regents
Algebra - Regents <i>(See Intervention Course Enrollment Guidelines)</i>		Algebra 2 / Trigonometry - Regents	Pre-calculus
Geometry - Regents	Algebra 2	Trigonometry - Regents	AP Calculus
	Algebra 2 / Trigonometry - Regents	Pre-calculus or IB	AP/College level Calculus, AP/College Level Statistics, or IB

NOTE: CTE integrated courses to be developed

High School Core Course Sequence – cont.

Courses in bold represent the District CORE sequence

Social Studies			
Grade 9	Grade 10	Grade 11	Grades 12
Prioritized Global History and Geography I* – Regents <i>*SpEd / IEP students only</i>	Prioritized Global History and Geography II* - Regents	Prioritized U.S. History* - Regents	Prioritized Participation in Government Economics*
Global History and Geography I - Regents	Global History and Geography II – Regents	U.S. History - Regents	Participation in Government Economics
Global History and Geography I - Regents	AP World History - Regents	AP U.S. History or IB: History of Americas	Participation in Government Economics or AP Government
		11 th grade Electives: Anthropology Psychology Sociology Leadership African American History	12 th grade electives History of the Americans Sociology, Psychology College Level Economics AP Government AP World History

NOTE: 2013-14 School year only - students may semester Global 1 and Global 2 in 10th grade

Science			
Grade 9	Grade 10	Grade 11	Grades 12
Prioritized Living Environment* - Regents <i>*SpEd / IEP students only</i>	Prioritized Earth Science* - Regents or elective <i>*SpEd / IEP students only</i>	Prioritized Physics* - Regents or elective <i>*SpEd / IEP students only</i>	
Living Environment - Regents	Earth Science - Regents or elective	Chemistry - Regents or elective	Physics* - Regents <i>*pre requisite – Algebra 1</i>
Living Environment - Regents	Chemistry - Regents AP Chemistry SUPA / SUNY ESF, etc	Physics - Regents IB / College Level, AP Living Environment AP Chemistry AP Physics	Physics - Regents IB / College Level, AP Living Environment AP Chemistry AP Physics

**PROPOSED PLAN FOR IMPLEMENTING COMMON CORE SCHEDULING
BEGINNING 2013-2014**

The following pages propose a plan to move forward on common core scheduling for all schools beginning next school year. In order to ensure that master schedules and course offerings are consistent, accurate and structured toward academic achievement, significant changes must take place. In particular, changes will affect the current role of the building-based registrar.

In order to plan this transition, the following has been considered and is shared in this plan:

- Common Core Scheduling for grades 6-8 and 9-12

COMMON CORE SCHEDULING

Some notes on the following schedules:

- 6th grade in a K-6 school will be scheduled on a ten-period day.
- 7-8 and 6th grade in a K-8 school will be scheduled on an eight-period day. Each class is 45 minutes.
- 6th grade in K-8 buildings will be departmentalized, in K-6 buildings it will be homeroom based.
- Ramp-up classes will be available in grades 6-9, and it should be scheduled so that it follows the core class. For example, 7th grade math ramp-up would be scheduled on A/C days after math.
- All schools regardless of grade level will follow an ABCD day rotation.
- "0" and "9" periods will be added to a school's schedule depending upon programming needs, and/or extra time for credit recovery or ramp-up activities.
- Grades 7-8 core instructional staff at K-8 schools may be used to provide Tier III intervention in order to create 1.0 teaching positions.
- Similar schools will be "married" based on proximity, size, etc. and exploratory staff will be scheduled within the ABCD framework

Guidelines for Scheduling:

- High School Schedules are based on an 8 period day.
- All schools will offer whole year classes.
- Schools can flex periods 0 and 9 for extended time and enrichment activities for students. In addition students who require double period classes (dance, art, music etc) are encouraged to schedule these courses in the 0 or 9 period added to the students 1 – 8 period classes.
- Students who require Ramp up protocols will get a double period of math or ELA. Students requiring both interventions should be scheduled in AC and BD days.
- All schools are expected to follow the core sequence stated in this document. While some students will require a divergent schedule (due to past practice) only those students should be scheduled out of sequence.
- There will be no “general” courses offered. All classes are expected to be Regents credit bearing courses.

Enrichment:

For students who are performing at or above proficiency, the additional period of time in grades 6-8 is intended to focus on language and literacy or math enrichment or foreign language(s). The additional ELA and math teachers at the middle grades should be providing *acceleration and enrichment opportunities to students in those content areas*. Poetry units, performances, hands-on and long-term problem-solving activities, and math labs are examples of instructional activities in which the students may be engaged.

Structured Use of Additional Time:

For students in grades 6, 7 and 8 in need of ELA and math support who are not receiving the grade 8 Algebra Readiness/Ramp Up to Algebra intervention support, the district is recommending and supporting the following protocols for use of the additional time. Whenever possible, having the additional period of ELA and math support as a continuous, double period is preferred. In instances when the additional period cannot be continuous, there are suggested protocols for the divided support across two periods.

ELA//Literacy Suggested Use of Time – Courses Taught in Periods Back to Back

Double Period Back-to-Back, Same Teacher (96 minutes)		Instructional Materials/Resources
Reading Unit		
Opening (10-15 minutes)	Review of daily student learning objectives Daily Word Study/Vocabulary	RCSD CCLS curriculum delivered with research-based effective instructional strategies (e.g., Isabel Beck, Robert Marzano)
Whole-Group Instruction (15-20 minutes)	Read-Alouds/Think-Aloud/Shared Reading opportunities Demonstration of Comprehension Strategies	NYS CCLS Reading Curriculum Units and grade-level textbook passages
Classroom Conversation (10 minutes)	Structured peer-to-peer conversations Guided practice in making claims about text and supporting claims with textual evidence	NYS CCLS Reading Curriculum Units and grade-level textbook passages
Individual, Partner, and Small Group Period (40 minutes)	Structured independent or paired reading Guided and independent practice in making claims about text and supporting claims with textual evidence Text discussion/Accountable Talk Socratic Seminar Response writing/Writing workshop and writing conferences	NYS CCLS Reading Curriculum Units Protocols for Accountable Talk and Socratic Seminar Short Response Writing Rubric Reading and writing journals
Closing (10 minutes)	Student sharing of key points Reflection on daily student learning objectives	RCSD CCLS Reading Curriculum Units

ELA/Literacy Suggested Use of Time - Courses Taught in Periods Not Back to Back

Double Period Split (48 + 48 minutes) Reading Unit		Instructional Materials/Resources
ELA period		
Opening (5 minutes)	Review of daily student learning objectives	NYS CCLS curriculum delivered with research-based effective instructional strategies (e.g., Isabel Beck, Robert Marzano)
Whole-Group Instruction (15-20 minutes)	Daily Word Study/Vocabulary Read-Alouds/Think-Aloud Shared Reading opportunities Demonstration of Comprehension Strategies	NYS CCLS Reading Curriculum Units and grade-level textbook passages
Individual, Partner, and Small Group Period (15-20 minutes)	Structured independent or paired reading Guided and independent practice in making claims about text and supporting claims with textual evidence Text discussion/Accountable Talk Response writing/Writing workshop and writing conferences	NYS CCLS Reading Curriculum Units Protocol for Accountable Talk Short Response Writing Rubric Reading and writing journals
Closing (5 minutes)	Student sharing of key points Reflection on daily student learning objectives	NYS CCLS Reading Curriculum Units
Tutorial period	(Daily or Every Other Day)	
Opening (5 minutes)	Review of daily student learning objectives	NYS CCLS Reading Curriculum Units
Fluency Practice (10 minutes)	Repeated reading of instructional level text	Coded passages from curricular or ancillary materials Six Minute Solution or other fluency protocols
Close Reading (15 minutes)	Structured reading of complex text Guided practice in making claims about text and supporting claims with textual evidence	NYS CCLS Reading Curriculum Units and grade-level textbook passages
Classroom Conversation (10 minutes)	Structured peer-to-peer conversations Guided practice in making claims about text and supporting claims with textual evidence Accountable Talk/Socratic Seminar Response writing	NYS CCLS Reading Curriculum Units Protocols for Accountable Talk and Socratic Seminar
Closing (10 minutes)	Student sharing of key points Reflection on daily student learning objectives	NYS CCLS Reading Curriculum Units

Mathematics Suggested Use of Time - Courses Taught in Periods Back to Back

Double Period Back-to-Back, Same Teacher (96 minutes) Math Unit		Instructional Materials/Resources
Opening (10-15 minutes)	<p>Teacher-led interactive discussion</p> <p>Focused introduction of concepts</p> <p>Questions that elicit deeper thinking</p> <p>Instruction on routines, rituals leads into work time</p>	<p>NYS CCLS curriculum delivered with research-based effective instructional strategies (e.g., Robert Marzano)</p> <p>Video or Literature books that highlight math concepts (e.g. LearnZillion)</p>
Work Time (25-30 minutes)	<p>Students interact with and explore mathematical concepts</p> <p>Reading, writing, and talking language of mathematics</p> <p>Formative assessments embedded in work</p> <p>Teacher conducts conferences and individualized instruction as needed.</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>Manipulatives</p> <p>Journal/notebooks</p>
Closing (15 -20 minutes)	<p>Learning connected back to concepts, questions posed in Opening</p> <p>Individual or small-group presentations show various approaches to problems</p> <p>Use mathematical language appropriately</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>Protocol for Accountable Talk</p>
Skills (10 minutes)	<p>Skills are practiced to reinforce new learning and relate to existing knowledge base</p> <p>Conceptual understanding grows as a result of practice with procedures and computations</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>First in Math</p>

Mathematics Suggested Use of Time – Courses Taught in Periods Back to Back

<p>Work Time (25-30 minutes)</p>	<p>Students interact with and explore mathematical concepts</p> <p>Reading, writing, and talking language of mathematics</p> <p>Formative assessments embedded in work</p> <p>Teacher conducts conferences and individualized instruction as needed.</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>Manipulatives</p> <p>Journal/notebooks</p>
<p>Review and Consolidation (15 - 20 minutes)</p>	<p>Students work another set of problems suitable for various skill levels</p> <p>Teacher works with students who need extra help</p> <p>Reflection on daily student learning objectives</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>“Ticket-out-the Door”</p>
<p>Double Period Split (48 + 48 minutes) Math Unit</p>		<p>Instructional Materials/Resources</p>
<p>Math period</p>		
<p>Opening (10 minutes)</p>	<p>Teacher-led interactive discussion</p> <p>Focused introduction of concepts</p> <p>Questions that elicit deeper thinking</p> <p>Instruction on routines, rituals leads into work time</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units) delivered with research-based effective instructional strategies (e.g., Robert Marzano)</p> <p>Video or Literature books that highlight math concepts (e.g. LearnZillion)</p>
<p>Work Time (25-30 minutes)</p>	<p>Students interact with and explore mathematical concepts</p> <p>Reading, writing, and talking language of mathematics</p> <p>Formative assessments embedded in work</p> <p>Teacher conducts conferences and individualized instruction as needed.</p>	<p>NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)</p> <p>Manipulatives</p> <p>Journal/notebooks</p>
<p>Closing (5 - 8 minutes)</p>	<p>Learning connected back to concepts, questions posed in Opening</p>	<p>Essential question</p>

Mathematics Suggested Use of Time

Tutorial period	(Daily or Every Other Day)	
Opening (10 minutes)	Review of daily student learning objectives/ vocabulary	NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units)
Skills and fluency practice (10 minutes)	Skills are practiced to reinforce new learning and relate to existing knowledge base Conceptual understanding grows as a result of practice with procedures and computations	NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units) Fluency worksheets
Review and Consolidation (15 - 20 minutes)	Students work another set of problems suitable for various skill levels Teacher works with students who need extra help Reflection on daily student learning objectives	NYS CCLS Math Curriculum Units (supplemented by the Rochester Developed Curriculum Units) "Ticket-out-the Door"
Closing (5 - 8 minutes)	Learning connected back to concepts, questions posed in Opening Students share Ticket-out-the -Door	Essential question

**Master Schedule for Grades 6-8
Required Common Core Courses
Beginning 2013-2014**

Minutes	6th Grade	7th Grade	8th Grade
15	Home Base	Home Base	Home Base
45	ELA	ELA	ELA
45	Math	Math	Math 8 or Integrated Algebra - R
45	Other (ELA/Math-Ramp Up)	Other (ELA/Math-Ramp Up)	Other (ELA/Math-Ramp Up)
45	Lunch	Lunch	Lunch
45	Social Studies	Social Studies	Social Studies
45	Science	Science	Science 8 or Living Environment
45	PE/Special AC/BD day	PE/Art AC/BD day	PE/Elective (or LE Lab) AC/BD day
45	Fine Arts/ Family Consumer Science AC/BD day	Tech/Health AC/BD day	Foreign Language

High School Master Schedule for 9-12 Schools
2013-2014

Period	Minutes	Grade 9 (RTI)	Grade 9 (on track)	Grade 10	Grade 11	Grade 12
1st	45	ELA 9 Intro to Lit & Comp	ELA 9 Intro to Lit & Comp	ELA 10 World Lit.	ELA 11- R American Lit. or AP /IB English	ELA 12 (school choice) AP/IB College Articulated English Technical Writing
		Integrated Literacy and Composition (Ramp-up) AC Days	Algebra- R or Intensified Algebra- R or Geometry- R	Algebra- R or Intensified Algebra- R Geometry- R or Algebra 2 with Trig.- R	Geometry- R or Algebra 2 with Trig.- R or Pre-Calculus or IB	Algebra 2 with Trig.- R or Pre-Calculus or AP Calculus AP/College Calculus or AP/ College Level Statistics or IB
3rd	45	Living Environment- R	LOTE	Fine Art	<i>Elective/Health</i> AC/BD Days	Elective
4th	45	LOTE	Elective	Elective	Elective	Elective
5th	45	Lunch	Lunch	Lunch	Lunch	Lunch

High School Master Schedule for 9-12 Schools
2013-2014

Period	Minutes	Grade 9 (RTI)	Grade 9 (on track)	Grade 10	Grade 11	Grade 12
6th	45	Global History I - R	Global History I - R	Global History II -R (and Global 1?) or AP World History - R	Global II - R or US History - R or AP World History - R or IB History of Americas	PIG/Eco Combo or AP Government
7th	45	Algebra- R	Living Environment- R Earth Science - R <i>(For students who took LE at grade 8)</i>	Earth Science - R or Chemistry - R AP Chemistry	Chemistry - R or Physics - R IB/ College Level AP: LE, Chem., or Physics	Physics - R (pre req. - Algebra-R) IB/ College Level AP: LE, Chem., or Physics
8th	45	PE AC Days	PE/Science Lab AC/BD Days	PE/Science Lab AC/BD Days	PE/Science Lab AC/BD Days	PE/Science Lab or Elective AC/BD Days

New York State Common Core – English Language Arts Accessibility & Deployment

- English Language Arts Common Core Standards, Curriculum, and Assessment
 - All curriculum & assessment units and materials will be housed on an online platform accessible at the following links:
 -  www.engageny.com and www.engagerochester.com
- Deployment
 - 2012 – 2013 more resources, exemplary lessons, student work samples, etc. will be vetted through a quality control process and added to the materials.
 - The curriculum & assessment system will be fully integrated with the professional development platform, assessment system, and other data systems to allow for accurate and usable reports and decision-making.
 - All work is being conducted across departments to ensure compatibility and utility needs are met.

High School English Language Course Sequence

English Language Arts			
Grade 9	Grade 10	Grade 11	Grades 12
Integrated Literacy and Composition <i>(See Intervention Course Enrollment Guidelines)</i>	ELA 10 – CCSS World Literature	ELA 11 – CCSS American Literature	ELA 12 – CCSS School Choice(s)
ELA 9 – CCSS* Introduction to Literature and Composition	ELA 10 – CCSS* World Literature	ELA 11 / Regents – CCSS* American Literature	ELA 12 – CCSS* (School Choice(s))
		AP English Language IB English Literature Other	AP English Language AP English Literature College Articulated English Technical Writing IB English Literature HL2 Other

Courses in bold represent the District CORE sequence

*Common Core State Standards – Course to be developed

**New York State Common Core Learning Standards for
English Language Arts and Literacy**

6-12

College and Career Readiness Anchor Standards for Reading

The Common Core Reading Standards for Literacy require the explicit instruction in reading strategies across content areas. The goal of these standards is to develop independent, strategic readers. The College and Career Ready framework is intended to support an interdisciplinary approach across curriculums.

The grades 6–12 standards on the following pages define what students should **understand** and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; **cite specific textual evidence** when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and **analyze their development**; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas **develop and interact** over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are **used in a text**, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including **how specific sentences, paragraphs, and larger portions of the text** (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the **content and style of a text**.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Responding to Literature

11. Respond to literature by employing knowledge of literary language, textual features, and forms to read and comprehend, reflect upon, and interpret literary texts from a variety of genres and a wide spectrum of American and world cultures.

Reading Standards for Literature 6–12

The following standards offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

	Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Key Ideas and Details</i>			
1.	Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
2.	Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.	2. Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.	2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
3.	Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	3. Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).	3. Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
<i>Craft and Structure</i>			
4.	Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama	4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
5.	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.	5. Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.	5. Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.

Reading Standards for Literature 6–12 – cont.

	Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Craft and Structure</i>			
6. Explain how an author develops the point of view of the narrator or speaker in a text. a. Explain how an author’s geographic location or culture affects his or her perspective.	6. Analyze how an author develops and contrasts the points of view of different characters or narrators in a text. a. Analyze stories, drama, or poems by authors who represent diverse world cultures.	6. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor. a. Analyze full-length novels, short stories, poems, and other genres by authors who represent diverse world cultures.	
<i>Integration of Knowledge and Ideas</i>			
7. Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text to what they perceive when they listen or watch.	7. Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing the effects of techniques unique to each medium (e.g., lighting, sound, color, or camera focus and angles in a film).	7. Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.	
8. (Not applicable to literature)	8. (Not applicable to literature)	8. (Not applicable to literature)	
9. Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.	9. Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.	9. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.	
<i>Range of Reading and Level of Text Complexity</i>			
10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literature, including stories, dramas, and poems, at the high end of grades 6–8 text complexity band independently and proficiently.	

Reading Standards for Literature 6–12 – cont.

Responding to Literature

- | | | |
|---|---|--|
| <p>11. Recognize, interpret, and make connections in narratives, poetry, and drama, ethically and artistically to other texts, ideas, cultural perspectives, eras, personal events, and situations.</p> <ul style="list-style-type: none"> a. Self-select text based on personal preferences. b. Use established criteria to classify, select, and evaluate texts to make informed judgments about the quality of the pieces. | <p>11. Recognize, interpret, and make connections in narratives, poetry, and drama, ethically and artistically to other texts, ideas, cultural perspectives, eras, personal events, and situations.</p> <ul style="list-style-type: none"> a. Self-select text based on personal preferences. b. Use established criteria to classify, select, and evaluate texts to make informed judgments about the quality of the pieces. | <p>11. Interpret, analyze, and evaluate narratives, poetry, and drama, artistically and ethically by making connections to: other texts, ideas, cultural perspectives, eras, personal events, and situations.</p> <ul style="list-style-type: none"> a. Self-select text to develop personal preferences. 12. Establish and use criteria to classify, select, and evaluate texts to make informed judgments about the quality of the pieces. |
|---|---|--|

Reading Standards for Literature 6–12 – cont.

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

<i>Key Ideas and Details</i>	Grade 9-10 students:	Grade 11-12 students:
1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	2. Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.	2. Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	3. Analyze how complex characters (e.g., those with multiple or conflicting motivations) develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	3. Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).
<i>Craft and Structure</i>		
4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).	4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).	4. Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)
5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.	5. Analyze how an author's choices concerning how to structure a text, order events within it (e.g., parallel plots), and manipulate time (e.g., pacing, flashbacks) create such effects as mystery, tension, or surprise.	5. Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.
6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.	6. Analyze a particular point of view or cultural experience reflected in a work of literature from outside the United States, drawing on a wide reading of world literature.	6. Analyze a case in which grasping point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

Reading Standards for Literature 6–12 – cont.

	Grade 9-10 students:	Grade 11-12 students:
	<i>Integration of Knowledge and Ideas</i>	
7.	Analyze the representation of a subject or a key scene in two different artistic mediums, including what is emphasized or absent in each treatment (e.g., Auden's "Musée des Beaux Arts" and Breughel's Landscape with the Fall of Icarus). a. Analyze works by authors or artists who represent diverse world cultures.	7. Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.) a. Analyze multiple interpretations of full-length works by authors who represent diverse world cultures.
8.	(Not applicable to literature)	8. (Not applicable to literature)
9.	Analyze how an author draws on and transforms source material in a specific work (e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare).	9. Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.
	<i>Range of Reading and Level of Text Complexity</i>	
10.	By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of	10. By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11–CCR text complexity band independently and proficiently
	By the end of grade 10, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 9–10 text complexity band independently and proficiently. Responding to Literature	
11.	Interpret, analyze, and evaluate narratives, poetry, and drama, aesthetically and ethically by making connections to: other texts, ideas, cultural perspectives, eras, personal events and situations. a. Self-select text to respond and develop innovative perspectives. b. Establish and use criteria to classify, select, and evaluate texts to make informed judgments about the quality of the pieces.	11. Interpret, analyze, and evaluate narratives, poetry, and drama, aesthetically and philosophically by making connections to: other texts, ideas, cultural perspectives, eras, personal events, and situations. a. Self-select text to respond and develop innovative perspectives. b. Establish and use criteria to classify, select, and evaluate texts to make informed judgments about the quality of the pieces.

Reading Standards for Informational Text 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Key Ideas and Details</i>		
<p>1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>2. Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.</p> <p>3. Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).</p>	<p>1. Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>2. Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.</p> <p>3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).</p>	<p>1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>2. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.</p> <p>3. Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).</p>
<i>Craft and Structure</i>		
<p>4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.</p> <p>5. Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.</p> <p>6. Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.</p>	<p>4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.</p> <p>5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.</p> <p>6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.</p>	<p>4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.</p> <p>5. Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.</p> <p>6. Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.</p>

Reading Standards for Informational Text 6–12 – cont.

<i>Integration of Knowledge and Ideas</i>		
7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.	7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).	7. Evaluate the advantages and disadvantages of using different mediums (e.g., print or digital text, video, multimedia) to present a particular topic or idea.
8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.	8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.	8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
9. Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person). a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively.	9. Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts. a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively.	9. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation. a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively.
<i>Range of Reading and Level of Text Complexity</i>		
10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.	10. By the end of the year, read and comprehend literary nonfiction at the high end of the grades 6–8 text complexity band independently and proficiently.

Reading Standards for Informational Text 6–12 – cont.

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grade 9-10 students:	Grade 11-12 students:
<i>Key Ideas and Details</i>	
<p>1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</p> <p>a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).</p>	<p>1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</p> <p>a. Develop factual, interpretive, and evaluative questions for further exploration of the topic(s).</p>
<p>2. Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.</p> <p>3. Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.</p>	<p>2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.</p> <p>3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.</p>
<i>Craft and Structure</i>	
<p>4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).</p> <p>5. Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).</p>	<p>4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).</p> <p>5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.</p>
<p>6. Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.</p>	<p>6. Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.</p>

Reading Standards for Informational Text 6–12 – cont.

Grade 9-10 students:	Grade 11-12 students:
<p><i>Integration of Knowledge and Ideas</i></p> <p>7. Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.</p> <p>8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.</p> <p>9. Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts. a. Read, annotate, and analyze informational texts on topics related to diverse and nontraditional cultures and viewpoints.</p>	<p>7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.</p> <p>8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).</p> <p>9. Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features. a. Read, annotate, and analyze informational texts on topics related to diverse and non-traditional cultures and viewpoints.</p>
<p><i>Range of Reading and Level of Text Complexity</i></p> <p>10. By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.</p>	<p>10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.</p>

College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes v

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Responding to Literature

11. Develop personal, cultural, textual, and thematic connections within and across genres as they respond to texts through written, digital, and oral presentations, employing a variety of media and genres.

Writing Standards 6–12

The following standards for grades 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. Students advancing through the grades are expected to meet each year’s grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p><i>Text Types and Purposes</i></p> <p>1. Write arguments to support claims with clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> a. Introduce claim(s) and organize the reasons and evidence clearly. b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from the argument presented. 	<p>1. Write arguments to support claims with clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> a. Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented. 	<p>1. Write arguments to support claims with clear reasons and relevant evidence.</p> <ul style="list-style-type: none"> a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented.

Writing Standards 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p><i>Text Types and Purposes</i></p> <p>2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <ul style="list-style-type: none"> a. Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from the information or explanation presented. 	<p>2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <ul style="list-style-type: none"> a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented. 	<p>2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.</p> <ul style="list-style-type: none"> a. Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style. f. Provide a concluding statement or section that follows from and supports the information or explanation presented.

Writing Standards 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p><i>Text Types and Purposes</i></p> <p>3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.</p> <ul style="list-style-type: none"> a. Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. e. Provide a conclusion that follows from the narrated experiences or events. 	<p>3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.</p> <ul style="list-style-type: none"> a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events. 	<p>3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.</p> <ul style="list-style-type: none"> a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. b. Use narrative techniques, such as dialogue, pacing, description, and reflection, to develop experiences, events, and/or characters. c. Use a variety of transition words, phrases, and clauses to convey sequence, signal shifts from one time frame or setting to another, and show the relationships among experiences and events. d. Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events. e. Provide a conclusion that follows from and reflects on the narrated experiences or events.

Writing Standards 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Production and Distribution of Writing</i>		
<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.) a. Produce text (print or nonprint) that explores a variety of cultures and perspectives.</p>	<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.) a. Produce text (print or nonprint) that explores a variety of cultures and perspectives.</p>	<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.) a. Produce text (print or nonprint) that explores a variety of cultures and perspectives.</p>
<p>5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3).</p>	<p>5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3).</p>	<p>5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3).</p>
<p>6. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.</p>	<p>6. Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.</p>	<p>6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.</p>
Research to Build and Present Knowledge		
<p>7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.</p>	<p>7. Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.</p>	<p>7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.</p>
<p>8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.</p>	<p>8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p>	<p>8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p>

Writing Standards 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p>Research to Build and Present Knowledge</p>		
<p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply grade 6 Reading standards to literature (e.g., "Compare and contrast texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics").</p> <p>b. Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not").</p>	<p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply grade 7 Reading standards to literature (e.g., "Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history").</p> <p>b. Apply grade 7 Reading standards to literary nonfiction (e.g., "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").</p>	<p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply grade 8 Reading standards to literature (e.g., "Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new").</p> <p>b. Apply grade 8 Reading standards to literary nonfiction (e.g., "Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced").</p>
<p>Range of Writing</p>		
<p>10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p>10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p>10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>
<p>Responding to Literature</p>		
<p>11. Create and present a text or art work in response to a literary work</p> <p>a. Develop a perspective or theme supported by relevant details.</p> <p>b. Recognize and illustrate social, historical, and cultural features in the presentation of literary texts.</p> <p>c. Create poetry, stories, plays, and other literary forms (e.g. videos, art work).</p>	<p>11. Create a presentation, art work, or text in response to a literary work with a commentary that identifies connections.</p> <p>a. Make deliberate, personal, cultural, textual, and thematic connections across genres.</p> <p>b. Create poetry, stories, plays and other literary forms (e.g. videos, art work).</p>	<p>11. Create a presentation, art work, or text in response to a literary work with a commentary that identifies connections and explains divergences from the original.</p> <p>a. Make well-supported personal, cultural, textual, and thematic connections across genres.</p> <p>b. Create poetry, stories, plays, and other literary forms (e.g. videos, art work).</p>

Writing Standards 6–12 – cont.

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grade 9-10 Students:	Grade 11-12 students:
<p>Text Types and Purposes</p> <p>1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <ul style="list-style-type: none"> a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience’s knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented. 	<p>1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument.</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience’s knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.

Writing Standards 6–12 – cont.

Grade 9-10 Students:	Grade 11-12 students:
<p>Text Types and Purposes</p> <p>2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <ol style="list-style-type: none"> Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. Use appropriate and varied transitions to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. Use precise language and domain-specific vocabulary to manage the complexity of the topic. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 	<p>2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.</p> <ol style="list-style-type: none"> Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).

Writing Standards 6–12 – cont.

Grade 9-10 Students:	Grade 11-12 students:
<i>Text Types and Purposes</i>	
<p>3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p> <ol style="list-style-type: none"> Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative. Adapt voice, awareness of audience, and use of language to accommodate a variety of cultural contexts. 	<p>3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p> <ol style="list-style-type: none"> Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative. Adapt voice, awareness of audience, and use of language to accommodate a variety of cultural contexts.
<i>Production and Distribution of Writing</i>	
<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 9–10.)</p> <p>6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically</p>	<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)</p> <p>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11–12.)</p> <p>6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.</p>

Writing Standards 6–12 – cont.

Grade 9-10 Students:	Grade 11-12 students:
<p><i>Research to Build and Present Knowledge</i></p>	
<p>7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p>a. Explore topics dealing with different cultures and world viewpoints.</p>	<p>7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p>a. Explore topics dealing with different cultures and world viewpoints. of language to accommodate a variety of cultural contexts.</p>
<p>8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.</p>	<p>8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
<p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply grades 9–10 Reading standards to literature (e.g., “Analyze how an author draws on and transforms source material in a specific work [e.g., how Shakespeare treats a theme or topic from Ovid or the Bible or how a later author draws on a play by Shakespeare]”).</p> <p>b. Apply grades 9–10 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning”).</p>	<p>9. Draw evidence from literary or informational texts to support analysis, reflection, and research.</p> <p>a. Apply grades 11–12 Reading standards to literature (e.g., “Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics”).</p> <p>b. Apply grades 11–12 Reading standards to literary nonfiction (e.g., “Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., The Federalist, presidential addresses]”).</p>
<p>Range of Writing</p>	
<p>10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</p>	<p>10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.</p>

Writing Standards 6–12 – cont.

Grade 9-10 Students:	Grade 11-12 students:
<p><i>Responding to Literature</i></p> <p>11. Create literary texts that demonstrate knowledge and understanding of a wide variety of texts of recognized literary merit.</p> <ul style="list-style-type: none"> a. Engage in a wide range of prewriting experiences, such as using a variety of visual representations, to express personal, social, and cultural connections and insights. b. Identify, analyze, and use elements and techniques of various genres of literature. c. Develop critical and interpretive texts from more than one perspective, including historical and cultural. d. Create poetry, stories, plays, and other literary forms (e.g. videos, art work). 	<p>11. Create interpretive and responsive texts to demonstrate knowledge and a sophisticated understanding of the connections between life and the literary work.</p> <ul style="list-style-type: none"> a. Engage in using a wide range of prewriting strategies, such as visual representations and the creation of factual and interpretive questions, to express personal, social and cultural connections and insights. b. Identify, analyze, and use elements and techniques of various genres of literature, such as allegory, stream of consciousness, irony, and ambiguity, to affect meaning. c. Develop innovative perspectives on texts, including historical, cultural, sociological, and psychological contexts. d. Create poetry, stories, plays, and other literary forms (e.g. videos, art work).

College and Career Readiness Anchor Standards for Speaking and Listening

The 6-12 standards for speaking and listening define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Comprehension and Collaboration

1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

1. Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
2. Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
3. Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Speaking and Listening Standards 6–12

The following standards for 6–12 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year’s grade-specific standards and retain or further develop skills and understandings mastered in preceding grades.

Grade 6 students: <i>Comprehension and Collaboration</i>	Grade 7 students:	Grade 8 students:
<p>1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others’ ideas and expressing their own clearly.</p> <ul style="list-style-type: none"> a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed. c. Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion. d. Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing. e. Seek to understand and communicate with individuals from different perspectives and cultural backgrounds. 	<p>1. Engage effectively in a range of collaborative discussions (one on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others’ ideas and expressing their own clearly.</p> <ul style="list-style-type: none"> a. Come to discussions prepared having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that elicit elaboration and respond to others’ questions and comments with relevant observations and ideas that bring the discussion back on topic as needed. d. Acknowledge new information expressed by others and, when warranted, modify their own views. e. Seek to understand other perspectives and cultures and communicate effectively with audiences or individuals from varied backgrounds. 	<p>1. Engage effectively in a range of collaborative discussions (one on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others’ ideas and expressing their own clearly.</p> <ul style="list-style-type: none"> a. Come to discussions prepared having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion. b. Follow rules for collegial discussions and decision making, track progress toward specific goals and deadlines, and define individual roles as needed. c. Pose questions that connect the ideas of several speakers and respond to others’ questions and comments with relevant evidence, observations, and ideas. d. Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented. e. Seek to understand other perspectives and cultures and communicate effectively with audiences or individuals from varied backgrounds.

Speaking and Listening Standards 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Comprehension and Collaboration</i>		
<p>2. Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.</p> <p>a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively</p>	<p>2. Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.</p> <p>a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively</p>	<p>2. Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.</p> <p>a. Use their experience and their knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively.</p>
<p>3. Delineate a speaker’s argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.</p>	<p>3. Delineate a speaker’s argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.</p>	<p>3. Delineate a speaker’s argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.</p>
Presentation of Knowledge and Ideas		
<p>4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.</p>	<p>4. Present claims and findings, emphasizing salient points in a focused, coherent manner with pertinent descriptions, facts, details, and examples; use appropriate eye contact, adequate volume, and clear pronunciation.</p>	<p>4. Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.</p>
<p>5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.</p>	<p>5. Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.</p>	<p>5. Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.</p>
<p>6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3).</p>	<p>6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 7 Language standards 1 and 3).</p>	<p>6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 8 Language standards 1 and 3).</p>

Speaking and Listening Standards 6–12 – cont.

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grade 9-10 Students:	Grade 11-12 students:
<p>Comprehension and Collaboration</p> <p>1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p> <ul style="list-style-type: none"> a. Come to discussions prepared having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to set rules for collegial discussions and decision-making (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed. c. Propel conversations by posing and responding to questions that relate to the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions. d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented. e. Seek to understand other perspectives and cultures and communicate effectively with audiences or individuals from varied backgrounds <p>2. Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.</p> <p>3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.</p>	<p>1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.</p> <ul style="list-style-type: none"> a. Come to discussions prepared having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas. b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed. c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives. d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task. e. Seek to understand other perspectives and cultures and communicate effectively with audiences or individuals from varied backgrounds. <p>2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.</p> <p>3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.</p>

Speaking and Listening Standards 6–12 – cont.

Grade 9-10 Students:	Grade 11-12 students:
Presentation of Knowledge and Ideas	
<p>4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.</p>	<p>4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.</p>
<p>5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>	<p>5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>
<p>6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grades 9–10 Language standards 1 and 3).</p>	<p>6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3).</p>

College and Career Readiness Anchor Standards for Language

The 6–12 standards for language define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
5. Demonstrate understanding of figurative language, word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Language Standards 6–12

The following standards for grades K–5 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Students advancing through the grades are expected to meet each year’s grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*).

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p><i>Conventions of Standard English</i></p> <p>1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Use intensive pronouns (e.g., myself, ourselves). Recognize and correct inappropriate shifts in pronoun number and person.* c. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).* e. Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.* <p>2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> a. Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.* b. Spell correctly. 	<p>1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> a. Explain the function of phrases and clauses in general and their function in specific sentences. b. Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas. c. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.* <p>2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> a. Use a comma to separate coordinate adjectives (e.g., it was a fascinating, enjoyable movie but not He wore an old[,] green shirt). b. Spell correctly. 	<p>1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <ul style="list-style-type: none"> a. Explain the function of verbals (gerunds, participles, infinitives) in general and their function in particular sentences. b. Form and use verbs in the active and passive voice. c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood. d. Recognize and correct inappropriate shifts in verb voice and mood.* <p>2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <ul style="list-style-type: none"> a. Use punctuation (comma, ellipsis, dash) to indicate a b. pause or break. c. Use an ellipsis to indicate an omission. d. Spell correctly.

Language Standards 6–12 – cont.

Kindergartners: <i>Knowledge of Language</i>	Grade 1 students:	Grade 2 students:
<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ul style="list-style-type: none"> a. Vary sentence patterns for meaning, reader/listener interest, and style.* b. Maintain consistency in style and tone.* 	<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ul style="list-style-type: none"> a. Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.* 	<p>3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <ul style="list-style-type: none"> a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).
<i>Vocabulary Acquisition and Use</i>		
<p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). 	<p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 7 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). 	<p>4. Determine or clarify the meaning of unknown and multiple meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, secede). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. e. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

Language Standards 6–12 – cont.

Kindergartners: <i>Vocabulary Acquisition and Use</i>	Grade 1 students:	Grade 2 students:
<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Interpret figures of speech (e.g., personification) in context. b. Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, unwise, thrifty). 	<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context. b. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., refined, respectful, polite, diplomatic, condescending). 	<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Interpret figures of speech (e.g. verbal irony, puns) in context. b. Use the relationship between particular words to better understand each of the words. c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).
<p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>	<p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>	<p>6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>

Language Standards 6–12 – cont.

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

	Grade 9-10 students:	Grade 11-12 students:
<p>Conventions of Standard English</p> <ol style="list-style-type: none"> Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. <ol style="list-style-type: none"> Use parallel structure.* Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. <ol style="list-style-type: none"> Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. Use a colon to introduce a list or quotation. Spell correctly. <p>Knowledge of Language</p> <ol style="list-style-type: none"> Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. <ol style="list-style-type: none"> Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian's Manual for Writers) appropriate for the discipline and writing type. 		<ol style="list-style-type: none"> Demonstrate command of the conventions of standard English grammar and usage when writing or speaking. <ol style="list-style-type: none"> Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested. Resolve issues of complex or contested usage, consulting references (e.g., Merriam Webster's Dictionary of English Usage, Garner's Modern American Usage) as needed. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing. <ol style="list-style-type: none"> Observe hyphenation conventions. Spell correctly.
<ol style="list-style-type: none"> Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening. <ol style="list-style-type: none"> Vary syntax for effect, consulting references (e.g., Tufte's <i>Artful Sentences</i>) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading. 		

Language Standards 6–12 – cont.

Grade 9-10 students: Conventions of Standard English	Grade 11-12 students:
<p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, or its etymology. d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary). 	<p>4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.</p> <ul style="list-style-type: none"> a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase. b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable). c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage. e. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Interpret figures of speech (e.g., euphemism, oxymoron) in context and analyze their role in the text. b. Analyze nuances in the meaning of words with similar denotations 	<p>5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.</p> <ul style="list-style-type: none"> a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text. b. Analyze nuances in the meaning of words with similar denotations.
<p>6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>	<p>6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.</p>

Standard 10: Range, Quality, and Complexity of Student Reading 6–12

Measuring Text Complexity: Three Factors

- Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands
- Quantitative evaluation of the text: Readability measures and other scores of text complexity
- Matching reader to text and task: Reader variables (such as motivation, knowledge, and experiences) and task variables (such as purpose and the complexity generated by the task assigned and the questions posed)

Range of Text Types for 6–12

Students in 6–12 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods. The following represent a sampling of types and suggestions for types of texts. Note that these are not mandated text but are illustrative of types of text to be utilized. Teachers should use their professional judgment and best practices to choose texts in each genre.

Literature			Informational Text
Stories	Dramas	Poetry	Literary Nonfiction and Historical, Scientific, and Technical Texts
Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels.	Includes one-act and multi-act plays, both in written form and on film.	Includes the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics.	Includes the subgenres of exposition, argument, and functional text in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, technical, or economic accounts (including digital sources) written for a broad audience.

Texts Illustrating the Complexity, Quality, and Range of Student Reading 6–12

Grades	Literature: Stories, Drama, Poetry	Informational Texts: Literary Nonfiction and Historical, Scientific, and Technical Texts
6-8	<ul style="list-style-type: none"> ▪ <i>Little Women</i> by Louisa May Alcott (1869) ▪ <i>The Adventures of Tom Sawyer</i> by Mark Twain (1876) ▪ "The Road Not Taken" by Robert Frost (1915) ▪ <i>The Dark Is Rising</i> by Susan Cooper (1973) ▪ <i>Dragonwings</i> by Laurence Yep (1975) ▪ <i>Roll of Thunder, Hear My Cry</i> by Mildred Taylor (1976) 	<ul style="list-style-type: none"> ▪ "Letter on Thomas Jefferson" by John Adams (1776) ▪ <i>Narrative of the Life of Frederick Douglass, an American Slave</i> by Frederick Douglass (1845) ▪ "Blood, Toil, Tears and Sweat: Address to Parliament on May 13th, 1940" by Winston Churchill (1940) ▪ <i>Harriet Tubman: Conductor on the Underground Railroad</i> by Ann Petry (1955) ▪ <i>Travels with Charley: In Search of America</i> by John Steinbeck (1962)
9-10	<ul style="list-style-type: none"> ▪ <i>The Tragedy of Macbeth</i> by William Shakespeare (1592) ▪ "Ozymandias" by Percy Bysshe Shelley (1817) ▪ "The Raven" by Edgar Allan Poe (1845) ▪ "The Gift of the Magi" by O. Henry (1906) ▪ <i>The Grapes of Wrath</i> by John Steinbeck (1939) ▪ <i>Fahrenheit 451</i> by Ray Bradbury (1953) ▪ <i>The Killer Angels</i> by Michael Shaara (1975) 	<ul style="list-style-type: none"> ▪ "Speech to the Second Virginia Convention" by Patrick Henry (1775) ▪ "Farewell Address" by George Washington (1796) ▪ "Gettysburg Address" by Abraham Lincoln (1863) ▪ "State of the Union Address" by Franklin Delano Roosevelt (1941) ▪ "Letter from Birmingham Jail" by Martin Luther King, Jr. (1964) ▪ "Hope, Despair and Memory" by Elie Wiesel (1997)
11-CCR	<ul style="list-style-type: none"> ▪ "Ode on a Grecian Urn" by John Keats (1820) ▪ <i>Jane Eyre</i> by Charlotte Brontë (1848) ▪ "Because I Could Not Stop for Death" by Emily Dickinson (1890) ▪ <i>The Great Gatsby</i> by F. Scott Fitzgerald (1925) ▪ <i>Their Eyes Were Watching God</i> by Zora Neale Hurston (1937) ▪ <i>A Raisin in the Sun</i> by Lorraine Hansberry (1959) ▪ <i>The Namesake</i> by Jhumpa Lahiri (2003) 	<ul style="list-style-type: none"> ▪ <i>Common Sense</i> by Thomas Paine (1776) ▪ <i>Walden</i> by Henry David Thoreau (1854) ▪ "Society and Solitude" by Ralph Waldo Emerson (1857) ▪ "The Fallacy of Success" by G. K. Chesterton (1909) ▪ <i>Black Boy</i> by Richard Wright (1945) ▪ "Politics and the English Language" by George Orwell (1946) ▪ "Take the Tortillas Out of Your Poetry" by Rudolfo Anaya (1995)

New York State English Language Arts Curriculum**Grades Prek-2 broken into two strands:**

- **Listening and Learning Strand** - consists of a series of read-alouds organized by topics (called domains), many of which are informational in nature. The goal of the Listening and Learning Strand is for students to acquire language competence through listening, specifically building a rich vocabulary, and broad knowledge in history and science by being exposed to carefully selected, sequenced, and coherent read-alouds.
- **Skills Strand** - teaches the mechanics of reading—students are taught systematic and explicit phonics instruction as their primary tool for decoding written English. By the end of grade 2, students have learned all of the sound-spelling correspondences in the English language and are able to decode written material they encounter. In addition to phonics, students also are taught spelling, grammar, and writing during the Skills Strand.

The two strands are taught separately, but complement each other, building the requisite decoding and comprehension skills that comprise fluent, mature reading. The teaching of the two strands, however, need not be correlated; i.e., educators may provide instruction and practice in a given unit of the skills strand as needed, while moving on to new topics and anthologies in the Listening and Learning Strand.

Grades 3-12:

- Curricula includes six modules that focus on reading, writing, listening, and speaking in response to high-quality texts. Each module is intended to last a quarter of a school year; the addition of two extra modules allows for teacher choice throughout the year.
- Modules will sequence and scaffold content that is aligned to the CCLS for ELA & Literacy and the PARCC Frameworks.
- Each module will culminate in an end-of-module performance task, aligned to the PARCC Frameworks, which can provide information to educators on whether students in their classrooms are achieving the standards.
- Modules may include several units and each unit may include a set of sequenced, coherent progressions of learning experiences that build knowledge and understanding of major concepts.
- Include daily lesson plans, guiding questions, recommended texts, scaffolding strategies, examples of proficient student work, and other classroom resources.

ELA Curriculum Structured into 4 Levels of Hierarchy

Curriculum materials for ELA subjects are structured into 4 levels of hierarchy. The ELA curriculum structure consists of individual grade levels, with modules divided into units. Each unit is further divided into lessons.

On the following pages is a sample from <http://engageny.org/english-language-arts> of a grade 6 and grade 10 English Language Arts Common Core State Standards lesson. Each lesson offers teacher materials, lesson text, handouts, and worksheets. Curriculum is available for grade K-12.

- The grade 6 lesson is designed to cultivate in students the ability to make evidence-based claims about informational texts. Students perform a sequence of activities centered on a close reading of the Commencement Address Steve Jobs delivered at Stanford University on June, 2005.
- The grade 11 lesson is also designed to cultivate in students the ability to make evidence-based claims about informational texts. Students perform a sequence of activities centered on a close reading of the Nobel Peace Prize Speeches of Rev. Dr. Martin Luther King, Jr. and President Barack Obama.



MAKING EVIDENCE-BASED CLAIMS CCSS GRADES 6-12 LESSON SERIES

The **Making Evidence-Based Claims CCSS Lesson Series** is designed to immerse students in the Common Core State Standards for English Language Arts and Literacy. The lessons introduce and develop in students a critical reading and writing skill at the heart of the CCSS: making evidence-based claims about complex texts.

The lesson series features:

ENGAGING INFORMATIONAL TEXTS

- diverse, complex informational texts of literary and cultural significance that connect to social studies curriculum

KEY LITERACY SKILL BUILDING

- builds central CCSS literacy skills foundational for many of the standards
- instructional focus on texts, including text-dependent questions, discussion, writing, and analysis
- developmentally progressive approach for leading students to making and writing evidence-based claims independently
- carefully crafted sequence of teacher-led, paired, and independent reading, speaking, listening, and writing activities
- clear criterion-based instruction, discussion, evaluation, and formative and summative assessment

GUIDANCE AND FLEXIBILITY FOR TEACHERS

- a sequence of activities that teachers can transform with their own expertise and style
- helpful instructional notes: text-dependent questions, examples, rubrics, and model claims
- organized into parts addressing each stage of skill development allowing teachers to plan and modify according to their own needs and schedule

STRATEGIC SUPPORT FOR STUDENTS

- activities designed and sequenced to bring ALL students, including ELL students and those reading below-grade level, into productive struggle with the texts, while offering strategic support from teachers and peers
- a series of printed and electronic worksheets and handouts designed to aid student learning and capture formative assessment for focus and differentiation



HOW TO USE THESE MATERIALS



This lesson is in the format of a **Compressed File**. Files are organized in such a way that you can easily browse through the materials and find every document you need to print or e-mail for each day.

The lesson components are organized into folders



The **TEACHER MATERIALS** folder contains:

- Lesson Overview
- Parts 1-5 Lesson Plans
- Teacher Version Worksheets
- Model Written EBC



The **TEXTS** folder contains the text(s) used in the lesson.



The **HANDOUTS** folder contains:

- Forming and Writing EBC Handouts
- EBC Criteria Checklists I and II
- Evidence-Based Writing Rubric



The **WORKSHEETS** folder contains:

- Blank Forming, Making, and Organizing EBC Worksheets



The worksheets have been created as **editable PDF forms**. With the **free version of Adobe Reader**, students and teachers are able to type in them and save their work for recording and e-mailing. This allows students and teachers to work either with paper and pencil or electronically according to their strengths and needs.

While Teacher Version Worksheets with model claims have been provided, these are meant more to illustrate the process than to shape textual analysis. Teachers are encouraged to develop claims based on their own analysis and class discussion. Teachers can record their own claims in the blank worksheets for their reference and to distribute to students.

If you decide to **PRINT** materials, please note that:

- For optimal use of space print them at **actual size**, without enabling the auto-fit function.
- All materials can be printed either in color or in black and white.

MAKING EVIDENCE-BASED CLAIMS

COMMON CORE STATE STANDARDS
ENGLISH LANGUAGE ARTS / LITERACY LESSON

GRADE 6

*2005 Commencement Address
Stanford University
Steve Jobs*

LESSON OVERVIEW

Making evidence-based claims about texts is a foundational literacy and critical thinking skill that lies at the heart of the CCSS. The skill consists of two parts. The first part is *the ability to extract detailed information* from texts and grasp how it is conveyed. Education and personal growth require real exposure to new information from a variety of media. Instruction should push students beyond general thematic understanding of texts into deep engagement with textual content and authorial craft.

The second half of the skill is *the ability to make valid claims* about the new information thus gleaned. This involves developing the capacity to analyze texts, connecting information in literal, inferential, and sometimes novel ways. Instruction should lead students to do more than simply restate the information they take in through close reading. Students should come to see themselves as creators of meaning as they engage with texts.

It is essential that students understand the importance and purpose of making evidence-based claims, which are at the center of many fields of study and productive civic life. We must help students become invested in developing their ability to explore the meaning of texts. Part of instruction should focus on teaching students how to understand and talk about their skills.

It is also important that students view claims as their own. They should see their interaction with texts as a personal investment in their learning. They are not simply reading texts to report information expected by their teachers, but should approach texts with their own authority and confidence to support their analysis.

This lesson is designed to cultivate in students the ability to make evidence-based claims about texts. Students perform a sequence of activities centered on a close reading of the Commencement Address Steve Jobs delivered at Stanford University on June, 2005.

HOW THIS LESSON IS STRUCTURED

The lesson activities are organized into five parts, each associated with sequential portions of text. The parts build on each other and can each span a range of instructional time depending on scheduling and student ability.

The lesson intentionally separates the development of critical reading skills from their expression in writing. A sequence of worksheets isolates and supports the progressive development of the critical reading skills. Parts 1-3 focus entirely on making evidence-based claims as readers. Parts 4 and 5 focus on expressing this skill in writing.

This organization is designed to strengthen the precision of instruction and assessment, as well as to give teachers flexibility in their use of the lesson. Teachers may choose to use only Parts 1-3

dealing with reading and teach writing in another context.

The first activities of Parts 2-5 – which involve independently reading sections of the text – are designed to function as homework assignments from the previous day. If scheduling and student ability do not support making the reading a homework assignment, these activities can be done in class at the beginning of each Part. Accordingly, they are listed both as a “bridging” homework activity at the end of each part and as an activity beginning the sequence of the next part.

Alternate configurations of Part 5 are given in the detailed lesson plan to provide multiple ways of structuring a summative assessment.

LESSON OUTLINE

PART 1: INTRODUCING EVIDENCE-BASED CLAIMS

- Students are introduced to the lesson focus on making evidence-based claims about texts.
- Students independently read part of the text with a text-dependent question to guide them.
- Students follow along as they listen to the speech and discuss a series of text-dependent questions.
- The teacher models a critical reading and thinking process for forming evidence-based claims about texts.

PART 2: MAKING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and look for evidence to support a claim made by the teacher.
- Students follow along as they listen to part of the speech and discuss a series of text-dependent questions.
- In pairs, students look for evidence to support claims made by the teacher.
- The class discusses the evidence found by the student pairs.
- In pairs, students make an evidence-based claim of their own and present it to the class.

PART 3: ORGANIZING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and make an evidence-based claim.
- Students follow along as they listen to part of the speech.
- The teacher models organizing evidence to develop and explain claims using student evidence-based claims.
- Students follow along as they listen to part of the speech and, in pairs, develop and organize a claim.
- The class discusses the evidence-based claims developed by student pairs.

PART 4: WRITING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and develop an evidence-based claim.
- The teacher introduces and models writing evidence-based claims.
- In pairs, students write evidence-based claims.
- The class discusses the written evidence-based claims of volunteer student pairs.
- Students follow along as they listen to part of the speech and discuss their new evidence-based claims.
- Students independently write evidence-based claims.

PART 5: DEVELOPING EVIDENCE-BASED WRITING

- Students review the entire speech and make a new evidence-based claim.
- The teacher analyzes student evidence-based writing and discusses developing global evidence-based claims.
- Students discuss their new claims in pairs and then with the class.
- Students independently write a final evidence-based writing piece.
- The class discusses final evidence-based writing pieces of student volunteers.

HOW THIS LESSON ALIGNS WITH CCSS FOR ELA/LITERACY

The primary CCSS alignment of the lesson instruction is with **RL.6.1** and **W.6.9b** (*use evidence to support analysis of a plot and infer its textual meaning*).

The evidence-based analysis of the text, including the text-dependent questions and the focus of the claims, involve **RL.6.2** and **RL.6.3** (*determine a central idea and analyze how it is developed and elaborated with details over the course of a text*).

The numerous paired activities and structured class discussions develop **SL.6.1** (*engage effectively in a range of collaborative discussions building on others' ideas and expressing their own clearly*).

The evidence-based writing pieces involve **W.6.4** (*produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience*).

HOW THIS LESSON ASSESSES STUDENT LEARNING

The lesson's primary instructional focus is on making evidence-based claims as readers and writers. Parts 1-3 develop the reading skill. Activities are sequenced to build the skill from the ground up. A series of worksheets supports students in their progressive development of the skill. These worksheets structure and capture students' critical thinking at each developmental stage and are the primary method of formative assessment. They are specifically designed to give teachers the ability to assess student development of the reading skill without the influence of their writing abilities.

From the first activity on, students are introduced to and then use a set of criteria that describes the characteristics of an evidence-based claim. In pair work and class discussions, students use the first five of these criteria to discuss and evaluate evidence-based claims made by the teacher and their peers. Teachers use these same criteria to assess student claims presented on the worksheets from Parts 1-3.

As the instructional focus shifts to writing in Parts 4 and 5 so does the nature of the assessment. In these parts, teachers assess the student writing pieces. Students continue using worksheets as well, giving teachers clear and distinct evidence of both their reading and writing skills for evaluation. In Parts 4-5, students learn about and use six additional criteria for writing claims. Teachers apply these criteria in the formative assessment of students' written work, as well as the evaluation of their final evidence-based writing pieces.

Part 5 can be configured in multiple ways giving teachers the flexibility to structure a summative assessment suitable for their students.

≡ HOW THIS LESSON TEACHES ≡ VOCABULARY

This lesson draws on two strategies for teaching academic and important disciplinary vocabulary. The primary strategy is the way critical academic vocabulary and concepts are built into the instruction. Students are taught academic words like “claim,” “evidence,” “reasoning,” and “inference” through their explicit use in the activities. Students come to understand and use these words as they think about and evaluate their textual analysis and that of their peers. The EBC Checklist plays a key role in this process. By the end of the lesson, students will have developed deep conceptual knowledge of key academic vocabulary that they can transfer to a variety of academic and public contexts.

The texts also provide many opportunities for more direct discussion around key discipline-specific vocabulary and concepts. The process of developing and evaluating claims about the texts supports the acquisition of these words and the building of content knowledge. Some of these words are explicitly referenced in the model text-based questions and claims as well as the glossary. Teachers are encouraged to take opportunity in discussion to focus on words they deem significant.

≡ HOW THIS LESSON MIGHT BE EMBEDDED ≡ IN CONTENT-BASED CURRICULUM

The lesson is explicitly and intentionally framed as skills-based instruction. It is critical for students to understand that they are developing key literacy skills that will enrich their academic and public lives. The lesson and activities should be framed for them as such. Nonetheless, the texts have been chosen, in part, for their rich content and cultural significance. They contain many important historical and contemporary ideas and themes. Moreover, they have been selected to connect with topics and events typically addressed in eighth grade social studies

classrooms. Teachers are encouraged to sequence the lesson strategically within their curriculum and instructional plans, and to establish content connections that will be meaningful for students. This might involve connecting the lesson to the study of topics or eras in social studies, related genres or voices in literature, or themes and essential questions. Whatever the curricular context established by the teacher, the central emphasis of the lesson should, however, be on evidence-based, text-focused instruction.

PEDAGOGICAL PRINCIPLES **SHAPING THE INSTRUCTION**

This lesson is designed to support real exposure and interaction with a complex text for ALL students. The activities are structured and sequenced to allow all students, including English language learners and students reading below grade level, independent exposure to the text, while also supporting them along the way to ensure involvement and comprehension. Students with disabilities should be further supported by the local professionals who are familiar with their individual learning profiles.

PRINCIPLE 1

Students understand and own the development of their literacy skills. Teachers explain skills and their importance throughout the process, ensuring students understand the purpose of what they are doing and have the academic vocabulary to discuss it. Teachers highlight that students make their own valid evidence-based claims based on their analysis of the text.

PRINCIPLE 2

All students independently engage in productive struggle with complex texts AND are supported with group readings of key portions of the text. Students are asked to read sections independently and then together with the class. Infrequent vocabulary and domain-specific concepts are highlighted and defined.

PRINCIPLE 3

Literacy skills are understood and taught developmentally; advancing from less challenging sections of text to more abstract or complex selections; working from literal comprehension to inferential analysis; and evolving from guided practice to independent application. All students are supported in their skill development through a consistent blend of teacher modeling, peer collaboration, and independent performance.

PRINCIPLE 4

Activities and tasks are structured and supported with worksheets to collect precise evidence for formative assessment of the students' progressive acquisition of skills. Assessment is based on clear criteria that are made explicit to students. Review of this information allows teachers to adjust and focus instruction for the entire class and to differentiate it for individual students.

PART 1

INTRODUCING EVIDENCE-BASED CLAIMS

“Connecting the Dots”

OBJECTIVE: Students learn the importance and elements of making evidence-based claims through a close reading of the text.

ACTIVITIES

1. **Introduction to lesson:** The teacher presents the purpose of the overall lesson and explains the skill of making evidence-based claims.
2. **Independent reading:** Students independently read the first paragraph of Steve Jobs' 2005 Stanford Commencement Address and answer the question, "What important detail do we learn about the speaker as he begins his speech?"
3. **Read aloud and class discussion:** The students follow along as they listen to the speech and the teacher leads a discussion guided by three text-dependent questions.
4. **Model forming EBCs:** The teacher models a critical reading and thinking process for forming evidence-based claims about texts.

MATERIALS:

Forming EBC Handout
Forming EBC Worksheet
EBC Criteria Checklist I
Making EBC Worksheet

ESTIMATED TIME: 2-3 Days

COMMON CORE STATE STANDARDS

Primary Alignment: RI.6.1

RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Secondary Alignment: RI.6.2 / RI.6.3 / SL.6.1

RI.6.2: Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

RI.6.3: Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

SL.6.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

ACTIVITY ONE

Introduction to lesson: The teacher presents the purpose of the overall lesson and explains the skill of making evidence-based claims, making reference to the first five criteria from the EBC Checklist I.

Introduce the central purpose of the lesson and the idea of a “claim” someone might make. The following is a possible approach:

Introduce the first characteristic of an evidence-based claim: “States a conclusion you have come to . . . and that you want others to think about.” Pick a subject that is familiar to students, such as “school lunches” and ask them to brainstorm some claim statements they might make about the subject. Introduce the fourth characteristic: “All parts of the claim are supported by specific evidence you can point to” and distinguish claims that can be supported by evidence from those that are unsupported opinions, using the students’ brainstorm list as a reference.

Move from experience-based claims to claims in a field like science. Start with more familiar, fact-based claims (For example, the claim “It is cold outside” is supported by evidence like “The outside thermometer reads 13 degrees F” but is not supported with statements like “It feels that way to me”). Then discuss a claim such as “Smoking has been shown to be hazardous to your health” and talk about how this claim was once considered to be an opinion, until a weight of scientific evidence over time led us to accept this claim as fact. Introduce the third characteristic/criterion: “Demonstrates knowledge of and sound thinking about a topic” and with it the idea that a claim becomes stronger as we expand our knowledge about a subject and find more and better evidence to support the claim.

Move from scientific claims to claims that are based in text that has been read closely. Use an example of a text read recently in class or one students are likely to be familiar with. Highlight that textual claims can start as statements about what a text tells us directly (literal

comprehension) such as “Tom Sawyer gets the other boys to paint the fence” and then move to simple conclusions we draw from thinking about the text, like: “Tom Sawyer is a clever boy” because (evidence) “He tricks the other boys into doing his work and painting the fence.” Then explain how text-based claims can also be more complex and require more evidence (e.g. “Mark Twain presents Tom Sawyer as a ‘good bad boy’ who tricks others and gets into trouble but also stands up for his friend Jim”), sometimes – as in this example – requiring evidence from more than one text or sections of text.

Explain that the class will be practicing the skill of making evidence-based claims that are based in the words, sentences, and ideas of a text by closely reading and analyzing the Commencement Address Steve Jobs delivered at Stanford University on June, 2005.

In the activities that follow, students will learn to make a text-based claim by moving from literal understanding of its details, to simple supported conclusions or inferences, to claims that arise from and are supported by close examination of textual evidence. This inductive process mirrors what effective readers do and is intended to help students develop a method for moving from comprehension to claim. In addition, the guiding questions, model claims, and movement through the text over the course of the lesson are sequenced to transition students from an initial, literal understanding of textual details to:

- Claims about fairly concrete ideas presented in short sections of the text;
- Claims about more abstract ideas implied across sections of the text;
- More global claims about the entire text and its meaning.

ACTIVITY TWO

Independent reading: students independently read the first paragraph of the speech's text and answer the question, "What important detail do we learn about the speaker as he begins his commencement address? What sentence(s) in the paragraph tell you this information?"

After all students have finished reading the paragraph, lead a brief discussion in which students volunteer something they learned about the speaker. List their answers on the board, checking those that are repeated. Go back to the list and ask this question, "What words or sentences in the paragraph tell you this

information?" for each of the answers, having students read the "evidence" that led them to their answer. Do not worry here about labeling their answers "right" or "wrong" but ask them to see if what they think they know is confirmed as they listen to the speech.

ACTIVITY THREE

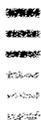
Read aloud and class discussion: The students follow along as they listen to Steve Jobs deliver the speech (<http://www.youtube.com/watch?v=UE9uR6Z6K1c>) or as the teacher reads the first eight paragraphs aloud. The teacher leads a discussion of paragraphs 2-8 guided by four text-dependent questions:

- In line 16 we learn that Steve Jobs' mother "refused to sign the adoption papers." Why did she do this, and why did she "relent" a few months later?
- What were the reasons why Steve Jobs "decided to drop out" of college? Why was doing so "one of the best decisions I ever made"?
- What are the "dots" that Steve Jobs connected between his post-college experiences and his designing of the first Mac computer?
- What do you think he means when he says "you can't connect the dots looking forward; you can only connect them looking backwards"?

The close reading of the first story in paragraphs 2-8 serves three primary purposes: to ensure comprehension of its literal details (which tell us more about the speaker's life), to orient students to the practice of close reading (by examining specific phrases, lines, and paragraphs), and to guide students in searching for textual evidence. The question sets are designed to move students' thinking from literal understanding to conclusions about what the speaker may be trying to say. Throughout discussion it is important to stress: "What in the text makes you reach your answer or conclusion? Point to specific words or sentences."

- In line 16 we learn that Steve Jobs' mother "refused to sign the adoption papers." Why did she do this, and why did she "relent" a few months later?

Because this section of text is a story with a chronological narrative structure, students can be guided by text-dependent questions to move from literal understanding of "what happens" in the story to its meaning in Jobs' life (and his speech). In paragraph 4, the reader learns that Jobs was adopted, and some important details about both his biological mother and his adoptive parents. The question, by directly quoting from the text, should cause students to



ACTIVITY THREE (CONT'D)

find two key sentences at the end of the paragraph and (potentially) to read backward from there. When they do so, they should learn why going to college was initially so important in his life. Answering this question from textual inferences can demonstrate to students how close reading can substitute for what could have been supplied by background information about the author. Discuss with students how beginning with details about Jobs' family background sets the stage for the entire text.

- **What were the reasons why Steve Jobs "decided to drop out" of college? Why was doing so "one of the best decisions I ever made"?**

In paragraph 5, we learn why Jobs has earlier stated "this is the closest I've ever gotten to a college graduation." Students should be able to point to direct textual evidence that presents the reasons why Jobs decided to leave college after only "six months." Discuss with students what we learn about Jobs from the six reasons he presents: he was naive, he chose an expensive college; his parents were spending their lifetime savings to pay for his tuition, he "couldn't see the value" in what he was learning; he didn't know what he wanted in life; he was unsure how college would help him "figure it out."

Answering this question, and attending to the paragraph's text, again provides an opportunity for students to move from literal comprehension of details to recognition of the inference Jobs (and the reader) makes as to why dropping out was a good decision. Point out that his "one of the best decisions I ever made" statement is itself a claim. Ask students if they think it is "evidence-based" or just Jobs' opinion?

- **What are the "dots" that Steve Jobs connected between his post-college experiences and his designing of the first Mac computer? What do you think he means when he says "you can't connect the dots looking forward; you can only connect them looking backwards"?**

As the story moves into paragraph 6, readers learn a number of details about what Jobs experienced immediately after dropping out of (and then back into Reed College (an elite and progressive liberal arts college in Portland, OR): Students may get lost in these details, and struggle with trying to understand why Jobs wanted to learn calligraphy – which presents an opportunity to work with the vocabulary listed at the bottom of page 2. Paragraph 7 reveals who Steve Jobs is if students do not already know this. It is also where the label of the first story ("connecting the dots") is explained.

To understand this metaphor, students first will need to think literally about what it means to "connect the dots" between two points in space (or time). After helping them do so, the discussion can move to a focus on what the "dots" in Jobs' life were, and how connecting them proved to be important. This movement to a more abstract understanding of the first story culminates with thinking about what Jobs means when he says "you can only connect [the dots] looking backward," and finally to why he chooses to tell this story to the graduates.

The progression suggested by the three text-dependent questions, from concrete detail to abstract inference, will be difficult for some students (and relatively easy for others); observing them as they read, answer, and discuss should provide insights as to where and how some students may need to be supported (or extended) as the lesson moves on.



ACTIVITY FOUR

Model forming EBC: Based on the class discussion of Job's first story, the teacher models a critical reading and thinking process for forming evidence-based claims: from comprehension of textual details that stand out, to an inference that arises from examining the details, to a basic evidence-based claim that is supported by specific references back to the text.

Once the class has reached an understanding of the first story, use the Forming EBC Handout to introduce a three-step process for making a claim that arises from the text.

Exemplify the process by making a claim with the Forming EBC Worksheet. The worksheet is organized so that students first take note of "interesting" details that they also see as "related" to each other. The second section asks them to think about and explain a connection they have made among those details. Such "text-to-text" connections should be distinguished from "text-to-self" connections readers make between what they have read and their own experiences. These "text-to-text" connections can then lead them to a "claim" they can make and record in the third section of the worksheet – a conclusion they have drawn about the text that can be referenced back to textual details and text-to-text connections. Have students follow along as you talk through the process with your claim.

To provide structured practice for the first two

steps, you might give students a textual detail on a blank worksheet. In pairs, have students use the worksheet to find other details/quotations that could be related to the one you have provided, and then make/explain connections among those details.

Use the EBC Checklist 1 to discuss the claim, asking students to explain how it meets (or doesn't yet meet) the criteria.

[Note: Here and throughout the entire lesson, you are encouraged to develop claims based on your own analysis and class discussion. The examples provided in the teacher versions are possibilities meant more to illustrate the process than to shape textual analysis. Instruction will be most effective if the claims used in modeling flow naturally from the textual ideas and details you and the students find significant and interesting. Also, while the worksheets have three or four places for supporting evidence, students should know that not all claims require three pieces of evidence. Places on the worksheets can be left blank.]



BRIDGING HOMEWORK ASSIGNMENT

Read paragraphs 9-14 and use the Making EBC Worksheet to find evidence to support the teacher-provided claim. This activity overlaps with the first activity of Part 2 and can be given as homework or done at the beginning of the next class.



ASSESSMENT

The Forming EBC Worksheet should be evaluated to get an initial assessment of students' grasp of the relationship between claims and textual evidence. Even though the work was done together with the class, filling in the worksheet helps them get a sense of the critical reading and thinking process and the relationships among the ideas. Also make sure that students are developing the habit of using quotation marks and recording the reference.

PART 2

MAKING EVIDENCE-BASED CLAIMS

“You’ve got to find what you love.”

OBJECTIVE: Students develop the ability to make evidence-based claims through a close reading of the text.

ACTIVITIES

1. **Independent reading and finding supporting evidence:** Students independently read paragraphs 9-14 of the text and use the Making EBC Worksheet to look for evidence to support a claim made by the teacher.*
2. **Read aloud and class discussion:** Students follow along as they listen to paragraphs 9-14 and discuss three text-dependent questions.
3. **Find supporting evidence in pairs:** In pairs, students use the Making EBC Worksheet to look for evidence to support claims about the text made by the teacher.
4. **Class discussion of EBC:** The class discusses evidence in support of claims found by student pairs.
5. **Forming EBC in pairs:** In pairs, students use the Forming EBC Worksheet to make an evidence-based claim of their own and present it to the class.

MATERIALS:

Making EBC Worksheet
Forming EBC Handout
Forming EBC Worksheet
EBC Criteria Checklist I

ESTIMATED TIME: 2-3 Days

COMMON CORE STATE STANDARDS

Primary Alignment: RI.6.1

RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Secondary Alignment: RI.6.2 / RI.6.3 / SL.6.1

RI.6.2: Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

RI.6.3: Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

SL.6.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.



ACTIVITY ONE

Independent reading and finding supporting evidence: Students independently read paragraphs 9-14 of the text and use the Making EBC Worksheet to look for evidence to support a claim made by the teacher.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading. Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the

section quietly by themselves. This ensures that all students have had at least some independent reading time.

Also depending on scheduling and student ability, some students might choose (or be encouraged) to read ahead. Instructional focus should follow the pacing outlined in the activities, but students will only benefit from reading and re-reading the text throughout the duration of the lesson.



ACTIVITY TWO

Read aloud and class discussion: Students follow along as they listen to paragraphs 9-14 read aloud and discuss three text-dependent questions:

- In paragraph 10 we learn that between age 20 and 30, Steve Jobs experienced great success and great failure. What does the text tell us were his successes, and how did his failure occur?
- Why does Jobs claim that "getting fired from Apple was the best thing that could have ever happened to me"? What evidence does he present to support this claim?
- What does Jobs mean when he says, "Sometimes life hits you in the head with a brick"? He then tells his audience two things not to do, beginning his sentences with the word "Don't." What does paragraph 14 suggest he is trying to tell the Stanford graduates?

Read the text aloud to the class while students follow along. Alternatively, students could be asked to read aloud or part of the Jobs video could be replayed. Work through the text using the following three text-dependent questions.

- **In paragraph 10 we learn that between the ages of 20 and 30, Steve Jobs experienced great success and great failure. What does the text tell us were his successes, and how did his failure occur?**

Paragraph 10 provides more key details about Steve Jobs' unusual path to success and fame.

Students need to comprehend these details, and understand the perplexing story of a man who could found a \$2 billion company in his parent's garage and then get fired from his own company, all within ten years of his life. It may be worth stopping to let students comment on this turn of fate – which can provide opportunities to ask them if their comments are claims supported by the text or just expressions of their opinions.

This question set, while focusing on the literal details of this part of the story, provides opportunities for students to scour the

ACTIVITY TWO (CONT'D)

paragraph for both details that list his successes ("what") and details that explain his failure ("how"). The first sentence of this question set is also in itself a claim – an example that models how details lead to a conclusion and a statement of a claim ("Jobs experienced great success and great failure"). It is also closely related to the teacher-made claim students will have encountered in completing The Forming EBC Worksheet. Help students recognize the statement as a claim and understand that as they search for details in response to this questions set, they are also finding evidence to support and develop this simple, summary-based claim.

- **Why does Jobs claim that, "getting fired from Apple was the best thing that could have ever happened to me"?**

This question again leads students to attend to narrative details in paragraphs 12 and 13, some of which relate to Jobs' feelings ("The heaviness of being successful was replaced by the lightness of being a beginner again, less sure about everything," – a great sentence to read and discuss closely) and some of which relate to his later successes with Next and Pixar (which students may want to discuss, being familiar with animated films such as Toy Story). It also uses the word "claim" to characterize what Jobs says in paragraph 13. Help students see that what Jobs is doing is making his own claim about events in his life – and have them look to see if he presents evidence to support his claim. Finally, the question calls for students to develop their own conclusions about "why" Jobs makes his claim – which they need to explain and support using specific references to the text.

- **What does Jobs mean when he says, "Sometimes life hits you in the head with a brick"? He then tells his audience two things not to do, beginning his sentences with the word "Don't."**

What does paragraph 14 suggest he is trying to tell the Stanford graduates?

The third question set should force students to scan the text in paragraph 15 to find the "brick" sentence and the three sentences that begin with "Don't." This is good practice for a basic skill of close reading, and presents an opportunity for informal assessment of students' foundational reading skills (if they have trouble locating the sentences, they will also struggle with the tasks in this lesson). In answering the first question about Jobs' meaning, students have to draw a conclusion based on their reading of textual details (all the things he has mentioned about his unusual history at Apple) – which is the second step in the process of arriving at a claim. Finally, students are asked to interpret two very simple, but profound, statements: "Don't lose faith" and "Don't settle" (which, it should be pointed out, Jobs repeats for emphasis). The messages inherent in these direct statements to the graduates are expanded in paragraph 15, highlighted by Jobs' advice that "You've got to find what you love." With the final question of the set, students must draw a conclusion about Jobs' advice and, essentially, make a claim about what they think (based on textual evidence!) he is trying to tell the graduates. Having students work on this question in pairs, then report out their claims about Jobs' message, provides more practice in working from textual details to a claim (and back again) – and also another opportunity for informal assessment of students' progress.

Following discussion of the three question sets, return to the Forming EBC Worksheet and discuss textual "details" that have emerged as "interesting" during the discussion of the text-dependent questions.

ACTIVITY THREE

Find supporting evidence in pairs: In pairs, students use the Making EBC Worksheet to look for evidence to support additional claims about the text made by the teacher.

Once the class has reached a solid understanding of the text, connect that understanding to the skill of making claims and supporting them with evidence by presenting a few main claims. Pass out the worksheets and have students work in pairs to find evidence to support the claims.

Collect each student's Making EBC Worksheet with the evidence they found for the first claim. These should be evaluated to get an assessment of where each student is in the skill development. Students should use their worksheets for their work in pairs—repeating the first claim and refining their evidence based on the read aloud and class discussion. Even though students are not finding the evidence independently, they should each fill in the worksheets to reinforce their acquisition of the logical structure among the ideas. Students should get into the habit of using quotation

marks when recording direct quotes and including the line numbers of the evidence.

The instructional focus here is developing familiarity with claims about texts and the use of textual evidence to support them. Students should still not be expected to develop complete sentences to express supporting evidence. The pieces of evidence should be as focused as possible. The idea is for students to identify the precise points in the text that support the claim. This focus is lost if the pieces of evidence become too large. The worksheets are constructed to elicit a type of "pointing" at the evidence.

One approach for ensuring a close examination of claims and evidence is to provide erroneous claims that contradict textual evidence and ask students to find the places that disprove the claim. Students could then be asked to modify it to account for the evidence.

ACTIVITY FOUR

Class discussion of EBC: The class discusses evidence in support of claims found by student pairs.

After students have finished their work in pairs, regroup for a class discussion. Have pairs volunteer to present their evidence to the rest of the class. Discuss the evidence, evaluating how each piece supports the claims. Begin by modeling the evaluation, referring to the checklist, and then call on students to evaluate the evidence shared by the other pairs. They can offer their own evidence to expand the discussion. Carefully guide the exchanges, explicitly asking students to support their evaluations with reference to the text.

These constructive discussions are essential for the skill development. Listening to and evaluating the evidence of others and providing text-based criticism expands students' capacity to reason through the relationship between claims and evidence. Paying close attention to and providing instructional guidance on the student comments is as important to the process as evaluating the worksheets and creates a class culture of supporting all claims (including oral critiques) with evidence.

ACTIVITY FIVE

Forming EBC in pairs: In pairs, students use the Forming EBC Worksheet to make an evidence-based claim of their own and present it to the class.

Once the claims and evidence have been discussed, students return to the pairs and use the worksheet to make an evidence-based claim of their own. Pairs should make a single claim, but each student should fill in his or her own worksheet. Regroup and discuss the claims and evidence as a class. Pairs can use their worksheet to present their claims and evidence orally. They should not be required to write them out at this stage.

Talk through the process modeled in the worksheet, including the nature of the details that stood out to students, the reasoning they used to group and relate them, and the claim they developed from the textual evidence. Draw upon the Forming EBC Handout and EBC Criteria Checklist I to help guide discussion.

BRIDGING HOMEWORK ASSIGNMENT

Read paragraphs 15-20 and use the Forming EBC Worksheet to make a claim and support it with evidence. This activity overlaps with the first activity of Part 3 and can be given as homework or done at the beginning of the next class.

ASSESSMENT

The Making EBC Worksheets should be evaluated to assess the development of the student's grasp of the relationship between claims and textual evidence. They should show progress in the relevance and focus of the evidence. The Forming EBC Worksheets are students' first attempts at making their own claims with the help of a peer. Basic claims are fine at this point. Use the EBC Criteria Checklist to structure the evaluation and feedback to students. Evaluation should focus on the validity and clarity of the claim and the relevance of the evidence. Recording the "thinking" part of the worksheet is important in order to strengthen the student's reasoning skills as well as provide them with the academic vocabulary to talk about them.

Evidence should be in quotation marks and the reference recorded. Using quotation marks helps students make the distinction between quotes and paraphrases. It also helps them to eventually incorporate quotes properly into their writing. Recording references is critical not only for proper incorporation in writing, but also because it helps students return to text for re-evaluating evidence and making appropriate selections.

PART 3

ORGANIZING EVIDENCE-BASED CLAIMS

“If today were the last day of my life...”

OBJECTIVE: Students expand their ability into organizing evidence to develop and explain claims through a close reading of the text.

ACTIVITIES

1. **Independent reading and forming EBC:** Students independently read paragraphs 15-20 and use the Forming EBC Worksheet to make an evidence-based claim with the teacher.
2. **Read aloud:** Students follow along as they listen to paragraphs 15-20 read aloud and discuss the text using two text-dependent questions.
3. **Model organizing EBC:** The teacher models organizing evidence to develop and explain claims using student evidence-based claims and the Organizing EBC Worksheet.
4. **Read aloud and organizing EBC in pairs:** Students listen to paragraph 21 and, in pairs, develop and organize a claim using the Organizing EBC Worksheet.
5. **Class discussion of student EBC:** The class discusses the evidence-based claims developed by student pairs.

MATERIALS:
Organizing EBC Worksheet
Forming EBC Worksheet
EBC Criteria Checklist I

ESTIMATED TIME: 1-3 Days

COMMON CORE STATE STANDARDS

Primary Alignment: RI.6.1

RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Secondary Alignment: RI.6.2 / RI.6.3 / SL.6.1

RI.6.2: Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

RI.6.3: Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

SL.6.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

ACTIVITY ONE

Independent reading and forming EBC: Students independently read paragraphs 15-20 and use the Forming EBC Worksheet to make an evidence-based claim with the teacher.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read quietly by themselves. This ensures that all students have had least some independent reading time.

ACTIVITY TWO

Read aloud: Students follow along as they listen to paragraphs 15-20 read aloud and discuss the text with two text-dependent questions.

The text in paragraphs 15-21 presents Jobs' third story of the speech, recounting his experiences following his diagnosis with pancreatic cancer. This story, like the two before it, provides students with some fairly straightforward narrative details; however, the third story also begins to present more abstract sections of text with which some students may struggle. In particular, paragraphs 16-17 and 21 present the speaker's musings about life and death; these more complex sections of text should be focused on as the passage is discussed.

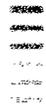
The three text-dependent questions used in Activities 2 and 4 are again designed to move students from concrete details and literal understanding of the events of the story Jobs relates to a conclusion about why Jobs says, "If today were the last day of my life, would I want to do what I am about to do today?" and then to an analysis of one of his most cryptic statements in the speech. Because the narrative comes in the middle of this passage, the questions begin with the content of paragraphs 18-19, then

move back to paragraphs 16-17 and finally to the abstract ideas of paragraph 21.

As each question is discussed, follow it up by asking: "What in the text makes you reach your answer or conclusion? Point to specific words or sentences."

- **In paragraphs 18 and 19, we learn important details about Jobs' recent life and health. What is the sequence of events that he tells his audience about in his third story "about death"?**

This question presents an opportunity (and challenge) for students to track sequential details of an important – and potentially disturbing – narrative from Jobs' life. So that students can "see" the details, it may be a good idea to conduct a discussion in which they read out text that presents a key detail and list these details in order on the board. Examining this list as a class can allow students to ask and answer questions such as "How do you think Jobs felt about the various pieces of news he received?"



ACTIVITY TWO (CONT'D)

How might his family have felt?" At this point, if students are aware that Steve Jobs eventually, and recently, succumbed to the cancer he tells the graduates about, it may be a good idea to allow a side-discussion of this fact, perhaps connecting it back into the text by looking at the final sentence of paragraph 19 – which sadly turned out not to be true.

- How is what Jobs learns about his health related to his question in lines 96-97, which he says he has asked himself for the past 33 years?

This question asks students to use several close-reading skills: summarizing the details presented

in paragraphs 18-19, finding, and interpreting, the question in lines 96-97 ("If today were the last day of my life, would I want to do what I am about to do today?"), and relating their understanding of this life-directing question (probably a puzzling one for a sixth grader: to Jobs' story about his near brush with death). Their answers should reflect connections (or inferences) that they have come to by linking various sections of text together. (Note: this might be a good place to teach students the meaning of the term "inference," as well as to emphasize that we often infer things by "reading between the lines" of a text and connecting various pieces of textual evidence together.)



ACTIVITY THREE

Model organizing EBC: The teacher models organizing evidence to develop and explain claims using student evidence-based claims and the Organizing EBC Worksheet.

The central focus of Part 3 is learning the thinking processes associated with developing an evidence-based claim, reflecting on how one has arrived at the claim, breaking the claim into parts, organizing supporting evidence in a logical sequence, anticipating what an audience will need to know in order to understand the claim, and, eventually, planning a line of reasoning that will substantiate the claim. This is a complex set of cognitive skills (challenging for most students), but essential so that students can move from the close reading process of arriving at a claim (Parts 1-2 of the lesson) to the purposeful writing process of explaining and substantiating that claim (Parts 4-5).

How a reader develops and organizes a claim is dependent upon the nature of the claim itself – and the nature of the text (or texts) from which it

arises, in some cases – simple claims involving literal interpretation of the text – indicating where the claim comes from in the text and explaining how the reader arrived at it is sufficient. This suggests a more straightforward, explanatory organization. More complex claims, however, often involve multiple parts, points, or premises, each of which needs to be explained and developed, then linked in a logical order into a coherent development.

Students only learn how to develop and organize a claim through practice, ideally moving over time from simpler claims and more familiar organizational patterns to more complex claims and organizations.

Students can be helped in learning how to develop a claim by using a set of developmental guiding questions such as the following: (Note:

ACTIVITY THREE (CONT'D)

the first few questions might be used with younger or less experienced readers, the latter questions with students who are developing more sophisticated evidence-based arguments.)

- What do I mean when I state this claim? What am I trying to communicate?
- How did I arrive at this claim? Can I “tell the story” of how I moved as a reader from the literal details of the text to a supported claim about the text?
- Can I point to the specific words and sentences in the text from which the claim arises?
- What do I need to explain so that an audience can understand what I mean and where my claim comes from?
- What evidence (quotations) might I use to illustrate my claim? In what order?
- If my claim contains several parts (or premises), how can I break it down, organize the parts, and organize the evidence that goes with them?
- If my claim involves a comparison or a relationship, how might I organize my discussion of the relationship between parts?
- What do I need to do to persuade my audience that my argument for the claim is supported?
- In the process of developing my claim, how do I further focus it, hone my thinking, enrich my understanding, expand my scope, and/or relate

the claim to other claims and ideas?

Students who are learning how to develop a claim, at any level, can benefit from graphic organizers or instructional scaffolding that helps them work out, organize, and record their thinking. While such models or templates should not be presented formulaically as a “how to” for developing a claim, they can be used to support the learning process. The Organizing EBC Worksheet can be used to provide some structure for student planning – or you can substitute another model or graphic organizer that fits well with the text, the types of claims being developed, and the needs of the students.

Begin by orienting students to the new worksheet and the idea of breaking down a claim into parts and organizing the evidence accordingly.

Ask for a volunteer to present a claim and supporting evidence about paragraphs 15-20. Use the example as a basis for a discussion. Based on the flow of discussion, bring in other volunteers to present their claims and evidence to build and help clarify the points. Work with students to none and develop a claim. As a class, express the organized claim in Organizing EBC Worksheet. The provided teacher version is one possible way a claim could be expressed and organized.

ACTIVITY FOUR

Organizing EBC in pairs: Students listen to paragraph 21, and, in pairs, develop and organize a claim using the Organizing EBC Worksheet.

When the class has reached a solid expression of an organized evidence-based claim about paragraphs 15-20, repeat the process for the next portion of text. Students follow along and listen to paragraph 21. Discuss the paragraph with another question:

- **Why does Steve Jobs make the puzzling claim in paragraph 21 that “Death is very likely the single best invention of Life”?**

This question again asks students to realize that Jobs himself makes claims in his speech, about

ACTIVITY FOUR (CONT'D)

which the reader can also make a text-based claim. This particular claim is perhaps the most difficult and paradoxical sentence in the speech, but it is also a key to understanding Jobs' final thoughts and his ultimate message to the graduates. It is worth taking the time with students to break down every word of the sentence and the one that follows, to dissect how Death might be seen as being "invented" by Life and as "Life's change agent."

Students can also use this question and cryptic quotation as a springboard to consider each of the other ideas and claims presented in paragraph 21, every sentence of which is worthy of close scrutiny and discussion.

After discussion, students then work in pairs using the worksheet to develop a claim, sub-points, and supporting evidence about this section.

ACTIVITY FIVE

Class discussion of student EBC: After students have finished their work in pairs, regroup for a class discussion.

Have pairs volunteer to present their claims and evidence to the rest of the class. Discuss the evidence and organization, evaluating how each piece supports and develops the claims. Repeat the process from activity two, using student

work to explain how evidence is organized to develop aspects of claims. The teacher version of the Organizing EBC Worksheet is one possible way a claim could be expressed and organized.

BRIDGING HOMEWORK ASSIGNMENT

Read the final four paragraphs of the speech (22-25) and use the Organizing EBC Worksheet to make any claim and support it with evidence. This activity overlaps with the first activity of Part 4 and can be given as homework or done at the beginning of the next class.

ASSESSMENT

Students are now beginning to develop more complex claims about challenging portions of the text. Their Forming EBC Worksheet should demonstrate a solid grasp of the claim-evidence relationship, but do not expect precision in the wording of their claims. Using the Organizing EBC Worksheet will help them clarify their claims as they break it into parts and organize their evidence. How they have transferred their information will demonstrate their grasp of the concept of organizing. Their second Organizing EBC Worksheet should show progress in all dimensions including the clarity of the claim and the selection and organization of evidence. Use the EBC criteria checklist to structure the evaluation and feedback to students.

PART 4

WRITING EVIDENCE-BASED CLAIMS

“Don’t be trapped by dogma”

OBJECTIVE: Students develop the ability to express evidence-based claims in writing through a close reading of the text.

ACTIVITIES

1. **Independent reading and making EBC:** Students independently read the final four paragraphs of the speech (22-25) and use the Organizing EBC Worksheet to develop an evidence-based claim.*
2. **Model writing EBC:** The teacher introduces and models writing evidence-based claims using a claim developed in Part 3.
3. **Writing EBC in pairs:** In pairs, students write EBC using one of their claims from Part 3.
4. **Class discussion of written EBC:** The class discusses the written evidence-based claims of volunteer student pairs.
5. **Read aloud and class discussion:** Students follow along as they listen to part of the speech and discuss their new evidence-based claims.
6. **Independent writing EBC:** Students independently write their new evidence-based claims.

MATERIALS:
Writing EBC Handout
Organizing EBC Worksheet
EBC Criteria Checklist II

ESTIMATED TIME: 2-4 Days

COMMON CORE STATE STANDARDS

Primary Alignment: RI.6.1 / W.6.9b

RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

W.6.9b: Draw evidence from literary or informational texts to support analysis, reflection, and research.

Secondary Alignment: RI.6.2 / RI.6.3 / SL.6.1

RI.6.2: Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

RI.6.3: Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

SL.6.1: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

ACTIVITY ONE

Independent reading and making EBC: Students independently read the final four paragraphs of the speech (22-25) and use the Organizing EBC Worksheet to develop an evidence-based claim.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students; it's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the text quietly by themselves. This ensures that all students have had at least some independent reading time.

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ACTIVITY TWO

Model writing EBC: The teacher introduces and models writing evidence-based claims using a claim developed in Part 3.

Parts 1-3 have built a solid foundation of critical thinking and reading skills for developing and organizing evidence-based claims. Parts 4 and 5 focus on expressing evidence-based claims in writing. Class discussions and pair work have given students significant practice expressing and defending their claims orally. The worksheets have given them practice selecting and organizing evidence. Expressing evidence-based claims in writing should now be a natural transition from this foundation.

Begin by explaining that expressing evidence-based claims in writing follows the same basic structure that they have been using with the worksheets; one states a claim and develops it with evidence. Discuss the additional considerations when writing evidence-based claims like establishing a clear context and using proper techniques for incorporating textual evidence. Introduce the EBC Criteria Checklist II with the additional writing-related criteria. The Writing EBC Handout gives one approach to explaining writing evidence-based claims. Model example written evidence-based claims are provided with the teacher materials.

Explain that the simplest structure for writing evidence-based claims is beginning with a paragraph stating the claim and its context and then using subsequent sentences and paragraphs logically linked together to develop the necessary points of the claim with appropriate evidence. (More advanced writers can organize the expression differently, like establishing a context, building points with evidence, and stating the claim at the end for a more dramatic effect. It's good to let students know that the simplest structure is not the only effective way.)

Incorporating textual evidence into writing is difficult and takes practice. Expect all students to need a lot of guidance deciding on what precise evidence to use, how to order it, and deciding when to paraphrase or to quote. They will also need guidance structuring sentence syntax and grammar to smoothly and effectively incorporate textual details, while maintaining their own voice and style.

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Incorporating textual evidence into writing is difficult and takes practice. Expect all students to need a lot of guidance deciding on what precise evidence to use, how to order it, and deciding when to paraphrase or to quote. They will also need guidance structuring sentence syntax and grammar to smoothly and effectively incorporate textual details, while maintaining their own voice and style.

ACTIVITY TWO (CONT'D)

Three things to consider when teaching this difficult skill:

- A "think-aloud" approach can be extremely effective here. When modeling the writing process, explain the choices you make. For example, "I'm paraphrasing this piece of evidence because it takes the author four sentences to express what I can do in one." Or, "I'm quoting this piece directly because the author's phrase is so powerful, I want to use the original words."
- Making choices when writing evidence-based claims is easiest when the writer has "lived with the claims." Thinking about a claim—personalizing the analysis—gives a writer an intuitive sense of how she wants to express it. Spending time with the worksheets selecting and organizing evidence will start students on this process.
- Students need to know that this is a process -- that it can't be done in one draft. Revision is fundamental to honing written evidence-based claims.

ACTIVITY THREE

Writing EBC in pairs: In pairs, students write evidence-based claims using their claims from Part 3.

Students return to the same pairs they had in Part 3 and use their Organizing EBC Worksheets as guidelines for their writing. Teachers should roam, supporting pairs by answering questions and helping them get comfortable with the techniques for incorporating evidence. Use questions from pairs as opportunities to instruct the entire class.

ACTIVITY FOUR

Class discussion of written EBC: The class discusses the written evidence-based claims of volunteer student pairs.

Have a pair volunteer to write their evidence-based claim on the board. The class together should evaluate the way the writing sets the context, expresses the claim, effectively organizes the evidence, and incorporates the evidence properly. Use the EBC Criteria Checklist to guide evaluation. Of course, it's also a good opportunity to talk about grammatical structure and word choice. Let other students lead the

evaluation, reserving guidance when needed and appropriate. It is likely and ideal that other students will draw on their own versions in when evaluating the volunteer pair's. Make sure that class discussion maintains a constructive collegial tone and all critiques are backed with evidence.

A model written evidence-based claim is provided with the teacher materials.

ACTIVITY FIVE

Read aloud and class discussion: Students follow along as they listen to the final four paragraphs read aloud or from the Jobs video. The class discusses the text and their new evidence-based claims from Activity 1.

A final text-dependent question can guide discussion.

- What does Jobs say in these paragraphs to explain what he thinks the Catolog slogan “Stay Hungry. Stay Foolish.” means?

Eventually bring discussion to the student’s claims about this portion of the text. As a class work together to hone the claims and organize the evidence. Use the EBC Criteria Checklist II as a reference.

ACTIVITY SIX

Independent writing EBC: Students independently write their evidence-based claims from their Organizing EBC Worksheets.

Students should have revised their worksheets based on class discussion. Now they independently write their claims based on their revised worksheets.

BRIDGING HOMEWORK ASSIGNMENT

Students review the entire text and use an Organizing EBC Worksheet to make a new claim of their choice and develop it with evidence. This activity overlaps with the first activity of Part 5 and can be given as homework or done at the beginning of the next class.

ASSESSMENT

At this stage teachers can assess students’ reading and writing skills. Students should be comfortable making claims and supporting them with organized evidence. Their worksheets should demonstrate evidence of mastery of the reading skill. Student writing should demonstrate the same qualities of organization. Make sure they have properly established the context; that the claim is clearly expressed; and that each paragraph develops a coherent point. Evaluate the writing for an understanding of the difference between paraphrase and quotation. All evidence should be properly referenced. Use the EBC Criteria Checklist II to structure the evaluation and feedback to students.

PART 5

DEVELOPING EVIDENCE-BASED WRITING

“Stay Hungry. Stay Foolish.”

OBJECTIVE: Students develop the ability to express global evidence-based claims in writing through a close reading of the text.

ACTIVITIES

1. **Independent reading and making EBC:** Students review the entire text and use an Organizing EBC worksheet to make a new evidence-based claim.
2. **Class discussion of global EBC:** The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.
3. **Pairs discuss their EBC:** Students discuss their new claims in pairs and then with the class.
4. **Independent writing of final piece:** Students independently write a final evidence-based writing piece using their new claims.
5. **Class discussion of final writing pieces:** The class discusses final evidence-based writing pieces of student volunteers.

MATERIALS:

Organizing EBC Worksheet
Writing EBC Handout
EBC Criteria Checklist II
Evidence Based Writing Rubric

ESTIMATED TIME: 1-2 Days

COMMON CORE STATE STANDARDS

Primary Alignment: RI.6.1 / W.6.9b

RI.6.1: Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

W.6.9b: Draw evidence from literary or informational texts to support analysis, reflection, and research.

Secondary Alignment: RI.6.2 / RI.6.3 / W.6.4

RI.6.2: Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

RI.6.3: Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).

W.6.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

ACTIVITY ONE

Independent reading and making EBC: Students review the entire text and use an Organizing EBC Worksheet to make a new claim of their choice and develop it with evidence.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the text quietly by themselves. This ensures that all students have had at least some independent reading time.

ACTIVITY TWO

Class discussion of global EBC: The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.

This activity should be seen as an expansion of the skills developed in Part 4. Begin by analyzing volunteer student-written claims to review the critical aspects of writing. These claims will vary in the amount of text they span and the global nature of the ideas. Use various examples to demonstrate the differences, moving to a discussion of how claims build on each other to produce more global analysis of entire texts.

Throughout the lesson the text has been chunked into gradually larger sections, and now students have been asked to consider its entirety

for their final claim. Model making a more global claim, discussing its relationship to smaller local claims. Demonstrate how claims can become sub-points for other claims.

Some students can be asked to present the claims they have developed as further models. The Writing EBC Handout could aid discussion on how various claims require various ways of establishing their context and relevance.



ACTIVITY THREE

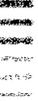
Pairs discuss their EBC: Students discuss their new claims from Activity 1 in pairs and then with the class.

Students discuss their new claims from Activity 1 in pairs and then with the class.

Once the class has a general understanding of the nature of more global claims, break them into pairs to work on the claims they have begun to develop in Activity 1. Have the pairs discuss if their claims contain sub-claims and how best they would be organized. It may be helpful to provide students with both the two-point and

three-point organizational worksheets to best fit their claims.

Volunteer pairs should be asked to discuss the work they did on their claims. At this point they should be able to talk about the nature of their claims and why they have chosen to organize evidence in particular ways.

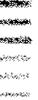


ACTIVITY FOUR

Independent writing of final piece: Students independently write a final evidence-based writing piece using their new claims.

Students independently write a final evidence-based writing piece using their new claims.

This evidence-based writing piece should be used as a summative assessment to evaluate acquisition of the reading and writing skills. Evaluating the claims and discussing ways of improving their organization breaks the summative assessment into two parts: making an evidence-based claim, and writing an evidence-based claim.



ACTIVITY FIVE

Class discussion of final writing pieces: The class discusses the final evidence-based writing piece of student volunteers.



ASSESSMENT

At this stage teachers can assess students' reading and writing skills. Students should be comfortable making claims and supporting them with organized evidence. Their worksheets should demonstrate mastery of the reading skill. Their final evidence-based writing piece can be seen as a summative assessment of both the reading and writing skills. Use the Evidence-Based Writing Rubric to evaluate their pieces.

≡ ALTERNATIVE ORGANIZATION ≡ OF PART 5

The activities of Part 5 can be re-ordered to provide a slightly different summative assessment. Teachers could choose not to give Activity 1 as an initial homework assignment or begin the part with it. Instead they can begin with the analysis of student writing from Part 4 and the discussion of global claims. Then students can be assigned to review the entire text, use a worksheet to make a global evidence-based claim, and move directly to developing the final evidence-based writing piece. This configuration of the activities provides a complete integrated reading and writing assessment. Depending on scheduling, this activity could be done in class or given partially or entirely as a homework assignment. Even with this configuration, ELL students or those reading below grade level can be supported by having their claims evaluated before they begin writing their pieces.

ACTIVITIES (Alternative Organization):

1. **Class discussion of global EBC:** The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.
2. **Independent reading and making EBC:** Students review the entire text and use an Organizing EBC Worksheet to make a global evidence-based claim.
3. **Independent writing of final piece:** Students independently write a final evidence-based writing piece using their global claims.
4. **Class discussion of final writing pieces:** The class discusses final evidence-based writing pieces of student volunteers.

Forming Evidence-Based Claims

FINDING DETAILS

I find interesting details that are related and that stand out to me from reading the text closely.

"and much of what I stumbled into by following my curiosity and intuition turned out to be priceless later on"

(Reference: lines 30-31)

"I decided to drop out and trust that it would all work out OK."

"If I had never dropped out, I would never have dropped in on this calligraphy class."

(Reference: lines 23-24, 43-45)

"when we were designing the first Macintosh computer, it all came back to me"

"So you have to trust that the dots will somehow connect in your future. You have to trust in something — your gut, destiny, life, karma"

(Reference: lines 40, 50-51)

CONNECTING THE DETAILS

I explain the connections I make among the details through re-reading and thinking about them.

MY THINKING: The "dots" Jobs is talking about "connecting" are dropping out, learning about calligraphy, and later designing the first Mac.

I think that Jobs wants us to live "following my curiosity and intuition."

"I decided drop out"

"I would have never dropped in on this calligraphy class"

I think Jobs is connecting his dots here.

"it all came back to me"

"trust that the dots will somehow connect in your future"

Jobs is saying that his "dots" worked out for him.

SUPPORTING EVIDENCE FOR

SUPPORTING EVIDENCE FOR

SUPPORTING EVIDENCE FOR

MAKING A CLAIM

I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.

Jobs says that when he connects the dots of his life it shows him that trusting your gut is the only way to live.

Making Evidence-Based Claims | Part 1

CLAIM: Jobs dropped out of college because the thought he was wasting his parent's money.

Supporting Evidence

"I dropped out of Reed College after the first 6 months"

(Reference: line 6)

Supporting Evidence

"I naively chose a college that was almost as expensive as Stanford, and all of my working-class parents' savings were being spent on my college tuition."

(Reference: lines 18-20)

Supporting Evidence

"And here I was spending all of the money my parents had saved their entire life. So I decided to drop out and trust that it would all work out OK"

(Reference: lines 22-23)

CLAIM: Jobs grew up without a lot of money.

Supporting Evidence

"all of my working-class parents' savings were being spent on my college tuition."

(Reference: line 19-20)

Supporting Evidence

"I slept on the floor in friends' rooms, I returned coke bottles for the 5¢ deposits to buy food with, and I would walk the 7 miles across town every Sunday night to get one good meal a week at the Hare Krishna temple."

(Reference: lines 27-30)

Supporting Evidence

Making Evidence-Based Claims | Part 2

CLAIM: Jobs thinks you should not settle for doing something you don't love.

Supporting Evidence

"I'm convinced that the only thing that kept me going was that I loved what I did."

(Reference: lines 84-85)

Supporting Evidence

"the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do"

(Reference: lines 87-88)

Supporting Evidence

"Don't settle."

(Reference: lines 91)

CLAIM:

Supporting Evidence

(Reference:)

Supporting Evidence

(Reference:)

Supporting Evidence

(Reference:)

Organizing Evidence-Based Claims (2 pts) | Part 3

CLAIM: Jobs tells his third story "about death," because he wants the graduates to realize something he has learned from having cancer: that death is a necessary part of life, which should influence how people live.

Point 1 Having cancer caused Jobs to face death.

A Supporting Evidence

"The doctors told me this was almost certainly a type of cancer that is incurable, and that I should expect to live no longer than three to six months."

(Reference: lines 107-108)

C Supporting Evidence

"Having lived through it, I can now say this to you with a bit more certainty than when death was a useful but purely intellectual concept"

(Reference: lines 120-121)

B Supporting Evidence

"since then, for the past 33 years, I have looked in the mirror every morning and asked myself: "If today were the last day of my life, would I want to do what I am about to do today?" "

(Reference: lines 95-97)

D Supporting Evidence

Point 2 Jobs thinks death should shape how people live.

A Supporting Evidence

"Death is very likely the single best invention of Life."

(Reference: line 124)

C Supporting Evidence

"Remembering that I'll be dead soon is the most important tool I've ever encountered to help me make the big choices in life."

(Reference: lines 99-100)

B Supporting Evidence

"It is Life's change agent. It clears out the old to make way for the new."

(Reference: lines 124-125)

D Supporting Evidence

Model Written Evidence-Based Claim



In his speech to Stanford graduates in 2005, Steve Jobs tells a story "about death," because he wants the graduates to realize something he has learned from having cancer: that death is a necessary part of life, which should influence how people live. When Jobs was first diagnosed with pancreatic cancer, he was told that it was incurable and that he would not live long (107-108). Knowing he might die from cancer caused him to remember something he had thought since he was 17, that he should live every day as if it were his last (lines 95-7).

In lines 120-1, Jobs introduces his message and tells the graduates that he can state his ideas "with a bit more certainty than when death was a useful but purely intellectual concept." In paragraph 21, he states several claims that explain how he now views death. He describes Death as "the single best invention of life" and "life's change agent" because it "clears out the old to make way for the new." Jobs' story about his cancer explains something he has said earlier in paragraph 17: "Remembering that I'll be dead soon is the most important tool I've ever encountered to help me make the big choices in life." Steve Jobs is telling the graduates that they should live their lives in a meaningful way, because, like him, they never know when life might end.

Stanford University Commencement Address

June 12, 2005

Steve Jobs

I am honored to be with you today at your commencement from one of the finest universities in the world. I never graduated from college. Truth be told, this is the closest I've ever gotten to a college graduation. Today I want to tell you three stories from my life. That's it. No big deal. Just three stories.

5 The first story is about connecting the dots. P2

I dropped out of Reed College after the first 6 months, but then stayed around as a drop-in for another 18 months or so before I really quit. So why did I drop out?

It started before I was born. My biological mother was a young, unwed college graduate student, and she decided to put me up for adoption. She felt very strongly that I should be adopted by college graduates, so everything was all set for me to be adopted at birth by a lawyer and his wife. Except that when I popped out they decided at the last minute that they really wanted a girl. So my parents, who were on a waiting list, got a call in the middle of the night asking: "We have an unexpected baby boy; do you want him?" They said: "Of course." My biological mother later found out that my mother had never graduated from college and that my father had never graduated from high school. She refused to sign the final adoption papers. She only relented a few months later when my parents promised that I would someday go to college.

commencement: graduation, in this case from a university

relented: gave in; yielded

And 17 years later I did go to college. But I **naively** chose a college that was almost as
 expensive as Stanford, and all of my working class parents' savings were being spent
 20 on my college tuition. After six months, I couldn't see the value in it. I had no idea what I
 wanted to do with my life and no idea how college was going to help me figure it out.
 And here I was spending all of the money my parents had saved their entire life. So I
 decided to drop out and trust that it would all work out OK. It was pretty scary at the time
 but looking back it was one of the best decisions I ever made. The minute I dropped out I
 25 could stop taking the required classes that didn't interest me, and begin dropping in on
 the ones that looked interesting.

It wasn't all romantic. I didn't have a dorm room, so I slept on the floor in friends'
 rooms. I returned coke bottles for the 50¢ deposits to buy food with, and I would walk
 the 7 miles across town every Sunday night to get one good meal a week at the Hare
 30 Krishna temple. I loved it. And much of what I stumbled into by following my curiosity and
 intuition turned out to be priceless later on. Let me give you one example:
 Reed College at that time offered perhaps the best **calligraphy** instruction in the country.
 Throughout the campus every poster, every label on every drawer, was beautifully hand
 calligraphed. Because I had dropped out and didn't have to take the normal classes, I
 35 decided to take a calligraphy class to learn how to do this. I learned about **serif and san**
serif typefaces, about varying the amount of space between different letter
 combinations, about what makes great **typography** great. It was beautiful, historical,
 artistically subtle in a way that science can't capture, and I found it fascinating.

naively: innocently and unwisely
calligraphy: the art of producing decorative
 handwritten lettering with a pen or brush
serif typeface: style of typeface with decorative
 lines on the letters (e.g., Times)

san serif typeface: style of typeface
 with simple lines (e.g., Arial)
typography: the style and appearance
 of printed matter; the art of arranging
 type

None of this had even a hope of any practical application in my life. But ten years
 40 later, when we were designing the first Macintosh computer, it all came back to me.
 And we designed it all into the Mac. It was the first computer with beautiful typography. If
 I had never dropped in on that single course in college, the Mac would have never had
 multiple typefaces or proportionally spaced fonts. And since Windows just copied the
 Mac, it's likely that no personal computer would have them. If I had never dropped out, I
 45 would have never dropped in on this calligraphy class, and personal computers might not
 have the wonderful typography that they do. Of course it was impossible to connect the
 dots looking forward when I was in college. But it was very, very clear looking backwards
 ten years later.

Again, you can't connect the dots looking forward; you can only connect them
 50 looking backwards. So you have to trust that the dots will somehow connect in your
 future. You have to trust in something — your gut, destiny, life, **karma**, whatever. This
 approach has never let me down, and it has made all the difference in my life.

My second story is about love and loss. 60

I was lucky — I found what I loved to do early in life. Woz and I started Apple in my
 55 parents garage when I was 20. We worked hard, and in 10 years Apple had grown
 from just the two of us in a garage into a \$2 billion company with over 4000 employees.
 We had just released our finest creation — the Macintosh — a year earlier, and I had just
 turned 30. And then I got fired. How can you get fired from a company you started? Well,
 as Apple grew we hired someone who I thought was very talented to run the company
 60 with me, and for the first year or so things went well. But then our visions of the future
 began to **diverge** and eventually we had a falling out. When we did, our Board of
 Directors sided with him. So at 30 I was out. And very publicly out. What had been the
 focus of my entire adult life was gone, and it was devastating.

karma: good or bad luck, seen as resulting from one's actions (from Hinduism and Buddhism)

diverge: differ; move away from each other

I really didn't know what to do for a few months. I felt that I had let the previous
65 generation of **entrepreneurs** down - that I had dropped the baton as it was being
passed to me. I met with David Packard and Bob Noyce and tried to apologize for
screwing up so badly. I was a very public failure, and I even thought about running away
from the valley. But something slowly began to dawn on me -- I still loved what I did. The
turn of events at Apple had not changed that one bit. I had been rejected, but I was still in
70 love. And so I decided to start over.

I didn't see it then, but it turned out that getting fired from Apple was the best thing
85 that could have ever happened to me. The heaviness of being successful was
replaced by the lightness of being a beginner again, less sure about everything. It freed
me to enter one of the most creative periods of my life.

75 During the next five years, I started a company named NeXT, another company
named Pixar, and fell in love with an amazing woman who would become my wife.
Pixar went on to create the world's first computer animated feature film, Toy Story, and is
now the most successful animation studio in the world. In a remarkable turn of events,
Apple bought NeXT. I returned to Apple, and the technology we developed at NeXT is at
80 the heart of Apple's current **renaissance**. And Laurene and I have a wonderful family
together.

I'm pretty sure none of this would have happened if I hadn't been fired from Apple.
90 It was awful tasting medicine, but I guess the patient needed it. Sometimes life hits
you in the head with a brick. Don't lose faith. I'm convinced that the only thing that kept
85 me going was that I loved what I did. You've got to find what you love. And that is as true
for your work as it is for your lovers. Your work is going to fill a large part of your life, and
the only way to be truly satisfied is to do what you believe is great work. And the only way

entrepreneur: a person who sets up a
business, taking on financial risks to make
money

renaissance: a revival or renewed interest
in something

to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle. As with all matters of the heart, you'll know when you find it. And, like any great
 90 relationship, it just gets better and better as the years roll on. So keep looking until you find it. Don't settle.

My third story is about death.

When I was 17, I read a quote that went something like "If you live each day as if it
 was your last, someday you'll most certainly be right." It made an impression on me
 95 and since then, for the past 33 years, I have looked in the mirror every morning and asked myself: "If today were the last day of my life, would I want to do what I am about to do today?" And whenever the answer has been "No" for too many days in a row, I know I need to change something.

Remembering that I'll be dead soon is the most important tool I've ever
 100 encountered to help me make the big choices in life. Because almost everything - all external expectations, all pride, all fear of embarrassment or failure - these things just fall away in the face of death, leaving only what is truly important. Remembering that you are going to die is the best way I know to avoid the trap of thinking you have something to lose. You are already naked. There is no reason not to follow your heart.

105 About a year ago I was diagnosed with cancer. I had a scan at 7:30 in the morning, and it clearly showed a tumor on my **pancreas**. I didn't even know what a pancreas was. The doctors told me this was almost certainly a type of cancer that is incurable, and that I should expect to live no longer than three to six months. My doctor advised me to go home and get my affairs in order, which is doctor's code for prepare to die. It means to
 110 try to tell your kids everything you thought you'd have the next 10 years to tell them in just a few months. It means to make sure everything is buttoned up so that it will be as easy as possible for your family. It means to say your goodbyes.

pancreas: a large gland behind the stomach which aids in digestion (and can be affected by a very lethal form of cancer)

page 5

I lived with that diagnosis all day. Later that evening I had a **biopsy**, where they stuck an **endoscope** down my throat, through my stomach and into my intestines, put a needle into my pancreas and got a few cells from the tumor. I was sedated, but my wife, who was there, told me that when they viewed the cells under a microscope the doctors started crying because it turned out to be a very rare form of pancreatic cancer that is curable with surgery. I had the surgery and I'm fine now.

This was the closest I've been to facing death, and I hope it's the closest I get for a few more decades. Having lived through it, I can now say this to you with a bit more certainty than when death was a useful but purely intellectual concept:

No one wants to die. Even people who want to go to heaven don't want to die to get there. And yet death is the destination we all share. No one has ever escaped it. And that is as it should be, because Death is very likely the single best invention of Life. It is Life's change agent. It clears out the old to make way for the new. Right now the new is you, but someday not too long from now, you will gradually become the old and be cleared away. Sorry to be so dramatic, but it is quite true.

Your time is limited, so don't waste it living someone else's life. Don't be trapped by **dogma** — which is living with the results of other people's thinking. Don't let the noise of others' opinions drown out your own inner voice. And most important, have the courage to follow your heart and **intuition**. They somehow already know what you truly want to become. Everything else is secondary.

biopsy: an examination of body tissue to discover the presence or cause of disease

endoscope: an instrument used to give a view of the body's internal parts

dogma: a principle or idea presented by an authority as unarguably true

intuition: the ability to understand something immediately and instinctively, without the need for conscious reasoning



When I was young, there was an amazing publication called The Whole Earth Catalog, which was one of the bibles of my generation. It was created by a fellow
 135 named Stewart Brand not far from here in Menlo Park, and he brought it to life with his poetic touch. This was in the late 1960's, before personal computers and desktop publishing, so it was all made with typewriters, scissors, and polaroid cameras. It was sort of like Google in paperback form, 35 years before Google came along: it was **idealistic**, and overflowing with neat tools and great notions.

140 Stewart and his team put out several issues of The Whole Earth Catalog, and then when it had run its course, they put out a final issue. It was the mid-1970s, and I was your age. On the back cover of their final issue was a photograph of an early morning country road, the kind you might find yourself hitchhiking on if you were so adventurous. Beneath it were the words: "Stay Hungry. Stay Foolish." It was their farewell message as
 145 they signed off. Stay Hungry. Stay Foolish. And I have always wished that for myself. And now, as you graduate to begin anew, I wish that for you.

Stay Hungry. Stay Foolish. P23

Thank you all very much. P26

idealistic: aiming or hoping for perfection, sometimes unrealistically

Forming Evidence-Based Claims

As you read, you will notice authors use a lot of details and strategies to develop their points and arguments. You might ask yourself: What details should I look for? How do I know they are important? Below are examples of types of details authors often use in important ways.

Author's Facts and Ideas	Author's Words and Organization	Opinions and Point of View
<ul style="list-style-type: none"> Statistics Examples Vivid Description Characters/Actors Events 	<ul style="list-style-type: none"> Repeated words Strong Language Figurative language Tone Organizational Structure/Phrases 	<ul style="list-style-type: none"> Interpretations Explanation of ideas or events Narration Personal reflection Beliefs

CONNECTING THE DETAILS

By reading closely and thinking about the details that stand out to me, I can make connections among them. Below are some ways details can be connected.

Facts and Ideas	Words and Organization	Opinions and Point of View
<ul style="list-style-type: none"> Authors use hard facts to illustrate or define an idea. Authors use examples to express a belief or point of view. Authors use vivid description to compare or oppose different ideas. Authors describe different actors or characters to illustrate a comparison or contrast. Authors use a sequence of events to arrive at a conclusion. 	<ul style="list-style-type: none"> Authors repeat specific words or structures to emphasize meaning or tone. Authors use language or tone to establish a mood. Authors use figurative language to infer emotion or embellish meaning. Authors use a specific organization to enhance a point or add meaning. 	<ul style="list-style-type: none"> Authors compare or contrast evidence to help define his or her point of view. Authors offer their explanation of ideas or events to support their beliefs. Authors tell their own story to develop their point of view. Authors use language to reveal an opinion or feeling about a topic.

MAKING A CLAIM

I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.



As I group and connect my details, I can come to a conclusion and form a statement about the text.

EVIDENCE-BASED WRITING EVALUATION RUBRIC

	PROFICIENT	NOT YET PROFICIENT		
CONTENT AND ANALYSIS	<p>SCORE = 4</p> <ul style="list-style-type: none"> - The essay contains a clear, compelling claim - The claim demonstrates insightful comprehension and valid prior inferences. - Overall analysis follows logically from the text 	<p>SCORE = 3</p> <ul style="list-style-type: none"> - The essay contains a clear claim - The claim demonstrates sufficient comprehension and valid basic inferences - Overall analysis follows logically from the text 	<p>SCORE = 2</p> <ul style="list-style-type: none"> - The essay contains a claim, but it is not fully articulated - The claim demonstrates basic, literal comprehension and significant misinterpretation - Major points of textual analysis are missing or irrelevant to account's purpose 	<p>SCORE = 1</p> <ul style="list-style-type: none"> - The essay contains a muddled claim that is not beyond correct literal reception - There is minimal inferential analysis serving no clear purpose
COMMAND OF EVIDENCE	<ul style="list-style-type: none"> - The central claim of the essay is well-supported by textual evidence - Use of relevant evidence is sustained throughout the entire analysis - The core reasoning of the essay follows from evidence 	<ul style="list-style-type: none"> - The central claim of the essay is only partially supported by textual evidence - An analysis is occasionally supported with significant gaps or misinterpretation - The core reasoning of the essay is tangential or muddled with respect to the evidence 	<ul style="list-style-type: none"> - The essay demonstrates some comprehension of the idea of evidence but only supports the claim with minimal evidence which is generally irrelevant 	<ul style="list-style-type: none"> - There is no sustained organization for the exposition. Organization does not rise above the paragraph level. The essay does contain discrete paragraphs, but the relationship among them are unclear - Ideas do not flow across paragraphs and are often introduced by erroneous sentence structure and paragraph development
COHERENCE AND ORGANIZATION	<ul style="list-style-type: none"> - The organization strengthens the context; the organizational strategies are appropriate for the content and purpose - There is a smooth progression of ideas enhanced by proper integration of clauses and paragraphs, effective transitions, sentence variety, and consistent formatting. 	<ul style="list-style-type: none"> - Some attempt has been made at a sustained organization, but major issues are missing or inadequate. The introduction does not establish the context. The organizational strategy is unclear and impedes exposition - Paragraphs do contain separate ideas but the relationships among them are not indicated with transitions. Quotas and phrases may be present, but no distinction is made between the two and they are not effectively integrated into the exposition. Sentences are repetitive and fail to develop ideas from one to the next 	<ul style="list-style-type: none"> - There is no sustained organization for the exposition. Organization does not rise above the paragraph level. The essay does contain discrete paragraphs, but the relationship among them are unclear - Ideas do not flow across paragraphs and are often introduced by erroneous sentence structure and paragraph development 	<ul style="list-style-type: none"> - The essay contains very limited and often incorrect vocabulary. Sentence structure is repetitive, simplistic, and often incorrect resulting in a minimal expression of a few simplistic ideas - The essay illustrates consistent errors of standard, grade-level appropriate writing conventions. Errors impede readability and comprehension of the writing
CONTROL OF LANGUAGE AND GRAMMAR	<ul style="list-style-type: none"> - The essay contains precise and vivid vocabulary, which may include imagery or figurative language and appropriate academic vocabulary. The sentence structure draws attention to key ideas and reinforces relationships among ideas. - Successful and consistent stylistic choices have been made that serve the purpose of the essay - The essay illustrates consistent command of standard, grade-level appropriate writing conventions. Errors are so few and so minor that they do not disrupt readability or affect the force of the writing. 	<ul style="list-style-type: none"> - The essay contains appropriate vocabulary that may lack some specificity, including some imagery or figurative language and appropriate academic vocabulary. The sentence structure supports key ideas and relationships among ideas, but may lack some variety and clarity - There is some evidence of stylistic choices that serve the purpose of the essay - The essay illustrates consistent command of standard, grade-level appropriate writing conventions. Minor errors do not disrupt readability, but may slightly reduce the force of the writing 	<ul style="list-style-type: none"> - The essay contains vague, repetitive and often incorrect vocabulary. Sentence structure is repetitive, simplistic, and often incorrect, disrupting the presentation of ideas - There are few or no attempts to develop an appropriate style - The essay illustrates consistent errors of standard, grade-level appropriate writing conventions. Errors disrupt readability and undermine the force of the writing 	<ul style="list-style-type: none"> - The essay contains very limited and often incorrect vocabulary. Sentence structure is repetitive, simplistic, and often incorrect resulting in a minimal expression of a few simplistic ideas - The essay illustrates consistent errors of standard, grade-level appropriate writing conventions. Errors impede readability and comprehension of the writing

EVIDENCE-BASED CLAIMS CRITERIA - GRADES 6-8 CHECK COMMENTS

I. Content and Analysis
Clarity of the Claim:
 States a conclusion that you have come to after reading a text(s) and that you want others to think about.

An EBC is a clearly stated inference that arises from close reading of a text.
Conformity to the Text:
 is based upon and linked to the ideas and details of the text(s) you have read.

Understanding of the Topic:
 Demonstrates knowledge of and sound thinking about a text or topic that matters to you and others.

Reasoning:
U. Command of Evidence All parts of the claim are supported by specific evidence you can point to in the text(s).

An EBC is supported by specific textual evidence and developed through valid reasoning.
Use and Integration of Evidence:
 Uses direct quotations and examples from the text(s) to explain and prove its conclusion.

EVIDENCE-BASED CLAIMS CRITERIA II GRADES 6-8 CHECK COMMENTS

<p>I. Content and Analysis <i>An EBC is a clearly stated inference that arises from close reading of a text.</i></p>	<p>Clarity of the Claim: States a conclusion that you have come to after reading a text(s) and that you want others to think about.</p> <p>Conformity to the Text: Is based upon, and linked to, the ideas and details of the text(s) you have read.</p> <p>Understanding of the Topic: Demonstrates knowledge of and sound thinking about a text or topic that matters to you and others.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>II. Command of Evidence <i>An EBC is supported by specific textual evidence and developed through valid reasoning.</i></p>	<p>Reasoning: All parts of the claim are supported by specific evidence you can point to in the text(s).</p> <p>Use and Integration of Evidence: Uses direct quotations and examples from the text(s) to explain and prove its conclusion.</p> <p>Thoroughness and Objectivity: Is explained thoroughly and distinguishes your claim from other possible positions.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>III. Coherence and Organization <i>An EBC and its support are coherently organized into a unified explanation.</i></p>	<p>Relationship to Context: States where your claim is coming from and why you think it is important.</p> <p>Relationships among Parts: Groups and presents supporting evidence in a clear way that helps others understand your claim.</p> <p>Relationship to Other Claims: Can be linked with other claims to make an argument.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>IV. Control of Language and Conventions <i>An EBC is communicated clearly and precisely, with responsible use-citation of supporting evidence.</i></p>	<p>Clarity of Communication: Is clearly and precisely stated, so that others understand your thinking.</p> <p>Responsible Use of Evidence: Quotes from the text(s) accurately.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

Writing Evidence-Based Claims

Writing evidence-based claims is a little different from writing stories or just writing about something. You need to **follow a few steps** as you write.

1. Establish the context.

Your readers must know **where your claim is coming from** and **why it's important**. Depending on the scope of your piece and the claim, the context differs. If your whole piece is one claim or if you're introducing the first major claim of your piece, the entire context must be given.

In his speech to Stanford graduates in 2005, Steve Jobs tells a story.

Purposes of evidence-based writing vary. In some cases, naming the article and author might be enough say why your claims is important. In other cases, you might want to give more information:

Steve Jobs led an inspirational life. In his speech to Stanford graduates in 2005, Steve Jobs tells a story . . .

If your claim is part of a larger piece with multiple claims, then the context might be simpler:

According to Jobs, . . . or . . . In paragraph 5, Jobs claims . . .

2. State your claim clearly.

How you state your claim is important; it must **clearly and fully express your ideas**. Figuring out how to state claims is a **process**; writers revise them continually as they write their supporting evidence. Here's a claim about Jobs' speech.

In his speech to Stanford graduates in 2005, Steve Jobs tells a story "about death," because he wants the graduates to realize something he has learned from having cancer: that death is a necessary part of life, which should influence how people live.

Remember, you should continually return and re-phrase your claim as you write the supporting evidence to make sure you are capturing exactly what you want to say. Writing out the evidence always helps you figure out what you really think.

3. Organize your supporting evidence.

Most claims contain multiple parts that require different evidence and should be expressed in separate paragraphs. This claim can be **broken down into two parts**:

A description of how **HAVING CANCER CAUSED JOBS TO FACE DEATH**
and
how **JOBS THINKS DEATH SHOULD SHAPE HOW PEOPLE LIVE**.

Writing Evidence-Based Claims



Here are two paragraphs that support the claim with evidence organized into these two parts:

A description of how **HAVING CANCER CAUSED JOBS TO FACE DEATH**:

In his speech to Stanford graduates in 2005, Steve Jobs tells a story "about death," because he wants the graduates to realize something he has learned from having cancer: that death is a necessary part of life, which should influence how people live. When Jobs was first diagnosed with pancreatic cancer, he was told that it was incurable and that he would not live long (107-108). Knowing he might die from cancer caused him to remember something he had thought since he was 17: that he should live every day as if it were his last (lines 95-7).

A description of the **JOBS THINKS DEATH SHOULD SHAPE HOW PEOPLE LIVE**:

In lines 110-1, Jobs introduces his message and tells the graduates that he can state his ideas "with a bit more certainty than when death was a useful but purely intellectual concept." In paragraph 21, he states several claims that explain how he now views death. He describes Death as "the single best invention of life" and "life's change agent" because it "clears out the old to make way for the new" (124-125). Jobs' story about his cancer explains something he has said earlier in paragraph 17: "Remembering that I'll be dead soon is the most important tool I've ever encountered to help me make the big choices in life." Steve Jobs is telling the graduates that they should live their lives in a meaningful way, because, like him, they never know when life might end.

Notice the phrase: "In lines 120-1, Jobs introduces his message" starting the second paragraph. **Transitional phrases** like this one aid the organization by showing how the ideas relate to each other.

4. Paraphrase and quote.

Written evidence from texts can be paraphrased or quoted. It's up to the writer to decide which works better for each piece of evidence. Paraphrasing is **putting the author's words into your own**. This works well when the author originally expresses the idea you want to include across many sentences. You might write it more briefly. The second line from the first paragraph paraphrases the evidence from Jobs' text. The ideas are his, but the exact way of writing is not.

When Jobs was first diagnosed with pancreatic cancer, he was told that it was incurable and that he would not live long (107-108).

Some evidence is better quoted than paraphrased. If an author has found the quickest way to phrase the idea or the words are especially strong, you might want to **use the author's words**. The third line from paragraph 2 quotes Jobs exactly, incorporating his powerful phrases.

He describes Death as "the single best invention of life" and "life's change agent" because it "clears out the old to make way for the new" (124-125).

5. Reference your evidence.

Whether you paraphrase or quote the author's words, you must include **the exact location where the ideas come from**. Direct quotes are written in quotation marks. How writers include the reference can vary depending on the piece and the original text. Here the writer puts the line numbers from the original text in parentheses at the end of the sentence.

Name Task

FINDING DETAILS

I find interesting details that are related and that stand out to me from reading the text closely.

(Reference:)

(Reference:)

(Reference:)



CONNECTING THE DETAILS MY THINKING:

I explain the connections I make among the details through re-reading and thinking about them.



MAKING A CLAIM

I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.



Name Task 

CLAIM:

Supporting Evidence:

Supporting Evidence:

Supporting Evidence:

(Reference:)

(Reference:)

(Reference:)

CLAIM:

Supporting Evidence:

Supporting Evidence:

Supporting Evidence:

(Reference:)

(Reference:)

(Reference:)

Name  Task

CLAIM:		Point 2	
Point 1	A Supporting Evidence	B Supporting Evidence	C Supporting Evidence
(Reference:)	(Reference:)	(Reference:)	(Reference:)
C Supporting Evidence	D Supporting Evidence	A Supporting Evidence	B Supporting Evidence
(Reference:)	(Reference:)	(Reference:)	(Reference:)



HOW TO USE THESE MATERIALS



This lesson is in the format of a **Compressed File**. Files are organized in such a way that you can easily browse through the materials and find every document you need to print or e-mail for each day.

The lesson components are organized into folders:



The **TEACHER MATERIALS** folder contains:

- Lesson Overview
- Parts 1-5 Lesson Plans
- Teacher Version Worksheets
- Model Written EBC



The **TEXTS** folder contains the text(s) used in the lesson.



The **HANDOUTS** folder contains:

- Forming and Writing EBC Handouts
- EBC Criteria Checklists I and II
- Evidence-Based Writing Rubric



The **WORKSHEETS** folder contains:

- Blank Forming, Making, and Organizing EBC Worksheets



The worksheets have been created as **editable PDF forms**. With the free version of **Adobe Reader**, students and teachers are able to type in them and save their work for recording and e-mailing. This allows students and teachers to work either with paper and pencil or electronically according to their strengths and needs.

While Teacher Version Worksheets with model claims have been provided, these are meant more to illustrate the process than to shape textual analysis. Teachers are encouraged to develop claims based on their own analysis and class discussion. Teachers can record their own claims in the blank worksheets for their reference and to distribute to students.

If you decide to **PRINT** materials, please note that:

- For optimal use of space print them at **actual size**, without enabling the auto-fit function.
- All materials can be printed either in color or in black and white.

MAKING EVIDENCE-BASED CLAIMS

COMMON CORE STATE STANDARDS
ENGLISH LANGUAGE ARTS / LITERACY LESSON

GRADE 10

Nobel Peace Prize Acceptance Speech
Rev. Dr. Martin Luther King, Jr.

A Just and Lasting Peace [Nobel Lecture]
President Barack Obama

LESSON OVERVIEW

Making evidence-based claims about texts is a foundational literacy and critical thinking skill that lies at the heart of the CCSS. The skill consists of two parts. The first part is the *ability to extract detailed information* from texts and grasp how it is conveyed. Education and personal growth require real exposure to new information from a variety of media. Instruction should push students beyond general thematic understanding of texts into deep engagement with textual content and authorial craft.

The second half of the skill is the *ability to make valid claims* about the new information thus gleaned. This involves developing the capacity to analyze texts, connecting information in literal, inferential, and sometimes novel ways. Instruction should lead students to do more than simply restate the information they take in through close reading. Students should come to see themselves as creators of meaning as they engage with texts.

It is essential that students understand the importance and purpose of making evidence-based claims, which are at the center of many fields of study - notably science and the social sciences. We must help students become invested in developing their ability to explore the meaning of texts. Part of instruction should focus on teaching students how to understand and talk about their skills.

It is also important that students view claims as their own. They should see their interaction with texts as a personal investment in their learning. They are not simply reading texts to report information expected by their teachers, but should approach texts with their own authority and confidence to support their analysis.

This lesson is designed to cultivate in students the ability to make evidence-based claims about texts. Students perform a sequence of activities centered on a close reading of the Nobel Peace Prize Speeches of Rev. Dr. Martin Luther King, Jr. and President Barack Obama.

HOW THIS LESSON IS STRUCTURED

The lesson activities are organized into five parts, each associated with sequential portions of the text. The parts build on each other and can each span a range of instructional time depending on scheduling and student ability.

The lesson intentionally separates the development of critical reading skills from their expression in writing. A sequence of worksheets isolates and supports the progressive development of the critical reading skills. Parts 1-3 focus entirely on making evidence-based claims as readers. Parts 4 and 5 focus on expressing this skill in writing.

This organization is designed to strengthen the precision of instruction and assessment, as well as to give teachers flexibility in their use of the lesson. Teachers may choose to use only Parts 1-3

dealing with reading and teach writing in another context.

The first activities of Parts 2-5 - which involve independently reading sections of the text - are designed to function as homework assignments from the previous day. If scheduling and student ability do not support making the reading a homework assignment, these activities can be done in class at the beginning of each Part. Accordingly, they are listed both as a "Bridging" homework activity at the end of each part and as an activity beginning the sequence of the next part.

Alternate configurations of Part 5 are given in the detailed lesson plan to provide multiple ways of structuring a summative assessment.

LESSON OUTLINE

PART 1: INTRODUCING EVIDENCE-BASED CLAIMS

- Students are introduced to the lesson focus on making evidence-based claims about texts.
- Students independently read part of the text with a text-dependent question to guide them.
- Students follow along as they listen to part of the speech and discuss a series of text-dependent questions.
- The teacher models a critical reading and thinking process for forming evidence-based claims about texts.

PART 2: MAKING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and look for evidence to support a claim made by the teacher.
- Students follow along as they listen to part of the speech and discuss a series of text-dependent questions
- In pairs, students look for evidence to support claims made by the teacher.
- The class discusses the evidence found by the student pairs.
- In pairs, students make an evidence-based claim of their own and present it to the class.

PART 3: ORGANIZING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and make an evidence-based claim.
- Students follow along as they listen to part of the speech.
- The teacher models organizing evidence to develop and explain claims using student evidence-based claims.
- In pairs, students develop a claim and organize supporting evidence.
- The class discusses the evidence-based claims developed by student pairs.

PART 4: WRITING EVIDENCE-BASED CLAIMS

- Students independently read part of the text and develop an evidence-based claim.
- The teacher introduces and models writing evidence-based claims.
- In pairs, students write evidence-based claims.
- The class discusses the written evidence-based claims of volunteer student pairs.
- The class discusses their new evidence-based claims and students read aloud portions of the text.
- Students independently write evidence-based claims.

PART 5: DEVELOPING EVIDENCE-BASED WRITING

- Students review both speeches in their entirety and make a new evidence-based claim.
- The teacher analyzes student evidence-based writing and discusses developing global evidence-based claims.
- Students discuss their new claims in pairs and then with the class.
- Students independently write a final evidence-based writing piece.
- The class discusses final evidence-based writing pieces of student volunteers.

HOW THIS LESSON ALIGNS WITH CCSS FOR ELA/LITERACY

The primary CCSS alignment of the lesson instruction is with **RI.9-10.1** and **W.9-10.9b** (*cite strong and thorough evidence to support analysis of explicit and inferential textual meaning*).

The evidence-based analysis of the text, including the text-dependent questions and the focus of the claims, involve **RI.9-10.3** and **RI.9-10.6** (*analyze how an author unfolds a series of ideas and a point of view over the course of a text*).

The use of Nobel Peace Prize Speeches of two important U.S. figures for teaching analytic skills aligns with **RI.9-10.9** (*analyze seminal U.S. documents of historical and literary significance*).

The numerous paired activities and structured class discussions develop **SL.9-10.1** (*participate effectively in a range of collaborative discussions building on others' ideas and expressing their own clearly and persuasively*).

The evidence-based writing pieces involve **W.9-10.4** (*produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience*).

HOW THIS LESSON ASSESSES STUDENT LEARNING

The lesson's primary instructional focus is on making evidence-based claims as readers and writers. Parts 1-3 develop the reading skill. Activities are sequenced to build the skill from the ground up. A series of worksheets supports students in their progressive development of the skill. These worksheets structure and capture students' critical thinking at each developmental stage and are the primary method of formative assessment. They are specifically designed to give teachers the ability to assess student development of the reading skill without the influence of their writing abilities.

From the first activity on, students are introduced to and then use a set of criteria that describes the characteristics of an evidence-based claim. In pair work and class discussions, students use the first five of these criteria to discuss and evaluate evidence-based claims made by the teacher and by other students. Teachers use these same

criteria to assess student claims presented on the worksheets from Parts 1-3.

As the instructional focus shifts to writing in Parts 4 and 5 so does the nature of the assessment. In these parts, teachers assess the student writing pieces. Students continue using worksheets as well, giving teachers clear and distinct evidence of both their reading and writing skills for evaluation. In Parts 4-5, students learn about and use six additional criteria for writing claims. Teachers apply these criteria in the formative assessment of students' written work, as well as the evaluation of their final evidence-based writing pieces.

Part 5 can be configured in multiple ways giving teachers the flexibility to structure a summative assessment suitable for their students.

≡ PEDAGOGICAL PRINCIPLES ≡ SHAPING THE INSTRUCTION

This lesson is designed to support real exposure and interaction with complex texts for ALL students. The activities are structured and sequenced to allow all students, including English language learners and students reading below grade level, independent exposure to the text, while also supporting them along the way to ensure involvement and comprehension. Students with disabilities should be further supported by the local professionals who are familiar with their individual learning profiles.

PRINCIPLE 1

Students understand and own the development of their literacy skills. Teachers explain skills and their importance throughout the process, ensuring students understand the purpose of what they are doing and have the academic vocabulary to discuss it. Teachers highlight that students make their own valid evidence-based claims based on their analysis of the texts.

PRINCIPLE 2

All students independently engage in productive struggle with complex texts AND are supported with group readings of key portions of the text. Students are asked to read sections independently and then together with the class. Infrequent vocabulary and domain-specific concepts are highlighted and defined.

PRINCIPLE 3

Literacy skills are understood and taught developmentally: advancing from less challenging sections of text to more abstract or complex selections; working from literal comprehension to inferential analysis; and evolving from guided practice to independent application. All students are supported in their skill development through a consistent blend of teacher modeling, peer collaboration, and independent performance.

PRINCIPLE 4

Activities and tasks are structured and supported with worksheets to collect precise evidence for formative assessment of the students' progressive acquisition of skills. Assessment is based on clear criteria that are made explicit to students. Review of this information allows teachers to adjust and focus instruction for the entire class and to differentiate it for individual students.

MAKING EVIDENCE-BASED CLAIMS

COMMON CORE STATE STANDARDS
ENGLISH LANGUAGE ARTS / LITERACY LESSON

GRADE 10

Nobel Peace Prize Acceptance Speech
Rev. Dr. Martin Luther King, Jr.

A Just and Lasting Peace [Nobel Lecture]
President Barack Obama

PART 1

INTRODUCING EVIDENCE-BASED CLAIMS

“The Question of Our Time”

OBJECTIVE: Students learn the importance and elements of making evidence-based claims through a close reading of the first five paragraphs of the text.

ACTIVITIES

1. **Introduction to lesson:** The teacher presents the purpose of the overall lesson and explains the skill of making evidence-based claims.
2. **Independent reading:** Students independently read paragraphs 1-5 of Rev. Dr. Martin Luther King, Jr.'s Nobel Peace Prize acceptance speech and answer the question, How does King describe the current state of the civil rights movement?
3. **Read aloud and class discussion:** The teacher reads paragraphs 1-5 aloud and leads a discussion guided by three text-dependent questions.
4. **Model forming EBCs:** The teacher models a critical reading and thinking process for forming evidence-based claims about texts.

ESTIMATED TIME: 2-3 Days

MATERIALS:

Forming EBC Handout
Forming EBC Worksheet
EBC Criteria Checklist I
Making EBC Worksheet

COMMON CORE STATE STANDARDS

RI.9-10.1: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

RI.9-10.3: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

RI.9-10.6: Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.9: Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

SL.9-10.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.



ACTIVITY ONE

Introduction to lesson: The teacher presents the purpose of the overall lesson and explains the skill of making evidence-based claims, making reference to the first five criteria from the EBC Checklist i.

Introduce the central purpose of the lesson and the idea of a “claim” someone might make. The following is a possible approach:

Introduce the first characteristic of an evidence-based claim: “States a conclusion you have come to... and that you want others to think about.” Pick a subject that is familiar to students, such as “school lunches” and ask them to brainstorm some claim statements they might make about the subject. Introduce the fourth characteristic: “All parts of the claim are supported by specific evidence you can point to” and distinguish claims that can be supported by evidence from those that are unsupported opinions, using the students’ brainstorm list as a reference.

Move from experience-based claims to claims in a field like science. Start with more familiar, fact-based claims (for example, the claim “It is cold outside” is supported by evidence like “The outside thermometer reads 13 degrees F” but is not supported with statements like “It feels that way to me”). Then discuss a claim such as “Smoking has been shown to be hazardous to your health” and talk about how this claim was once considered to be an opinion, until a weight of scientific evidence over time led us to accept this claim as fact. Introduce the third characteristic criterion: “Demonstrates knowledge of and sound thinking about a topic” and with it the idea that a claim becomes stronger as we expand our knowledge about a subject and find more and better evidence to support the claim.

Move from scientific claims to claims that are based in text that has been read closely. Use an example of a text read recently in class or one students are likely to be familiar with. Highlight that textual claims can start as statements about what a text tells us directly (literal

comprehension) such as “Tom Sawyer gets the other boys to paint the fence” and then move to simple conclusions we draw from thinking about the text, like: “Tom Sawyer is a clever boy” because (evidence) “He tricks the other boys into doing his work and painting the fence.” Then explain how text-based claims can also be more complex and require more evidence (e.g., “Mark Twain presents Tom Sawyer as a ‘good bad boy’ who tricks others and gets into trouble but also stands up for his friend Jim.”), sometimes – as in this example – requiring evidence from more than one text or sections of text.

Explain that the class will be practicing the skill of making evidence-based claims that are based in the words, sentences, and ideas of a text by closely reading and analyzing the Nobel Peace Prize Speeches of Rev. Dr. Martin Luther King, Jr. and President Barack Obama.

In the activities that follow, students will learn to make a text-based claim by moving from literal understanding of its details, to simple supported conclusions or inferences, to claims that arise from and are supported by close examination of textual evidence. This inductive process mirrors what effective readers do and is intended to help students develop a method for moving from comprehension to claim. In addition, the guiding questions, model claims, and movement through the text over the course of the lesson are sequenced to transition students from an initial, literal understanding of textual details to:

- Claims about fairly concrete ideas presented in short sections of the text;
- Claims about more abstract ideas implied across sections of the text;
- More global claims about the entire text and its meaning.

ACTIVITY TWO

Independent reading: Students independently read paragraphs 1-5 of King's speech and answer the question: How does King describe the current state of the civil rights movement?

Briefly introduce students to the text. The introduction should be kept to a short explanation of the prize and the year of the speech. Students should be allowed to approach the text freshly and to make their own inferences

based on textual content. Plenty of instruction and support will follow to ensure comprehension for all students. The question helps orient students to the text and begins the focus on searching for textual evidence.

ACTIVITY THREE

Read aloud and class discussion: The teacher reads paragraphs 1-5 aloud and leads a discussion guided by three text-dependent questions.

- How does King describe the current state of the civil rights movement?
- What is nonviolence according to King?
- To what societal, moral and political debate is King responding?

The close reading of the paragraphs serves three primary purposes: to ensure comprehension of an important part of the text, to orient students to the practice of close reading, and to guide students in searching for textual evidence.

Use the discussion about the questions to help students learn the essential skills of selecting interesting and significant textual details and connecting them inferentially. This process links directly to the forming of evidence-based claims they will begin in Activity Four.

- **How does King describe the current state of the civil rights movement?**

King states that he is receiving the prize not for himself but for a "movement," which he then briefly describes. Students can look through the opening paragraph for the descriptive details King uses to describe the civil rights movement at that point in 1964. The images King gives are ones of violence and deep struggle between two sides: those for equal rights and those for segregation.

The fact that the movement is ongoing causes King to ask the rhetorical question: if the movement has not yet achieved peace, why then has it been awarded the Nobel Peace Prize? Discuss with the students why King begins with such a negative and violent picture of the movement and how it helps him introduce the idea of nonviolence.

- **What is nonviolence according to King?**

King answers his own question by claiming that nonviolence is the answer to the political and moral question of how to overcome violence without resorting to violence. King describes nonviolence as a "moral force" opposed to "sterile passivity," and the only "method" to establish peace. Ask the students what words King associates and disassociates with nonviolence ("creative battle," "love," "moral force," "revenge," "aggression"). Once students can identify these points, discuss how King juxtaposes the idea of nonviolence with the violent description given in the first paragraph.

ACTIVITY THREE (CONT'D)

- **To what societal debate is King responding?**

Now that the students have a clearer understanding of the violence in the movement and King's idea of nonviolence, point out that King is responding to a debate in society. Ask the students how they know there is a

debate in society by looking closely at the words used by King ("question of our time," "recognition"). Discuss how the Peace Prize helps King's argument and how he uses it as a platform to make his case for the nonviolent movement. Ask what evidence King provides to prove the legitimacy of his solution (Prize "bears witness," "Civil Rights Bill").

ACTIVITY FOUR

Model forming EBC: Based on the class discussion of the first five paragraphs, the teacher models a critical reading and thinking process for forming evidence-based claims: from comprehension of textual details that stand out, to an inference that arises from examining the details, to a basic evidence-based claim that is supported by specific references back to the text. The class uses the first five criteria for an evidence-based claim to think about the teacher's claims.

Once the class has reached an understanding of the text, use the Forming EBC Handout to introduce a three-step process for making a claim that arises from the text.

Exemplify the process by making a claim with the Forming EBC Worksheet. The worksheet is organized so that students first take note of "interesting" details that they also see as "related" to each other. The second section asks them to think about and explain a connection they have made among those details. Such "text-to-text" connections should be distinguished from "text-to-self" connections readers make between what they have read and their own experiences. These "text-to-text" connections can then lead them to a "claim" they can make and record in the third section of the worksheet – a conclusion they have drawn about the text that can be referenced back to textual details and text-to-text connections. Have students follow along as you talk through the process with your claim.

To provide structured practice for the first two

steps, you might give students a textual detail on a blank worksheet. In pairs, have students use the worksheet to find other details/quotations that could be related to the one you have provided, and then make/explain connections among those details.

[Note: Here and throughout the entire lesson, you are encouraged to develop claims based on your own analysis and class discussion. The examples provided in the teacher versions are possibilities meant more to illustrate the process than to shape textual analysis. Instruction will be most effective if the claims used in modeling flow naturally from the textual ideas and details you and the students find significant and interesting. Also, while the worksheets have three or four places for supporting evidence, students should know that not all claims require three pieces of evidence. Places on the worksheets can be left blank.]

Use the EBC Checklist 1 to discuss the claim, asking students to explain how it meets (or doesn't yet meet) the criteria.



BRIDGING HOMEWORK ASSIGNMENT

Read paragraphs 6-12 and use the Making EBC Worksheet to find evidence to support the teacher-provided claim. This activity overlaps with the first activity of Part 2 and can be given as homework or done at the beginning of the next class.



ASSESSMENT

The Forming EBC Worksheet should be evaluated to get an initial assessment of students' grasp of the relationship between claims and textual evidence. Even though the work was done together with the class, filling in the worksheet properly helps them get a sense of the critical reading and thinking process and the relationships among the ideas. Also make sure that students are developing the habit of using quotation marks and recording the reference.

PART 2

MAKING EVIDENCE-BASED CLAIMS

“An Audacious Faith”

OBJECTIVE: Students develop the ability to make evidence-based claims through a close reading of the text.

ACTIVITIES

1. **Independent reading and find supporting evidence:** Students independently read paragraphs 6-12 of the text and use the Making EBC Worksheet to look for evidence to support a claim made by the teacher.*
2. **Read aloud and class discussion:** Students follow along as they listen to paragraphs 6-12 read aloud and discuss four text-dependent questions.
3. **Find supporting evidence in pairs:** In pairs, students use the Making EBC Worksheet to look for evidence to support claims about the text made by the teacher.
4. **Class discussion of EBC:** The class discusses evidence in support of claims found by student pairs.
5. **Forming EBC in pairs:** In pairs, students use the Forming EBC Worksheet to make an evidence-based claim of their own and present it to the class.

MATERIALS:

Making EBC Worksheet
Forming EBC Handout
Forming EBC Worksheet
EBC Criteria Checklist I

ESTIMATED TIME: 2-3 Days

COMMON CORE STATE STANDARDS

RI.9-10.1: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text

RI.9-10.3: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them

RI.9-10.6: Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.9: Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter from Birmingham Jail"), including how they address related themes and concepts.

SL.9-10.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

ACTIVITY ONE

Independent reading and find supporting evidence: Students independently read paragraphs 6-12 of the text and use the Making EBC Worksheet to look for evidence to support a claim made by the teacher.*

* Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the

section quietly by themselves. This ensures that all students have had at least some independent reading time.

Also depending on scheduling and student ability, some students might choose (or be encouraged) to read ahead. Instructional focus should follow the pacing outlined in the activities, but students will only benefit from reading and re-reading the text throughout the duration of the lesson.

ACTIVITY TWO

Read aloud and class discussion: Students follow along as they listen to paragraphs 6-12 read aloud and discuss four text-dependent questions.

- What does King mean by the "isness" of humanity's present nature?"
- Where does King use a religious tone in his speech?
- What is the "genuine civilization" King has the audacity to believe in?
- How does King use rhetoric to evoke emotion in his speech?

Read the text aloud to the class while students follow along. Alternatively, students could be asked to read aloud to the class. Work through the text using the following four text-dependent questions. The close reading of these paragraphs serves three primary purposes: to ensure comprehension of an important part of the text, to develop students' practice of close reading, and to develop students' ability to search for textual evidence.

- **What does King mean by the "isness" of humanity's present nature?"**

In this part of the speech, King uses more morally driven language as he juxtaposes two different worlds of humanity: our "isness" vs. "oughtness." Here, students can identify the qualities of these two different worlds. On the one hand, King talks of the "ambiguities of history" and the seemingly impossibility of changing the course of that history. On the other, King expresses his faith in humanity's ability and moral obligation to act.

ACTIVITY TWO (CONT'D)

Draw on King's use of metaphor in these next sections, beginning with rich phrases like "flotsam and jetsam" and "starless midnight." What effect does King's word choice have on his speech?

- **Where does King use a religious tone in his speech?**

King infuses religious and moral language into his speech at this point. Ask students to identify which words and phrases are religious or have a moral tone. Some of these include:

- reign supreme (line 49)
- altars (line 53)
- redemptive (line 54)
- "And the lion and the lamb shall lie down together and every man shall sit under his own vine and fig tree and none shall be afraid" (lines 55-56)

Ask students why King invokes moral and religious tones in his speech, and the relationship King makes between religion and the nonviolence method. The teacher can point out that King's argument for nonviolence is laden with moral values to prove what is wrong and right.

- **What is the "genuine civilization" King has the audacity to believe in?**

By this point, students should have a good understanding that King is talking about two sides in a moral and political debate. He clearly describes two sides of a conflict and imagines a

better society at the end of the struggle. Ask the students what this society looks like or does not look like. Draw on the text for evidence by guiding the students to such phrases as "militaristic stairway into the hell of thermonuclear destruction," "grinding poverty afflicts my people and chains them to the lowest rung of the economic ladder," and "peoples everywhere can have three meals a day." Discuss why King labels the movement and his belief in a "genuine civilization" as audacious.

- **How does King use rhetoric to evoke emotion in his speech?**

Halfway through his speech, King changes the rhythm of his language. He repeats the phrases "I refuse" and "I believe" numerous times in the two middle paragraphs using a rhetorical device called anaphora; he repeats a phrase to gather emotional momentum in his speech. Ask the students for examples of King's repetitive style and how it changes the tone of the speech. Viewing the speech will largely help them grasp the difference. (Note: You might also show an excerpt of the "I have a dream" speech where the same tool is used.) Guide students through the beginning of the speech where King focuses on a seemingly dismal outlook of the movement, to his use of the phrases "I refuse" and "I believe" to develop an emotionally charged climax. Where else in his speech does he use this device? ("I am mindful...")



ACTIVITY THREE

Find supporting evidence in pairs: In pairs, students use the Making EBC Worksheet to look for evidence to support additional claims about the text made by the teacher.

Once the class has reached a solid understanding of the text, connect that understanding to the skill of making claims and supporting them with evidence by presenting a few main claims. Pass out the worksheets and have students work in pairs to find evidence to support the claims.

Collect each student's Making EBC Worksheet with the evidence they found for the first claim. These should be evaluated to get an assessment of where each student is in the skill development. Students should use their worksheets for their work in pairs—repeating the first claim and refining their evidence based on the read aloud and class discussion. Even though students are not finding the evidence independently, they should each fill in the worksheets to reinforce their acquisition of the logical structure among the ideas. Students should get into the habit of using quotation

marks when recording direct quotes and including the line numbers of the evidence.

The instructional focus here is developing familiarity with claims about texts and the use of textual evidence to support them. Students should still not be expected to develop complete sentences to express supporting evidence. The pieces of evidence should be as focused as possible. The idea is for students to identify the precise points in the text that support the claim. This focus is lost if the pieces of evidence become too large. The worksheets are constructed to elicit a type of "pointing" at the evidence.

One approach for ensuring a close examination of claims and evidence is to provide erroneous claims that contradict textual evidence and ask students to find the places that disprove the claim. Students could then be asked to modify it to account for the evidence.



ACTIVITY FOUR

Class discussion of EBC: The class discusses evidence in support of claims found by student pairs.

After students have finished their work in pairs, regroup for a class discussion. Have pairs volunteer to present their evidence to the rest of the class. Discuss the evidence, evaluating how each piece supports the claims. Begin by modeling the evaluation, referring to the checklist, and then call on students to evaluate the evidence shared by the other pairs. They can offer their own evidence to expand the discussion. Carefully guide the exchanges, explicitly asking students to support their evaluations with reference to the text.

These constructive discussions are essential for the skill development. Listening to and evaluating the evidence of others and providing text-based criticism expands students' capacity to reason through the relationship between claims and evidence. Paying close attention to and providing instructional guidance on the student comments is as important to the process as evaluating the worksheets and creates a class culture of supporting all claims (including oral critiques) with evidence.

ACTIVITY FIVE

Forming EBC in pairs: In pairs, students use the Forming EBC Worksheet to make an evidence-based claim of their own and present it to the class.

Once the claims and evidence have been discussed, students return to the pairs and use the worksheet to make an evidence-based claim of their own. Pairs should make a single claim, but each student should fill in his or her own worksheet. Regroup and discuss the claims and evidence as a class. Pairs can use their worksheet to present their claims and evidence orally. They

should not be required to write them out at this stage. Talk through the process modeled in the worksheet, including the nature of the details that stood out to students, the reasoning they used to group and relate them, and the claim they developed from the textual evidence. Draw upon the Forming EBC Handout and EBC Checklist I to help guide discussion.

BRIDGING HOMEWORK ASSIGNMENT

Read paragraphs 1-17 of President Obama's Nobel Lecture, *A Just and Lasting Peace*, and use the Forming EBC Worksheet to make a claim and support it with evidence. This activity overlaps with the first activity of Part 3 and can be given as homework or done at the beginning of the next class.

ASSESSMENT

The Making EBC worksheets should be evaluated to assess the development of the student's grasp of the relationship between claims and textual evidence. They should show progress in the relevance and focus of the evidence. The Forming EBC worksheets are students' first attempts at making their own claims with the help of a peer. Basic claims are fine at this point. Use the EBC Criteria Checklist to structure the evaluation and feedback to students. Evaluation should focus on the validity and clarity of the claim and the relevance of the evidence. Recording the "thinking" part of the worksheet is important in order to strengthen the student's reasoning skills as well as provide them with the academic vocabulary to talk about them.

Evidence should be in quotation marks and the reference recorded. Using quotation marks helps students make the distinction between quotes and paraphrases. It also helps them to eventually incorporate quotes properly into their writing. Recording references is critical not only for proper incorporation in writing, but also because it helps students return to text for re-evaluating evidence and making appropriate selections.

PART 3

ORGANIZING EVIDENCE-BASED CLAIMS

“I Face The World As It Is”

OBJECTIVE: Students expand their ability into organizing evidence to develop and explain claims through a close reading of the text.

ACTIVITIES

1. **Independent reading and forming EBC:** Students independently read paragraphs 1-17 of President Obama’s speech, *A Just and Lasting Peace*, and use the Forming EBC Worksheet to make an evidence-based claim with the teacher.
2. **Read aloud:** Students follow along as they listen to paragraphs 1-17 of the speech.
3. **Model organizing EBC:** The teacher models organizing evidence to develop and explain claims using student evidence-based claims and the Organizing EBC Worksheet.
4. **Organizing EBC in pairs:** In pairs, students develop a claim with multiple points using the Organizing EBC Worksheet.
5. **Class discussion of student EBC:** The class discusses the evidence-based claims developed by student pairs.

MATERIALS:

Organizing EBC Worksheet
Forming EBC Worksheet
EBC Criteria Checklist I

ESTIMATED TIME: 1-3 Days

COMMON CORE STATE STANDARDS

RI.9-10.1: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

RI.9-10.3: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

RI.9-10.6: Determine an author’s point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.9: Analyze seminal U.S. documents of historical and literary significance (e.g., Washington’s Farewell Address, the Gettysburg Address, Roosevelt’s Four Freedoms speech, King’s “Letter from Birmingham Jail”), including how they address related themes and concepts.

SL.9-10.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others’ ideas and expressing their own clearly and persuasively.

ACTIVITY ONE

Independent reading and forming EBC: Students independently read paragraphs 1-17 and use the Forming EBC Worksheet to make an evidence-based claim with the teacher.*

* Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read paragraph 5 quietly by themselves. This ensures that all students have had least some independent reading time.

ACTIVITY TWO

Read aloud: Students follow along as they listen to the speech.

Show a video of President Obama delivering the speech. Alternatively, students could be asked to read aloud to the class.

ACTIVITY THREE

Model organizing EBC: The teacher models organizing evidence to develop and explain claims

The central focus of Part 3 is learning the thinking processes associated with developing an evidence-based claim: reflecting on how one has arrived at the claim; breaking the claim into parts; organizing supporting evidence in a logical sequence; anticipating what an audience will need to know in order to understand the claim; and, eventually, planning a line of reasoning that will substantiate the claim. This is a complex set of cognitive skills, challenging for

most students, but essential so that students can move from the close reading process of arriving at a claim (Parts 1-2 of the lesson) to the purposeful writing process of explaining and substantiating that claim (Parts 4-5).

How a reader develops and organizes a claim is dependent upon the nature of the claim itself - and the nature of the text (or texts) from which it arises. In some cases - simple claims involving



ACTIVITY THREE (CONT'D)

literal interpretation of the text – indicating where the claim comes from in the text and explaining how the reader arrived at it is sufficient. This suggests a more straightforward, explanatory organization. More complex claims, however, often involve multiple parts, points, or premises, each of which needs to be explained and developed, then linked in a logical order into a coherent development.

Students only learn how to develop and organize a claim through practice, ideally moving over time from simpler claims and more familiar organizational patterns to more complex claims and organizations.

Students can be helped in learning how to develop a claim by using a set of developmental guiding questions such as the following. [Note: the first few questions might be used with younger or less experienced readers, the latter questions with students who are developing more sophisticated evidence-based arguments.]

- What do I mean when I state this claim? What am I trying to communicate?
- How did I arrive at this claim? Can I “tell the story” of how I moved as a reader from the literal details of the text to a supported claim about the text?
- Can I point to the specific words and sentences in the text from which the claim arises?
- What do I need to explain so that an audience can understand what I mean and where my claim comes from?
- What evidence (quotations) might I use to illustrate my claim? In what order?
- If my claim contains several parts (or premises), how can I break it down, organize the parts, and organize the evidence that goes with them?
- If my claim involves a comparison or a relationship, how might I present, clarify, and organize my discussion of the relationship between parts or texts?

- What are some other ways of thinking about the text and some counterclaims others might propose that are also potentially based in the text?
- What do I need to do to persuade my audience that my argument for the claim is supported?
- How do I substantiate my claim through valid reasoning and relevant and sufficient evidence?
- In the process of developing my claim, how do I further focus it, hone my thinking, enrich my understanding, expand my scope, and/or relate the claim to other claims and ideas?

Students who are learning how to develop a claim, at any level, can benefit from graphic organizers or instructional scaffolding that helps them work out, organize, and record their thinking. While such models or templates should not be presented formulaically as a “how to” for developing a claim, they can be used to support the learning process. The Organizing EBC Worksheet can be used to provide some structure for student planning – or you can substitute another model or graphic organizer that fits well with the text, the types of claims being developed, and the needs of the students.

Begin by orienting students to the new worksheet and the idea of breaking down a claim into parts and organizing the evidence accordingly.

Ask for a volunteer to present his or her claim and supporting evidence. Use the example as a basis for a discussion. Based on the flow of discussion, bring in other volunteers to present their claims and evidence to build and help clarify the points. Work with students to hone and develop a claim that comprehensively and accurately expresses Du Bois’ idea. As a class, express the organized claim in Organizing EBC Worksheet. The provided teacher version is one possible way a claim could be expressed and organized.

ACTIVITY FOUR

Organizing EBC in pairs: In pairs, students develop and organize a claim using the Organizing EBC Worksheet.

When the class has reached a solid expression of an organized evidence-based claim, have students work in pairs, using the worksheet to develop and organize another claim. You might

want to give students some general guidance by directing their focus to a specific section of the text.

ACTIVITY FIVE

Class discussion of student EBC: After students have finished their work in pairs, regroup for a class discussion

Have pairs volunteer to present their claims and evidence to the rest of the class. Discuss the evidence and organization, evaluating how each piece supports and develops the claims. Repeat the process from activity two, using student

work to explain how evidence is organized to develop aspects of claims. The teacher version of the Organizing EBC Worksheet is one possible way a claim could be expressed and organized.

BRIDGING HOMEWORK ASSIGNMENT

Read paragraphs 18-47 of *A Just and Lasting Peace* and use the Organizing EBC Worksheet to make any claim and support it with evidence. This activity overlaps with the first activity of Part 4 and can be given as homework or done at the beginning of the next class.

ASSESSMENT

Students are now beginning to develop more complex claims about challenging portions of the text. Their Forming EBC Worksheet should demonstrate a solid grasp of the claim-evidence relationship, but do not expect precision in the wording of their claims. Using the Organizing EBC Worksheet will help them clarify their claims as they break it into parts and organize their evidence. How they have transferred their information will demonstrate their grasp of the concept of organizing. Their second Organizing EBC Worksheet should show progress in all dimensions including the clarity of the claim and the selection and organization of evidence. Use the EBC criteria checklist to structure the evaluation and feedback to students.

PART 4

WRITING EVIDENCE-BASED CLAIMS

“The Peace We Seek”

OBJECTIVE: Students develop the ability to express evidence-based claims in writing through a close reading of the text.

ACTIVITIES

1. **Independent reading and making EBC:** Students independently read paragraphs 18-47 of *A Just and Lasting Peace* and use the Organizing EBC Worksheet to develop an evidence-based claim.*
2. **Model writing EBC:** The teacher introduces and models writing evidence-based claims using a claim developed in Part 3.
3. **Writing EBC in pairs:** In pairs, students write evidence-based claims using one of their claims from Part 3.
4. **Class discussion of written EBC:** The class discusses the written evidence-based claims of volunteer student pairs.
5. **Read aloud and class discussion:** The class discusses their new evidence-based claims and students read aloud portions of the text.
6. **Independent writing EBC:** Students independently write their new evidence-based claims.

MATERIALS:

Writing EBC Handout
Organizing EBC Worksheet
EBC Criteria Checklist II

ESTIMATED TIME: 1-3 Days

COMMON CORE STATE STANDARDS

RI.9-10.1: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

RI.9-10.3: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

RI.9-10.6: Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.9: Analyze seminal U.S. documents of historical and literary significance including how they address related themes and concepts.

SL.9-10.1: Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

W.9-10.9b: Draw evidence from literary or informational texts to support analysis, reflection, and research.



ACTIVITY ONE

Independent reading and making EBC: Students independently read paragraphs 18-47 of the text and use the Organizing EBC Worksheet to develop an evidence-based claim.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the text quietly by themselves. This ensures that all students have had at least some independent reading time.



ACTIVITY TWO

Model writing EBC: The teacher introduces and models writing evidence-based claims using a claim developed in Part 3.

Parts 1-3 have built a solid foundation of critical thinking and reading skills for developing and organizing evidence-based claims. Parts 4 and 5 focus on expressing evidence-based claims in writing. Class discussions and pair work have given students significant practice expressing and defending their claims orally. The worksheets have given them practice selecting and organizing evidence. Expressing evidence-based claims in writing should now be a natural transition from this foundation.

Begin by explaining that expressing evidence-based claims in writing follows the same basic structure that they have been using with the worksheets: one must state a claim and develop it with evidence. Discuss the additional considerations when writing evidence-based claims like establishing a clear context and using proper techniques for incorporating textual evidence. The Writing EBC Handout gives one approach to explaining writing evidence-based claims.

Explain that the simplest structure for writing evidence-based claims is beginning with a paragraph stating the claim and its context and then using subsequent paragraphs to develop the necessary points of the claim with appropriate evidence. (More advanced writers can organize the expression differently, like establishing a context, building points with evidence, and stating the claim at the end for a more dramatic effect. It's good to let students know that the simplest structure is not the only effective way).

Incorporating textual evidence into writing is difficult and takes practice. Expect all students to need a lot of guidance deciding on which precise evidence to use, how to order it, and when to paraphrase and when to quote. They will also need guidance structuring sentence syntax and grammar to smoothly and effectively develop the claim with textual details, while maintaining their own voice and style.

ACTIVITY TWO (CONT'D)

Three things to consider when teaching this difficult skill:

- Using a “think-aloud” approach can be extremely effective here. When modeling developing a claim and incorporating evidence into writing from the organizational worksheet, explain the choices you make. For example, “I’m paraphrasing this piece of evidence because it takes the author four sentences to express what I can do in one.” Or, “I’m quoting this piece directly because the author’s phrase is so powerful, I want to use the original words.”
- Making choices when writing evidence-based claims is easiest when the writer has “lived with the claims.” Thinking about the claims—personalizing the analysis—gives a writer an intuitive sense of how she wants to express them. Spending time with the worksheets selecting and organizing evidence will start students on this process.
- Students need to know that this is a process—that it can’t be done in one draft. Revision is fundamental to honing written evidence-based claims.

ACTIVITY THREE

Writing EBC in pairs: In pairs, students write evidence-based claims using their claims from Part 3.

Students return to the same pairs they had in Part 3 and use their Organizing EBC Worksheet as guidelines for their writing. Teachers should roam, supporting pairs by answering questions and helping them get comfortable with the techniques for incorporating evidence. Use questions from pairs as opportunities to instruct the entire class.

ACTIVITY FOUR

Class discussion of written EBC: The class discusses the written evidence-based claims of volunteer student pairs.

Have a pair volunteer to write their evidence-based claim on the board. The class together should evaluate the way the writing sets the context, expresses the claim, effectively organizes the evidence, and incorporates the evidence properly. Use the EBC Criteria Checklist II to guide evaluation. Of course, it’s also a good opportunity to talk about grammatical structure and word choice. Let other students lead the

evaluation, reserving guidance when needed and appropriate. It is likely and ideal that other students will draw on their own versions in when evaluating the volunteer pair’s. Make sure that class discussion maintains a constructive collegial tone and all critiques are backed with evidence.

Model written evidence-based claims are provided with the teacher materials.



ACTIVITY FIVE

Read aloud and class discussion: The class discusses their new evidence-based claims from Activity 4 and students read aloud portions of the text.

At this stage, this activity is reversed from earlier similar ones. Students should present their evidence-based claims and allow discussion to determine areas of the text to be read aloud. Students read aloud relevant portions to help the class analyze claims and selected evidence. Use the worksheet to help organize the claims.



ACTIVITY SIX

Independent writing EBC: Students independently write their evidence-based claims from their Organizing EBC Worksheets.

Students should have revised their worksheets based on class discussion. Now they independently write their claims based on their revised worksheets.



BRIDGING HOMEWORK ASSIGNMENT

Students review both texts in their entirety and use an Organizing EBC Worksheet to make a new claim of their choice and develop it with evidence. This activity overlaps with the first activity of Part 5 and can be given as homework or done at the beginning of the next class.



ASSESSMENT

At this stage teachers can assess students' reading and writing skills. Students should be comfortable making claims and supporting them with organized evidence. Their worksheets should demonstrate evidence of mastery of the reading skill. Student writing should demonstrate the same qualities of organization. Make sure they have properly established the context; that the claim is clearly expressed; and that each paragraph develops a coherent point. Evaluate the writing for an understanding of the difference between paraphrase and quotation. All evidence should be properly referenced. Use the EBC Criteria Checklist II to structure the evaluation and feedback to students.

PART 5

DEVELOPING EVIDENCE-BASED WRITING

“A Just and Lasting Peace”

OBJECTIVE: Students develop the ability to express global evidence-based claims in writing through a close reading of the text.

ACTIVITIES

1. **Independent reading and making EBC:** Students review both speeches in their entirety and use an Organizing EBC worksheet to make a new evidence-based claim *
2. **Class discussion of global EBC:** The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.
3. **Pairs discuss their EBC:** Students discuss their new claims in pairs and then with the class.
4. **Independent writing of final piece:** Students independently write a final evidence-based writing piece using their new claims.
5. **Class discussion of final writing pieces:** The class discusses final evidence-based writing pieces of student volunteers.

MATERIALS:

Organizing EBC Worksheet
Writing EBC Handout
EBC Criteria Checklist II
Evidence Based Writing Rubric

ESTIMATED TIME: 1-2 Days

COMMON CORE STATE STANDARDS

RI.9-10.1: Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

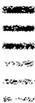
RI.9-10.3: Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

RI.9-10.6: Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

RI.9-10.9: Analyze seminal U.S. documents of historical and literary significance including how they address related themes and concepts.

W.9-10.9b: Draw evidence from literary or informational texts to support analysis, reflection, and research.

W.9-10.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

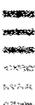


ACTIVITY ONE

Independent reading and making EBC: Students review both speeches in their entirety and use an Organizing EBC Worksheet to make a new claim of their choice and develop it with evidence.*

*Depending on scheduling and student ability, students can be assigned to read and complete the worksheet for homework. Teachers should decide what works best for their students. It's essential that students have opportunity to read the text independently. All students must develop the habit of perseverance in reading.

Assigning the reading as homework potentially gives them more time with the text. Either way, it might be a good idea to provide some time at the beginning of class for students to read the text quietly by themselves. This ensures that all students have had at least some independent reading time.



ACTIVITY TWO

Class discussion of global EBC: The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.

This activity should be seen as an expansion of the skills developed in Part 4. Begin by analyzing volunteer student-written claims to review the critical aspects of writing. These claims will vary in the amount of text they span and the global nature of the ideas. Use various examples to demonstrate the differences, moving to a discussion of how claims build on each other to produce more global analysis that spans entire and multiple texts.

Throughout the lesson the text has been chunked into gradually larger sections, and now

students have been asked to consider the two speeches in their entirety for their final claim. Model making a more global claim, discussing its relationship to smaller local claims. Demonstrate how claims can become sub-points for other claims.

Some students can be asked to present the claims they have developed as further models. The Writing EBC Handout could aid discussion on how various claims require various ways of establishing their context and relevance.



ACTIVITY THREE

Pairs discuss their EBC: Students discuss their new claims from Activity 1 in pairs and then with the class.

Once the class has a general understanding of the nature of more global claims, break them into pairs to work on the claims they have begun to develop in Activity 1. Have the pairs discuss if their claims contain sub-claims and how best they would be organized. It may be helpful to provide students with both the two-point and

three-point organizational worksheets to best fit their claims.

Volunteer pairs should be asked to discuss the work they did on their claims. At this point they should be able to talk about the nature of their claims and why they have chosen to organize evidence in particular ways.



ACTIVITY FOUR

Independent writing of final piece: Students independently write a final evidence-based writing piece using their new claims.

This evidence-based writing piece should be used as a summative assessment to evaluate acquisition of the reading and writing skills. Evaluating the claims and discussing ways of improving their organization breaks the summative assessment into two parts: making an evidence-based claim, and writing an evidence-based claim.



ACTIVITY FIVE

Class discussion of final writing pieces: The class discusses the final evidence-based writing piece of student volunteers.



ASSESSMENT

At this stage teachers can assess students' reading and writing skills. Students should be comfortable making claims and supporting them with organized evidence. Their worksheets should demonstrate mastery of the reading skill. Their final evidence-based writing piece can be seen as a summative assessment of both the reading and writing skills. Use the Evidence-Based Writing Rubric to evaluate their pieces.

≡ ALTERNATIVE ORGANIZATION ≡ OF PART 5

The activities of Part 5 can be re-ordered to provide a slightly different summative assessment. Teachers could choose not to give Activity 1 as an initial homework assignment or begin the part with it. Instead they can begin with the analysis of student writing from Part 4 and the discussion of global claims. Then students can be assigned to review both speeches in their entirety, use a worksheet to make a global evidence-based claim, and move directly to developing the final evidence-based writing piece. This configuration of the activities provides a complete integrated reading and writing assessment. Depending on scheduling, this activity could be done in class or given partially or entirely as a homework assignment. Even with this configuration, ELL students or those reading below grade level can be supported by having their claims evaluated before they begin writing their pieces.

ACTIVITIES (Alternative Organization):

1. **Class discussion of global EBC:** The teacher analyzes volunteer students' written evidence-based claims from Part 4 and discusses developing global claims.
2. **Independent reading and making EBC:** Students review both speeches in their entirety and use an Organizing EBC Worksheet to make a global evidence-based claim.
3. **Independent writing of final piece:** Students independently write a final evidence-based writing piece using their global claims.
4. **Class discussion of final writing pieces:** The class discusses final evidence-based writing pieces of student volunteers.

Forming Evidence-Based Claims

<p>FINDING DETAILS</p> <p>I find interesting details that are related and that stand out to me from reading the text closely.</p>	<p>"our children, crying out for brotherhood, were answered with fire hoses, snarling dogs and even death"</p> <p>(Reference: Lines 8 - 9)</p>	<p>"young people seeking to secure the right to vote were brutalized and murdered"</p> <p>(Reference: Lines 9 - 10)</p>	<p>"more than 40 houses of worship in the State of Mississippi alone were bombed or burned because they offered a sanctuary to those who would not accept segregation"</p> <p>(Reference: Lines 11 - 12)</p>
<p>CONNECTING THE DETAILS</p> <p>I explain the connections I make among the details through re-reading and thinking about them.</p>	<p>MY THINKING: The repetitive sentence structure and strong language express a clear <u>opposition</u>.</p> <p>NONVIOLENCE: "our children, crying out for brotherhood"</p> <p>VIOLENCE: "were answered with fire hoses, snarling dogs and even death"</p> <p>NONVIOLENCE: "young people seeking to secure the right to vote"</p> <p>VIOLENCE: "were brutalized and murdered"</p> <p>NONVIOLENCE: "offered a sanctuary to those who would not accept segregation"</p> <p>VIOLENCE: "were bombed or burned"</p>		
<p>MAKING A CLAIM</p> <p>I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.</p>	<p>SUPPORTING EVIDENCE FOR</p> <p>According to King, there are two opposing sides: a violent one against equal rights and a nonviolent one struggling for justice.</p> <p>SUPPORTING EVIDENCE FOR</p>		

Making Evidence-Based Claims | Part 1

CLAIM: According to King, there are two opposing sides: a violent one against equal rights and a nonviolent one struggling for justice.

Supporting Evidence

"our children, crying out for brotherhood, were answered with fire hoses, snarling dogs and even death"

(Reference: lines 8-9)

Supporting Evidence

"young people seeking to secure the right to vote were brutalized and murdered"

(Reference: lines 9-10)

Supporting Evidence

"more than 40 houses of worship in the State of Mississippi alone were bombed or burned because they offered a sanctuary to those who would not accept segregation"

(Reference: lines 11-12)

CLAIM: King argues that nonviolence, and not violence, is the only way to secure peace.

Supporting Evidence

"civilization and violence are antithetical concepts"

(Reference: lines 21-22)

Supporting Evidence

"nonviolence is not sterile passivity, but a powerful moral force which makes for social transformation"

(Reference: lines 23-24)

Supporting Evidence

"it has led to a new Civil Rights Bill"

(Reference: line 32)

Making Evidence-Based Claims | Part 1

CLAIM: By awarding the Nobel Peace Prize to him, King argues that nonviolence is proven to successfully establish peace.

Supporting Evidence

"this award... is a profound recognition that nonviolence is the answer"

(Reference: lines 18-19)

Supporting Evidence

"the tortuous road which has led from Montgomery, Alabama to Oslo bears witness to this truth"

(Reference: lines 29-30)

Supporting Evidence

(Reference:)

CLAIM:

Supporting Evidence

(Reference:)

Supporting Evidence

(Reference:)

Supporting Evidence

(Reference:)

Making Evidence-Based Claims | Part 2

CLAIM: King rejects the idea that humans are passive bystanders in a violent world

Supporting Evidence

"I refuse to accept the idea that the "isness" of man's present nature makes him morally incapable of reaching up for the eternal "oughtness" that forever confronts him"

(Reference: lines 37-38)

Supporting Evidence

"I refuse to accept the idea that man is mere flotsom and jetsom in the river of life, unable to influence the unfolding events which surround him"

(Reference: lines 39-40)

Supporting Evidence

"I refuse to accept the view that mankind is so tragically bound to the starless midnight of racism"

(Reference: lines 40-41)

CLAIM: King argues that humanity is not destined to be violent but can choose peace and brotherhood.

Supporting Evidence

"I refuse to accept the idea that man is mere flotsom and jetsom in the river of life, unable to influence the unfolding events which surround him"

(Reference: lines 39-40)

Supporting Evidence

"I refuse to accept the cynical notion that nation after nation must spiral down a militaristic stairway into the hell of thermonuclear destruction"

(Reference: lines 43-44)

Supporting Evidence

"justice, can be lifted from this dust of shame to reign supreme among the children of men"

(Reference: lines 48-49)

Making Evidence-Based Claims | Part 2

CLAIM: King believes that a peaceful society will prevail over a violent one.

Supporting Evidence

"unarmed truth and unconditional love will have the final word in reality"

(Reference: line 45)

Supporting Evidence

"what self-centered men have torn down men other-centered can build up"

(Reference: line 52)

Supporting Evidence

"I believe that even amid today's mortar bursts and whining bullets, there is still hope for a brighter tomorrow"

(Reference: lines 46-47)

CLAIM: King's speech moves from a dismal view of the present, to a concrete method, and finally to an audacious yet tangible vision of the future.

Supporting Evidence

"I am mindful that only yesterday in Philadelphia, Mississippi, young people seeking to secure the right to vote were brutalized and murdered."

(Reference: lines 9-10)

Supporting Evidence

"The foundation of such a method is love."

(Reference: lines 27-28)

Supporting Evidence

"Today I come to Oslo as a trustee, inspired and with renewed dedication to humanity."

(Reference: lines 63-64)

Organizing Evidence-Based Claims (2 pts) | Part 3

CLAIM: President Obama argues that while violence can be controlled and society is progressively more peaceful, the world faces threats that inevitably require war to preserve the peace.

Point 1 Human violence is both fundamental and controllable

A Supporting Evidence: "War, in one form or another, appeared with the first man"
B Supporting Evidence: "codes of law sought to control violence within groups"

C Supporting Evidence: "it became clear to victor and vanquished alike that the world needed institutions to prevent another World War"
 (Reference: lines 46-47) (Reference: line 31)
D Supporting Evidence:

"The ideals of liberty, self-determination, equality and the rule of law have haltingly advanced"

(Reference: lines 45-47) (Reference: lines 55-56)

Point 2 War is necessary to achieve peace

A Supporting Evidence: "We must begin by acknowledging the hard truth that we will not eradicate violent conflict in our lifetimes."
B Supporting Evidence: "A non-violent movement could not have halted Hitler's armies"

(Reference: lines 70-71) (Reference: lines 81-82)
C Supporting Evidence: "The service and sacrifice of our men and women in uniform has promoted peace and prosperity from Germany to Korea, and enabled democracy to take hold in places like the Balkans."
D Supporting Evidence:

"the instruments of war do have a role to play in preserving the peace"

(Reference: lines 90-92) (Reference: line 96)

Organizing Evidence-Based Claims (2 pts) | Part 3

CLAIM: King and Obama make arguments against and for violence respectively; however, King's rhetoric utilizes emotion and values, or pathos, to advance his idea of a "genuine civilization," while Obama uses logic and realism to advance his idea of facing the "world as it is."

Point 1 KING'S PATHOS

<p>A Supporting Evidence</p> <p>"I am mindful"</p> <p>(Reference: P2)</p> <p>C Supporting Evidence</p> <p>"wounded justice, lying pros- trate on the blood-flowing streets"</p> <p>(Reference: line 48)</p>	<p>B Supporting Evidence</p> <p>"I refuse" and "I believe" phrasing; "foundation of such a method is love"</p> <p>(Reference: P6-7; lines 27-28)</p> <p>D Supporting Evidence</p> <p>"one day mankind will bow be- fore the altars of God and be crowned triumphant over war and bloodshed"</p> <p>(Reference: lines 53-54)</p>
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Point 2 OBAMA'S LOGIC

<p>A Supporting Evidence</p> <p>"War, in one form or another, appeared with the first man"</p> <p>(Reference: lines 27-28)</p> <p>C Supporting Evidence</p> <p>"modern technology allows a few small men with outsized rage to murder innocents on a horrific scale"</p> <p>(Reference: lines 62-63)</p>	<p>B Supporting Evidence</p> <p>"A decade into a new cen- tury, this old architecture is buckling under the weight of new threats"</p> <p>(Reference: lines 59-60)</p> <p>D Supporting Evidence</p> <p>"I face the world as it is" "the instruments of war do have a role to play in pre- serving the peace"</p> <p>(Reference: line 80; line 96)</p>
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Model Written Evidence-Based Claim



In his speech "A Just and Lasting Peace," President Obama argues that while violence can be controlled and society is progressively more peaceful, the world faces threats that inevitably require war to preserve the peace.

Despite the fact that "war, in one form or another, appeared with the first man," societies set up laws that "sought to control violence within groups." (27-27-31). For many years these laws were not highly regarded, but after the destruction of WWII and threat of nuclear war, "it became clear to victor and vanquished alike that the world needed institutions to prevent another World War" (45-47). Even though violence continued, these institutions permitted the advancement of "the ideals of liberty, self-determination, equality and the rule of law" (55-56).

Progress has been made to achieve peace; however, Obama stresses that "we must begin by acknowledging the hard truth that we will not eradicate violent conflict in our lifetimes" (70-71). While Obama respects the actions of Gandhi and King, he argues that conflict is necessary because "a non-violent movement could not have halted Hitler's armies" (81-82). Institutions and treaties worked to an extent, but Obama asserts it was the military that "promoted peace and prosperity from Germany to Korea, and enabled democracy to take hold in places like the Balkans" (86-87, 90-92). As these actions secured a better future for children, they prove that "the instruments of war do have a role to play in preserving the peace" (96).

Model Written Evidence-Based Claim



King and Obama make arguments against and for violence respectively; however, King's rhetoric utilizes emotion and idealism, or pathos, to advance his idea of a "genuine civilization," while Obama uses logic and a realism to advance his idea of facing the "world as it is" (62, 80).

King begins his speech by reminding the audience of the grave atrocities that occurred to those trying to seek justice and equality (P2). His use of dramatic imagery such as "wounded justice, lying prostrate on the blood-flowing streets" stirs emotions in his audience (48). King also repeats certain phrases such as "I am mindful" and later on "I refuse" and "I believe," which give his speech an emotional tone (P2, P6-P7). Furthermore, he uses idealistic language when he argues that the "foundation of such a [nonviolent] method is love," and that he has faith in a "brighter tomorrow" (27, 46). Finally, King invokes an idealistic and religious tone in decreeing that, "one day mankind will bow before the altars of God and be crowned triumphant over war and bloodshed" (53).

In contrast to King's use of emotion and idealism, Obama relies on logic and realism to argue the need of war to secure peace. He begins by confirming that "war, in one form or another, appeared with the first man," implying that war has always been present (27). Even though humans have come up with institutions to control the violence, "this old architecture is buckling under the weight of new threats" (59-60). Obama points out that "modern technology allows a few small men with outsized rage to murder innocents on a horrific scale" (62-63). Aware of the context of his speech, Obama assures the audience that he values the "creed and lives of Gandhi and King" and their acts of nonviolence (77-78). In the end though, the President asserts that he must "face the world as it is" and acknowledges that "the instruments of war do have a role to play in preserving the peace" (80, 96).



Acceptance Speech

Nobel Peace Prize, Oslo, 1964

Rev. Dr. Martin Luther King, Jr.

Your Majesty, Your Royal Highness, Mr. President, Excellencies, Ladies and
Gentlemen: P 1

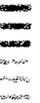
I accept the Nobel Prize for Peace at a moment when 22 million Negroes of the
United States of America are engaged in a creative battle to end the long night of
5 racial injustice. I accept this award on behalf of a **civil rights movement** which is moving
with determination and a majestic **scorn** for risk and danger to establish a reign of
freedom and a rule of justice. I am mindful that only yesterday in Birmingham, Alabama,
our children, crying out for brotherhood, were answered with fire hoses, snarling dogs
and even death. I am mindful that only yesterday in Philadelphia, Mississippi, young
10 people seeking to secure the right to vote were brutalized and murdered. And only
yesterday more than 40 houses of worship in the State of Mississippi alone were bombed
or burned because they offered a sanctuary to those who would not accept segregation. I
am mindful that **debilitating** and grinding poverty afflicts my people and chains them to
the lowest rung of the economic ladder.

15 Therefore, I must ask why this prize is awarded to a movement which is **beleaguered** P 2
and committed to unrelenting struggle; to a movement which has not won the very
peace and brotherhood which is the essence of the Nobel Prize.

civil rights movement: the effort during the 1950s and 60s to end racial segregation and social injustice, and establish equality for the African-American community of the United States

scorn: open dislike and disrespect
debilitating: strength-draining
beleaguered: in constant or repeated trouble

page 1



After contemplation, I conclude that this award which I receive on behalf of that movement is a profound recognition that nonviolence is the answer to the crucial political and moral question of our time - the need for man to overcome oppression and violence without resorting to violence and oppression. Civilization and violence are **antithetical** concepts. Negroes of the United States, following the people of India, have demonstrated that nonviolence is not sterile **passivity**, but a powerful moral force which makes for social transformation. Sooner or later all the people of the world will have to discover a way to live together in peace, and thereby transform this pending cosmic elegy into a creative psalm of brotherhood. If this is to be achieved, man must evolve for all human conflict a method which rejects revenge, aggression and retaliation. The foundation of such a method is love.

The tortuous road which has led from Montgomery, Alabama to Oslo **bears witness** to this truth. This is a road over which millions of Negroes are travelling to find a new sense of dignity. This same road has opened for all Americans a new era of progress and hope. It has led to a new Civil Rights Bill, and it will, I am convinced, be widened and lengthened into a super highway of justice as Negro and white men in increasing numbers create alliances to overcome their common problems.

I accept this award today with an abiding faith in America and an **audacious** faith in the future of mankind. I refuse to accept despair as the final response to the **ambiguities** of history. I refuse to accept the idea that the "isness" of man's present nature makes him morally incapable of reaching up for the eternal "oughtness" that forever confronts him. I refuse to accept the idea that man is mere **flotsom and jetsom** in

antithetical: directly opposite or opposed

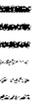
passivity: inaction

bear witness: to show that something exists or is true

audacious: very confident and daring

ambiguities: things that do not have a single clear meaning

flotsom (flotsam) and jetsom: floating pieces, parts, etc., from a ship that has been wrecked



40 the river of life, unable to influence the unfolding events which surround him. I refuse to accept the view that mankind is so tragically bound to the starless midnight of racism and war that the bright daybreak of peace and brotherhood can never become a reality.

I refuse to accept the cynical notion that nation after nation must spiral down a 27
militaristic stairway into the hell of thermonuclear destruction. I believe that

45 unarmed truth and unconditional love will have the final word in reality. This is why right temporarily defeated is stronger than evil triumphant. I believe that even amid today's mortar bursts and whining bullets, there is still hope for a brighter tomorrow. I believe that wounded justice, lying prostrate on the blood-flowing streets of our nations, can be lifted from this dust of shame to reign supreme among the children of men. I have the
50 audacity to believe that peoples everywhere can have three meals a day for their bodies, education and culture for their minds, and dignity, equality and freedom for their spirits. I believe that what self-centered men have torn down men other-centered can build up. I still believe that one day mankind will bow before the altars of God and be crowned
55 triumphant over war and bloodshed, and nonviolent **redemptive** good will proclaim the rule of the land. "And the lion and the lamb shall lie down together and every man shall sit under his own vine and fig tree and none shall be afraid." I still believe that *We Shall* overcome!

This faith can give us courage to face the uncertainties of the future. It will give our 28
tired feet new strength as we continue our forward stride toward the city of freedom.

60 When our days become dreary with low-hovering clouds and our nights become darker than a thousand midnights, we will know that we are living in the creative **turmoil** of a genuine civilization struggling to be born.

redemptive: having the quality of making (something that is bad, unpleasant, etc.) better or more acceptable

turmoil: a state of confusion or disorder

Today I come to Oslo as a trustee, inspired and with renewed dedication to
humanity. I accept this prize on behalf of all men who love peace and brotherhood. I
65 say I come as a trustee, for in the depths of my heart I am aware that this prize is much
more than an honor to me personally.

P9

Every time I take a flight, I am always mindful of the many people who make a
successful journey possible - the known pilots and the unknown ground crew.

P10

So you honor the dedicated pilots of our struggle who have sat at the controls as the
70 freedom movement soared into orbit. You honor, once again, Chief Lutuli of South
Africa, whose struggles with and for his people, are still met with the most brutal
expression of man's inhumanity to man. You honor the ground crew without whose labor
and sacrifices the jet flights to freedom could never have left the earth. Most of these
people will never make the headline and their names will not appear in Who's Who. Yet
75 when years have rolled past and when the blazing light of truth is focused on this
marvelous age in which we live - men and women will know and children will be taught
that we have a finer land, a better people, a more noble civilization - because these
humble children of God were willing to suffer for righteousness' sake.

I think Alfred Nobel would know what I mean when I say that I accept this award in
80 the spirit of a curator of some precious heirloom which he holds in trust for its true
owners - all those to whom beauty is truth and truth beauty - and in whose eyes the
beauty of genuine brotherhood and peace is more precious than diamonds or silver or
gold.

P12



A Just and Lasting Peace

Nobel Lecture, Oslo, 2009

President Barack Obama

Your Majesties, Your Royal Highnesses, Distinguished Members of the Norwegian Nobel Committee, citizens of America, and citizens of the world. P1

I receive this honor with deep gratitude and great humility. It is an award that speaks P2
to our highest aspirations - that for all the cruelty and hardship of our world, we are
5 not mere prisoners of fate. Our actions matter, and can bend history in the direction of
justice.

And yet I would be **remiss** if I did not acknowledge the considerable controversy that P3
your generous decision has generated. In part, this is because I am at the beginning,
and not the end, of my labors on the world stage. Compared to some of the giants of
10 history who have received this prize - Schweitzer and King; Marshall and Mandela - my
accomplishments are slight. And then there are the men and women around the world
who have been jailed and beaten in the pursuit of justice; those who toil in humanitarian
organizations to relieve suffering; the unrecognized millions whose quiet acts of courage
and compassion inspire even the most hardened of **cynics**. I cannot argue with those who
15 find these men and women - some known, some obscure to all but those they help - to be
far more deserving of this honor than I.

remiss: negligent or careless

cynic: someone who believes that human
conduct is motivated primarily by self-interest

page 1



But perhaps the most profound issue surrounding my receipt of this prize is the fact that I am the Commander-in-Chief of a nation in the midst of two wars. One of these wars is winding down. The other is a conflict that America did not seek; one in which we are joined by forty three other countries - including Norway - in an effort to defend ourselves and all nations from further attacks.

P4

Still, we are at war, and I am responsible for the deployment of thousands of young Americans to battle in a distant land. Some will kill. Some will be killed. And so I come here with an acute sense of the cost of armed conflict - filled with difficult questions about the relationship between war and peace, and our effort to replace one with the other.

P5

These questions are not new. War, in one form or another, appeared with the first man. At the dawn of history, its morality was not questioned; it was simply a fact, like drought or disease - the manner in which tribes and then civilizations sought power and settled their differences.

P6

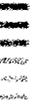
Over time, as codes of law sought to control violence within groups, so did philosophers, clerics, and statesmen seek to regulate the destructive power of war. The concept of a "just war" emerged, suggesting that war is justified only when it meets certain preconditions: if it is waged as a last resort or in self-defense; if the force used is proportional, and if, whenever possible, civilians are spared from violence.

P7

For most of history, this concept of just war was rarely observed. The capacity of human beings to think up new ways to kill one another proved inexhaustible, as did our capacity to exempt from mercy those who look different or pray to a different God. Wars between armies gave way to wars between nations - total wars in which the

P8

acute: very strong and sensitive; highly developed



40 distinction between combatant and civilian became blurred. In the span of thirty years, such carnage would twice engulf this continent. And while it is hard to conceive of a cause more just than the defeat of the Third Reich and the Axis powers, World War II was a conflict in which the total number of civilians who died exceeded the number of soldiers who perished.

45 **In the wake of** such destruction, and with the **advent** of the nuclear age, it became clear to victor and vanquished alike that the world needed institutions to prevent another World War. And so, a quarter century after the United States Senate rejected the League of Nations - an idea for which Woodrow Wilson received this Prize - America led the world in constructing an architecture to keep the peace: a Marshall Plan and a United
50 Nations, mechanisms to govern the waging of war, treaties to protect human rights, prevent **genocide**, and restrict the most dangerous weapons.

In many ways, these efforts succeeded. Yes, terrible wars have been fought, and
atrocities committed. But there has been no Third World War. The Cold War ended with jubilant crowds dismantling a wall. Commerce has stitched much of the world
55 together. Billions have been lifted from poverty. The ideals of liberty, self-determination, equality and the rule of law have haltingly advanced. We are the heirs of the fortitude and foresight of generations past, and it is a legacy for which my own country is rightfully proud.

A decade into a new century, this old architecture is buckling under the weight of
60 new threats. The world may no longer shudder at the prospect of war between two nuclear superpowers, but proliferation may increase the risk of catastrophe. Terrorism has long been a tactic, but modern technology allows a few small men with outsized rage to murder innocents on a horrific scale.

in the wake of: what happens after or as consequence of something
advent: the first appearance of something

genocide: the deliberate killing of people who belong to a particular racial, political, or cultural group



Moreover, wars between nations have increasingly given way to wars within nations. P12

65 The **resurgence** of ethnic or **sectarian** conflicts; the growth of secessionist movements, insurgencies, and failed states; have increasingly trapped civilians in unending chaos. In today's wars, many more civilians are killed than soldiers; the seeds of future conflict are sewn, economies are wrecked, civil societies torn asunder, refugees amassed, and children scarred.

70 We must begin by acknowledging the hard truth that we will not eradicate violent P13 conflict in our lifetimes. There will be times when nations - acting individually or in concert - will find the use of force not only necessary but morally justified.

I make this statement mindful of what Martin Luther King said in this same ceremony P14 years ago - "Violence never brings permanent peace. It solves no social problem; it

75 merely creates new and more complicated ones." As someone who stands here as a direct consequence of Dr. King's life's work, I am living testimony to the moral force of non-violence. I know there is nothing weak - nothing passive - nothing **naïve** - in the creed and lives of Gandhi and King.

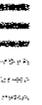
But as a head of state sworn to protect and defend my nation, I cannot be guided by P15

80 their examples alone. I face the world as it is, and cannot stand idle in the face of threats to the American people. For make no mistake: evil does exist in the world. A non-violent movement could not have halted Hitler's armies. Negotiations cannot convince al Qaeda's leaders to lay down their arms. To say that force is sometimes necessary is not a call to cynicism - it is a recognition of history: the imperfections of man and the limits of
85 reason

resurgence: a growth or increase that occurs after a period without growth or increase; a comeback

sectarian: relating to religious or political sects and the differences between them

naïve: lacking knowledge or experience



Yet the world must remember that it was not simply international institutions - not P 15
just treaties and declarations - that brought stability to a post-World War II world.

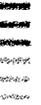
Whatever mistakes we have made, the plain fact is this: the United States of America has
helped underwrite global security for more than six decades with the blood of our citizens
90 and the strength of our arms. The service and sacrifice of our men and women in uniform
has promoted peace and prosperity from Germany to Korea, and enabled democracy to
take hold in places like the Balkans. We have borne this burden not because we seek to
impose our will. We have done so out of enlightened self-interest - because we seek a
better future for our children and grandchildren, and we believe that their lives will be
95 better if other peoples' children and grandchildren can live in freedom and prosperity.

So yes, the instruments of war do have a role to play in preserving the peace. And yet P 17
this truth must coexist with another - that no matter how justified, war promises
human tragedy. The soldier's courage and sacrifice is full of glory, expressing devotion to
country, to cause and to comrades in arms. But war itself is never glorious, and we must
100 never trumpet it, as such.

So part of our challenge is **reconciling** these two seemingly irreconcilable truths - P 18
that war is sometimes necessary, and war is at some level an expression of human
feelings. Concretely, we must direct our effort to the task that President Kennedy called
for long ago. "Let us focus," he said, "on a more practical, more attainable peace, based
105 not on a sudden revolution in human nature but on a gradual evolution in human
institutions."

What might this evolution look like? What might these practical steps be? P 19

reconciling: making peace between two opposing ideas or sides



To begin with, I believe that all nations - strong and weak alike - must adhere to standards that govern the use of force. I - like any head of state - reserve the right to
 110 act unilaterally if necessary to defend my nation. Nevertheless, I am convinced that adhering to standards strengthens those who do, and isolates - and weakens - those who don't.

The world rallied around America after the 9/11 attacks, and continues to support our efforts in Afghanistan, because of the horror of those senseless attacks and the
 115 recognized principle of self-defense. Likewise, the world recognized the need to confront Saddam Hussein when he invaded Kuwait - a **consensus** that sent a clear message to all about the cost of aggression.

Furthermore, America cannot insist that others follow the rules of the road if we
 120 refuse to follow them ourselves. For when we don't, our action can appear **arbitrary** and undercut the legitimacy of future intervention - no matter how justified.

This becomes particularly important when the purpose of military action extends
 125 beyond self defense or the defense of one nation against an aggressor. More and more, we all confront difficult questions about how to prevent the slaughter of civilians by their own government, or to stop a civil war whose violence and suffering can engulf an entire region.

I believe that force can be justified on humanitarian grounds, as it was in the Balkans, or in other places that have been scarred by war. Inaction tears at our conscience and can lead to more costly intervention later. That is why all responsible nations must embrace the role that militaries with a clear **mandate** can play to keep the peace.

consensus: an agreement

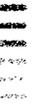
arbitrary: something that is done with no concern for what is fair or right

mandate: an official order to do something



- 130 The leaders and soldiers of NATO countries - and other friends and allies - demonstrate this truth through the capacity and courage they have shown in Afghanistan. But in many countries, there is a disconnect between the efforts of those who serve and the ambivalence of the broader public. I understand why war is not popular. But I also know this: the belief that peace is desirable is rarely enough to achieve
- 135 it. Peace requires responsibility. Peace entails sacrifice. That is why NATO continues to be indispensable. That is why we must strengthen UN and regional peacekeeping, and not leave the task to a few countries. That is why we honor those who return home from peacekeeping and training abroad to Oslo and Rome; to Ottawa and Sydney; to Dhaka and Kigali - we honor them not as makers of war, but as wagers of peace.
- 140 Where force is necessary, we have a moral and strategic interest in binding ourselves to certain rules of conduct. And even as we confront a vicious adversary that abides by no rules, I believe that the United States of America must remain a standard bearer in the conduct of war. That is what makes us different from those whom we fight. That is a source of our strength. That is why I prohibited torture. That is why I ordered the prison at
- 145 Guantanamo Bay closed. And that is why I have reaffirmed America's commitment to **abide** by the Geneva Conventions. We lose ourselves when we compromise the very ideals that we fight to defend. And we honor those ideals by upholding them not just when it is easy, but when it is hard.
- I have spoken to the questions that must weigh on our minds and our hearts as we
- 150 choose to wage war. But let me turn now to our effort to avoid such tragic choices, and speak of three ways that we can build a just and lasting peace.

abide: to accept and follow



First, in dealing with those nations that break rules and laws, I believe that we must P29
develop alternatives to violence that are tough enough to change behavior - for if we
want a lasting peace, then the words of the international community must mean
155 something. Those regimes that break the rules must be held accountable. Sanctions must
exact a real price. **Intransigence** must be met with increased pressure - and such pressure
exists only when the world stands together as one.

One urgent example is the effort to prevent the spread of nuclear weapons, and to P29
seek a world without them. In the middle of the last century, nations agreed to be
160 bound by a treaty whose bargain is clear: all will have access to peaceful nuclear power;
those without nuclear weapons will forsake them; and those with nuclear weapons will
work toward disarmament. I am committed to upholding this treaty. It is a centerpiece of
my foreign policy. And I am working with President Medvedev to reduce America and
Russia's nuclear stockpiles.

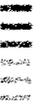
165 The same principle applies to those who violate international law by brutalizing their P30
own people. When there is genocide in Darfur; systematic rape in Congo; or
repression in Burma - there must be consequences. And the closer we stand together, the
less likely we will be faced with the choice between armed intervention and complicity in
oppression.

170 This brings me to a second point - the nature of the peace that we seek. For peace is P31
not merely the absence of visible conflict. Only a just peace based upon the inherent
rights and dignity of every individual can truly be lasting.

It was this insight that drove drafters of the Universal Declaration of Human Rights P32
after the Second World War. In the wake of devastation, they recognized that if
175 human rights are not protected, peace is a **hollow** promise.

intransigence: refusal to change; stubbornness

hollow: empty



And yet all too often, these words are ignored. In some countries, the failure to uphold human rights is excused by the false suggestion that these are Western principles, foreign to local cultures or stages of a nation's development. And within America, there has long been a tension between those who describe themselves as

180 realists or idealists - a tension that suggests a stark choice between the narrow pursuit of interests or an endless campaign to impose our values.

I reject this choice. I believe that peace is unstable where citizens are denied the right to speak freely or worship as they please, choose their own leaders or assemble without fear. **Pent up** grievances fester, and the suppression of tribal and religious

185 identity can lead to violence. We also know that the opposite is true. Only when Europe became free did it finally find peace. America has never fought a war against a democracy, and our closest friends are governments that protect the rights of their citizens. No matter how **callously** defined, neither America's interests - nor the world's - are served by the denial of human aspirations.

190 Third, a just peace includes not only civil and political rights - it must encompass economic security and opportunity. For true peace is not just freedom from fear, but freedom from want.

It is undoubtedly true that development rarely takes root without security; it is also true that security does not exist where human beings do not have access to enough

195 food, or clean water, or the medicine they need to survive. It does not exist where children cannot aspire to a decent education or a job that supports a family. The absence of hope can rot a society from within.

pent up: kept inside

callously: ruthlessly; without regard for other's suffering

page 9



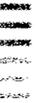
And that is why helping farmers feed their own people - or nations educate their children and care for the sick - is not mere charity. It is also why the world must come
200 together to confront climate change. There is little scientific dispute that if we do nothing, we will face more drought, famine and mass displacement that will fuel more conflict for decades. For this reason, it is not merely scientists and activists who call for swift and forceful action - it is military leaders in my country and others who understand that our common security hangs in the balance.

205 Agreements among nations. Strong institutions. Support for human rights. Investments in development. All of these are vital ingredients in bringing about the evolution that President Kennedy spoke about. And yet, I do not believe that we will have the will, or the staying power, to complete this work without something more - and that is the continued expansion of our moral imagination; an insistence that there is something
210 irreducible that we all share.

As the world grows smaller, you might think it would be easier for human beings to recognize how similar we are; to understand that we all basically want the same things; that we all hope for the chance to live out our lives with some measure of happiness and fulfillment for ourselves and our families.

215 And yet, given the dizzying pace of globalization, and the cultural leveling of modernity, it should come as no surprise that people fear the loss of what they cherish about their particular identities - their race, their tribe, and perhaps most powerfully their religion. In some places, this fear has led to conflict. At times, it even feels like we are moving backwards. We see it in Middle East, as the conflict between Arabs and
220 Jews seems to harden. We see it in nations that are torn **asunder** by tribal lines.

asunder: apart



Most dangerously, we see it in the way that religion is used to justify the murder of innocents by those who have distorted and defiled the great religion of Islam, and who attacked my country from Afghanistan. These extremists are not the first to kill in the name of God: the cruelties of the Crusades are amply recorded. But they remind us that no Holy War can ever be a just war. For if you truly believe that you are carrying out divine will, then there is no need for restraint - no need to spare the pregnant mother, or the medic, or even a person of one's own faith. Such a **warped** view of religion is not just incompatible with the concept of peace, but the purpose of faith - for the one rule that lies at the heart of every major religion is that we do unto others as we would have them do unto us.

Adhering to this law of love has always been the core struggle of human nature. We are **fallible**. We make mistakes, and fall victim to the temptations of pride, and power, and sometimes evil. Even those of us with the best intentions will at times fail to right the wrongs before us.

But we do not have to think that human nature is perfect for us to still believe that the human condition can be perfected. We do not have to live in an idealized world to still reach for those ideals that will make it a better place. The non-violence practiced by men like Gandhi and King may not have been practical or possible in every circumstance, but the love that they preached - their faith in human progress - must always be the North Star that guides us on our journey.

For if we lose that faith - if we dismiss it as silly or naïve; if we divorce it from the decisions that we make on issues of war and peace - then we lose what is best about humanity. We lose our sense of possibility. We lose our moral compass.

warped: distorted; misrepresented

fallible: capable of making mistakes

page 11



Like generations have before us, we must reject that future. As Dr. King said at this P45
 245 occasion so many years ago, "I refuse to accept despair as the final response to the
 ambiguities of history. I refuse to accept the idea that the 'isness' of man's present nature
 makes him morally incapable of reaching up for the eternal 'oughtness' that forever
 confronts him."

So let us reach for the world that ought to be - that spark of the divine that still stirs P46
 250 within each of our souls. Somewhere today, in the here and now, a soldier sees he's
 outgunned but stands firm to keep the peace. Somewhere today, in this world, a young
 protestor awaits the brutality of her government, but has the courage to march on.
 Somewhere today, a mother facing punishing poverty still takes the time to teach her
 child, who believes that a cruel world still has a place for his dreams.

255 Let us live by their example. We can acknowledge that oppression will always be with P47
 us, and still strive for justice. We can admit the **intractability** of **depravation**, and
 still strive for dignity. We can understand that there will be war, and still strive for peace.
 We can do that - for that is the story of human progress; that is the hope of all the world;
 and at this moment of challenge, that must be our work here on Earth.

intractable: not easily managed or solved

depravation: moral evilness or corruption

page 12

Forming Evidence-Based Claims

FINDING DETAILS
I find interesting details that are related and that stand out to me from reading the text closely.

Author's Facts and Ideas

- Statistics
- Examples
- Vivid Description
- Characters/Actors
- Events

Author's Words and Organization

- Repeated words
- Strong Language
- Figurative language
- Tone
- Organizational Structure/Phrases

Opinions and Point of View

- Interpretations
- Explanation of ideas or events
- Narration
- Personal reflection
- Beliefs

As you read, you will notice authors use a lot of details and strategies to develop their points and arguments. You might ask yourself: What details should I look for? How do I know they are important? Below are examples of types of details authors often use in important ways.

CONNECTING THE DETAILS
I explain the connections I make among the details through re-reading and thinking about them.

Facts and Ideas

- Authors use hard facts to illustrate or define an idea.
- Authors use examples to express a belief or point of view.
- Authors use vivid description to compare or oppose different ideas.
- Authors describe different actors or characters to illustrate a comparison or contrast.
- Authors use a sequence of events to arrive at a conclusion.

Words and Organization

- Authors repeat specific words or structures to emphasize meaning or tone.
- Authors use language or tone to establish a mood.
- Authors use figurative language to infer emotion or embellish meaning.
- Authors use a specific organization to enhance a point or add meaning.

Opinions and Point of View

- Authors compare or contrast evidence to help define his or her point of view.
- Authors offer their explanation of ideas or events to support their beliefs.
- Authors tell their own story to develop their point of view.
- Author use language to reveal an opinion or feeling about a topic.

By reading closely and thinking about the details that stand out to me, I can make connections among them. Below are some ways details can be connected.

MAKING A CLAIM
I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.

SUPPORTING EVIDENCE FOR

SUPPORTING EVIDENCE FOR

SUPPORTING EVIDENCE FOR

As I group and connect my details, I can come to a conclusion and form a statement about the text.

EVIDENCE-BASED CLAIMS CRITERIA 1- GRADES 9-10 CHECK COMMENTS

Clarity of the Claim:
States an idea you have inferred directly from a text(s) and that you want others to consider.

I. Content and Analysis
An EBC is a clearly stated inference that arises from close reading of a text.

Conformity to the Text:
Is directly based upon – and may comment on – the ideas, details, language, and form of a text(s).

Understanding of the Topic:
Demonstrates knowledge of and sound thinking about a text or topic that matters to you and others.

Reasoning:
Represents sound thinking supported by relevant and sufficient evidence drawn directly from the text.

II. Command of Evidence
An EBC is supported by specific textual evidence and developed through valid reasoning.

Use and Integration of Evidence:
Presents and integrates supporting quotations and textual references in a logical sequence that explains and discusses the claim.

EVIDENCE-BASED CLAIMS CRITERIA W-9-10

COMMENTS

CHECK

<p>I. Content and Analysis An EBC is a clearly stated inference that arises from close reading of a text</p>	<p>Clarity of the Claim: States an idea you have inferred directly from a text(s) and that you want others to consider. Conformity to the Text: Is directly based upon – and may comment on – the ideas, details, language, and form of a text(s).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p></p>
<p>II. Command of Evidence An EBC is supported by specific textual evidence and developed through valid reasoning.</p>	<p>Reasoning: Represents sound thinking supported by relevant and sufficient evidence drawn directly from the text. Use and Integration of Evidence: Presents and integrates supporting quotations and textual references in a logical sequence that explains and discusses the claim.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p></p>
<p>III. Coherence and Organization An EBC and its support are coherently organized into a unified explanation.</p>	<p>Thoroughness and Objectivity: Is explained fairly and thoroughly, including unbiased references to counterclaims or conflicting evidence. Relationship to Context: Indicates where your claim is coming from (its source) and why it is relevant.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p></p>
<p>IV. Control of Language and Conventions An EBC is communicated clearly and precisely, with responsible use/citation of supporting evidence.</p>	<p>Relationships among Parts: Groups and presents supporting evidence in a clear and logical way that helps others understand your claim. Relationship to Other Claims: Can be linked in a logical sequence of related claims to produce a well-reasoned argument. Clarity of Communication: Is stated clearly, coherently, precisely, and objectively, using appropriate language, syntax and writing conventions. Responsible Use of Evidence: Uses quotations and/or paraphrasing accurately, and indicates where the evidence can be found in the text(s).</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p></p>

Writing Evidence-Based Claims



Writing evidence-based claims is a little different from writing stories or just writing about something. You need to **follow a few steps** as you write.

1. Establish the context.

Your readers must know **where your claim is coming from and why it's relevant**. Depending on the scope of your piece and the claim, the context differs. If your whole piece is one claim or if you're introducing the first major claim of your piece, the entire context must be established:

In his speech, "A Just and Lasting Peace," President Obama argues...

Purposes of evidence-based writing vary. In some cases, naming the book and author might be enough to establish the relevance of your claim. In other cases, you might want to supply additional information:

President Obama was awarded the Nobel Peace prize amidst some controversy. In his acceptance speech, he argues...

If your claim is part of a larger piece with multiple claims, then the context might be simpler:

According to President Obama,... or In paragraph 5, Obama argues...

2. State your claim clearly.

How you state your claim is important: it must **precisely and comprehensively express your analysis**. Figuring out how to state claims is a **process**; writers revise them continually as they write their supporting evidence. Here's a claim about President Obama's view of the relationship between war and peace:

In his speech, "A Just and Lasting Peace," President Obama argues that while violence can be controlled and society is progressively more peaceful, the world faces new threats that inevitably require war to control violence and preserve the peace.

When writing claims it is often useful to describe parts of the claim before providing the supporting evidence. In this case, the writer might want to briefly highlight the paradoxical nature of President Obama's view in a second sentence:

President Obama argues that while violence can be controlled and society is progressively more peaceful, the world faces new threats that inevitably require war to control violence and preserve the peace. Obama's realistic view of human society involves a paradoxical understanding of human violence.

The second sentence suggests how the writer will organize the textual evidence to explain the claim.

Remember, you should continually return and re-phrase your claim as you write the supporting evidence to make sure you are capturing exactly what you want to say. Writing out the evidence always helps you figure out what you really think.

3. Organize your supporting evidence.

Most claims contain multiple aspects that require different evidence and should be expressed in separate paragraphs. This claim can be **broken down into two parts**:

Obama's ideas that **HUMAN VIOLENCE IS BOTH FUNDAMENTAL AND CONTROLLABLE** and that **WAR IS NECESSARY TO ACHIEVE PEACE**.

Writing Evidence-Based Claims



Here are two paragraphs that support the claim with evidence organized into those two parts.

HUMAN VIOLENCE IS BOTH FUNDAMENTAL AND CONTROLLABLE:

Despite the fact that “war, in one form or another, appeared with the first man,” societies set up laws that “sought to control violence within groups.” (27-27, 31). For many years these laws were not highly regarded, but after the destruction of WWII and threat of nuclear war, “it became clear to victor and vanquished alike that the world needed institutions to prevent another World War” (45-47). Even though violence continued, these institutions permitted the advancement of “the ideals of liberty, self-determination, equality and the rule of law” (55-56).

WAR IS NECESSARY TO ACHIEVE PEACE.

Progress has been made to achieve peace; however, Obama stresses that “we must begin by acknowledging the hard truth that we will not eradicate violent conflict in our lifetimes” (70-71). While Obama respects the actions of Gandhi and King, he argues that conflict is necessary because “a non-violent movement could not have halted Hitler’s armies” (81-82). Institutions and treaties worked to an extent, but Obama asserts it was the military that “promoted peace and prosperity from Germany to Korea, and enabled democracy to take hold in places like the Balkans” (86-87, 90-92). As these actions secured a better future for children, they prove that “the instruments of war do have a role to play in preserving the peace” (96).

Notice the word, “however,” in the first sentence of the second paragraph. **Transitional phrases** like this one aid the organization by showing how the ideas relate to each other.

4. Paraphrase and quote.

Written evidence from texts can be paraphrased or quoted. It’s up to the writer to decide which works better for each piece of evidence. Paraphrasing is **putting the author’s words into your own**. This works well when the author originally expresses the idea you want to include across many sentences. You might write it more briefly.

The second line from paragraph 3 paraphrases Obama’s view of respect for King and Gandhi instead of quoting all the places he mentions them.

While Obama respects the actions of Gandhi and King...

Some evidence is better quoted than paraphrased. If an author has found the quickest way to phrase the idea or the words are especially strong, you might want to **use the author’s words**.

The last line from paragraph 3 quotes Obama exactly, incorporating his powerful phrase.

As these actions secured a better future for children, they prove that “the instruments of war do have a role to play in preserving the peace” (96).

5. Reference your evidence.

Whether you paraphrase or quote the author’s words, you must include **the exact location where the ideas come from**. Direct quotes are written in quotation marks. How writers include the reference can vary depending on the piece and the original text. Here the writer puts the line numbers from the original text in parentheses at the end of the sentence.

EVIDENCE-BASED WRITING EVALUATION RUBRIC

PROFICIENT

NOT YET PROFICIENT

SCORE = 4

SCORE = 3

SCORE = 2

SCORE = 1

CONTENT AND ANALYSIS

- The essay contains a clear, compelling claim.
- The claim demonstrates insightful comprehension and valid precise evidence.
- Overall analysis follows logically from the text.

- The essay contains a clear claim.
- The claim demonstrates sufficient comprehension and valid basic evidence.
- Overall analysis follows from the text.

- The essay contains a claim, but it is only partially developed.
- The claim demonstrates basic comprehension and evidence, but lacks organization.
- Major points of textual evidence are missing or incomplete in explanation.

- The essay contains a potential claim that is not clearly stated.
- There is minimal textual evidence supporting the claim.

COMMAND OF EVIDENCE

- The central claim of the essay is well-supported by textual evidence.
- Use of relevant evidence is woven throughout the entire analysis.
- The core reasoning of the essay follows from evidence.

- The central claim of the essay is well-supported by textual evidence.
- Use of relevant evidence is generally sustained with some gaps.
- The core reasoning of the essay follows from evidence.

- The central claim of the essay is only partially supported by textual evidence.
- Analytical gaps consistently substituted with a cliffhanger type of evidence relation.
- The core reasoning of the essay is for general or vague text (subject to the evidence).

- The essay demonstrates some comprehension of the text or evidence, but only supports the claim with minimal evidence which is generally irrelevant.

ORGANIZATION AND COHERENCE

- The organization strengthens the exposition. The introduction establishes context, the organizational strategies are appropriate for the content and purpose.
- There is a smooth progression of ideas enhanced by proper integration of words and paragraphs, effective transition, sentence variety, and consistent formatting.

- The organization supports the exposition. The introduction establishes the context, the organizational strategies are appropriate for the content and purpose.
- The ideas progress smoothly with appropriate transitions, but evidence is not always integrated properly. Sentences include relevant information and formatting is consistent.

- Some attempts have been made at connecting organization, but major issues are missing or added after the instruction does not address the content. The organization and strategy unclear and incomplete.
- Paragraphs do not relate separately, but the relationships among them are not included with transitions, subject and clauses may be present, but no distinction made between the two and they are not effectively integrated into the exposition. Sentences are repetitive and do not develop ideas from one to the next.

- There is no sustained organization for the exposition. Organization does not rise above the paragraph level. The essay does contain discrete paragraphs, but the relationships among them are unclear.
- Ideas do not flow across paragraphs and are often repeated by explicit sentence structure and paragraph development.

CONTROL OF LANGUAGE AND GRAMMAR

- The essay contains precise and vivid vocabulary which may include imagery or figurative language and appropriate academic vocabulary. The sentence structure draws attention to key ideas and reinforces relationships among ideas.
- Successful and consistent stylistic choices have been made that serve the purpose of the essay.
- The essay illustrates consistent command of standard, grade-level appropriate writing conventions. Errors are so few and so minor that they do not disrupt readability or affect the force of the writing.

- The essay contains appropriate vocabulary that may lack some specificity including some imprecision of figurative language and appropriate academic vocabulary. The sentence structure supports key ideas and relationships among ideas, but may lack some variety and clarity.
- There is some evidence of stylistic choices that serve the purpose of the essay.
- The essay illustrates consistent command of standard, grade-level appropriate writing conventions. Minor errors do not disrupt readability, but may slightly reduce the force of the writing.

- The essay contains varied, effective and often precise vocabulary. Sentence structure is repetitive, simplistic and often unclear, disrupting the presentation of ideas.
- There are few or no attempts to develop an appropriate style.
- The essay illustrates consistent errors of command, grade-level appropriate writing conventions. Errors disrupt readability and undermine the force of the writing.

- The essay contains very limited and often incorrect vocabulary. Sentence structure is repetitive, simplistic and often unclear, resulting in a minimal explanation of key concepts.
- The essay illustrates consistent errors of command, grade-level appropriate writing conventions. Errors impede readability and comprehension of the writing.

Name Task

FINDING DETAILS

I find interesting details that are related and that stand out to me from reading the text closely.

(Reference:)

(Reference:)

(Reference:)



CONNECTING THE DETAILS
MY THINKING

I explain the connections I make among the details through re-reading and thinking about them.



MAKING A CLAIM

I state a conclusion that I have come to and can support with evidence from the text after reading and thinking about it closely.



Name  Task 

CLAIM:

Supporting Evidence:

Supporting Evidence:

Supporting Evidence:

(Reference:)

(Reference:)

(Reference:)

CLAIM:

Supporting Evidence:

Supporting Evidence:

Supporting Evidence:

(Reference:)

(Reference:)

(Reference:)

ODELL
EDUCATION

Making Evidence-Based Claims | EBC CCSS Lesson | Worksheet

Name Task

CLAIM:

Point 1

A Supportive Evidence B Supportive Evidence

(Reference:) (Reference:)

C Supportive Evidence D Supportive Evidence

(Reference:) (Reference:)

Point 2

A Supportive Evidence B Supportive Evidence

(Reference:) (Reference:)

C Supportive Evidence D Supportive Evidence

(Reference:) (Reference:)

ODELL

EDUCATION

Organizing Evidence-Based Claims (2 Points) | EBC CCSS Lesson | Worksheet

Name  Task

CLAIM:

	Point 1	Point 2	Point 3
A	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)
B	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)
C	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)	Supporting Evidence (Reference:)

**Suggested Instructional Routines – English Language Arts
Implementing Grades 6-12 Rochester City School District Common Core Learning Standards
Reading and Writing Curriculum Units**

ELA Period 48 minutes (teaching time) – 52 minute period		Instructional Materials/Resources
Reading Unit:		
Opening (3 minutes)	Review of daily student learning objectives	<p>RCSD CCLS Reading Curriculum Units supported by current RCSD textbooks, trade books and non-fiction text and delivered utilizing research-based effective instructional strategies.</p> <p>*At this time, teachers should utilize texts that currently exist in their buildings with guidance from Literacy Coaches according to text complexity recommendations and guidelines. If they have access to texts recommended in the RCSD CCLS Reading units, those texts should be prioritized over other options.</p>
Whole-Group Instruction (15-20 minutes)	Daily Word Study/Vocabulary	
	Read-Aloud/Think-Aloud	
	Demonstration of Comprehension Strategies	
Individual, Partner, and Small Group Period (15-20 minutes)	Structured independent or paired reading	
	Guided and independent practice in making claims about text and supporting claims with textual evidence	
Closing (5 minutes)	Text discussion/Accountable Talk	
	Response writing	
	Student sharing of key points Reflection on daily student learning objectives	

**Suggested Instructional Routines – English Language Arts
Implementing Grades 6-12 Rochester City School District Common Core Learning Standards
Reading and Writing Curriculum Units**

ELA Period 48 minutes (teaching time) – 52 minute period		Instructional Materials/Resources
Writing Unit		
Opening (5 minutes)	Review of daily student learning objectives	RCSD CCLS Writing Curriculum Units supported by current RCSD resources and delivered utilizing research-based effective instructional strategies.
Writing Mini-lesson (10-15 minutes)	Teacher models new writing strategy Students practice strategy with guidance and feedback from the teacher.	
Independent Writing (20-25 minutes)	Teacher guides students through the phases of the writing process.	
	Students work independently while teacher offers support to individuals or small groups based on student progress according to corresponding rubric.	
Closing (5 minutes)	This independent writing time is critical to the level of stamina and skill demanded by the Common Core Learning Standards. Student sharing of written work/key learning Reflection on daily student learning objectives.	

ELA DISTRICT DEVELOPED SAMPLE LESSON PLANS

Successful readers develop good reading strategies that help them read fluently and to read for meaning. In kindergarten through fifth grade classrooms, effective habits of literacy begin to be developed through the implementation of the NYS Common Core Curriculum Units. This guidebook serves to communicate how these pieces can work together to help students develop habits of literacy that will support their learning as they engage in a rigorous instructional program that is more closely aligned to the CCLS.

ALIGNED TO COMMON CORE

Grade 6 Sample Lesson Plan**Rochester Instructional Framework ELA****Title/Topic/Theme:**

- What Really Happened: The Mystery of King Tutankhamen's Death?

Skill/Content:

- Students will explore what historical and recent research has revealed about King Tut in an effort to solve the mystery of how he died. They will then learn more about how new technology is helping scientists clarify the circumstances surrounding Tut's death.

Common Core State Standards:

- RI.6.1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- RI.6.8. Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
- SL.6.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- SL.6.4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

Essential Question(s)/Guiding Question(s):

- What are some of the theories used to explain King Tutankhamen's mysterious death?
- How has new technology aided in the study of King Tut?

Objective/Result:

- Determine what is known about King Tut's death.
- Investigate new technology aiding in the study of King Tut.

Bridge/Connections:

- Ask students to share what they know about King Tut and how they think he died.

Materials/Resources:

- News articles: -*King Tut Not Murdered Violently, CT Scans Show*
http://news.nationalgeographic.com/news/2005/03/0308_050308_kingtutmurder.html
- *Who Killed King Tut?* <http://www.time.com/time/magazine/article/0,9171,349108-1,00.html>

Lesson/Process/Procedures:

- Assign half of your students to read one of the articles and half of them to read the other. Each article presents a competing theory about King Tut's death, so do not let students know that they are reading different articles.
- Tell the students to take notes on the articles as they read. When they have finished reading, group the students according to the article they have read (again, without letting students know that they read different articles) and have them discuss what they learned. Be sure to position

the groups far enough away from each other so that neither group can hear what the other is discussing. Have each group discuss the following questions:

- How do you think King Tut died?
 - What evidence supports your theory?
 - What questions remain unanswered, if any?
- Once they reach a consensus, groups should elect one person to present their theory on King Tut's death. Have each group representative state the group's theory about Tut's death and briefly outline the supporting evidence. Once both groups have presented their theories, it should become obvious to students that they were assigned to read different articles. Tell the students that half of them read an article from 2002 and half of them read an article from 2005.

Work Time/Embedded Performances:

- Have students write down the theory they believe best explains Tut's death. Then have them list the unanswered questions that still remain. What information would they need to answer these questions? Have students design a cutting edge technology that they think would provide them with the necessary information to answer the remaining questions. Instruct students to write brief summaries of their technology, explaining how it works, which questions it will answer, and what they believe the answers will be.

Closing/Wrap-Up:

- Invite students to share their writing with the class.

Evaluation/Assessment:

- Evaluate student participation in the group discussion, and students written responses.

Homework/Extensions/Enrichment:

- Have students create a timeline of King Tut research from 1923 through the future. They should focus on specific discoveries and technologies used to prove or disprove theories about his death. To fill in the "future" portion of the timeline, they should consider what other information we may obtain as technology evolves. (Examples of new or evolving technology could include cloning, DNA analysis, MRI scans, etc.).



Name _____

<i>Theories About King Tut's Death</i>	<i>Methods Used To Learn About Tut</i>
<p style="text-align: center; font-size: 48px; opacity: 0.3;">DRAFT</p>	<p style="text-align: center; font-size: 48px; opacity: 0.3;">DRAFT</p>

Name _____

How do you think King Tut died?

What evidence supports your theory?

What questions remain unanswered, if any?

Grade 7 Sample Lesson Plan**Title/Topic/Theme:**

- Real- Life Bully Proofing

Essential Question(s)/Guiding Question(s):

- How do we persuade others using the problem-solution method?

Common Core Learning Standards:

- CCSS.ELA-Literacy.RI.7.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.
- CCSS.ELA-Literacy.RI.7.9 Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.
- CCSS.ELA-Literacy.CCRA.W.1 Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
- CCSS.ELA-Literacy.CCRA.W.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Objective/Result:

The student will:

- Conduct a Close Reading of a nonfiction article related to bullying.
- Write a problem-solution letter.

Bridge:

- After reading the entry from *Tangerine* for Monday, December 20, have students brainstorm a list of bullying incidents discussed in the text.

Materials/Resources:

- Springboard books
- Copies of *Tangerine*
- Sourcebooks or looseleaf paper

Mini-lesson:

- Form students in to groups of 3 to 4 and have half of the groups read "Bullying in Schools" and half read "Taming Wild Girls"
- Have each group conduct a close read of their assigned text and mark the text by circling examples of bullying and highlighting solutions presented.
- Have students share in a jigsaw format presenting the examples and solutions they found.
- As students record the solutions to bullying, ask them to write about possible solutions to the acts of bullying in *Tangerine*.

Work Period:

- As a group, complete the RAFT organizer deciding on a role they will assume for the writing of a persuasive letter.
- Explain they will be using the problem solution format to complete the letter.
- Guide students on the organization of an introduction a body, and a conclusion in their business letters.

Summary:

- Have students share letters in their groups to comment on the positive points of persuasion and one suggestion for improvement for each letter shared.

Closing/Wrap-Up:

- Allow students to self-edit, revise and prepare a final version and read several aloud to the class.

Homework/Extensions/Enrichment:

- Writing of the letter can be assigned as homework.

Grade 8 Sample Lesson Plan**Title/Topic/Theme:**

- Unit 1: Lesson 18

Skill/Content:

- Text Citation
- Determining Importance
- Analyzing Text

Common Core Learning Standards:

- CCSS.ELA-Literacy.RI.8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-Literacy.RI.8.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
- CCSS.ELA-Literacy.W.8.1 Write arguments to support claims with clear reasons and relevant evidence.

Essential Question(s)/Guiding Question(s):

- What defines a hero?

Objective/Result:

The student will:

- explore the concept of heroism in real life and nonfiction text
- practice text citations using quotations
- create a well developed paragraph

Bridge/Connections:

- Students have been reading, writing and watching clips about heroes throughout the unit. This activity will allow students to explore the idea of an everyday hero.
- Have students write a one minute essay on what they think the qualities of a hero are.
- Have students share.

Materials/Resources:

- Springboard texts
- Student Sourcebooks

Lesson/Process/Procedures:

- Students will conduct a close read the four paragraphs in Activity 1.14.
- After students have read each piece, they will identify the most important quote from each section that defines Ana as a hero. Students will write these down using appropriate text citation. Teachers may need to review text citation from previous lessons in Unit 1 prior to completion of this activity.
- After students have selected a quote from each piece, the teacher will divide the class up into groups of 3-4 students. Give students a chance to share their quotes with each

other. Then, the students must decide on one overall quote that best fits Ana. Allow students ample time to engage in conversation surrounding the selected quotes.

- In their student sourcebooks, students can write about why they selected the quote and why the quote fits Ana as an everyday hero.
 - *Note: Questions in Activity 1.14 should be used as a guide for the writing process.

Work Time/Embedded Performances:

- Completion of Sourcebook entry paragraph discussing quotation from text.
- Text citation of quotes from each piece describing Ana as a hero.

Closing/Wrap-Up:

- For closing, groups can share the quote that they selected and give a rationale of why they selected that quote. If time permits, students can share portions of their writing pieces.

Evaluation/Assessment:

- Activity assessments are based on observation, participation and completion of the tasks described above.

Homework/Extensions/Enrichment:

- If needed, students can complete the writing piece for homework and bring in the next day to share.
- Additionally, students can complete their own quickwrite about an everyday hero in their life.

Name: _____ Date: _____

Springboard Activity 1.14

An Everyday Hero

Piece Number	Unknown Word	Meaning

Name _____

Quotes

Directions: Choose one quote that best describes Ana as a hero. Explain why you choose that quote using at least one detail from the story you have read.

Piece One -

"She is an inspiration to us all, for she is a real hero."

"...I know she is afraid, she fights...every moment of every day, and she does it with a smile."

Piece Two -

"Day after day, my mother gets up with a smile and still has the strength to be a mother to me."

"I know I'm young, but I know I will never catch up to my mother's faith."

Piece Three -

"A hero can be a savior, a fighter, or a mother changing her child's diaper."

"Even though chances were slim, she would keep on fighting 'til the very end."

Why did you choose that quote? Provide evidence from the text as it describes Ana as a hero.

Grade 9 Sample Lesson Plan**RIF ELA Grade 9 Introductory Unit Result 1**

Supplemental Lesson – Building Community

Title/Topic /Theme: Building Community**Time-Frame:** 4-5 days**Skill / Content:**

- Students will analyze a painting, (Graphic Organizer follows) making observations about its content;
- Students will use their understanding of community to analyze a painting
- Students use these observations to draw conclusions about what is important to the painter (Henry Ossawa Tanner);
- Students will explore the concept of conflict, in text, as it can be a defining moment in a person's life
- Students will demonstrate their understanding of how relationships support “personhood” (*Note: Personhood is an appreciation that every person is unique: personalities, experiences, knowledge, preferences and life history all make up what is called personhood. It is all the things that make people different from each other. Helping someone to preserve their personhood will have a dramatic effect on their sense of well-being.*)
- Students will use guiding questions to analyze a complex text (“The Boy Who Painted Christ Black,” by John Henrik Clarke)
- Students will build **vocabulary** using a personal thesaurus format developed by the teacher (See “Personal Thesaurus Template” and Personal Thesaurus directions” attachments)
- Students will review **Short Story Elements** (Short Story Analysis worksheet)
- Students will activate schema to connect their own defining moment to complete the Baseline Narrative (Embedded Assessment 1)

Common Core Learning Standards

- CCSS.ELA-Literacy.RL.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-Literacy.RL.9-10.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- CCSS.ELA-Literacy.RL.9-10.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone)
- CCSS.ELA-Literacy.RL.9-10.10 By the end of grade 9, read and comprehend literature, including stories, dramas, and poems, in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range

Cultural Learning Standards: (RTC, 2007)

- Students understand that they are central to the learning process.
- Students know and feel that they belong – they are safe, cared for, and acknowledged in classrooms as individuals and as members of diverse cultures and groups.
- Students know that schools are a center of community life.
- Students know and expect that families and community play a significant role in the educational process.

Essential Questions:

- How does an individual shine when a community supports him/her?
- Why do we need each other?
- How do moments of conflict empower us?
- How can we demystify words?

Objective / Result:

- Students will begin to consider the importance of COMMUNITY as necessary component of personhood.
- Students will know that they belong and are affirmed as being part of a diverse cultural group.
- Students will understand complex text through inquiry.

Bridge / Connections:

- Observing Henry Ossawa Tanner's painting "The Banjo Lesson" (1893, oil on canvas), students will complete the Picture Analysis Worksheet (Side One)- (Project painting on SmartBoard, or print—in color—on overhead sheet, or make a color copy, or as a last resort, make black and white copies)

Materials / Resources:

- Double Sided Picture Analysis Worksheet/Short Story Analysis Sheet
- Image of "The Banjo Lesson" to project
- FOR TEACHER ONLY: Review the following documents on SHAREPOINT: Go to Culturally Responsive Teaching section under the Teaching and Learning site, and review *Notes on LeMoine's Closing the Achievement & Proficiency Gaps.docx*, and *Closing Achievement_Proficiency Gaps N.Lemoine.pdf* to review rationale for Personal Thesaurus strategy.
- Personal Thesaurus 'binder' (See Personal Thesaurus Template and Personal Thesaurus Directions worksheets, or teacher to develop process for recording vocabulary) – NOTE: Teacher will need to develop a mini-lesson to introduce personal thesaurus, or other means of recording vocabulary throughout the year.
- Copies of "The Boy Who Painted Christ Black" Student Text
- "The Boy Who Painted Christ Black" Teacher Text with Inquiry questions and highlighted Vocabulary – plain text and/or hyperlinked text can be uploaded to SmartBoard if available
- Teacher Notes for Story Analysis Sheet
- Markers for highlighting the text
- Dictionaries / Thesaurus' hardcopy or online

Learning Process / Procedures:

- **Day 1-2**
 - Students will share their analysis of the painting, “The Banjo Lesson”
 - Through inquiry, teacher should guide the students to make inferences about the relationship depicted in the painting, and inferences about the painter himself. (What can you tell me about the relationship between the elder and the young boy? How do you know (student should provide evidence from painting to support answer)? What do you know about the person created this painting?)
 - Hand out Text
 - Mini-Lesson: Understanding CONNOTATION versus DENOTATION
 - Explain to students that teacher will ask guiding questions about the text AND throughout the text, and students will be expected to highlight the evidence in the text to support their answers to the guiding questions—Model the first two questions (this is very similar to a Socratic Seminar)
 - Prior to reading the text, also instruct students to highlight vocabulary that is new and unfamiliar to them, or familiar vocabulary that is used in an unfamiliar way.
 - Begin reading text paying attention to Guiding Questions and Notes on the TEACHER TEXT for “The Boy Who Painted Christ Black”
- **Day 2-3**
 - Continue reading the text and directing students with guiding questions
 - Upon completing the text, ask students to work together to complete the Short Story Analysis worksheet (Side Two)
 - Closing for Day 2 –have students Think Pair Share to develop a thematic statement about ‘relationship’ (in the context of the story)
- **Day 3**
 - **Mini Lessons to support student learning**
 1. Word Choice: Connotation vs Denotation – in terms of developing Personal Thesaurus
 2. Personal Thesaurus (or teacher format for recording vocabulary throughout the year)
 - Model the Personal Thesaurus
 - Jigsaw sections of the text and group students to add to their Personal Thesaurus (Students can use the teacher text with hyperlinked vocabulary)
- **Day 4-5**
 - Students share their vocabulary for larger group to add to personal thesaurus

Work Time / Embedded Assessment:

- Students analyze picture using worksheet
- Students mark text for information
- Students participate in discussion by finding evidence in text to support answers to teacher’s guided questions
- Students complete short story analysis worksheet
- Students add to their personal thesaurus

Closing Wrap –up:

- Based on Jigsaw activity for the Personal Thesaurus, answer the Essential Question Why do we need each other?

Evaluation / Assessment:

- Picture Analysis Worksheet/Story Notetaking Organizer
- Participation in Inquiry of text
- Marking of the text
- Thematic Statement about Relationship
- Personal Thesaurus

Homework / Extension:

- Day 1: Students to research Henry Ossawa Tanner, and write a summary of their findings
- Day 2: Students journal about what they feel they are good at
- Day 3: Students brainstorm events or people that have changed their life
- Day 4-5: Students choose minimum of five words from their personal thesaurus to write a minimum of one paragraph (5 sent) about important relationships in their lives

Grade 10 Sample Lesson Plan**Title/Topic/Theme:**

- Unit 2: Lesson 3

Skill/Content:

- To analyze tone and diction to track changes in narrative perspective
- To analyze tone and diction and find textual evidence to support a claim

Common Core Learning Standards:

- CCSS.ELA-Literacy.RL.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-Literacy.RL.9-10.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text
- CCSS.ELA-Literacy.W.9-10.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Essential Question(s)/Guiding Question(s):

- How does an author's tone reflect their changing attitudes in a text?

Objective/Result:

The student will:

- Conduct a close read of a narrative nonfiction text.
- Analyze how changing perspectives can be identified in a text and reflected in tone
- Create a well-developed paragraph analyzing author's word choice to communicate a change in perspective over time

Bridge/Connections:

- To activate prior knowledge, instruct students to complete the quickwrite about a Thanksgiving they have celebrated or have seen celebrated on television or in books or movies.

Materials/Resources:

- Springboard texts
- Student Sourcebooks

Lesson/Process/Procedures:

- Introduce Thanksgiving: A personal history to students and explain that this is an author reflecting on her life through the lens of a specific holiday. You may ask students to consider how their views on their birthdays have changed as they have grown older.
- Students will conduct a close read of Thanksgiving: A Personal History Have them read once to get the Gist. The second read should be conducted so they can identify the shifts or changes in perspective from childhood, to adolescence, to adulthood.
- Complete the Words/ Phrases/ and Tone Graphic organizer with students by drawing on the board or smartboard.
- Work together as a class to identify how the author feels at different points in her life.
- Have students complete the graphic organizer on the bottom of page 66.

- Have students think-pair-share to discuss and determine the time periods in the author's life and the author's attitude at different points in her life.
- Ask students to construct a paragraph response to the questions at the bottom of page 66.

Work Time/Embedded Performances/ Assessment:

- Completion of Graphic Organizer
- Completion and quality of paragraph response

Closing/Wrap-Up:

- For closing, students can share the paragraph they constructed and reflect on the strategies used to identify shifts in tone in the passage.

Evaluation/Assessment:

- Activity assessments are based on observation, participation and completion of the tasks described above.

Homework/Extensions/Enrichment:

- If needed, students can complete the writing piece for homework and bring in the next day to share.

Grade 11 Sample Lesson Plan**Title/Topic/Theme:**

- Unit 1: Lesson 13

Skill/Content:

- To apply the elements of argument in response to a literary nonfiction text.

Common Core Learning Standards:

- CCSS.ELA-Literacy.RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
- CCSS.ELA-Literacy.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. And corresponding subsections of this standard.

Essential Question(s)/Guiding Question(s):

- How can we use the problem/solution framework for persuasion?

Objective/Result:

The student will:

- Complete a double entry journal while reading an excerpt of an essay.
- Students will identify five important passages and respond to the passages.
- Create a well-developed response to the passage in the form of a persuasive letter citing quotations from the passage.

Bridge/Connections:

- Review strategies for a close read with students identifying how to read once to get the GIST of a passage, and once to find significant or in this case emotionally-charged quotations or passages.

Materials/Resources:

- Springboard texts
- Student Sourcebooks

Lesson/Process/Procedures:

- Instruct students they will conduct a close read of *Nickel and Dimed* first to find the main points, and secondly to complete their double entry journal.
- Instruct students to complete a double entry journal while reading the excerpt from *Nickel and Dimed*.
- After students have read the text move students in to discussion groups of up to four students to engage in a group discussion of the text.
- Ask groups to share out the issues discussed from texts.
- Review the elements of hook, claim, support, concessions and refutations and call to action.

Work Time/Embedded Performances/ Assessment:

- Students will compose a persuasive letter to either a news editorial or a maid service company offering suggestions for improving conditions for workers.

Closing/Wrap-Up:

- For closing, students should share their persuasive letters with the class and review the components of a persuasive letter particular to hook, claim, support, and refutations, etc.

Evaluation/Assessment:

- Activity assessments are based on observation, participation and completion of the tasks described above.

Homework/Extensions/Enrichment:

- If needed, students can complete the writing piece for homework and bring in the next day to share.

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Grade 12 Sample Lesson Plan**Title/Topic/Theme:**

- Unit 1: Lesson 17: Reading with a Cultural Criticism Lens

Skill/Content:

- To analyze the elements of an essay using the lens of Cultural Criticism.

Common Core Learning Standards:

- CCSS.ELA-Literacy.RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
- CCSS.ELA-Literacy.RI.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
- CCSS.ELA-Literacy.RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.
- CCSS.ELA-Literacy.RI.11-12.6 Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.

Essential Question(s)/Guiding Question(s):

- How can we use a specific lens to further recognize the relevance and beauty of a text?

Objective/Result:

The student will:

- Complete a close read of "Shooting an Elephant"
- Explore the concepts and structures of a reflective essay
- Create and revise a reflective essay in response to the text
- Generate leveled questions to participate in a Socratic Seminar

Bridge/Connections:

- Ask students to present briefly on the research they have conducted pertaining to imperialism from the previous activity..

Materials/Resources:

- Springboard texts
- Student Sourcebooks

Lesson/Process/Procedures:

- Students should begin by attempting to diffuse the difficult vocabulary of the text by skimming for them and using context clues to replace these words with more familiar terms.
- Instruct students they will conduct a close read of Shooting an Elephant first to find the main points, and secondly to complete their double entry journal.
- Prepare for students the visual display of a reflective essay organizational pattern and review the three main parts, the event, the response, and the reflection.
- Ask students to consider a significant event in their own lives and draft a brief reflective response based on the event, their response, and what they learned.
- Have students complete a think-pair-share with their responses.

- Assist students by showing them how to chunk the text in to smaller parts.
 - The first two paragraphs establish mood, tone, and setting.
 - Paragraphs 3 and 4 introduce the issue or factors leading up to the event
 - Paragraphs 5 and 6 discuss the narrator's feelings towards the situation
 - Paragraphs 8 and 9 discuss the author's positions and internal dialogue
 - Paragraphs 10-12 relay the actual event
 - The remainder of the essay relay the narrator's reflections
- . Have students reflect on the narrator's response, his thoughts at the time, and the theme of the essay.

Work Time/Embedded Performances/ Assessment:

- Have students revisit their essays and revise them now that they have a greater understanding of the genre. Students should also prepare questions to conduct a Socratic Seminar regarding the essay they have read.

Closing/Wrap-Up:

- For closing, students should prepare for the Socratic Seminar applying Cultural Criticism to the essay.

Evaluation/Assessment:

- Activity assessments are based on observation, participation in the Socratic Seminar and completion of the essay described above.

Homework/Extensions/Enrichment:

- If needed, students can complete the writing piece for homework and bring in the next day to share.

**New York State Common Core Learning Standards for
Literacy in
History/Social Studies, Science, and Technical Subjects
6–12**

College and Career Readiness Anchor Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.
8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

Reading Standards for Literacy in History/Social Studies 6–12

The standards below begin at grade 6; standards for K–5 reading in history/social studies, science, and technical subjects are integrated into the K–5 Reading standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

	Grade 6-8 students:	Grade 9-10 students:	Grade 11-12 students:
	<i>Key Ideas and Details</i>		
1.	Cite specific textual evidence to support analysis of primary and secondary sources.	1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.	1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2.	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text	2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3.	Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).	3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.	3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
	<i>Craft and Structure</i>		
4.	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	4. Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.	4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
5.	Describe how a text presents information (e.g., sequentially, comparatively, causally).	5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.	5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
6.	Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.	6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.

Reading Standards for Literacy in History/Social Studies 6–12 – cont.

	Grade 6-8 students:	Grade 9-10 students:	Grade 11-12 students:
	<i>Integration of Knowledge and Ideas</i>		
7.	Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.	7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.	7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
8.	Distinguish among fact, opinion, and reasoned judgment in a text.	8. Assess the extent to which the reasoning and evidence in a text support the author's claims.	8. Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
9.	Analyze the relationship between a primary and secondary source on the same topic.	9. Compare and contrast treatments of the same topic in several primary and secondary sources.	9. Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
	<i>Range of Reading and Level of Text Complexity</i>		
10.	By the end of grade 8, read and comprehend history/social studies texts in the grades 6–8 text complexity band independently and proficiently	10. By the end of grade 10, read and comprehend history/social studies texts in the grades 9–10 text complexity band independently and proficiently.	10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11-CCR text complexity band independently and proficiently..

Reading Standards for Literacy in Science and Technical Subjects 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
<p><i>Key Ideas and Details</i></p> <ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts. 2. Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. 3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks. 	<ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions. 2. Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. 3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. 	<ol style="list-style-type: none"> 1. Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. 2. Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. 3. Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
<p><i>Craft and Structure</i></p> <ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics. 5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. 	<ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9–10 texts and topics. 5. Analyze the structure of the relationships among concepts in a text, including relationships among key terms (e.g., <i>force</i>, <i>friction</i>, <i>reaction force</i>, <i>energy</i>). 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address. 	<ol style="list-style-type: none"> 4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. 5. Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. 6. Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, identifying important issues that remain unresolved.

Reading Standards for Literacy in Science and Technical Subjects 6–12 – cont.

<i>Integration of Knowledge and Ideas</i>		
7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).	7. Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.	7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
8. Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	8. Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.	8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.
9. Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	9. Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.	9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
<i>Range of Reading and Level of Text Complexity</i>		
10. By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.	10. By the end of grade 10, read and comprehend science/technical texts in the grades 9–10 text complexity band independently and proficiently.	10. By the end of grade 12, read and comprehend science/technical texts in the grades 11–CCR text complexity band independently and proficiently.

College and Career Readiness Anchor Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes v

1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

The standards below begin at grade 6; standards for K–5 writing in history/social studies, science, and technical subjects are integrated into the K–5 Writing standards. The CCR anchor standards and high school standards in literacy work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

Grade 6-8 students:	Grade 9-10 students:	Grade 11-12 students:
<p><i>Text Types and Purposes</i></p> <p>1. Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows from and supports the argument presented. 	<p>1. Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text; create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented. 	<p>1. Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and c. evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. e. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. f. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. g. Provide a concluding statement or section that follows from or supports the argument presented.

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12 – cont.

Grade 6-8 students:	Grade 9-10 students:	Grade 11-12 students:
<p><i>Text Types and Purposes</i></p> <p>2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p> <ol style="list-style-type: none"> Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. Use precise language and domain-specific vocabulary to inform about or explain the topic. Establish and maintain a formal style and objective tone. Provide a concluding statement or section that follows from and supports the information or explanation presented. 	<p>2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p> <ol style="list-style-type: none"> Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 	<p>2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p> <ol style="list-style-type: none"> Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Text Types and Purposes</i>		
<p>3. Not applicable as a separate requirement- Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.</p>	<p>3. Not applicable as a separate requirement- Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.</p>	<p>3. Not applicable as a separate requirement- Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import. In science and technical subjects, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations or technical work that others can replicate them and (possibly) reach the same results.</p>
Production and Distribution of Writing		
<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<p>4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
<p>5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.</p>	<p>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p>	<p>5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p>
<p>6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.</p>	<p>6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.</p>	<p>6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.</p>

Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12 – cont.

Grade 6 students:	Grade 7 students:	Grade 8 students:
<i>Research to Build and Present Knowledge</i>		
<p>7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.</p>	<p>7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>	<p>7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
<p>8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p>	<p>8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.</p>	<p>8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
<p>9. Draw evidence from informational texts to support analysis, reflection, and research.</p>	<p>9. Draw evidence from informational texts to support analysis, reflection, and research.</p>	<p>9. Draw evidence from informational texts to support analysis, reflection, and research.</p>
<i>Range of Writing</i>		
<p>10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p>10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>	<p>10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>

New York State Common Core – Mathematics Accessibility & Deployment

- Mathematics Standards, Curriculum, and Assessment
 - All curriculum & assessment units and materials will be housed on an online platform accessible at the following links:



- www.engageny.com and www.engagerochester.com

- Deployment
 - 2012 – 2013 more resources, exemplary lessons, student work samples, etc. will be vetted through a quality control process and added to the materials
 - The curriculum & assessment system will be fully integrated with the professional development platform, assessment system, and other data systems to allow for accurate and usable reports and decision-making
 - All work is being conducted across departments to ensure compatibility and utility needs are met

High School Mathematics Course Sequence

Mathematics			
Grade 9	Grade 10	Grade 11	Grades 12
Foundations of Algebra (Ramp-Up) <i>(See Intervention Course Enrollment Guidelines)</i>	Intensified Algebra - Regents	Geometry - Regents	Algebra 2
	Algebra - Regents		Algebra 2 / Trigonometry - Regents
Intensified Algebra – Regents	Geometry - Regents	Algebra 2	Trigonometry - Regents
Algebra - Regents <i>(See Intervention Course Enrollment Guidelines)</i>		Algebra 2 / Trigonometry - Regents	Pre-calculus
Geometry - Regents	Algebra 2	Trigonometry - Regents	AP Calculus
	Algebra 2 / Trigonometry - Regents	Pre-calculus or IB	AP/College level Calculus, AP/College Level Statistics, or IB

Courses in bold represent the District CORE sequence

NOTE: CTE integrated courses to be developed

New York State Common Core Learning Standard

Mathematics

6-12

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Standards for Mathematical Practice

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second are the strands of mathematical proficiency specified in the National Research Council’s report *Adding It Up*: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy).

1. **Make sense of problems and persevere in solving them.**

Mathematically proficient students start by **explaining** to themselves the meaning of a problem and looking for entry points to its solution. They **analyze** givens, constraints, relationships, and goals. They make conjectures about the form and **meaning** of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They **consider** analogous problems, and try special cases and simpler forms of the original problem **in order** to gain insight into its solution. They monitor and evaluate their progress and **change course** if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information **they** need. Mathematically proficient students can explain correspondences between equations, **verbal** descriptions, tables, and graphs or draw diagrams of **important** features and relationships, graph data, and search for regularity or trends. Younger students **might rely** on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they **continually** ask themselves, “Does this make sense?” They can understand the **approaches of others** to solving complex problems and identify correspondences between **different** approaches.

2. **Reason abstractly and quantitatively.**

Mathematically proficient students **make sense** of quantities and their relationships in problem situations. They **bring** two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the **representing** symbols as if they have a life of their own, without necessarily attending to **their referents**—and the ability to contextualize, to pause as needed during the manipulation **process** in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and

other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

How to Read the Grade Level Standards

Standards define what students should understand and be able to do.

Clusters summarize groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.

Domains are larger groups of related standards. Standards from different domains may sometimes be closely related

These Standards do not dictate curriculum or teaching methods. For example, just because topic A appears before topic B in the standards for a given grade, it does not necessarily mean that topic A must be taught before topic B. A teacher might prefer to teach topic B before topic A, or might choose to highlight connections by teaching topic A and topic B at the same time. Or, a teacher might prefer to teach a topic of his or her own choosing that leads, as a byproduct, to students reaching the standards for topics A and B.

What students can learn at any particular grade level depends upon what they have learned before. Ideally then, each standard in this document might have been phrased in the form, "Students who already know A should next come to learn B." But at present this approach is unrealistic—not least because existing education research cannot specify all such learning pathways. Of necessity therefore, grade placements for specific topics have been made on the basis of state and international comparisons and the collective experience and collective professional judgment of educators, researchers and mathematicians. One promise of common state standards is that over time they will allow research on learning progressions to inform and improve the design of standards to a much greater extent than is possible today. Learning opportunities will continue to vary across schools and school systems, and educators should make every effort to meet the needs of individual students based on their current understanding.

Mathematics - Grade 6: Introduction

In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

1. Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.
2. Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers to the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.
3. Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships between quantities.
4. Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry, considering the context in which the data were collected.

Mathematics - Grade 6: Introduction – cont.

Students in Grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 6 Overview**Ratios and Proportional Relationships**

- Understand ratio concepts and use ratio reasoning to solve problems..

The Number System

- Apply and **extend** previous understandings of multiplication and division to **divide** fractions by fractions.
- Compute **fluently** with multi-digit numbers and find common **factors** and multiples.
- Apply and extend **previous** understandings of numbers to the system of rational numbers.

Expression and Equation

- Apply and extend **previous** understandings of arithmetic to **algebraic** expressions.
- Reason about and solve one-variable equations and inequalities.
- Represent and analyze quantitative relationships between dependent and independent variables

Geometry

- Solve real-world and mathematical problems involving area, surface area, and volume.

Statistics and Probability

- Develop understanding of statistical variability.
- Summarize and describe distributions.

Ratios & Proportional Relationships

6.RP

Understand ratio concepts and use ratio reasoning to solve problems.

1. Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."
2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."¹
3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.
 - a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.
 - b. Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?
 - c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means $30/100$ times the quantity); solve problems involving finding the whole, given a part and the percent.
 - d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

¹Expectations for unit rates in this grade are limited to non-complex fractions.

The Number System

6.NS

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

1. Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$ -cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?

Compute fluently with multi-digit numbers and find common factors and multiples.

2. Fluently divide multi-digit numbers using the standard algorithm.
3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.
4. Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express $36 + 8$ as $4(9 + 2)$.

Apply and extend previous understandings of numbers to the system of rational numbers.

5. Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.
6. Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.
 - a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.
 - b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.
 - c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.
7. Understand ordering and absolute value of rational numbers.
 - a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right.
 - b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-30\text{ C} > -70\text{ C}$ to express the fact that -30 C is warmer than -70 C .
 - c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an account balance of -30 dollars, write $|-30| = 30$ to describe the size of the debt in dollars.
 - d. Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars.
8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.

Expressions & Equations

6.EE

Apply and extend previous understandings of arithmetic to algebraic expressions.

1. Write and evaluate numerical expressions involving whole-number exponents.
2. Write, read, and evaluate expressions in which letters stand for numbers.
 - a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract y from 5" as $5 - y$.
 - b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.
 - c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = \frac{1}{2}$.
3. Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.
4. Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the **same number** regardless of which number y stands for.

Reason about and solve one-variable equations and inequalities.

5. Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.
6. Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.
7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.
8. Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

Represent and analyze quantitative relationships between dependent and independent variables.

9. Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.

Geometry

6.G

Solve real-world and mathematical problems involving area, surface area, and volume.

1. Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
2. Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.
3. Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.
4. Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Statistics & Probability

6.SP

Develop understanding of statistical variability.

1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.
2. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.
3. Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

Summarize and describe distributions.

4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
5. Summarize numerical data sets in relation to their context, such as by:
 - a. Reporting the number of observations.
 - b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.
 - c. Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.
 - d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

Mathematics - Grade 7: Introduction

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

1. Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.
2. Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.
3. Students continue their work with area from Grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in Grade 8 they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two-dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.
4. Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 7 Overview

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems..

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Expression and Equation

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Geometry

- Draw, construct **and describe** geometrical figures and describe **the relationships** between them.
- Solve real-life and mathematical problems involving **angle measure**, area, surface area, and volume

Statistics and Probability

- Use random sampling to draw **inferences** about a population.
- Draw informal comparative inferences **about** two populations. • Investigate chance processes and develop, use, and evaluate probability **models**..

Ratios & Proportional Relationships**7.RP****Analyze proportional relationships and use them to solve real-world and mathematical problems.**

1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. For example, if a person walks $\frac{1}{2}$ mile in each $\frac{1}{4}$ hour, compute the unit rate as the complex fraction $\frac{1/2}{1/4}$ miles per hour, equivalently 2 miles per hour.
2. Recognize and represent proportional relationships between quantities.
 - a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.
 - b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.
 - c. Represent proportional relationships by equations. For example, if total cost t is proportional to the number n of items purchased at a constant price p , the relationship between the total cost and the number of items can be expressed as $t = pn$.
 - d. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
3. Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

The Number System**7.NS****Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.**

1. Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.
 - a. Describe situations in which opposite quantities combine to make 0. For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.
 - b. Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.
 - c. Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.
 - d. Apply properties of operations as strategies to add and subtract rational numbers.
2. Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.
 - a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.
 - b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real-world contexts.
 - c. Apply properties of operations as strategies to multiply and divide rational numbers.
 - d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.
3. Solve real-world and mathematical problems involving the four operations with rational numbers.

Expressions & Equations

7.EE

Use properties of operations to generate equivalent expressions.

1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.
2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. For example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by 1.05."

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional $1/10$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.
4. Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.
 - a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?
 - b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions

Geometry

7.G

Draw, construct, and describe geometrical figures and describe the relationships between them.

1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.
3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.
5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.
6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

Statistics & Probability

7.SP

Use random sampling to draw inferences about a population.

1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.

Draw informal comparative inferences about two populations.

3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.
4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. For example, decide whether the words in a chapter of a seventh grade science book are generally longer than the words in a chapter of a fourth-grade science book.

Investigate chance processes and develop, use, and evaluate probability models.

5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.
6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.
7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
 - a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.
 - b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?
8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.
 - a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.
 - b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.
 - c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Mathematics - Grade 8: Introduction

In Grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

1. Students use linear equations and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize equations for proportions ($y/x = m$ or $y = mx$) as special linear equations ($y = mx + b$), understanding that the constant of proportionality (m) is the slope, and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x-coordinate changes by an amount A , the output or y-coordinate changes by the amount $m \cdot A$. Students also use a linear equation to describe the association between two quantities in bivariate data (such as arm span vs. height for students in a classroom). At this grade, fitting the model, and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question and to interpret components of the relationship (such as slope and y-intercept) in terms of the situation.

Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

2. Students grasp the concept of a function as a rule that assigns to each input exactly one output. They understand that functions describe situations where one quantity determines another. They can translate among representations and partial representations of functions (noting that tabular and graphical representations may be partial representations), and they describe how aspects of the function are reflected in the different representations.
3. Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two-dimensional figures and to solve problems. Students show that the sum of the angles in a triangle is the angle formed by a straight line, and that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem holds, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons. Students complete their work on volume by solving problems involving cones, cylinders, and spheres.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Grade 8 Overview**The Number System**

- Know that there are numbers that are not rational, and approximate them by rational numbers.

Expression and Equation

- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs

Functions

- Define, evaluate, and compare functions.
- Use functions to model relationships between quantities of simultaneous linear equations.

Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean Theorem.
- Solve real-world and mathematical problems

Statistics and Probability

- Investigate patterns of association in bivariate data.

The Number System

8.NS

Know that there are numbers that are not rational, and approximate them by rational numbers.

1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.
2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.

Expressions & Equations

8.EE

Work with radicals and integer exponents.

1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.
2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.
3. Use numbers expressed in the form of a single digit times a whole-number power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 times 108 and the population of the world as 7 times 109, and determine that the world population is more than 20 times larger.
4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

Understand the connections between proportional relationships, lines, and linear equations.

5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
6. Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .

Analyze and solve linear equations and pairs of simultaneous linear equations.

7. Solve linear equations in one variable.
 - a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
 - b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.
8. Analyze and solve pairs of simultaneous linear equations.
 - a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
 - b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.
 - c. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.

Functions

8.F

Define, evaluate, and compare functions.

1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.¹
2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.
3. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.

Use functions to model relationships between quantities.

4. Construct a function to model a linear relationship **between two quantities**. Determine the rate of change and initial value of the function from a description of a relationship or **from two** (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
5. Describe qualitatively the functional relationship between two quantities by **analyzing** a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

¹ Function notation is not required in Grade 8.

Geometry

8.G

Understand congruence and similarity using physical models, transparencies, or geometry software.

1. Verify experimentally the **properties** of rotations, reflections, and translations:
 - a. Lines **are taken to lines**, and line segments **to line segments** of the same length.
 - b. Angles **are taken to angles** of the same measure.
 - c. Parallel lines **are taken to parallel lines**.
2. Understand that a **two-dimensional figure is congruent** to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the **congruence between them**.
3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.
4. Understand that a **two-dimensional figure is similar** to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.
5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.

Understand and apply the Pythagorean Theorem.

6. Explain a proof of the Pythagorean Theorem and its converse.
7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.
8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.

9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

Statistics & Probability

8.SP

Investigate patterns of association in bivariate data.

1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.
2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.
4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

Mathematics Standards for High School

The high school standards specify the mathematics that all students should study in order to be college and career ready. Additional mathematics that students should learn in order to take advanced courses such as calculus, advanced statistics, or discrete mathematics is indicated by (+), as in this example:

(+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers).

All standards without a (+) symbol should be in the common mathematics curriculum for all college and career ready students. Standards with a (+) symbol may also appear in courses intended for all students.

The high school standards are listed in conceptual categories:

- Number and Quantity
- Algebra
- Functions
- Modeling
- Geometry
- Statistics and Probability

Conceptual categories portray a coherent view of high school mathematics; a student's work with functions, for example, crosses a number of traditional course boundaries, potentially up through and including calculus.

Modeling is best interpreted not as a collection of isolated topics but in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (*). The star symbol sometimes appears on the heading for a group of standards; in that case, it should be understood to apply to all standards in that group.

Mathematics - High School Number & Quantity: Introduction

Numbers and Number Systems.

During the years from kindergarten to eighth grade, students must repeatedly extend their conception of number. At first, “number” means “counting number”: 1, 2, 3, ... Soon after that, 0 is used to represent “none” and the whole numbers are formed by the counting numbers together with zero. The next extension is fractions. At first, fractions are barely numbers and tied strongly to pictorial representations. Yet by the time students understand division of fractions, they have a strong concept of fractions as numbers and have connected them, via their decimal representations, with the base-ten system used to represent the whole numbers. During middle school, fractions are augmented by negative fractions to form the rational numbers. In Grade 8, students extend this system once more, augmenting the rational numbers with the irrational numbers to form the real numbers. In high school, students will be exposed to yet another extension of number, when the real numbers are augmented by the imaginary numbers to form the complex numbers.

With each extension of number, the meanings of addition, subtraction, multiplication, and division are extended. In each new number system—integers, rational numbers, real numbers, and complex numbers—the four operations stay the same in two important ways: They have the commutative, associative, and distributive properties and their new meanings are consistent with their previous meanings.

Extending the properties of whole-number exponents leads to new and productive notation. For example, properties of whole-number exponents suggest that $(5^{1/3})^3$ should be $5^{(1/3)3} = 5^1 = 5$ and that $5^{1/3}$ should be the cube root of 5.

Calculators, spreadsheets, and computer algebra systems can provide ways for students to become better acquainted with these new number systems and their notation. They can be used to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

Quantities.

In real world problems, the answers are usually not numbers but quantities: numbers with units, which involves measurement. In their work in measurement up through Grade 8, students primarily measure commonly used attributes such as length, area, and volume. In high school, students encounter a wider variety of units in modeling, e.g. acceleration, currency conversions, derived quantities such as person-hours and heating degree days, social science rates such as per-capita income, and rates in everyday life such as points scored per game or batting averages. They also encounter novel situations in which they themselves must conceive the attributes of interest. For example, to find a good measure of overall highway safety, they might propose measures such as fatalities per year, fatalities per year per driver, or fatalities per vehicle-mile traveled. Such a conceptual process might be called quantification. Quantification is important for science, as when surface area suddenly “stands out” as an important variable in evaporation. Quantification is also important for companies, which must conceptualize relevant attributes and create or choose suitable measures for them.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Number and Quantity Overview

The Number System

- Extend the properties of exponents to rational exponents
- Use properties of rational and irrational numbers.

Quantities

- Reason quantitatively and use units to solve problems

The Complex Number System

- Perform arithmetic operations with complex numbers
- Represent complex numbers and their operations on the complex plane
- Use complex numbers in polynomial identities and equations

Vector and Matrix Quantities

- Represent and model with vector quantities.
- Perform operations on vectors.
- Perform operations on matrices and use matrices in applications.

The Real Number System

N.RN

Extend the properties of exponents to rational exponents.

1. Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents. For example, we define $5^{1/3}$ to be the cube root of 5 because we want $(5^{1/3})^3 = 5^{(1/3)3}$ to hold, so $(5^{1/3})^3$ must equal 5.
2. Rewrite expressions involving radicals and rational exponents using the properties of exponents.

Use properties of rational and irrational numbers.

3. Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.

Quantities

N.Q

Reason quantitatively and use units to solve problems.

1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
2. Define appropriate quantities for the purpose of descriptive modeling.
3. Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

The Complex Number System

N.CN

Perform arithmetic operations with complex numbers.

1. Know there is a complex number i such that $i^2 = -1$, and every complex number has the form $a + bi$ with a and b real.
2. Use the relation $i^2 = -1$ and the commutative, associative, and distributive properties to add, subtract, and multiply complex numbers.
3. (+) Find the conjugate of a complex number; use conjugates to find moduli and quotients of complex numbers.

Represent complex numbers and their operations on the complex plane.

4. (+) Represent complex numbers on the complex plane in rectangular and polar form (including real and imaginary numbers), and explain why the rectangular and polar forms of a given complex number represent the same number.
5. (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. For example, $(-1 + \sqrt{3}i)^3 = 8$ because $(-1 + \sqrt{3}i)$ has modulus 2 and argument 120° .
6. (+) Calculate the distance between numbers in the complex plane as the modulus of the difference, and the midpoint of a segment as the average of the numbers at its endpoints.

Use complex numbers in polynomial identities and equations.

7. Solve quadratic equations with real coefficients that have complex solutions.
8. (+) Extend polynomial identities to the complex numbers. For example, rewrite $x^2 + 4$ as $(x + 2i)(x - 2i)$.
9. (+) Know the Fundamental Theorem of Algebra; show that it is true for quadratic polynomials.

Vector & Matrix Quantities

N.VN

Represent and model with vector quantities.

1. (+) Recognize vector quantities as having both magnitude and direction. Represent vector quantities by directed line segments, and use appropriate symbols for vectors and their magnitudes (e.g., v , $|v|$, $\|v\|$, v).
2. (+) Find the components of a vector by subtracting the coordinates of an initial point from the coordinates of a terminal point.
3. (+) Solve problems involving velocity and other quantities that can be represented by vectors.

Perform operations on vectors.

4. (+) Add and subtract vectors.
 - a. Add vectors end-to-end, component-wise, and by the parallelogram rule. Understand that the magnitude of a sum of two vectors is typically not the sum of the magnitudes.
 - b. Given two vectors in magnitude and direction form, **determine** the magnitude and direction of their sum.
 - c. Understand vector subtraction $v - w$ as $v + (-w)$, where $-w$ is the additive inverse of w , with the same magnitude as w and pointing in the **opposite** direction. **Represent** vector subtraction graphically by connecting the tips in the **appropriate** order, and **perform** vector subtraction component-wise.
5. (+) Multiply a vector by a scalar.
 - a. Represent scalar multiplication graphically **by scaling vectors** and possibly **reversing** their direction; perform scalar multiplication component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.
 - b. Compute the magnitude of a scalar multiple cv using $\|cv\| = |c|v$. Compute the direction of cv knowing that when $|c|v \neq 0$, the direction of cv is either along v (for $c > 0$) or against v (for $c < 0$).

Perform operations on matrices and use matrices in applications.

6. (+) Use matrices to represent and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
7. (+) Multiply **matrices by scalars** to produce new matrices, e.g., as when all of the payoffs in a game are doubled.
8. (+) Add, subtract, **and multiply matrices** of appropriate dimensions.
9. (+) Understand that, **unlike multiplication** of numbers, matrix multiplication for square matrices is not a commutative operation, **but still satisfies the** associative and distributive properties.
10. (+) Understand that the **zero and identity matrices** play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The **determinant** of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.
11. (+) Multiply a vector (regarded as a **matrix** with one column) by a matrix of suitable dimensions to produce another vector. Work with matrices as **transformations** of vectors.
12. (+) Work with 2×2 matrices as a transformations of the plane, and interpret the absolute value of the determinant in terms of area.

Mathematics - High School Algebra: Introduction

Expressions.

An expression is a record of a computation with numbers, symbols that represent numbers, arithmetic operations, exponentiation, and, at more advanced levels, the operation of evaluating a function. Conventions about the use of parentheses and the order of operations assure that each expression is unambiguous. Creating an expression that describes a computation involving a general quantity requires the ability to express the computation in general terms, abstracting from specific instances.

Reading an expression with comprehension involves analysis of its underlying structure. This may suggest a different but equivalent way of writing the expression that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price p . Rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying the price by a constant factor.

Algebraic manipulations are governed by the **properties** of operations and exponents, and the conventions of algebraic notation. At times, an **expression** is the result of applying operations to simpler expressions. For example, $p + 0.05p$ is the **sum** of the simpler expressions p and $0.05p$. Viewing an expression as the result of operation on **simpler expressions** can sometimes clarify its underlying structure.

A spreadsheet or a computer algebra system (CAS) can be **used** to experiment with algebraic expressions, perform complicated algebraic manipulations, and **understand** how algebraic manipulations behave.

Equations and inequalities.

An equation is a statement of **equality** between two expressions, often viewed as a question asking for which values of the variables the **expressions** on either side are in fact equal. These values are the solutions to the equation. An **identity**, in **contrast**, is true for all values of the variables; identities are often developed by rewriting an **expression in an equivalent form**.

The solutions of an equation in one **variable** form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs of **numbers**, which can be plotted in the coordinate plane. Two or more equations and/or inequalities form a system. A solution for such a system must satisfy every equation and inequality in the system.

An equation can often be solved by successively deducing from it one or more simpler equations. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, but have a solution in a larger system. For example, the solution of $x + 1 = 0$ is an integer, not a whole number; the solution of $2x + 1 = 0$ is a rational number, not an integer; the solutions of $x^2 - 2 = 0$ are real numbers, not rational numbers; and the solutions of $x^2 + 2 = 0$ are complex numbers, not real numbers.

Mathematics - High School Algebra: Introduction – cont.

The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = ((b_1+b_2)/2)h$, can be solved for h using the same deductive process.

Inequalities can be solved by reasoning about the properties of inequality. Many, but not all, of the properties of equality continue to hold for inequalities and can be useful in solving them.

Connections to Functions and Modeling.

Expressions can define functions, and equivalent expressions define the same function. Asking when two functions have the same value for the same input leads to an equation; graphing the two functions allows for finding approximate solutions of the equation. Converting a verbal description to an equation, inequality, or system of these is an essential skill in modeling

Mathematical Practices

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8. Look for and express regularity in repeated reasoning.

Algebra Overview**Seeing Structure in Expressions**

- Interpret the structure of expressions.
- Write expressions in equivalent forms to solve Problems.

Arithmetic with Polynomials and Rational Expressions

- Perform arithmetic operations on polynomials.
- Understand the relationship between zeros and factors of polynomials.
- Use polynomial identities to solve problems.
- Rewrite rational expressions.

Creating Equations

- Create equations that describe numbers or relationships.

Reasoning with Equations and Inequalities

- Understand solving equations as a process of reasoning and explain the reasoning.
- Solve equations and inequalities in one variable.
- Solve systems of equations.
- Represent and solve equations and inequalities graphically.

Seeing Structure in Expressions**A.SSE****Interpret the structure of expressions.**

1. Interpret expressions that represent a quantity in terms of its context.
 - a. Interpret parts of an expression, such as terms, factors, and coefficients.
 - b. Interpret complicated expressions by viewing one or more of their parts as a single entity. For example, interpret $P(1+r)^n$ as the product of P and a factor not depending on P .
2. Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$.

Write expressions in equivalent forms to solve problems

1. Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
 - a. Factor a quadratic expression to reveal the zeros of the function it defines.
 - b. Complete the square in a quadratic expression to reveal the maximum or minimum value of the function it defines.
 - c. Use the properties of exponents to transform expressions for exponential functions. For example the expression $1.15t$ can be rewritten as $(1.151/12)^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.
2. Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.

Arithmetic with Polynomials & Rational Expressions

A.APR

Perform arithmetic operations on polynomials.

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Understand the relationship between zeros and factors of polynomials.

2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a , the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.

Use polynomial identities to solve problems.

4. Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.
5. (+) Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n , where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.¹

Rewrite rational expressions

6. Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system.
7. (+) Understand that rational expressions form a system analogous to the rational numbers, closed under addition, subtraction, multiplication, and division by a **nonzero** rational expression; add, subtract, multiply, and divide rational expressions.

¹ The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument

Creating Equations

A.CED

Create equations that describe numbers or relationships.

1. Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.
2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.
4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R .

Reasoning with Equations & Inequalities

A.REI

Understand solving equations as a process of reasoning and explain the reasoning.

1. Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.
2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.

Solve equations and inequalities in one variable.

3. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.
4. Solve quadratic equations in one variable.
 - a. Use the method of completing the square to transform any quadratic equation in x into an equation of the form $(x - p)^2 = q$ that has the same solutions. Derive the quadratic formula from this form.
 - b. Solve quadratic equations by inspection (e.g., for $x^2 = 49$), taking square roots, completing the square, the quadratic formula and factoring, as appropriate to the initial form of the equation. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b .

Solve systems of equations.

5. Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.
6. Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.
7. Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.
8. (+) Represent a system of linear equations as a single matrix equation in a vector variable.
9. (+) Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension 3×3 or greater).

Represent and solve equations and inequalities graphically.

10. Understand that the graph of an equation in two variables is the set of all its solutions plotted in the coordinate plane, often forming a curve (which could be a line).
11. Explain why the x -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.
12. Graph the solutions to a linear inequality in two variables as a half-plane (excluding the boundary in the case of a strict inequality), and graph the solution set to a system of linear inequalities in two variables as the intersection of the corresponding half-planes.

Mathematics - High School Functions: Introduction

Functions describe situations where one quantity determines another. For example, the return on \$10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because we continually make theories about dependencies between quantities in nature and society, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour, v ; the rule $T(v) = 100/v$ expresses this relationship algebraically and defines a function whose name is T .

The set of inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context.

A function can be described in various ways, such as by a graph (e.g., the trace of a seismograph); by a verbal rule, as in, "I'll give you a state, you give me the capital city;" by an algebraic expression like $f(x) = a + bx$; or by a recursive rule. The graph of a function is often a useful way of visualizing the relationship of the function models, and manipulating a mathematical expression for a function can throw light on the function's properties.

Functions presented as expressions can model many important phenomena. Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with a constant term of zero describe proportional relationships.

A graphing utility or a computer algebra system can be used to experiment with properties of these functions and their graphs and to build computational models of functions, including recursively defined functions.

Connections to Expressions, Equations, Modeling, and Coordinates.

Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value for the same input lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

Mathematical Practices

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Functions Overview**Interpreting Functions**

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions

Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model

Trigonometric Functions

- Extend the domain of trigonometric functions using the unit circle
- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities

Interpreting Functions

F.IF

Understand the concept of a function and use function notation.

1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x . The graph of f is the graph of the equation $y = f(x)$.
2. Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.
3. Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.

Interpret functions that arise in applications in terms of the context.

4. For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.
5. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.
6. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.

Analyze functions using different representations.

7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
 - a. Graph linear and quadratic functions and show intercepts, maxima, and minima.
 - b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions.
 - c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior.
 - d. behavior.
 - e. (+) Graph rational functions, identifying zeros and asymptotes when suitable factorizations are available, and showing end behavior.
 - f. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude.
8. Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.
 - a. Use the process of factoring and completing the square in a quadratic function to show zeros, extreme values, and symmetry of the graph, and interpret these in terms of a context.
 - b. Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, and classify them as representing exponential growth or decay.
9. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.

Building Functions

F.IF

Build a function that models a relationship between two quantities.

1. Write a function that describes a relationship between two quantities.
 - a. Determine an explicit expression, a recursive process, or steps for calculation from a context.
 - b. Combine standard function types using arithmetic operations. For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.
 - c. (+) Compose functions. For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.
2. Write arithmetic and geometric sequences both recursively and with an explicit formula, use them to model situations, and translate between the two forms.

Build new functions from existing functions.

3. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology. Include recognizing even and odd functions from their graphs and algebraic expressions for them.
4. Find inverse functions.
 - a. Solve an equation of the form $f(x) = c$ for a simple function f that has an inverse and write an expression for the inverse. For example, $f(x) = 2x^3$ or $f(x) = (x+1)/(x-1)$ for $x \neq 1$.
 - b. (+) Verify by composition that one function is the inverse of another.
 - c. (+) Read values of an inverse function from a graph or a table, given that the function has an inverse.
 - d. (+) Produce an invertible function from a non-invertible function by restricting the domain.
5. (+) Understand the inverse relationship between exponents and logarithms and use this relationship to solve problems involving logarithms and exponents.

Linear, Quadratic, & Exponential Models

F.LE

Construct and compare linear, quadratic, and exponential models and solve problems.

1. Distinguish between situations that can be modeled with linear functions and with exponential functions.
 - a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals.
 - b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another.
 - c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another.
2. Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).
3. Observe using graphs and tables that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.
4. For exponential models, express as a logarithm the solution to $ab^{ct} = d$ where a , c , and d are numbers and the base b is 2, 10, or e ; evaluate the logarithm using technology.

Interpret expressions for functions in terms of the situation they model.

5. Interpret the parameters in a linear or exponential function in terms of a context.

Trigonometric Functions

F.TF

Extend the domain of trigonometric functions using the unit circle.

1. Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
2. Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
3. (+) Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosines, and tangent for x , $\pi + x$, and $2\pi - x$ in terms of their values for x , where x is any real number.
4. (+) Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions

Model periodic phenomena with trigonometric functions.

5. Choose trigonometric functions to model periodic phenomena with specified amplitude, frequency, and midline.
6. (+) Understand that restricting a trigonometric function to a domain on which it is always increasing or always decreasing allows its inverse to be constructed.
7. (+) Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.

Prove and apply trigonometric identities.

8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant of the angle.
9. (+) Prove the addition and subtraction formulas for sine, cosine, and tangent and use them to solve problems.

Mathematics - High School Modeling: Introduction

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

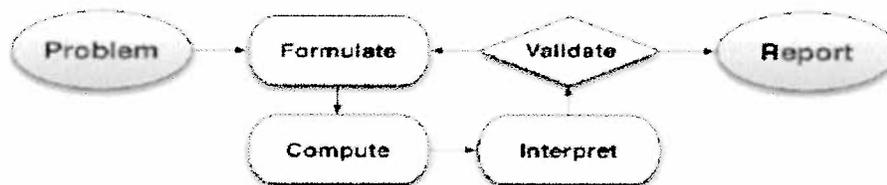
Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of 3 million people, and how it might be distributed.
- Planning a table tennis tournament for 7 players at a club with 4 tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Engaging in critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Analyzing risk in situations such as extreme sports, pandemics, and terrorism.

Relating population statistics to individual predictions.

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can sometimes model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example, as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.

Mathematics - High School Modeling: Introduction – cont.

The basic modeling cycle is summarized in the diagram. It involves (1) identifying variables in the situation and selecting those that represent essential features, (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables, (3) analyzing and performing operations on these relationships to draw conclusions, (4) interpreting the results of the mathematics in terms of the original situation, (5) validating the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable, (6) reporting on the conclusions and the reasoning behind them. Choices, assumptions, and approximations are present throughout this cycle.

In descriptive modeling, a model simply describes the phenomena or summarizes them in a compact form. Graphs of observations are a familiar descriptive model—for example, graphs of global temperature and atmospheric CO₂ over time.

Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.

Graphing utilities, spreadsheets, computer algebra systems, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

Mathematics - High School Geometry: Introduction

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Although there are many types of geometry, school mathematics is devoted primarily to plane Euclidean geometry, studied both synthetically (without coordinates) and analytically (with coordinates). Euclidean geometry is characterized most importantly by the Parallel Postulate, that through a point not on a given line there is exactly one parallel line. (Spherical geometry, in contrast, has no parallel lines.)

During high school, students begin to formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs. Later in college some students develop Euclidean and other geometries carefully from a small set of axioms.

The concepts of congruence, similarity, and symmetry can be understood from the perspective of geometric transformation. Fundamental are the rigid motions: translations, rotations, reflections, and combinations of these, all of which are here assumed to preserve distance and angles (and therefore shapes generally). Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent.

In the approach taken here, two geometric figures are defined to be congruent if there is a sequence of rigid motions that carries one onto the other. This is the principle of superposition. For triangles, congruence means the equality of all corresponding pairs of sides and all corresponding pairs of angles. During the middle grades, through experiences drawing triangles from given conditions, students notice ways to specify enough measures in a triangle to ensure that all triangles drawn with those measures are congruent. Once these triangle congruence criteria (ASA, SAS, and SSS) are established using rigid motions, they can be used to prove theorems about triangles, quadrilaterals, and other geometric figures.

Similarity transformations (rigid motions followed by dilations) define similarity in the same way that rigid motions define congruence, thereby formalizing the similarity ideas of "same shape" and "scale factor" developed in the middle grades. These transformations lead to the criterion for triangle similarity that two pairs of corresponding angles are congruent.

The definitions of sine, cosine, and tangent for acute angles are founded on right triangles and similarity, and, with the Pythagorean Theorem, are fundamental in many real-world and theoretical situations. The Pythagorean Theorem is generalized to non-right triangles by the Law of Cosines. Together, the Laws of Sines and Cosines embody the triangle congruence criteria for the cases where three pieces of information suffice to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that Side-Side-Angle is not a congruence criterion.

Mathematics - High School Geometry: Introduction - cont.

Analytic geometry connects algebra and geometry, resulting in powerful methods of analysis and problem solving. Just as the number line associates numbers with locations in one dimension, a pair of perpendicular axes associates pairs of numbers with locations in two dimensions. This correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling, and proof. Geometric transformations of the graphs of equations correspond to algebraic changes in their equations.

Dynamic geometry environments provide students with experimental and modeling tools that allow them to investigate geometric phenomena in much the **same way** as computer algebra systems allow them to experiment with algebraic phenomena.

Connections to Equations.

The correspondence between numerical coordinates and geometric points **allows** methods from algebra to be applied to geometry and vice versa. The solution set of an **equation** becomes a geometric curve, making visualization a **tool** for doing and understanding algebra. Geometric shapes can be described by equations, making **algebraic** manipulation into a tool for geometric understanding, modeling, and proof.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. **Model with mathematics.**
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Geometry Overview**Congruence**

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions

Similarity, Right Triangles, and Trigonometry

- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity
- Define trigonometric ratios and solve problems involving right triangles
- Apply trigonometry to general triangles

Circles

- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles

Expressing Geometric Properties with Equations

- Translate between the geometric description and the equation for a conic section
- Use coordinates to prove simple geometric theorems algebraically

Geometric Measurement and Dimension

- Explain volume formulas and use them to solve problems
- Visualize relationships between two-dimensional and three-dimensional objects

Modeling with Geometry

- Apply geometric concepts in modeling situations

Congruence

G.CO

Experiment with transformations in the plane

1. Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
2. Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
3. Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
4. Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
5. Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.

Understand congruence in terms of rigid motions

6. Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
7. Use the definition of congruence in terms of rigid motions to show that two triangles are congruent if and only if corresponding pairs of sides and corresponding pairs of angles are congruent.
8. Explain how the criteria for triangle congruence (ASA, SAS, and SSS) follow from the definition of congruence in terms of rigid motions.

Prove geometric theorems

9. Prove theorems about lines and angles. Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment's endpoints.
10. Prove theorems about triangles. Theorems include: measures of interior angles of a triangle sum to 180° ; base angles of isosceles triangles are congruent; the segment joining midpoints of two sides of a triangle is parallel to the third side and half the length; the medians of a triangle meet at a point.
11. Prove theorems about parallelograms. Theorems include: opposite sides are congruent, opposite angles are congruent, the diagonals of a parallelogram bisect each other, and conversely, rectangles are parallelograms with congruent diagonals.

Make geometric constructions

12. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
13. Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Similarity, Right Triangles, & Trigonometry**G.SRT****Understand similarity in terms of similarity transformations**

1. Verify experimentally the properties of dilations given by a center and a scale factor:
 - a. A dilation takes a line not passing through the center of the dilation to a parallel line, and leaves a line passing through the center unchanged.
 - b. The dilation of a line segment is longer or shorter in the ratio given by the scale factor.
2. Given two figures, use the definition of similarity in terms of similarity transformations to decide if they are similar; explain using similarity transformations the meaning of similarity for triangles as the equality of all corresponding pairs of angles and the proportionality of all corresponding pairs of sides.
3. Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.

Prove theorems involving similarity

4. Prove theorems about triangles. Theorems include: a line parallel to one side of a triangle divides the other two proportionally, and conversely; the Pythagorean Theorem proved using triangle similarity.
5. Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.

Define trigonometric ratios and solve problems involving right triangles

6. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.
7. Explain and use the relationship between the sine and cosine of complementary angles.
8. Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

Apply trigonometry to general triangles

9. (+) Derive the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle by drawing an auxiliary line from a vertex perpendicular to the opposite side.
10. (+) Prove the Laws of Sines and Cosines and use them to solve problems.
11. (+) Understand and apply the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Circles**G.C****Understand and apply theorems about circles**

1. Prove that all circles are similar.
2. Identify and describe relationships among inscribed angles, radii, and chords. Include the relationship between central, inscribed, and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.
3. Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.
4. (+) Construct a tangent line from a point outside a given circle to the circle.

Find arc lengths and areas of sectors of circles

5. Derive using similarity the fact that the length of the arc intercepted by an angle is proportional to the radius, and define the radian measure of the angle as the constant of proportionality; derive the formula for the area of a sector.

Expressing Geometric Properties with Equations**G.GPE****Translate between the geometric description and the equation for a conic section**

1. Derive the equation of a circle of given center and radius using the Pythagorean Theorem; complete the square to find the center and radius of a circle given by an equation.
2. Derive the equation of a parabola given a focus and directrix.
3. (+) Derive the equations of ellipses and hyperbolas given the foci, using the fact that the sum or difference of distances from the foci is constant.

Use coordinates to prove simple geometric theorems algebraically

4. Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.
5. Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
6. Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
7. Use coordinates to compute perimeters of polygons and areas of triangles and rectangles, e.g., using the distance formula

Geometric Measurement & Dimension**G.GMD****Explain volume formulas and use them to solve problems**

1. Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid, and cone. Use dissection arguments, Cavalieri's principle, and informal limit arguments.
2. (+) Give an informal argument using Cavalieri's principle for the formulas for the volume of a sphere and other solid figures.
3. Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems

Visualize relationships between two-dimensional and three-dimensional objects

4. Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three dimensional objects generated by rotations of two-dimensional objects.

Modeling with Geometry**G.MG****Apply geometric concepts in modeling situations**

1. Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).
2. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).
3. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).

Mathematics - High School Statistics & Probability: Introduction

Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data; in critically reviewing uses of statistics in public media and other reports, it is important to consider the study design, how the data were gathered, and the analyses employed as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model: a list or description of the possible outcomes (the sample space), each of which is assigned a probability. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the Addition and Multiplication Rules. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of twoway tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, regression functions, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

Connections to Functions and Modeling.

Functions may be used to describe data; if the data suggest a linear relationship, the relationship can be modeled with a regression line, and its strength and direction can be expressed through a correlation coefficient.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Statistics and Probability Overview

Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models

Conditional Probability and the Rules of Probability

- Understand **independence** and conditional probability **and use** them to interpret data
- Use the **rules of probability** to compute probabilities of compound events in a uniform probability model

Making Inferences and Justifying Conclusions

- Understand and evaluate random processes underlying statistical experiments
- Make inferences and justify conclusions from sample surveys, experiments and observational studies

Using Probability to Make Decisions

- Calculate expected values and **use** them to solve problems
- Use probability to evaluate outcomes of **decisions**

Interpreting Categorical & Quantitative Data

S-ID

Summarize, represent, and interpret data on a single count or measurement variable

1. Represent data with plots on the real number line (dot plots, histograms, and box plots).
2. Use statistics appropriate to the shape of the **data** distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.
3. Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible **effects of extreme** data points (outliers).
4. Use the mean **and** standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

Summarize, represent, and interpret data on two categorical and quantitative variables

5. Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal, and conditional relative frequencies). Recognize possible associations and trends in the data.
6. Represent data on two quantitative variables on a scatter plot, and describe how the variables are related.
 - a. Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.
 - b. Informally assess the fit of a function by plotting and analyzing residuals.
 - c. Fit a linear function for a scatter plot that suggests a linear association.

Interpret linear models

7. Interpret the slope (rate of change) and the intercept (constant term) of a linear model in the context of the data.
8. Compute (using technology) and interpret the correlation coefficient of a linear fit.
9. Distinguish between correlation and causation.

Making Inferences & Justifying Conclusions**S-IC****Understand and evaluate random processes underlying statistical experiments**

1. Understand statistics as a process for making inferences about population parameters based on a random sample from that population.
2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?

Make inferences and justify conclusions from sample surveys, experiments, and observational studies

3. Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.
4. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
5. Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.
6. Evaluate reports based on data.

Conditional Probability & the Rules of Probability**S-CP****Understand independence and conditional probability and use them to interpret data**

1. Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events ("or," "and," "not").
2. Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.
3. Understand the conditional probability of A given B as $P(A \text{ and } B)/P(B)$, and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A , and the conditional probability of B given A is the same as the probability of B .
4. Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.
5. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.

Use the rules of probability to compute probabilities of compound events in a uniform probability model

6. Find the conditional probability of A given B as the fraction of B 's outcomes that also belong to A , and interpret the answer in terms of the model.
7. Apply the Addition Rule, $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$, and interpret the answer in terms of the model.
8. (+) Apply the general Multiplication Rule in a uniform probability model, $P(A \text{ and } B) = P(A)P(B|A) = P(B)P(A|B)$, and interpret the answer in terms of the model.
9. (+) Use permutations and combinations to compute probabilities of compound events and solve problems.

Using Probability to Make Decisions

S-MD

Calculate expected values and use them to solve problems

1. (+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.
2. (+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.
3. (+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of a multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.
4. (+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. For example, find a current data distribution on the number of TV sets per household in the United States, and calculate the expected number of sets per household. How many TV sets would you **expect to** find in 100 randomly selected households?

Use probability to evaluate outcomes of decisions

5. (+) Weigh the possible outcomes of a decision **by** assigning probabilities to payoff values and finding expected values.
 - a. Find the expected payoff for a game of chance. For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.
 - b. Evaluate and compare strategies on the basis of **expected** values. For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.
6. (+) Use probabilities **to make** fair decisions (e.g., drawing by lots, using a random number generator).
7. (+) Analyze **decisions and strategies** using probability concepts (e.g., product testing, medical testing, pulling a hockey **goalie** at the **end** of a game).

Note on courses & transitions

The high school portion of the Standards for Mathematical Content specifies the mathematics all students should study for college and career readiness. These standards do not mandate the sequence of high school courses. However, the organization of high school courses is a critical component to implementation of the standards. To that end, sample high school pathways for mathematics – in both a traditional course sequence (Algebra I, Geometry, and Algebra II) as well as an integrated course sequence (Mathematics 1, Mathematics 2, Mathematics 3) – will be made available shortly after the release of the final Common Core State Standards. It is expected that additional model pathways based on these standards will become available as well.

The standards themselves do not dictate curriculum, pedagogy, or delivery of content. In particular, states may handle the transition to high school in different ways. For example, many students in the U.S. today take Algebra I in the 8th grade, and in some states this is a requirement. The K-7 standards contain the prerequisites to prepare students for Algebra I by 8th grade, and the standards are designed to permit states to continue existing policies concerning Algebra I in 8th grade.

A second major transition is the transition from high school to post-secondary education for college and careers. The evidence concerning college and career readiness shows clearly that the knowledge, skills, and practices important for readiness include a great deal of mathematics prior to the boundary defined by (+) symbols in these standards. Indeed, some of the highest priority content for college and career readiness comes from Grades 6-8. This body of material includes powerfully useful proficiencies such as applying ratio reasoning in real-world and mathematical problems, computing fluently with positive and negative fractions and decimals, and solving real-world and mathematical problems involving angle measure, area, surface area, and volume. Because important standards for college and career readiness are distributed across grades and courses, systems for evaluating college and career readiness should reach as far back in the standards as Grades 6-8. It is important to note as well that cut scores or other information generated by assessment systems for college and career readiness should be developed in collaboration with representatives from higher education and workforce development programs, and should be validated by subsequent performance of students in college and the workforce.

**New York State Common Core
Mathematics Curriculum Overview**

Grades 6-8

Introduction

This document provides an overview of the academic year for Grades 6 through 8, beginning with a curriculum map and followed by detailed grade level descriptions.

The curriculum map is a chart that shows, at a glance, the sequence of modules comprising each grade of the Grades 6 through 8 curriculum. The map also indicates the approximate number of instructional days designated for each module of each grade. The date approximations are based on an academic calendar beginning on 9/6/12 and ending on 6/26/13 with a testing date approximately mid-late April. Details that elaborate on the curriculum map are found in the grade-level descriptions.

Each grade-level description begins with a list of the five to seven modules that comprise the instruction of that grade. That introductory component is followed by three sections: the Summary of Year, the Rationale for Module Sequence, and the alignment chart with the grade-level standards.

The “Summary of Year” portion of each grade level includes four pieces of information:

- The critical instructional areas for the grade, as described in the Common Core Learning Standards¹(CCLS)
- The Key Areas of Focus² for the grade
- The Required Fluencies for the grade
- The CCLS Major Emphasis Clusters³ for the grade

The “Rationale for Module Sequence” portion of each grade level provides a brief description of the instructional focus of each module for that grade and explains the developmental sequence of the mathematics.

The alignment chart for each grade lists the CCLS that are addressed in each module of the grade. Note that when a cluster is referred to without a footnote, it is taught in its entirety. There are also times when footnotes are relevant to particular standards within a cluster. All standards for each grade have been carefully included in the module sequence. Some standards are deliberately included in more than one module, so that a strong foundation can be built over time. Note that the standards identified on the Pre-Post Standards⁴ document as those which should be taught after the state test in April, have been intentionally aligned with the final modules of those grades.

¹EngageNY: http://www.p12.nysed.gov/ciai/common_core_standards/pdfdocs/nysp12cclsmath.pdf

²Achievethecore: http://www.achievethecore.org/downloads/E0702_Description_of_the_Common_Core_Shifts.pdf

³EngageNY: <http://engageny.org/sites/default/files/resource/attachments/nys-math-emphases-k-hs.pdf>

⁴NYSED: <http://www.p12.nysed.gov/assessment/ei/2013/draft-math-ccls-13.pdf>

New York State COMMON CORE MATHEMATICS CURRICULUM A Story of Ratios Curriculum Overview

Test Date	Grade 6	Grade 7	Grade 8	
9/6/12	M1: Ratios and Unit Rates (35 days)	M1: Ratios and Proportional Relationships (30 days)	M1: The Number System and Properties of Exponents (20 days)	20 days
10/10/12	M2: Arithmetic Operations Including Dividing by a Fraction (25 days)	M2: Rational Numbers (30 days)	M2: Congruence (25 days)	20 days
11/8/12	M3: Rational Numbers (25 days)	M3: Expressions and Equations (35 days)	M3: Similarity (25 days)	20 days
12/11/12	M4: Expressions and Equations (45 days)	M4: Percent and Proportional Relationships (25 days)	M4: Linear Equations (40 days)	20 days
1/17/13	M5: Area, Surface Area, and Volume Problems (25 days)	M5: Statistics and Probability (25 days)	M5: Examples of Functions from Geometry (15 days)	20 days
2/15/13	M6: Statistics (25 days)	M6: Geometry (35 days)	M6: Linear Functions (20 days)	20 days
3/22/13				
4/29/13				
5/28/13			M7: Introduction to Irrational Numbers Using Geometry (35 days)	20 days
6/26/13				20 days



Approx. test date for Grades 6-8

6/26/13 Note that date approximations are based on a first student day of 9/6/12 and last day of 6/26/13.

Key:	Number	Geometry	Ratios and Proportions	Expressions and Equations	Statistics and Probability	Functions
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Sequence of Grade 6 Modules Aligned with the Standards

- Module 1: Ratios and Unit Rates
- Module 2: Arithmetic Operations Including Dividing by a Fraction
- Module 3: Rational Numbers
- Module 4: Expressions and Equations
- Module 5: Area, Surface Area, and Volume Problems
- Module 6: Statistics

Summary of Year:

Sixth grade mathematics is about (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking.

Key Areas of Focus for Grade 6: Ratios and proportional reasoning; early expressions and equations

- Required Fluency:** 6.NS.2 Multi-digit division
6.NS.3 Multi-digit decimal operations

Rationale for Module Sequence in Grade 6:

In Module 1, students build on their prior work in measurement and in multiplication and division as they study the concepts and language of ratios and unit rates. They use proportional reasoning to solve problems. In particular, students solve ratio and rate using tape diagrams, tables of equivalent ratios, double number line diagrams, and equations. They plot pairs of values generated from a ratio or rate on the first quadrant of the coordinate plane.

Students expand their understanding of the number system and build their fluency in arithmetic operations in Module 2. Students learned in Grade 5 to divide whole numbers by unit fractions and unit fractions by whole numbers. Now, they apply and extend their understanding of multiplication and division to divide fractions by fractions. The meaning of this operation is connected to real-world problems as students are asked to create and solve fraction division word problems. Students continue (from Fifth Grade) to build fluency with adding, subtracting, multiplying, and dividing multi-digit decimal numbers using the standard algorithms.

A breakdown of each Module is available at the following link:
<http://engageny.org/resource/grades-6-8-mathematics-curriculum-map>

CCLs Major Emphasis Clusters	
Ratios and Proportional Relationships	<ul style="list-style-type: none"> • Understand ratio concepts and use ratio reasoning to solve problems.
The Number System	<ul style="list-style-type: none"> • Apply and extend previous understandings of multiplication and division to divide fractions by fractions. • Apply and extend previous understandings of numbers to the system of rational numbers.
Expressions and Equations	<ul style="list-style-type: none"> • Apply and extend previous understandings of arithmetic to algebraic expressions. • Reason about and solve one-variable equations and inequalities. • Represent and analyze quantitative relationships between dependent and independent variables.

Sequence of Grade 6 Modules Aligned with the Standards – cont.

Major themes of Module 3 are to understand rational numbers as points on the number line and to extend previous understandings of numbers to the system of rational numbers, which now include negative numbers. Students extend coordinate axes to represent points in the plane with negative number coordinates and, as part of doing so, see that negative numbers can represent quantities in real-world contexts. They use the number line to order numbers and to understand the absolute value of a number. They begin to solve real-world and mathematical problems by graphing points in all four quadrants, a concept that continues throughout to be used into high school and beyond.

With their sense of number expanded to include negative numbers, in Module 4 students begin formal study of algebraic expressions and equations. Students learn equivalent expressions by continuously relating algebraic expressions back to arithmetic and the properties of arithmetic (commutative, associative, distributive). They write, interpret, and use expressions and equations as they reason about and solve one-variable equations and inequalities and analyze quantitative relationships between two variables.

Module 5 is an opportunity to practice the material learned in Module 4 in the context of geometry; students apply their newly acquired capabilities with expressions and equations to solve for unknowns in area, surface area, and volume problems. They find the area of triangles and other two-dimensional figures and use the formulas to find the volumes of right rectangular prisms with fractional edge lengths. Students use negative numbers in coordinates as they draw lines and polygons in the coordinate plane. They also find the lengths of sides of figures, joining points with the same first coordinate or the same second coordinate and apply these techniques to solve real-world and mathematical problems.

In Module 6, students develop an understanding of statistical variability and apply that understanding as they summarize, describe, and display distributions. In particular, careful attention is given to measures of center and variability.

Sequence of Grade 7 Modules Aligned with the Standards

- Module 1: Ratios and Proportional Relationships
- Module 2: Rational Numbers
- Module 3: Expressions and Equations
- Module 4: Percent and Proportional Relationships
- Module 5: Statistics and Probability
- Module 6: Geometry

Summary of Year:

Seventh grade mathematics is about (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two-and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

Key Areas of Focus for Grade 7: Ratios and proportional reasoning; arithmetic of rational numbers

Rationale for Module Sequence in Grade 7:

In Module 1, students build on their Grade 6 experiences with ratios, unit rates, and fraction division to analyze proportional relationships. They decide whether two quantities are in a proportional relationship, identify constants of proportionality, and represent the relationship by equations. These skills are then applied to real-world problems including scale drawings. Students continue to build an understanding of the number line in Module 2 from their work in Grade 6. They learn to add, subtract, multiply, and divide rational numbers. Module 2 includes rational numbers as they appear in expressions and equations—work that is continued in Module 3.

A breakdown of each Module is available at the following link:

<http://engageny.org/resource/grades-6-8-mathematics-curriculum-map>

CCLS Major Emphasis Clusters

Ratios and Proportional Relationships

- Analyze proportional relationships and use them to solve real-world and mathematical problems.

The Number System

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

Expressions and Equations

- Use properties of operations to generate equivalent expressions.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

Sequence of Grade 7 Modules Aligned with the Standards – cont.

Module 3 consolidates and expands students' previous work with generating equivalent expressions and solving equations. Students solve real-life and mathematical problems using numerical and algebraic expressions and equations. Their work with expressions and equations is applied to finding unknown angles and problems involving area, volume, and surface area.

Module 4 parallels Module 1's coverage of ratio and proportion, but this time with a concentration on percent. Problems in this module include simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, and percent error. Additionally, this module includes percent problems about populations, which prepare students for probability models about populations covered in the next module.

In Module 5, students learn to draw inferences about populations based on random samples. Through the study of chance processes, students learn to develop, use and evaluate probability models.

The year concludes with students drawing and constructing geometrical figures in Module 6. They also revisit unknown angle, area, volume, and surface area problems, which now include problems involving percentages of areas or volumes.

Sequence of Grade 8 Modules Aligned with the Standards

- Module 1: The Number System and Properties of Exponents
- Module 2: Congruence
- Module 3: Similarity
- Module 4: Linear Equations
- Module 5: Examples of Functions from Geometry
- Module 6: Linear Functions
- Module 7: Introduction to Irrational Numbers Using Geometry

Summary of Year:

Eighth grade mathematics is about (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

Key Areas of Focus for Grade 8: Linear algebra

Rationale for Module Sequence in Grade 8:

This year begins with students extending the properties of exponents to integer exponents in Module 1. They use the number line model to support their understanding of the rational numbers and the number system. The number system is revisited at the end of the year (in Module 7) to develop the real number line through a detailed study of irrational numbers. In Module 2, students study congruence by experimenting with rotations, reflections, and translations of geometrical figures. Their study of congruence culminates with an introduction to the Pythagorean Theorem in which the teacher guides students through the “square-within-a-square” proof of the theorem. Students practice the theorem in real-world applications and mathematical problems throughout the year. (In Module 7, students learn to prove the Pythagorean Theorem on their own and are assessed on that knowledge in that module.)



A breakdown of each Module is available at the following link:
<http://engageny.org/resource/grades-6-8-mathematics-curriculum-map>



CCLS Major Emphasis Clusters

Expressions and Equations

- Work with radicals and integer exponents.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze and solve linear equations and pairs of simultaneous linear equations.

Functions

- Define, evaluate, and compare functions.

Geometry

- Understand congruence and similarity using physical models, transparencies, or geometry software.
- Understand and apply the Pythagorean Theorem.

Sequence of Grade 8 Modules Aligned with the Standards – cont.

The experimental study of rotations, reflections, and translations in Module 2 prepares students for the more complex work of understanding the effects of dilations on geometrical figures in their study of similarity in Module 3. They use similar triangles to solve unknown angle, side length and area problems. Module 3 concludes with revisiting a proof of the Pythagorean Theorem from the perspective of similar triangles.

In Module 4, students use similar triangles learned in Module 3 to explain why the slope of a line is well-defined. Students learn the connection between proportional relationships, lines, and linear equations as they develop ways to represent a line by different equations ($y = mx + b$, $y - y1 = m(x - x1)$, etc.). They analyze and solve linear equations and pairs of simultaneous linear equations. The equation of a line provides a natural transition into the idea of a function explored in the next two modules.

Students are introduced to functions in the context of linear equations and area/volume formulas in Module 5. They define, evaluate, and compare functions using equations of lines as a source of linear functions and area and volume formulas as a source of non-linear functions.

In Module 6, students return to linear functions in the context of statistics and probability as bivariate data provides support in the use of linear functions.

By Module 7 students have been using the Pythagorean Theorem for several months. They are sufficiently prepared to learn and explain a proof of the theorem on their own. The Pythagorean Theorem is also used to motivate a discussion of irrational square roots (irrational cube roots are introduced via volume of a sphere). Thus, as the year began with looking at the number system, so it concludes with students understanding irrational numbers and ways to represent them (radicals, non-repeating decimal expansions) on the real number line.

Math Curriculum Structured into 3 Levels of Hierarchy

Curriculum materials for mathematics are structured into 3 levels of hierarchy. The mathematics curriculum structure consists of individual grade levels, with modules divided into lessons.

On the following pages is a common core exemplar for a grade 7 and a high school module. The grade 7 module is for *Addition and Subtraction of Rational Numbers* and the High School module is for *Arithmetic Operations and Polynomials*.

The New York State Common Core Mathematics Curriculum can be accessed at the following link:

<http://engageny.org/mathematics>

COMMON CORE UNIT:

Straw Man Outline for an Intense Engagement Exemplar in Grade 7

UNIT SUMMARY

Content area: **Addition and subtraction of rational numbers**

Associated CCSS content standards: **7.NS.1, 7.NS.3**

Total instructional time: **15 days**

The rational numbers are an arithmetic system that includes 0 as well as positive and negative whole numbers and fractions. Wherever the term “rational numbers” is used, numbers of all types are implied, including fractions in decimal notation.

The straw man outline presented here does not develop the arithmetic of integers before the arithmetic of rational numbers in general. Rather, each specific phase of the outline would likely begin with integers for simplicity and incorporate other rational numbers second. As with any feature of the straw man, bidders may critique this choice and present alternatives if desired.

Prior knowledge assumed. In grade 6, students learned about signed numbers and what kinds of quantities they can be used to represent. They located them on a number line. As a result of this study, students should have come away thinking of the negative side of the number line as being the mirror reflection of the positive side. For example, by reasoning that the reflection of a reflection is the thing itself, they will have learned that $-(-a) = a$. (Here a may be positive, negative, or zero.) Grade 6 students also learned about absolute value and ordering of rational numbers, including in real-world contexts.

In Grade 6, students will have supported their reasoning about rational numbers with models of rational numbers. These models should continue to function in Grade 7 to support the development of rational arithmetic.

As an aside, the grade 6-to-grade 7 progression for rational numbers is structurally similar to the grade 3-to-grade 4 progression for fractions. In grade 3, students first learned about fractions and what kinds of quantities they can be used to represent. They located them on a number line and ordered them. Then, in grade 4, they began doing arithmetic with these new numbers. Likewise, in grade 7, now that we have some new numbers, we again have to learn how to add, subtract, multiply, and divide with them.

Use of models. Colored chips are commonly used; a similar approach uses small plastic plus signs and minus signs in place of colored chips. Such models have the disadvantage that they do not seem to lend themselves well to fraction reasoning, or consequently to multiplication and division of rational numbers. (Perhaps one could represent a rational number such as $-3/5$ by three chips where one chip represents $-1/5$. In a problem with mixed denominators this would become unwieldy.) If chips are used, it may be especially important for contextual illustrations to involve fractional quantities.

A mathematically robust model for a rational number is an arrow on a number line. To represent a number q , an arrow is drawn from 0 to the point q . The length of the arrow represents the absolute value of the number, and the direction of the arrow indicates the sign of the number. Addition combines arrows tip-to-tail, while multiplication stretches or shrinks arrows by the multiplicative factor, and possibly reverses their direction. This fully represents the scaling/resizing nature of multiplication; see 5.NF.5. (Multiplication with chips seems to revert to an equal-groups picture of multiplication more appropriate to Grade 3; see 3.OA.1.) Other models may be possible.

Whatever models are used, students should represent sums and differences of rational numbers on the number line at various points of the engagement. They should come to recognize, or it can be pointed out to them, that $p + q$ is the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. They should observe, or it should be pointed out to them, that this agrees with addition on the number line as it may have been practiced in earlier grades.

Deductive reasoning, concrete models, and contextual situations. In building up the arithmetic of rational numbers in Grade 7, there is no avoiding a certain amount of deductive reasoning. Students need not deduce everything from definitions and stated assumptions, but neither on the other hand can students reach all of the necessary conclusions by making analogies to everyday situations. That said, everyday situations should certainly be woven into the treatment in order to provide plausibility to results, keep the material interesting, and ensure that students can apply what they learn. In the outline below, a number of calculations are laid out in deductive steps. These calculations are meant to show how the key mathematical ideas fit together. These calculations are not meant to suggest that teachers should fill up the blackboard with equations in the style of a college mathematics course. In each case, one expects that the reasoning will be appropriately motivated and supported by models and contextual situations.

Sequence of ideas and activities

1. Day 1. We review the key grade 6 takeaways, assigning homework with review problems.
2. We work hard on addition for 5 days.
 - a. Day 2. We begin with some simple and plausible principles on which others will be built.

Students are told that addition with signed numbers obeys the same general rules as addition of whole numbers and fractions, including commutativity and associativity. And indeed, **addition of positive numbers agrees with the addition they have been doing all along.**

Examples:

$$(+3) + (+5) = +8 \text{ agrees with } 3 + 5 = 8.$$

$$(+1/2) + (+1/3) = +5/6 \text{ agrees with } 1/2 + 1/3 = 5/6.$$

Notes. This could be approached in any number of ways - as a logical consequence of a formal definition of addition of rational numbers (along the lines of 7.NS.1.b), as an implication of a model for addition of signed numbers (such as chips or arrows), and/or simply as a useful

thing to say in light of various real-world situations that we model with positive and negative numbers. (For example, if a balloon is 100 meters above sea level and it rises 30 meters, then it is 130 meters above sea level.)

Students are then told that another similarity to what they have done before is that **adding 0 to any number leaves the number unchanged**:

Examples:

$$(+1/3) + 0 = +1/3$$

$$0 + (-8.1) = -8.1.$$

Notes. Again this can be approached in any number of ways - as a logical consequence of a formal definition of addition of rational numbers along the lines of 7.NS.1.b, as simple common sense left mostly unremarked upon, as a principle we would like to hang onto going forward into algebra, and/or simply as a useful thing to say in light of various real-world situations that we model with positive and negative numbers. (For example, if someone writes you a check for \$0, you have the same amount of credit or debt you had before.)

Classwork and homework: Students solve a variety of word problems in a context involving positive and negative numbers, where the problem calls for addition of two positive numbers or addition of zero to a number.

b. Day 3. Students then work on problems like:

$$(+10.3) + (-10.3) = 0$$

and

$$(-2/3) + -(-2/3)$$

$$= (-2/3) + (+2/3)$$

$$= 0$$

to learn that **a number and its opposite sum to zero**. Again this can be approached in any number of ways - as a logical consequence of a formal definition of addition of rational numbers along the lines of 7.NS.1.b, as an implication of a model for addition of signed numbers such as chips or arrows, and/or simply as a useful thing to say in light of various real-world situations that we model with positive and negative numbers. (For example, if you win \$10.30 and then lose \$10.30, you haven't gained or lost anything. Another example, which would require appropriate scientific knowledge, is that a positive proton and a negative electron combine to form a neutral atom.)

Classwork and homework: Students work on some pure computational problems, and some word problems, in which a number and its opposite are added. These might include problems that call for the addition of three numbers, two of which are opposites of one another.

- c. Day 4. Students find the **sum of negative numbers** using a combination of common sense, models and/or definitions, and what has been learned.

To find: $(-7) + (-4) = ?$

Students could use a model of addition to find the sum -11 , and also think of the problem contextually: If it is already 7 degrees below zero, and the temperature drops another 4 degrees, how cold is it now? 11 degrees below zero.

Classwork and homework: After doing a few of these, students will catch on to the general pattern for adding two negative numbers. They practice computation problems and word problems that include fractions and decimals, and perhaps problems with three or more negative addends. Practice should also mix in some problems of the types previously encountered.

- d. Day 5. Students find the **sum of a positive number and a negative number**. This is the first really difficult moment in the sequence. Again this is a combination of common sense, models and/or definitions, and what has been learned.

Examples

$$\begin{aligned}
 & (+700) + (-100) \\
 &= (+600) + (+100) + (-100) \quad \text{because } (+600) + (+100) = +700 \\
 &= (+600) + 0 \quad \text{by property of adding opposites} \\
 &= +600 \quad \text{by property of zero.}
 \end{aligned}$$

$$(+50) + (-80) = (+50) + (-50) + (-30) = 0 + (-30) = -30.$$

(This “neutral pair” approach is meant to show where the answer comes from; it is not necessarily an efficient algorithm for adding rational numbers.)

Students are told the **general pattern for the results of addition**, if they haven’t figured it out. When adding two numbers with different signs, the number with smaller absolute value partially cancels the number with larger absolute value. The sum has the same sign as the addend with larger absolute value, but the sum is closer to 0 than that addend is.

- e. Day 6: **Practice**. No new ideas are introduced. Students do computational and word problems that call for adding three or more signed numbers of various signs and relative absolute values, including fractions and decimals. (Students may use number line representations to support reasoning if they like, but the problems themselves do not refer to representations or models.) The two goals are fluency in computation and confidence and correctness in application.

Toward the end of this work, we stop using the + symbol to indicate positive numbers.

3. We now turn to subtraction. Another 4 days of hard thinking.

- a. Day 7. As was the case for addition, we begin with simple and plausible principles on which others are built.

Students are reminded that in their previous study of **subtraction**, they check their answer to subtraction by adding. In general, we check our answer to $a - b = c$ by adding $b + c$ and making sure we get back to a . This is still true for rational numbers. If **ever** in doubt about a subtraction, we check our results by adding.

Students are told some important special cases of this: first, **subtracting anything from itself gives zero**: $a - a = 0$. This would probably just strike most students as **common** sense. It is true because if you add $a + 0$ you get back to a .

Also, **subtracting zero leaves a number unchanged**: $x - 0 = x$. Again plausible, and true because if you add $x + 0$ you get back to x . The teacher **does** a few numerical examples at the board to make sure people are good with this. The presentation **includes** contextual examples in addition to the above mathematical reasoning.

These special cases are so plausible that some students might like them perfectly well without completely following the subtle argument about adding back; such students are not browbeaten with the **reasoning** but are simply allowed to embrace the results willingly.

- b. Day 8. Students learn the general rule for subtraction, $a - b = a + (-b)$. **Subtracting means adding the opposite**.

During their **work** with addition, students likely already noticed special cases of the general rule. For example, in $(+10) + (-3)$, the answer $+7$ was like subtracting 3 from 10. Students collect these suggestive examples and observe that subtractions familiar from previous grades can be recast as adding the opposite. For example, $4/5 - 1/5 = 3/5$ is familiar from previous grades, and more recently one may recall the result of $4/5 + (-1/5)$ as being $3/5$ as well. So in this case, $4/5 - 1/5 = 4/5 + (-1/5)$. From such examples, supported as appropriate by models and contextual situations, students conjecture, or are led to conjecture, that all subtraction of rational numbers is adding the opposite.

Students make a small test of this conjecture by showing how this rule agrees what came immediately before: namely, it reproduces the prior conclusions that $a - a = 0$ (because $a + (-a) = 0$) and that $x - 0 = x$ (because $x + (-0) = x + 0 = x$).

Examples like the following are then used to motivate/derive/justify the general rule. Each example given might be motivated by a context, then modeled, then formalized; or treated like a logical argument and then modeled and illustrated in context, to “see it in action.”

Example:

$$3 - 5$$

$$= 3 + 0 - 5 \quad \text{by the property of 0}$$

$$= 3 + (-5) + 5 - 5 \quad \text{by the property of adding opposites}$$

$$= 3 + (-5) + "a - a" \quad \text{noticing an instance of one of the special cases above}$$

$$= 3 + (-5) + 0 \quad \text{by the above special case}$$

$$= 3 + (-5) \quad \text{by the property of 0; this step shows the general rule}$$

$$= -2. \quad \text{by previous work.}$$

As with any subtraction problem, we check the answer by addition:

$$5 + (-2)$$

$$= 3. \text{ It checks.} \quad \text{by previous work on adding rational numbers.}$$

Another Example

$$-8 - (-12)$$

$$= -8 + 0 - (-12) \quad \text{by the property of 0}$$

$$= -8 + 12 + (-12) - (-12) \quad \text{by the property of adding opposites}$$

$$= -8 + 12 + "a - a" \quad \text{noticing an instance of one of the special cases}$$

$$= -8 + 12 + 0 \quad \text{by the special case}$$

$$= -8 + 12 \quad \text{by the property of 0; this step shows the general rule}$$

$$= 4. \quad \text{by previous work.}$$

As with any subtraction problem, we check the answer by addition:

$$-12 + 4$$

$$= -8. \text{ It checks.}$$

by previous work on adding rational numbers.

Aside: Here is the first example another way:

$$3 - 5$$

$$= 3 + 0 - 5$$

by the property of 0

$$= 3 + 2 + (-2) - 5$$

by the property of adding opposites

$$= 5 + (-2) - 5$$

by previous work

$$= 5 - 5 + (-2)$$

by properties of addition

$$= "a - a" + (-2)$$

noticing an instance of one of the special cases above

$$= 0 + (-2)$$

by the above special case

$$= -2.$$

by previous work.

Compared to the first calculation shown for $3 - 5$, this is probably an easier way to get to the answer, because it takes students there by a reassuringly familiar path of “taking small from big.” However, the point of having this discussion was not to train students in an optimal method for getting the answer to problems like $3 - 5$. The point was to motivate, illustrate, or justify the fact that subtraction is adding the opposite. Observe that in the second method for $3 - 5$, this general rule does not appear.

Classwork and homework: Students practice subtraction of two rational numbers, including fractions and decimals. In some cases they are asked to check the results by addition.

- c. Day 9: Students work with **parentheses**. The first problem they do is $-(8+5) = ?$. This is easy if we begin inside the parentheses, $8+5 = 13$ so $-(8+5) = -13$. Students are shown this result in a new light: because $-13 = -8 + -5$, our result can be written as $-(8+5) = -8 + -5$. This can be described by saying that **“the opposite of a sum is the sum of the opposites.”** This can be illustrated with models and contextual situations. Students verify this for all of the possibilities with signs. The principle is then extended to the case of three or more summands. Students might be invited to think of this as “distributing in the minus sign.” (The use of the term “distributing” will be justified later during the study of multiplication of rational numbers, when we find that -1 times a number is the opposite of the number: $(-1)(a) = -a$. Then the principle that the opposite of a sum is the sum of the opposites can be seen from the distributive property as $-(b + c) = (-1)(b + c) = (-1)b + (-1)c = -b + -c$.)

Next problem: $6 - (8+5) = ?$ We can do this as $6 - (8+5) = 6 - 13 = 6 + (-13) = -7$. In that approach, we evaluate parentheses first as usual and then apply the principle that subtraction is adding the opposite. Or, we can view the term in parentheses as a “chunk” and apply the subtraction principle first: $6 - (8+5) = 6 + -(8+5)$. As a second step, we can evaluate the term in parentheses; this leads to $6 + (-13)$ as before. Alternatively, as a second step we can handle the term in parentheses by applying the principle that the opposite of the sum is the sum of the opposites:

$$6 + -(8+5) = 6 + (-8) + (-5).$$

Now we have a sum of three summands, $6 + (-8) + (-5)$. This can be evaluated in various ways, e.g., adding the first two terms first gives $(-2) + (-5) = -7$.

Classwork and homework: Students solidify this by **evaluating** simple numerical expressions with sums and differences of positive and negative rational numbers **that involve parentheses**.

- d. Day 10: **Practice**. Students do computational problems involving addition and **subtraction** of three or more rational numbers, including positive and negative fractions and decimals, problems **with parentheses**, and problems with more than one subtraction operation. The goal is fluency.

4. We now turn to finding distances on the **number line**.

Students in Grade 6 learned that the **absolute value of a number** is its distance from 0 on a number line. They also found the distance between **two points in the coordinate plane** having the same first coordinate or the same second coordinate; **they will have done this graphically**, because in grade 6 they did not have a general principle for finding such distances. In grade 7, they will use subtraction in such a general principle.

- a. Day 11. In **contextual settings**, students find the distance between two numbers on the number line graphically, in **integer cases** as well as in cases such as $-4 \frac{1}{3}$ and $-2/3$ that may induce them to connect the problem of finding **distance** to the **operation** of subtraction.

Students **realize**, or it is pointed out to them, that **the distance is found by taking the absolute value of the difference between the two numbers in either order, $|a - b|$, or, by subtracting the lesser number from the greater**. This can then be justified by appeal to models or definitions.

Students show, or are shown, that this principle agrees with distances found on the number line in earlier grades. Students also realize, or it is pointed out to them, that this principle is consistent with what they learned in Grade 6: at that time they learned, as a matter of definition, that the distance between 0 and a is $|a|$. The new principle is consistent, because it says that the distance between 0 and a is given by subtraction as $|a - 0| = |a|$.

- b. Day 12: No new mathematics is introduced. Students apply the subtraction principle to solve word problems involving the distance between two numbers, such as, a weather balloon is 100,000 feet above sea level, and a submarine is 3 miles below sea level. How high above the submarine is the weather balloon? John was \$3.75 in debt, and Mary was \$0.50 ahead. John found an envelope with some money in it, and after that he had the

same amount of money as Mary. How much was in the envelope? On their way to giving the answer, students should represent these problems by a math diagram, a number line, and an equation.

- c. Day 13: Students apply the distance principle in word problems to find distances in the coordinate plane computationally for points with the same first coordinate or second coordinate, as they did graphically in grade 6.
 - d. Day 14: **Mixed practice.** Students practice problems along the lines of 2(e), 3(d), 4(b), 4(c).
5. Day 15: Unit test combining 2(e), 3(d), 4(b), 4(c). A score of 90% is required to pass.

Further developments during Grade 7

From this point on, algebra work with expressions and equations should sometimes involve positive and negative rational numbers, including positive and negative fractions and decimals, as well as parentheses. Also, applied percentage problems should sometimes involve negative percent differences.

COMMON CORE UNIT

Straw man outline for an intense engagement in High School Algebra

Content area: **Arithmetic Operations on Polynomials**

Associated CCSS content standards: **A-APR.1**

Total instructional time: **7 days**

Algebraic manipulations are governed by the properties of operations and exponents, and the conventions of algebraic notation. At times, an expression is the result of applying operations to simpler expressions. Viewing an expression as the result of operations on simpler expressions can sometimes clarify its underlying structure.

This high school module is intended to extend and connect students' understandings from middle school to polynomials. It focuses on reinforcing knowledge and skills, rather than developing completely new knowledge and skills.

Prior knowledge assumed. Themes beginning in middle school algebra continue and deepen during high school. As early as grades 6 and 7, students began to use the properties of operations to generate equivalent expressions. By grade 7, they began to recognize that rewriting expressions in different forms could be useful in problem solving. In high school algebra, these aspects carry forward as students continue to use properties of operations to rewrite expressions, gaining fluency and engaging in what has been called "mindful manipulation."

In Grade 5, students will have written and interpreted numerical expressions, gaining familiarity with such mathematical notations as parentheses and brackets. In grade 6, they are expected to apply and extend their previous understanding of arithmetic to algebraic expressions by writing, reading, and evaluating expressions in which letters stand for numbers. They are expected to apply the properties of operations to numerical and simple algebraic expressions to come up with equivalent expressions. By grade 7, the ability to use properties of operations to generate equivalent expressions is extended specifically to adding, subtracting, factoring, and expanding linear expressions with rational coefficients. Students in grade 7 are also expected to be able to rewrite an expression in different forms to shed light on the problem and how the quantities in it are related.

The Standards for Mathematical Practice are important aspects of teaching and learning mathematics across all of the grades. As students in middle school use properties of operations to rewrite expressions and generate equivalent expressions that are helpful to them in solving problems, they need to look for and make use of structure. For example, as they progress through the grades, they can see increasingly complicated things that they need to make sense of.

Use of instructional tools.

Algebra tiles can be useful for visual representation of algebraic expressions and operations to combine them.

Technologies, such as student response systems, interactive white boards, blogging sites, and interactive websites, can be useful teaching and learning tools.

Deductive reasoning, concrete models, and contextual situations. In building up arithmetic operations on polynomials in high school, there is no avoiding a certain amount of deductive reasoning. Students need not deduce everything from definitions and stated assumptions, but neither on the other hand can students reach all of the necessary conclusions by making analogies to everyday situations. That said, everyday situations should certainly be woven into the **treatment in** order to provide plausibility to results, keep the material interesting, and ensure that students can **apply** what they learn. In the sequence of ideas and activities below, a number of calculations are laid out in deductive steps. These calculations are meant to show the reader how the key mathematical **ideas** are intended to fit together. These calculations are not meant to suggest that teachers should fill up the **blackboard** with equations in the style of a college mathematics course. One expects that the learning as conducted in class will be appropriately motivated and supported by models and contextual situations.

Standards for Mathematical Practice. All **eight Standards** for Mathematical Practice will be used during this unit. However, there are certain Standards for **Mathematical Practice** that are particularly applicable to the sequence of activities described for this unit.

- Attend to precision
- Look for and make use of structure
- Look for **and express regularity** in repeated reasoning

Sequence of ideas and activities

1. Day 1. We review **number systems** and their properties that students worked with in middle school, stressing the coherence of **these** properties **across** number systems and their applicability to increasingly sophisticated systems. Have students **use** properties to justify the equivalences of numeric and simple algebraic expressions. Terms to reviewed/discussed on **Day 1** include monomial, term, variable, and the various properties (i.e., commutative, associative, **distributive**, identity, etc.). Assign homework problems that bridge students to the concept of polynomials.

Examples:

Review activities for properties of real numbers might include problems like the following:

The statement $3x + 3y = 3(x+y)$ uses which property of real numbers?

The statement $(a + b) + c = a + (b+c)$ illustrates which property of real numbers?

Review activities for operations with rational numbers might include problems like the following. As students begin work with operations on polynomials, it is important that they have a solid grasp on performing operations with rational numbers (in particular, addition, subtraction, and multiplication).

Perform the indicated operation:

$$-25 + 32$$

$$-18 - (-15)$$

$$(-5)(8)(-10)$$

$$-8[-5+(-9)]$$

Sample problems to be worked in class as a whole group that involve determining equivalent numeric and algebraic expressions and the identification of the properties and rules that justify the equivalences.

Identify the mathematical property or rule that justifies each step below.

$$5[2 + (3+1) - 6(4 + 7) + 8]$$

$$5[(2 + 3) + 1 - 6(4 + 7) + 8]$$

$$5[(2 + 3) + 1 - 24 - 42 + 8]$$

$$5[5 + 1 - 24 - 42 + 8]$$

$$5[-52]$$

$$-260$$

$$3[2(a + b) + 4a]$$

$$3[4a + 2(a + b)]$$

$$3[4a + 2a + 2b]$$

$$3[6a + 2b]$$

$$18a + 6b$$

Classwork and homework: In addition to practice problems, students could be asked to create their own multi-step algebraic or numeric expression and a set of defined steps to arrive at an equivalent expression. Then on Day 2, students could do a “think, pair, share” activity where they exchange expressions and identify the properties or rules used for each step. In addition, students would be expected to check their partner’s precision (Mathematical Practice #6).

2. Day 2.

- a. We work with students to build understanding of what a polynomial is—building from the notion of monomial. Make students aware of special cases of polynomials like binomials and trinomials.
- b. Students are introduced to addition of polynomials, extending their understanding of properties of addition, including the identity element.

Notes: Teacher will begin class going over homework practice problems and engaging students in the “think, pair, share” activity. This will take about 15 minutes. Teacher will then define terms for specific types of polynomials (e.g., monomial, binomial, and trinomial). This will then lead to a discussion of polynomials and the more general definition that characterizes polynomials with more than 3 terms (even though monomials, binomials, and trinomials are, of course polynomials).

Examples:

Generally, students will complete problems like the following.

$$(5y - 7) + (-1 + 4y)$$

$$(-x^3 + 7x^2 - 2) + (2x^3 + 2x^2 - 5x)$$

Classwork and homework: Students will complete problems like the ones above as a class and then individually. Students will share their work with the class and explain how they arrived at the answer. Homework will include problems similar to the classwork but also including a problem like the one below:

$$3[2(4x^2 - 5)] + 2[2(x^2 + 1)]$$

3. Day 3. Students are introduced to subtraction of polynomials, extending their understanding of properties of subtraction, including the concept of the additive inverse.

Notes: Teacher can refer back to the material covered on the first day to review the rules of subtraction with rational numbers as a segue into working with polynomials. Teachers will explain to the students that any subtraction problem has an equivalent addition problem. Teachers can also show the students that these problems can be done horizontally as well as vertically.

Examples:

Generally, students will complete problems like the following.

$$(6a + 2b - 3c) - (4a - b - 2c)$$

$$x - (2x - 3)$$

It is also important for students to be able to set up the problem by themselves like the example below:

If $x^2 - 3y + 5$ is subtracted from $2x^2 - 4y + 3$ the result is:

Classwork and homework: Students will complete problems like the ones above as a class and then individually. Students will share their work with the class and explain how they arrived at the answer. Homework will include problems similar to the classwork but also include a written assignment asking the students to explain how a subtraction problem became an addition problem and why is this mathematically correct. Students can research this topic but make sure to include citations where appropriate.

4. Day 4.

- a. Review properties of exponents in relation to monomials
- b. Develop the conceptual understanding of multiplication of polynomials, by extending students' understanding of properties of multiplication, with emphasis on application of the distributive property. Focus will be on multiplication of a polynomial by a monomial and an introduction to multiplication of binomials.

Notes: Teacher will review the properties of exponents at the beginning of class this can be done by showing $x^3 \cdot x^2 = x \cdot x \cdot x \cdot x \cdot x = x^5$. These problems could include a coefficient of a decimal or fraction.

Examples: To scaffold this lesson the following types of questions will be covered in the order below:

$$3x \cdot x$$

$$-2xy^3(4x^2y^3)$$

$$2a^2(a^2 + 3a + 5)$$

$$(y^3 + 4y - 5)y$$

In the accompanying diagram, the width of the rectangle is represented by $2x^2$ and the length is represented by $3x+1$.



- a) Express the area of the rectangle in terms of x .
- b) Express the perimeter of the rectangle in terms of x .

$3x+1$

Classwork and homework: Students will complete problems like the ones above as a class and then in small groups. Students will share their work amongst their group and then will report out with the class and explain how they arrived at the answer. Homework will include problems similar to the classwork but also including a problem like the ones below:

$$(-3x)(2x)(-4x^3)$$

Students will also be asked to solve the following problem: $(x+2)(2x-3)$ Students will be asked to come up with an solution as well as a justification of the solution. Then on Day 5, students could do a “think, pair, share” activity where they compare their work. If teachers create a blog, they can post the multiplication problem on the blog and then students could collaborate and share their ideas to work together to come up with a solution. Students should not be discouraged to research this topic on the internet or in a textbook.

5. Day 5. Continue to develop students’ conceptual understanding of multiplication of polynomials. Again, emphasize application of the distributive property. Focus will be on multiplication of two binomials and the multiplication of polynomials.

Notes: Teacher will begin class going over the homework problems and engaging students in the “think, pair, share” activity. Teacher will ask for students to share their solutions and explanation to their work. This will encourage students to converse about their solutions. This will take about 15 minutes.

Examples:

Generally, students will complete problems like the following:

$$(3x + 2)(x - 1)$$

$$(2x^3 - 3)(4x + 5)$$

Students will also complete problems like the following:

$$(y+5)(y-5)$$

$$(3x - 1)(3x + 1)$$

Students will be asked what they notice about the product of these two binomials versus the previous ones completed. Students should discover this rule.

Classwork and homework: Students will complete problems like the ones above as a class and then in small groups. Students should think individually about the special pair of binomials and then break into groups and discuss their thoughts and then will report out with the class. Homework will include problems similar to the classwork but also including a problem like the ones below:

Express the area of the square in terms of x .



$(2x + 2)$

6. Day 6. The focus will be application-related work or review that integrates the concepts of addition, subtraction, and multiplication of polynomials. These activities will provide students with reinforcement and also the opportunity to be engaged in mixed practice. No new mathematics is introduced. Students will work to solve multi-stop word problems involving geometric figures.

Classwork: This day could be spent having students play a pre-planned review game or break students into groups and assign each group an operation and have the students teach a 5 minute mini review of what has been covered throughout this unit. On this day the teacher could also use a student response system to find out the students level of understanding.

6. Day 7: Unit test including basic computational skills with polynomials along with problems that will require students to demonstrate their conceptual understanding and the ability to translate to an applied problem.

Further developments during High School

From this point on, arithmetic operations with polynomials can and should be imbedded in future algebra work with expressions and equations. For example, as students work to solve equations and systems of equations, they should be expected to use the arithmetic operations of addition, subtraction, and multiplication to find equivalent expressions. In addition, students should be able to examine a real-world problem and decontextualize it into an algebraic expression or equation. From that, they will be able to use the properties of operations with polynomials to determine the solution.

DISTRICT DEVELOPED ⁶ SAMPLE LESSON PLANS

Mathematics 6-12

ALIGNED TO COMMON CORE

DRAFT

Middle School Mathematics

Providing high quality, highly effective instruction and equal access to academic opportunities is the most important service we can provide our students. Ensuring that all students have comparable academic programming options has been a primary driver for many of the scheduling and programmatic changes from the 2012/13 to the 2013/14 school year. As the district continues to build an infrastructure that better supports all schools, we will realize the promise of offering engaging instructional opportunities via rigorous curriculum and content and consistent academic programming for every child, in every classroom, every day.

Core Mathematics Curriculum

Teachers in Grade 6 - 8 will use the RCSD developed units in conjunction with district-adopted curricular resources until the NYS Core Curriculum is implemented. The RCSD scope and sequence for mathematics accounts for key grade-level focus areas determined by the Common Core Learning Standards. We aimed to significantly narrow and **deepen** the scope and content of how time and energy is spent in the math classroom. This **increased** focus allows each student to think, practice, and integrate each new idea into a growing structure. Each unit provides teachers with guidance about lessons, projects, or tasks to help them plan **daily** instruction. As teachers plan they should account for the following lesson components and instructional shifts.

Fluency:

The Common Core Learning Standards explicitly call for fast and accurate computation. Fluency is best addressed **through** short daily routines such as timed fact test, mental math exercises and Number Talks. Students in the middle grades should spend **approximately** 10 minutes a day practicing the following **crucial** fluencies. The table to the right is **the end of** year fluency expectations required by the Common Core Learning Standards. Teachers are encouraged to identify additional fluencies that will aid in mastery of the standards.

Grade	Required Fluency
6	Multi-digit division
	Multi-digit decimal operations
7	Solve $px + q = r$, $p(x + q) = r$
8	Solve simple 2x2 systems by inspection

Conceptual Understanding:

Teachers must support the development of deep conceptual understanding, not just algorithms and answer-getting, in their students. Class time should be structured to support students' ability to access concepts from a number of perspectives. Teachers are encouraged to use a variety of instructional strategies to build mathematical knowledge so students see math as more than a set of discrete procedures. Teacher should spend the majority of class time – approximately 40 minutes – developing conceptual understanding.

Application:

Students demonstrate deep conceptual understanding of core math concepts by applying them to new situations. Teachers must devote time for students to use math and choose the appropriate procedure for application without prompting. Mathematics classes should establish a connection between math and the real world. Solving problems in context is what will build strong mathematicians. Students should spend 10-15 minutes a day applying the math they've learned.

DRAFT

Grade 6 Sample Lesson

Rochester Instructional Framework

6.1.3.8 (Unit Rate)

Estimated Time: 60 minutes

Domain: Ratio & Proportional Relationships

Cluster: Understand ratio concepts and use ratio reasoning to solve problems.

CCS Standard: 6.RP.3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

Mathematical Practice(s): 2. Reason abstractly and quantitatively.

Key Vocabulary: Unit Rate, Rate Reasoning, Unit Pricing, Constant Speed, Ratio

Essential Question: How do we use ratios to solve real-world unit rate problems?

The Bridge:

Remind the students of the applications of ratios to real world problems. Ratios are used to compare two things using numbers.

Pose the following question to the class:

“Jackie bought three equally-priced dresses at the store. She paid \$150.00 for all three dresses. How much did she pay per dress?”

Ask students for their thoughts on how to solve this problem. (Possible strategies could include: division, charts, tree diagrams, etc.)

The Mini Lesson:

To solve this you must know how much was paid in total and how many items were purchased. In this case she purchased 3 dresses (the quantity) for \$150.00 (the total amount).

*****the most direct strategy to solve this problem would be division*****

Students should complete the division to solve the problem. **Jackie paid \$50 per dress.**

Now that students know the correct answer model for them how to solve this problem using ratio reasoning...

$\frac{3}{150}$ The number of dresses to the total amount spent; the unit rate is $\frac{1}{50}$ one dress for \$50

Pose the following question “How many dresses could be bought for \$250?”
Have students work in pairs to solve this. Guide students to create a ratio.

Work Period:

Split the students into 4 groups and assign each group a portion of the Running at Constant Speed problem attached at the bottom of this page (1-4)

After 15 minutes have groups create a chart that explains and outlines the steps used to solve their portion of the problem, similar to reciprocal teaching. Each group will then report out and present their findings

Summary:

After each group has presented, select a few students to explain how they set up a ratio to solve the problem as well as any conversions they may have needed to make (ie: hours to minutes). Post the charts the groups have created on the wall.

Closure:

Assign the following Homework Problems

1. Over a period of 3 hours, 180 leaves fell from a tree. At this rate, how many leaves fell in one hour?
2. Georgia drove a total of 252 miles and used 12 gallons of gasoline. What is this rate in miles per gallon?
3. Tyler scored 21 goals in 7 soccer games. At this rate, about how many goals did he score each game?
4. While climbing down a mountain, Anthony descended 45 feet every hour. At this rate, how many feet will he descend in 6 hours?

Student sheet is attached at the bottom of this lesson

Learning Extensions:

Additional Resources: Task with student work samples

Use the problem attached at the end of the lesson for an additional resource.

6.1.3.7 Work period

Name _____ Date _____

Task: 6.1.3.7 Running at Constant Speed Work Period CCSSM 6.RP.3b

A runner ran 20 miles in 150 minutes. If she runs at that speed,

1. How long would it take her to run 6 miles?
2. How far could she run in 15 minutes?
3. How fast is she running in miles per hour?
4. What is her pace in minutes per mile?

Alignment 1:6.RP.3

Grade

6

Domain

RP: Ratios and Proportional Relationships

Cluster

Understand ratio concepts and use ratio reasoning to solve problems.

Standard

Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

Commentary: NoneSolution:

Solution: Using a table

	A	B	C	D	E	F
Number of Minutes	150	15	7.5	30	45	60
Number of Miles	20	2	1	4	6	8

The values in column B were found by dividing both values in column A by 10. The values in column C were found by dividing both values in column B by 2. The other columns contain multiples of the values in column B.

- If we look in column E, we can see that it would take her 45 minutes to run 6 miles.
- If we look in column B, we can see that she could run 2 miles in 15 minutes.
- If we look in column F, we can see that she is running 8 miles every 60 minutes (which is 1 hour), so she is running 8 miles per hour.
- If we look in column C, we can see that her pace is 7.5 minutes per mile.

6.1.3.7 Homework

Name _____ Date _____

6.1.3.7 Homework

1. Over a period of 3 hours, 180 leaves fell from a tree. At this rate, how many leaves fell in one hour?
2. Georgia drove a total of 252 miles and used 12 gallons of gasoline. What is this rate in miles per gallon?
3. Tyler scored 21 goals in 7 soccer games. At this rate, about how many goals did he score each game?
4. While climbing down a mountain, Anthony descended 45 feet every hour. At this rate, how many feet will he descend in 6 hours?

6.1.3.7 Additional Resource

Name _____ Date _____

Task: 6.1.3.7 Price per Pound and Pounds Per Dollar CCSSM 6.RP.3

The grocery store sells beans in bulk. The grocer's sign above the beans says,

5 pounds for \$4.

At this store, you can buy any number of pounds of beans at this same rate, and all prices include tax.

Alberto said,

"The ratio of the number of dollars to the number of pounds is 4:5. That's \$0.80 per pound."

Beth said,

"The sign says the ratio of the number of pounds to the number of dollars is 5:4. That's 1.25 pounds per dollar."

- Are Alberto and Beth both correct? Explain.
- Claude needs two pounds of beans to make soup. Show Claude how much money he will need.
- Dora has \$10 and wants to stock up on beans. Show Dora how many pounds of beans she can buy.
- Do you prefer to answer parts (b) and (c) using Alberto's rate of \$0.80 per pound, using Beth's rate of 1.25 pounds per dollar, or using another strategy? Explain.

Alignment 1:6.RP.2

Grade

6

Domain

RP: Ratios and Proportional Relationships

Cluster

Understand ratio concepts and use ratio reasoning to solve problems.

Standard

Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger." Expectations for unit rates in this grade are limited to non-complex fractions.

Commentary:

This task could be used by teachers to help students develop the concept of unit rates. Its purpose is to help students see that when you have a context that can be modeled with a ratio and associated unit rate, there is almost always another ratio with its associated unit rate (the only exception is when one of the quantities is zero), and to encourage students to flexibly choose either unit rate depending on the question at hand.

Item (d) admits many different answers and is intended to prompt a teacher-facilitated discussion of different student strategies. A productive discussion could develop around side-by-side comparisons of strategies that apply Alberto's rate and strategies that apply Beth's rate.

Solution:

Solution: Using a ratio table

(a) Alberto and Beth are both correct. Their rates could be illustrated with a double number line or a ratio table like the following:

Pounds	Dollars
1	80
1.25	1
2.5	2
5	4

(b) Double the quantities in Alberto's rate to find the price of two pounds

Pounds	Dollars
1	80
2	1 60

(c) Starting from Beth's rate and multiplying both quantities by ten shows the number of pounds that can be purchased for 10 dollars:

Pounds	Dollars
1.25	1
12.50	10

(d) Answers may vary. We can efficiently answer part (b) using Alberto's rate and part (c) using Beth's rate.

Grade 7 Sample Lesson

Rochester Instructional Framework

7.2.2.2 (proportional vs. non proportional)

Time Frame: 90 minutes

Domain: Ratios and Proportional Relationships

Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems.

Standard:

7RP.2.A: Decide whether two quantities are in a proportional relationship.

7RP.2.C: Represent proportional relationships by equations.

7RP.2.D: Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.

Mathematical Practices:

Model with mathematics; Look for and make use of structure; Look for and express regularity in repeated reasoning

Vocabulary: ratio; proportion; proportional relationship, constant of proportionality = unit rate

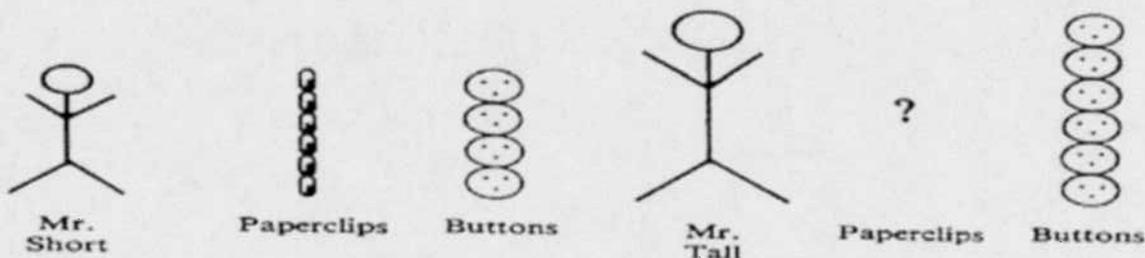
Materials: large visual of Bridge picture

Essential Question:

What are the properties of a proportional relationship and what are the properties of a non-proportional relationship?

The Bridge: In the picture, they use paperclips and buttons to measure Mr. Small. Now you use the buttons to measure Mr. Tall. How many paperclips tall is Mr. Tall? How do you know, explain your answer.

(Teachers: Most students will say Mr. Tall is eight paperclips tall. The misconception is: they added two more buttons equivalent to the height of Mr. Tall therefore they must also add two more paperclips to measure Mr. Tall. Actually, there are three paperclips to every two buttons equal to the height of Mr. Short. Therefore, you should add another three paperclips to equal the height of Mr. Tall. This would be a total of nine paperclips to measure Mr. Tall, not eight paperclips.)



(Teacher Notes)

Read the problem together and discuss questions as you examine different representations of the word problem in data tables, in graphs and in equations. Guide the students in exploring the properties of a proportional relationship and the properties of a non-proportional relationship.

Jet Ski Rentals

Adriana has an opportunity to go jet skiing on Canandaigua Lake for the 4th of July. She looked up the prices to rent a jet ski for the long weekend. Below is the information Adriana gathered from two different Jet Ski Rental companies: Canandaigua Jets and the Jackson Jet Ski company. You are going to explore what might be the properties of a proportional relationship and what might be the properties of a non-proportional relationship, Use the data tables below to help you answer some questions.

Work Period:**A. USING TABLES TO DETERMINE PROPORTIONALITY**

Calculate the ratio of $\frac{y}{x}$, $\left(\frac{\text{cost}}{\text{hour}}\right)$ in each data table. This is the unit rate. Then answer the questions below.

Canandaigua Jets

(x) (y)

NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$45	
2	\$90	
3	\$135	
4	\$180	
5	\$225	

Jackson Jet Ski Company

(x) (y)

NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$75	
2	\$120	
3	\$165	
4	\$210	
5	\$255	

Fill in the equations for this table.

- 1] How are the tables alike? _____
- 2] How are they different? _____
- 3] Which one is proportional? _____
- 4] What makes it a proportional relationship? _____

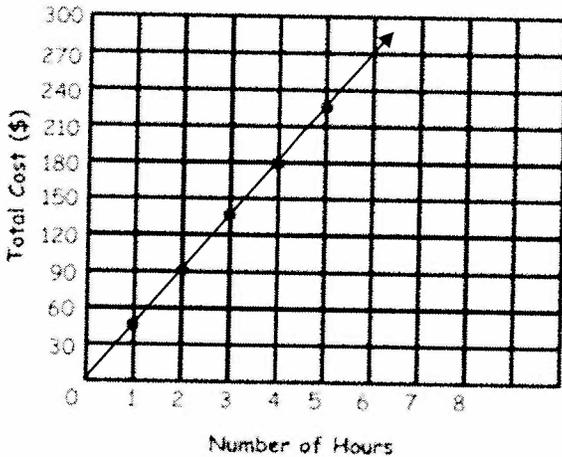


To determine proportionality from a table you _____

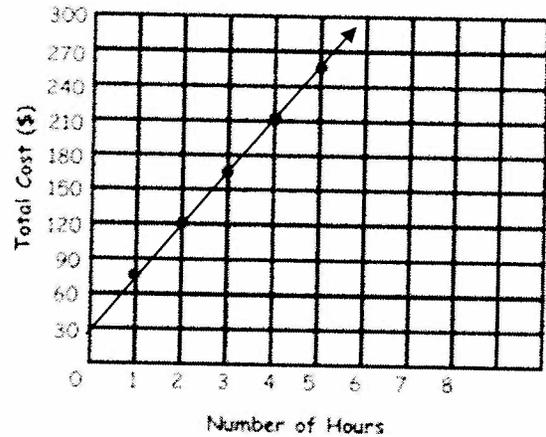
B. USING GRAPHS TO DETERMINE PROPORTIONALITY

Look at the graphs of Canandaigua Jet Ski Company and Jackson Jet Ski Company. Make observations of each graph and answer the questions below.

Canandaigua Jets
(Jet Ski Rentals)



Jackson Jet Ski Company
(Jet Ski Rentals)



- 1] How are the graphs alike?
- 2] How are they different?

- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from a graph, _____

C. USING EQUATIONS TO DETERMINE PROPORTIONALITY

Canandaigua Jets Company

Jackson Jet Ski Company

$$y = 45x$$

$$y = 45x + 30$$

- 1] How are the equations alike?
- 2] How are they different?
- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from an equation, _____

Summary:

Facilitate a class discussion reviewing what the properties of a proportional relationship are and the properties of a non-proportional relationship in: a table; graph; and in equation.

Closure:

Journal write: students write one example of a proportional relationship and one example of a non-proportional relationship that they are familiar with from their everyday lives. (Examples can be used for homework.)

Name _____

Date _____

Hwk 7.2.3.1 Proportional Reasoning

Definition of Proportional Relationship

Facts/ Characteristics

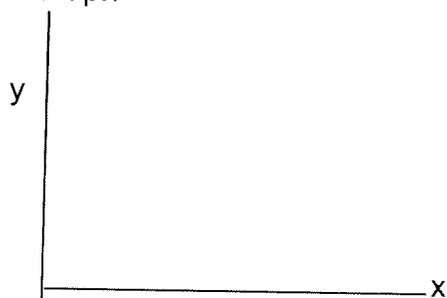
Proportional Relationships

Examples of Proportionality

1) Table

x	y	Ratio $\frac{y}{x}$

2) Graph



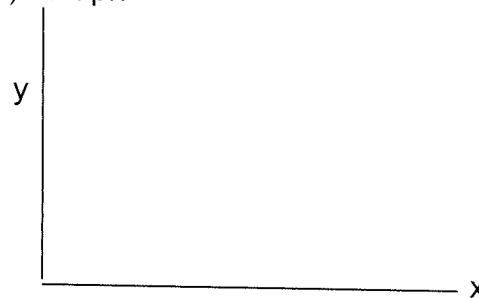
3) Equation _____

Non-Examples of Proportionality

1) Table

x	y	Ratio $\frac{y}{x}$

2) Graph



3) Equation _____

Name _____

Date _____

7.2.2.2 CWK

Jet Ski Rentals

Adriana has an opportunity to go jet skiing on Canandaigua Lake for the 4th of July. She looked up the prices to rent a jet ski for the long weekend. Below is the information Adriana gathered from two different Jet Ski Rental companies: Canandaigua Jets and the Jackson Jet Ski company. You are going to explore what might be the properties of a proportional relationship and what might be the properties of a non-proportional relationship, Use the data tables below to help you answer some questions.

A. USING TABLES TO DETERMINE PROPORTIONALITY

Calculate the ratio of $\frac{y}{x}$, $\left(\frac{\text{cost}}{\text{hour}}\right)$ in each data table. This is the unit rate. Then answer the questions below.

Canandaigua Jets

Jackson Jet Ski Company

(x)	(y)	
NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$45	
2	\$90	
3	\$135	
4	\$180	
5	\$225	

(x)	(y)	
NUMBER OF HOURS	TOTAL COST (\$)	RATIO: $\frac{y}{x}$
1	\$75	
2	\$120	
3	\$165	
4	\$210	
5	\$255	

Fill in the equations for this table.

1] How are the tables alike? _____

2] How are they different? _____

3] Which one is proportional? _____

4] What makes it a proportional relationship? _____

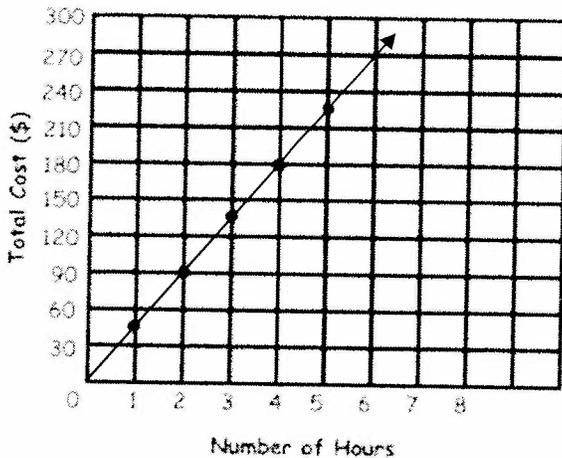


To determine proportionality from a table you _____

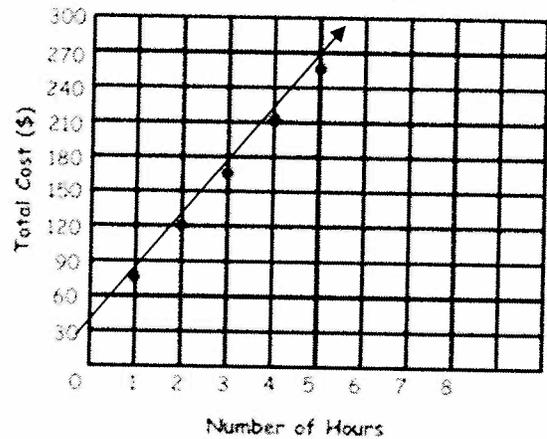
B. USING GRAPHS TO DETERMINE PROPORTIONALITY

Look at the graphs of Canandaigua Jet Ski Company and Jackson Jet Ski Company. Make observations of each graph and answer the questions below.

Canandaigua Jets
(Jet Ski Rentals)



Jackson Jet Ski Company
(Jet Ski Rentals)



1] How are the graphs alike?

2] How are they different?

- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from a graph, _____

C. USING EQUATIONS TO DETERMINE PROPORTIONALITY

Canandaigua Jets Company

Jackson Jet Ski Company

$$y = 45x$$

$$y = 45x + 30$$

- 1] How are the equations alike?
- 2] How are they different?
- 3] Which one is proportional?
- 4] What makes it a proportional relationship?



To determine proportionality from an equation, _____

DRAFT

Name _____

Date _____

7.2.2.2 HWK

Definition of Proportional Relationship

Facts/ Characteristics

Proportional Relationships

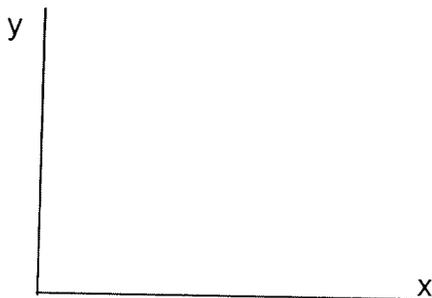
Examples of Proportionality

Non-Examples of Proportionality

4) Table

	x	y	Ratio $\frac{y}{x}$
$\frac{y}{x}$			

5) Graph

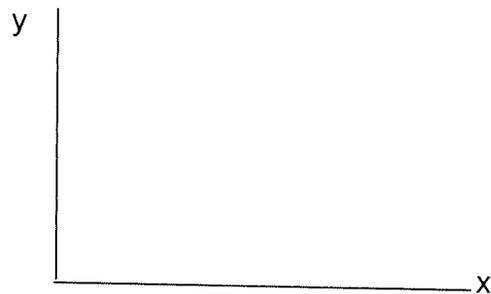


6) Equation _____

1) Table

	x	y	Ratio

2) Graph



3) Equation _____

Grade 8 Sample Lesson

Rochester Instructional Framework

Grade 8 Unit 1 CCSSM3 Lesson 8 RIF
(Proportional Reasoning)

Recommended time: 90 minutes

Domain: Expressions and Equations

Cluster: Understand the connections between proportional relationships, lines, and linear equations.

Common Core Standard: 8.EE.6 Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b .

Mathematical Practices: Make sense of problems and persevere in solving them
Construct viable arguments and critique the reasoning of others
Use appropriate tools strategically
Look for and make use of structure

Vocabulary: point-slope form

Essential Question: What does an equation in point-slope form look like and how do we graph it?

The Bridge: The cost for 1,2,3 and 4 people to go the zoo is shown in the table.

Number of People, x	1	2	3	4
Total Cost, y	\$13	\$22	\$31	\$40

Is the relationship linear? Explain.

What is the slope of the related graph?

Write an equation of the line in slope-intercept form.

Mini Lesson: The linear equation $y - y_1 = m(x - x_1)$ is written in point-slope form, where (x_1, y_1) is a given point on a nonvertical line and m is the slope of the line. Notice that this really just came from the slope formula:

$$\frac{y - y_1}{x - x_1} = m \quad \text{slope formula}$$

$$\frac{x - x_1}{1} \cdot \frac{y - y_1}{x - x_1} = m \cdot \frac{x - x_1}{1} \quad \text{multiplication property of equality}$$

$$\frac{\cancel{x - x_1}}{1} \cdot \frac{y - y_1}{\cancel{x - x_1}} = m \cdot \frac{x - x_1}{1} \quad \text{cross cancel}$$

$$y - y_1 = m(x - x_1)$$

You can write an equation of a line in slope-intercept form when you know the slope and the y -intercept. You can write an equation of a line in **point-slope form** when you are given the slope and the coordinates of a point on the line that is not the y -intercept.

Example:

Write an equation in point-slope form for the line that passes through $(-2, 3)$ with a slope of 4.

$$y - y_1 = m(x - x_1) \quad \text{point-slope form}$$

$$y - 3 = 4(x - (-2)) \quad (x_1, y_1) = (-2, 3), m = 4$$

$$y - 3 = 4(x + 2) \quad \text{Simplify}$$

Write the slope-intercept form of this equation.

$$y - 3 = 4(x + 2) \quad \text{write the equation}$$

$$y - 3 = 4x + 8 \quad \text{distributive property}$$

$$\begin{array}{r} +3 \quad +3 \\ y - 3 = 4x + 8 \end{array} \quad \text{addition property of equality}$$

$$y = 4x + 11 \quad \text{simplify}$$

Check: Substitute the coordinates of the given point in the equation.

$$y = 4x + 11$$

$$3 = 4(-2) + 11$$

$$3 = 3$$

Let's put it all together: How can we write a linear equation?

from slope and a point – substitute the slope m and the coordinates of the point in $y - y_1 = m(x - x_1)$

from slope and y-intercept – substitute the slope m and y-intercept b in $y = mx + b$

from a graph – find the y-intercept b and the slope m from the graph, then substitute the slope and y-intercept in $y = mx + b$

from two points – use the coordinates of the points to find the slope. Substitute the slope and coordinates

of one of the points in $y - y_1 = m(x - x_1)$.

from a table – use the coordinates of the two points to find the slope, then substitute the slope and coordinates of one of the points in $y - y_1 = m(x - x_1)$

The form you use to write a linear equation is based on the information you are given.

Work Period: Divide the class up into 8 groups (hopefully about 3-4 students per group). Give each group a separate worksheet. Worksheets #1- 4 have the same situations but given different pieces of information. Worksheets #5 – 8 have the same situations but given different pieces of information. When groups have completed the worksheets, have them put their work on poster paper. Have students walk around and put Post-its on other groups' posters. Each person should put 1 positive Post-it and 1 constructive criticism Post-it.

Think and Discuss

1. Think about the other 3 groups that had the same situations your group had. Even though your group was given different information (for example, maybe you were given a table but another group was given a graph, etc.) did your group come up with the same equations as the others? What piece of information (graph, table or description) would you prefer to have in order to derive the linear equation? Explain.
2. Each representation (graph, table and equation) has its advantages and disadvantages. Think of at least 1 advantage and 1 disadvantage for each representation.

Summary/Closure: Have students answer the essential question.

Journal Entry – In the soccer ball problem, students were told to assume that it was a linear relationship between distance the ball traveled and time. Do you think in real life this really is a linear situation? Explain.

Homework: Worksheet

Learning Extensions: Write a linear equation that is in point-slope form. Identify the slope and name a point on the line.

Name: _____

Date: _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 - (8.1.3.8)

Activity #1

Work Period

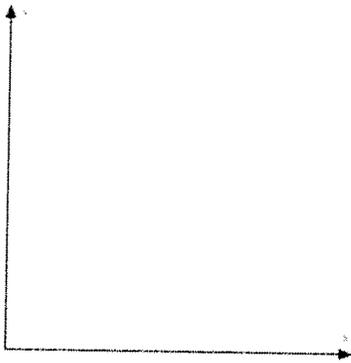
Janelle's party:

Janelle is planning a party. The cost for 20 people is \$250. The cost for 70 people is \$750. Write an equation in point-slope form and in slope-intercept form to represent the cost y of having a party for x people.

Point-slope form: _____

Slope-intercept form: _____

Draw a graph of the line.



Fill in the table

Number of people	Cost (\$)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How much would a party cost if she invited 60 people?

Lesson: 8.1.3.8

Science experiment:

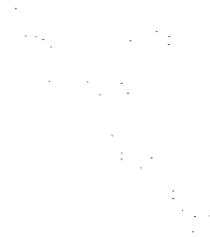
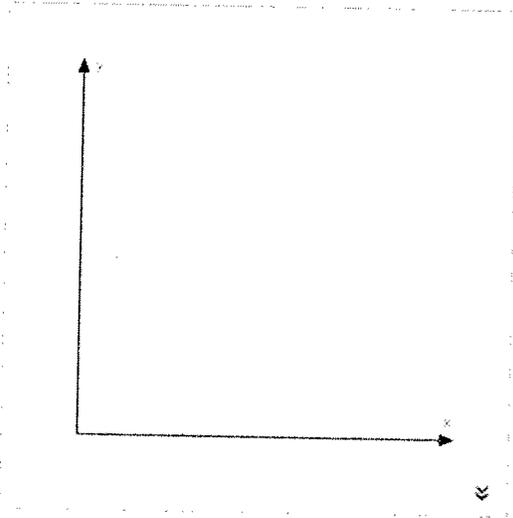
Michael measured the height of a plant every week. He recorded the information in the table. Assuming the growth is linear, write an equation in point-slope form and y-intercept form to represent the height y of the plant after x weeks.

Point-slope form: _____

Slope-intercept form: _____

Weeks	Height (In.)
5	13
10	14
15	15
20	16

Draw a graph of the line



What does the slope represent in this situation?

What does the y-intercept represent in this situation?

In how many weeks will the plant be 20 inches tall?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

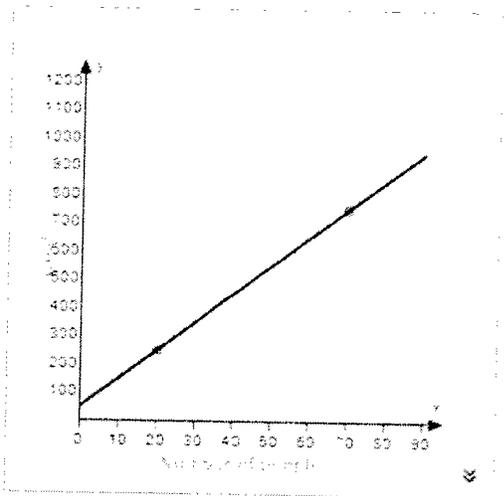
Activity #2

Janelle's party:

Janelle is planning a party. Below is a graph that represents the cost of the party vs. how many people she invites. Write an equation in point-slope form and in slope-intercept form to represent the cost y of having a party for x people.

Point-slope form: _____

Slope-intercept form: _____



Fill in a table

Number of people	Cost (\$)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How much would a party cost if she invited 60 people?

Name: _____

Date _____

Lesson #8 (8.1.3.8)

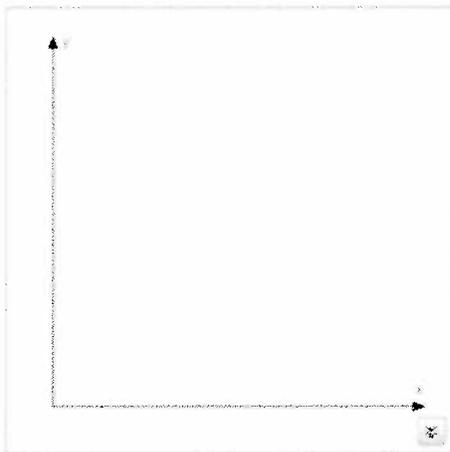
Science experiment:

Michael measured the height of a plant every week. After 5 weeks, the plant was 13 inches tall. After 10 weeks, it was 14 inches tall. Assuming the growth is linear, write an equation in point-slope form and y-intercept form to represent the height y of the plant after x weeks.

Point-slope form: _____

Slope-intercept form: _____

Draw a graph of the line



Fill in the table

Weeks	Height (In.)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

In how many weeks will the plant be 20 inches tall?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

Activity #3

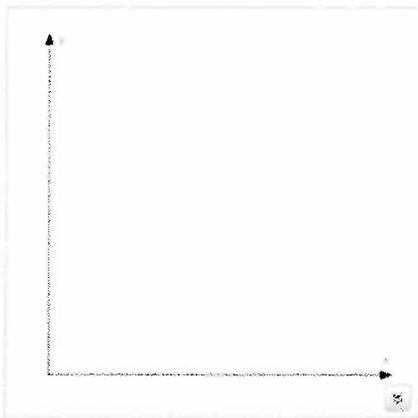
Janelle's party:

Janelle is planning a party. Below is a table that represents the cost of the party vs. how many people she invites. Write an equation in point-slope form and in slope-intercept form to represent the cost y of having a party for x people.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Number of people	Cost (\$)
20	250
30	350
40	450
50	550

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How much would a party cost if she invited 60 people?

Name: _____

Date _____

Lesson #8 (8.1.3.8)

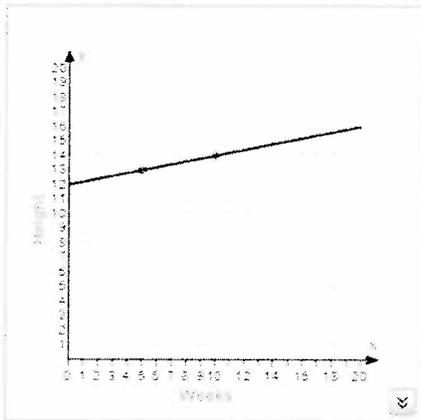
Science experiment:

Michael measured the height of a plant every week. Below is a graph of a line of what he found. Assuming the growth is linear, write an equation in point-slope form and y-intercept form to represent the height y of the plant after x weeks.

Point-slope form: _____

Slope-intercept form: _____

Fill in the table



Weeks	Height (In.)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

In how many weeks will the plant be 20 inches tall?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

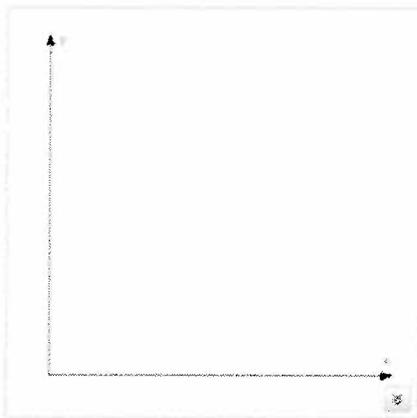
Activity #4

Janelle is planning a party. Below is a table that represents the cost of the party vs. how many people she invites. Write an equation in point-slope form and in slope-intercept form to represent the cost y of having a party for x people.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Number of people	Cost (\$)
20	250
30	350
40	450
50	550

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How much would a party cost if she invited 60 people?

Name: _____

Date _____

Lesson #8 (8.1.3.8)

Work Period

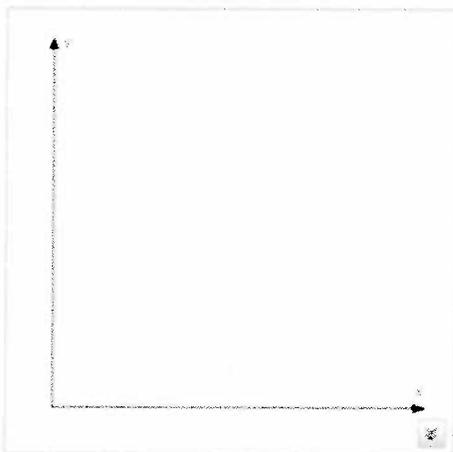
Science experiment:

Michael measured the height of a plant every week. After 5 weeks, the plant was 13 inches tall. After 10 weeks, it was 14 inches tall. Assuming the growth is linear, write an equation in point-slope form and y-intercept form to represent the height y of the plant after x weeks.

Point-slope form: _____

Slope-intercept form: _____

Draw a graph of the line



Fill in the table

Weeks	Height (In.)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

In how many weeks will the plant be 20 inches tall?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

Activity #5

Penalty kick:

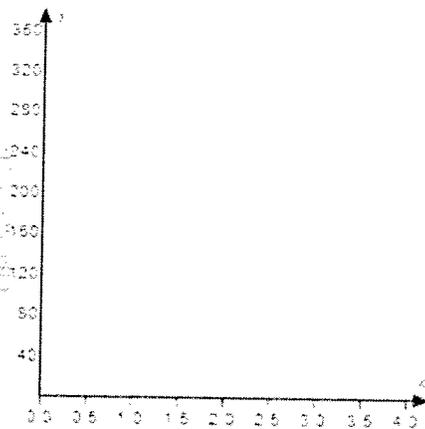
After 2 seconds on a direct kick in soccer, the ball travels 160 feet. After 2.75 seconds on the same kick, the ball travels 220 feet. Assuming this is a linear relationship, write an equation in point-slope form and slope-intercept form to represent the distance y of the ball after x seconds.

Point-slope form: _____

Slope-intercept form: _____

Graph the line

Fill in the table



Time (seconds)	Distance (feet)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How far would the ball travel after 4 seconds?

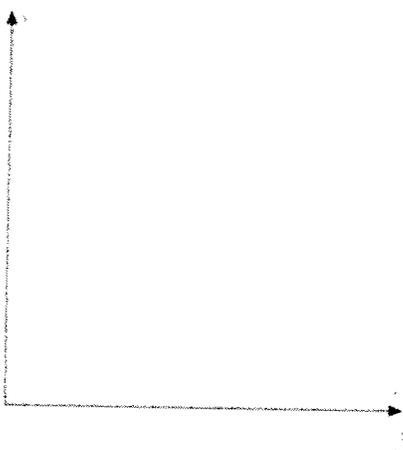
Spirit Buttons:

The cost for making spirit buttons is shown in the table. Write an equation in point-slope form and slope-intercept form to represent the cost y of making x buttons.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Number of Buttons	Cost (\$)
100	25
150	35
200	45
250	55

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

Suppose you want to get spirit buttons for the entire Rochester City School District and you figure you would need about 3,000 buttons. How much would this cost?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

Activity #6

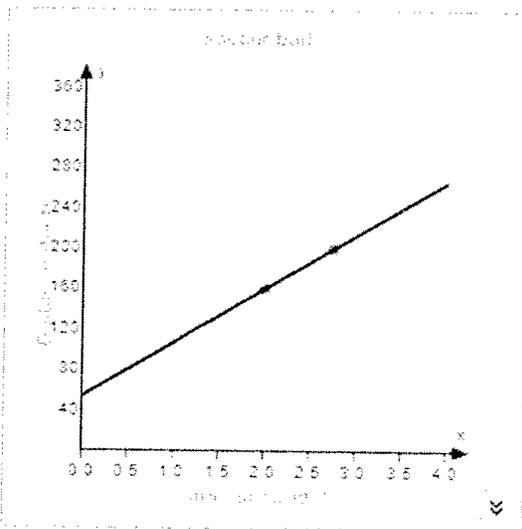
Soccer kick:

The graph of a line below compares a soccer ball's distance vs. time after it has been kicked. Assuming this is a linear relationship, write an equation in point-slope form and slope-intercept form to represent the distance y of the ball after x seconds.

Point-slope form: _____

Slope-intercept form: _____

Fill in the table



Time (seconds)	Distance (feet)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How far would the ball travel after 4 seconds?

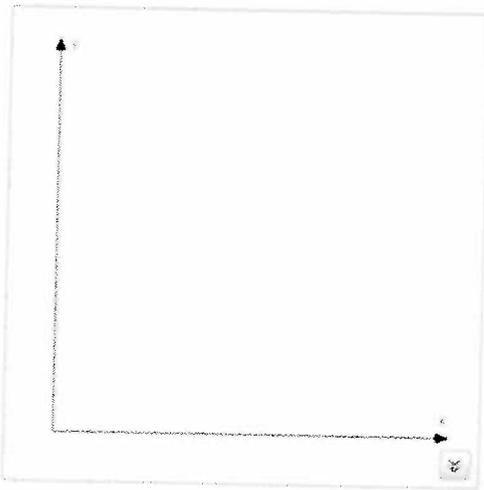
Spirit Buttons:

The cost for making spirit buttons is shown in the table. Write an equation in point-slope form and slope-intercept form to represent the cost y of making x buttons.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Number of Buttons	Cost (\$)
100	25
150	35
200	45
250	55

What does the slope represent in this situation?

What does the y -intercept represent in this situation?

Suppose you want to get spirit buttons for the entire Rochester City School District and you figure you would need about 3,000 buttons. How much would this cost?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Activity #7

Work Period

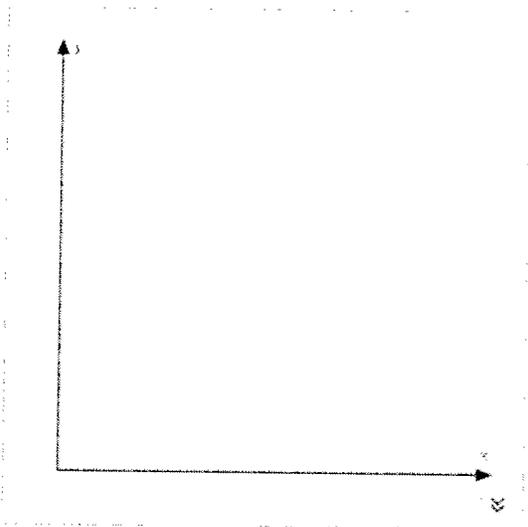
Soccer kick:

The table below represents the distance a soccer ball travels after being kicked vs. time. Assuming this is a linear relationship, write an equation in point-slope form and slope-intercept form to represent the distance y of the ball after x seconds.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Time (seconds)	Distance (feet)
1.5	120
2	160
2.5	200
3	240

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

How far would the ball travel after 4 seconds?

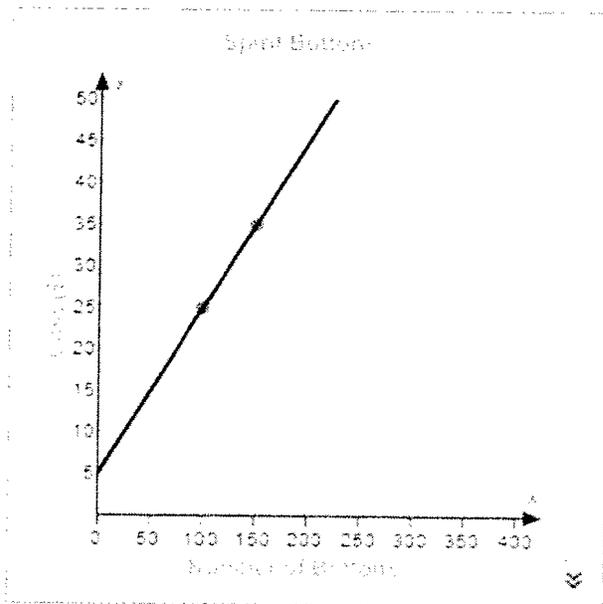
Spirit Buttons:

Suppose you want to purchase spirit buttons. The graph below shows you the cost vs. the quantity of buttons. Write an equation in point-slope form and slope-intercept form to represent the cost y of making x buttons.

Point-slope form: _____

Slope-intercept form: _____

Fill in the table



Number of Buttons	Cost (\$)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

Suppose you want to get spirit buttons for the entire Rochester City School District and you figure you would need about 3,000 buttons. How much would this cost?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.

Lesson #8 (8.1.3.8)

Work Period

Activity #8

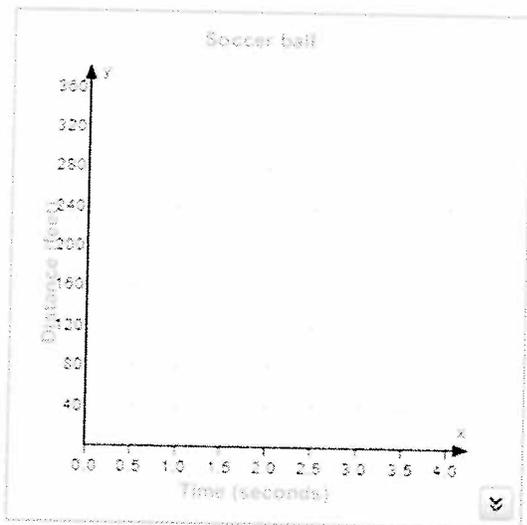
Soccer kick:

After 2 seconds on a direct kick in soccer, the ball travels 160 feet. After 2.75 seconds on the same kick, the ball travels 220 feet. Assuming this is a linear relationship, write an equation in point-slope form and slope-intercept form to represent the distance y of the ball after x seconds.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Fill in the table

Time (seconds)	Distance (feet)

What does the slope represent in this situation?



What does the y-intercept represent in this situation?

How far would the ball travel after 4 seconds?

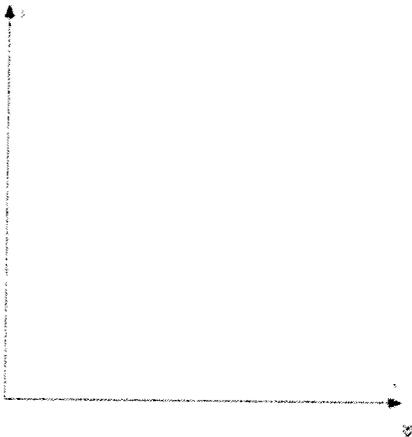
Spirit Buttons:

Suppose you want to purchase spirit buttons. A company says that will charge you \$25 for 100 buttons, \$35 for 150 buttons and so on. Write an equation in point-slope form and slope-intercept form to represent the cost y of making x buttons.

Point-slope form: _____

Slope-intercept form: _____

Graph the line



Fill in the table

Number of Buttons	Cost (\$)

What does the slope represent in this situation?

What does the y-intercept represent in this situation?

Suppose you want to get spirit buttons for the entire Rochester City School District and you figure you would need about 3,000 buttons. How much would this cost?

Name: _____

Date _____

Understand the connections between proportional relationships, lines, and linear equations.
Lesson #8

Homework

Directions: Write an equation in point-slope form and slope-intercept form for each line. Show all work.

1.) passes through (1, 9), slope = 2

2.) passes through (4, -1), slope = -3

3.) passes through (-4, -5), slope = $\frac{3}{4}$

4.) passes through (3, -6) and (-1, 2)

5.) passes through (4, -4) and (8, -10)

6.) passes through (3, 4) and (5, -4)

Integrated Algebra Sample Lesson

Rochester Instructional Framework

Integrated Algebra Lesson Plan: System of Equations and Inequalities

Result 4

Performance Indicator: A.A.10

CCSSM Emphasis: Create equations that describe numbers or relationships (A-CED 3)

Essential Question: How do you solve verbal problems whose solution requires solving a system of equations?

The Bridge (Warm-up):

1. What is the value of the y -coordinate of the solution to the system of equations $x + 2y = 9$ and $x - y = 3$?

- (1) 6 (3) 3
(2) 2 (4) 5

2. What is the value of the y -coordinate of the solution to the system of equations $x - 2y = 1$ and $x + 4y = 7$?

- (1) 1 (3) 3
(2) -1 (4) 4

The Mini Lesson:

- Model the following problem:
- 1. Jack bought 3 slices of cheese pizza and 4 slices of mushroom pizza for a total cost of \$12.50. Grace bought 3 slices of cheese pizza and 2 slices of mushroom pizza for a total cost of \$8.50. What is the cost of one slice of mushroom pizza?
- 2. The sophomore class at South High School raised \$800 from the sale of tickets to a dance. Tickets sold for \$1.50 in advance and \$2.00 at the door. If a total of 475 tickets were sold, what was the number of tickets sold at the door?

Work Period

- See attached worksheet

Summary/ Closure:

1. The cost of 3 markers and 2 pencils is \$1.80. The cost of 4 markers and 6 pencils is \$2.90. What is the cost of each item? Include appropriate units in your answer.
2. Ramón rented a sprayer and a generator. On his first job, he used each piece of equipment for 6 hours at a total cost of \$90. On his second job, he used the sprayer for 4 hours and the generator for 8 hours at a total cost of \$100. What was the hourly cost of *each* piece of equipment?

Homework:

- See attached work period PDF from Above
- Apprentice Problems Attached below as a word document
- More examples can be found at jmap.org or <http://www.regentsprep.org/Regents/math/ALGEBRA/AE3/PracWord.htm>

Integrated Algebra

Name: _____

Algebraic Systems

- | | |
|----|---|
| 1. | <p>The freshman class at Boomtown High School raised \$930 from the sale of tickets to the spring dance. Tickets were \$3.50 if purchased in advance and \$5.00 if purchased at the door. If 225 tickets were sold, what is the total number of tickets sold at the door? <i>[Show or explain the procedure used to obtain your answer.]</i> [10]</p> |
| 2. | <p>Cedric and Zelda went shopping at Price Buster. Cedric bought 2 jumbo rolls of aluminum foil and 3 packages of AA batteries for a total cost of \$21. Zelda bought 5 identical jumbo rolls of aluminum foil and 2 identical packages of AA batteries for a total cost of \$25. Find the cost of 1 roll of aluminum foil and find the cost of 1 package of AA batteries. <i>[Only an algebraic solution will be accepted.]</i> [10]</p> |

3. The Town Recreation Department ordered a total of 100 balls and bats for the summer baseball camp. Balls cost \$4.50 each and bats cost \$20.00 each. The total purchase was \$822.00. How many of each item were ordered? *[Use any method to arrive at your answer. Show all work.]* [10]

4. The senior class at Northwest High School needed to raise money for the yearbook. A local sporting goods store donated hats and T-shirts. The number of T-shirts was three times the number of hats. The seniors charged \$5 for each hat and \$8 for each T-shirt. If the seniors sold everything and raised \$435, what was the total number of hats and the total number of T-shirts that were sold? *[Show or explain the procedure used to obtain your answer.]* [10]

Geometry Sample Lesson

Rochester Instructional Framework

Geometry Concepts of Density

CCSSM: G.MG. Apply concepts of density based on area and volume in modeling situations (e.g. persons per square mile, btu's per cubic foot)

45 -90 minutes estimated

Warm Up: (10 minutes)

There will be a concert at school and the audience will be allowed to stand on the football field that measures 120 yards long(including end zones) and 70 yards wide. There will be no other seating. You want to sell enough tickets to make a sizeable profit, but you want to ensure the safety of the audience and not overcrowd. What is a reasonable number of tickets to sell? Explain your answer clearly.



The Mini Lesson: Conceptual Understanding

Allow students to explain their thinking from the Warm Up activity. Try to move students to explain their solution in terms of a safe number of people per square yard or even per square foot. If you use people per square yard, encourage students to discuss how they decide what is a safe number of people to fit - Did they use width of shoulder of a typical person?

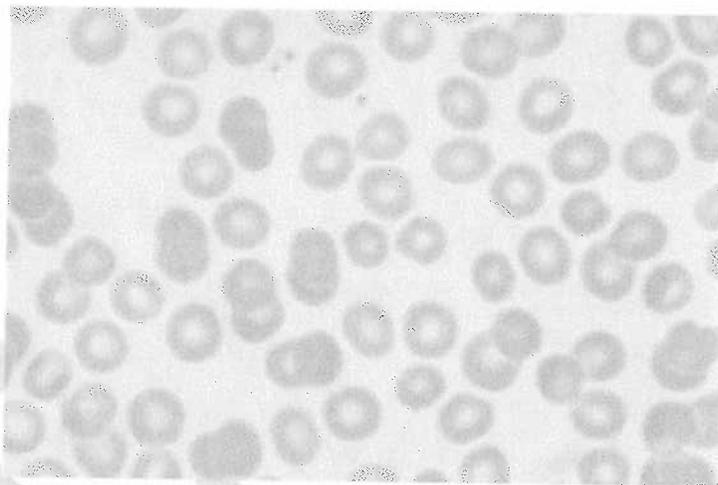
Allow multiple students to demonstrate their solution and encourage other students to ask questions to presenters.

Work Period: Application

With your partner, complete the following problem:

About how many cells are in the human body ?

You can assume that a cell is a sphere with radius 10^{-3} cm and that the density of a cell is approximately the density of water which is 1g/cm^3 .

**Teacher Notes:**

The purpose of this task is for students to apply the concepts of mass, volume, and density in a real-world context. There are several ways one might approach the problem, e.g., by estimating the volume of a person and dividing by the volume of a cell. The main pitfall with that approach is that students generally know how much a person weighs, but are less likely to make accurate estimates of a person's volume. The task provides an opportunity to think about attention to mathematical precision. Note that despite maintaining several digits of accuracy throughout the calculation, we report an answer with only one significant digit.

Students may need to be reminded that mass = density x volume. And one pound is approximately 454 grams.

After students have worked on this problem, teachers should spend some time discussing the reasonableness of the assumptions provided. Cells are not really spherical, for example, but getting the right order of magnitude for the volume is probably sufficient for this type of estimation. (For example, if we replace our spherical model of a cell by a cubical model, our net estimate will be cut approximately in half). Also, different cells are likely to have different densities and are not all packed together as tightly in all parts of the body (consider bone cells, for example). This task could be nicely paired with work in a biology class where students could discuss these issues in more depth.

Summary/ Closure:

Allow students to present multiple solutions. Be sure to discuss the enormity and magnitude of the number of cells. It turns out that a 100 lb person has approximately ten trillion cells. Ten trillion is a very interesting number to discuss!

Extension:

What other real life applications depend on density of area or volume. Write out several examples.

Homework:

You have been hired by the owner of a local ice cream parlor to assist in his company's new venture. The company will soon sell its ice cream cones in the freezer section of local grocery stores. The manufacturing process requires that the ice cream cone be wrapped in a cone-shaped paper wrapper with a flat circular disc covering the top. The company wants to minimize the amount of paper that is wasted in the process of wrapping the cones. Use a real ice cream cone or the dimensions of a real ice cream cone to complete the following tasks.

- Sketch a wrapper like the one described above, using the actual size of your cone. Ignore any overlap required for assembly.
- Use your sketch to help you develop an equation the owner can use to calculate the surface area of a wrapper (including the lid) for another cone given its base had a radius of length, r , and a slant height, s .
- Using measurements of the radius of the base and slant height of your cone, and your equation from the previous step, find the surface area of your cone.
- The company has a large rectangular piece of paper that measures 100 cm by 150 cm. Estimate the maximum number of complete wrappers sized to fit your cone that could be cut from this one piece of paper. Explain your estimate.

Algebra 2 with Trigonometry Sample Lesson

Rochester Instructional Framework

Algebra 2 with Trig
Modeling Periodic Behavior

CCSSM: F.IF. Model periodic phenomena with trigonometric functions

Essential Question: How do you use trigonometric functions to model periodic behavior?**(Warm-up): Fluency**

For each of the following functions, find the amplitude, period, and phase shifts.

1. $y = 5 \sin 2x + 3$

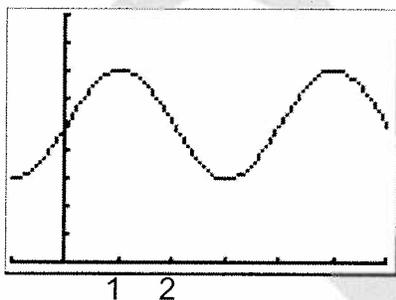
2. $y = 2 \cos \frac{1}{2}(x - 2) - 1$

3. $y = \cos \frac{\pi}{2}(x - 1) + 3$

4. $y + 3 = 6 \sin \frac{\pi}{4}(x + 2)$

The Mini Lesson: Fluency and Conceptual Understanding

To answer questions 1-5, refer to the picture of the trigonometric function below. Scale increase by 1



1. What is the amplitude?
2. What is the period?
3. What is the axis of the wave?
4. If the wave is considered to be a translation of the sine graph, what are the horizontal and vertical translation amounts? What is the sine equation?
5. If the wave is considered to be a translation of the cosine graph, what are the horizontal and vertical translation amounts? What is the cosine equation?

Work Period: Application

With your partner, complete the following problem. An accurate graph must be .

You are sitting on a pier watching the waves when you notice a bottle in the water. The bottle bobs so that it is between 2.5 ft and 4.5 ft below the pier. You know you can reach 3 ft below the pier.

Suppose the bottle reaches its highest point every 5 s.

a. Sketch a graph of the bottle's distance below the pier for 15 s. Assume that at $t = 0$, the bottle is closest to the pier.

b. Find the period and the amplitude of the function. Write the equation of the function.

c. **Estimation** Use your graph to estimate the length of time the bottle is within reach during each cycle. Explain your answer in context.

Extension:

The function $y = 1.5 \sin\left(\frac{\pi}{6}(x - 6)\right) + 2$ represents the average monthly rainfall for a town in Central Florida, where x represents the number of the month. (January = 1, February = 2, etc...) Rewrite the function using a cosine model.

Summary/ Closure:

Sketch the graph: $y = -3 \sin\left(x - \frac{\pi}{6}\right)$. Identify the amplitude, period, and phase shifts.

Homework:

- Page 872, 7, 13, 15, 17, 24, 27, 46 Graph paper is needed.

Calculus Sample Lesson

Rochester Instructional Framework

Calculus
Applications of Optimization

45 minutes estimated

Warm Up: (10 minutes)

The function $f(x) = x^2 - ax + b$ has a relative minimum at $x = 2$. Find a .

Minilesson:

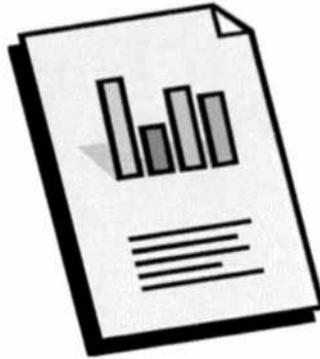
GUIDELINES FOR SOLVING MAX./MIN. PROBLEMS

1. Read each problem slowly and carefully. Sometimes words can be ambiguous. It is imperative to know exactly what the problem is asking. If you misread the problem, you will have difficulty solving it correctly.
2. If appropriate, draw a sketch or diagram of the problem to be solved. Pictures are a great help in organizing and sorting out your thoughts.
3. Define variables to be used and carefully label your picture or diagram with these variables. This step is very important because it leads directly or indirectly to the creation of mathematical equations.
4. Write down all equations which are related to your problem or diagram. Clearly denote that equation which you are asked to maximize or minimize.
5. Verify that your result is a maximum or minimum value using the first or second derivative test for extrema.

Example:

How can 20 be partitioned such that the product of one part and the square of the other part shall be a maximum?

Worktime:



It costs a manufacturer C dollars per item to make and distribute the item. If they sell each item for x dollars, it is estimated that the number N sold is given by the equation:

$$N = \frac{A}{x-C} + B(100 - x) \text{ where } A \text{ and } B \text{ are positive constants.}$$

What selling price will bring the maximum profit, if profit is represented by $p = xN - CN$

Teacher Notes: Please notice that C is also a constant. This task will require solid algebraic manipulation skills. The solution will not be numeric.

Extension:

A window has the outline of a semicircle on top of a rectangle. Suppose that there is $8 + \pi$ feet of wood trim available. Discuss why a window designer might want to maximize the area of the window. Find the dimensions of the rectangle that will maximize the area of the entire window.

High School Social Studies Course Sequence

Social Studies			
Grade 9	Grade 10	Grade 11	Grades 12
Prioritized Global History and Geography I* – Regents <i>*SpEd / IEP students only</i>	Prioritized Global History and Geography II* - Regents	Prioritized U.S. History* - Regents	Prioritized Participation in Government Economics*
Global History and Geography I - Regents	Global History and Geography II – Regents	U.S. History - Regents	Participation in Government Economics
Global History and Geography I - Regents	AP World History - Regents	AP U.S. History or IB: History of Americas	Participation in Government Economics or AP Government
		11 th grade Electives: Anthropology Psychology Sociology Leadership African American History	12 th grade electives History of the Americans Sociology, Psychology College Level Economics AP Government AP World History

Courses in bold represent the District CORE sequence

NOTE: 2013-14 School year only - students may semester Global 1 and Global 2 in 10th grade

New York State

Common Core K-8 Social Studies Framework

INTRODUCTION

Social Studies Education in the 21st Century: Rationale

In the interconnected world of the 21st century, it is necessary to revise the New York State *Resource Guide with Social Studies Core Curriculum* to ensure that teaching and learning in Social Studies are rigorous and prepare students to be college and career ready.

The K-8 Framework for Social Studies allows for:

- Students to develop an understanding of concepts and key ideas, driven by case studies, analysis of primary and secondary source documents, and an examination of patterns of events in history.
- Students to be assessed on their understanding of key ideas, as well as conceptual understandings.
- Students to be instructed across the K-8 spectrum using a coherent set of themes, key ideas, and concepts.
- Districts and teachers to have increased decision making power about how to teach and illustrate conceptual understandings and key ideas to promote student understanding. There will be multiple pathways to lead students to conceptual understandings.

Purpose of Social Studies

Social Studies is the integrated study of the social sciences and humanities intended to promote civic competence. Within the school program, Social Studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, belief systems, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of Social Studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (adapted from the National Council for the Social Studies [NCSS] definition of Social Studies).

Relationship to the *Learning Standards for Social Studies* and *Social Studies Resource Guide with Core Curriculum*

- The existing New York State *Learning Standards for Social Studies* serve as the foundation of the new Social Studies framework. Each Key Idea is derived from and aligned to one or more of these five standards.
- Most of the topical coverage in the *Social Studies Resource Guide with Core Curriculum* has been maintained. However, the curricula were reorganized and conceptualized to progress across grade levels and to focus on broad Key Ideas and Conceptual Understandings.
- The new framework fuses both the existing New York State Learning Standards and the reorganized and conceptualized curricula into a single document.
- The new framework provides 10 to 20 key ideas at each individual grade level. This differs from the 1996 New York State Learning Standards in which key ideas were provided at each of the grade bands — elementary, intermediate, and commencement.
- The emphasis in the new Social Studies framework is on Key Ideas and Conceptual Understandings for each grade level. In the previously released *Social Studies Resource Guide with Core Curriculum*, topical outlines were provided for each grade level.
- Unifying Themes based primarily on the National Council for the Social Studies themes, Common Core Literacy Skills, and Social Studies Practices are new features that provide common elements across all grades that serve to unify the framework, strengthen the progression of skills across the K-8 continuum, and establish a consistent design approach. These replace the concepts and themes for Social Studies and the Social Studies skills listed in the *Social Studies Resource Guide with Core Curriculum*.
- The new framework outlines the core conceptual content and focuses on what students should know. It does not describe or prescribe performance indicators or performance levels. The Common Core Literacy Skills and Social Studies Practices include the skills and habits of mind that should be developed and fostered using the content for each grade band.
- An accompanying Field Guide will be developed which will include sample outcomes (performance tasks aligned to the Key Ideas and Conceptual Understandings) that illustrate the integration of content, Common Core Literacy Skills, and Social Studies Practices. The Field Guide will also include recommended primary and secondary sources and Social Studies texts at all grade levels.

K-8 Social Studies Framework Follows the Outline of the Existing Core Curriculum

Grade	Content Focus
Kindergarten	Self and Others
Grade 1	My Family and Other Families, Now and Long Ago
Grade 2	My Community and Other United States Communities
Grade 3	Communities around the World – Learning about People and Places
Grade 4	Local History and Local Government
Grade 5	The United States, Canada, and Latin America
Grade 6	The Eastern Hemisphere
Grade 7	History of the United States and New York – I
Grade 8	History of the United States and New York – II

New York State Learning Standards for Social Studies

The five learning standards, adopted by the Board of Regents in 1996, continue to provide the overall foundation for the Social Studies framework. Each Key Idea is derived from and/or aligned to one of these standards as the primary standard. In many cases, a Key Idea represents more than one standard.

Standard 1: History of the United States and New York

Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.

Standard 2: World History

Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.

Standard 3: Geography

Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global—including the distribution of people, places, and environments over Earth's surface.

Standard 4: Economics

Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and nonmarket mechanisms.

Standard 5: Civics, Citizenship, and Government

Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for establishing governments; the governmental system of the United States and other nations; the United States Constitution; the basic civic values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, including avenues of participation.

New York State K-12 Common Core Learning Standards: Literacy Skills

The Common Core Learning Standards (CCLS) outline standards for literacy in Social Studies for grades 6-12, with distinct standards at the following grade bands: 6-8, 9-10, 11-12. In order to match the structure and outline of the Social Studies framework, the CCLS and Social Studies Practices required a 5-8, and 9-10 and 11-12 articulation of skills, so language was synthesized to match these grade bands (i.e., addition of grade 5 to the 6-8 band). In this case, teachers are asked to use their best judgment about which CCLS and Social Studies Practices should be applied at grade 5 in order to prepare students for the requirements and demands of grade 6.

College and Career Readiness Anchor Standards for Reading:

The grades 5-8 on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details:

1. Read closely to determine what the text says explicitly and to make logical references from it, and cite specific textual evidence when **writing** or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a **text** and analyze their development, and summarize the key supporting details and ideas.
3. Analyze how and why individuals, events, or **ideas** develop and interact over the course of a text.

Craft and Structure:

4. Interpret words and phrases as they are used in a **text**, including determining technical, connotative, and figurative meanings, and **analyze** how specific word choices shape meaning or tone.
5. Analyze the **structure** of texts, including how **specific** sentences, paragraphs, and larger portions of the **text** (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
6. Assess how **point of view** or **purpose** shapes the content and style of a text.

Integration of Knowledge and Ideas:

7. Integrate and **evaluate** content presented in diverse formats and media, including visually and quantitatively, as well as in words.
8. Delineate and evaluate **the argument** and specific claims in a text, including the validity of the reasoning and the **relevance** and **sufficiency** of the evidence.
9. Analyze how two or more **texts** address similar themes or topics to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

10. Read and comprehend complex literary and informational texts independently and proficiently.

College and Career Readiness Anchor Standards for Writing

The grades 5-8 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. As in the Anchor Standards for Reading, the CCR and grade-specific standards for writing are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes:

1. Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing:

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge:

7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing:

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Reading Standards for Literacy in History/Social Studies 5-12

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of primary and secondary sources.	1. Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information.	1. Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of how key events or ideas develop over the course of the text.	2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary that makes clear the relationships among the key details and ideas.
3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes a law, how interest rates are raised or lowered).	3. Analyze in detail a series of events described in a text; determine whether earlier events caused later ones or simply preceded them.	3. Evaluate various explanations for actions or events and determine which explanation best accords with textual evidence, acknowledging where the text leaves matters uncertain.
Craft and Structure		
4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	4. Determine the meaning of words and phrases as they are used in a text, including vocabulary describing political, social, or economic aspects of history/social studies.	4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines faction in <i>The Federalist No.10</i>).
5. Describe how a text presents information (e.g., sequentially, comparatively, causally).	5. Analyze how a text uses structure to emphasize key points or advance an explanation or analysis.	5. Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole.
6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	6. Compare the point of view of two or more authors for how they treat the same or similar topics, including which details they include and emphasize in their respective accounts.	6. Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, reasoning, and evidence.

Reading Standards for Literacy in History/Social Studies 5-12 – cont.

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Integration of Knowledge and Ideas		
7. Integrate visual information (e.g., charts, graphs, photographs, videos, or maps) with other information in print and digital texts.	7. Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.	7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well verbally) in order to address a question or solve a problem.
8. Distinguish among fact, opinion, and reasoned judgment in a text.	8. Assess the extent to which the reasoning and evidence in a text support the authors' claims.	8. Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.
9. Analyze the relationship between a primary and secondary source on the same topic.	9. Compare and contrast treatments of the same topic in several primary and secondary sources.	9. Integrate information from diverse sources , both primary and secondary, into a coherent understanding of an idea or event , noting discrepancies among sources .
Range of Reading and Level of Text Complexity		
10. By the end of grade 8, read and comprehend history/social studies texts in the grades 5-8 text complexity band independently and proficiently.	10. By the end of grade 10, read and comprehend history/social studies texts in the grades 9-10 text complexity band independently and proficiently.	10. By the end of grade 12, read and comprehend history/social studies texts in the grades 11-CCR text complexity band independently and proficiently.

Writing Standards for Literacy in History/Social Studies 5-12

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Text Types and Purposes		
<p>1. Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically. b. Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources. c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence. d. Establish and maintain a formal style. e. Provide a concluding statement or section that follows and supports the argument presented. 	<p>1. Write arguments focused on discipline-specific content.</p> <ul style="list-style-type: none"> a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among the claims(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly, supplying data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form and in a manner that anticipates the audience's knowledge level and concerns. c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented. 	<p>1. Write arguments focused on discipline-specific content</p> <ul style="list-style-type: none"> a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from or supports the argument presented.

Writing Standards for Literacy in History/Social Studies 5-12 – cont.

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Text Types and Purposes		
<p>2. Write informative/explanatory texts, including the narration of historical events or technical processes.</p> <ul style="list-style-type: none"> a. Introduce a topic, clearly previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to inform about or explain the topic. e. Establish and maintain a formal style and objective tone. f. Provide a concluding statement or section that follows from and supports the information or explanation presented. 	<p>2. Write informative/explanatory texts, including the narration of historical events or technical processes.</p> <ul style="list-style-type: none"> a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comparison. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among ideas and concepts. d. Use precise language and domain-specific vocabulary to manage the complexity of the topic and convey a style appropriate to the discipline and context as well as to the expertise of likely readers. e. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic). 	<p>2. Write informative/explanatory texts, including the narration of historical events or technical processes.</p> <ul style="list-style-type: none"> a. Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. c. Use varied transitions and sentence structures to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Text Types and Purposes		
		of likely readers. e. Provide a concluding statement or section that follows from and supports the information or explanation provided (e.g., articulating implications or the significance of the topic).
3. (See note: not applicable as a separate requirement)	3. (See note: not applicable as a separate requirement)	3. (See note: not applicable as a separate requirement)

Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import.

Writing Standards for Literacy in History/Social Studies 5-12 – cont.

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Production and Distribution of Writing		
4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.	5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.	5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.	6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
Research to Build and Present Knowledge		
7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	7. Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Writing Standards for Literacy in History/Social Studies 5-12 – cont.

Grades 5-8 Students	Grades 9-10 Students	Grades 11-12 students
Production and Distribution of Writing		
9. Draw evidence from informational texts to support analysis reflection, and research.	9. Draw evidence from informational texts to support analysis reflection, and research.	9. Draw evidence from informational texts to support analysis reflection, and research.
Range of Writing		
10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Common Core Literacy Skills, Grades 5-8**Reading***Key Ideas and Details*

1. Cite specific textual evidence to support analysis of primary and secondary sources.
2. Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
3. Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes a law, how interest rates are raised or lowered).

Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
5. Describe how a text presents information (e.g., sequentially, comparatively, causally)
6. Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

Integration of Knowledge and Ideas

7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
8. Distinguish among fact, opinion and reasoned judgment in a text.
9. Analyze the relationship between a primary and secondary source on the same topic.

Range of Reading and Level of Text Complexity

10. By the end of grade 8, read and comprehend history/social studies texts in the grades 5-8 text complexity band independently and proficiently.

Writing*Text Types and Purposes*

1. Write arguments focused on discipline-specific content.
 - a. Introduce claim(s) about a topic or issue, acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
 - b. Support claim(s) with logical reasoning and relevant, accurate, data and evidence that demonstrate an understanding of the topic or text, using credible sources.
 - c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
 - d. Establish and maintain a formal style.
 - e. Provide a concluding statement or section that follows and supports the argument presented.

Common Core Literacy Skills, Grades 5-8 -Cont.

2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
 - a. Introduce a topic, clearly previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.
 - b. Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
 - c. Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
 - d. Use precise language and domain-specific vocabulary to inform about or explain the topic.
 - e. Establish and maintain a formal style and objective tone.
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented.
3. (See note: not applicable as a separate requirement) Note: Students' narrative skills continue to grow in these grades. The Standards require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history/social studies, students must be able to incorporate narrative accounts into their analyses of individuals or events of historical import.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.
6. Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.

Research**Research to Build and Present Knowledge**

7. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
9. Draw evidence from informational texts to support analysis, reflection, and research.

Research to Build and Present Knowledge

10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Themes with Context

Unifying Themes These ten unifying Social Studies themes represent different lenses that can be applied to the teaching and learning of the Key Ideas and Conceptual Understandings within the 2012 Social Studies framework across all grades, K-12.

Themes at a Glance

1. Individual Development and Cultural Identity
2. Development, Movement, and Interaction of Cultures
3. Time, Continuity, and Change
4. Geography, Humans, and the Environment
5. Development and Transformation of Social Structures
6. Power, Authority, and Governance
7. Civic Ideals and Practices
8. Creation, Expansion, and Interaction of Economic Systems
9. Science, Technology, and Innovation
10. Global Connections and Exchange

Themes with Context

1. Individual Development and Cultural Identity

- Role of social, political, and cultural interactions in the development of identity
- Personal identity is a function of an individual's culture, time, place, geography, interaction with groups, influences from institutions, and lived experiences

2. Development, Movement, and Interaction of Cultures

- Role of diversity within and among cultures
- Aspects of culture such as belief systems, religious faith, or political ideals as influences on other parts of a culture such as its institutions or literature, music, and art
- Cultural diffusion and change over time as facilitating different ideas and beliefs

3. Time, Continuity, and Change

- History as a formal study that applies research methods
- Reading, reconstructing, and interpreting events
- Analyzing causes and consequences of events and developments
- Considering competing interpretations of events

4. Geography, Humans, and the Environment

- Relationship between human populations and the physical world (people, places, and environments) □
- Impact of human activities on the environment
- Interactions between regions, locations, places, people, and environments

5. Development and Transformation of Social Structures

- Role of social class, systems of stratification, social groups, and institutions
- Role of gender, race, ethnicity, education, class, age, and religion in defining social structures within a culture
- Social and political inequalities
- Expansion and access of rights through concepts of justice and human rights

Themes with Context – cont.**6. Power, Authority, and Governance**

- Purposes, characteristics, and functions of various governance systems as they are practiced
- Individual rights and responsibilities as protected and challenged within the context of majority rule
- Fundamental principles and values of constitutional democracy
- Origins, uses, and abuses of power
- Conflict, diplomacy, and war

7. Civic Ideals and Practices

- Basic freedoms and rights and responsibilities of citizens in a democratic republic
- Role of the citizen in the community and nation and as a member of the global community
- Civic participation and engagement
- Respect for diversity
- Civic ideals and practices in countries other than our democratic republic
- Struggle for rights, access to citizenship rights, and universal human rights

8. Creation, Expansion, and Interaction of Economic Systems

- Production, distribution, and consumption
- Scarcity of resources and the challenges of meeting wants and needs
- Supply/demand and the coordination of individual choices
- Economic systems
- Trade, interdependence, and globalization
- Role of government in the economy
- Personal finance

9. Science, Technology, and Innovation

- Scientific and intellectual theories, findings, discoveries, and philosophies
- Applications of science and innovations in transportation, communication, military technology, navigation, agriculture and industrialization
- Relationship between science, technology, and innovation and social, cultural, and economic change

10. Global Connections and Exchange

- Past, current, and likely future global connections and interactions
- Cultural diffusion, the spread of ideas, beliefs, technology and goods
- Role of technology
- Benefits/consequences of global interdependence (social, political, economic)
- Causes of and patterns of migration of people
- Tension between national interests and global priorities

K-12 Social Studies Practices

The Social Studies Practices represent the social science and historical thinking skills that students should develop throughout their K-12 education in order to be prepared for civic participation, college, and careers. Similar to the Mathematical Practices within the Common Core Learning Standards, the Social Studies Practices should be infused with the Social Studies content contained within the Key Ideas and Conceptual Understandings. The Practices were created based on the existing New York State Social Studies Learning Standards, the National Geography Standards, the historical thinking skills articulated within the new Advanced Placement World History Curriculum Framework, the National Council for the Social Studies Standards, and the Habits of the Mind published by the National Council for History Education.

1. Chronological Reasoning and Causation
2. Comparison and Contextualization
3. Geographic Reasoning (people, places, regions, environment, interactions)
4. Gathering, Using, and Interpreting Evidence
5. The Role of the Individual in Social and Political Participation

Key Ideas

Key ideas are aligned to the standards and represent enduring understandings that should be the focus of teaching and learning for each grade. Key ideas are designed to address larger Social Studies perspectives, movements, and issues. Each grade level comprises 10 to 20 Key Ideas, so these statements are intentionally rich and substantial.

Conceptual Understandings

Conceptual Understandings are more specific statements designed to support each Key Idea. Together the Key Ideas and Conceptual Understandings represent the body of Social Studies concepts that should be the focus of teaching and learning

Grades K - 4 Social Studies Practices***Chronological Reasoning and Causation***

- Explain how events are related chronologically to one another in time
- Identify causes and effects using examples from a student's life or from Social Studies
- Identify the relationship between cause and effect
- Distinguish between long-term and immediate causes and effects (time, continuity, and change)
- Recognize dynamics of historical continuity and change over periods of time
- Recognize that periodization provides a specific context
- Recognize and identify patterns of continuity and change
- Identify a model of historical periodization

Comparison and Contextualization

- Identify similarities and differences between geographic regions
- Identify multiple perspectives from a student's life or from Social Studies
- Identify similarities and differences between historical developments that are closely related in time and context
- Describe and compare historical developments
- Recognize the relationship between geography, economics, and history
- Describe historical developments with specific circumstances including time and place

Geographic Reasoning

- Ask geographic questions about where places are located and why they are located there
- Identify and describe the relationship between people, places, and the environment
- Identify how the environment affects human activities and how human activities affect the environment
- Recognize relationships among patterns and processes
- Recognize that place and region influence the social, cultural, and economic characteristics of civilizations
- Identify and describe changes within and across places and regions

Gathering, Using, and Interpreting Evidence

- Form questions about the world in which we live
- Recognize different forms of evidence used to make meaning in Social Studies (including primary and secondary sources such as art and photographs, artifacts, oral histories, maps and graphs)
- Identify and explain authorship, point of view, purpose, and format
- Identify arguments of others

Grades 5 - 8 Social Studies Practices*Chronological Reasoning and Causation*

- Articulate how events are related chronologically to one another in time and explain the ways in which earlier ideas and events may influence subsequent ideas and events
- Identify causes and effects using examples from current grade level content and historical ideas and events
- Identify, analyze, and evaluate relationship between multiple causes and effects
- Distinguish between long-term and immediate causes and effects (time, continuity, and change)
- Recognize, analyze, and evaluate dynamics of historical continuity and change over periods of time
- Recognize that changing the periodization affects the historical narrative
- Relate patterns of continuity and change to larger historical processes and themes
- Identify and describe models of historical periodization that historians use to categorize events

Comparison and Contextualization

- Identify similarities and differences among geographic regions using specific geographic vocabulary
- Identify and compare multiple perspectives on a given historical experience
- Identify similarities and differences between historical developments over time within a similar cultural and geographical context
- Describe, compare, and evaluate multiple historical developments (within societies; across and between societies; in various chronological and geographical contexts)
- Describe the relationship between geography, economics, and history as a context for events and movements
- Connect historical developments to specific circumstances of time and place and to broader regional, national, or global processes

Geographic Reasoning

- Define and frame questions about events and the world in which we live and use evidence to answer these questions
- Identify, describe, and evaluate evidence about events from diverse sources (including written documents, works of art, photographs, charts and graphs, artifacts, oral traditions, and other primary and secondary sources)
- Analyze evidence in terms of content, authorship, point of view, purpose, and format; identify bias; explain the role of bias and audience in presenting arguments or evidence
- Describe and analyze arguments of others
- Make inferences and draw conclusions from evidence
- Recognize an argument and identify evidence that supports the argument; examine arguments related to a specific Social Studies topic from multiple perspectives; deconstruct arguments, recognizing the perspective of the argument and identifying evidence used to support that perspective
- Create meaningful and persuasive understandings of the past by fusing disparate and relevant evidence from primary and secondary sources

Grades 5 - 8 Social Studies Practices – cont.*The Role of the Individual in Social and Political Participation*

- Demonstrate respect for the rights of others in discussions and classroom; respectfully disagree with other viewpoints
- Participate in activities that focus on a classroom, school, community, state, or national issue or problem
- Explain differing philosophies of social and political participation and the role of the individual leading to group-driven philosophies
- Identify, describe, and contrast the role of the individual in opportunities for social and political participation in different societies
- Participate in persuading, negotiating, and compromising in the resolution of conflicts and differences; introduce and examine the elements of debate
- Identify situations in which social actions are **required** and determine an appropriate course of action
- Work to influence those in positions of **power** to strive for extensions of freedom, social justice, and human rights
- Fulfill social and political **responsibilities** associated with **citizenship** in a democratic society and interdependent global community by developing awareness and/or engaging in the political process

Vertical Articulation and Progression of Social Studies Practices

Progression of Social Studies Practices			
Social Studies Practices	Grades K-4	Grades 5-8	Grades 9-12
Chronological Reasoning and Causation	Explain how events are related chronologically to one another in time.	Articulate how events are related chronologically to one another in time and explain the ways in which earlier ideas and events may influence subsequent ideas and events.	Articulate how events are related chronologically to one another in time and explain the ways in which earlier ideas and events may influence subsequent ideas and events.
	Identify causes and effects using examples from a student's life or from Social Studies.	Identify causes and effects using examples from current grade-level content and historical ideas and events.	Identify causes and effects using examples from different time periods and courses of study across several grade levels.
	Identify the relationship between cause and effect.	Identify, analyze, and evaluate relationship between multiple causes and effects.	Identify, analyze, and evaluate relationship between multiple causes and effects.
	Distinguish between long-term and immediate causes and effects (time, continuity, and change).	Distinguish between long-term and immediate causes and effects (time, continuity, and change).	Distinguish between long-term and immediate causes and multiple effects (time, continuity and change).
	Recognize dynamics of historical continuity and change over periods of time.	Recognize, analyze, and evaluate dynamics of historical continuity and change over periods of time.	Recognize, analyze, and evaluate dynamics of historical continuity and change over periods of time and investigate factors that caused those changes over time.
	Recognize that periodization provides a specific context.	Recognize that changing the periodization affects the historical narrative.	Recognize that choice of specific periodizations favors or advantages one narrative, region, or group over another narrative, region, or group.
	Recognize and identify patterns of continuity and change.	Relate patterns of continuity and change to larger historical processes and themes.	Relate patterns of continuity and change to larger historical processes and themes.
	Identify a model of historical periodization.	Identify and describe models of historical periodization that historians use to categorize events.	Describe, analyze, evaluate, and construct models of historical periodization that historians use to categorize events.

Vertical Articulation and Progression of Social Studies Practices – cont.

Progression of Social Studies Practices			
Social Studies Practices	Grades K-4	Grades 5-8	Grades 9-12
Comparison and Contextualization	Identify similarities and differences between geographic regions.	Identify similarities and differences among geographic regions using specific geographic vocabulary.	Identify similarities and differences among geographic regions across historical time periods, and relate differences in geography to different historical events and outcomes.
	Identify multiple perspectives from a student's life or from Social Studies.	Identify and compare multiple perspectives on a given historical experience.	Identify, compare, and evaluate multiple perspectives on a given historical experience.
	Identify similarities and differences between historical developments that are closely related in time and context.	Identify similarities and differences between historical developments over time within a similar cultural and geographical context.	Identify and compare similarities and differences among historical developments over time and in different geographical and cultural contexts.
	Describe and compare historical developments.	Describe, compare, and evaluate multiple historical developments (within societies; across and between societies; in various chronological and geographical contexts).	Describe, compare, and evaluate multiple historical developments (within societies; across and between societies; in various chronological and geographical contexts).
	Recognize the relationship between geography, economics, and history.	Describe the relationship between geography, economics, and history as a context for events and movements.	Recognize the relationship between geography, economics, and history as a context for events and movements and as a matrix of time and place.
	Describe historical developments with specific circumstances including time and place.	Connect historical developments to specific circumstances of time and place and to broader regional, national, or global processes.	Connect historical developments to specific circumstances of time and place and to broader regional, national, or global processes, and draw connections to the present (where appropriate).

Vertical Articulation and Progression of Social Studies Practices – cont.

Progression of Social Studies Practices			
Social Studies Practices	Grades K-4	Grades 5-8	Grades 9-12
Geographic Reasoning	Ask geographic questions about where places are located and why they are located there.	Ask geographic questions about where places are located and why their location is important.	Ask geographic questions about where places are located, why their location is important, and how their locations are related to the location of other places and people.
	Identify and describe the relationship between people, places, and the environment.	Identify and describe the relationship between people, places, and the environment using geographic tools to place them in a spatial content.	Identify, describe, and evaluate the relationships between people, places, regions, and environments by using geographic tools to place them in a spatial context.
	Identify how the environment affects human activities and how human activities affect the environment.	Identify, analyze, and evaluate the relationship between the environment and human activities, how the physical environment is modified by human activities, and how human activities are also influenced by Earth's physical features and processes.	Identify, analyze, and evaluate the relationship between the environment and human activities, how the physical environment is modified by human activities, and how human activities are also influenced by Earth's physical features and processes.
	Recognize relationships among patterns and processes.	Recognize and interpret (at different scales) the relationships among patterns and processes.	Recognize and interpret (at different scales) the relationships among patterns and processes.
	Recognize that place and region influence the social, cultural, and economic characteristics of civilizations.	Recognize and analyze how place and region influence the social, cultural, and economic characteristics of civilizations.	Recognize and analyze how place and region influence the social, cultural, and economic characteristics of civilizations.
	Identify and describe changes within and across places and regions.	Characterize and analyze changing interconnections among places and regions.	Characterize and analyze changing interconnections among places and regions.

Vertical Articulation and Progression of Social Studies Practices – cont.

Progression of Social Studies Practices			
Social Studies Practices	Grades K-4	Grades 5-8	Grades 9-12
Gathering, Using, and Interpreting Evidence	Form questions about the world in which we live .	Define and frame questions about events and the world in which we live and use evidence to answer these questions.	Define and frame questions about events and the world in which we live, form hypotheses as potential answers to these questions, use evidence to answer these questions, and consider and analyze counter-hypotheses.
	Recognize different forms of evidence used to make meaning in Social Studies (including primary and secondary sources such as art and photographs, artifacts, oral histories, maps, and graphs).	Identify, describe, and evaluate evidence about events from diverse sources (including written documents, works of art, photographs, charts and graphs, artifacts, oral traditions, and other primary and secondary sources).	Identify, describe, and evaluate evidence about events from diverse sources (including written documents, works of art, photographs, charts and graphs, artifacts, oral traditions, and other primary and secondary sources).
	Identify and explain authorship, point of view, purpose, and format.	Analyze evidence in terms of content, authorship, point of view, purpose, and format; identify bias; explain the role of bias and audience in presenting arguments or evidence.	Analyze evidence in terms of content, authorship, point of view, bias, purpose, format, and audience
	Identify arguments of others.	Describe and analyze arguments of others.	Describe, analyze, and evaluate arguments of others.
	Identify inferences.	Make inferences and draw conclusions from evidence.	Make inferences and draw conclusions from evidence.
	Recognize arguments and identify evidence.	Recognize an argument and identify evidence that supports the argument; examine arguments related to a specific social studies topic from multiple perspectives; deconstruct arguments, recognizing the perspective of the argument and identifying evidence used to support that perspective.	Deconstruct and construct plausible and persuasive arguments using evidence.
	Create understanding of the past by using primary and secondary sources.	Create meaningful and persuasive understandings of the past by fusing disparate and relevant evidence from primary and secondary sources.	Create meaningful and persuasive understandings of the past by fusing disparate and relevant evidence from primary and secondary sources and drawing connections to the present.

Vertical Articulation and Progression of Social Studies Practices – cont.

Progression of Social Studies Practices			
Social Studies Practices	Grades K-4	Grades 5-8	Grades 9-12
The Role of the Individual in Social and Political Participation	Demonstrate respect for the rights of others in discussions and classroom debates regardless of whether one agrees with the other viewpoint.	Demonstrate respect for the rights of others in discussions and classroom; respectfully disagree with other viewpoints.	Demonstrate respect for the rights of others in discussions and classroom; respectfully disagree with other viewpoints and provide evidence for a counter-argument.
	Participate in activities that focus on a classroom, school, or community issue or problem.	Participate in activities that focus on a classroom, school, community, state, or national issue or problem.	Participate in activities that focus on a classroom, school, community, state, or national issue or problem.
	Identify differing philosophies of social and political participation.	Explain differing philosophies of social and political participation and the role of the individual leading to group-driven philosophies.	Explain differing philosophies of social and political participation and the role of the individual leading to group-driven philosophies.
	Identify the role of the individual in opportunities for social and political participation in the local class, school, or community.	Identify, describe, and contrast the role of the individual in opportunities for social and political participation in different societies.	Identify, describe, and contrast the role of the individual in opportunities for social and political participation in different societies.
	Show respect in issues involving difference and conflict; participate in negotiating and compromising in the resolution of differences and conflict.	Participate in persuading, negotiating, and compromising in the resolution of conflicts and differences; introduce and examine the elements of debate.	Participate in persuading, debating, negotiating, and compromising in the resolution of conflicts and differences.
	Identify situations in which social actions are required.	Identify situations in which social actions are required and determine an appropriate course of action.	Identify situations in which social actions are required and determine an appropriate course of action.
	Identify those in positions of power who drive opportunities for freedom, social justice, and human rights.	Work to influence those in positions of power to strive for extensions of freedom, social justice, and human rights.	Work to influence those in positions of power to strive for extensions of freedom, social justice, and human rights.
	Identify social and political responsibilities at the local classroom, school, and community level.	Fulfill social and political responsibilities associated with citizenship in a democratic society and interdependent global community by developing awareness and/or engaging in the political process.	Fulfill social and political responsibilities associated with citizenship in a democratic society and interdependent global community by developing awareness and/or engaging in the political process.

Organizational Structure of Each Grade Level - How to Read the Social Studies Framework:

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<p><i>Time, Continuity, and Change in the Western Hemisphere</i></p> <p>5.4 Major social, political, economic, and cultural shifts in Europe resulted in an Age of Exploration and Encounter in the 15th century that brought explorers, European settlers, and Africans to North and South America and changed people's understanding of the world.</p>	<p>5.4.a European migration and settlement reflected and altered people's view and understanding of the world.</p> <p>5.4.b Competition for natural resources led to settlement patterns for Europeans and interactions with Native American peoples.</p> <p>5.4.c European settlement impacted the physical and human environments of an area, with both positive and negative effects.</p> <p>5.4.d Cultural diffusion had positive and negative impacts on European and Native Americans in the Americas.</p> <p>5.4.e Differing belief systems of Native Americans and Europeans created social and political inequalities in the Americas.</p>	<p>Development, Movement, and Interaction of Cultures</p> <p>Time, Continuity, and Change</p> <p>Global Connections</p>	<p>1, 2</p>

Each grade level is structured into broad categories.

The Key Ideas are the central organizing feature for each grade. Key Ideas represent the essential and enduring understandings that should be the focus of teaching and learning for each grade. The Key Ideas are designed to address larger Social Studies perspectives, movements, and issues. Each grade level is comprised of 10 to 20 Key Ideas, so these statements are intentionally rich and substantial, and will require greater detail and case study through instruction.

For each Key Idea, there are supporting Conceptual Understandings, more specific statements that support deeper articulation for each Key Idea. Together, the Key Ideas and Conceptual Understandings represent the body of Social Studies concepts that should be the focus of teaching and learning. By design, the Conceptual Understandings make limited references to specific dates, places, people, and terms, in order to allow for multiple pathways to teaching the conceptual content.

There are 10 Unifying Themes across the entire K-2 Social Studies Framework. Each Key Idea is connected to multiple themes. The primary themes, most strongly pronounced within the Key Idea and Conceptual Understandings, are listed here. The themes can serve as signals for areas of teaching emphasis and for building connections across ideas.

Each Key Idea is derived from and/or aligned to one or more of the five New York Learning Standards for Social Studies.

Grades 5 - 8 Key Ideas and Conceptual Understandings

Grades 5-6 Grade Band

In Grades 5 and 6, students study the world through civilizations, nations, and regions. The courses distinguish between the Americas and the Eastern Hemisphere (Africa, Asia, Europe, and Oceania). Each course is divided into four sections—Geography, Humans, and the Environment of the Western Hemisphere; Time, Continuity, and Change; Power, Authority, and Governance; and Creation, Expansion, and Interaction of Economic Systems. The sections can be studied in this order or teachers can teach themes, regions, or places that are cross-cutting. Both courses emphasize the skills of geographic reasoning and social and political participation, although each pays attention to chronological reasoning and causation. Students continue to gather, use, and interpret evidence and to make comparisons across contexts. The courses span the time of human settlement, migration, and development in the Americas and the Eastern Hemisphere, but also emphasize the geographic and resources issues, political systems, and economic production patterns that shape the lives of people and the endeavors of international organizations today..

Grades 7-8 Grade Band

In Grades 7 and 8, students will examine the United States and New York through an historical lens. The two-year sequence is arranged chronologically beginning with the settlement of North and South America by Native Americans and ending with an examination of the U.S. in the 21st century. Although the courses emphasize the skill of chronological reasoning and causation, the courses also integrate the skills and content from geography, politics, economy, and culture into the study of history. The courses stress the lens of social history over that of political history.

Grade 5: The United States, Canada, and Latin America

“The United States, Canada, and Latin America” is a study of the Western Hemisphere. The course introduces students to the complex relationships between people and their environment and how each shapes the other. The historical section begins with the settlement of Native Americans and then moves on to study the interaction of Native Americans, Europeans, and Africans, periods of colonization and revolution, and the expansion and development of the 21st century and how these historic eras and events changed Native Americans and the American landscape. The section on governance teaches students about the different types of political systems that maintain order in these nation-states and the roles of citizens therein. The section emphasizes that not all regimes are guided by the protection of individual rights and that different groups of people have different access to power and wealth within these nation-states. In the study of economics, students learn about the ways nation-states respond to scarce resources, the distribution of production and transportation within countries, and the economic interaction of nations within the Western Hemisphere..

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Geography, Humans, and the Environment of the Western Hemisphere</i>			
5.1. The Western Hemisphere, comprised of North and South America, has an expansive and varied geography comprised of different regions, physical features, climates, and human communities..	5.1.a The physical landscape of North and South America shows both great variation and unifying patterns. 5.1.b The extensive biodiversity in North and South America produces unique biomes and species of plants and animals. 5.1.c North and South America can be divided into regions that share common human and/or physical features. 5.1.d The physical environment, human culture, and economic and political structures all influence the unique sense of place of a region.	Geography, Humans, and the Environment	3
5.2 The physical environment and natural resources in North and South America encouraged development of the first human settlements and cultural systems by Native Americans.	5.2.a Physical systems influence patterns of human migration and settlement in North and South America. 5.2.b The varied physical environments across North and South America are reflected in the array and diversity of human settlements that appear across the region. 5.2.c Different types of structures, forms of agriculture, and location of urban centers are examples of ways people adapt to the physical landscape to form settlements. 5.2.d Human settlements modify the physical landscape and environment by creating transportation systems, industries, and methods to harness and control natural resources.	Geography, Humans, and the Environment Development, Movement, and Interaction of Cultures	1, 2, 3

Grade 5: The United States, Canada, and Latin America - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Geography, Humans, and the Environment of the Western Hemisphere</i>			
5.3 Over time, different ethnic, religious, and national groups, including Native Americans, have contributed to the cultural diversity of the nations and regions in North and South America by sharing their customs, beliefs, ideas, and languages..	<p>5.3.a Cultures and societies described as civilizations share certain common characteristics, including the development of economic systems, urban centers, centralized governments, complex technologies and social structures.</p> <p>5.3.b Nation-states within North and South America have developed over time and contain multiple diverse ethnic and religious groups.</p> <p>5.3.c Different ethnic groups share their various customs, beliefs, ideas, languages, and religions creating culturally diverse nations and regions and leading to cultural integration.</p>	Development, Movement, and Interaction of Cultures	1, 2
<i>Time, Continuity, and Change in the Western Hemisphere</i>			
5.4 Major social, political, economic, and cultural shifts in Europe resulted in an Age of Exploration and Encounter in the 15th century that brought explorers, European settlers, and Africans to North and South America and changed people's understanding of the world.	<p>5.4.a European migration and settlement reflected and altered people's views and understanding of the world.</p> <p>5.4.b Competition for natural resources led to particular settlement patterns for Europeans and interactions with Native American peoples.</p> <p>5.4.c European and Native American settlement had an impact on physical and human environments, with both positive and negative effects.</p> <p>5.4.d Cultural diffusion between Europeans and Native Americans reshaped the lives and beliefs of all groups.</p> <p>5.4.e Differing belief systems of Native Americans and Europeans created social and political inequalities in the Americas.</p>	Development, Movement, and Interaction of Cultures Time, Continuity, and Change Global Connections and Exchange	1, 2
5.5 Across time and place, the people of the Western Hemisphere have held differing beliefs regarding power, authority, governance, and law resulting in dynamic periods of colonial rule, revolutions, and state building.	<p>5.5.a During colonial eras, Europeans held beliefs about power and economic needs that led them to colonize and exert control over other lands and people.</p> <p>5.5.b Periods of revolution freed people from colonial authority.</p> <p>5.5.c Following revolutions, former colonial states worked to organize diverse peoples and regions into nation-states with a common government, economy, and national identity.</p> <p>5.5.d Although colonial oppression was one catalyst for revolution, new nations used race, religion, gender, and economic status to officially and unofficially differentiate treatment of the population.</p>	Time, Continuity, and Change Power, Governance, and Authority	1, 2, 5

Grade 5: The United States, Canada, and Latin America - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Time, Continuity, and Change in the Western Hemisphere</i>			
<p>5.6 The forces of expansion and migration have affected nations and cultures throughout the Western Hemisphere, resulting in population shifts, development of urban centers, displacement of native cultures, and imperial conflicts.</p>	<p>5.6.a Geographic characteristics found in particular regions have served to aid expansion and the connection with other societies.</p> <p>5.6.b Growth of industrialization led to the development of urban areas and shifted populations and centers of wealth.</p> <p>5.6.c People leave their homes and move to other places within their countries or other countries for economic, political, and cultural reasons.</p> <p>5.6.d The movement of human population has led to the displacement of indigenous groups—often through force and aggression.</p>	<p>Time, Continuity, and Change</p> <p>Geography, Humans, and the Environment</p>	<p>1, 2, 3</p>
<i>Power, Authority, and Governance in the Western Hemisphere</i>			
<p>5.7 Over time, different political systems have developed in the nations of the Western Hemisphere, and these governments maintain order, provide security, and protect individual rights in different ways.</p>	<p>5.7.a Colonial histories, political and social values, religious institutions, and spatial arrangement of people and physical features contribute to the types of political systems found in the Western Hemisphere.</p> <p>5.7.b Oligarchy, republic, and military dictatorship are political systems of the Western Hemisphere that govern differently.</p> <p>5.7.c Governments make laws and enforce them in different ways to maintain order and security within a country or community.</p>	<p>Power, Authority, and Governance</p>	<p>5</p>
<p>5.8 The roles of citizenship and individual rights are defined by different constitutions and governing systems in the Western Hemisphere, and these definitions and who has been included in them have changed over time.</p>	<p>5.8.a Citizens have different rights and responsibilities in the nations of the Western Hemisphere.</p> <p>5.8.b Women and other minority groups have not always been granted the rights of citizenship in the nations of the Western Hemisphere.</p> <p>5.8.c Most constitutions of nations in the Western Hemisphere have added statements about the protection of individual rights of their citizens.</p>	<p>Power, Authority, and Governance</p> <p>Civic Ideals and Practices</p>	<p>5</p>

Grade 5: The United States, Canada, and Latin America - cont.

<i>Power, Authority, and Governance in the Western Hemisphere</i>				
<p>5.9 Across time and place, different cultural groups and populations have struggled and fought for civil rights and equality using different means, and the sources of power and authority in the Western Hemisphere nations have responded to issues of justice and inequality with different approaches.</p>	<p>5.9.a The concept of justice suggests that the rules of the government should be applied equally to all people.</p>	<p>Power, Authority, and Governance</p>	<p>1,2,5</p>	
	<p>5.9.b Groups of people, particularly groups of women, Native Americans, African Americans, and other cultural, ethnic, and racial minorities in Western Hemisphere countries have responded to inequality and injustice with a variety of tactics.</p>	<p>Development and Transformation of Social Structures</p>		
	<p>5.9.c Citizens find ways to confront and challenge their government.</p>	<p>Civic Ideals and Practices</p>		
	<p>5.9.d Protests by groups of people have led to increased individual rights, but they have also intensified the suppression of rights.</p>			
<p>5.10 Increasingly, the nations of the Western Hemisphere participate in and benefit from international organizations that promote peace, cooperation, economic development, global health, and cultural understanding.</p>	<p>5.10.a Multinational organizations and non-governmental organizations in the Western Hemisphere seek to actively promote democracy, protect human rights, support economic development, and encourage cooperation between nations.</p>	<p>Power, Authority, and Governance Global Connections and Exchange</p>	<p>1,2</p>	
	<p>5.10.b The United Nations helps maintain peace between nations and uses international pressure to protect human rights and promote cultural understanding.</p>			
	<p>5.10.c When nations or regions in the Western Hemisphere face challenges due to natural disasters, health epidemics, or political upheavals, multinational organizations provide global support and assistance.</p>			
<i>Creation, Expansion, and Interaction of Economic Systems in the Western Hemisphere</i>				
<p>5.11 The types and availability of natural resources shape the economic systems of nations in North and South America and play a strong role in determining the overall strength and influence of those nations.</p>	<p>5.11.a The physical features, climate, and natural resources of North and South America enable different kinds of agricultural and industrial production and development.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p>	<p>4</p>	
	<p>5.11.b Governments make rules that regulate types of economic production.</p>			
	<p>5.11.c The strength and influence of a nation are partially determined by the size and health of its economy.</p>			

Grade 5: The United States, Canada, and Latin America - cont.

<i>Creation, Expansion, and Interaction of Economic Systems in the Western Hemisphere</i>			
5.12 Over time, nations have shifted and transformed their economic systems.	<p>5.12.a Physical, political, and other thematic maps can be used to show the relationship between agrarian and industrial systems, land use, access to transportation systems, and size of settlements.</p> <p>5.12.b Transportation systems within and between nations allow for the movement of raw materials and goods from farmlands and mines to industrial areas where goods are produced or consumed.</p> <p>5.12.c People in agrarian and industrial areas develop different lifestyles related to their modes of economic production.</p>	Creation, Expansion, and Interaction of Economic Systems	4
5.13 Nations of North and South America depend on one another for various resources and products they need.	<p>5.13.a Some nations have a comparative advantage in the production of goods and services.</p> <p>5.13.b Nations trade with other nations to meet economic needs that they cannot meet alone.</p> <p>5.13.c Issues of scarcity and supply and demand impact how economic needs are met.</p> <p>5.13.d The North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO) are examples of groups which regulate trade between nations.</p> <p>5.13.e The World Bank and the International Monetary Fund (IMF) loan money to support nations in need. These lending policies have drawn criticism from some groups due to the requirements and regulations that frequently accompany the loans.</p>	Creation, Expansion, and Interaction of Economic Systems	4
5.14 Economic systems among nations and regions are becoming increasingly interdependent.	<p>5.14.a Global interdependence suggests that national economic systems rely on and affect one another.</p> <p>5.14.b Nations have trade and money investments in other nations, and when one nation struggles economically or financially, this can affect the global community.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Global Connections and Exchange</p>	4

Grades 6: The Eastern Hemisphere

“The Eastern Hemisphere” surveys the Eastern Hemisphere (Africa, Asia, Europe, and Oceania). The units on geography, economic systems, and governance are not period specific and allow teachers to examine these concepts both today and in the past. The historic portion of the course focuses on civilizations between 8000 BCE and 600 CE. The course introduces students to the complex relationships between people and their environment with particular attention to the diverse ways people shape and are shaped by their environment across the Eastern Hemisphere. Students learn that there is great variation across the hemisphere. Students study the multiple ways societies organize themselves, social and scientific achievements, and the religious systems that guide and distinguish civilizations. The comparative study of political systems in the Eastern Hemisphere introduces students to the structure of, role of citizens in, and protection of individual and human rights in aristocracies, theocracies, monarchies, dictatorships, oligarchies, and democracies. The course also teaches students about international organizations and institutions that promote peace, global health, and cultural understanding. A significant portion of the course focuses on the study of ancient civilizations and empires giving a context through which to examine the concepts of society, economy, and governance. This study also provides students with the foundational topics for global history.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Geography, Humans, and the Environment of the Eastern Hemisphere</i>			
6.1 The Eastern Hemisphere has an expansive and varied geography comprised of different regions, physical features, climates, and human communities. The geographic diversity of the Eastern Hemisphere has significantly influenced physical mobility and the course of human development.	<p>6.1.a Physical maps reflect the varied climate zones, landforms, bodies of water, and natural resources of the Eastern Hemisphere.</p> <p>6.1.b The Eastern Hemisphere can be divided into various geographic regions based on physical features, human characteristics, or both.</p> <p>6.1.c The physical diversity of the Eastern Hemisphere affects the varied spread of settlements in Africa, Asia, Europe, and Oceania.</p>	Geography, Humans, and the Environment	3
6.2 The physical environment and natural resources of the Eastern Hemisphere promoted development of the first human settlements and cultural systems.	<p>6.2.a Early Eastern Hemisphere settlements made use of fertile lands along rivers to sustain their communities.</p> <p>6.2.b Human populations that settled along rivers, in rainforests, along oceans, in deserts, and in mountains made use of the resources and landscapes around them in developing distinct ways of life.</p>	<p>Geography, Humans, and the Environment Development,</p> <p>Movement, and Interaction of Cultures</p>	2, 3

Grades 6: The Eastern Hemisphere – cont.

Geography, Humans, and the Environment of the Eastern Hemisphere			
<p>6.3 Civilizations across the Eastern Hemisphere are characterized by centralized governments, advanced commerce and trade systems, and complex social hierarchies. These civilizations are influenced by scientific and cultural achievements of civilizations that came before them.</p>	<p>6.3.a Humans living together develop specific patterns of governance and geographic arrangement that allow them to manage their society.</p> <p>6.3.b Humans living together in settlements develop shared customs, beliefs, ideas, and languages that give identity to the group.</p> <p>6.3.c Civilizations create systems for locating and producing the materials they need and/or for trading with other communities to acquire these goods.</p> <p>6.3.d Social hierarchies within civilizations mean that people have different roles and different access to power and wealth.</p> <p>6.3.e Ancient and classical civilizations in the Eastern Hemisphere made scientific, cultural, and political discoveries that have shaped the world today.</p>	<p>Time, Continuity, and Change</p> <p>Development, Movement, and Interaction of Cultures</p> <p>Science, Technology, and Innovation</p> <p>Development and Transformation of Social Structures</p>	<p>2</p>
Time, Continuity and Change in the Eastern Hemisphere (8000 BCE – 600 CE)			
<p>6.4 The Neolithic Revolution was a technological development that radically changed the nature of human society and led the way to more stable human settlements and communities.</p>	<p>6.4.a Patterns in global turning points and events allow the histories of the Eastern Hemisphere to be divided into time periods, eras, or ages.</p> <p>6.3.b Various types of revolutions throughout history mark significant changes to the political, economic, cultural, or social systems in which human societies live.</p> <p>6.3.c The Neolithic Revolution was marked by technological advances in agriculture and domestication of animals that allowed people to form stationary settlements.</p> <p>6.3.d Early human settlements relied on favorable geographic areas where humans could adapt these environments to produce food and build shelters.</p>	<p>Time, Continuity, and Change</p> <p>Development, Movement, and Interaction of Cultures</p>	<p>2</p>

Grades 6: The Eastern Hemisphere – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Time, Continuity and Change in the Eastern Hemisphere (8000 BCE – 600 CE)</i>			
<p>6.5 As the ancient river valley civilizations turned to agriculture, world populations grew, and as a result, these civilizations created centralized systems of government to provide structure and order.</p>	<p>6.5.a Many ancient civilizations made use of and learned to adapt to powerful rivers that produced fertile farming lands, materials for shelter, and water for the movement of goods and people.</p> <p>6.5.b Many of the beliefs, traditions, and technologies in early river civilizations reflected respect for and reliance on rivers.</p> <p>6.5.c Stationary settlements became civilizations in which humans living together developed specific patterns of governance and geographic arrangement that allowed them to manage their society.</p> <p>6.5.d Settlements of people left behind artifacts that archaeologists collect to learn more about the lives of people.</p> <p>6.5.e The achievements, values, and structures of ancient societies shaped classical civilizations and are reflected in contemporary societies.</p>		2
<p>6.6 Classical civilizations developed and grew into large empires characterized by powerful centralized governments, advanced commerce and trade systems, and complex social hierarchies. The scientific and cultural achievements of these civilizations continue to impact the world today^{1.4} Citizens effectively contribute to their local and global communities by demonstrating responsible traits and behaviors.</p>	<p>6.6.a The classical era was marked by an increase in the number and size of civilizations.</p> <p>6.6.b Classical civilizations maintained social order through various political systems that corresponded to the values of their citizens.</p> <p>6.6.c Social divisions in classical civilizations meant that some people had more access to power and wealth.</p> <p>6.6.d Classical civilizations were able to specialize their production of goods because of trade and interaction with other civilizations.</p> <p>6.6.e Classical trade routes show the breadth of travel around the globe and reflect the limitations of physical geography.</p> <p>6.6.f Ancient civilizations made scientific, cultural, and political discoveries that have shaped our understanding of the world today.</p>	<p>Development, Movement, and Interaction of Cultures</p> <p>Development and Transformation of Social Structures</p>	2

Grades 6: The Eastern Hemisphere – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Time, Continuity and Change in the Eastern Hemisphere (8000 BCE – 600 CE)</i>			
6.7 Major religions and belief systems developed as civilizations grew, which unified societies, but also became a major source of tension and conflict.	<p>6.7.a Belief systems and religions are sets of mutual values that help to explain the way the world and humanity work.</p> <p>6.7.b Over time, civilizations developed belief systems and religions that differed across place but shared similar themes.</p> <p>6.7.c Belief systems and religions unify groups of people and are woven into the social organization of societies.</p> <p>6.7.d Differences between belief systems and disputes over lands associated with religious groups have created tension and conflict between peoples.</p>	Development, Movement, and Interaction of Cultures	2
6.8 From earliest times, networks of trade have connected the various civilizations of the Eastern Hemisphere. Long distance trade routes promoted interregional trade, cultural exchanges and diffusion, and the desire to expand empires and influence.	<p>6.8.a Civilizations design technologies for transportation that allow them to traverse challenging landscapes and move people and goods efficiently.</p> <p>6.8.b The comparative advantage some civilizations had in producing certain goods, growing particular crops, or collecting important mineral resources encouraged trade among civilizations.</p> <p>6.8.c The interaction of people along trade routes promoted the exchange of language, belief systems, tools, intellectual ideas, and inventions.</p> <p>6.8.d Extensive global trade routes map the diffusion of belief systems, language, crops, and inventions across the Eastern Hemisphere and between the Eastern and Western Hemispheres.</p>	Development, Movement, and Interaction of Cultures Global Connections and Exchange Creation, Expansion, and Interaction of Economic Systems	2, 4
<i>Power, Authority, and Governance in the Eastern Hemisphere</i>			
6.9 As settlement patterns changed and civilizations developed, new forms of political order were created to meet the more complex needs of societies and to maintain order, provide security, and protect individual rights in different ways..	<p>6.9.a Aristocracies, theocracies, monarchies, kinship systems, dictatorships, oligarchies, and democracies have flourished at different times in different Eastern Hemisphere nations and empires.</p> <p>6.9.b Each of these political systems has had different ways of selecting leaders, making laws, enforcing order, and protecting, and sometimes infringing upon, individual rights.</p> <p>6.9.c Religious values, nationalism, and humanist philosophies have shaped political systems in the Eastern Hemisphere.</p>	Power, Authority, and Governance Time, Continuity, and Change	2,5

Grades 6: The Eastern Hemisphere – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Power, Authority, and Governance in the Eastern Hemisphere</i>			
<p>6.10 Different roles of citizenship and individual rights and responsibilities are defined in different constitutions and governing systems across the.</p>	<p>6.10.a Constitutions in many Eastern Hemisphere nations outline the functions of the government and the rights and responsibilities of the people.</p> <p>6.10.b The nations of the Eastern Hemisphere reveal a multitude of ways for people to be involved in their government.</p> <p>6.10.c Democratizers in Asia and Africa have included or proposed extensive lists of human rights in their constitutions in response to the lack of human rights experienced before and during European colonialism.</p> <p>6.10.d Some governments suppress the individual rights of their citizens.</p> <p>6.10.e Women and people in minority racial, ethnic, or religious groups face struggles for justice and equal rights in countries across the Eastern Hemisphere.</p>	<p>Power, Authority, and Governance</p> <p>Civic Ideals and Practices</p>	<p>5</p>
<p>6.11 Increasingly, the nations of the Eastern Hemisphere participate in and benefit from international organizations that promote peace, cooperation, economic development, global health, and cultural understanding.</p>	<p>6.11.a Continental and regional alliances in Africa, Asia, and Europe intend to promote economic development, secure military protection, and support cooperation among countries in the alliance.</p> <p>6.11.b Monetary loans from the World Bank and the International Monetary Fund have had varying impacts on countries in Africa, Asia, Eastern Europe, and Oceania.</p> <p>6.11.c The United Nations works to promote peace and cooperation between nations and to protect the rights of women, indigenous peoples, children, and other minority or marginalized groups in the Eastern Hemisphere.</p>	<p>Power, Authority, and Governance</p> <p>Global Connections and Exchange</p>	<p>2, 4, 5</p>

Grades 6: The Eastern Hemisphere – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Creation, Expansion, and Interaction of Economic Systems in the Eastern Hemisphere</i>			
<p>6.12 The types and availability of natural resources shape the economic systems of nations in the Eastern Hemisphere and play a strong role in determining the strength and influence of those nations.</p>	<p>6.12.a The economic system of a nation determines how goods are produced and distributed and the role of the government in that process.</p> <p>6.12.b There is an economic gap between Eastern Hemisphere nations that extract natural resources and those that make and distribute finished products.</p> <p>6.12.c The economic health of a nation is measured by factors such as gross domestic product, literacy rate, trade balance, and infant mortality rates.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Geography, Humans, and the Environment</p>	<p>3, 4</p>
<p>6.13 The study of urban and suburban communities across the Eastern Hemisphere reveals differences between urban and rural ways of living, as well as regional differences in the types of urban and rural areas.</p>	<p>6.13.a The organization – layout, types of jobs available to people, locations – of urban areas varies across the Eastern Hemisphere.</p> <p>6.13.b Increased urbanization and climate/environmental challenges have affected the function, survival, and way of life in rural areas in different ways across the Eastern Hemisphere.</p> <p>6.13.c The economic systems in urban and rural areas affect the values and ways of life in these communities.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Global Connections and Exchange</p>	<p>4</p>

Grade 7: The United States and New York History I

Part I of “The United States and New York History” encompasses the settlement of the Americas through Reconstruction in 1877. The course is divided into four sections that each pay attention to the movement and culture of people, the changing politics and access to citizenship, the interaction of people with their environment, and the forms of production that distinguish regions and types of communities throughout United States history. The course begins with a study of the interaction of Native Americans, Europeans, and Africans in North America and the (positive and negative) impacts the groups had on one another and the formation of a new country. The course gives detailed attention to the American Revolution, the philosophies underlying it, and the resulting form of government that organized people in and defined the United States. A section on Expansion and Reform spans 1800 to 1861 and examines how and why the United States expanded, the effects of expansion on Native Americans, and the origins of a sectional divide based on culture, economy, and politics. The course concludes with a study of the Civil War that divided the nation and the era of Reconstruction that reunified the nation.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Three Worlds Meet and Colonization of the Americas (Beginnings to 1750s)</i>			
7.1 The physical environment and natural resources of North and South America encouraged development of the first human settlements and cultural systems of Native Americans. The settlements and civilizations established by Native Americans varied widely across North and South America.	<p>7.1.a Physical systems influenced patterns of human migration and settlement in North and South America.</p> <p>7.1.b Humans interacted with their physical environment in developing diverse civilizations in North and South America.</p> <p>7.1.c There is a diverse array of how humans have created civilizations and communities in the Western Hemisphere.</p> <p>7.1.d Native American civilizations developed belief systems, governments, infrastructures, social structures, and systems of writing and/or mathematics.</p>	<p>Geography, Humans, and the Environment</p> <p>Development, Movement, and Interaction of Cultures</p>	1, 3
7.2 As a result of the Age of Exploration and Encounter in the 15th and 16th centuries, the Spanish, Portuguese, French, Dutch, and eventually British developed settlements and colonies in the Americas, establishing colonial regimes with different political, social, and economic structures.	<p>7.2.a Scientific beliefs about the shape and organization of the world, as well as political alliances and competitions, fostered an era of exploration.</p> <p>7.2.b New forms of production in Europe encouraged European nations to look elsewhere in the world for natural resources and markets for trade.</p> <p>7.2.c Religious conflict and persecution caused some groups to leave their home countries and eventually emigrate to the Americas in search of religious freedom.</p> <p>7.2d European nations created settlements in the Americas that differed in their motivations for settlement, their economic activities in the Americas, and their relationship with Native Americans.</p>	<p>Time, Continuity, and Change</p> <p>Development, Movement, and Interaction of Cultures</p> <p>Global Connections and Exchange</p>	1, 2

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Three Worlds Meet and Colonization of the Americas (Beginnings to 1750s)</i>			
<p>7.3 The American colonies were established based on distinct economic, religious, or political goals. The colonists adapted ideas from their European heritage to develop new political and religious institutions and economic systems. The differing political, economic, and social structures of the British New England, Middle, and Southern colonies led to regional differences among the colonies.</p>	<p>7.3.a European settlements in North America were established for a variety of economic, religious, and political reasons.</p> <p>7.3.b The reasons for the settlement shaped the political, religious, and economic institutions as well as relationships with European countries.</p> <p>7.3.c Differences in climate, landscape, access to water routes, and sources of labor led to different economies in the New England, Middle, and Southern colonies.</p> <p>7.3.d Systems of labor and economies in the New England, Middle, and Southern colonies affected social structures.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p> <p>Development and Transformation of Social Structures</p>	<p>1, 5</p>
<p>7.4 The slave labor system that was introduced in the Americas and the loss of Native American lives as a result of the encounter with Europeans had a lasting impact on the development of the United States and American culture.</p>	<p>7.4.a Indentured servitude and tributes of labor were early systems that made Africans, economically disadvantaged Europeans, and Native Americans indebted to prosperous Europeans in the American colonies.</p> <p>7.4.b Economic desires led colonists to claim fertile lands and displace Native Americans already living there.</p> <p>7.4.c The inequitable economic system in the colonial era shaped the economy and culture of the United States</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	<p>1</p>
<i>War for Independence and Formation of a New Nation</i>			
<p>7.5 Growing tension over political power and economic issues fueled a desire and movement for independence from Great Britain. The Declaration of Independence summarizes American political ideas regarding rights and the purpose of government.</p>	<p>7.5.a Conflicts between France and Great Britain in the 17th and 18th centuries in North America altered the relationship between the colonies and between the colonies and Great Britain.</p> <p>7.5.b Social, political, and economic imbalances created tension between Great Britain and the American colonies.</p> <p>7.5.c British political and economic policies toward the colonies resulted in varied colonial responses, including protests and dissent.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	<p>1,5</p>

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>War for Independence and Formation of a New Nation</i>			
	<p>7.5.d Civic values and individual rights were debated among the American colonists, reflecting different perspectives about a potential separation from Great Britain.</p> <p>7.5.e Some American colonists outlined their grievances against British policies in various ways and ultimately called for separation from Great Britain In the Declaration of Independence.</p> <p>7.5.f The Declaration of Independence continues to represent American political ideals and values regarding representative government and natural rights.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	1,5
<p>7.6 The course and outcome of the American Revolution was defined by actions of both British and colonial leaders, strategic battles, and crucial military and economic alliances.</p>	<p>7.6.a Military strategies that defined the course of the American Revolution on both sides were shaped by geographic, political, technological, and economic factors.</p> <p>7.6.b Alliances, economic aid, and diplomatic relations with foreign nations influenced the outcome of the American Revolution.</p> <p>7.6.c American leaders emerged as a result of the war based on the military, political, or diplomatic roles they played. These leaders served as the architects of the new nation's government.</p>	Time, Continuity, and Change	1, 3
<p>7.7 The newly independent colonies faced political and economic struggles as they worked to develop a new government. The fundamental democratic principles of the United States Constitution, a document that is adaptable to the evolving needs of the nation, serves as the foundation of the United States government today and outlines essential American rights.</p>	<p>7.7.a Throughout the Revolutionary War, the American colonies struggled to unify their differing social, political, and economic traditions, perspectives, and institutions to focus on the common goal of independence.</p> <p>7.7.b The Articles of Confederation was a form of government that loosely united the states, but maintained a large degree of individual state sovereignty.</p> <p>7.7.c The lack of a strong central government under the Articles of Confederation offered some advantages, but presented numerous challenges to the young nation.</p> <p>7.7.d The Constitution, which replaced the Articles of Confederation, established a democratic republic with a stronger central government.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	1, 5

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>War for Independence and Formation of a New Nation</i>			
	<p>7.7.e A democratic republic is based on the idea of representative as opposed to direct government by the people, which was inspired by a variety of historical, intellectual, and political ideals.</p> <p>7.7.f The Constitution was developed as a “living document” that could respond to political and social changes in the young nation.</p> <p>7.7.g The Bill of Rights are the first ten amendments and enumerate individual freedoms not listed in the originally ratified Constitution.</p> <p>7.7h Conflict, compromise, personality, and persuasion helped shape the Constitution and the Bill of Rights.</p>		
<p>7.8 The concept of federalism – sharing power between the central government and the states – determined the political development of the United States and produced advocates for both states’ and federal rights. The new federal government struggled to define powers within its branches and its role in the new nation.</p>	<p>7.8.a. The Constitution embraced federalism as a form of government that shares powers between the federal and state governments.</p> <p>7.8.b The Constitution established three independent but equally powerful branches of government, as well as a system of checks and balances that guides the relationship between the branches.</p> <p>7.8.c Advocates for and against a strong central government were divided on issues of states’ rights, federal power, and individual freedoms.</p> <p>7.8.d Compromises were needed between the states in order to ratify the Constitution, and these compromises foreshadowed future tensions and conflicts.</p> <p>7.8.e Early foreign and domestic disputes tested the strength of the Constitution, particularly regarding the separation of powers between the executive, legislative, and judicial branches of government, the system of checks and balances, and the issue of states’ rights.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	<p>1, 5</p>

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Expansion and Reform (1800-1861)</i>			
<p>7.9 Guided by various ideological values and political and economic needs, the United States expanded its physical boundaries to the Pacific Ocean between 1800 and 1860.</p>	<p>7.9.a Conflict and compromise with foreign nations occurred regarding the physical expansion of the United States during the 19th century.</p> <p>7.9.b American values and beliefs resulted in increased westward expansion and settlement.</p> <p>7.9.c Technologies and the need for resources affected westward expansion and settlement.</p> <p>7.9.d Pioneers in western settlements faced hardships and benefits as they sought to reconcile their old lifestyles with political, social, and cultural structures in the western territories.</p> <p>7.9.e Settlement of Americans on western territories affected government policies and interactions with the Native Americans who already lived there</p>	<p>Time, Continuity, and Change Development, Movement, and Interaction of Cultures</p>	<p>1, 3</p>
<p>7.10 Technological innovation led to industrialization and growth in production and trade throughout the United States.</p>	<p>7.10.a New technologies encouraged new forms of production, specialization of production, trade between communities, and the growth of businesses.</p> <p>7.10.b New technologies improved agricultural efficiency and made for easier transport of goods and ideas across the country. The geography of New York State permitted the development of the nation's most efficient canal system which led to the emergence of New York City as the nation's economic leader, surpassing other cities.</p> <p>7.10.c With the growth of private companies, businesses prospered but workers frequently did not share in this prosperity equally.</p>	<p>Science, Technology and Innovation</p>	<p>1</p>
<p>7.11 In addition to geographic expansion, the strength of the national government and the power of the executive branch grew significantly, sparking tensions between the advocates of states' rights and the supporters of a strong federal government.</p>	<p>7.11.a As the nation expanded geographically, the political strength and scope of the federal government also expanded.</p> <p>7.11.b Supreme Court decisions were instrumental in elevating the power of the federal government.</p> <p>7.11.c Nationalist and nativist claims shaped domestic and foreign policy and were used to strengthen the executive branch.</p>	<p>Time, Continuity, and Change Power, Authority, and Governance</p>	<p>1, 5</p>

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Expansion and Reform (1800-1861)</i>			
	<p>7.11.d Regional economic differences and values laid the basis for tensions between states' rights advocates and supporters of a strong federal government.</p> <p>7.11.e The power of the president expanded through decisions and actions related to national finance and banking, expansion, and international treaties and relations.</p>		
<p>7.12 Unequal and oppressive social structures sparked resistance efforts by slaves and reform movements to address social, political, and economic inequalities in the United States.</p>	<p>7.12.a Early reform movements applied religious ideals and transcendentalist philosophy to respond to social problems.</p> <p>7.12.b Enslaved African Americans found a variety of ways to resist the institution of slavery.</p> <p>7.12.c Abolitionists' actions increased the awareness of slavery and motivated enslaved African Americans to take greater risks to achieve freedom in the United States.</p> <p>7.12.d Women joined the movements for abolition and temperance, and organized to advocate for women's property rights, fair wages, education, and political equality.</p> <p>7.12.e Immigrant workers, low-wage earners, and women organized unions and political institutions to fight for safe and fair working conditions in industrialized areas.</p> <p>7.12.f Immigrant and Native American groups struggled to acquire basic rights.</p> <p>7.12.g Social reformers also illuminated the need for improvements in education and mental health care.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	<p>1</p>

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Sectionalism, Division, and Reunion (1850s-1877)</i>			
<p>7.13 The Westward movement, growing industrialization, and the expansion of slavery increased sectional divisions and regional tensions.</p>	<p>7.13.a New technologies transformed the daily life of Americans in the United States during the 19th century.</p> <p>7.13.b Different types of industrialization, production, and trade distinguished regions of the United States.</p> <p>7.13.c The economic development of the South resulted in a greater reliance on slave labor.</p> <p>7.13.d Deeply entrenched systems of social and political inequality existed on southern plantations, in urban centers of the South, and in the growing industrial cities of the North.</p> <p>7.13.e The characteristics and impact of industrialism differed, based on the geographic and social characteristics of the North, South, and West.</p> <p>7.13.f The issues of expansion and federalism were debated between the North and South.</p> <p>7.13.g Industrialism, federalism, westward expansion, and the contested role of slavery contributed to the development of sectional conflict.</p>	<p>Time, Continuity, and Change</p> <p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Power, Authority, and Governance</p>	<p>1, 5</p>
<p>7.14 Complex economic, social, and political tensions between northern and southern states and differing views on slavery ultimately led to the Civil War, which affected the lives of all Americans.</p>	<p>7.14.a Beliefs about slavery and the resulting social and economic structures led to irreconcilable differences between the North and South.</p> <p>7.14.b Perspectives on the long-term causes of the Civil War varied based on geographic region, but the election of a Republican president was one of the immediate causes for the secession of the southern states.</p> <p>7.14.c Military and political actions affected beliefs and behaviors of civilians and the military during the Civil War.</p> <p>7.14.d African Americans, Native Americans, women, and immigrants played different roles during the Civil War, and these roles were at times challenged by white male leaders.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	

Grade 7: The United States and New York History I – cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Sectionalism, Division, and Reunion (1850s-1877)</i>			
	<p>7.14.e The power of the presidency expanded greatly during the Civil War, and presidential speeches, actions, and decisions of the time continue to have an impact on American life.</p> <p>7.14.f Geography, military innovations, and new modes of transportation significantly affected the outcome of the Civil War.</p> <p>7.14.g The Emancipation Proclamation helped alter the course of the war and shifted the cause of the Union to focus on the abolition of slavery.</p> <p>7.14.h The Civil War drastically affected human lives, physical infrastructure, economic capacity, and governance of the United States.</p>		
7.15 Regional tensions following the Civil War complicated the effort to reunify the nation and define the status of African Americans.	<p>7.15.a State and federal goals and policies during Reconstruction affected the political and social structures in the North and South.</p> <p>7.15.b Different approaches toward and policies for Reconstruction demonstrated the challenges to reunify the United States.</p> <p>7.15.c The amendments expanding the rights of African Americans, added to the Constitution during Reconstruction, were challenged on many levels.</p> <p>7.15.d Reconstruction had both positive and negative impacts on the lives of African Americans.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	1

Grade 8: The United States and New York History II

Part II of “The United States and New York History” encompasses Industrialism in the 1870s through the role of the United States in a global economy today. The course is divided into six sections that each pay attention to the movement and culture of people, the changing politics and access to citizenship, the interaction of people with their environment, and the forms of production that distinguish regions and types of communities throughout U.S. history. The course begins with a section on industrialism and the progressive reforms that stemmed from the inequity and unfair conditions that arose with industrialization and urbanization. This section studies the claim of rights by women, children, labor unions, and immigrants. The next section examines America’s imperialism, isolationism, and intervention at the turn of the 20th century, leading up to the entrance of the U.S. into World War I. A third section uses a sociological lens to study life in the United States between the two world wars. A section surrounding World War II highlights the changing role of the United States in international affairs and accompanying economic and social changes at home. The Cold War section studies in depth the international political and economic issues that divided the world between 1945 and 1990 and the social and scientific impacts of this “war” on the lives and education of ordinary Americans. The last section examines the geographic, political, social, and economic issues that affect the lives of Americans at home and abroad in the 21st century.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Industrial Society and Progressive Reforms (1870-1920)</i>			
8.1 The Industrial Revolution had significant consequences, including increasing urbanization, the need for a larger labor force, and the emergence of new business practices.	<p>8.1.a Continued technological developments and access to natural resources facilitated an Industrial Revolution that changed the modes of production.</p> <p>8.1.b Industrialization was significant to the United States by allowing it to develop into a strong economic system of global importance.</p> <p>8.1.c Increased industrialism expanded urban areas in the United States, particularly in Northern cities.</p> <p>8.1.d The demand for labor in urban industrial areas resulted in increased migration from rural areas and a steep rise in immigration to the United States.</p> <p>8.1.e Business owners developed practices that increased their profits and efficiency.</p> <p>8.1.f Unions emerged in response to tensions between industry and labor.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p> <p>Geography, Humans, and the Environment</p>	1, 3, 4
8.2 New technologies and opportunities led a migration into claimed Western lands.	<p>8.2.a Political, economic, and technological opportunities increased settlement of the West after the Civil War.</p> <p>8.2.b American settlers and the government continued the conflict with Native Americans over settlement of Western lands between 1864 and 1890.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	1, 2

Grade 8: The United States and New York History II - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Industrial Society and Progressive Reforms (1870-1920)</i>			
	<p>8.2.c Differing cultural, economic, and social systems affected the lives of settlers on the Western frontier from 1864 to 1890.</p> <p>8.2.d The Populist movement in the late 1800s was a reform movement that promoted the interests of farmers and sought to limit the power of the elite.</p>	<p>Geography, Humans, and the Environment</p>	<p>1, 2</p>
<p>8.3 Urban problems resulting from industrialization sparked the Progressive movement and increased the calls for reform and equality by various groups.</p>	<p>8.3.a The density, diversity, technologies, and industry of urban areas shaped the social, cultural, and economic lives of people in cities.</p> <p>8.3.b Anti-immigration sentiments, income disparities, and limited access to resources created unique challenges for urban leaders.</p> <p>8.3.c Progressive Era reformers sought to address political and social issues at the local, state, and federal levels of government between 1890 and 1920.</p> <p>8.3.d Muckrakers and reformers used a variety of techniques to expose political and social issues that occurred as a result of industrialism and urbanization.</p> <p>8.3.e Government policies were enacted and enforced in response to the actions of reformers.</p> <p>8.3.f The Progressive Era brought renewed attention to women's rights and the suffrage movement.</p>	<p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	<p>1, 4</p>
<i>America on the World Stage: Imperialism, Isolationism, and Intervention (1890-1918)</i>			
<p>8.4 Beginning in the late 19th century, support for a more aggressive foreign policy grew in the United States, resulting in territorial expansion and a debate over imperialism.</p>	<p>8.4.a Technological developments such as those in transportation and communications produced the demand for new markets and enabled U.S. expansion.</p> <p>8.4.b. Military, economic, political, and cultural strategies and values spurred U.S. imperialism.</p> <p>8.4.c The location of U.S. territories across the globe offered military and economic advantages to the United States.</p> <p>8.4.d The U.S. acquisition of territories relied on military force and political diplomacy.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p> <p>Global Connections and Exchange</p>	<p>1, 2</p>

Grade 8: The United States and New York History II - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Geography, Humans, and the Environment</i>			
8.5 Varied diplomatic, economic, and ideological factors ultimately led the United States to abandon neutrality and enter World War I. The effects of World War I resulted in the United States return to isolationism.	<p>8.5.a Militarism, alliances, imperialism, and nationalism grew, uniting and dividing nations around the world, leading to global conflict.</p> <p>8.5.b International, economic, and military developments swayed opinion in favor of the U.S. siding with the Allies and entering World War I.</p> <p>8.5.c New military technologies changed military strategy in World War I and resulted in an unprecedented number of casualties.</p> <p>8.5.d Following extensive political debate, the U.S. refused to ratify the Treaty of Versailles.</p> <p>8.5.e Following the war, the U.S. sought to return to prewar policies by focusing on domestic rather than international matters.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p> <p>Global Connections and Exchange</p>	1, 2
<i>Life in the United States between the World Wars (1910-1930s)</i>			
8.6 The United States involvement in World War I significantly altered the social, cultural, and political lives of Americans. Postwar reactions generated cultural conflict and change in the 1920s.	<p>8.6.a Economic and social changes during World War I and later World War II offered new opportunities for women and racial minorities.</p> <p>8.6.b Domestic responses to World War I limited civil liberties within the United States.</p> <p>8.6.c The end of World War I ushered in radical cultural change, as well as the emergence of an African American cultural movement as part of the Roaring Twenties.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p>	1
8.7 Postwar America was characterized by economic prosperity, technological innovation, changes in the workplace, and a rising standard of living, but not all Americans benefited equally from this prosperity.	<p>8.7.a Economic shifts and new technologies from World War I helped the United States economy flourish.</p> <p>8.7.b Pro-business economic policies assisted the growth of businesses, banks, and investments.</p> <p>8.7.c New household conveniences, forms of transportation, and investment opportunities improved the standard of living for many Americans.</p> <p>8.7.d The economic prosperity of the 1920s was not shared by all Americans.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p> <p>Science, Technology and Innovation</p>	1

Grade 8: The United States and New York History II - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>Life in the United States between the World Wars (1910-1930s)</i>			
<p>8.8 The Great Depression and environmental disasters of the 1930s created hardships for many Americans, resulting in a powerful government response that had lasting social, political, and economic impacts on the United States.</p>	<p>8.8.a Monetary policies, consumerism, protectionism, and a weak global economy during the 1920s led to the Great Depression.</p> <p>8.8.b The Great Depression affected all American families, but the effects varied across geographic regions and class, race, and gender lines.</p> <p>8.8.c Hardships for farming families occurred that required many of them to relocate and resettle.</p> <p>8.8.d In contrast to his predecessor, President Franklin Roosevelt used an aggressive policy, called the New Deal, to try to revive the economy and help Americans deal with the hardships of the Great Depression.</p> <p>8.8.e New Deal reforms had a long-lasting effect on the role of government in American society and economic life, but did not resolve all of the hardships Americans faced.</p>	<p>Time, Continuity, and Change</p> <p>Creation, Expansion, and Interaction of Economic Systems</p>	<p>1, 4</p>
<i>The United States Assumes Worldwide Responsibilities (1930s-1950s)</i>			
<p>8.9 The aggression of the Axis Powers threatened the United States national interests and security and led to the United States entry into World War II.</p>	<p>8.9.a Economic depression, the rise of totalitarian rule, increased nationalism, and the unsuccessful efforts of the League of Nations contributed to the outbreak of World War II.</p> <p>8.9.b A series of government actions from 1939 to 1941 that were designed to protect United States interests, eventually led to alliance building and entry into World War II.</p> <p>8.9.c U.S. military strategy in World War II required divided allocation of resources and support during a conflict fought on three continents and as many oceans.</p> <p>8.9.d. The growth of global militarism created new technologies used in World War II.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	<p>1,2</p>

Grade 8: The United States and New York History II - cont.

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>The United States Assumes Worldwide Responsibilities (1930s-1950s)</i>			
<p>8.10 The nature and consequences of warfare during World War II transformed the United States and the global community. The damage from total warfare and human atrocities, including the Holocaust, led to a call for an international organization and protection of human rights.</p>	<p>8.10.a Advanced technologies and military strategy increased the impact of world war on human life and the environment.</p> <p>8.10.b The United States emerged from World War II as a leader of democracy, creating alliances and providing economic support to protect democracy and advance its interests throughout the world.</p> <p>8.10.c Human rights violations occurred during World War II and included Japanese internment and the Holocaust.</p> <p>8.10.d The United Nations was formed after World War II to promote peace and protect human rights.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	<p>1, 2</p>
<i>The Cold War and the Changing Global Role of the United States (1945-1991)</i>			
<p>8.11 The Cold War struggle between the United States and the Soviet Union dominated international military policy, global conflicts, technological advances, and global alliances for almost four decades.</p>	<p>8.11.a. The Cold War was an ongoing political struggle led by the United States and the Soviet Union in which the two global superpowers sought to advance their diplomatic and economic interests.</p> <p>8.11.b The United States based its military and diplomatic policies from 1945 to 1990 on a policy of containment.</p> <p>8.11.c The Cold War shaped the reconstruction of national boundaries and political alliances across the globe.</p> <p>8.11.d The legacies of Cold War actions and political ideologies continue to affect U.S. foreign policy today.</p> <p>8.11.e Following the end of the Cold War, the United States sought to define a new role in global affairs.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p> <p>Geography, Humans, and the Environment</p>	<p>1,2, 5</p>

Grade 8: The United States and New York History II - cont

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>The Cold War and the Changing Global Role of the United States (1945-1991)</i>			
<p>8.12 Domestic policies and everyday life in the United States reflected and responded to the international tensions of the Cold War.</p>	<p>8.12.a The struggle to contain communism abroad was mirrored by a struggle to prevent the undermining of America within the United States and at times resulted in attacks on American civil liberties.</p> <p>8.12.b Americans experienced Cold War tensions in their everyday lives, as shown by the fear of nuclear attacks, education reform, and news relayed through mass media.</p> <p>8.12.c New technologies, industrial patterns, and an emphasis on science and math education were influenced by the U.S. desire to meet the perceived threat from the Soviet Union.</p> <p>8.12.d Changes in the economic sector continued to shape class, race, and gender relations.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p> <p>Civic Ideals and Practices</p>	<p>1</p>
<p>8.13 An extensive and powerful civil rights movement began in the 1950s and helped transform African American rights during the 1960s. The success of the civil rights movement led to renewed reform efforts by women and other groups.</p>	<p>8.13.a The demands for rights by African Americans, women of all races, Native Americans, and immigrants grew out of longstanding struggles for equality.</p> <p>8.13.b Successes within the civil rights and women's movements activated new social and political movements and the formation of a counterculture.</p> <p>8.13.c The strategies of activists in regions, cities, and campuses across the country responded to local politics and physical (natural or constructed) environments.</p> <p>8.13.d The political struggles of the 1950s, 1960s, and 1970s challenged the understanding of citizenship within the Constitution.</p> <p>8.13.e Presidential and congressional policies during these decades helped and hindered social movements.</p>	<p>Time, Continuity, and Change</p> <p>Development and Transformation of Social Structures</p> <p>Civic Ideals and Practices</p> <p>Geography, Humans, and the Environment</p>	<p>1, 5</p>

Grade 8: The United States and New York History II - cont

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>The Cold War and the Changing Global Role of the United States (1945-1991)</i>			
<p>8.14 The last decades of the 20th century were a time of tension between a conservative movement and an expansion of social policy.</p>	<p>8.14.a The New Right used grassroots coalition building to respond to political and social changes in the 1960s and 1970s.</p> <p>8.14.b Economic recession encouraged changes in regulation and policy to generate recovery.</p> <p>8.14.c Various minority groups who won rights in the 1960s and 1970s struggled to exercise those rights in political and social realms.</p> <p>8.14.d New health and environmental concerns shaped policy, activism, and lifestyles.</p> <p>8.14.d Economic struggles, particularly in urban and rural areas, led to migrations of people across the United States seeking economic opportunity.</p>	<p>Time, Continuity, and Change</p> <p>Creation, Expansion, and Interaction of Economic Systems</p> <p>Geography, Humans, and the Environment</p>	<p>1, 3, 4</p>
<i>United States at the Start of the 21st Century</i>			
<p>8.15 The period from 1960 to 2010 started with a major expansion of federal social programs and subsequent recurring political debates over the proper role and power of the federal and state governments in American life.</p>	<p>8.15.a Federal funding for social programs ebbed and flowed between the 1960s and the present.</p> <p>8.15.b The federal and state governments continue to debate control over education, health care, welfare, marriage, and other issues not enumerated in the Constitution.</p> <p>8.15.c Political parties continue to debate the role and power of federal and state governments in American life.</p>	<p>Time, Continuity, and Change</p> <p>Power, Authority, and Governance</p>	<p>1, 5</p>

Grade 8: The United States and New York History II - cont

Key Ideas	Conceptual Understandings	Theme(s)	Standard
<i>United States at the Start of the 21st Century</i>			
<p>8.16 At the start of the 21st century, the United States faced global and domestic challenges, including terrorism, increased economic interdependence and competition, and growing environmental concerns.</p>	<p>8.16.a The location of resources, access to labor, and the evolution of finance and high-tech economic sectors have increased economic interdependence and competition.</p> <p>8.16.b Population growth, the consumption of natural resources, the clearing of land for human sustenance, and industrialism have put added stress on the global environment.</p> <p>8.16.c Terrorist groups, not representing any nation, entered and reshaped global military and political alliances and conflicts.</p> <p>8.16.d Multinational organizations gained a greater role in shaping global economic, environmental, and diplomatic policies and actions.</p> <p>8.15.e Multiple and competing economic actions and decisions at home and abroad have affected the U.S. and world economies.</p>	<p>Time, Continuity, and Change</p> <p>Global Connections and Exchange</p> <p>Geography, Humans, and the Environment</p>	<p>1, 2, 4, 5</p>

High School Science Course Sequence

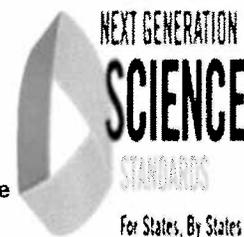
Science			
Grade 9	Grade 10	Grade 11	Grades 12
Prioritized Living Environment* - Regents *SpEd / IEP students only	Prioritized Earth Science* - Regents or elective *SpEd / IEP students only	Prioritized Physics* - Regents or elective *SpEd / IEP students only	
Living Environment - Regents	Earth Science - Regents or elective	Chemistry - Regents or elective	Physics* - Regents *pre requisite – Algebra 1
Living Environment - Regents	Chemistry - Regents AP Chemistry SUPA / SUNY ESF, etc	Physics - Regents IB / College Level, AP Living Environment AP Chemistry AP Physics	Physics - Regents IB / College Level, AP Living Environment AP Chemistry AP Physics

Courses in bold represent the District CORE sequence

Next Generation Science Standards (NGSS) to be released in January 2013

Next Generation Science Standards for Today's Students and Tomorrow's

Workforce: Through a collaborative, state-led process managed by Achieve, new K–12 science standards are being developed that will be rich in content and practice, arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education. The NGSS will be based on the *Framework for K–12 Science Education* developed by the National Research Council.



New York State Intermediate Level Science Core Curriculum Grades 5-8**Preface:**

This *Intermediate Level Science Core Curriculum* has been written to assist teachers and supervisors as they prepare curriculum, instruction, and assessment for the intermediate level (grades 5, 6, 7, and 8) content of Standards 1, 2, 4, 6, and 7 of the New York State *Learning Standards for Mathematics, Science, and Technology*. The *Learning Standards for Mathematics, Science, and Technology* identify Key Ideas and Performance Indicators. Key Ideas are broad, unifying, general statements of what students need to know. The Performance Indicators for each Key Idea are statements of what students should be able to do to provide evidence that they understand the Key Idea. As part of this continuum, this Core Curriculum guide presents Major Understandings that give more specific detail to the concepts underlying each Performance Indicator.

This Core Curriculum is *not* a syllabus. It addresses only the content and skills to be tested by the Intermediate Level Science Assessment. The Core Curriculum has been prepared with the assumption that the content and skills as outlined in the *Learning Standards for Mathematics, Science, and Technology* at the elementary level have been taught previously. This is a guide for the preparation of intermediate level curriculum, instruction, and assessment, the middle stage in a K-12 continuum of science education. The lack of detail in the document should not be seen as a shortcoming. Rather, the focus on conceptual understanding in the guide is consistent with the approaches recommended in the *National Science Education Standards and Benchmarks of Science Literacy: Project 2061*.

It is essential that instruction focus on understanding important relationships, processes, mechanisms, and applications of concepts. Less important is the memorization of specialized terminology and technical details. Future assessments will test students' ability to explain, analyze, and interpret scientific processes and phenomena more than their ability to recall specific facts. It is hoped that the general nature of these statements will encourage the teaching of science for understanding, instead of for memorization. The question has been asked for each Key Idea: What do students need to know to have science literacy within that broad theme? The general nature of the Major Understandings in this guide will also permit teachers more flexibility in instruction and greater variation in assessment than would a more explicit syllabus.

The order of presentation and numbering of all statements in this guide are not meant to indicate any recommended sequence of instruction. For example, in the Living Environment section, teachers may decide to deal with the concepts in Key Idea 4 before Key Ideas 2 and 3. Major Understandings have not been prioritized, nor have they been organized in any manner to indicate time allotments. Teachers are encouraged to find and elaborate for students the conceptual cross-linkages that interconnect many of the Key Ideas to each other and to other mathematics, science, and technology learning standards.

The courses designed using this Core Curriculum will hopefully prepare our students to explain, both accurately and with appropriate depth, the most important ideas about our physical setting and our living environment. Students, in attaining science literacy, ought to be able to give these explanations, in their own words, by the time they graduate and long after they have completed their high school education. The science educators throughout New York State who collaborated on the writing of this guide fervently hope that this goal is realized in the years ahead.

Laboratory Recommendations: Critical to understanding science concepts is the use of scientific inquiry to develop explanations of natural phenomena. Therefore, it is recommended that students have the opportunity to develop their skills of analysis, inquiry, and design through active laboratory work on a regular basis in grades 5, 6, 7, and 8.

Prior to the written portion of the Intermediate Level Science Assessment, students will be required to complete a laboratory performance test during which concepts and skills from Standards 1, 2, 4, 6, and 7 will be assessed.

STANDARDS 1, 2, 6, AND 7: EXPANDED PROCESS SKILLS

Science process skills should be based on a series of discoveries. Students learn most effectively when they have a central role in the discovery process. To that end, Standards 1, 2, 6, and 7 incorporate in the Intermediate Core Curriculum a student centered, problem-solving approach to intermediate science. The following is an expanded version of the skills found in Standards 1, 2, 6, and 7 of the Learning Standards for Mathematics, Science, and Technology. This list is not intended to be an all-inclusive list of the content or skills that teachers are expected to incorporate into their curriculum. It should be a goal of the instructor to encourage science process skills that will provide students with background and curiosity sufficient to prompt investigation of important issues in the world around them.

STANDARD 1—Analysis, Inquiry, and Design

Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

STANDARD 1 Analysis, Inquiry, and Design MATHEMATICAL ANALYSIS:	<i>Key Idea 1:</i> Abstraction and symbolic representation are used to communicate mathematically. M1.1 Extend mathematical notation and symbolism to include variables and algebraic expressions in order to describe and compare quantities and express mathematical relationships. M1.1a identify independent and dependent variables M1.1b identify relationships among variables including: direct, indirect, cyclic, constant; identify non-related material M1.1c apply mathematical equations to describe relationships among variables in the natural world
	<i>Key Idea 2:</i> Deductive and inductive reasoning are used to reach mathematical conclusions. M2.1 Use inductive reasoning to construct, evaluate, and validate conjectures and arguments, recognizing that patterns and relationships can assist in explaining and extending mathematical phenomena. M2.1a interpolate and extrapolate from data M2.1b quantify patterns and trends
	<i>Key Idea 3:</i> Critical thinking skills are used in the solution of mathematical problems. M3.1 Apply mathematical knowledge to solve real-world problems and problems that arise from the investigation of mathematical ideas, using representations such as pictures, charts, and tables. M3.1a use appropriate scientific tools to solve problems about the natural world
STANDARD 1 Analysis, Inquiry, and Design SCIENTIFIC INQUIRY:	<i>Key Idea 1:</i> The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process. S1.1 Formulate questions independently with the aid of references appropriate for guiding the search for explanations of everyday observations. S1.1a formulate questions about natural phenomena S1.1b identify appropriate references to investigate a question S1.1c refine and clarify questions so that they are subject to scientific investigation

STANDARDS 1, 2, 6, AND 7: EXPANDED PROCESS SKILLS – cont.

<p>STANDARD 1</p> <p>Analysis, Inquiry, and Design</p> <p>SCIENTIFIC INQUIRY:</p>	<p>S1.2 Construct explanations independently for natural phenomena, especially by proposing preliminary visual models of phenomena.</p> <p>S1.2a independently formulate a hypothesis</p> <p>S1.2b propose a model of a natural phenomenon</p> <p>S1.2c differentiate among observations, inferences, predictions, and explanations</p> <p>S1.3 Represent, present, and defend their proposed explanations of everyday observations so that they can be understood and assessed by others.</p> <p>S1.4 Seek to clarify, to assess critically, and to reconcile with their own thinking the ideas presented by others, including peers, teachers, authors, and scientists.</p>
	<p><i>Key Idea 2:</i></p> <p>Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.</p> <p>S2.1 Use conventional techniques and those of their own design to make further observations and refine their explanations, guided by a need for more information.</p> <p>S2.1a demonstrate appropriate safety techniques</p> <p>S2.1b conduct an experiment designed by others</p> <p>S2.1c design and conduct an experiment to test a hypothesis</p> <p>S2.1d use appropriate tools and conventional techniques to solve problems about the natural world, including:</p> <ul style="list-style-type: none"> ▪ measuring ▪ observing ▪ describing ▪ classifying ▪ sequencing <p>S2.2 Develop, present, and defend formal research proposals for testing their own explanations of common phenomena, including ways of obtaining needed observations and ways of conducting simple controlled experiments.</p> <p>S2.2a include appropriate safety procedures</p> <p>S2.2b design scientific investigations (e.g., observing, describing, and comparing; collecting samples; seeking more information, conducting a controlled experiment; discovering new objects or phenomena; making models)</p> <p>S2.2c design a simple controlled experiment</p> <p>S2.2d identify independent variables (manipulated), dependent variables (responding), and constants in a simple controlled experiment</p> <p>S2.2e choose appropriate sample size and number of trials</p> <p>S2.3 Carry out their research proposals, recording observations and measurements (e.g., lab notes, audiotape, computer disk, videotape) to help assess the explanation.</p> <p>S2.3a use appropriate safety procedures</p> <p>S2.3b conduct a scientific investigation</p> <p>S2.3c collect quantitative and qualitative data</p>

STANDARDS 1, 2 , 6, AND 7: EXPANDED PROCESS SKILLS – cont.

<p>STANDARD 1</p> <p>Analysis, Inquiry, and Design SCIENTIFIC INQUIRY:</p>	<p><i>Key Idea 3:</i> The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena.</p> <p>S3.1 Design charts, tables, graphs, and other representations of observations in conventional and creative ways to help them address their research question or hypothesis.</p> <p>S3.1a organize results, using appropriate graphs, diagrams, data tables, and other models to show relationships</p> <p>S3.1b generate and use scales, create legends, and appropriately label axes</p> <p>S3.2 Interpret the organized data to answer the research question or hypothesis and to gain insight into the problem.</p> <p>S3.2a accurately describe the procedures used and the data gathered</p> <p>S3.2b identify sources of error and the limitations of data collected</p> <p>S3.2c evaluate the original hypothesis in light of the data</p> <p>S3.2d formulate and defend explanations and conclusions as they relate to scientific phenomena</p> <p>S3.2e form and defend a logical argument about cause-and-effect relationships in an investigation</p> <p>S3.2f make predictions based on experimental data</p> <p>S3.2g suggest improvements and recommendations for further studying</p> <p>S3.2h use and interpret graphs and data tables</p> <p>S3.3 Modify their personal understanding of phenomena based on evaluation of their hypothesis.</p>
<p>STANDARD 1</p> <p>Analysis, Inquiry, and Design: ENGINEERING DESIGN:</p>	<p><i>Key Idea 1:</i> Engineering design is an iterative process involving modeling and optimization (finding the best solution within given constraints); this process is used to develop technological solutions to problems within given constraints.</p> <p>T1.1 Identify needs and opportunities for technical solutions from an investigation of situations of general or social interest.</p> <p>T1.1a identify a scientific or human need that is subject to a technological solution which applies scientific principles</p> <p>T1.2 Locate and utilize a range of printed, electronic, and human information resources to obtain ideas.</p> <p>T1.2a use all available information systems for a preliminary search that addresses the need</p> <p>T1.3 Consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal.</p> <p>T1.3a generate ideas for alternative solutions</p> <p>T1.3b evaluate alternatives based on the constraints of design</p> <p>T1.4 Develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship.</p> <p>T1.4a design and construct a model of the product or process</p> <p>T1.4b construct a model of the product or process</p> <p>T1.5 In a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss trade-offs that might have to be made.</p> <p>T1.5a test a design</p> <p>T1.5b evaluate a design</p>

STANDARDS 1, 2, 6, AND 7: EXPANDED PROCESS SKILLS – cont.

STANDARD 2—Information Systems

Students will access, generate, process, and transfer information, using appropriate technologies.

<p>STANDARD 2</p> <p>INFORMATION SYSTEMS:</p>	<p><i>Key Idea 1:</i> Information technology is used to retrieve, process, and communicate information as a tool to enhance learning.</p> <ul style="list-style-type: none"> 1.1 Use a range of equipment and software to integrate several forms of information in order to create good-quality audio, video, graphic, and text-based presentations. 1.2 Use spreadsheets and database software to collect, process, display, and analyze information. Students access needed information from electronic databases and on-line telecommunication services. 1.3 Systematically obtain accurate and relevant information pertaining to a particular topic from a range of sources, including local and national media, libraries, museums, governmental agencies, industries, and individuals. 1.4 Collect data from probes to measure events and phenomena. <ul style="list-style-type: none"> 1.4a collect the data, using the appropriate, available tool 1.4b organize the data 1.4c use the collected data to communicate a scientific concept 1.5 Use simple modeling programs to make predictions.
	<p><i>Key Idea 2:</i> Knowledge of the impacts and limitations of information systems is essential to its effectiveness and ethical use.</p> <ul style="list-style-type: none"> 2.1 Understand the need to question the accuracy of information displayed on a computer because the results produced by a computer may be affected by incorrect data entry. <ul style="list-style-type: none"> 2.1a critically analyze data to exclude erroneous information 2.1b identify and explain sources of error in a data collection 2.2 Identify advantages and limitations of data-handling programs and graphics programs. 2.3 Understand why electronically stored personal information has greater potential for misuse than records kept in conventional form.
	<p><i>Key Idea 3:</i> Information technology can have positive and negative impacts on society, depending upon how it is used.</p> <ul style="list-style-type: none"> 3.1 Use graphical, statistical, and presentation software to present projects to fellow classmates. 3.2 Describe applications of information technology in mathematics, science, and other technologies that address needs and solve problems in the community. 3.3 Explain the impact of the use and abuse of electronically generated information on individuals and families.

STANDARDS 1, 2, 6, AND 7: EXPANDED PROCESS SKILLS – cont.**STANDARD 6—Interconnectedness: Common Themes**

Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>SYSTEMS THINKING:</p>	<p><i>Key Idea 1:</i> Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.</p> <p>1.1 Describe the differences between dynamic systems and organizational systems. 1.2 Describe the differences and similarities among engineering systems, natural systems, and social systems. 1.3 Describe the differences between open- and closed-loop systems. 1.4 Describe how the output from one part of a system (which can include material, energy, or information) can become the input to other parts.</p>
<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>MODELS:</p>	<p><i>Key Idea 2:</i> Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.</p> <p>2.1 Select an appropriate model to begin the search for answers or solutions to a question or problem. 2.2 Use models to study processes that cannot be studied directly (e.g., when the real process is too slow, too fast, or too dangerous for direct observation). 2.3 Demonstrate the effectiveness of different models to represent the same thing and the same model to represent different things.</p>
<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>MAGNITUDE AND SCALE:</p>	<p><i>Key Idea 3:</i> The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems.</p> <p>3.1 Cite examples of how different aspects of natural and designed systems change at different rates with changes in scale. 3.2 Use powers of ten notation to represent very small and very large numbers.</p>
<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>EQUILIBRIUM AND STABILITY:</p>	<p><i>Key Idea 4:</i> Equilibrium is a state of stability due either to a lack of change (static equilibrium) or a balance between opposing forces (dynamic equilibrium).</p> <p>4.1 Describe how feedback mechanisms are used in both designed and natural systems to keep changes within desired limits. 4.2 Describe changes within equilibrium cycles in terms of frequency or cycle length and determine the highest and lowest values and when they occur.</p>
<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>PATTERNS OF CHANGE:</p>	<p><i>Key Idea 5:</i> Identifying patterns of change is necessary for making predictions about future behavior and conditions.</p> <p>5.1 Use simple linear equations to represent how a parameter changes with time. 5.2 Observe patterns of change in trends or cycles and make predictions on what might happen in the future.</p>
<p>STANDARD 6</p> <p>Interconnectedness: Common Themes</p> <p>OPTIMIZATION:</p>	<p><i>Key Idea 6:</i> In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.</p> <p>6.1 Determine the criteria and constraints and make trade-offs to determine the best decision. 6.2 Use graphs of information for a decision-making problem to determine the optimum solution.</p>

STANDARDS 1, 2 , 6, AND 7: EXPANDED PROCESS SKILLS – cont.

STANDARD 7—Interdisciplinary Problem Solving

Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

<p>STANDARD 7</p> <p>Interdisciplinary Problem Solving</p> <p>CONNECTIONS:</p>	<p><i>Key Idea 1:</i> The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/ technology/society, consumer decision making, design, and inquiry into phenomena.</p> <p>1.1 Analyze science/technology/society problems and issues at the local level and plan and carry out a remedial course of action.</p> <p>1.2 Make informed consumer decisions by seeking answers to appropriate questions about products, services, and systems; determining the cost/benefit and risk/benefit tradeoffs; and applying this knowledge to a potential purchase.</p> <p>1.3 Design solutions to real-world problems of general social interest related to home, school, or community using scientific experimentation to inform the solution and applying mathematical concepts and reasoning to assist in developing a solution.</p> <p>1.4 Describe and explain phenomena by designing and conducting investigations involving systematic observations, accurate measurements, and the identification and control of variables; by inquiring into relevant mathematical ideas; and by using mathematical and technological tools and procedures to assist in the investigation.</p>
<p>STANDARD 7</p> <p>Interdisciplinary Problem Solving</p> <p>STRATEGIES:</p>	<p><i>Key Idea 2:</i> Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results.</p> <p>2.1 Students participate in an extended, culminating mathematics, science, and technology project. The project would require students to:</p> <ul style="list-style-type: none"> ▪ Working Effectively: Contributing to the work of a brainstorming group, laboratory partnership, cooperative learning group, or project team; planning procedures; identify and managing responsibilities of team members; and staying on task, whether working alone or as part of a group. ▪ Gathering and Processing Information: Accessing information from printed media, electronic data bases, and community resources and using the information to develop a definition of the problem and to research possible solutions. ▪ Generating and Analyzing Ideas: Developing ideas for proposed solutions, investigating ideas, collecting data, and showing relationships and patterns in the data. ▪ Common Themes: Observing examples of common unifying themes, applying them to the problem, and using them to better understand the dimensions of the problem. ▪ Realizing Ideas: Constructing components or models, arriving at a solution, and evaluating the result. ▪ Presenting Results: Using a variety of media to present the solution and to communicate the results.

PROCESS SKILLS BASED ON STANDARD 4**General Skills**

- 1 follow safety procedures in the classroom and laboratory
- 2 safely and accurately use the following measurement tools:
 - metric ruler
 - balance
 - stopwatch
 - graduated cylinder
 - thermometer
 - spring scale
 - voltmeter
- 3 use appropriate units for measured or calculated values
- 4 recognize and analyze patterns and trends
- 5 classify objects according to an established scheme and a student-generated scheme
- 6 develop and use a dichotomous key
- 7 sequence events
- 8 identify cause-and-effect relationships
- 9 use indicators and interpret results

Living Environment Skills

- 1 manipulate a compound microscope to view microscopic objects
- 2 determine the size of a microscopic object, using a compound microscope
- 3 prepare a wet mount slide
- 4 use appropriate staining techniques
- 5 design and use a Punnett square or a pedigree chart to predict the probability of certain traits
- 6 classify living things according to a student-generated scheme and an established scheme
- 7 interpret and/or illustrate the energy flow in a food chain, energy pyramid, or food web
- 8 identify pulse points and pulse rates
- 9 identify structure and function relationships in organisms

Physical Setting Skills

- 1 given the latitude and longitude of a location, indicate its position on a map and determine the latitude and longitude of a given location on a map
- 2 using identification tests and a flow chart, identify mineral samples
- 3 use a diagram of the rock cycle to determine geological processes that led to the formation of a specific rock type
- 4 plot the location of recent earthquake and volcanic activity on a map and identify patterns of distribution
- 5 use a magnetic compass to find cardinal directions
- 6 measure the angular elevation of an object, using appropriate instruments
- 7 generate and interpret field maps including topographic and weather maps
- 8 predict the characteristics of an air mass based on the origin of the air mass
- 9 measure weather variables such as wind speed and direction, relative humidity, barometric pressure, etc.
- 10 determine the density of liquids, and regular- and irregular-shaped solids
- 11 determine the volume of a regular- and an irregular-shaped solid, using water displacement
- 12 using the periodic table, identify an element as a metal, nonmetal, or noble gas
- 13 determine the identity of an unknown element, using physical and chemical properties
- 14 using appropriate resources, separate the parts of a mixture
- 15 determine the electrical conductivity of a material, using a simple circuit
- 16 determine the speed and acceleration of a moving object

Standard 4: The Living Environment

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea 1: Living things are both similar to and different from each other and from nonliving things.

Introduction: Living things are similar to each other yet different from nonliving things. The cell is a basic unit of structure and function of living things (cell theory). For all living things, life activities are accomplished at the cellular level. Human beings are an interactive organization of cells, tissues, organs, and systems. Viruses lack cellular organization.

<p>PERFORMANCE INDICATOR 1.1:</p>	<p><i>Compare and contrast the parts of plants, animals, and one-celled organisms.</i></p> <p><u>Major Understandings:</u></p> <p>1.1a Living things are composed of cells. Cells provide structure and carry on major functions to sustain life. Cells are usually microscopic in size.</p> <p>1.1b The way in which cells function is similar in all living things. Cells grow and divide, producing more cells. Cells take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.</p> <p>1.1c Most cells have cell membranes, genetic material, and cytoplasm. Some cells have a cell wall and/or chloroplasts. Many cells have a nucleus.</p> <p>1.1d Some organisms are single cells; others, including humans, are multicellular.</p> <p>1.1e Cells are organized for more effective functioning in multicellular organisms. Levels of organization for structure and function of a multicellular organism include cells, tissues, organs, and organ systems.</p> <p>1.1f Many plants have roots, stems, leaves, and reproductive structures. These organized groups of tissues are responsible for a plant's life activities.</p> <p>1.1g Multicellular animals often have similar organs and specialized systems for carrying out major life activities.</p> <p>1.1h Living things are classified by shared characteristics on the cellular and organism level. In classifying organisms, biologists consider details of internal and external structures. Biological classification systems are arranged from general (kingdom) to specific (species).</p>
<p>PERFORMANCE INDICATOR 1.2:</p>	<p><i>Explain the functioning of the major human organ systems and their interactions.</i></p> <p><u>Major Understandings:</u></p> <p>1.2a Each system is composed of organs and tissues which perform specific functions and interact with each other, e.g., digestion, gas exchange, excretion, circulation, locomotion, control, coordination, reproduction, and protection from disease.</p> <p>1.2b Tissues, organs, and organ systems help to provide all cells with nutrients, oxygen, and waste removal.</p> <p>1.2c The digestive system consists of organs that are responsible for the mechanical and chemical breakdown of food. The breakdown process results in molecules that can be absorbed and transported to cells.</p> <p>1.2d During respiration, cells use oxygen to release the energy stored in food. The respiratory system supplies oxygen and removes carbon dioxide (gas exchange).</p> <p>1.2e The excretory system functions in the disposal of dissolved waste molecules, the elimination of liquid and gaseous wastes, and the removal of excess heat energy.</p> <p>1.2f The circulatory system moves substances to and from cells, where they are needed or produced, responding to changing demands.</p> <p>1.2g Locomotion, necessary to escape danger, obtain food and shelter, and reproduce, is accomplished by the interaction of the skeletal and muscular systems, and coordinated by the nervous system.</p>

Standard 4: The Living Environment – cont.

PERFORMANCE INDICATOR 1.2:	<p>2h The nervous and endocrine systems interact to control and coordinate the body's responses to changes in the environment, and to regulate growth, development, and reproduction. Hormones are chemicals produced by the endocrine system; hormones regulate many body functions.</p> <p>1.2i The male and female reproductive systems are responsible for producing sex cells necessary for the production of offspring.</p> <p>1.2j Disease breaks down the structures or functions of an organism. Some diseases are the result of failures of the system. Other diseases are the result of damage by infection from other organisms (germ theory). Specialized cells protect the body from infectious disease. The chemicals they produce identify and destroy microbes that enter the body.</p>
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Key Idea 2: Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring.

Introduction: Every organism requires a set of instructions for specifying its traits. This information is found in the genes of cells. As organisms reproduce, these instructions are passed from one generation to the next.

PERFORMANCE INDICATOR 2.1:	<p><i>Describe sexual and asexual mechanisms for passing genetic materials from generation to generation.</i></p> <p><u>Major Understandings:</u></p> <p>2.1a Hereditary information is contained in genes. Genes are composed of DNA that makes up the chromosomes of cells.</p> <p>2.1b Each gene carries a single unit of information. A single inherited trait of an individual can be determined by one pair or by many pairs of genes. A human cell contains thousands of different genes.</p> <p>2.1c Each human cell contains a copy of all the genes needed to produce a human being.</p> <p>2.1d In asexual reproduction, all the genes come from a single parent. Asexually produced offspring are genetically identical to the parent.</p> <p>2.1e In sexual reproduction typically half of the genes come from each parent. Sexually produced offspring are not identical to either parent.</p>
PERFORMANCE INDICATOR 2.2:	<p><i>Describe simple mechanisms related to the inheritance of some physical traits in offspring.</i></p> <p><u>Major Understandings:</u></p> <p>2.2a In all organisms, genetic traits are passed on from generation to generation.</p> <p>2.2b Some genes are dominant and some are recessive. Some traits are inherited by mechanisms other than dominance and recessiveness.</p> <p>2.2c The probability of traits being expressed can be determined using models of genetic inheritance. Some models of prediction are pedigree charts and Punnett squares.</p>

Standard 4: The Living Environment – cont.**Key Idea 3:** Individual organisms and species change over time.

Introduction: Evolution is the change in a species over time. Millions of diverse species are alive today. Generally this diversity of species developed through gradual processes of change occurring over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations (natural selection). Biological adaptations are differences in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.

<p>PERFORMANCE INDICATOR 3.1:</p>	<p><i>Describe sources of variation in organisms and their structures and relate the variations to survival.</i></p> <p><u>Major Understandings:</u></p> <p>3.1a The processes of sexual reproduction and mutation have given rise to a variety of traits within a species.</p> <p>3.1b Changes in environmental conditions can affect the survival of individual organisms with a particular trait. Small differences between parents and offspring can accumulate in successive generations so that descendants are very different from their ancestors. Individual organisms with certain traits are more likely to survive and have offspring than individuals without those traits.</p> <p>3.1c Human activities such as selective breeding and advances in genetic engineering may affect the variations of species.</p> <p>2.1e In sexual reproduction typically half of the genes come from each parent. Sexually produced offspring are not identical to either parent.</p>
<p>PERFORMANCE INDICATOR 3.2:</p>	<p><i>Describe factors responsible for competition within species and the significance of that competition.</i></p> <p><u>Major Understandings:</u></p> <p>3.2a In all environments, organisms with similar needs may compete with one another for resources.</p> <p>3.2b Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to permit its survival. Extinction of species is common. Fossils are evidence that a great variety of species existed in the past.</p> <p>3.2c Many thousands of layers of sedimentary rock provide evidence for the long history of Earth and for the long history of changing lifeforms whose remains are found in the rocks. Recently deposited rock layers are more likely to contain fossils resembling existing species.</p> <p>3.2d Although the time needed for change in a species is usually great, some species of insects and bacteria have undergone significant change in just a few years.</p>

Standard 4: The Living Environment – cont.

Key Idea 4: The continuity of life is sustained through reproduction and development.

Introduction: The survival of a species depends on the ability of a living organism to produce offspring. Living things go through a life cycle involving both reproductive and developmental stages. Development follows an orderly sequence of events.

<p>PERFORMANCE INDICATOR 4.1:</p>	<p><i>Observe and describe the variations in reproductive patterns of organisms, including asexual and sexual reproduction.</i></p> <p><u>Major Understandings:</u></p> <p>4.1a Some organisms reproduce asexually. Other organisms reproduce sexually. Some organisms can reproduce both sexually and asexually.</p> <p>4.1b There are many methods of asexual reproduction, including division of a cell into two cells, or separation of part of an animal or plant from the parent, resulting in the growth of another individual.</p> <p>4.1c Methods of sexual reproduction depend upon the species. All methods involve the merging of sex cells to begin the development of a new individual. In many species, including plants and humans, eggs and sperm are produced.</p> <p>4.1d Fertilization and/or development in organisms may be internal or external.</p>
<p>PERFORMANCE INDICATOR 4.2:</p>	<p><i>Explain the role of sperm and egg cells in sexual reproduction.</i></p> <p><u>Major Understandings:</u></p> <p>4.2a The male sex cell is the sperm. The female sex cell is the egg. The fertilization of an egg by a sperm results in a fertilized egg.</p> <p>4.2b In sexual reproduction, sperm and egg each carry one-half of the genetic information for the new individual. Therefore, the fertilized egg contains genetic information from each parent.</p>
<p>PERFORMANCE INDICATOR 4.3:</p>	<p><i>Observe and describe developmental patterns in selected plants and animals (e.g., insects, frogs, humans, seed-bearing plants).</i></p> <p><u>Major Understandings:</u></p> <p>4.3a Multicellular organisms exhibit complex changes in development, which begin after fertilization. The fertilized egg undergoes numerous cellular divisions that will result in a multicellular organism, with each cell having identical genetic information.</p> <p>4.3b In humans, the fertilized egg grows into tissue which develops into organs and organ systems before birth.</p> <p>4.3c Various body structures and functions change as an organism goes through its life cycle.</p> <p>4.3d Patterns of development vary among animals. In some species the young resemble the adult, while in others they do not. Some insects and amphibians undergo metamorphosis as they mature.</p> <p>4.3e Patterns of development vary among plants. In seed-bearing plants, seeds contain stored food for early development. Their later development into adulthood is characterized by varying patterns of growth from species to species.</p> <p>4.3f As an individual organism ages, various body structures and functions change.</p>

Standard 4: The Living Environment – cont.

<p>PERFORMANCE INDICATOR 4.4:</p>	<p><i>Observe and describe cell division at the microscopic level and its macroscopic effects.</i></p> <p><u>Major Understandings:</u></p> <p>4.4a In multicellular organisms, cell division is responsible for growth, maintenance, and repair. In some one-celled organisms, cell division is a method of asexual reproduction.</p> <p>4.4b In one type of cell division, chromosomes are duplicated and then separated into two identical and complete sets to be passed to each of the two resulting cells. In this type of cell division, the hereditary information is identical in all the cells that result.</p> <p>4.4c Another type of cell division accounts for the production of egg and sperm cells in sexually reproducing organisms. The eggs and sperm resulting from this type of cell division contain one-half of the hereditary information.</p> <p>4.4d Cancers are a result of abnormal cell division.</p>
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Key Idea 5: Organisms maintain a dynamic equilibrium that sustains life.

Introduction: All organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment. Organisms respond to internal or environmental stimuli.

<p>PERFORMANCE INDICATOR 5.1:</p>	<p><i>Compare the way a variety of living specimens carry out basic life functions and maintain dynamic equilibrium.</i></p> <p><u>Major Understandings:</u></p> <p>5.1a Animals and plants have a great variety of body plans and internal structures that contribute to their ability to maintain a balanced condition.</p> <p>5.1b An organism's overall body plan and its environment determine the way that the organism carries out the life processes.</p> <p>5.1c All organisms require energy to survive. The amount of energy needed and the method for obtaining this energy vary among cells. Some cells use oxygen to release the energy stored in food.</p> <p>5.1d The methods for obtaining nutrients vary among organisms. Producers, such as green plants, use light energy to make their food. Consumers, such as animals, take in energy-rich foods.</p> <p>5.1e Herbivores obtain energy from plants. Carnivores obtain energy from animals. Omnivores obtain energy from both plants and animals. Decomposers, such as bacteria and fungi, obtain energy by consuming wastes and/or dead organisms.</p> <p>5.1f Regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep conditions within the range required for survival. Regulation includes a variety of nervous and hormonal feedback systems.</p> <p>5.1g The survival of an organism depends on its ability to sense and respond to its external environment.</p>
<p>PERFORMANCE INDICATOR 5.2:</p>	<p><i>Describe the importance of major nutrients, vitamins, and minerals in maintaining health and promoting growth, and explain the need for a constant input of energy for living organisms.</i></p> <p><u>Major Understandings:</u></p> <p>5.2a Food provides molecules that serve as fuel and building material for all organisms. All living things, including plants, must release energy from their food, using it to carry on their life processes.</p> <p>5.2b Foods contain a variety of substances, which include carbohydrates, fats, vitamins, proteins, minerals, and water. Each substance is vital to the survival of the organism.</p>

Standard 4: The Living Environment – cont.

PERFORMANCE INDICATOR 5.2:	<p>5.2c Metabolism is the sum of all chemical reactions in an organism. Metabolism can be influenced by hormones, exercise, diet, and aging.</p> <p>5.2d Energy in foods is measured in Calories. The total caloric value of each type of food varies. The number of Calories a person requires varies from person to person.</p> <p>5.2e In order to maintain a balanced state, all organisms have a minimum daily intake of each type of nutrient based on species, size, age, sex, activity, etc. An imbalance in any of the nutrients might result in weight gain, weight loss, or a diseased state.</p> <p>5.2f Contraction of infectious disease, and personal behaviors such as use of toxic substances and some dietary habits, may interfere with one's dynamic equilibrium. During pregnancy these conditions may also affect the development of the child. Some effects of these conditions are immediate; others may not appear for many years.</p>
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Key Idea 6: Plants and animals depend on each other and their physical environment.

Introduction: An environmentally aware citizen should have an understanding of the natural world. All organisms interact with one another and are dependent upon their physical environment. Energy and matter flow from one organism to another. Matter is recycled in ecosystems. Energy enters ecosystems as sunlight, and is eventually lost from the community to the environment, mostly as heat.

PERFORMANCE INDICATOR 6.1:	<p><i>Describe the flow of energy and matter through food chains and food webs.</i></p> <p><u>Major Understandings:</u></p> <p>6.1a Energy flows through ecosystems in one direction, usually from the Sun, through producers to consumers and then to decomposers. This process may be visualized with food chains or energy pyramids.</p> <p>6.1b Food webs identify feeding relationships among producers, consumers, and decomposers in an ecosystem.</p> <p>6.1c Matter is transferred from one organism to another and between organisms and their physical environment. Water, nitrogen, carbon dioxide, and oxygen are examples of substances cycled between the living and nonliving environment.</p>
PERFORMANCE INDICATOR 6.2:	<p><i>Provide evidence that green plants make food and explain the significance of this process to other organisms.</i></p> <p><u>Major Understandings:</u></p> <p>6.2a Photosynthesis is carried on by green plants and other organisms containing chlorophyll. In this process, the Sun's energy is converted into and stored as chemical energy in the form of a sugar. The quantity of sugar molecules increases in green plants during photosynthesis in the presence of sunlight.</p> <p>6.2b The major source of atmospheric oxygen is photosynthesis. Carbon dioxide is removed from the atmosphere and oxygen is released during photosynthesis.</p> <p>6.2c Green plants are the producers of food which is used directly or indirectly by consumers.</p>

Standard 4: The Living Environment – cont.

Key Idea 7: Human decisions and activities have had a profound impact on the physical and living environment.

Introduction: The number of organisms an ecosystem can support depends on the resources available and physical factors: quantity of light, air, and water; range of temperatures; soil composition. To ensure the survival of our planet, people have a responsibility to consider the impact of their actions on the environment.

<p>PERFORMANCE INDICATOR 7.1:</p>	<p><i>Describe how living things, including humans, depend upon the living and nonliving environment for their survival.</i></p> <p><u>Major Understandings:</u></p> <p>7.1a A population consists of all individuals of a species that are found together at a given place and time. Populations living in one place form a community. The community and the physical factors with which it interacts compose an ecosystem.</p> <p>7.1b Given adequate resources and no disease or predators, populations (including humans) increase. Lack of resources, habitat destruction, and other factors such as predation and climate limit the growth of certain populations in the ecosystem.</p> <p>7.1c In all environments, organisms interact with one another in many ways. Relationships among organisms may be competitive, harmful, or beneficial. Some species have adapted to be dependent upon each other with the result that neither could survive without the other.</p> <p>7.1d Some microorganisms are essential to the survival of other living things.</p> <p>7.1e The environment may contain dangerous levels of substances (pollutants) that are harmful to organisms. Therefore, the good health of environments and individuals requires the monitoring of soil, air, and water, and taking steps to keep them safe.</p>
<p>PERFORMANCE INDICATOR 7.2:</p>	<p><i>Describe the effects of environmental changes on humans and other populations.</i></p> <p><u>Major Understandings:</u></p> <p>7.2a In ecosystems, balance is the result of interactions between community members and their environment.</p> <p>7.2b The environment may be altered through the activities of organisms. Alterations are sometimes abrupt. Some species may replace others over time, resulting in longterm gradual changes (ecological succession).</p> <p>7.2c Overpopulation by any species impacts the environment due to the increased use of resources. Human activities can bring about environmental degradation through resource acquisition, urban growth, land-use decisions, waste disposal, etc.</p> <p>7.2d Since the Industrial Revolution, human activities have resulted in major pollution of air, water, and soil. Pollution has cumulative ecological effects such as acid rain, global warming, or ozone depletion. The survival of living things on our planet depends on the conservation and protection of Earth's resources.</p>

Standard 4: The Physical Setting

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea 1: The Earth and celestial phenomena can be described by principles of relative motion and perspective.

The universe is comprised of a wide array of objects, a few of which can be seen by the unaided eye. Others can only be observed with scientific instruments. These celestial objects, distinct from Earth, are in motion relative to Earth and each other. Measurements of these motions vary with the perspective of the observer. Cyclical changes on Earth are caused by interactions among objects in the universe.

PERFORMANCE INDICATOR 1.1:	<p><i>Explain daily, monthly, and seasonal changes on Earth.</i></p> <p><u>Major Understandings:</u></p> <p>1.1a Earth's Sun is an average-sized star. The Sun is more than a million times greater in volume than Earth.</p> <p>1.1b Other stars are like the Sun but are so far away that they look like points of light. Distances between stars are vast compared to distances within our solar system.</p> <p>1.1c The Sun and the planets that revolve around it are the major bodies in the solar system. Other members include comets, moons, and asteroids. Earth's orbit is nearly circular.</p> <p>1.1d Gravity is the force that keeps planets in orbit around the Sun and the Moon in orbit around the Earth.</p> <p>1.1e Most objects in the solar system have a regular and predictable motion. These motions explain such phenomena as a day, a year, phases of the Moon, eclipses, tides, meteor showers, and comets.</p> <p>1.1f The latitude/longitude coordinate system and our system of time are based on celestial observations.</p> <p>1.1g Moons are seen by reflected light. Our Moon orbits Earth, while Earth orbits the Sun. The Moon's phases as observed from Earth are the result of seeing different portions of the lighted area of the Moon's surface. The phases repeat in a cyclic pattern in about one month.</p> <p>1.1h The apparent motions of the Sun, Moon, planets, and stars across the sky can be explained by Earth's rotation and revolution. Earth's rotation causes the length of one day to be approximately 24 hours. This rotation also causes the Sun and Moon to appear to rise along the eastern horizon and to set along the western horizon. Earth's revolution around the Sun defines the length of the year as 365 1/4 days.</p> <p>1.1i The tilt of Earth's axis of rotation and the revolution of Earth around the Sun cause seasons on Earth. The length of daylight varies depending on latitude and season.</p> <p>1.1j The shape of Earth, the other planets, and stars is nearly spherical.</p>
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Standard 4: The Physical Setting – cont.

Key Idea 2: Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.

Students should develop an understanding of Earth as a set of closely coupled systems. The concept of systems provides a framework in which students can investigate three major interacting components: lithosphere, hydrosphere, and atmosphere. Processes act within and among the three components on a wide range of time scales to bring about continuous change in Earth’s crust, oceans, and atmosphere.

<p>PERFORMANCE INDICATOR 2.1:</p>	<p><i>Explain how the atmosphere (air), hydrosphere (water), and lithosphere (land) interact, evolve, and change.</i></p> <p><u>Major Understandings:</u></p> <p>2.1a Nearly all the atmosphere is confined to a thin shell surrounding Earth. The atmosphere is a mixture of gases, including nitrogen and oxygen with small amounts of water vapor, carbon dioxide, and other trace gases. The atmosphere is stratified into layers, each having distinct properties. Nearly all weather occurs in the lowest layer of the atmosphere.</p> <p>2.1b As altitude increases, air pressure decreases.</p> <p>2.1c The rock at Earth's surface forms a nearly continuous shell around Earth called the lithosphere.</p> <p>2.1d The majority of the lithosphere is covered by a relatively thin layer of water called the hydrosphere.</p> <p>2.1e Rocks are composed of minerals. Only a few rock-forming minerals make up most of the rocks of Earth. Minerals are identified on the basis of physical properties such as streak, hardness, and reaction to acid.</p> <p>2.1f Fossils are usually found in sedimentary rocks. Fossils can be used to study past climates and environments.</p> <p>2.1g The dynamic processes that wear away Earth’s surface include weathering and erosion.</p> <p>2.1h The process of weathering breaks down rocks to form sediment. Soil consists of sediment, organic material, water, and air.</p> <p>2.1i Erosion is the transport of sediment. Gravity is the driving force behind erosion. Gravity can act directly or through agents such as moving water, wind, and glaciers.</p> <p>2.1j Water circulates through the atmosphere, lithosphere, and hydrosphere in what is known as the water cycle.</p>
<p>PERFORMANCE INDICATOR 2.2</p>	<p><i>Describe volcano and earthquake patterns, the rock cycle, and weather and climate changes.</i></p> <p><u>Major Understandings:</u></p> <p>2.2a The interior of Earth is hot. Heat flow and movement of material within Earth cause sections of Earth’s crust to move. This may result in earthquakes, volcanic eruption, and the creation of mountains and ocean basins.</p> <p>2.2b Analysis of earthquake wave data (vibrational disturbances) leads to the conclusion that there are layers within Earth. These layers-the crust, mantle, outer core, and inner core-have distinct properties.</p> <p>2.2c Folded, tilted, faulted, and displaced rock layers suggest past crustal movement.</p> <p>2.2d Continents fitting together like puzzle parts and fossil correlations provided initial evidence that continents were once together.</p>

Standard 4: The Physical Setting – cont.

<p>PERFORMANCE INDICATOR 2.2</p>	<p>2.2e The Theory of Plate Tectonics explains how the “solid” lithosphere consists of a series of plates that “float” on the partially molten section of the mantle. Convection cells within the mantle may be the driving force for the movement of the plates.</p> <p>2.2f Plates may collide, move apart, or slide past one another. Most volcanic activity and mountain building occur at the boundaries of these plates, often resulting in earthquakes.</p> <p>2.2g Rocks are classified according to their method of formation. The three classes of rocks are sedimentary, metamorphic, and igneous. Most rocks show characteristics that give clues to their formation conditions.</p> <p>2.2h The rock cycle model shows how types of rock or rock material may be transformed from one type of rock to another.</p> <p>2.2i Weather describes the conditions of the atmosphere at a given location for a short period of time.</p> <p>2.2j Climate is the characteristic weather that prevails from season to season and year to year.</p> <p>2.2k The uneven heating of Earth’s surface is the cause of weather.</p> <p>2.2l Air masses form when air remains nearly stationary over a large section of Earth’s surface and takes on the conditions of temperature and humidity from that location. Weather conditions at a location are determined primarily by temperature, humidity, and pressure of air masses over that location.</p> <p>2.2m Most local weather condition changes are caused by movement of air masses.</p> <p>2.2n The movement of air masses is determined by prevailing winds and upper air currents.</p> <p>2.2o Fronts are boundaries between air masses. Precipitation is likely to occur at these boundaries.</p> <p>2.2p High-pressure systems generally bring fair weather. Low-pressure systems usually bring cloudy, unstable conditions. The general movement of highs and lows is from west to east across the United States.</p> <p>2.2q Hazardous weather conditions include thunderstorms, tornadoes, hurricanes, ice storms, and blizzards. Humans can prepare for and respond to these conditions if given sufficient warning.</p> <p>2.2r Substances enter the atmosphere naturally and from human activity. Some of these substances include dust from volcanic eruptions and greenhouse gases such as carbon dioxide, methane, and water vapor. These substances can affect weather, climate, and living things.</p>
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Key Idea 3: Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity.

Objects in the universe are composed of matter. Matter is anything that takes up space and has mass. Matter is classified as a substance or a mixture of substances. Knowledge of the structure of matter is essential to students’ understanding of the living and physical environments. Matter is composed of elements which are made of small particles called atoms. All living and nonliving material is composed of these elements or combinations of these elements.

<p>PERFORMANCE INDICATOR 3.1:</p>	<p><i>Observe and describe properties of materials, such as density, conductivity, and solubility.</i></p> <p><u>Major Understandings:</u></p> <p>3.1a Substances have characteristic properties. Some of these properties include color, odor, phase at room temperature, density, solubility, heat and electrical conductivity, hardness, and boiling and freezing points.</p> <p>3.1b Solubility can be affected by the nature of the solute and solvent, temperature, and pressure. The rate of solution can be affected by the size of the particles, stirring, temperature, and the amount of solute already dissolved.</p>
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Standard 4: The Physical Setting – cont

PERFORMANCE INDICATOR 3.1:	<p>1c The motion of particles helps to explain the phases (states) of matter as well as changes from one phase to another. The phase in which matter exists depends on the attractive forces among its particles.</p> <p>3.1d Gases have neither a determined shape nor a definite volume. Gases assume the shape and volume of a closed container.</p> <p>3.1e A liquid has definite volume, but takes the shape of a container.</p> <p>3.1f A solid has definite shape and volume. Particles resist a change in position.</p> <p>3.1g Characteristic properties can be used to identify different materials, and separate a mixture of substances into its components. For example, iron can be removed from a mixture by means of a magnet. An insoluble substance can be separated from a soluble substance by such processes as filtration, settling, and evaporation.</p> <p>3.1h Density can be described as the amount of matter that is in a given amount of space. If two objects have equal volume, but one has more mass, the one with more mass is denser.</p> <p>3.1i Buoyancy is determined by comparative densities.</p>
PERFORMANCE INDICATOR 3.2:	<p><i>Distinguish between chemical and physical changes.</i></p> <p><u>Major Understandings:</u></p> <p>3.2a During a physical change a substance keeps its chemical composition and properties. Examples of physical changes include freezing, melting, condensation, boiling, evaporation, tearing, and crushing.</p> <p>3.2b Mixtures are physical combinations of materials and can be separated by physical means.</p> <p>3.2c During a chemical change, substances react in characteristic ways to form new substances with different physical and chemical properties. Examples of chemical changes include burning of wood, cooking of an egg, rusting of iron, and souring of milk.</p> <p>3.2d Substances are often placed in categories if they react in similar ways. Examples include metals, nonmetals, and noble gases.</p> <p>3.2e The Law of Conservation of Mass states that during an ordinary chemical reaction matter cannot be created or destroyed. In chemical reactions, the total mass of the reactants equals the total mass of the products.</p>
PERFORMANCE INDICATOR 3.3:	<p><i>Develop mental models to explain common chemical reactions and changes in states of matter.</i></p> <p><u>Major Understandings:</u></p> <p>3.3a All matter is made up of atoms. Atoms are far too small to see with a light microscope.</p> <p>3.3b Atoms and molecules are perpetually in motion. The greater the temperature, the greater the motion.</p> <p>3.3c Atoms may join together in well-defined molecules or may be arranged in regular geometric patterns.</p> <p>3.3d Interactions among atoms and/or molecules result in chemical reactions.</p> <p>3.3e The atoms of any one element are different from the atoms of other elements.</p> <p>3.3f There are more than 100 elements. Elements combine in a multitude of ways to produce compounds that account for all living and nonliving substances. Few elements are found in their pure form.</p> <p>3.3g The periodic table is one useful model for classifying elements. The periodic table can be used to predict properties of elements (metals, nonmetals, noble gases).</p>

Standard 4: The Physical Setting – cont.

Key Idea 4: Energy exists in many forms, and when these forms change energy is conserved.

Introduction: An underlying principle of all energy use is the Law of Conservation of Energy. Simply stated, energy cannot be created or destroyed.

Energy can be transformed, one form to another. These transformations produce heat energy. Heat is a calculated value which includes the temperature of the material, the mass of the material, and the type of the material. Temperature is a direct measurement of the average kinetic energy of the particles in a sample of material. It should be noted that temperature is not a measurement of heat.

<p>PERFORMANCE INDICATOR 4.1:</p>	<p><i>Describe the sources and identify the transformations of energy observed in everyday life.</i></p> <p><u>Major Understandings:</u></p> <p>4.1a The Sun is a major source of energy for Earth. Other sources of energy include nuclear and geothermal energy.</p> <p>4.1b Fossil fuels contain stored solar energy and are considered nonrenewable resources. They are a major source of energy in the United States. Solar energy, wind, moving water, and biomass are some examples of renewable energy resources.</p> <p>4.1c Most activities in everyday life involve one form of energy being transformed into another. For example, the chemical energy in gasoline is transformed into mechanical energy in an automobile engine. Energy, in the form of heat, is almost always one of the products of energy transformations.</p> <p>4.1d Different forms of energy include heat, light, electrical, mechanical, sound, nuclear, and chemical. Energy is transformed in many ways.</p> <p>4.1e Energy can be considered to be either kinetic energy, which is the energy of motion, or potential energy, which depends on relative position.</p>
<p>PERFORMANCE INDICATOR 4.2:</p>	<p><i>Observe and describe heating and cooling events.</i></p> <p><u>Major Understandings:</u></p> <p>4.2a Heat moves in predictable ways, flowing from warmer objects to cooler ones, until both reach the same temperature.</p> <p>4.2b Heat can be transferred through matter by the collisions of atoms and/or molecules (conduction) or through space (radiation). In a liquid or gas, currents will facilitate the transfer of heat (convection).</p> <p>4.2c During a phase change, heat energy is absorbed or released. Energy is absorbed when a solid changes to a liquid and when a liquid changes to a gas. Energy is released when a gas changes to a liquid and when a liquid changes to a solid.</p> <p>4.2d Most substances expand when heated and contract when cooled. Water is an exception, expanding when changing to ice.</p> <p>4.2e Temperature affects the solubility of some substances in water.</p>
<p>PERFORMANCE INDICATOR 4.3:</p>	<p><i>Observe and describe energy changes as related to chemical reactions.</i></p> <p><u>Major Understandings:</u></p> <p>4.3a In chemical reactions, energy is transferred into or out of a system. Light, electricity, or mechanical motion may be involved in such transfers in addition to heat.</p>

Standard 4: The Physical Setting – cont

<p>PERFORMANCE INDICATOR 4.4:</p>	<p><i>Observe and describe</i> the properties of sound, light, magnetism, and electricity.</p> <p><u>Major Understandings:</u></p> <p>4.4a Different forms of electromagnetic energy have different wavelengths. Some examples of electromagnetic energy are microwaves, infrared light, visible light, ultraviolet light, X-rays, and gamma rays.</p> <p>4.4b Light passes through some materials, sometimes refracting in the process. Materials absorb and reflect light, and may transmit light. To see an object, light from that object, emitted by or reflected from it, must enter the eye.</p> <p>4.4c Vibrations in materials set up wave-like disturbances that spread away from the source. Sound waves are an example. Vibrational waves move at different speeds in different materials. Sound cannot travel in a vacuum.</p> <p>4.4d Electrical energy can be produced from a variety of energy sources and can be transformed into almost any other form of energy.</p> <p>4.4e Electrical circuits provide a means of transferring electrical energy.</p> <p>4.4f Without touching them, material that has been electrically charged attracts uncharged material, and may either attract or repel other charged material.</p> <p>4.4g Without direct contact, a magnet attracts certain materials and either attracts or repels other magnets. The attractive force of a magnet is greatest at its poles.</p>
<p>PERFORMANCE INDICATOR 4.5:</p>	<p>Describe situations that support the principle of conservation of energy.</p> <p><u>Major Understandings:</u></p> <p>4.5a Energy cannot be created or destroyed, but only changed from one form into another.</p> <p>4.5b Energy can change from one form to another, although in the process some energy is always converted to heat. Some systems transform energy with less loss of heat than others..</p>

Key Idea 5: Energy and matter interact through forces that result in changes in motion.

Introduction: Examples of objects in motion can be seen all around us. These motions result from an interaction of energy and matter. This interaction creates forces (pushes and pulls) that produce predictable patterns of change. Common forces would include gravity, magnetism, and electricity. Friction is a force that should always be considered in a discussion of motion.

When the forces acting on an object are unbalanced, changes in that object's motion occur. The changes could include a change in speed or a change in direction. When the forces are balanced, the motion of that object will remain unchanged. Understanding the laws that govern motion allows us to predict these changes in motion.

<p>PERFORMANCE INDICATOR 5.1:</p>	<p>Describe different patterns of motion of objects.</p> <p><u>Major Understandings:</u></p> <p>5.1a The motion of an object is always judged with respect to some other object or point. The idea of absolute motion or rest is misleading.</p> <p>5.1b The motion of an object can be described by its position, direction of motion, and speed.</p> <p>5.1c An object's motion is the result of the combined effect of all forces acting on the object. A moving object that is not subjected to a force will continue to move at a constant speed in a straight line. An object at rest will remain at rest.</p>
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Standard 4: The Physical Setting – cont.

PERFORMANCE INDICATOR 5.1:	<p>Describe different patterns of motion of objects.</p> <p><u>Major Understandings:</u></p> <p>5.1d Force is directly related to an object's mass and acceleration. The greater the force, the greater the change in motion.</p> <p>5.1e For every action there is an equal and opposite reaction.</p>
PERFORMANCE INDICATOR 5.2:	<p><i>Observe, describe, and compare effects of forces (gravity, electric current, and magnetism) on the motion of objects.</i></p> <p><u>Major Understandings:</u></p> <p>5.2a Every object exerts gravitational force on every other object. Gravitational force depends on how much mass the objects have and on how far apart they are. Gravity is one of the forces acting on orbiting objects and projectiles.</p> <p>5.2b Electric currents and magnets can exert a force on each other.</p> <p>5.2c Machines transfer mechanical energy from one object to another.</p> <p>5.2d Friction is a force that opposes motion.</p> <p>5.2e A machine can be made more efficient by reducing friction. Some common ways of reducing friction include lubricating or waxing surfaces.</p> <p>5.2f Machines can change the direction or amount of force, or the distance or speed of force required to do work.</p> <p>5.2g Simple machines include a lever, a pulley, a wheel and axle, and an inclined plane. A complex machine uses a combination of interacting simple machines, e.g., a bicycle.</p>

Intermediate Science Examination Description

Purpose: To assess student achievement of Standards 1, 2, 4, 6, and 7 of the *Learning Standards for Mathematics, Science, and Technology* and, when appropriate, include aspects of the other six mathematics, science, and technology standards including analysis, inquiry, design, information systems, mathematics, technology, common themes, and interdisciplinary problem solving.

Format: Questions will be content- and skills-based and may require students to graph, complete a data table, label diagrams or photographs, interpret a reading passage, make calculations, or write a response. As outlined in the Scientific Inquiry section of the *Learning Standards for Mathematics, Science, and Technology*, students may be asked to hypothesize, interpret, analyze, and evaluate data and apply their scientific knowledge and skills to real-world situations.

The three-hour written examination will include three parts. Students should be prepared to answer questions in selected-response (multiple choice) and constructed-response formats. In addition, prior to the written portion, there will be a laboratory performance test that will assess students' skills.

The Specifics are as follows:

Part A	Content-based, multiple choice questions assessing the student's ability to apply, analyze, synthesize, and evaluate core material primarily from Standard 4. (approximately 25 - 35% of exam)
Part B	Content- and skills-based questions, multiple choice and/or short constructed-response items assessing the student's ability to apply, analyze, synthesize, and evaluate material primarily from Standard 4 (content) and Standard 1 (inquiry). (approximately 25 - 35% of exam)
Part C	Content and its application will be assessed with extended constructed-response items. Material from Standards 1, 4, 6, and 7 (problem solving) primarily will be assessed by requiring students to apply their knowledge of science concepts and skills to address realworld situations. Real-world situations (approximately three to five) may be taken from newspaper or magazine articles, scientific journals, or current events, for example. Students will be asked to apply scientific concepts, formulate hypotheses, make predictions, or use other scientific inquiry techniques in their responses to the questions posed. Scoring rubrics will be used to assess responses. (approximately 20 - 25% of exam)
Part D	Laboratory performance test (prior to written examination) Hands-on laboratory tasks linked to content and skills in Standards 1, 2, 4, 6, and 7. (comprising 15% of exam)

Examples of Activities to Build Skills to Support Standards 1 and 4**Standard 1: Scientific Inquiry**

Key Idea 1:	<p>The central purpose of scientific inquiry is to develop explanations of natural phenomena in a continuing, creative process.</p> <ul style="list-style-type: none"> ▪ After being shown the disparity between the amount of solid waste that is recycled and the amount that could be recycled, students working in small groups are asked to explain why this disparity exists. They develop a set of possible explanations and select one for intensive study. After their explanation is critiqued by other groups, it is refined and submitted for assessment. The explanation is rated on clarity, plausibility, and appropriateness for intensive study using research methods.
Key Idea 2:	<p>Beyond the use of reasoning and consensus, scientific inquiry involves the testing of proposed explanations involving the use of conventional techniques and procedures and usually requiring considerable ingenuity.</p> <ul style="list-style-type: none"> ▪ Students develop a research plan for studying the accuracy of their explanation of the disparity between the amount of solid waste that is recycled and the amount that could be recycled. After their tentative plan is critiqued, they refine it and submit it for assessment. The research proposal is rated on clarity, feasibility, and soundness as a method of studying the explanation's accuracy. They carry out the plan, with teacher-suggested modifications. This work is rated by the teacher while it is in progress.
Key Idea 3	<p>The observations made while testing proposed explanations, when analyzed using conventional and invented methods, provide new insights into phenomena.</p> <ul style="list-style-type: none"> ▪ Students carry out their plan, making appropriate observations and measurements. They analyze the data, reach conclusions regarding their explanation of the disparity between the amount of solid waste that is recycled and the amount that could be recycled, and prepare a tentative report which is critiqued by other groups, refined, and submitted for assessment. The report is rated on clarity, quality of presentation of data and analyses, and soundness of conclusions.

Examples of Activities to Build Skills to Support Standards 1 and 4 – cont.**Standard 4: Science-Living Environment**

Key Idea 1:	Living things are both similar to and different from each other and from nonliving things. <ul style="list-style-type: none"> ▪ Students conduct a survey of the school grounds and develop appropriate classification keys to group plants and animals by shared characteristics. ▪ Students use spring-type clothespins to investigate muscle fatigue or rulers to determine the effect of amount of sleep on hand-eye coordination.
Key Idea 2:	Organisms inherit genetic information in a variety of ways that result in continuity of structure and function between parents and offspring. <ul style="list-style-type: none"> ▪ Students contrast dominance and blending as models for explaining inheritance of traits. ▪ Students trace patterns of inheritance for selected human traits.
Key Idea 3:	Individual organisms and species change over time. <ul style="list-style-type: none"> ▪ Students conduct a long-term investigation of plant or animal communities. ▪ Students investigate the acquired effects of industrialization on tree trunk color and those effects on different insect species.
Key Idea 4:	The continuity of life is sustained through reproduction and development. <ul style="list-style-type: none"> ▪ Students apply a model of the genetic code as an analogue for the role of the genetic code in human populations.
Key Idea 5:	Organisms maintain a dynamic equilibrium that sustains life. <ul style="list-style-type: none"> ▪ Students record and compare the behaviors of animals in their natural habitats and relate how these behaviors are important to the animals. ▪ Students design and conduct a survey of personal nutrition and exercise habits, and analyze and critique the results of that survey.
Key Idea 6:	Plants and animals depend on each other and their physical environment. <ul style="list-style-type: none"> ▪ Students construct a food web for a community of organisms and explore how elimination of a particular part of a chain affects the rest of the chain and web.
Key Idea 7:	Human decisions and activities have had a profound impact on the physical and living environment. <ul style="list-style-type: none"> ▪ Students conduct an extended investigation of a local environment affected by human actions (e.g., a pond, stream, forest, empty lot).

Science K-4 Standards, Scope and Sequence

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1
<p><u>Interconnectedness:</u></p> <p><u>Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Scientific Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.1 ▪ S1.2 	<p><u>Interconnectedness:</u></p> <p><u>Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Scientific Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.1 ▪ S1.2 ▪ S1.3 	<p><u>Interconnectedness:</u></p> <p><u>Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Scientific Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.2 ▪ S1.3 ▪ S2.1 	<p><u>Interconnectedness:</u></p> <p><u>Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Scientific Inquiry</u></p> <ul style="list-style-type: none"> ▪ S2.1 ▪ S2.2 ▪ S2.3 ▪ S3.1 ▪ S3.2 	<p><u>Interconnectedness:</u></p> <p><u>Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Scientific Inquiry</u></p> <ul style="list-style-type: none"> ▪ S2.3 ▪ S3.1 ▪ S3.2 ▪ S3.3 ▪ S3.4

Science K-4 Standards, Scope and Sequence – cont.

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4
<p>Life Science [L.E.]</p> <ul style="list-style-type: none"> ▪ Plants <ul style="list-style-type: none"> ○ 1.1b ▪ Animals <ul style="list-style-type: none"> ○ 1.1a ▪ Living/Non-living <ul style="list-style-type: none"> ○ 1.1c ○ 1.1d 	<p>Life Science [L.E.]</p> <ul style="list-style-type: none"> ▪ Plants <ul style="list-style-type: none"> ○ 1.1b ▪ Animals <ul style="list-style-type: none"> ○ 1.1a ▪ Animal Structures/Functions <ul style="list-style-type: none"> ○ 3.1a ○ 5.1b 	<p>Life Science [L.E.]</p> <ul style="list-style-type: none"> ▪ Life Functions <ul style="list-style-type: none"> ○ 1.2a ○ 5.1a ▪ Plant Life Cycles <ul style="list-style-type: none"> ○ 4.1a ○ 4.1b ○ 4.1c ○ 4.1d ▪ Animal Life Cycles <ul style="list-style-type: none"> ○ 4.1e ○ 4.1f ○ 4.1g ○ 5.3a ▪ Food Chains <ul style="list-style-type: none"> ○ 6.1b ○ 6.1c 	<p>Life Science [L.E.]</p> <ul style="list-style-type: none"> ▪ Plant Structures /Functions <ul style="list-style-type: none"> ○ 3.1b ○ 3.1c ○ 5.1b ▪ Plant Life Cycles <ul style="list-style-type: none"> ○ 4.1a ○ 4.1b ○ 4.1c ○ 4.1d ▪ Animal Life Cycles <ul style="list-style-type: none"> ○ 4.1a ○ 4.1e ○ 4.1f ○ 4.1g ▪ Growth and Health <ul style="list-style-type: none"> ○ 4.2a ○ 4.2b ○ 5.3a ○ 5.3b ▪ Adaptations & Competition <ul style="list-style-type: none"> ○ 6.1e ▪ Humans & the Environment <ul style="list-style-type: none"> ○ 6.2c ○ 7.1a ○ 7.1b ○ 7.1c 	<p>Life Science [L.E.]</p> <ul style="list-style-type: none"> ▪ Life Functions <ul style="list-style-type: none"> ○ 1.2a ○ 5.1a ▪ Animal Structures/Functions <ul style="list-style-type: none"> ○ 3.1a ▪ Genetics <ul style="list-style-type: none"> ○ 2.1a ○ 2.2a ○ 2.2b ▪ Variations & Competitions <ul style="list-style-type: none"> ○ 2.1b ○ 3.2a ○ 3.2b ▪ Adaptation <ul style="list-style-type: none"> ○ 5.2a ○ 5.2b ○ 5.2c ○ 5.2d ○ 5.2e ○ 5.2f ○ 5.2g ○ 6.1f ▪ Food Chains / Food Webs <ul style="list-style-type: none"> ○ 6.1a ○ 6.2a ○ 6.1b ○ 6.1c ○ 6.2b ○ 6.1d

Science 5-8 Standards, Scope and Sequence

Grade 5	Grade 6	Grade 7	Grade 8
<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 <p><u>Interconnectedness: Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.1 ▪ S1.2 ▪ S2.1 ▪ S3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 <p><u>Interconnectedness: Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.3 ▪ S1.4 ▪ S2.1 ▪ S2.2 ▪ S2.3 ▪ S3.1 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 <p><u>Interconnectedness: Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.3 ▪ S1.4 ▪ S2.1 ▪ S2.2 ▪ S2.3 ▪ S3.1 ▪ S3.2 ▪ S3.3 	<p><u>Mathematical Analysis</u></p> <ul style="list-style-type: none"> ▪ M1.1 ▪ M2.1 ▪ M3.1 <p><u>Interconnectedness: Common Themes</u></p> <ul style="list-style-type: none"> ▪ KI 6.1 ▪ KI 6.2 ▪ KI 6.3 ▪ KI 6.4 ▪ KI 6.5 ▪ KI 6.6 <p><u>Inquiry</u></p> <ul style="list-style-type: none"> ▪ S1.3 ▪ S1.4 ▪ S2.1 ▪ S2.2 ▪ S2.3 ▪ S3.1 ▪ S3.2 ▪ S3.3

Science 5-8 Standards, Scope and Sequence – cont.

Grade 5		Grade 6		Grade 7		Grade 8	
Life Science	[L.E.]	Life Science	[L.E.]	Life Science	[L.E.]	Life Science	[L.E.]
<p>Life Cycles, Reproduction & Change</p> <ul style="list-style-type: none"> ▪ 4.1a ▪ 4.1b ▪ 4.1c ▪ 4.1d ▪ 4.2a ▪ 4.2b ▪ 4.3b ▪ 4.3c ▪ 4.3d ▪ 4.3e ▪ 4.3f <p>Classification of Organisms</p> <ul style="list-style-type: none"> ▪ 1.1g ▪ 1.1h ▪ 1.1f <p>Interrelationships</p> <ul style="list-style-type: none"> ▪ 5.1d ▪ 6.2c ▪ 5.1e ▪ 6.1b ▪ 6.2b 		<p>Variation in Living Things</p> <ul style="list-style-type: none"> ▪ 1.1g ▪ 1.1h ▪ 2.1a ▪ 2.2a <p>Ecosystems</p> <ul style="list-style-type: none"> ▪ 6.1a ▪ 6.1b ▪ 6.1c ▪ 6.2a ▪ 6.2b ▪ 7.2a <p>Interdependence</p> <ul style="list-style-type: none"> ▪ 7.1a ▪ 7.1b ▪ 7.1c ▪ 7.1d <p>Environmental Changes</p> <ul style="list-style-type: none"> ▪ 7.1e ▪ 7.2b ▪ 7.2c ▪ 7.2d 		<p>Animal Diversity</p> <ul style="list-style-type: none"> ▪ 1.1a ▪ 1.1b ▪ 1.1d ▪ 1.1e ▪ 1.1g ▪ 1.1h ▪ 2.1d ▪ 2.1e ▪ 3.1a ▪ 3.1c ▪ 4.3a <p>The Human Body Systems</p> <ul style="list-style-type: none"> ▪ 1.2a ▪ 1.2b ▪ 1.2c ▪ 1.2d ▪ 1.2e ▪ 1.2f ▪ 1.2g ▪ 1.2h ▪ 1.2i ▪ 1.2j 		<p>Cells and Cell Processes</p> <ul style="list-style-type: none"> ▪ 1.1a ▪ 1.1b ▪ 1.1c ▪ 1.1d ▪ 1.1e ▪ 4.3a ▪ 4.4a ▪ 4.4b ▪ 4.4c ▪ 4.4d <p>Genetics & Heredity</p> <ul style="list-style-type: none"> ▪ 2.1a ▪ 2.1b ▪ 2.1c ▪ 2.1d ▪ 2.1e ▪ 4.2b ▪ 2.2a ▪ 2.2b ▪ 2.2c <p>Evolution and Extinction</p> <ul style="list-style-type: none"> ▪ 3.1a ▪ 3.1b ▪ 3.1c ▪ 3.2a ▪ 3.2b ▪ 3.2c ▪ 3.2d 	

Science 5-8 Standards, Scope and Sequence – cont.

Grade 5	Grade 6	Grade 7	Grade 8
<p><u>Life Science</u></p> <p>[L.E.]</p>	<p><u>Life Science</u></p> <p>[L.E.]</p>	<p><u>Life Science</u></p> <p>[L.E.]</p>	<p><u>Life Science</u></p> <p>[L.E.]</p>
<p><u>Earth Science</u></p> <p>[E.S.]</p> <p>The Solar System</p> <ul style="list-style-type: none"> ▪ 1.1a ▪ 1.1b ▪ 1.1c ▪ 1.1g ▪ 1.1j <p>Seasons & Climate</p> <ul style="list-style-type: none"> ▪ 1.1f ▪ 1.1h ▪ 1.1i 	<p><u>Earth Science</u></p> <p>[E.S.]</p> <p>Gravitational Forces & Planetary Motion</p> <ul style="list-style-type: none"> ▪ 1.1d ▪ 1.1e ▪ 5.2a <p>Weather</p> <ul style="list-style-type: none"> ▪ 2.1a ▪ 2.2i ▪ 2.2j ▪ 2.2k ▪ 2.2l ▪ 2.2m ▪ 2.2n ▪ 2.2o ▪ 2.2p ▪ 2.2q ▪ 2.2r 	<p><u>Earth Science</u></p> <p>[E.S.]</p> <p>Rocks</p> <ul style="list-style-type: none"> ▪ 2.1c ▪ 2.1e ▪ 2.1f ▪ 2.2g ▪ 2.2h <p>Weathering/Erosion</p> <ul style="list-style-type: none"> ▪ 2.1g ▪ 2.1h ▪ 2.1i <p>Volcanoes/Earthquakes</p> <ul style="list-style-type: none"> ▪ 2.2a ▪ 2.2b ▪ 2.2c ▪ 2.2d ▪ 2.2e ▪ 2.2f 	<p><u>Earth Science</u></p> <p>[E.S.]</p> <p>The Atmosphere</p> <ul style="list-style-type: none"> ▪ 2.1a ▪ 2.1b ▪ 2.2l ▪ 2.2m ▪ 2.2n ▪ 2.2o ▪ 2.2r <p>The Water Cycle</p> <ul style="list-style-type: none"> ▪ 2.1d ▪ 2.1j
<p><u>Life Science</u></p> <p>[L.E.]</p> <p>Metabolism</p> <ul style="list-style-type: none"> ▪ 5.1c ▪ 5.1d ▪ 5.2a ▪ 5.2b ▪ 5.2c ▪ 5.2d ▪ 5.2e <p>Homeostasis and Equilibrium</p> <ul style="list-style-type: none"> ▪ 5.1a ▪ 5.1b ▪ 5.1f ▪ 5.1g ▪ 5.2f 	<p><u>Life Science</u></p> <p>[L.E.]</p> <p>Ecology and the Environment</p> <ul style="list-style-type: none"> ▪ 6.1a ▪ 6.1b ▪ 6.1c ▪ 7.1a ▪ 7.1b ▪ 7.1c ▪ 7.1d ▪ 7.1e ▪ 7.2a ▪ 7.2b 		

Science 5-8 Standards, Scope and Sequence – cont.

Grade 5	Grade 6	Grade 7	Grade 8
<p><u>Physical Science</u> [P.S.]</p> <p>Electricity & Magnetism</p> <ul style="list-style-type: none"> ▪ 4.4d ▪ 4.4e ▪ 4.4f ▪ 4.4g ▪ 5.2b <p>Classifying Matter</p> <ul style="list-style-type: none"> ▪ 3.1a ▪ 3.1d ▪ 3.1e ▪ 3.1f ▪ 3.1g 	<p><u>Physical Science</u> [P.S.]</p> <p>Light</p> <ul style="list-style-type: none"> ▪ 4.4a ▪ 4.4b ▪ Sound ▪ 4.4c <p>Forces & Motion</p> <ul style="list-style-type: none"> ▪ 5.1a ▪ 5.1b ▪ 5.1c ▪ 5.1d ▪ 5.1e 	<p><u>Physical Science</u> [P.S.]</p> <p>Sources & Forms of Energy</p> <ul style="list-style-type: none"> ▪ 4.1a ▪ 4.1b ▪ 4.1c ▪ 4.1d ▪ 4.1e <p>Simple Machines</p> <ul style="list-style-type: none"> ▪ 5.2c ▪ 5.2d ▪ 5.2e ▪ 5.2f ▪ 5.2g <p>Heating/Cooling</p> <ul style="list-style-type: none"> ▪ 4.2a ▪ 4.2b ▪ 4.2c ▪ 4.2d ▪ 4.2e <p>Law of Conservation of Energy</p> <ul style="list-style-type: none"> ▪ 4.3a ▪ 4.5a ▪ 4.5b 	<p><u>Physical Science</u> [P.S.]</p> <p>Physical/Chemical Properties of Matter</p> <ul style="list-style-type: none"> ▪ 3.1a ▪ 3.1b ▪ 3.1c ▪ 3.1d ▪ 3.1e ▪ 3.1f ▪ 3.1g ▪ Density ▪ 3.1h ▪ 3.1i <p>Physical/Chemical Changes of Matter</p> <ul style="list-style-type: none"> ▪ 3.2a ▪ 3.2b ▪ 3.2c ▪ 3.2d <p>Law of Conservation of Mass</p> <ul style="list-style-type: none"> ▪ 3.2e <p>Atoms & the Periodic Table</p> <ul style="list-style-type: none"> ▪ 3.3a ▪ 3.3b ▪ 3.3c ▪ 3.3d ▪ 3.3e ▪ 3.3f ▪ 3.3g

Science K-12 Overview by Topic

Grade	Std 1, & 6	Life	Earth	Physical Science
K	<ul style="list-style-type: none"> ▪ Inquiry, Mathematical analysis Interconnected themes 	<ul style="list-style-type: none"> ▪ Plants ▪ Animals Living /Nonliving 	<ul style="list-style-type: none"> ▪ Daily weather ▪ Seasons 	<ul style="list-style-type: none"> ▪ Properties of matter ▪ Classifying matter
1	<ul style="list-style-type: none"> ▪ Inquiry, Mathematical analysis Interconnected themes 	<ul style="list-style-type: none"> ▪ Plants ▪ Animals ▪ Animal structures & Functions 	<ul style="list-style-type: none"> ▪ Sun & Star Movement ▪ Weathering 	<ul style="list-style-type: none"> ▪ Measurement ▪ States of matter ▪ Heat ▪ Locating objects ▪ Pushes & Pulls ▪ Magnetism ▪ Simple Machines
2	<ul style="list-style-type: none"> ▪ Inquiry, Mathematical analysis Interconnected themes 	<ul style="list-style-type: none"> ▪ Life Functions ▪ Plant Life cycles ▪ Animal Life cycles ▪ Food Chains 	<ul style="list-style-type: none"> ▪ Daily Weather ▪ Measuring Weather ▪ Water Cycle 	<ul style="list-style-type: none"> ▪ Matter ▪ Describing/classifying matter ▪ Physical/Chemical changes ▪ Energy ▪ Electricity ▪ Gravity
3	<ul style="list-style-type: none"> ▪ Inquiry, Mathematical analysis Interconnected themes 	<ul style="list-style-type: none"> ▪ Plant Structures & Functions ▪ Plant Life Cycles ▪ Animal Life cycles ▪ Growth and Health ▪ Adaptation & competition ▪ Humans & the Environment 	<ul style="list-style-type: none"> ▪ Natural Cycles ▪ Water Cycle ▪ Natural events 	<ul style="list-style-type: none"> ▪ Properties & States of matter ▪ Energy ▪ Forces
4	<ul style="list-style-type: none"> ▪ Inquiry, Mathematical analysis Interconnected themes 	<ul style="list-style-type: none"> ▪ Life Functions ▪ Animal Structures & Functions ▪ Heredity ▪ Variation & Competitions ▪ Adaptations ▪ Food Chains & Food Webs 	<ul style="list-style-type: none"> ▪ Natural Motions of the Earth ▪ Measuring Weather ▪ Weathering 	<ul style="list-style-type: none"> ▪ Electricity ▪ Heat ▪ Interactions of Energy ▪ Magnetism ▪ Simple Machines ▪ Matter ▪ Physical & Chemical Changes

Science K-12 Overview by Topic – cont.

Grade	Std 1, & 6	Life	Earth	Physical Science
5	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 	<ul style="list-style-type: none"> ▪ Life Cycles, Reproduction & Change ▪ Classification of Organisms ▪ Interrelationships 	<ul style="list-style-type: none"> ▪ Solar System ▪ Seasons & Climate 	<ul style="list-style-type: none"> ▪ Electricity and Magnetism ▪ Classifying Matter
6	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 	<ul style="list-style-type: none"> ▪ Variation in Living things ▪ Ecosystems ▪ Interdependence ▪ Environmental Changes 	<ul style="list-style-type: none"> ▪ Gravitational Forces & Planetary motion ▪ Weather 	<ul style="list-style-type: none"> ▪ Light ▪ Sound ▪ Forces & Motion
7	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 	<ul style="list-style-type: none"> ▪ Unity & Diversity ▪ Human Body Systems ▪ Metabolism ▪ Homeostasis & Equilibrium 	<ul style="list-style-type: none"> ▪ Rocks ▪ Weathering & Erosion ▪ Volcanoes/ Earthquakes 	<ul style="list-style-type: none"> ▪ Sources & Forms of Energy ▪ Simple Machines ▪ Heating/Cooling ▪ Law of Conservation of Energy
8	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 	<ul style="list-style-type: none"> ▪ Cells & Cell processes ▪ Genetics & Heredity ▪ Evolution and Extinction ▪ Ecology and the Environment 	<ul style="list-style-type: none"> ▪ Atmosphere ▪ Water Cycle 	<ul style="list-style-type: none"> ▪ Physical & Chemical Properties of Matter ▪ Physical & Chemical Changes of Matter ▪ Law of conservation of Mass ▪ Atoms & The Periodic Table
9	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 	<ul style="list-style-type: none"> ▪ Living Environment 		
10	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 		<ul style="list-style-type: none"> ▪ Earth Science 	
11	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 			<ul style="list-style-type: none"> ▪ Chemistry
12	<ul style="list-style-type: none"> ▪ Inquiry, ▪ Mathematical analysis ▪ Interconnected themes 			<ul style="list-style-type: none"> ▪ Physics

New York State / Rochester City School District Health Standards

Standard 1	Standard 2	Standard 3
<p>Personal Health: <i>Students will have the necessary knowledge and skills to establish and maintain personal health.</i></p> <p><i>Students will:</i></p> <ul style="list-style-type: none"> A. Understand human growth and development of the basic body systems with an understanding of the changes that accompany puberty / and integrate knowledge of basic body systems throughout the life cycle. B. Demonstrate the relationship between behaviors and healthy development. C. Demonstrate ways to promote health prevent disease and practice positive health behaviors. 	<p>A Safe and Healthy Environment: <i>Students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment and advocate using interpersonal communication skills.</i></p> <p><i>Students will:</i></p> <ul style="list-style-type: none"> A. Recognize hazardous conditions in the home, school, workplace and community and propose solutions to eliminate or reduce them. B. Evaluate personal and social skills which contribute to health and safety of self and others. C. Recognize how individual behavior affects the quality of the environment. 	<p>Resource Management: <i>Students will identify and manage their community resources and be able to analyze the influence of culture, media, technology and other factors on their health.</i></p> <p><i>Students will:</i></p> <ul style="list-style-type: none"> A. Demonstrate advocacy for individual, family and community health. B. Explain how media and technology can assist with the selection of health information, products and services. C. Explain how peers, media and technology influence healthy choices. D. Describe how cultural beliefs influence health behaviors.

New York State / Rochester City School District Health Standards –cont.

Health Education Skills - The seven personal and social health skills that students need to know and be able to do to be safe, healthy and achieve the NYS and National Standards.

Self-Management:	Demonstrates the ability practice strategies and skills to enhance personal health and safety.
Relationship-Management:	Demonstrates the ability to apply interpersonal and intra-personal strategies and skills to enhance personal, family and community health.
Stress-Management:	Demonstrates the ability to apply stress management strategies and skills to enhance personal health.
Communication:	Demonstrates the ability to apply communication strategies and skills to enhance personal, family and community health.
Decision-Making:	Demonstrates the ability to apply decision – making strategies and skills to enhance personal, family and community health.
Planning & Goal Setting:	Demonstrates the ability to apply planning and goal-setting strategies and skills to enhance personal, family and community health goals.
Advocacy:	Demonstrates the ability to apply advocacy strategies & skills to enhance personal, family and community health.

Functional Knowledge - Specific research-based health knowledge from nine essential content areas that students need to know to be safe, healthy and achieve the NYS and National Standards.

- Physical Activity and Nutrition
- HIV/AIDS
- Sexual Risk
- Family Life/Sexual Health
- Tobacco
- Alcohol and Other Drugs
- Unintentional Injury
- Violence Prevention
- Other Required Health Areas

New York State Bilingual Common Core Initiative

Beginning in Spring 2012, NYSED launched the Bilingual Common Core Initiative to develop new English as a Second Language and Native Language Arts Standards aligned to the Common Core. As a result of this process, NYSED is developing New Language Arts Progressions (NLAP) and Home Language Arts Progressions (HLAP) for every NYS Common Core Learning Standard in every grade.

New Terminology	
New Language Arts Progressions	Formerly English as a Second Language Learning Standards
Home Language Arts Progressions	Formerly Native Language Arts Learning Standards
New Levels!	
5 Levels of Language Progressions (Entering, Emerging, Transitioning, Expanding and Commanding)	Formerly 4 Levels (Beginning, Intermediate, Advanced and Proficient)
Why the Change?	
Terminology is reflective of NYS's multilingual student population and diverse ways in which languages are learned and taught in NYS. New levels align with research about stages of language and literacy development. See Theoretical Foundations document for more information.	

Theoretical Foundations of the New York State Bilingual Common Core Initiative

At the core of The New York State Bilingual Common Core Initiative (NYSBCCI) is the idea that in addition to being a series of grammatical structures, language is also a social practice (Street, 1985; Pennycook, 2010). Therefore, language learning in an academic context is not solely about mastery over grammatical structures or isolated vocabulary but also about the development of competency in the language specific to each academic discipline. In order for this development of competency to occur, students must participate in a language socialization process that includes both explicit and implicit guidance by mentors who are more proficient in the language of the academic discipline (Duffy, 2010) as well as an engagement with the ways of thinking in each academic discipline through exposure to content-specific texts (Snow, Griffin, and Burns, 2007). What this means is that in a history class students are treated as historians and in science class students are treated as scientists and are provided with both explicit and implicit guidance on the language structures and practices associated with the discourse of the content-area being taught (Walqui & Heritage, 2012).

The NYSBCCI also embraces a dynamic view of bilingualism. Bilingualism has at times been conceptualized as “double monolingualism,” with strict separation of languages from each other in instruction (Cummins, 2007). In an English as a Second Language program such an approach minimizes the use of the home language while in a bilingual program it compartmentalizes instruction in the two languages. However, more dynamic views of bilingualism that have emerged in recent years have argued that using the home language as a springboard to understand and produce in the new language will not confuse children and will not hinder their progress towards mastering the new language (Cummins, 2007). Similarly, continued development of the home language will also support the development of the new language (August and Shanahan, 2006). In line with this research, the NYSBCCI views bilingualism both as a point of departure for language instruction and as goal for all language learners.

The major goal of the NYSBCCI is to provide teachers with tools to enact this vision of bilingualism in the Common Core classroom. To this effect, the New Language Arts Progressions (formerly known as English as a Second Language Learning Standards) and Home Language Arts Progressions (formerly known as Native Language Arts Learning Standards) that have been developed as part of this initiative provide points of entry for students of all language proficiency and literacy levels to access grade level Language Arts content as described by the new NYS Common Core Learning Standards. These tools are designed primarily to meet the needs of English Language Learners; however, to support a broader goal of bilingualism for all students, these resources can also be used as a guide for planning instruction for students who are learning a foreign language or who are developing their home languages. Specifically, the New Language Arts Progressions can also be used as a guide in foreign language classrooms, and the Home Language Arts Progressions can also be used as a guide for the development of literacy among bilingual students who are not English Language Learners. This approach continues the tradition of strong support for bilingualism and biliteracy in New York State and is in the spirit of the recently enacted Seal of Biliteracy legislation that seeks to promote greater biliteracy among students in New York State. As with the 2004 New York State Learning Standards for English as a Second Language and Native Language Arts, the New Language Arts Progressions and Home Language Arts Progressions identify performance indicators for students based on the NYS P-12 Common Core Learning Standards. Thus, these resources help teachers provide all students with access to grade level content. The New Language Arts Progressions and Home Language Arts Progressions are not separate standards, but rather

Theoretical Foundations of the New York State Bilingual Common Core Initiative – cont.

provide a roadmap for teachers to ensure that students who are learning a new language and/or developing their home language meet the Common Core standards.

New Language Arts Progressions:

The New Language Arts Progressions focus specifically on the needs of English Language Learners. However, the progressions can also be applied to students learning a foreign language, as the stages of new language development are the same regardless of the language (Council of Europe, 2001) or whether a language is being learned as an additional or foreign language (American Council on the Teaching of Foreign Languages, 1996). Thus, the term new language is being used to replace second language. Using new as opposed to second language also acknowledges the many students in New York State who have competency in more than two languages. Moreover, it is the term that is used by the National Board for Professional Teaching Standards (1998) in its national certification program.

The New Language Arts Progressions are aligned with the emerging research that has called for the integration of content and language in new language development (Chamot, 2009; Coyle, Hood, & Marsh, 2010; Echevarria, Vogt, & Short, 2012). The idea behind integrating content and language is that new language development happens most successfully when learners are engaged in authentic content-specific tasks from the very beginning of their exposure to the new language. That is, when provided appropriate scaffolding, language learners can start developing language for academic purposes at the same time that they are developing basic communication skills in their new language (Walqui & Heritage, 2012).

In order to demonstrate the trajectory of learning language and content, the New Language Arts Progressions identify five levels of progressions (Entering, Emerging, Transitioning, Expanding, Commanding). The decision to expand from four to five levels is based on the latest work in language development being done both nationally and internationally where progressions have been divided into five (WIDA, 2012) or six levels (Council of Europe, 2001; Interagency Language Roundtable, 2011). Those that include six levels, however, have a “level zero” for a student with absolutely no proficiency in a new language, which research indicates is a very short period of time when students are interacting with others in the new language (Calderón, 2009).

The five levels of language progressions demonstrate a trajectory of language learning and teaching. It should be emphasized that students at all five levels are expected to work with the same grade level texts. At the entering level of the New Language Arts Progressions, grade level texts are heavily scaffolded (e.g. pre-identified words, graphic organizers, option to use home language, etc.). This scaffolding is temporary assistance by which a teacher or peer helps a learner accomplish a task in their “zone of proximal development” (Vygotsky, 1978), the gap between what students can do independently and what they can do with supports implemented by a skilled expert (Gibbons, 2002). The performance indicators at the entering level have scaffolding explicitly built into them because students who are very new to the language will need such supports to engage with grade level texts. Gradually, these scaffolds are removed from the performance indicators. Thus, the Progressions demonstrate that with appropriate supports all learners can engage meaningfully with grade level text to meet the expectations of the Common Core, rather than working with simplified texts or lower level

Theoretical Foundations of the New York State Bilingual Common Core Initiative – cont.

texts. The difference between the levels is not with the complexity of the text or rigor of the content, but instead with the amount of scaffolding provided for students to access the grade level text that all students work with.

The New Language Arts Progressions follow the lead of the Framework for English Language Proficiency issued by the Council of Chief State Schools (2012), by organizing language into receptive (listening and reading) and productive (speaking and writing) functions within the modalities of oracy (oral skills) and literacy (written texts). The division into receptive and productive language functions allows for a more integrated approach to language development. Students just beginning to learn a language have neither oral nor written receptive or productive skills in the new language. Therefore, they have to develop both receptive competencies in oral language (listening) and written language (reading), while also needing to develop productive competencies in oral language (speaking) and written language (writing).

A curriculum for these students must include all four components of language (listening, speaking, reading, and writing) (NYS English as a Second Language 2004). Organizing language development as productive and receptive ensures the integration of the four components of language and emphasizes that students who are new to a language do not need to first develop oral language before being exposed to written language.

Home Language Arts Progressions:

In addition to the development of New Language Arts Progressions, the NYSBCCI has created Home Language Arts Progressions as a tool for teachers of classrooms focused explicitly on teaching Language Arts in the home languages of English Language Learners and other speakers of languages other than English. The Home Language Arts Progressions builds upon the work of the New York State Native Language Arts Learning Standards (2004) and World Class Instructional Design and Assessment (WIDA) (2005) in the creation of standards related to home language arts. Like these predecessors, these Home Language Arts Progressions are based upon the extensive research into the role of home language development on the development of a new language (Cummins, 2001; Krashen & McField, 2005; August & Shanahan, 2006). The term *home language* as opposed to *native language* is used to describe the languages other than English spoken by the bilingual students of New York States. This change is aligned with recent developments in language education that finds the term “native” speaker to be a concept no longer applicable to our increasingly globalized world (Graddol, 2006). In addition, the shift in terminology allows for a message that home and school can and must be integrated in ways that allow students to see them as complementary spheres as opposed to separate spheres in their lives.

Similar to the New Language Arts Progressions, the Home Language Arts Progressions create performance indicators for the Common Core Learning Standards that address all four components of language. However, in contrast to the New Language Arts Progressions, where new language development and content learning are emphasized equally, the Home Language Arts Progressions focus on the learning of Language Arts content in the home language. In this way, the Home Language Arts Progressions parallel the skills that are focused on in English Language Arts Classrooms.

Theoretical Foundations of the New York State Bilingual Common Core Initiative – cont.

Like the New Language Arts Progressions, the Home Language Arts Progressions are organized into productive and receptive language components. However, they differ from the New Language Arts Progressions in that there is a stronger focus on literacy development. This is because students come into Home Language Arts classrooms with stronger oracy skills but with varying degrees of literacy in their home language. This foundation in oracy can and must be built upon in supporting students in their development of home language literacy. Therefore, the purpose of the Home Language Arts Progressions is to provide guidance to teachers and points of entry for students at all levels of literacy in their home language.

The Home Language Arts Progressions are cognizant of the continuum of bilingualism and biliteracy that exists for students in New York State. In particular, research has identified at least three subgroups of such students: (1) Students with strong schooling in their home language, (2) Students with Interrupted Formal Education (SIFE), and (3) heritage speakers—students raised in homes where a non-English language is spoken and who have some degree of ability in that language (Freeman & Freeman, 2002; Valdés, 2001). In order to provide tools for teachers to meet the needs of all of these students, the Home Language Arts Progressions are divided into five levels (Entering, Emerging, Transitioning, Expanding, Commanding). Thus, similar to the New Language Arts Progressions, the Home Language Arts Progressions have five levels. Also, similar to the New Language Arts Progression, the difference between the levels is not related to the rigor of the content or grade level of the text. That is, students at all literacy levels are expected to engage with grade-level texts.

The difference between the levels relates to the amount of scaffolding that students receive based on their literacy levels. It is important to note, however, that while the names of the levels and the philosophy underpinning both Progressions are the same, a student can be at a different level in new and home language. A student in this situation would be expected to receive different types and amounts of scaffolding depending on the language of instruction.

Bilingual Common Core Progressions:

Taken together, the New Language Arts Progressions and the Home Language Arts Progressions present tools for teachers to develop grade level instruction for students with varying levels of language proficiency and literacy. When used together, New Language Arts Progressions and the Home Language Arts Progressions provide a roadmap to develop bilingual Common Core skills for all students—skills that are necessary for our increasingly global society.

Understanding the Bilingual Common Core Initiative's Progressions

	New Language Arts Progressions	Home Language Arts Progressions
Target Student Population	Students learning a new language (e.g. students in English as a Second Language or Language Other than English classes)	Students developing a home language (e.g. students in Native Language Arts or language classes for speakers of that language)
CCLS Analysis	Each resource identifies what is called the <i>Main Academic Demand</i> of every Common Core anchor standard as well as the <i>Grade Level Academic Demand</i> of the Common Core grade level standard.	
Levels of Proficiency and Literacy	<p>Five Levels of Language Progressions: Entering, Emerging, Transitioning, Expanding, Commanding to target instruction to students based on their level of proficiency in the new language.</p> <p>Replaces current levels in ESL of Beginner, Intermediate, Advanced and Proficient. Note: NYSESLAT will be revised to align with these five levels.</p>	<p>Five Levels of Literacy Progressions: Entering, Emerging, Transitioning, Expanding, Commanding to target instruction to students based on their level of literacy in the home language.</p> <p>New levels being introduced for home language.</p>
Performance Indicators	Performance indicators for each modality that demonstrate how students at each of the five levels can meet the Common Core standard for their grade level, using grade level text, with appropriate supports. Performance indicators have embedded teacher scaffolds to demonstrate how students can meet the indicators using grade level content and text. Performance indicators address each of the four modalities of language (L: Listening, R: Reading, S: Speaking, W: Write).	
Linguistic Demand	Each resource identifies what is called the <i>Linguistic Demands</i> of each Common Core standard. The <i>Linguistic Demands</i> identify the words, phrases and forms of language that students will need to understand and use in order to meet the Common Core standard.	
Examples to Address the Linguistic Demands	Based on the <i>Linguistic Demands</i> and <i>Grade Level Academic Demand</i> each resource provides examples of such linguistic demands used in a content-specific context, and suggested activities for teachers to target the language development needed. The examples will vary greatly based on language of instruction and the goals of the program or class (e.g. ESL classes may have more content heavy goals than LOTE classes). Thus the scaffolds are suggested resources for teachers to apply in their classrooms where appropriate. In Home Language Arts Progressions, the examples will include representation of the top 5 languages of New York State (Spanish, Chinese, Arabic, Bengali and Haitian Creole).	

Teachers working in *ESL or bilingual programs* as well as teachers of *foreign language classes* can use these performance indicators and progressions for students who are learning a new language, for example:

- Students who are learning English as a new language (i.e. Spanish, Chinese or Haitian Creole home language speakers learning English as a new language)
- Students who are learning a Language Other than English as a new language (i.e. English speakers learning Spanish or Japanese)
- Students for whom both languages in a dual program are new (i.e. students who speak another home language not represented in the dual or transitional bilingual language program)

Understanding the Bilingual Common Core Initiative's Progressions – cont.

Teachers working in *dual, bilingual or transitional bilingual programs*, as well as *foreign language teachers* of students who already speak the language, can use the home language performance indicators and progressions for:

- Students who are in dual or bilingual programs (i.e., a Spanish speaker attending a dual bilingual Spanish-English; a Mandarin speaker attending a dual bilingual Chinese-English program)
- Students who are in transitional bilingual programs (i.e., a Spanish speaker participating in a Spanish Language Arts class; an Arabic speaker participating in a Arabic Language Arts class)

The Home Language Arts Progressions can offer teachers useful strategies to design intervention activities and develop literacy skills for students who are:

- new to the US school system in initial grades, and thus lacking literacy in any language;
- newcomer students (beyond 2nd grade) with appropriate literacy in their home language;
- newcomer students (beyond 2nd grade) without age-appropriate literacy in their home language (often known as SIFE);
- students who entered US schools as emergent bilinguals, but who have been in the US school system for longer than three years, have developed listening and speaking abilities in English, but for a variety of reasons lack age-appropriate literacy abilities (often known as LTELs); and
- students who are new to the US school system and have Disabilities
- (students in Special Education).

Using the Progressions to Design Instruction

The New and Home Language Arts Progressions are designed to help all teachers plan instruction and develop appropriate expectations for students at different levels of language and literacy levels. The development of academic language rests on content area texts. Teachers can target grade appropriate text and develop strategies to provide multiple points of entry for their students. The following are some examples of how teachers can use the progressions to plan and assess language.

- **Differentiate linguistic scaffolds that students will require:** Entering students for example, will be able to develop their listening, reading, speaking and writing skills by focusing on key words in text, while Emerging students will focus on key phrases and short sentences in the new language. Transitioning students will need less explicit teaching of language and can replicate models, while Expanding students can be supported with tools such as glossaries while Commanding students can be expected to work more independently. All students will be working within the same content area, but the teacher will be able to create different supports for the students to access the content and the academic language that is integral to the content area.
- **Determine the specific scaffolds that target the content area demands:** Recognizing the precise way in which content should be broken down for students learning a new language or developing their home language is key for selecting scaffolds. Using a cause and effect graphic organizers is essential for understanding historical events. Sequencing becomes essential for understanding how a specific cycle works in science. Rubrics can be useful for assessing the reliability of a source and summarizing is essential for distinguishing the main idea from unimportant details in a text. The Progressions can support teachers in understanding how to create content area scaffolds such as graphic organizers, sentence starters and rubrics that target the content area standard and match the students' language ability in the new or home language.

Understanding the Bilingual Common Core Initiative's Progressions – cont.

- **Develop formative assessments according to levels:** Knowing what students should be able to do at each level create benchmarks against which to measure progress. If, for example, a student should be able to integrate information from the text into a graphic organizer with the support of only a word bank, a formative assessment can include that scaffold and the teacher can recognize if the student needs more support, or if the student is ready to move to the next level. Similarly, teachers can develop rubrics to assess the ability of students to participate in partnership, small group or whole class discussions and measure progress over time.
- **Develop specific language objectives:** The linguistic demands within the Progressions will facilitate for planning for integrating language as a teaching goal. Teachers will be able to plan for the specific language that a unit demands. For instance, knowing the words that are necessary for introducing cause and effect (i.e. because of, due to, when) will reinforce and clarify the content area concepts and thus help guide teachers to language development for the content.

It is important to note that the Progressions can and should be used by teachers working in content area classrooms with students learning English. In such classrooms, teachers can use the new language progressions to develop literacy and language in academic settings within their content area. For example:

- **Students who are learning English in English Language Arts, Social Studies/History or Science classrooms:** content area teachers can use the performance indicators to determine what scaffolds can be the most appropriate for a particular student based on their level of language progression. Teachers can also use the linguistic demands to understand the words, phrases and forms of language that students learning English will need to know in order to meet the academic demand. Knowing how to scaffold the language and the content for the Common Core standard being targeted will help ensure that all teachers are able to design instruction based on the needs of English Language Learners.

The Home and New Language Arts Progressions are designed to facilitate the planning and implementation of content and language learning in different educational settings. Examples of how the Home and New Language Arts Progressions can be used jointly or separately for planning and implementing instruction in whole class settings follow:

- Teachers working in *transitional bilingual programs* can address their students' needs by using the Home Language Arts Progressions in the beginning stages of the program as they transition to the New Language. Even though the final goal of these programs is often not to develop biliteracy, using the Home Language as a springboard for developing oracy and literacy in the New Language will facilitate language and content development for these students.
- Teachers working in *bilingual programs* that aim to develop biliteracy can use the New and Home Language simultaneously. The objectives of these programs are to develop oracy and biliteracy, but a student's development of both languages will rarely follow a parallel path. Teachers working in these bilingual programs can use the progressions to scaffold content and academic language instruction at different levels. A teacher working in the Home Language can be driving their students literacy level at the Expanding and/or Commanding level whereas the same student might be at a Transitioning level in the New Language.

Understanding the Bilingual Common Core Initiative's Progressions – cont.

- Teachers working in *foreign language classes* using content area instruction in full immersion models, can find the supports, scaffolds and linguistic demands useful to integrate content and academic language development. While the goal in these programs may not be biliteracy, the stages of language development can guide instruction based on both the point of entry for students and the language development goals of the foreign language program.

The main characteristic of the Home Language Arts and New Language Arts Progressions are their functionality and flexibility. Their purpose is to help teachers plan, organize, and implement successfully, the ambitious demands described in the NYS Common Core Learning Standards, while taking into account the range of language and literacy skills that characterize these students.

New Language Arts and Home Language Arts Progressions Samples

On the following pages is a sample from <http://engageny.org/resource/new-york-bilingual-common-core-initiative> of the following:

- New Language Arts Progressions (NLAP)
 - 6th Grade Reading for Information
 - 9-10 Grade Speaking and Listening

- Home Language Arts Progressions (HLAP)
 - 6th Grade Reading for Information
 - 9-10 Grade Speaking and Listening



New Language Arts Progressions - 6th Grade Reading for Information

		MAIN ACADEMIC DEMAND: <i>Analyze Cause/Effect and Interactions Between Key Text Elements</i>				
		GRADE LEVEL ACADEMIC DEMAND: <i>Analyze Cause/Effect Between Details of a Key Text Element</i>				
5 Levels of Language Progressions		Entering	Emerging	Transitioning	Expanding	Commanding
Oral and Literacy Links	When acquiring a new language, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:	L. Able to identify cause and effect relationships between a key individual, event or idea, by organizing <i>pre-identified key words</i> into a cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership and/or teacher lead small group</i> discussions, in <i>new and/or home language</i> .	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing <i>pre-identified key phrases and short sentences</i> into a cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership and/or small group</i> discussions, in <i>new and/or home language</i> .	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text into a <i>partially completed</i> cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions, in <i>new and occasionally in home language</i> .	L. Able to identify cause and effect relationships between a key individual, event or idea by <i>independently</i> organizing information from text into a cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions, in <i>new language</i> .	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text into a <i>note taking guide or taking notes independently</i> , as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions, in <i>new language</i> .
		R. Able to identify <i>two or more</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing <i>pre-identified key words</i> into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text in <i>new and/or home language</i> .	R. Able to identify <i>two or more</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing <i>pre-identified key phrases and short sentences</i> into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text in <i>new and/or home language</i> .	R. Able to identify <i>two or more</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing <i>pre-identified key phrases and short sentences</i> into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text in <i>new and/or home language</i> .	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by <i>independently</i> organizing information into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text in <i>new language</i> .	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by <i>independently</i> organizing information into a <i>note taking guide or taking notes independently</i> to connect examples or anecdotes to cause and effect relationships, when reading text in <i>new language</i> .

RECEPTIVE

New Language Arts Progressions - 6th Grade Reading for Information – cont.

		MAIN ACADEMIC DEMAND: Analyze Cause/Effect and Interactions Between Key Text Elements GRADE LEVEL ACADEMIC DEMAND: Analyze Cause/Effect Between Details of a Key Text Element				
		Entering	Emerging	Transitioning	Expanding	Commanding
Common Core Anchor Standard (RI.3): Analyze how and why individuals, events and ideas develop and interact over the course of a text. Common Core Grade 6 Standard (RI.6.3): Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g. through examples or anecdotes). 5 Levels of Language Progressions						
When acquiring a new language, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:						
Oral and Literacy Links	S. Able to analyze text by completing sentence starters that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using pre-taught one word answers, when speaking about text, in partnership and/or teacher lead small group discussions in new and/or home language.	S. Able to analyze text by completing sentence starters that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using provided key phrases and short sentences, when speaking about text, in partnership and/or small group discussions in new and/or home language.	S. Able to analyze text by participating in discussions that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using a word bank, when speaking about text, in partnership, small group and/or whole class discussions in new and occasionally in home language.	S. Able to analyze text by initiating discourse that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using a glossary of terms, when speaking about text, in partnership, small group and/or whole class discussions in new language.	S. Able to analyze text by leading discourse that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, when speaking about text, in partnership, small group and/or whole class discussions in new language.	
	W. Able to analyze text by completing cloze-type paragraphs that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using pre-identified keywords, when writing about text in new and/or home language.	W. Able to analyze text by developing short paragraphs that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using pre-identified key phrases and short sentences, when writing about text in new and/or home language.	W. Able to analyze text by developing a short essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a word bank, when writing about text in new and occasionally in home language.	W. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a glossary of terms, when writing about text in new language.	W. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, independently, when writing about text in new language..	
PRODUCTIVE						

New Language Arts Progressions - 6th Grade Reading for Information – cont.

<p>Common Core Grade 6 Standard (RI.6.3): Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g. through examples or anecdotes).</p>	<p>GRADE LEVEL ACADEMIC DEMAND: Analyze Cause/Effect Between Details of a Key Text Element</p>
<p>Linguistic Demands: words, phrases and forms that link and ideas and explain cause and effect relationships. The following are some examples in English, that may vary based on the language of instruction. In the first three levels students can approach the linguistic demands in new and/or home language.</p> <ul style="list-style-type: none"> ▪ Introducing cause and effect relationships: when, because, since, if, now that, so that ▪ Compound Prepositions for cause and effect: due to, because of, reasons for, cause off/for, result of, consequences of, effect on/effect of 	<p>The following are some examples in English, that may vary based on the language of instruction. In the first three levels, students can approach this linguistic demand in new and/or home language.</p> <ul style="list-style-type: none"> ▪ Sentence Transitions: therefore, for this reason, as a result, consequently, thus, that is why ▪ Giving examples or anecdotes: for example, for instance, namely
<p>Examples to Address the Linguistic Demands: words, phrases and forms that link ideas and explain cause and effect relationships found in a science text. The following are some examples in English, that may vary based on language of instruction and content area. In the first three levels, students can approach this linguistic demand in new and/or home language.</p> <ul style="list-style-type: none"> ▪ Analyze in small group/whole class discussion how language in an academic setting integrates and evaluates information presented in different formats and justify/analyze the evidence presented: <ul style="list-style-type: none"> ○ Amusia is the technical term for tone deafness. A good singing voice is not necessarily the result of the ability to hear tones accurately. There has been some intriguing research on this subject. For instance, new brain imaging techniques can measure the density of the white matter, consisting of nerve fibers that provide paths between the right frontal lobe and the right temporal lobe. The right frontal lobe is where higher thinking takes place. In tone deaf people (amusics) the white matter is thinner. As a result there is a weaker connection between the lobes. Findings also indicate the thinner the white matter, the worse the tone deafness. According to researchers from Harvard Medical School, 5 percent of the US population are amusics. Some reasons can be a general indifference to singing or an immunity to embarrassment. Tone deafness doesn't mean hard of hearing. That is why a tone deaf person can still hear someone whisper in a room. (Harvard Medical School, "Music to their ears it is not") ▪ In a mini lesson and small group/whole class conversations, model how synthesizing and contrasting information requires joining multiple information and sources: <ul style="list-style-type: none"> ○ There is a belief that says that there is an overlap between how the brain handles music and how it handles speech. Other researchers believe that musical perception and thinking occur separately from other functions. Most indicate there is a strong genetic component to tone deafness. <p>Sources: Schekel, L. 2011. Ask your science teacher. Answers to everyday questions. Create Space Independent Publishing Platform Harvard Medical School, "Music to their ears it is not," Harvard Health Letter, September 2007 Issue.</p> 	

New Language Arts Progressions – 9-10 Grade Speaking and Listening

		<p>MAIN ACADEMIC DEMAND: <i>Compare/Contrast, Synthesize and Evaluate the Credibility of Information Presented in Various Formats</i></p> <p>GRADE LEVEL ACADEMIC DEMAND: <i>Synthesize and Evaluate the Reliability of Different Sources of Information Presented in Diverse Media or Formats</i></p>				
		Entering	Emerging	Transitioning	Expanding	Commanding
<p>Common Core Anchor Standard (SL.2): Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally..</p> <p>Common Core Grade 9-10 Standard (SL.9-10.2): Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.</p> <p>5 Levels of Language Progressions</p>						
<p>When acquiring a new language, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:</p>						
<p>Oral and Literacy Links</p>	<p>L. Able to compare and contrast two or more sources of information by organizing pre-identified key words into a Venn Diagram that targets similarities and differences, as sources are read aloud in class, or in partnership and/or teacher lead small group discussions, in new and/or home language.</p>	<p>L. Able to compare and contrast two or more sources of information by organizing pre-identified key phrases and short sentences into a Venn Diagram that targets similarities and differences, as sources are read aloud in class, or in partnership and/or small group discussions, in new and/or home language..</p>	<p>L. Able to compare and contrast multiple sources of information by organizing similarities and differences into an partially completed evaluative graphic organizer, as sources are read aloud in class, or in partnership, small group, and/or whole class discussions, in new and occasionally in home language.</p>	<p>L. Able to compare and contrast multiple sources of information by independently organizing similarities and differences into an evaluative graphic organizer, as sources are read aloud in class, or in partnership, small group, and/or whole class discussions, in new language.</p>	<p>L. Able to compare and contrast multiple sources of information by organizing similarities and differences into a note taking guide or taking notes independently, as sources are read aloud in class, or in partnership, small group, and/or whole class discussions, in new language.</p>	<p>R. Able to evaluate the credibility of multiple sources by rating each source (authority, currency and/or objectivity) in a provided scoring rubric and justifying the ratings independently, when reading sources in new and/or home language. (See CCLS RI. 3.7)</p>
	<p>R. Able to evaluate the credibility of two or more sources by rating each source (authority and/or currency) in a provided scoring rubric and justifying the ratings by choosing from a preidentified list of words, when reading sources in new and/or home language. (See CCLS RI. 3.7)</p>	<p>Able to evaluate the credibility of two or more sources by rating each source (authority and/or currency) in a provided scoring rubric, and justifying the ratings by choosing from a preidentified list of phrases and short sentences, when reading sources in new and/or home language. (See CCLS RI. 3.7)</p>	<p>R. Able to evaluate the credibility of multiple sources by rating each source (authority, currency and/or objectivity) in a provided scoring rubric, and justifying the ratings after teacher modeling, when reading sources in new and occasionally in home language. (See CCLS RI. 3.7)</p>	<p>R. Able to evaluate the credibility of multiple sources by rating each source (authority, currency and/or objectivity) in a provided scoring rubric and justifying the ratings independently, when reading sources in new language. (See CCLS RI. 3.7)</p>	<p>R. Able to evaluate the credibility of multiple sources by rating each source (authority, currency and/or objectivity) in a note taking guide or taking notes independently and justifying the ratings independently, when reading sources in new language. (See CCLS RI. 3.7).</p>	
<p>RECEPTIVE</p>						

New Language Arts Progressions – 9-10 Grade Speaking and Listening- cont.

		<p>MAIN ACADEMIC DEMAND: Compare/Contrast, Synthesize and Evaluate the Credibility of Information Presented in Various Formats</p>				
		<p>GRADE LEVEL ACADEMIC DEMAND: Synthesize and Evaluate the Reliability of Different Sources of Information Presented in Diverse Media or Formats</p>				
5 Levels of Language Progressions		Entering	Emerging	Transitioning	Expanding	Commanding
<p>Common Core Anchor Standard (SL.2): Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally..</p>						
<p>Common Core Grade 9-10 Standard (SL.9-10.2): Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.</p>						
<p>When acquiring a new language, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:</p>						
<p>Oral and Literacy Links</p>	<p>S. Able to synthesize <i>two or more</i> sources of information by <i>completing sentence starters</i> that address similarities and differences and the credibility of each source, using <i>pre-taught one word answers</i>, when speaking about sources in <i>partnership and/or teacher lead small group discussions in new and/or home language.</i></p>	<p>S. Able to synthesize <i>two or more</i> sources of information by <i>completing sentence starters</i> that address similarities and differences and the credibility of each source, using <i>provided key phrases and short sentences</i>, when speaking about sources in <i>partnership and/or small group discussions in new and/or home language.</i></p>	<p>S. Able to synthesize <i>multiple</i> sources of information by <i>participating in discussions</i> that address similarities and differences and the credibility of each source, using a <i>word bank</i>, when speaking about sources in <i>partnership, small group and/or whole class discussions in new and occasionally in home language.</i></p>	<p>S. Able to synthesize <i>multiple</i> sources of information by <i>initiating discourse</i> that addresses similarities and differences and the credibility of each source, using a <i>glossary of terms</i>, when speaking about sources in <i>partnership, small group and/or whole class discussions in new language.</i></p>	<p>S. Able to synthesize <i>multiple</i> sources of information by <i>leading discourse</i> that addresses similarities and differences and the credibility of each source, when speaking about sources in <i>partnership, small group and/or whole class discussions in new language.</i></p>	<p>S. Able to synthesize <i>multiple</i> sources of information by <i>developing a multiple paragraph essay</i> that addresses the similarities, differences and credibility of the sources, <i>independently</i>, when writing about sources in <i>new language.</i> (See CCLS W.9-10.8)</p>
	<p>W. Able to synthesize <i>two or more</i> sources of information by <i>completing cloze-type paragraphs</i> that target the similarities, differences and credibility of the sources, using <i>preidentified key words</i>, when writing in <i>new and/or home language.</i> (See CCLS W.9-10.8)</p>	<p>W. Able to synthesize <i>two or more</i> sources of information by <i>developing short paragraphs</i> that target similarities, differences and readability of the sources, using <i>pre-identified key phrases and short sentences</i>, when writing in <i>new and/or home language.</i> (See CCLS W.9-10.8)</p>	<p>W. Able to synthesize <i>multiple</i> sources of information by <i>developing a short essay</i> that addresses the similarities, differences and credibility of the sources, using a <i>word bank</i>, when writing in <i>new and occasionally in home language.</i> (See CCLS W.9-10.8)</p>	<p>W. Able to synthesize <i>multiple</i> sources of information by <i>developing a multiple paragraph essay</i> that addresses the similarities, differences and credibility of the sources, using a <i>glossary of terms</i>, when writing in <i>new language.</i> (See CCLS W.9-10.8)</p>	<p>W. Able to synthesize <i>multiple</i> sources of information by <i>developing a multiple paragraph essay</i> that addresses the similarities, differences and credibility of the sources, <i>independently</i>, when writing about sources in <i>new language.</i> (See CCLS W.9-10.8)</p>	
<p>PRODUCTIVE</p>						

New Language Arts Progressions – 9-10 Grade Speaking and Listening- cont.

Common Core Grade 9-10 Standard (SL.9-10.2): Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.	GRADE LEVEL ACADEMIC DEMAND: Synthesize and Evaluate the Reliability of Different Sources of Information Presented in Diverse Media or Formats
<p>Linguistic Demands: words, phrases and forms that integrate and evaluate information. The following are some examples in English, that may vary based on the language of instruction and in the first three levels students can approach this linguistic demands in new and/or home language.</p> <ul style="list-style-type: none"> ▪ Presenting information: provide, accomplish, demonstrate, arrange, present, conceptualize ▪ Words for evaluating: appraise, assess, based on, criticize, value, decide, survey, suggest ▪ Words for adding information: and, also, in addition, as well as, too, furthermore, moreover, apart from, besides ▪ Words and phrases for reliability: impartial, neutral, valid, trustworthy, presently, modern, actual, often 	<p>Introducing Compare/Contrast Information: like, unlike, while, although, but, though, however, on the one hand, even though, despite, nonetheless, notwithstanding, regardless of, in spite of</p> <ul style="list-style-type: none"> ▪ Sentence Transitions and Conclusions: consequently, this means that, as a result, to conclude, the former, the latter, the first reason is, lastly, the following ▪ Words for negotiating and justifying information: admit, consistently, acknowledge, argue, allege, assert, grant, observe, often, question, emphasize, refute, reject, report, respond, suggest, think
<p>Examples to Address the Linguistic Demands: words, phrases and forms that integrate and evaluate information found in social studies/historical text. The following are some examples in English, that may vary based on language of instruction. In the first three levels, students can approach this linguistic demand in new and/or home language.</p> <ul style="list-style-type: none"> ▪ Analyze in small group/whole class discussion how language in an academic setting integrates and evaluates information presented in different formats and justify/analyze the evidence presented: <ul style="list-style-type: none"> ○ The United States government's support of slavery was based on an overpowering practicality. In 1790 a thousand tons of cotton were being produced every year in the South. By 1860, it was a million tons. In the same period, 500,000 slaves grew to 4 million.... The American government had set out to fight the slave states in 1861, not to end slavery, but to retain the enormous national territory and market and resources. (Zinn, 2005; p.171, 198). ○ As the map demonstrates, the South had an economy based on agriculture and as a result, of slave labor. On the other hand, the North had an industrial economy that depended on the working class for their success. Consequently, they found slavery illegal (Economics and the Civil War: http://www.markedbyteachers.com/international-baccalaureate/history/industry-vs-agriculture-the-economics-leading-to-the-civil-war.html) ▪ In a mini lesson and small group/whole class conversations, model how synthesizing and contrasting information requires joining multiple information and sources: <ul style="list-style-type: none"> ○ [The Civil War] ... was not a clash of peoples... but of elites. The northern elite wanted economic expansion—free land, free labor, a free market, a high protective tariff for manufacturers, a bank of the United States. The slave interests opposed all that... (Zinn, 2005; p.189). o Lincoln could argue with lucidity and passion against slavery on moral grounds.... (Zinn, 2005; p.187). This vision is portrayed in the Gettysburg Address: "Four score and seven years ago, our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal." (Lincoln, "The Gettysburg Address") <p>Sources: Zinn, H. (2005). <i>A People's History of the United States</i>. Harper Perennial Classics. Economics and the Civil War: http://www.markedbyteachers.com/international-baccalaureate/history/industry-vs-agriculture-the-economics-leading-to-the-civilwar.html Lincoln, A., "The Gettysburg Address." Gettysburg, Penn. Nov. 19, 1863.</p> <p>Note: Types of sources may be an important consideration for students, especially in the early levels of progressions. Note how the map provides visual supports as well as academic content.</p>	

Home Language Arts Progressions - 6th Grade Reading for Information

		MAIN ACADEMIC DEMAND: Analyze Cause/Effect and Interactions Between Key Text Elements				
		GRADE LEVEL ACADEMIC DEMAND: Analyze Cause/Effect Between Details of a Key Text Element				
5 Levels of Language Progressions		Entering	Emerging	Transitioning	Expanding	Commanding
When developing home language literacy, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:						
Oral and Literacy Links	L. Able to identify cause and effect relationships between a key individual, event or idea, by organizing <i>pre-identified key phrases and short sentences</i> into a cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership and/or small group</i> discussions.	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text into a <i>partially completed</i> cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions.	L. Able to identify cause and effect relationships between a key individual, event or idea by <i>independently</i> organizing information from text into a cause and effect graphic organizer, as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions.	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text <i>based on a list of guiding questions</i> , as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions.	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text into a <i>note taking guide or taking notes independently</i> , as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions, in <i>new language</i> .	L. Able to identify cause and effect relationships between a key individual, event or idea by organizing information from text into a <i>note taking guide or taking notes independently</i> , as text is read aloud in class, or in <i>partnership, small group and/or whole class</i> discussions, in <i>new language</i> .
	R. Able to identify <i>two or more</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing <i>pre-identified key words</i> into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text.	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing <i>provided lists of causes, effects and examples or anecdotes into the appropriate cause and effect relationships</i> , when reading text.	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by <i>independently</i> organizing information into a matrix that connects examples or anecdotes to cause and effect relationships, when reading text.	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships by organizing information and connecting examples or anecdotes to cause and effect relationships based on a list of <i>guiding questions</i> , when reading text.	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships into a <i>note taking guide or taking notes independently</i> to connect examples or anecdotes to cause and effect relationships when reading text.	R. Able to identify <i>multiple</i> examples or anecdotes that introduce, illustrate and/or elaborate the cause and effect relationships into a <i>note taking guide or taking notes independently</i> to connect examples or anecdotes to cause and effect relationships when reading text.

RECEPTIVE

Home Language Arts Progressions - 6th Grade Reading for Information – cont.

		MAIN ACADEMIC DEMAND: <i>Analyze Cause/Effect and Interactions Between Key Text Elements</i>				
		GRADE LEVEL ACADEMIC DEMAND: <i>Analyze Cause/Effect Between Details of a Key Text Element</i>				
5 Levels of Language Progressions		Entering	Emerging	Transitioning	Expanding	Commanding
Oral and Literacy Links	When developing home language literacy, student performance of the standard using grade level text and with proper supports at each level demonstrates that they are:	S. Able to analyze text by completing sentence starters that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using provided key phrases and short sentences, when speaking about text, in partnership and/or small group discussions.	S. Able to analyze text by participating in discussions that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using a word bank, when speaking about text, in partnership, small group and/or whole class discussions.	S. Able to analyze text by initiating discourse that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using a glossary of terms, when speaking about text, in partnership, small group and/or whole class discussions.	S. Able to analyze text by initiating and occasionally addresses cause and effect relationships between key individuals, event or ideas and connecting them to examples or anecdotes based on a list of guiding questions, when speaking about text, in partnership, small group and/or whole class discussions.	S. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a provided checklist, when writing about text.
	PRODUCTIVE	S. Able to analyze text by completing sentence starters that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples or anecdotes, using provided key phrases and short sentences, when speaking about text, in partnership and/or small group discussions.	W. Able to analyze text by developing a short essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a word bank, when writing about text.	W. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a glossary of terms, when writing about text.	W. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, using a provided checklist, when writing about text.	W. Able to analyze text by developing a multiple paragraph essay that addresses cause and effect relationships between a key individual, event or idea and connecting them to examples and anecdotes, independently, when writing about text.

Home Language Arts Progressions - 6th Grade Reading for Information – cont.

<p>Common Core Grade 6 Standard (RI.6.3): Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g. through examples or anecdotes).</p>	<p>GRADE LEVEL ACADEMIC DEMAND: Analyze Cause/Effect Between Details of a Key Text Element</p>
<p>Linguistic Demands: words, phrases and forms that link and ideas and explain cause and effect relationships. The following are some examples in English that may vary based on the home language.</p>	<p>Sentence Transitions: therefore, for this reason, as a result, consequently, thus, so that</p>
<p>Introducing cause and effect relationships: when, because, since, if, now that,</p> <p>Compound Prepositions for cause and effect: due to, because of, reasons for, cause of/for, result of, consequences of, effect on/effect of</p>	<p>Giving examples or anecdotes: for example, for instance, namely</p>
<p>Examples to Address the Linguistic Demands: words, phrases and forms that that link ideas and explain cause and effect relationships found in a science text. The following are some examples in Spanish that may vary based on the home language and content area.</p> <ul style="list-style-type: none"> ▪ Analyze in small group/whole class discussion how language in an academic setting links and explains cause and effect relationships: <ul style="list-style-type: none"> ○ El ciclo geológico es el proceso que origina el relieve y estructura de los suelos por la acción de agentes geológicos tanto externos como internos. El origen y evolución de los suelos son el resultado de la erosión y desgaste de rocas y se producen por la acción del aire, el agua y el viento en un tiempo muy prolongado. El desgaste de las rocas es conocido como meteorización y es un ejemplo de un ciclo geológico. La meteorización se refiere a la fragmentación de las rocas las cuales se rompen en pequeños pedazos y gradualmente se van deshaciendo. La meteorización da lugar a la erosión del suelo. (The geological cycle is the process that causes the topography and soil structure to change by the action of geological agents both external and internal. The origin and evolution of soils are the result of erosion and weathering of rocks and is produced by the action of air, water and wind over a prolonged time. The weathering of rocks is known as meteorization and is an example of a geological cycle. Meteorization refers to the fragmentation of the rocks which are broken into small pieces and are gradually undone. Meteorization leads to soil erosion.) ▪ In a mini lesson and small group/whole class conversations, model how relating individuals, events or ideas requires comparing and synthesizing information: <ul style="list-style-type: none"> ○ A nivel mundial, Madagascar es el país que más erosionado se encuentra. Madagascar ha perdido entre el 50 al 90% de sus bosques debido a la tala indiscriminada; mientras que España tiene el mismo título pero a nivel de la Unión Europea. La Cruz Roja Española ha celebrado el "Día Mundial de la Lucha contra la Desertificación y Sequía" para dar a conocer las problemáticas que el aumento del uso del agua también produce en este proceso. Los estudios realizados en Ecuador indican que alrededor del 6% de la zona litoral del Chocó se ha perdido. (Globally, Madagascar is the country that is the most eroded. Madagascar has lost between 50 to 90% of its forests due to logging; while Spain has the same title but at the level of the European Union. The Spanish Red Cross has celebrated the "World Day to Combat Desertification and Drought" to raise awareness of the problems that increased water use also plays in this process. Studies in Ecuador indicate that about 6% of the coastal area of Chocó is lost.) 	<p>The following are some examples in Spanish that may vary based on the home language and content area.</p>

Source: Ciencias. 6to. Ministerio de Educación del Ecuador. Segunda Edición. Feb.2011. p.13-14..



New York State Testing Program

Common Core Assessments

English Language Arts & Mathematics

Changes to New York State Assessments:

As part of the Regents Reform Agenda, New York State has embarked on a comprehensive reform initiative to ensure that schools prepare students with the knowledge and skills they need to succeed in college and in their careers. To realize the goals of this agenda, changes are occurring in standards, curricula, and assessments. These changes are affecting pedagogy and student learning. As a result, New York State is deeply engaged in a revision of the current State assessment program to align to the New York State P-12 Common Core Learning Standards (CCLS).

When will the English Language Arts and Mathematics Assessments Change?:

Beginning with the 2012-13 administration, the assessments in Grades 3 - 8 English Language Arts and Mathematics will measure the CCLS. Similarly, some ELA and Mathematics Regents Exams will be aligned to the CCLS beginning in the 2013-14 school year, and the rest will follow suit in the 2014-15 school year. While content will differ from that of past exams, students should still expect to see a combination of multiple-choice and constructed-response items.

Instructional Shifts and how they will be Reflected in the ELA and Mathematics Assessments:

The CCLS for ELA and Mathematics will require significant changes in instruction. There are 12 instructional shifts that the CCLS requires to ensure that curriculum materials and classroom instruction are truly aligned to the standards.

- In ELA, these shifts will be characterized by an intense focus on complex, grade-appropriate non-fiction and fiction texts that require the application of academic vocabulary and other key college and career readiness skills.
- In mathematics, the CCLS require that educators focus their instruction on fewer, more central standards, thereby providing room to build core understandings and linkages between mathematical concepts and skills.

Educators should focus their instruction around the standards and six key shifts in both ELA and mathematics. Ultimately, each of the six shifts in both subjects will be evident in the new assessments. The following are the ways that instructors can expect the new ELA and mathematics assessments will differ from past assessments through the lens of the six shifts.



New York State Common Core sample questions and test guides can be found at: <http://engageny.org/common-core-assessments>.

Instructional Shifts Reflected in Common Core Assessments

<i>English Language Arts</i>	
Shift 1: Pre-K-5, Balancing Informational & Literary Texts	Passages will be authentic, and will be balanced between informational and literary texts.
Shift 2: 6-12, Knowledge in the Disciplines	Assessments will contain knowledge-based questions about the informational text; students will not need outside knowledge to respond.
Shift 3: Staircase of Complexity	Passage selection will be based on text complexity that is appropriate to grade level per Common Core.
Shift 4: Text-based Answers Shift 5: Writing from Sources	Questions will require students to marshal evidence from the text, including from paired passages.
Shift 6: Academic Vocabulary	Students will be tested directly on the meaning of pivotal, common terms, the definition of which can be discerned from the text. Academic vocabulary will also be tested indirectly through general comprehension of the text.

<i>Mathematics</i>	
Shift 1: Focus	Priority standards will be the focus of the assessments. Other standards will be deemphasized.
Shift 2: Coherence	Assessments will reflect the progression of content and concepts as depicted in the standards across grade levels.
Shift 3: Fluency	It will be assumed that students possess the required fluencies as articulated through grade 8; as such, students will not be allowed to use calculators in grades 3-5. Students will be allowed to use four-function calculators with a square root key or scientific calculators in grade 6 and scientific calculators in grades 7-8.
Shift 4: Deep Understanding	Each standard will be assessed from multiple perspectives, while not veering from the primary target of measurement for the standard.
Shift 5: Application Shift 6: Dual Intensity	Students will be expected to know grade-level mathematical content with fluency and to know which mathematical concepts to employ to solve real-world mathematics problems.

New York State Assessment Transition Plan: ELA and Mathematics

As of October 12, 2012 (Subject to Revision)

Assessment –	2011-12	2012-13	2013-14	2014-15
ELA				
Grades 3-8	Aligned to 2005 Standards	Aligned to the Common Core	Aligned to the Common Core ²	PARCC ¹
Grades 9-10				
Grade 11 Regents	Aligned to 2005 Standards		Regents Exam Aligned to the Common Core ³	Regents Exam Aligned to the Common Core / PARCC ^{1,3}
Math				
Grades 3-8		Aligned to the Common Core		PARCC ¹
Algebra I			Regents Exams Aligned to the Common Core ^{3,4}	Regents Exams Aligned to the Common Core / PARCC ^{1,3,4}
Geometry	Aligned to 2005 Standards			
Algebra II		Aligned to 2005 Standards	Aligned to the 2005 Standards	
Additional State Assessments				
NYSAA ⁵	Aligned to 2005 Standards		Aligned to the Common Core	NCSC ⁶
NYSESLAT	Aligned to 1996 Standards			Aligned to the Common Core

¹ The PARCC assessments are scheduled to be operational in 2014-15 and are subject to adoption by the New York State Board of Regents. The PARCC assessments are still in development. All PARCC assessments will be aligned to the Common Core.

² Funding Pending.

³ The PARCC consortium is developing ELA and mathematics assessments that will cover grades 3-11. New York State will continue to monitor the development of these assessments to determine how the PARCC assessments might intersect with the Regents Exams. Note that all new Regents Exams and PARCC assessments will be implemented starting with the end-of-year administration, rather than the winter or summer administrations.

⁴ The names of New York State's Mathematics Regents Exams are expected to change to reflect the new alignment of these assessments to the Common Core. For additional information about the upper-level mathematics course sequence and related standards, see the "Traditional Pathway" section of Common Core Mathematics Appendix A (<http://engageny.org/news/traditional-course-pathway-for-high-school-mathematics-courses-approved/>).

⁵ This transition plan is specific to the NYSAA in ELA and mathematics.

⁶ New York State is a member of the NCSC national alternate assessment consortium that is engaged in research and development of new alternate assessments for alternate achievement standards. The NCSC assessments are scheduled to be operational in 2014-15 and are subject to adoption by the New York State Board of Regents.



New York State Testing Program

**Test Guides Samples
for
English Language Arts
And
Mathematics**

Test Guides for English Language Arts and Mathematics

In the past, the Department has released one Test Guide in mid-winter, which was focused primarily on test administration. In an effort to provide educators with as much support as possible regarding the instructional and assessment shifts necessitated by the Common Core, the Department has prepared 2013 Test Guides for each subject and grade. The Test Guides integrate important instructional and assessment information into a single document and detail how the CCLS in English Language Arts and Mathematics will be measured on the 2013 tests and supplement the other Common Core implementation resources found on EngageNY.

The Test Guides for English Language Arts and Mathematics will address the following topics for each grade:

- The instructional shifts demanded by ELA and Mathematics CCLS;
- How ELA and Mathematics are conceptualized in the CCLS;
- How the 2013 Common Core ELA and Mathematics Tests differ from previous New York State Tests;
- The 2013 Common Core ELA and Mathematics Test content and design; and
- The new CCLS rubrics for short and extended constructed response questions.

The Grade 3-8 Common Core English Language Arts Test Guides will introduce several changes that differentiate the 2013 CCLS English Language Arts Tests from past New York State Tests. Some of the important changes discussed in the Test Guides include:

- Speaking and Listening will no longer be assessed;
- All text passages will be authentic and worthwhile to read;
- Some text passages may express opinions with which the reader may disagree;
- Text passages may be longer and more rigorous than on past tests;
- ELA Tests will be split into 4 books administered across 3 days;
- Grade 3 and 4 Tests will have a shorter maximum testing time to complete than in previous years; and
- New CCLS rubrics will be used for scoring short and extended response questions.

Test guides for English Language Arts and Mathematics can be found at: <http://engageny.org/resources/test-guides-for-english-language-arts-and-mathematics>.



Test Guides for English Language Arts and Mathematics – cont.

Similarly, the Grade 3-8 Common Core Mathematics Guides will highlight many ways that the 2013 CCLS Mathematics tests will be different from past New York State Mathematics tests. Some of the important changes discussed in the Test Guides include:

- Mathematics Content emphases and Standard-level emphases (e.g. not all standards are recommended to receive the same amount of instructional time);
- Mathematics questions may assess multiple-standards simultaneously;
- Grade 3 and 4 Tests will have a shorter maximum testing time to complete than in the previous years;
- Revised Guidance on Mathematics Tools and Reference Sheets; and
- Calculators will not be allowed in Book 1 of the Grade 6-8 Mathematics Tests. Calculators will be required in Books 2 and 3.

REF

English Language Arts Sample – Test Guide Grade 6

2013 Common Core English Language Arts Tests:

As part of the New York State Board of Regents Reform Agenda, the New York State Education Department (NYSED) has embarked on a comprehensive initiative to ensure that schools prepare students with the knowledge and skills they need to succeed in college and in their careers. To realize the goals of this agenda, changes have occurred in standards, curricula, and assessments. These changes will impact pedagogy and, ultimately, student learning.

The New York State P–12 Common Core Learning Standards (CCLS) for English Language Arts & Literacy call for changes in what is expected from a teacher’s instructional approach. In English Language Arts, these shifts will be characterized by an intense focus on complex, grade appropriate nonfiction and fiction texts that require rigorous textual analysis, the application of academic language, and other key college- and career-readiness skills.

More specifically, the changes around which teachers should expect to focus their instruction will involve six key shifts each in English Language Arts & Literacy. (A more detailed description of these shifts can be found at <http://engageny.org/resource/common-core-shifts/>).

Shifts in English Language Arts & Literacy		
Shift 1	Balancing Informational & Literary Text	Students read a true balance of informational and literary texts.
Shift 2	Knowledge in the Disciplines	Students build knowledge about the world (domains / content areas) primarily through text rather than through the teacher or other activities.
Shift 3	Staircase of Complexity	Students read the central, grade-appropriate text around which instruction is centered. Teachers are patient, and create more time, space, and support in the curriculum for close reading.
Shift 4	Text-based Answers	Students engage in rich and rigorous evidence-based conversations about text.
Shift 5	Writing from Sources	Writing emphasizes use of evidence from sources to inform or make an argument.
Shift 6	Academic Vocabulary	Students continuously build the transferable vocabulary they need to access grade-level complex texts. This can be done effectively by spiraling like content in increasingly complex texts.

The Grades 3–8 English Language Arts and Mathematics New York State Testing Program (NYSTP) has been redesigned to measure student learning aligned with the instructional shifts necessitated by the CCLS. This document provides specific details about the 2013 Grade 5 Common Core English Language Arts Test and the standards that it measures.

English Language Arts Sample – Test Guide Grade 6 - cont.

Common Core Learning Standards for English Language Arts:

The New York State P–12 Common Core Learning Standards for English Language Arts & Literacy define general, cross-disciplinary literacy expectations that must be met for students (Standards) and characteristics of CCLS instruction (“Note on range and content”). The standards are organized into four overlapping strands: Reading, Writing, Language, and Speaking/Listening. In each of these strands the shifts are born out in the specific fluency, comprehension, analytic, and communication expectations stated in the standards. The CCLS present an integrated model of literacy, where standards mutually inform one another and progress fluidly across grades. A successful integration of the standards will provide students with necessary fluency, comprehension, analytic, and communication skills necessary to be on track for college and career readiness.

As detailed in the “Note on range and content,” (found alongside the Grade K-5 Anchor Standards) Common Core teaching and learning have certain distinct characteristics. The characteristics, detailed below by strand, further articulate what New York means by the instructional “Shifts” demanded by these standards. The information below is meant to provide the context and expectations to enable student success and inform teacher practice.

READING

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer insights into the human condition and serve as models for students’ own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among influential U.S. documents, the classics of American literature, and the timeless works from a diverse range of authors. Through wide and deep reading of literature and nonfiction of steadily increasing sophistication, students gain

- a reservoir of literary and cultural knowledge, references, and images (Shift 1: Balancing Informational & Literary Text; Shift 2: Knowledge in the Disciplines; Shift 3: Staircase of Complexity; Shift 6: Academic Vocabulary); and
- the ability to evaluate intricate arguments (Shift 1: Balancing Informational & Literary Text; Shift 2: Knowledge in the Disciplines; Shift 5: Writing from Sources)

WRITING

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To become college- and career-ready writers, students

- must take the task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately (Shift 5: Writing from Sources);
- need to know how to combine elements of different kinds of writing—for example, to use narrative strategies within argument and explanation within narrative—to produce complex and nuanced writing (Shift 4: Text-based Answers; Shift 5: Writing from Sources);
- need to be able to use technology strategically when creating, refining, and collaborating

English Language Arts Sample – Test Guide Grade 6 - cont.

- have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner (Shift 4: Text-based Answers; Shift 5: Writing from Sources); and
- must have the flexibility, concentration, and fluency to produce high-quality, first-draft text under a tight deadline, as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it (Shift 4: Text-based Answers; Shift 5: Writing from Sources).

Language

To become college and career ready, students

- must have firm control over the conventions of standard English;
- must come to appreciate that language is at least as much a matter of craft as of rules and be able to choose words, syntax, **and** punctuation to express themselves and achieve particular functions and rhetorical effects;
- must also have extensive vocabularies built through reading and study, enabling them to comprehend complex texts and **engage** in purposeful writing about and conversations around content (Shift 1: Balancing Informational & Literary Text; Shift 2: Knowledge in the Disciplines);
- need to become skilled in determining or **clarifying** the meaning of words and phrases they encounter, choosing flexibly from an array of strategies to aid them (Shift 6: Academic Vocabulary); and
- must learn to see **an** individual word as part of a **network** of other words—words, for example, **that have similar** denotations but different connotations (Shift 6: Academic Vocabulary).

Speaking and Listening

To become college and career ready, students

- must have ample opportunities to **take** part in a variety of rich, structured conversations—as part of **a whole class**, in small groups, and with a partner—built around important content in **various domains** (Shift 2: Knowledge in the Disciplines); and
- must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or career, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own ideas clearly and persuasively (Shift 4: Text-based Answers).

English Language Arts Sample – Test Guide Grade 6 - cont.**Assessing the CCLS for English Language Arts:**

The 2013 Grade 6 Common Core English Language Arts Test will focus entirely on the Grade 6 CCLS for English Language Arts & Literacy. As such, the assessments will approach reading, writing, and language differently from past assessments.

Reading, Writing, and Language:

The 2013 Grade 6 Common Core English Language Arts Test will assess Reading, Writing, and Language Standards using multiple-choice, short-response, and extended-response questions. All questions will be based on deep reading of informational, literary, or paired texts. All texts will be drawn from authentic, grade-level works that are worthwhile to read. Texts on the 2013 Grade 6 Common Core English Language Arts Test will typically be 750–850 words long. Please see pages 5–7 for further information about authentic texts and text selection.

Reading and Language Standards will be assessed using multiple-choice questions. Short response questions (2-point) will primarily assess reading, **but** will also require writing and command of language. Extended-response questions (4-point) **will** assess Writing from Sources, whereby student responses will be rated on the degree to which they **can communicate** a clear and coherent analysis of one or two texts.

Speaking and Listening:

Speaking and Listening will **NOT** be assessed on the 2013 Grade 6 Common Core English Language Arts Test. With the transition to the CCLS for English Language Arts & Literacy, Standards for Speaking and Listening have changed. Common Core Speaking and Listening Standards focus on group interaction and other classroom-based activities.

While Speaking and Listening Standards will **NOT** be assessed on the state test, they remain two of the most important **components** of college and career **readiness**. In early grades, Speaking and Listening Standards provide the dialogic building blocks that directly support students in acquiring the necessary **skills and knowledge to Read to Learn**. In Grades 6–8, Speaking and Listening Standards (practiced daily in **evidence-based conversations about text**) add to the foundation built in the early grades' instruction **by strengthening and evolving habits, models, and developmental supports** for students so that they **are prepared to write from sources**. Only through rigorous, structured classroom discourse will students **gain valuable experiences** interrogating texts they need in order to meet the rigors of what is required in **writing**. **It is imperative** that teachers continue to instruct and assess the Speaking and Listening Standards in the classroom. Instructional resources and examples of formative assessments for the Speaking and Listening Standards can be found in the Grade 6 curriculum materials located on EngageNY.org.

English Language Arts Sample – Test Guide Grade 6 - cont.

What It Means to Use Authentic Texts:

State testing programs use either commissioned or authentic texts, or a combination, as passages for questions. Commissioned texts are authored by test developers or writers and are developed specifically for use in standardized tests. In contrast, authentic texts are published works that are typically encountered by students in daily life, such as in magazines, books or newspapers. The 2013 Grade 5 Common Core English Language Arts Test will use only authentic texts.

The transition to authentic texts and the CCLS for English Language Arts will mean that the 2013 Common Core English Language Arts Tests will be experienced differently than past state tests. Many of the Common Core Reading for Information Standards require students to recognize how authors support their opinions, to understand the author's point of view and purpose, and to be able to discern well-supported arguments from those that are not. In order to assess these standards on the test, we must include text passages that express opinions and theories with which not all readers may agree. Students must demonstrate their ability to determine point of view, purpose, and success of argumentation with supporting evidence in subjects that they will encounter both in other academic classes and in their daily lives.

The move to using authentic texts allows for the inclusion of works of literature that are worthy of reading outside an assessment context. The use of authentic, meaningful texts may mean that some texts are more emotionally charged or may use language outside of a student's particular cultural experience. While all assessments will include appropriate texts, please be aware that authentic texts will likely prompt real responses—perhaps even strong disagreement—among our students. Students need to be prepared to respond accordingly while engaging with the test. The alternative would be to exclude many authors and texts that are capable of supporting the rigorous analysis called for by the Common Core.

For example, a selection from Mark Twain's *The Adventures of Tom Sawyer* may appear on Common Core tests, although the complete work from which it was drawn may include controversial ideas and language. Likewise, a passage from Richard Wright's *Native Son* may appear on a Common Core test, even though some may find the ideas and incidents present in the rest of the text (that does not appear on the test) to be provocative.

English Language Arts Sample – Test Guide Grade 6 - cont.**Rigorous Texts:**

Both qualitative and quantitative measures are used to determine complexity of the texts. Based on research and the guidance of nationally-recognized literacy experts, the following ranges for quantitative measures were used to guide text selection:

Common Scale for Band Level Text Difficulty Ranges

Common Core Brand	Text Analyzer Tool					
	ATOS	DRP	FK	LEXILE	SR	RM
2 nd – 3 rd	2.75-5.14	45-54	1.98-5.34	420-820	0.05-2.48	3.53-6.13
4 th – 5 th	4.97-7.03	52-60	4.51-7.73	740-1010	0.84-5.75	5.42-7.92
6 th – 8 th	7.00-9.98	57-67	6.51-10.34	925-1185	4.11-10.66	7.04-9.57
9 th – 10 th	9.67-12.01	62-72	8.32-12.12	1050-1335	9.02-13.93	8.41-10.81
11 th – 12 th	11.20-14.10	67-74	10.34-14.20	1185-1385	12.30-14.50	9.57-12.00

Key	
ATOS	ATOS® (Renaissance Learning)
DRP	Degrees of Reading Power® (Questar)
FK	Flesch-Kincaid®
LEXILE	Lexile Framework® (MetaMetrics)
SR	Source Rater© (Educational Testing Service)
RM	Pearson Reading Maturity Metric© (Person Education)

Range of Informational Texts:

One of the major shifts of the CCLS is an emphasis on developing skills for comprehending and analyzing informational texts. The CCLS for English Language Arts calls for a balance of literary and informational texts. This balance is reflected in the standards, instruction, and in the texts selected for the Grade 6 test.

Increased exposure to informational texts better prepares students for what they will encounter in college and the workplace. The array of passages selected for the 2013 tests will assess whether students can comprehend and analyze a range of informational texts.

The 2013 Grade 5 Common Core English Language Arts Test will have questions on a variety of informational texts. Each of these has unique characteristics and can be grouped by general similarities in structure and purpose. The chart below categorizes common informational texts according to their structure. Please note that the chart below is not specific to Grade 6, rather it is meant to help teachers understand the range of informational texts that students may encounter by the end of Grade 8.

English Language Arts Sample – Test Guide Grade 6 - cont.

Expository	Argumentative	Instructional	Narrative
Textbooks (science)	Opinion/Editorial Pieces	Training Manuals	(Auto) Biographies
Textbooks (Humanities)	Speeches (including those from seated politicians)	Contracts	Histories
Reports	Advertisements	User Guides/Manuals	Correspondence
Tourism Guides	Political Propaganda	Legal Documents	Curriculum Vitae
Product Specifications	Journal Articles	Recipes	Memoirs
Product/Service Descriptions	Government Documents	Product/Service Descriptions	News Articles
Magazine Articles	Legal Documents		Essays
Company Profiles	Tourism Guides		Interviews
Legal Documents	Correspondence		Agendas
Agendas	Essays		
Interviews			
Government Documents			
News Articles			

English Language Arts Sample – Test Guide Grade 6 - cont

The 2013 Grade 5 Common Core English Language Arts Test

Testing Sessions and Times:

The 2013 Grade 6 Common Core English Language Arts Test will consist of four books that are administered over three days. **Day 1 will consist of Book 1. Day 2 will consist of Book 2 and Book 3. Day 3 will consist of Book 4.** The 2013 Grade 6 Common Core English Language Arts Test is designed so that most students will complete Day 1 and 2 testing in about 70 minutes and Day 3 testing in about 50 minutes. While it is likely that most students will complete testing within these times, students will be permitted 90 minutes to complete the test each day. This design provides ample time for students who work at different paces. For more information regarding what students may do once they have completed their work, please refer to the section, “When Students Have Completed Their Tests”.

Grade 6 Estimated Time on Task

Book	Day Administered	Estimated Time on Task
1	1	70*
2	2	70*
3		
4	3	50*
Total Estimated Time on Task		190*

* Each Testing Day will be scheduled to allow 90 minutes for completion.

The tests must be administered under standard conditions and the directions must be followed carefully. The same test administration procedures must be used with all students so that valid inferences can be drawn from the test results.

NYSED devotes great attention to the security and integrity of the NYSTP. School administrators and teachers involved in the administration of State Assessments are responsible for understanding and adhering to the instructions set forth in the 2013 School Administrator’s Manual and the Teacher’s Directions. These resources will be found at <http://www.p12.nysed.gov/assessment/ei/eigen.html>.

When Students have Completed Their Tests:

Students who finish their assessment before the allotted time expires should be encouraged to go back and check their work. Once the student checks his or her work, or chooses not to, examination materials should be collected by the proctor. After a student’s assessment materials are collected, that student may be permitted to read silently. This privilege is granted at the discretion of each school. No talking and no other schoolwork is permitted.

For more detailed information about test administration, including proper procedures for talking to students during testing and handling reading materials, please refer to the 2013 School Administrator’s Manual and the Teacher’s Directions.

English Language Arts Sample – Test Guide Grade 6 - cont

Test Design:

The chart below illustrates the test design for the 2013 Grade 6 Common Core English Language Arts Test. This chart details the number of passages and the type(s) of questions in each book. Book 1 and Book 2 of the test consist of multiple-choice questions only. Book 3 and Book 4 consist of short- and extended-response questions.

Also noted is the approximate number of informational and literary passages present on the 2013 test. Please note that embedded field test questions and passages are included in the design. It will not be apparent to students whether a question is an embedded field test question that does not count towards their score or an operational test question that does count towards their score.

	Day 1 Book 1	Day 2 Book 2	Book 3	Day 3 Book 4	Total
Passages	6	3	2	3	14
Multiple Choice Questions	42	21			63
Short Response Questions			3	5	8
Extended Response Questions			1	1	2
	Total Number of Literary Passages				4-7
	Total Number of Informational Passages				7-10

Test Blueprint:

The chart below shows the percentage of points that relate to Reading, Language, and Writing Standards. When reading these charts, it is essential to remember that most questions assess many standards simultaneously. Additionally, Reading Standards are divided by focus (Key Ideas, Craft and Structure, and Integration of Knowledge) to help guide instruction.

Area of Focus		Approximate Percentage of Points
Reading Standards (RL and RI)		100% of points require close reading
Language and Writing Standards		Up to 45% of points require writing and command of language
Approximate Percent of Reading Points		
Key Ideas and Details	Craft and Structure	Integration of Knowledge and Ideas
Up to 60%	Up to 40%	Up to 40%

English Language Arts Sample – Test Guide Grade 6 - cont

It should be noted that Standards RL6.1 and RI6.1 undergird all questions on the tests, as all will require text-based responses. Likewise, Standards RL6.10 and RI6.10 form the heart of all text based CCLS instruction. While not assessed directly in questions, Standards RL6.10 and RI6.10 are present on the test in the form of rigorous, worthwhile texts.

Question Formats:

Multiple Choice

Multiple-choice questions are designed to assess Common Core Reading and Language Standards. They will ask students to analyze different aspects of a given text, including central idea, style elements, character and plot development, and vocabulary. For multiple-choice questions, students will select the correct response from four answer choices.

Multiple-choice questions will assess Reading Standards in a range of ways. Some will ask students to analyze aspects of text or vocabulary. Many questions will require students to combine skills. For example, questions may ask students to identify a segment of text that best supports the central idea. To answer correctly, a student must first comprehend the central idea and then show understanding of how that idea is supported. Questions will require more than rote recall or identification. Students will also be required to negotiate plausible, text-based distractors.¹ Each distractor will require students to meaningfully comprehend what they have read in order to discern the correct response.

Short Response

Short-response questions are designed to assess Common Core Reading and Language Standards. These are single questions in which students will be required to provide textual evidence to support their answer. These questions ask the student to make a claim, take a position, or draw a conclusion, and then provide two pieces of text-based evidence to support her answer.

Sample Two-Credit Question:

What is the main purpose of the 2013 Test Guide? Provide two text-based details to support your answer.

Sample Response: The guide is designed to help teachers prepare students to be assessed on their mastery of the CCLS for ELA. The guide provides an overview of the CCLS for ELA and specific information about how the CCLS for ELA will be assessed, including Test Blueprint and Question Formats

The purpose of the short-response questions is to assess a student's ability to comprehend and analyze text. In responding to these questions, students will be expected to write in complete sentences. Responses should require no more than three complete sentences.

¹ A distractor is an incorrect response that may appear to be a plausible correct response to a student who has not mastered the skill or concept being tested.

English Language Arts Sample – Test Guide Grade 6 - cont

Extended Response

Extended-response questions are designed to assess **Writing from Sources**. They will focus primarily on Common Core Writing Standards. Extended-response questions will require comprehension and analysis of either an individual text or paired texts. Paired texts require students to read and analyze two related texts. Paired texts are related by theme, genre, tone, time period, or other characteristics. Many extended-response questions will ask students to express a position and support it with text-based evidence. For paired texts, students will be expected to synthesize ideas between and draw evidence from both texts. Extended-response questions allow students to demonstrate their ability to **write** a coherent essay using textual evidence to support their ideas.

Student responses will be evaluated based on Common Core Writing Standards and a student's command of evidence to defend his or her point.

New English Language Arts Rubrics:

The 2013 Grade 5 Common Core English Language Arts Test will be scored **using** new rubrics. Both the English Language Arts 2-point and 4-point Rubrics have changed to reflect the new demands called for by the CCLS.

Short-Response (2-Point) Holistic Rubric:

Short-response questions will ask students to make **a claim**, **take** a position, or draw a conclusion, and then support it with details. This structure **forms** the foundation of the CCLS. As such, the 2-point rubric focuses on both the inference and evidence **a** student provides. This structure allows students to have wide latitude in responding to each prompt **so** long as their response is supported by the text.

Additionally, **the** expectation for all short responses will be complete, coherent sentences. By weaving these elements **together** the questions, responses, and scores remain firmly focused on student reading ability.

English Language Arts Sample – Test Guide Grade 6 - cont

(2-Point) Holistic Rubric

Score	Response Features
2 Point	<p>The features of a 2-point response are</p> <ul style="list-style-type: none"> ▪ Valid inferences and/or claims from the text where required by the prompt ▪ Evidence of analysis of the text where required by the prompt ▪ Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt ▪ Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt ▪ Complete sentences where errors do not impact readability
1 Point	<p>The features of a 1-point response are</p> <ul style="list-style-type: none"> ▪ A mostly literal recounting of events or details from the text as required by the prompt ▪ Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt ▪ Incomplete sentences or bullets
0 Point	<p>The features of a 0-point response are</p> <ul style="list-style-type: none"> ▪ A response that does not address any of the requirements of the prompt or is totally inaccurate ▪ No response (blank answer) ▪ A response that is not written in English ▪ A response that is unintelligible or indecipherable

Note-If the prompt requires two texts and the student only references one text, the response can be scored no higher than a 1.

Extended-Response (4-Point) Holistic Rubric:

Within the Common Core, writing does not take place in a vacuum. To be college and career ready, one must be able to write for a purpose using information from textual sources. Extended response questions on the 2013 Common Core English Language Arts Tests will ask students to analyze texts and address meaningful questions using strategic, textual details. Scores for extended responses will be based on four overarching criteria:

- **Content and Analysis**—the extent to which the essay conveys complex ideas and information clearly and accurately in order to support claims in an analysis of topics or texts
- **Command of Evidence**—the extent to which the essay presents evidence from the provided texts to support analysis and reflection
- **Coherence, Organization, and Style**—the extent to which the essay logically organizes complex ideas, concepts, and information using formal style and precise language
- **Control of Conventions**—the extent to which the essay demonstrates command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling

These four characteristics combined make up the focus of the 4-point, extended-response tasks, **Writing from Sources**. Whether in response to an individual text or a paired selection, a student will be asked to synthesize, evaluate, and evidence their thinking in a coherent and legible manner. Please note the new holistic 4-point rubric for Expository Writing in Grade 6–8 on the following page.

English Language Arts Sample – Test Guide Grade 6 – cont.

New York State Grade 6-8 Expository Writing Evaluation Rubric

CRITERIA	CCLS	SCORE			
		4	3	2	1
<p>CONTENT AND ANALYSIS: the extent to which the essay conveys complex ideas and information clearly and accurately in order to support claims in an analysis of topics or texts</p> <p>COMMAND OF EVIDENCE: the extent to which the essay presents evidence from the provided texts to support analysis and reflection</p>	<p>W.2 R.1-9</p>	<p>Essays at this level: —clearly introduce a topic in a manner that is compelling and follows logically from the task and purpose —demonstrate insightful analysis of the text(s)</p>	<p>Essays at this level: —introduce a topic in a manner that follows generally from the task and purpose —demonstrate a literal comprehension of the text(s)</p>	<p>Essays at this level: —introduce a topic in a manner that does not logically follow from the task and purpose —demonstrate little understanding of the text(s)</p>	<p>Essays at this level: —demonstrate a lack of comprehension of the text(s) or task</p>
		<p>—develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples from the text(s) —sustain the use of varied, relevant evidence —exhibit clear organization, with the skillful use of appropriate and varied transitions to create a unified whole and enhance meaning —establish and maintain a formal style, using grade-appropriate, stylistically sophisticated language and domain-specific vocabulary with a notable sense of voice —provide a concluding statement or section that is compelling and follows clearly from the topic and information presented —demonstrate grade-appropriate command of conventions, with few errors</p>	<p>—develop the topic with relevant facts, definitions, details, quotations, or other information and examples from the text(s) —sustain the use of relevant evidence, with some lack of variety —exhibit clear organization, with the use of appropriate transitions to create a unified whole —establish and maintain a formal style using precise language and domain-specific vocabulary —provide a concluding statement or section that follows from the topic and information presented —demonstrate grade-appropriate command of conventions, with occasional errors that do not hinder comprehension</p>	<p>—partially develop the topic of the essay with the use of some textual evidence, some of which may be irrelevant —use relevant evidence inconsistently —exhibit some attempt at organization, with inconsistent use of transitions —establish but fail to maintain a formal style, with inconsistent use of language and domain-specific vocabulary —provide a concluding statement or section that follows generally from the topic and information presented</p>	<p>—demonstrate an attempt to use evidence, but only develop ideas with minimal, occasional evidence which is generally invalid or irrelevant —exhibit little attempt at organization, or attempts to organize are irrelevant to the task —lack a formal style, using language that is imprecise or inappropriate for the text(s) and task —provide a concluding statement or section that is illogical or unrelated to the topic and information presented</p>
<p>COHERENCE, ORGANIZATION, AND STYLE: the extent to which the essay logically organizes complex ideas, concepts, and information using formal style and precise language</p>	<p>W.2 L.3 L.6</p>	<p>—provide a concluding statement or section that is compelling and follows clearly from the topic and information presented —demonstrate grade-appropriate command of conventions, with few errors</p>	<p>—demonstrate emerging command of conventions, with some errors that may hinder comprehension</p>	<p>—demonstrate a lack of command of conventions, with frequent errors that hinder comprehension</p>	<p>—provide minimal, making assessment of conventions unreliable</p>
<p>CONTROL OF CONVENTIONS: the extent to which the essay demonstrates command of the conventions of standard English grammar, usage, capitalization, punctuation, and spelling</p>	<p>W.2 L.1 L.2</p>	<p>—provide a concluding statement or section that is compelling and follows clearly from the topic and information presented —demonstrate grade-appropriate command of conventions, with few errors</p>	<p>—demonstrate emerging command of conventions, with some errors that may hinder comprehension</p>	<p>—demonstrate a lack of command of conventions, with frequent errors that hinder comprehension</p>	<p>—provide minimal, making assessment of conventions unreliable</p>

- If the prompt requires two texts and the student only references one text, the response can be scored no higher than a 2.
- If the student writes only a personal response and makes no reference to the text(s), the response can be scored no higher than a 1.
- Responses totally unrelated to the topic, illegible, incoherent, or blank should be given a 0.
- A response totally copied from the text(s) with no original student writing should be scored a 0.

Mathematics Sample – Test Guide Grade 8

2013 Common Core Mathematics Tests:

As part of the New York State Board of Regents Reform Agenda, the New York State Education Department (NYSED) has embarked on a comprehensive reform initiative to ensure that schools prepare students with the knowledge and skills they need to succeed in college and in their careers. To realize the goals of this initiative, changes have occurred in standards, curricula, and assessments. These changes will impact pedagogy and, ultimately, student learning.

The Common Core Learning Standards (CCLS) call for changes in what is expected from a teacher's instructional approach. In mathematics courses, the CCLS demand that teachers focus their instruction on fewer, more central standards (<http://engageny.org/resource/math-content-emphases/>), thereby providing room to build core understandings and connections between mathematical concepts and skills.

More specifically, the CCLS demand six key shifts in instruction in mathematics, summarized in the chart below. A more detailed description of these shifts can be found at <http://engageny.org/resource/commoncore-shifts/>

Shifts in Mathematics		
Shift 1	Focus	Teachers significantly narrow and deepen the scope of how time and energy is spent in the math classroom. They do so in order to focus deeply on only the concepts that are prioritized in the standards.
Shift 2	Coherence	Principals and teachers carefully connect the learning within and across grades so that students can add new understanding onto foundations built in previous years.
Shift 3	Fluency	Students are expected to have speed and accuracy with simple calculations; teachers structure class time and/or homework time for students to memorize core functions.
Shift 4	Deep Understanding	Students deeply understand and can operate easily within a math concept before moving on. They learn more than the procedure to get the answer right. They learn the math.
Shift 5	Application	Students are expected to use math and choose the appropriate concept for application even when they are not prompted to do so.
Shift 6	Dual Intensity	Students are practicing procedures and understanding concepts. There is more than a balance between these two things in the classroom—both are occurring with intensity

The Grades 3–8 English Language Arts and Mathematics New York State Testing Program (NYSTP) has been redesigned to measure student learning aligned with the instructional shifts necessitated by the CCLS. This document provides specific details about the 2013 Grade 4 Common Core Mathematics Test and the standards that it measures.

Mathematics Sample – Test Guide Grade 8 – cont.**Common Core Learning Standards for Mathematics:**

In Grade 8, the CCLS focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; and (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

1. Students use linear equations and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize equations for proportions ($y/x = m$ or $y = mx$) as special linear equations ($y = mx + b$), understanding that the constant of proportionality (m) is the slope, and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x -coordinate changes by an amount A , the output or y -coordinate changes by the amount $m \cdot A$. Students also use a linear equation to describe the association between two quantities in bivariate data (such as arm span vs. height for students in a classroom). At this grade, fitting the model and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question and to interpret components of the relationship (such as slope and y -intercept) in terms of the situation.

Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

2. Students grasp the concept of a function as a rule that assigns to each input exactly one output. They understand that functions describe situations where one quantity determines another. They can translate among representations and partial representations of functions (noting that tabular and graphical representations may be partial representations), and they describe how aspects of the function are reflected in the different representations.
3. Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two dimensional figures and to solve problems. Students show that the sum of the angles in a triangle is the angle formed by a straight line, and that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem holds, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons. Students complete their work on volume by solving problems involving cones, cylinders, and spheres.

Mathematics Sample – Test Guide Grade 8 – cont.

Clusters, Standards, and Sequencing in Instruction and Assessment:

The 2013 Grade 4 Common Core Mathematics Test will focus entirely on the Grade 8 New York State CCLS for Mathematics. As such, the test will be designed differently than in the past.

The CCLS for Mathematics are divided into *standards, clusters, and domains*.

- *Standards* define what students should understand and be able to do. In some cases, standards are further articulated into lettered components.
- *Clusters* are groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject.
- *Domains* are larger groups of related clusters and standards. Standards from different domains may be closely related.

Content Emphases:

The CCLS for Mathematics were designed with the understanding that not all clusters should be emphasized equally in instruction or assessment. Some clusters require greater emphasis than the others based on the time that they take to master and/or their importance to future mathematics or the demands of college and career readiness. The Grade 8 CCLS are divided into *Major Clusters, Supporting Clusters, and Additional Clusters*. The *Major Clusters* are the intended instructional focus at Grade 8 and will account for the majority of math test questions. The *Supporting Clusters* and *Additional Clusters* are Mathematics Standards that serve to both introduce and reinforce Major Clusters. The chart below details the recommended instructional focus and the percentage of test questions that assess the *Major, Supporting, and Additional Clusters*:

Cluster Emphases for Instruction and the 2013 Grade 8 Common Core Mathematics Test

Cluster Emphasis	Recommended Instructional Time	Approximate Number of Test Points
Major	65-75%	70-80%
Supporting	15-25%	10-20%
Additional	5-15%	5-10%

Emphasized Standards:

The CCLS for Mathematics were also designed with the understanding teachers would emphasize standards that best facilitate mastery of the most important grade-level mathematics and best position students for mastery of future mathematics. Similar to the cluster emphases, not all standards should receive similar emphasis. Within each of the clusters and domains, certain standards require more instructional and assessment emphasis.

Mathematics Sample – Test Guide Grade 8 – cont.

One example of a standard needing greater emphasis is 8.F.4, “Construct a function to model a linear relationship between two quantities...” In order for a student to construct functions to model a linear relationship between two quantities, it is necessary that they first understand what a function is and be able to define, evaluate, and compare functions. Standards 8.F.1 (“Understand that a function is a rule...”) and 8.F.2 (“Compare properties of two functions...”) form the foundational understandings that move students toward standard 8.F.4. Ultimately, standards 8.F.1 and 8.F.2 serve as necessary steps to reach the grand understanding represented by 8.F.4.

An emphasis on the most critical clusters and standards allows **depth** and focus in learning, which is carried out through the Standards for Mathematical Practice. **Without** such depth and focus, attention to the Standards for Mathematical Practice would be **unrealistic**.

Sequencing:

The August 2012 memorandum Grades 3–8 Mathematics Testing Program Guidance: September-to-April / May-to-June Common Core Learning Standards provides guidance on aligning standards to each time period. Standards designated as September-to-April will be assessed on the 2013 Grade 4 Common Core Mathematics Test. Several standards designated as Major Clusters are included in the May-to-June instructional period. Placing these standards in the May-to-June instructional period provides more coherent September-to-April content blocks and allows for more logical sequencing for standards that closely relate to the Major Clusters of the following year. Starting with the April 2013 administration, most test questions will target more than one standard. Some questions will assess an entire cluster. As such, many individual test questions will assess Grade 8 September-to-April standards in conjunction with standards from past grades.

One of the ways the CCLS are changing instructional practices and our assessment design is through the spiraling of mathematic concepts within and across grade levels. This means that when a student has mastered a particular standard, that student has also inherently mastered the related standards that came before. It is our recommendation, therefore, that all teachers pay close attention to student mastery of May-to-June standards so that student learning can begin promptly and efficiently the following year.

For more information about the Grades 3–8 Mathematics Testing Program Guidance: September-to-April / May-to-June Common Core Learning Standards, please refer to <http://www.p12.nysed.gov/assessment/math/math-ei.html>.

Emphases and Sequencing:

The chart below illustrates the different clusters and standards recommended for instructional emphasis. Standards that are recommended for greater emphasis are indicated with a check mark while those that are recommended for instruction after the administration of the 2013 Grade 4 Common Core Mathematics Test are indicated by the word “Post.” ***The instructional emphasis recommended in the chart below is mirrored in the Grade 8 test design, whereby clusters and standards that are recommended for greater emphasis will be assessed in greater number. Standards recommended for greater emphasis that are designated for instruction after the administration of the 2013 Grade 8 Common Core Mathematics Test, while not tested, will be fundamental in ensuring that students are prepared for Grade 9 instruction.***

Mathematics Sample – Test Guide Grade 8 – cont.

Cluster Emphasis	Domain	Cluster	Standard
Major Clusters	Expressions and Equations	Work with radicals and integer exponents.	8.EE.1
			8.EE.2 Post
		Understand the connections between proportional relationships, lines, and linear equations. Analyze and solve linear equations and pairs of simultaneous linear equations.	8.EE.3
			8.EE.4
			8.EE.5 √
			8.EE.6
			8.EE.7
			8.EE.8 √
	Function	Define, evaluate, and compare functions.	8.F.1
			8.F.2
8.F.3			
Geometry	Understand and apply the Pythagorean Theorem.	8.G.6 √ Post	
		8.G.7 √ Post	
		8.G.8 √ Post	
	Understand congruence and similarity using physical models, transparencies, or geometry software.	8.G.1	
		8.G.2	
		8.G.3	
		8.G.4	
8.G.5			
Supporting Clusters	Number System	Know that there are numbers that are not rational, and approximate them by rational numbers.	8.NS.12 Post 8.NS.22 Post
	Functions	Use functions to model relationships between quantities.	8.F.4 √
			8.F.5
	Statistics and Probability	Investigate patterns of association in bivariate data.	8.SP.1
			8.SP.2
			8.SP.3
8.SP.4			
Additional Clusters	Geometry	Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	8.G.9

√ = Standards recommended for greater emphasis

Post = Standards recommended for instruction in May-June

Mathematics Sample – Test Guide Grade 8 – cont.

The 2013 Grade 4 Common Core Mathematics Test

Testing Sessions and Times:

The 2013 Grade 8 Common Core Mathematics Test will consist of **three books** that are administered over **three successive days**, one book per day. The 2013 Grade 8 Common Core Mathematics Test is designed so that most students will complete Book 1 and Book 2 in approximately 50 minutes each and Book 3 in about 70 minutes. While it is likely that most students will complete each book sooner, students are permitted 90 minutes complete each book. This design provides ample time for students who **work** at different paces. For more information regarding what students may do once they have completed their work, please refer to the section, “When Students Have Completed Their Tests.”

Grade 4 Estimated Time on Task

Book	Day Administered	Estimated Time on Task
1	1	50*
2	2	50*
3	3	70**
Total Estimated Time on Task		190*

* Each Testing Day will be scheduled to allow 90 minutes for completion.

The tests must be administered under **standard conditions** and the directions must be followed carefully. The same test administration **procedures must** be used with all students so that valid inferences can be drawn from the test results.

NYSED devotes great attention to the security and integrity of the NYSTP. School administrators and teachers involved in the administration of State Assessments are responsible for understanding and adhering to the instructions set forth in the 2013 School Administrator’s Manual and the Teacher’s Directions. These resources will be posted at <http://www.p12.nysed.gov/assessment/ei/eigen.html>.

When Students Have Completed Their Tests

Students who finish their assessment before the allotted time expires should be encouraged to go back and check their work. Once the student checks his or her work, or chooses not to, examination materials should be collected by the proctor. After a student’s assessment materials are collected, that student may be permitted to read silently. This privilege is granted at the discretion of each school. No talking is permitted and no other schoolwork is permitted.

Test Design:

In Grade 8, students are required to apply mathematical understandings and mathematical practices gained in the classroom in order to answer three types of questions: multiple-choice, short-response, and extended-response. Book 1 and Book 2 will consist of multiple-choice questions. Book 3 consists of short- and extended-response questions. Students will **NOT** be permitted to use calculators on Book 1. For Book 2 and Book 3, students **must have the exclusive use of a Scientific Calculator**.

Mathematics Sample – Test Guide Grade 8 – cont.

The chart below provides a description of the 2013 Grade 8 Test Design. Please note that the number of multiple-choice questions in Book 1 and in Book 2 includes embedded field test questions. It will not be apparent to students whether a question is an embedded field test question that does not count towards their score or an operational test question that does count towards their score.

Grade 8 Test Design

Book	Number of Multiple Choice Questions	Number of Short Response Questions	Number of Extended Response Questions	Total Number of Questions
1	34	0	0	34
2	34	0	0	34
3	0	6	4	10
Total	68	6	4	78

2013 Grade 4 Common Core Mathematics Test Blueprint:

All questions on the 2013 Grade 4 Common Core Mathematics Test measure the CCLS for Mathematics. The test was designed around the Content Emphases. As such, questions that assess the Major Clusters make up the majority of the test. Additionally, standards recommended for more emphasis within clusters are assessed with greater frequency.

While all questions are linked to a primary standard, many questions measure more than one standard and one or more of the Standards for Mathematical Practices. Similarly, some questions measure cluster-level understandings. As a result of the alignment to standards, clusters, and the Standards for Mathematical Practice, the tests assess students' conceptual understanding, procedural fluency, and problem-solving abilities, rather than assessing their knowledge of isolated skills and facts.

The charts below illustrate the domain-level and cluster-level test blueprint.

Domain-Level Test Blueprint –Percent of Test Points on Grade 8 Test				
The Number System	Expressions and Equations	Functions	Geometry	Statistics and Probability
0%	40-45%	20-25%	25-30%	10-15%

Cluster-Emphasis Test Blueprint –Percent of Test Points on Grade 8 Test		
Major Clusters	Supporting Clusters	Additional Clusters
70-80%	10-20%	5-10%

Mathematics Sample – Test Guide Grade 8 – cont.**Question Formats:**

The 2013 Grade 8 Common Core Mathematics Test contains multiple-choice, short-response (2-Point), and extended-response (3-Point) questions. For multiple-choice questions, students select the correct response from four answer choices. For short- and extended-response questions, students write an answer to an open-ended question and may be required to show their work. In some cases, they may be required to explain, in words, how they arrived at their answers.

Multiple Choice Questions:

Multiple-choice questions are designed to assess CCLS for Mathematics. Mathematics multiple choice questions will mainly be used to assess standard algorithms and conceptual standards. Multiple-choice questions incorporate both Standards and Standards for Mathematical Practices, some in real-world applications. Many multiple-choice questions require students to complete multiple steps. Likewise, many of these questions are linked to more than one standard, drawing on the simultaneous application of multiple skills and concepts. Within answer choices, distractors¹ will all be based on plausible missteps.

Short-Response Questions:

Short-response questions are similar to past 2-Point questions, requiring students to complete a task and show their work. Like multiple-choice questions, short-response questions will often require multiple steps, the application of multiple mathematics skills, and real-world applications. Many of the short-response questions will cover conceptual and application standards.

Extended-Response Questions:

Extended-response questions are similar to past 3-Point questions, asking students to show their work in completing two or more tasks or one more extensive problem. Extended-response questions allow students to show their understanding of mathematical procedures, conceptual understanding, and application. Extended-response questions may also assess student reasoning and the ability to critique the arguments of others.

Sample Questions for the Grade 8 Common Core Mathematics Tests are available at <http://www.p12.nysed.gov/assessment/common-core-sample-questions/>

¹ A distractor is an incorrect response that may appear to be a plausible correct response to a student who has not mastered the skill or concept being tested.

Mathematics Sample – Test Guide Grade 8 – cont.**New Mathematics Rubrics and Scoring Policies:**

The 2013 Grade 4 Common Core Mathematics Test will use new rubrics and scoring policies. Both the Mathematics 2-point and 3-point Rubrics have changed to reflect the new demands called for by the CCLS. Similarly, new scoring policies have been adopted to address CCLS Mathematics Standards. The new Mathematics rubrics are as follows:

(2-Point) Holistic Rubric

Score	Response Features
2 Point	<p>A 2-point response answers the questions correctly.</p> <p>This response</p> <ul style="list-style-type: none"> ▪ demonstrates a thorough understanding of the mathematical concepts, but may contain errors that do not detract from the demonstration of understanding ▪ indicates that the student has completed the task correctly using mathematically sound procedures
1 Point	<p>A 1-point response is only partially correct.</p> <p>This response</p> <ul style="list-style-type: none"> ▪ indicates that the student has demonstrated only a partial understanding of the mathematical concepts and/or procedures in the task ▪ correctly addresses some elements of the task ▪ may contain an incorrect solution but applies a mathematically appropriate process ▪ may contain correct numerical answer(s) but required work is not provided
0 Point	<p>A 0-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

2-Point Scoring Policies:

- Scoring Policies provided for past New York State Tests will NOT apply to the 2013 Common Core Mathematics Tests.
- New Scoring Policies are provided on page ??? 357.

Mathematics Sample – Test Guide Grade 8 – cont.**(3-Point) Holistic Rubric**

Score	Response Features
3 Point	<p>A 3-point response answers the questions correctly.</p> <p>This response</p> <ul style="list-style-type: none"> ▪ demonstrates a thorough understanding of the mathematical concepts but may contain errors that do not detract from the demonstration of understanding ▪ indicates that the student has completed the task correctly, using mathematically sound procedures
2 Point	<p>A 2-point response is only partially correct.</p> <p>This response</p> <ul style="list-style-type: none"> ▪ demonstrates partial understanding of the mathematical concepts and/or procedures embodied in the task ▪ addresses most aspects of the task, using mathematically sound procedures ▪ may contain an incorrect solution but provides complete procedures, reasoning, and/or explanations ▪ may reflect some misunderstanding of the underlying mathematical concepts and/or procedures
1 Point	<p>A 1-point response is incomplete and exhibits many flaws but is not completely incorrect.</p> <p>This response</p> <ul style="list-style-type: none"> ▪ demonstrates only a limited understanding of the mathematical concepts and/or procedures embodied in the task ▪ may address some elements of the task correctly but reaches an inadequate solution and/or provides reasoning that is faulty or incomplete ▪ exhibits multiple flaws related to misunderstanding of important aspects of the task, misuse of mathematical procedures, or faulty mathematical reasoning ▪ reflects a lack of essential understanding of the underlying mathematical concepts ▪ may contain correct numerical answer(s) but required work is not provided
0 Point	<p>A 0-point response is incorrect, irrelevant, incoherent, or contains a correct response arrived at using an obviously incorrect procedure. Although some parts may contain correct mathematical procedures, holistically they are not sufficient to demonstrate even a limited understanding of the mathematical concepts embodied in the task.</p>

3-Point Scoring Policies:

- Scoring Policies provided for past New York State Tests will NOT apply to the 2013 Common Core Mathematics Tests.
- New Scoring Policies are provided on the next page

Mathematics Sample – Test Guide Grade 8 – cont.**2013 2- and 3-Point Mathematics Scoring Policies:**

Below are the policies to be followed while scoring the mathematics tests for all grades:

1. If a student does the work in other than a designated “Show your work” area, that work should still be scored. (Additional paper is an allowable accommodation for a student with disabilities if indicated on the student’s Individual Education Program or Section 504 Accommodation Plan.)
2. If the question requires students to show their work, and the student shows appropriate work and clearly identifies a correct answer but fails to write that answer in the answer blank, the student should still receive full credit.
3. If the question requires students to show their work, and the student shows appropriate work and arrives at the correct answer but writes an incorrect answer in the answer blank, the student should **not** receive full credit.
4. In questions that provide ruled lines for students to write an explanation of their work, mathematical work shown elsewhere on the page should be considered and scored.
5. If the student provides one legible response (and one response only), teachers should score the response, even if it has been crossed out.
6. If the student has written more than one response but has crossed some out, teachers should score only the response that has **not** been crossed out.
7. Trial-and-error responses are **not** subject to Scoring Policy #6 above, since crossing out is part of the trial-and-error process.
8. If a response shows repeated occurrences of the same conceptual error within a question, the student should not be penalized more than once.
9. In questions that require students to provide bar graphs,
 - in Grades 3 and 4 only, touching bars are acceptable
 - in Grades 3 and 4 only, space between bars does not need to be uniform
 - in all grades, widths of the bars must be consistent
 - in all grades, bars must be aligned with their labels
 - in all grades, scales must begin at 0, but the 0 does not need to be written
10. In questions requiring number sentences, the number sentences must be written horizontally.
11. In pictographs, the student is permitted to use a symbol other than the one in the key, provided that the symbol is used consistently in the pictograph; the student does not need to change the symbol in the key. The student may **not**, however, use multiple symbols within the chart, nor may the student change the value of the symbol in the key.
12. If students are not directed to show work, any work shown will not be scored. This applies to items that do not ask for any work and items that ask for work for one part and do not ask for work in another part.

Mathematics Sample – Test Guide Grade 8 – cont.**Mathematics Tools:*****Why Mathematics Tools?***

These provisions are necessary for students to meet Standard for Mathematical Practice Five found throughout the New York State P–12 Common Core Learning Standards for Mathematics:

Use appropriate tools strategically

Mathematically proficient students consider the available tools when solving a mathematical problem. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Rulers and Protractors - Students in Grade 4 must have a ruler and a protractor for their exclusive use for all sessions of the test. Students with disabilities may use adapted rulers and protractors if this is indicated as a testing accommodation on the student's Individualized Education Program or Section 504 Accommodation Plan.

Note: Schools are responsible for supplying the appropriate tools for use with the Grade 4 Mathematics Test. NYSED does not provide them.

Calculators - Students in Grade 8 are **NOT** permitted to use calculators with Book 1. For Book 2 and for Book 3 students must have the exclusive **use of a Scientific Calculator**. Graphing calculators are **NOT** permitted.

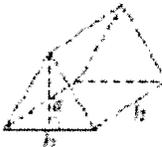
Value of Pi - Students should learn that π is an irrational number. For the short-response and extended response questions in Grade 8 (Book 3), the π key and the full display of the calculator should be used in computations. The approximate values of π , such as 3.1416, 3.14, or $\frac{22}{7}$, are unacceptable.

Reference Sheet – a detachable reference sheet will be included in each of the three test books. For grade 8, the reference sheet will look as follows on the next page:

Mathematics Sample – Test Guide Grade 8 – cont.

Grade 8 Mathematics Reference Sheet

FORMULAS

	Circle	Area = πr^2 Circumference = $2\pi r$
	Triangle	Area = $\frac{1}{2}bh$
	Parallelogram	Area = bh
	Trapezoid	Area = $\frac{1}{2}h(b_1 + b_2)$
	Right Circular Cylinder	Volume = πr^2h Volume = Sh Surface Area = $2\pi rh + 2\pi r^2$
	Right Rectangular Prism	Volume = lwh Volume = Bl
	Right Triangular Prism	Volume = $\frac{1}{2}abh$ Volume = Bl
	Right Circular Cone	Volume = $\frac{1}{3}Bh$ Volume = $\frac{1}{3}\pi r^2h$

CONVERSIONS

- | | |
|---|-----------------------------|
| 1 centimeter = 10 millimeters | 1 cup = 8 fluid ounces |
| 1 meter = 100 centimeters = 1,000 millimeters | 1 pint = 2 cups |
| 1 kilometer = 1,000 meters | 1 quart = 2 pints |
| 1 gram = 1,000 milligrams | 1 gallon = 4 quarts |
| 1 kilogram = 1,000 grams | 1 liter = 1,000 milliliters |
| 1 pound = 16 ounces | 1 kiloliter = 1,000 liters |
| 1 ton = 2,000 pounds | 1 mile = 5,280 feet |
| | 1 mile = 1,760 yards |



New York State Testing Program

English Language Arts Common Core Sample Questions Grade 6

Common Core Sample Questions ELA Grade 6**The Horse of Wood***by Alfred J. Church*

The Greeks **besieged** the city of Troy for nearly ten years. They could not take it because the walls were so high and strong—some said that they had been built by the hands of gods—but they kept the Trojans inside. This had not always been so. There had been a time when the Trojans had gone out and fought with their enemies on the plain, sometimes they had beaten them in battle, and once they had very nearly burnt their ships. But this was all changed. They had lost some of the bravest of their chiefs, such as Hector, the best of the sons of Priam, and Paris the great archer, and many great princes, who had come from the countries round about to help them.

We can easily believe then that Priam, King of Troy, and his people were very glad to hear that one day the Greeks had gone home. Two Trojans, who had left the city two weeks or so before on a message from King Priam to one of his allies, came back saying that they had gone to the camp of the Greeks and had found it empty, and that there were no ships to be seen. Everyone who was not ill or too old to move about made all the **haste** they could to get out of the city. The gates were opened wide for the first time during ten years, and men, women, and children hurried out to see the plain where so many battles had been fought, and the camp in which the enemy had lived, and the place where the ships had been dragged up on the shore. As you may suppose, those who had fought in the battles had a great deal to say about what they had done and what they had seen. There were many things to see, but the strangest one of all was a great Horse of Wood, which was standing not far from the walls of the city. No one was quite sure what it was, or what it meant. One man said: "It is a very curious thing. Let us drag it into the city that it may be a monument of all that we have suffered for the last ten years." Others said: "Not so; we had better burn it, or drag it down to the sea that the water may cover it, or cut it open to see whether there is anything inside." Of these no one was more vehement than Laocoön, priest of Neptune. "Take heed what you do, men of Troy," he cried. "Who knows whether the Greeks have really gone away? It may be that there are armed men inside this Horse; it may be that it has been made so big to overtop the walls of the city. Anyhow I am afraid of these Greeks, even when they give us gifts." And as he spoke, he threw the spear which he had in his hand at the Horse of Wood, and struck it on the side. A great rattling sound was heard, and the Trojans, if they had not been very blind and foolish, might have known that there was something wrong.

While the dispute was going on, some shepherds came up, bringing with them a man whose hands were bound behind his back. He had come out from a hiding-place, they said, of his own **accord**, when they were in the field. The young Trojans crowded round him, and began to mock at him, but he cried out in a very piteous voice: "What shall I do? Where shall I go? The Greeks will not let me live, and the Trojans cry out for vengeance upon me." Then they began to pity him, and they **bade** him say who he was and what he had to tell.

Common Core Sample Questions ELA Grade 6 – cont.

Then King Priam had pity on him and bade them unbind his hands, saying: "Forget your own people; from to-day you are one of us. But tell us now, why did the Greeks make this great Horse of Wood that we see?"

- 45 Then Sinon lifted up his hands to the sky and said: "O sun and moon and stars, I call you to witness that I have a good right to tell the secrets of my countrymen. Listen, O King. From the beginning, when the Greeks first came to this place, their hope has been in the help of Minerva. But she was angry with them for this cause. Ulysses and Diomed made their way into your city, and climbed into the **citadel**, and
- 50 killed the guards. And then with hands all bloody from the slaughter, they laid hold of her image and carried it away. It was this that made the goddess angry, that they should dare to touch her with hands stained with blood. I saw with my own eyes how the eyes of the image, when these two brought it into the camp, flashed with anger, and how the drops of sweat stood upon it; yes, and how it leapt three times
- 55 from the ground, shaking shield and spear. Then the prophet said: 'You must go back to Greece, and come again, and begin the war again, if you wish to take the city of Troy'—and this they are doing now; they have gone back to Greece, and they will soon return. Furthermore, he said: 'You must make a Horse of Wood to be a peace-offering to Minerva. Make it, I advise you, very great, so that the Trojans may not
- 60 take it within their walls. For, if they do so take it, then you will never conquer their city. Nay, they will come to our own land, and lay **siege** to our cities, and our children will suffer the things which we have sought to bring on them. But if they hurt the thing, then they themselves shall perish.' "

- Then they all cried out together that the Horse of Wood should be drawn into
- 65 the citadel. So they opened the great gate of the city, pulling down part of the wall that there might be more room, and they put rollers under the feet of the Horse, and they fastened ropes to it. Then they drew it into the city, boys and girls laying hold of the ropes, and singing songs with great joy. And everyone thought it a great thing if he could put his hand to a rope. But there were not wanting signs of evil to come.
- 70 Four times did the Horse halt as they dragged it, before it passed through the gate, and each time there might have been heard a great clashing of arms within. Also Cassandra opened her mouth, and that she should speak the truth and not be believed. So the Trojans drew the Horse of Wood into the city. That night they kept a feast to the gods with great joy, not knowing that the end of their city was now close
- 75 at hand.

The Aeneid for Boys and Girls
www.mainlesson.com

Words that could be defined for students are in bold.

Common Core Sample Questions ELA Grade 6 – cont.

1 According to lines 1 through 9, what was one problem with Troy's defense against the Greeks?

- A They had lost many of the bravest chiefs.
- B They had not tested the strategy for very long.
- C They were not able to leave their city.
- D They could not keep the Greeks out of Troy.

Key: C

Aligned CCLS: RL.6.1; additional standards may be added after further development.

Commentary: The question aligns to CCLS RL.6.1 because it asks students to identify textual evidence to support what the text says explicitly as well as inferences drawn from the text.

Rationale: Option C is correct. The fortified walls that surround Troy and keep the Greeks at bay provide the context that sets up the story.

2 How does Laocoön's opinion differ from those of other Trojans?

- A He thinks they should keep the horse.
- B He thinks they should not trust the Greeks.
- C He thinks the Greeks have gone away for good.
- D He thinks the horse is a gift from the Greeks.

Key: B

Aligned CCLS: RL.6.1; additional standards may be added after further development.

Commentary: The question aligns to CCLS RL.6.1 because it asks students to identify evidence about what is specifically stated in the text.

Rationale: Option B is correct. Laocoön warns the Trojans that men may be inside the horse and says that he is afraid of the Greeks even when they give gifts.

Common Core Sample Questions ELA Grade 6 – cont.

3 As used in line 35 of the passage, the word *dispute* most closely means

- A search
- B disruption
- C work
- D argument

Key: D

Aligned CCLS: RL.6.4

Commentary: The question aligns to CCLS RL.6.4 because it asks students to determine the meaning of a word from the story.

Rationale: Option D is correct. Based on the context, the word “dispute” is synonymous with “argument.”

4 How did Sinon’s speech influence the Trojans?

- A It made them ignore the help of Minerva.
- B It convinced them to give the horse back to the Greeks.
- C It persuaded them to take the horse into the city.
- D It made them angry with him.

Key: C

Aligned CCLS: RL.6.3

Commentary: The question aligns to CCLS RL.6.3 because it asks students to explain how scenes unfold and influence future events.

Rationale: Option C is correct. Sinon’s speech about the Greeks, Minerva, and the horse convinces the Trojans to take the horse inside the city walls.

Common Core Sample Questions ELA Grade 6 – cont.

Which line or lines illustrate knowledge the narrator has that the characters in the story do not?

- A “There had been a time when the Trojans had gone out and fought with their enemies on the plain.” (lines 4 and 5)
- B “We can easily believe then that Priam, King of Troy, and his people were very glad to hear that one day the Greeks had gone home.” (lines 10 and 11)
- C “No one was quite sure what it [the horse] was, or what it meant.” (line 22)
- D “A great rattling sound was heard, and the Trojans, if they had not been very blind and foolish, might have known that there was something wrong.” (lines 32 through 34)

Key: D

Aligned CCLS: RL.6.6

Commentary: The question aligns to CCLS RL.6.6 because it asks students to explain how the narrator’s perspective differs from that of the participants and affects the way the story is told. In doing so, the student must negotiate the various points of view at play in the text.

Rationale: Option D is correct. These lines illustrate that the narrator knows the horse will be dangerous for Troy, while the Trojans are unaware.

Common Core Sample Questions ELA Grade 6 – cont.***The Lionfish Invasion!***

*What is as graceful and beautiful as a butterfly,
as **ferocious** as the most dangerous predator,
and delivers a painful sting with its poisonous spines?*

It is the lionfish, a fish from the coral reefs in the tropical waters of the South Pacific and Indian Oceans. But you don't have to travel halfway around the world to see a lionfish.

Perhaps you have seen one in a friend's home aquarium?

5 Lionfish are popular saltwater aquarium fish all over the world, but especially in the United States. Nowadays, they also live in Atlantic waters off the East Coast of the United States. These lionfish are what scientists call an invasive species or an "alien invader."

Lionfish invade U.S. waters

10 Local divers off the coast of North Carolina were not expecting to see what they found one day in August 2002—they spotted the exotic and beautiful lionfish, common to the warm waters of the western Pacific, but unknown at that time as residents of the Carolina coast. They provided the first solid evidence that lionfish were in the Atlantic—an actual specimen that they collected there. A year later, scientists had documented 19 lionfish sightings at eight locations along the North Carolina continental shelf. By then, lionfish were also being observed off the coasts of Florida, Georgia, and South Carolina.
15 **Juvenile** lionfish were also showing up off of Bermuda, about 650 miles away from the North Carolina coast, and even as far north as Long Island, New York! Since then, many more United States divers have reported sightings of the distinctive fish. Between 2000 and 2003, lionfish sightings were reported at 16 different shipwrecks and natural hard bottom locations. During a summer 2004 research expedition, NOAA scientists collected 155
20 lionfish at 19 different locations off the North Carolina coast alone. The jump in numbers and distributions over such a short time, plus sightings of juveniles smaller than those sold for aquaria, strongly indicates that the lionfish is reproducing in the Atlantic Ocean. If this is true, it's the first time that a western Pacific fish has populated the U.S. Atlantic coast.

Common Core Sample Questions ELA Grade 6 – cont.

25 **How did the lionfish get into the Atlantic Ocean?**

Lionfish are a popular **ornamental** aquarium fish that were likely released on purpose when people no longer want them as aquarium pets! The swift and warm Gulf Stream, which likely transported buoyant lionfish eggs and larvae from Florida northward, helped the lionfish's Atlantic journey.

30 It's pretty unusual for non-native, tropical marine fishes, like the lionfish, to establish themselves at this latitude. In Florida waters and along the continental shelf near the Gulf Stream the temperatures are very similar to the lionfish's native waters.

35 However, from north Florida upward, the waters along the coastline are too cold in the winter for lionfish to survive. Scientists expect them to survive the winter only at water depths greater than 120 ft because this is where the Gulf Stream has influence all year long. Very importantly, the types of predators and competitors present in the marine community in the Atlantic are very different from the native range of the lionfish. Generally, species like the lionfish have not been perceived to pose a significant threat to marine ecosystems because they were not likely to survive
40 long.



Text and Photos NOAA.
<http://oceanservice.noaa.gov>

Words that could be defined for students are in bold.

Common Core Sample Questions ELA Grade 6 – cont.

- 6** Which statement best reflects the central idea of the article?
- A** In 2002, divers looking for other species of fish discovered the lionfish off the coast of North Carolina.
 - B** The beautiful and exotic lionfish, a native of tropical waters, has been populating the waters of the Atlantic Ocean.
 - C** While dangerous to other forms of marine life, the lionfish has become a popular aquarium pet because of its unique appearance.
 - D** The warm waters of the Gulf Stream extend from the Gulf of Mexico toward Europe and provide a habitat for the lionfish.

Key: B

Aligned CCLS: RI.6.2

Commentary: This question aligns to CCLS RI.6.2 in that it asks the student to identify the central idea of the article.

Rationale: Option B is correct. The fact that divers found lionfish off the coast of North Carolina in 2002 is not the main point of the article, and the portions of the text concerning the lionfish as a pet and the nature of the Gulf Stream are minor details, not central ideas.

- 7** Scientists call the lionfish an *alien invader* (line 6) because lionfish
- A** attack other species with their poisonous spines
 - B** have overtaken the habitats of other marine species
 - C** came from one place and spread to another place
 - D** are able to live in hostile environments

Key: C

Aligned CCLS: RI.6.4

Commentary: This question aligns to RI.6.4 in that it asks the student to interpret the figurative phrase “alien invader” in light of information in the article as a whole.

Rationale: Option C is correct. There is no indication in the article that lionfish have uprooted other species; and while lionfish are predators and are able to adapt to certain environments, these characteristics do not explain the idea that they are “alien invaders.”

Common Core Sample Questions ELA Grade 6 – cont.

- 8** Why does the author include lines 12–16 (“A year later...as far north as Long Island, New York!”) in the article?
- A to list all of the places lionfish can be found
 - B to track the movements of lionfish and their habitats
 - C to warn people living in certain locations about poisonous fish
 - D to describe how widespread lionfish sightings have become

Key: D

Aligned CCLS: RI.6.5

Commentary: This question aligns to CCLS RI.6.5 in that it requires students to determine the purpose of a particular paragraph in an article. Understanding of the overall structure of the article and its general content is required to answer this question.

Rationale: Option D is correct. Lines 12–16 illustrate the extent of the lionfish invasion (as far as Bermuda and New York). The paragraph is not presented as a complete list, and nothing in the article indicates that people should be warned about the fish or that scientists are tracking movements of the fish.

- 9** Which of these words is closest in meaning to *expedition* (line 19)?
- A a display
 - B a contest
 - C a trip
 - D a report

Key: C

Aligned CCLS: L.6.4a

Commentary: This question aligns to CCLS L.6.4a in that it asks the student to determine the meaning of an unknown word (“expedition”) from context.

Rationale: It is clear from context that the “NOAA scientists” went on a trip to collect lionfish at various locations off of the Carolina coast. There is no indication that the scientists collected the fish during a display or during a contest, and it does not make sense to say they collected them during a report.

Common Core Sample Questions ELA Grade 6 – cont.*Paired Passages***Demosthenes***by John Haaren*

In the city of Athens about twenty-five years after the Peloponnesian War there lived a delicate boy named Demosthenes. His father was a manufacturer of swords and made a great deal of money. But when Demosthenes was only seven years old his father died. Guardians had charge of his property for ten years. They
5 robbed the boy of part of his fortune and managed the rest so badly that Demosthenes could not go to school to the best teachers in Athens because he had not money enough to pay them.

One day, when he was sixteen years old, a great trial was going on at Athens and he strolled into the court. There were fifteen hundred and one dicasts or, as we
10 call them, jurymen in their seats, and the court was crowded with citizens who, like Demosthenes, had gone in from curiosity. A lawyer named Callistratus was speaking. He did not finish his speech for nearly four hours. But no one left the court until he ceased to speak. Then hundreds of people went out and hurried home. Demosthenes waited to see the end. When each of the jurymen had thrown a voting
15 pebble into a basket the clerk of the court counted the pebbles and told the result. Callistratus had won the case.

Demosthenes went home determined to become a lawyer and public speaker. In one year from that time he brought suit against his guardians, delivered
20 four orations against them and won his case. He recovered a large part of the property which his father had left to his mother and himself.

After this he entered public life, but the first time he made a speech in the public assembly it was a complete failure. He stammered and could not speak loud enough, and in trying to do so he made odd faces.

25 People laughed at him, and even his friends told him that he never could be a speaker, so he went home greatly cast down.

Then an actor who was a great friend of his family went to see him and encouraged him. He asked Demosthenes to read to him some passages of poetry. Then the actor recited the same passages. The verses now seemed to have new meaning and beauty. The actor pronounced the words as if he felt them. The tones of
30 his voice were clear and pleasant and his gestures were graceful. Demosthenes was charmed.

"You can learn to speak just as well as I do," said the actor, "if you are willing to work patiently. Do not be discouraged, but conquer your difficulties."

"I will," said Demosthenes. And he did.

Common Core Sample Questions ELA Grade 6 – cont.

35 It is said that to improve his voice he spoke with stones in his mouth, and to become accustomed to the noise amid confusion of the public assembly he went to the seashore and recited there amid the roar of the waves. To overcome his habit of lifting one shoulder above the other he suspended a sword so that the point would prick his shoulder as he raised it.

40 He built an underground room in which he could study without interruption and practice speaking without disturbing anyone. He had one side of his head shaved so that he would be ashamed to leave this retreat. Then he remained there for months at a time engaged in study. One thing that he did while there was to copy
45 eight times the speeches in the famous history of Thucydides. This was to teach him to use the most fitting language. Besides all this he took lessons of an excellent speaker named Iosm'us who taught declamation. In this way the awkward boy who had been laughed out of the assembly became in time the greatest orator of Athens. Not only was Demosthenes a graceful orator, but he was wise and patriotic. He soon acquired great influence in Athens and became one of the ten official orators.

www.books.google.com

Words that could be defined for students are in bold.

Common Core Sample Questions ELA Grade 6 – cont.**Icarus and Daedalus***by Josephine Preston Peabody*

Among all those mortals who grew so wise that they learned the secrets of the gods, none was more cunning than Daedalus.

5 He once built, for King Minos of Crete, a wonderful Labyrinth of winding ways so cunningly tangled up and twisted around that, once inside, you could never find your way out again without a magic clue. But the king's favor veered with the wind, and one day he had his master architect imprisoned in a tower. Daedalus managed to escape from his cell; but it seemed impossible to leave the island, since every ship that came or went was well guarded by order of the king.

10 At length, watching the sea-gulls in the air—the only creatures that were sure of liberty—he thought of a plan for himself and his young son Icarus, who was captive with him.

15 Little by little, he gathered a store of feathers great and small. He fastened these together with thread, molded them in with wax, and so fashioned two great wings like those of a bird. When they were done, Daedalus fitted them to his own shoulders, and after one or two efforts, he found that by waving his arms he could **winnow** the air and **cleave** it, as a swimmer does the sea. He held himself aloft, wavered this way and that, with the wind, and at last, like a great fledgling, he learned to fly.

20 Without delay, he fell to work on a pair of wings for the boy Icarus, and taught him carefully how to use them, bidding him beware of rash adventures among the stars. "Remember," said the father, "never to fly very low or very high, for the fogs about the earth would weigh you down, but the blaze of the sun will surely melt your feathers apart if you go too near."

25 For Icarus, these cautions went in at one ear and out by the other. Who could remember to be careful when he was to fly for the first time? Are birds careful? Not they! And not an idea remained in the boy's head but the one joy of escape.

30 The day came, and the fair wind that was to set them free. The father bird put on his wings, and, while the light urged them to be gone, he waited to see that all was well with Icarus, for the two could not fly hand in hand. Up they rose, the boy after his father. The hateful ground of Crete sank beneath them; and the country folk, who caught a glimpse of them when they were high above the tree-tops, took it for a vision of the gods—Apollo, perhaps, with Cupid after him.

35 At first there was a terror in the joy. The wide vacancy of the air dazed them—a glance downward made their brains reel. But when a great wind filled their wings, and Icarus felt himself sustained, like a halcyon-bird in the hollow of a wave, like a child uplifted by his mother, he forgot everything in the world but joy. He forgot Crete and the other islands that he had passed over: he saw but vaguely that

Common Core Sample Questions ELA Grade 6 – cont.

40 winged thing in the distance before him that was his father Daedalus. He longed for one **draught** of flight to quench the thirst of his captivity: he stretched out his arms to the sky and made towards the highest heavens.

45 Alas for him! Warmer and warmer grew the air. Those arms, that had seemed to uphold him, relaxed. His wings wavered, drooped. He fluttered his young hands vainly—he was falling—and in that terror he remembered. The heat of the sun had melted the wax from his wings; the feathers were falling, one by one, like snowflakes; and there was none to help.

He fell like a leaf tossed down the wind, down, down, with one cry that overtook Daedalus far away. When he returned, and sought high and low for the poor boy, he saw nothing but the bird-like feathers afloat on the water, and he knew that Icarus was drowned.

50 The nearest island he named Icaria, in memory of the child; but he, in heavy grief, went to the temple of Apollo in Sicily, and there hung up his wings as an offering. Never again did he attempt to fly.

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Words that could be defined for students are in bold.

Common Core Sample Questions ELA Grade 6 – cont.*Short Answer Constructed Response for “Demosthenes”***10**

How does Demosthenes’ experience observing a trial at age 16 affect his life choices, as described in the passage? Use **two** details from the passage to support your response.

Write your answer in complete sentences.

CCLS Alignment: RL.6.3

Commentary: This question aligns to CCLS RL.6.3. It asks students to look at a particular event in the beginning of the passage and explain how it affects the unfolding of the story and the development of the character throughout the rest of the passage.

Rationale: The response accurately describes Demosthenes’ reaction to the trial (“Demosthenes went home determined to become a lawyer and public speaker”) and then provides evidence that this reaction affected him throughout his life (“He brought suit against his guardians ... he recovered a large part of the property”) and (“He soon acquired great influence in Athens and became one of the ten official orators”).

Common Core Sample Questions ELA Grade 6 – cont.

- 11** How does Demosthenes overcome obstacles to reach his goal? Use **two** details from the passage to support your response.

Write your answer in complete sentences.

CCLS Alignment: RL.6.1; additional standards may be added after further development.

Commentary: This question aligns to CCLS RL.6.1. It asks students to cite specific textual evidence to explain Demosthenes' goal, the obstacles in his way, and how he overcame those obstacles.

Rationale: The response accurately describes the steps taken by Demosthenes in order to reach his goal of becoming a great orator ("It is said that to improve his voice he spoke with stones in his mouth," "To overcome his habit of lifting one shoulder above the other he suspended a sword so that the point would prick his shoulder as he raised it," "He built an underground room in which he could study," etc.).

Common Core Sample Questions ELA Grade 6 – cont.

Short Answer Constructed Response for "Icarus and Daedalus"

12

Closely reread the following sentence from lines 7–8 of the passage:

"...but it seemed impossible to leave the island, since every ship that came or went was well guarded by order of the king."

How does this sentence contribute to the development of the plot of the passage? Use **two** details from the passage to support your answer.

Write your answer in complete sentences.

Aligned CCLS: RL.6.5

Commentary: This item aligns to CCLS RL.6.5 because it asks students to analyze how a sentence fits into or impacts the overall development of the passage. Similarly, it challenges a student to look beyond the main idea of the passage, balancing the meaning of what came before the sentence and what followed.

Rationale: The response accurately explains that Daedalus's motivation for flying was driven by his desire to be free from imprisonment, which eventually leads to his son flying too close to the sun. Appropriate textual evidence includes, but is not limited to, "like a great fledgling, [Daedalus] learned to fly," "Up they rose, the boy and his father," "The heat of the sun had melted the wax from his wings," "He fell like a leaf tossed down the wind," etc.

Common Core Sample Questions ELA Grade 6 – cont.*Extended Constructed Response Paired Passages***13**

In both the *Demosthenes* biography and the *Icarus and Daedalus* myth the main characters exhibit determination in pursuit of their goals. Did determination help both main characters reach their goals, or did it lead them to tragedy? Write an argument for whether you believe determination helped or hurt the two main characters.

In your response, be sure to do the following:

- describe how determination affected the outcome in *Demosthenes*
- describe how determination affected the outcome in *Icarus and Daedalus*
- explain the similarities or differences that exist in the ways determination played into the outcome of both texts
- use details from both passages in your response

Aligned CCLS: RL.6.9, W.6.1, W.6.4, W.6.8, W6.9a, and W.6.9b

Commentary: This item aligns to CCLS RL.6.9, W.6.1, W.6.4, W.6.8, W6.9a, and W.6.9b because it asks students to provide evidence from the texts to support written analysis of what the texts say explicitly.

Rationale: The response accurately describes how determination affects the outcome of *Demosthenes* and of *Icarus and Daedalus*, giving examples of similarities and differences that exist in the way this determination played into the outcome of both texts. In both texts the characters demonstrate determination. Demosthenes overcomes personal obstacles (his stuttering, soft voice, and odd posture) through determination and persistent hard work (building an underground room to practice speaking without disturbance, practicing speaking with stones in his mouth, reciting amid the roar of the waves, and pricking his shoulder to remind him to keep his posture perfect) to become one of Athens' ten official orators. Daedalus overcomes the imprisonment of himself and his son, Icarus, on the Island of Crete, by his determination. He demonstrates this by his careful crafting of sea-gull inspired wings and learning to fly with them (like a fledgling bird). The wings were made of feathers and wax, so Daedalus warned young Icarus to be careful and not fly too high into the heavens. But Icarus did fly too high, the wings melted, and he fell to the

Common Core Sample Questions ELA Grade 6 – cont.

water and drowned. The determination of Daedalus did lead him to his successful escape, but he lost his son. In both texts determination leads to the characters' goals; however, Demosthenes achieves complete success as an orator while Daedalus's achievement of his goal also leads to tragedy.

DRAFT



New York State Testing Program

Mathematics Common Core Sample Questions Grade 8

Common Core Sample Questions Math Grade 8**Domain:** Functions**Item:** CR

A trainer for a professional football team keeps track of the amount of water players consume throughout practice. The trainer observes that the amount of water consumed is a linear function of the temperature on a given day. The trainer finds that when it is 90°F the players consume about 220 gallons of water, and when it is 76°F the players consume about 178 gallons of water.

Part A: Write a linear function to model the relationship between the gallons of water consumed and the temperature.

Part B: Explain the meaning of the slope in the context of the problem.

Key:

Part A: $y = 3x - 50$

Part B: For every one degree increase in temperature, the number of gallons consumed increases by 3.

Aligned CCLS: 8.F.4

Commentary: This question aligns to CCLS 8.F.4 because it assesses a student's ability to construct a function that models a linear relationship from a description of a relationship between two values (x,y) and interpret the rate of change.

Rationale: The correct answer indicates the ability to construct a function to model a linear relationship. Given that water consumption is a function of temperature, the values cited in the problem are understood as coordinate pairs that can be related by a linear function.

Part A:

$$\frac{220-178}{90-76} = \frac{42}{14} = 3$$

$$y = 3x + b$$

$$220 = 3(90) + b$$

$$-50 = b$$

Part B: The slope indicates 3 gallons per degree ($\frac{3}{1}$), which shows that for every temperature increase in one degree, the number of gallons of water consumed would increase by three.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** MC

2 Which of the following expressions is **not** equivalent to $\frac{1}{25}$?

- A $5^3 \times 5^{-5}$
- B $5^{-1} \times 5^{-1}$
- C $5^{-3} \times 5$
- D $5^{-2} \times 5^4$

Key: D**Aligned CCLS:** 8.EE.1

Commentary: This question aligns to CCLS 8.EE.1 because it assesses a student's ability to apply properties of exponents to rewrite exponential expressions.

Rationale: Selecting Option D could indicate that student recognizes the incorrect addition of exponents or confusion on the concept of equivalence ($5^4 \times 5^{-2} = 25$). Options A, B, and C involve the correct application of the properties of integer exponents.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** CR

3 A computer can do 1000 operations in 4.5×10^{-6} seconds. How many operations can be done by this computer in one hour? Express your answer in scientific notation.

Key: 8×10^{11} **Aligned CCLS:** 8.EE.4

Commentary: This question aligns to CCLS 8.EE.4 because it assesses a student's ability to perform operations with numbers expressed in scientific notation.

Rationale: The computer works at the rate of the 1000 operations in 4.5×10^{-6} seconds, or 2.2×10^8 multiplications per second ($1000/4.5 \times 10^{-6}$). Application of the conversion of 1 hour = 3600 seconds [$(2.2 \times 10^8) \times 3600$] gives the number of operations (8×10^{11}) the computer can complete in one hour.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** MC

x	y
-8	-42
-3	-17
0	-2
6	28

4 If a line contains the points in the table above, the equation of the line is

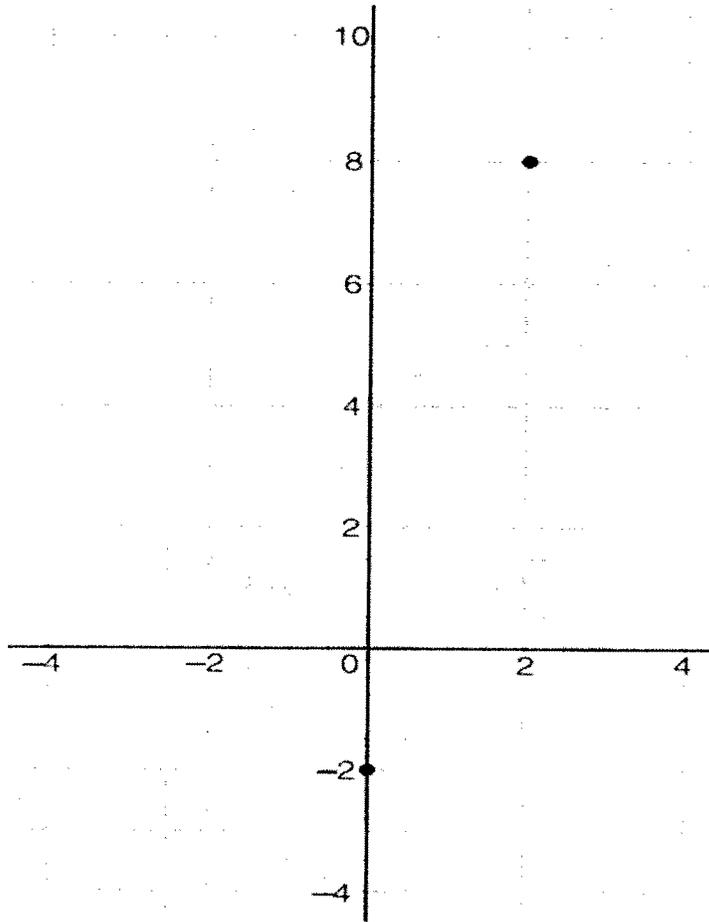
- A $y = -2x + 5$
- B $y = 2x - 5$
- C $y = 5x - 2$
- D $y = -5x - 2$

Key: C**Aligned CCLS:** 8.EE.6

Commentary: This question aligns to CCLS 8.EE.6 because a student uses $y = mx + b$ to write the equation of a line given its slope and the y-intercept.

Rationale: Option C is correct. The equation of a line can be represented in slope-intercept form ($y = mx + b$) if the slope and y-intercept is known or can be found. The slope, m , can be found by performing the following with any two pairs of the given points: $m = \frac{28 - (-2)}{6 - 0} = \frac{30}{6} = 5$. The y-intercept, b , is given in the table as -2 (0,-2).

Accurately substituting these values into the slope-intercept form of the equation gives $y = 5x - 2$. Option C can also be determined by testing each of the options to determine which equation is satisfied by the set of points in the table. Selecting Option A indicates confusion in the proper location of these two values in a slope-intercept form. Selecting Option B also indicates confusion in the proper location of these two values in a slope-intercept form, as well as possible sign errors for the values of both the slope and the y-intercept. Selecting Option D indicates an incorrect calculation of slope from the given table.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** MC**5**

If a line passes through the two points above, the equation of the line is

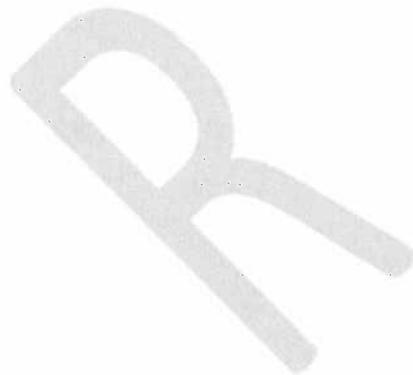
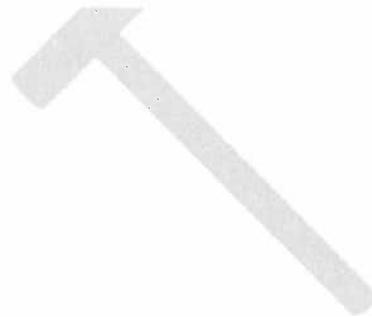
- A $y = -2x + 5$
- B $y = 2x - 5$
- C $y = 5x - 2$
- D $y = -5x - 2$

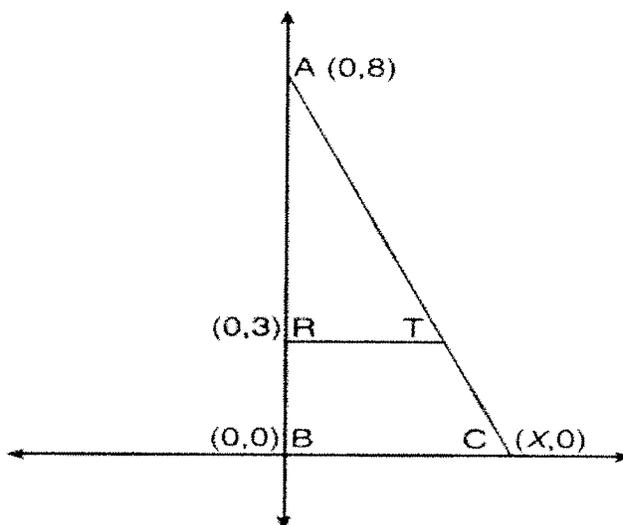
Key: C**Aligned CCLS:** 8.EE.6

Commentary: This question aligns to CCLS 8.EE.6 because a student uses $y = mx + b$ to write the equation of a line given its slope and the y -intercept.

Common Core Sample Questions Math Grade 8 – cont.

Rationale: Option C is correct. The student can determine the slope graphically or algebraically and can identify (0, -2) as the y-intercept from the graph. Algebraically the slope can be determined by $m = \frac{8 - (-2)}{2 - 0} = \frac{10}{2} = 5$. Accurately substituting these values into the slope-intercept form of a linear equation gives $y = 5x - 2$.



Common Core Sample Questions Math Grade 8 – cont.**Domain:** Geometry/Expressions and Equations**Item:** CR**6** In the diagram below, $\triangle ABC$ is similar to $\triangle ART$.**Part A:** What is the scale factor from $\triangle ABC$ to $\triangle ART$?**Part B:** If the slope of AC is -2 , what is the value of x for coordinate C ?**Part C:** Using the information from parts A and B, what is the length of RT ?**Key:**

Part A: $\frac{AB}{AR} = \frac{8}{5}$

Part B: 4

Part C: 2.5

Aligned CCLS: 8.G.4, 8.EE.6, and 8.EE.7b**Commentary:** This question aligns to CCLS 8.G.4, 8.EE.6, and 8.EE.7b because it assesses the construction and application of a similarity ratio, the creation of a linear equation, and solving a linear equation with one variable.

Common Core Sample Questions Math Grade 8 – cont.**Rationale:**

Part A: The ratio of side AB to side AR is determined by

$$\frac{AB}{AR} = \frac{8-0}{8-3} = \frac{8}{5}$$

Part B: The y -intercept is $(0,8)$ and the given slope of -2 yields the resulting linear equation for segment AB of $y = -2x + 8$. Solving this equation for $y = 0$ yields the following value for C :

$$\begin{aligned}0 &= -2x + 8 \\-8 &= -2x \\4 &= x \\x &= 4\end{aligned}$$

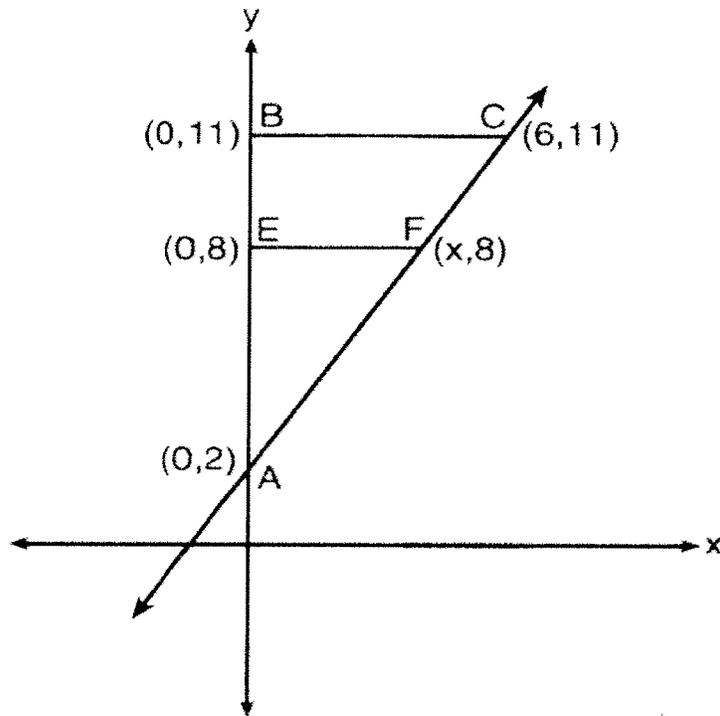
Part C: The length of side BC is the difference in x -values between point B and point C , $4 - 0 = 4$. The ratio of side BC to side RT is $\frac{8}{5}$. Using these two pieces of information the solution to side RT can be found by solving the

proportion $\frac{8}{5} = \frac{4}{x}$.

$$\frac{8}{5} = \frac{4}{x}$$

$$8x = 20$$

$$x = \frac{20}{8} = \frac{5}{2} = 2.5$$

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** CR**7**In the coordinate plane below, $\triangle ABC$ is similar to $\triangle AEF$.What is the value of x ?**Key:** $x = 4$ **Aligned CCLS:** 8.EE.6**Commentary:** This question aligns to CCLS 8.EE.6 because it assesses the student's understanding that slope is the same along a line between any two distinct points.

Rationale: The student can compute $\frac{11-2}{6-0}$ to find the slope of $\overline{AC} = \frac{3}{2}$. Next, the student finds the slope, $\overline{FA} = \frac{8-2}{x-0} = \frac{6}{x}$, and then the student will set ratios equal $\frac{3}{2} = \frac{6}{x}$ to find $x = 4$.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** MC

8 $\frac{2}{3}(2x-1) + 2\frac{1}{3} = 7 - \frac{1}{2}x$

Which step would **not** be a possible first step for solving this equation algebraically?

- A multiplying every term in the equation by six
- B subtracting $2\frac{1}{3}$ from 7
- C subtracting $\frac{1}{2}x$ from $2x$
- D multiplying -1 by $\frac{2}{3}$

Key: C**Aligned CCLS:** 8.EE.7b

Commentary: This question aligns to CCLS 8.EE.7b because it assesses the student's ability to use the distributive property and to combine like terms when solving an equation.

Rationale: Option C is correct. Given that $2x$ is multiplying a factor of $\frac{2}{3}$, distribution or some other algebraic beginning that would be necessary before subtracting $\frac{1}{2}x$ from $2x$. Options A, B, and D all represent reasonable starting points.

Common Core Sample Questions Math Grade 8 – cont.**Domain:** Expressions and Equations**Item:** CR

David currently has a square garden. He wants to redesign his garden and make it into a rectangle with a length that is 3 feet shorter than twice its width. He decides that the perimeter should be 60 feet.

Determine the dimensions, in feet, of his new garden.

Show your work.

Key: 11 feet wide and 19 feet long

Aligned CCLS: 8.EE.7b

Commentary: This question aligns to CCLS 8.EE.7b because it assesses the student's ability to find the perimeter of a rectangle by expanding expressions using the distributive property and collecting terms.

Rationale: Width = 11 and length = 19 produces a rectangle with a perimeter of 60. The length is 3 feet shorter than twice the width.

Let w = width

$2w - 3$ = length

$$2(w + 2w - 3) = 60$$

$$2w + 4w - 6 = 60$$

$$6w = 66$$

$$w = 11$$

$$2w - 3 = 19$$

Other processes may also result in the correct answer.

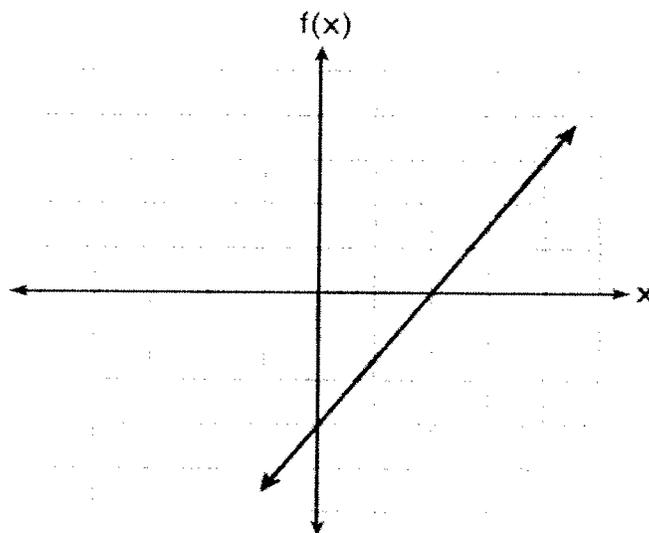
Common Core Sample Questions Math Grade 8 – cont.

Domain: Functions

Item: CR

10 The three different linear functions below are represented in three different ways, as shown.

x	f(x)
-3	-9
3	3
6	9



$$2y + 3 = 3x$$

(I)

(II)

(III)

Which function has the greatest rate of change? Does any pair of functions have the same rate of change? **Justify your answer.**

Key: The linear function in I has the greatest rate of change of the three given functions.

The linear functions in II and III each have a rate of change of $\frac{3}{2}$.

Aligned CCLS: 8.F.2

Commentary: This question aligns to CCLS 8.F.2 because it assesses a student’s ability to recognize and compare properties of functions represented in different ways: table of values, graphically, and algebraically.

Rationale: I – The rate of change is 2.

II and III – The rate of change for each is $\frac{3}{2}$.

Common Core Sample Questions Math Grade 8 – cont.

Domain: Functions

Item: MC

11

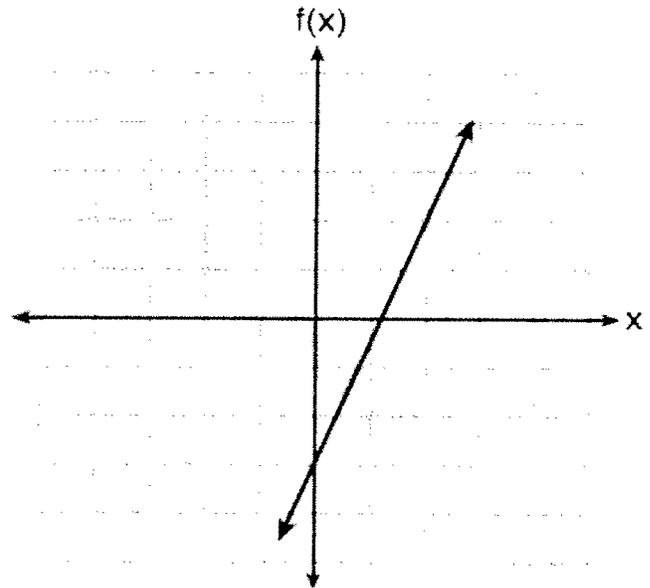
Of the four linear functions represented below, which has the greatest rate of change?

(A) A number, y , is two less than twice a number, x .

x	$h(x)$
-6	-10
-3	-3
3	11

(B) $3y - 4x = 3$

(C)



(D)

Key: D

Aligned CCLS: 8.F.2

Commentary: This question aligns to CCLS 8.F.2 because it assesses a student’s ability to compare rates of changes for functions represented in different ways.

Rationale: Option D is correct because the rate of change is $\frac{5}{2}$; in Option A it is 2, in Option B it is $\frac{4}{3}$, and in Option C it is $\frac{7}{3}$.