



Changing Classroom Practice

Formative Assessment of Academic & Behavioral Progress: Selected Tools

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RTI-Ready Methods to Monitor Student Academics

Reading: Phonemic Awareness / Alphabetics

<input type="checkbox"/> Initial Sound Fluency	⌚ 3 minutes	Administration: 1:1
<i>Description:</i> The student is shown 4 pictures, each depicting an object that begins with a different letter sound. The examiner gives the student a letter sound and asks the student to select the picture of the object that begins with that letter sound. The process is repeated with new sets of pictures until the time		
<i>Where to get materials:</i> DIBELS https://dibels.uoregon.edu/		
<input type="checkbox"/> Phoneme Segmentation Fluency	⌚ 1 minute	Administration: 1:1
<i>Description:</i> The student is read a list of words that contain from 2 to five phonemes. For each word, the student is asked to recite all of the phonemes that make up the word.		
<i>Where to get materials:</i> DIBELS https://dibels.uoregon.edu/		
<input type="checkbox"/> Nonsense Word Fluency	⌚ 1 minute	Administration: 1:1
<i>Description:</i> The student is shown a list of nonsense words of 2 to 3 letters in length. For each word, the student is to read the word or give the sounds that make up the word.		
<i>Where to get materials:</i> DIBELS https://dibels.uoregon.edu/		
<input type="checkbox"/> Letter Naming Fluency	⌚ 1 minute	Administration: 1:1
<i>Description:</i> The student is presented with a list of randomly arranged letters. The student names as many letters as possible.		
<i>Where to get materials:</i> DIBELS https://dibels.uoregon.edu/		
<input type="checkbox"/> Letter Sound Fluency	⌚ 1 minute	Administration: 1:1
<i>Description:</i> The student is presented with a list of randomly arranged letters. The student gives the sounds of as many letters as possible.		
<i>Where to get materials:</i> www.interventioncentral.org		
<input type="checkbox"/> Word Identification Fluency	⌚ 1 minute	Administration: 1:1
<i>Description:</i> The student is presented with a list of words randomly selected from a larger word list (e.g., Dolch Wordlist). The student reads as many words as possible.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none"> • Easy CBM http://www.easycbm.com • Intervention Central http://www.interventioncentral.org (Dolch wordlists) 		

Reading: Fluency

<input type="checkbox"/> Oral Reading Fluency	⌚: 1 minute	Administration: 1:1
<i>Description:</i> The student reads aloud from a passage and is scored for fluency and accuracy. Passages are controlled for level of reading difficulty.		
<i>Where to get materials:</i> <ul style="list-style-type: none">• DIBELS https://dibels.uoregon.edu/• AimsWeb http://www.aimsweb.com/• Easy CBM http://www.easycbm.com• Intervention Central http://www.interventioncentral.org (Use the OKAPI page to create customized ORF passages)		

Reading: Basic Comprehension

<input type="checkbox"/> Maze Passages	⌚: 1-3 minutes	Administration: Group
<i>Description:</i> The student is given a passage in which every 7 th word has been removed. The student reads the passage silently. Each time the student comes to a removed word, the student chooses from among 3 replacement words: the correct word and two distractors. The student circles the replacement word that he or she believes best restores the meaning of the text.		
<i>Where to get materials:</i> <ul style="list-style-type: none">• AimsWeb http://www.aimsweb.com/• Intervention Central http://www.interventioncentral.org (Use the Maze Passage Generator page to create customized Maze passages)		

<input type="checkbox"/> Multiple-Choice Reading Comprehension	⌚: Unknown	Administration: Group
<i>Description:</i> The student is given a passage to read. The student then answers a series of standardized comprehension questions based on the text.		
<i>Where to get materials:</i> <ul style="list-style-type: none">• Easy CBM http://www.easycbm.com		

Math: Early Math Fluency

<input type="checkbox"/> Quantity Discrimination Fluency	⌚: 1 minute	Administration: 1:1
<i>Description:</i> The student is given a sheet with number pairs. For each number pair, the student must name the larger of the two numbers.		
<i>Where to get materials:</i> <ul style="list-style-type: none">• AimsWeb http://www.aimsweb.com/• Intervention Central http://www.interventioncentral.org (Numberfly Early Math Fluency Probe Creator)		

<input type="checkbox"/> Missing Number Fluency	⌚: 1 minute	Administration: 1:1
<i>Description:</i> The student is given a sheet containing numerous sets of 3 or 4 sequential numbers. For each number series, one of the numbers is missing. The student must name the missing number.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none"> • AimsWeb http://www.aimsweb.com/ • Intervention Central http://www.interventioncentral.org (Numberfly Early Math Fluency Probe Creator) 		

<input type="checkbox"/> Number Identification Fluency	⌚: 1 minute	Administration: 1:1
<i>Description:</i> The student is given a sheet with numbers in random order. The student gives the name of each number.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none"> • AimsWeb http://www.aimsweb.com/ • Intervention Central http://www.interventioncentral.org (Numberfly Early Math Fluency Probe Creator) 		

<input type="checkbox"/> Oral Counting Fluency	⌚: 1 minute	Administration: 1:1
<i>Description:</i> The student counts aloud as many words in sequence as possible, starting from zero or one.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none"> • The student does not require materials for this assessment. The examiner can make a sheet with numbers listed sequentially from 0-100 to record those numbers that the student can recite in sequence. 		

Math: Computation

<input type="checkbox"/> Math Computation Fluency	⌚: 2 minutes	Administration: Group
<i>Description:</i> The student is given a worksheet with single-skill or mixed-skill math computation problems. The student works independently to complete as many problems as possible. The student receives credit for each correct digit appearing in his or her answer.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none"> • AimsWeb http://www.aimsweb.com/ • Intervention Central http://www.interventioncentral.org (Math Worksheet Generator) • SuperKids http://www.superkids.com/aweb/tools/math/ (This website allows you to create math computation worksheets for more advanced areas such as fractions, percentages, decimals, and more) 		

Math: Applied Problems

<input type="checkbox"/> Math Concepts & Applications	⌚: 6-8 minutes	Administration: Group
<i>Description:</i> Students are given 3-page assessment booklets with a mix of applied problem types appropriate to that grade level. (Assessments are available for grades 1-8). A mix of applied problems is included in each assessment, sampling the typical math curriculum for the student's grade (e.g., money skills, time-telling, etc.)		
<i>Where to get materials:</i>		
<ul style="list-style-type: none">• The Math Concepts & Applications probes were developed by Drs. Lynn & Dough Fuchs, Vanderbilt University. Sets of 30 alternative probes for grades 1-8 can be obtained for the cost of postage and copying only. Phone: 615-343-4782 Mail: Lynn Fuchs Peabody #328 230 Appleton Place Nashville, TN 37203-5721		

Math: Vocabulary

<input type="checkbox"/> Math Vocabulary Probes (Howell, 2008)	⌚: 5 minutes	Administration: Group
<i>Description:</i> Students are given a math vocabulary probe consisting of 20 vocabulary items. There are two versions commonly used: (1) The sheet contains vocabulary terms on one side of the sheet and the definitions of those terms—in scrambled order—on the other. The student connects term to its correct definition; (2) The sheet contains only definitions. The student must read each definition and write the correct corresponding vocabulary term.		
<i>Where to get materials:</i>		
<ul style="list-style-type: none">• Math vocabulary probes are developed by the school. Teachers create 'vocabulary pools' that contain the key vocabulary items to be included in probes. From that larger pool, vocabulary items are randomly sampled to create individual probes.		

Writing

<input type="checkbox"/> CBM Writing	⌚: 4.5 minutes	Administration: Group
<i>Description:</i> The student is given a worksheet with a 'story starter' (an introductory sentence that provides the student with a topic on which to write). The student is given 60 to 90 seconds to plan a story and 3 minutes to produce a writing sample. CBM Writing probes can be scored for total words written, number of correctly spelled words, and number of 'correct writing sequences' (a more comprehensive measure of the student's mastery of the mechanics and conventions of writing).		
<i>Where to get materials:</i>		
<ul style="list-style-type: none">• Many schools make their own story starters, which are simple to produce.• AimsWeb http://www.aimsweb.com/		

References

Hosp, M.K., Hosp, J. L., & Howell, K. W. (2007). *The ABCs of CBM*. New York: Guilford

Howell, K. W. (2008). Best practices in curriculum-based evaluation and advanced reading. In A. Thomas & J. Grimes (Eds.), *Best practices in school psychology V* (pp. 397-418). Bethesda, MD: National Association of School Psychologists.

Student School Performance Status Report

Student Name: _____ School: _____ Grade: _____

Monitoring Period: From ____/____/____ to ____/____/____ Date of Report: ____/____/____ Meeting #: _____

Attendance	# Days Absent	Divided by	Elapsed School Days in Period	Equals	Absence Rate (decimal)	Times 100 =	Absence Rate (percentage)

Discipline	Number of student disciplinary office referrals	<input style="width: 50px; height: 20px;" type="text"/>	Primary reason(s) for disciplinary referrals:	Staff member(s) referring student:
			1. _____	1. _____
			2. _____	2. _____
			3. _____	3. _____

	CLASS 1:	CLASS 2:	CLASS 3:	CLASS 4:

Tardiness	Days Tardy	Days Tardy	Days Tardy	Days Tardy
	_____	_____	_____	_____

Classwork	<input type="checkbox"/> Course average for marking period <input type="checkbox"/> Average of quiz & test grades <input type="checkbox"/> Percent of class & homework received	Student Performance	Student Performance	Student Performance	Student Performance
		_____	_____	_____	_____

Daily Behavior Report Card Ratings	Got along with peers and showed socially appropriate behaviors.	1..2..3 4..5..6 7..8..9 Poor Fair Good			
	Was respectful to the teacher & other adults, complied with requests in a timely manner.	1..2..3 4..5..6 7..8..9 Poor Fair Good			
	Paid attention to teacher instructions, classroom lessons and focused on his/her work.	1..2..3 4..5..6 7..8..9 Poor Fair Good			
	Completed and turned in classwork, homework, assignments.	Poor Fair Good	Poor Fair Good	Poor Fair Good	Poor Fair Good

Comments/ Notes	

STUDENT DAILY BEHAVIOR REPORT

Student Name: _____ Grade: _____

Person Completing This Report Card: _____

Directions: At the end of each school day, please rate the student on the behaviors below. Write your ratings into the appropriate box on the right of the page and record the *date* of each rating. You may also write daily comments about the student's behavior on the back of this sheet.

Student Behaviors	MON _/_/_	TUES _/_/_	WED _/_/_	THURS _/_/_	FRI _/_/_
<p><i>The student got along with peers and showed socially appropriate behaviors.</i></p> <p style="text-align: center;">1 2 3 4 5 6 7 8 9 Poor Fair Good</p>					
<p><i>The student was respectful to the teacher and other adults and complied with their requests in a timely manner.</i></p> <p style="text-align: center;">1 2 3 4 5 6 7 8 9 Poor Fair Good</p>					
<p><i>The student paid attention to teacher instructions and classroom lessons and focused on his/her work assignments.</i></p> <p style="text-align: center;">1 2 3 4 5 6 7 8 9 Poor Fair Good</p>					
<p><i>The student completed and turned in classwork and homework assignments.</i></p> <p style="text-align: center;">Poor Fair Good</p>					
<p>(Optional Behavior)</p> <hr/> <p style="text-align: center;">1 2 3 4 5 6 7 8 9 Never/Seldom Sometimes Most/All of the Time</p>					

Parent Sign-Off (Optional): I have reviewed this Behavior Report Card and discussed it with my child.

Parent Signature: _____ Date: _____

Daily Behavior Report: Optional Comments

Monday--Date: _____

Comments: _____

Tuesday-- Date: _____

Comments: _____

Wednesday-- Date: _____

Comments: _____

Thursday-- Date: _____

Comments: _____

Friday-- Date: _____

Comments: _____

Response to Intervention

Finding RTI-Ready Measures to Assess and Track Student Academic Skills

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Response to Intervention

Effective Formative Evaluation: The Underlying Logic...

1. What is the relevant academic or behavioral outcome measure to be tracked?
2. Is the focus the core curriculum or system, subgroups of underperforming learners, or individual struggling students?
3. What method(s) should be used to measure the target academic skill or behavior?
4. What goal(s) are set for improvement?
5. How does the school check up on progress toward the goal(s)?

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Response to Intervention

Monitoring Student Academics: Curriculum-Based Measurement

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Models in Reading & Math

<p>5 Strands of Mathematical Proficiency</p> <ol style="list-style-type: none"> 1. Understanding 2. Computing 3. Applying 4. Reasoning 5. Engagement <p><small>Source: National Research Council. (2002). <i>Helping children learn mathematics. Mathematics Learning Study Committee. J. Kilpatrick & J. Swafford, Editors. Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.</i></small></p>	<p>5 Big Ideas in Beginning Reading</p> <ol style="list-style-type: none"> 1. Phonemic Awareness 2. Alphabetic Principle 3. Fluency with Text 4. Vocabulary 5. Comprehension <p><small>Source: Big ideas in beginning reading. University of Oregon. Retrieved September 23, 2007, from http://reading.uoregon.edu/index.php</small></p>
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Response to Intervention

Curriculum-Based Evaluation: Definition

"Whereas standardized commercial achievement tests measure broad curriculum areas and/or skills, CBE measures specific skills that are presently being taught in the classroom, usually in basic skills. Several approaches to CBE have been developed. Four common characteristics exist across these models:

- The measurement procedures assess students directly using the materials in which they are being instructed. This involves sampling items from the curriculum.
- Administration of each measure is generally brief in duration (typically 1-5 mins.)
- The design is structured such that frequent and repeated measurement is possible and measures are sensitive to change.
- Data are usually displayed graphically to allow monitoring of student performance."

SOURCE: CAST Website: http://www.cast.org/publications/ncaac/ncaac_curriculumbe.html

	Curriculum-Based Evaluations			Related: Dynamic Indicators of Basic Early Literacy Skills (DIBELS)
	Curriculum-Based Assessment (CBA)	Precision Teaching	Curriculum-Based Measurement (CBM)	
Characteristics:				
Authors	Prokocinski, Whitcomb, Gickling, Blankenship, Ito, Maestas	Lindsay et al.	Deno et al.	Good et al.
Sampling Plan	Items selected from the identified curriculum domain	Repeated measures based on fluency & accuracy	Items sampled from the identified curriculum domain randomly selected for measure	Items are author selected and randomly sequenced for the 5 literacy subtest measures
Application	Evaluation and instructional planning	Evaluation and instructional planning	Measures used to aid eligibility, placement and diagnosis. Provides multi-referenced data sources	Designed to identify literacy skills difficulties and provide teachers with information to reduce the risk of reading problems
Target grade level	Grades 1-6	Grades K-12	Grades K-6	Grades preschool, kindergarten, first, second and third grade
Development	Teacher made	Teacher made	Teacher made using guidelines	Sampling of items created by authors versus a curriculum of instruction
Scoring	Teacher scored	Teacher scored	Standardized administration & scoring. Some simultaneous administration and scoring	Standardized administration & scoring. Simultaneous administration and scoring. Fluency measures
Results/Display	Varies, teacher preference	Graphic display on semi-logarithmic charts	Uses graphs to display results. Guides many educational decisions	Graphically or numerically displayed to view individual, class or normative information
Response Mode	Students either answer out loud to teacher, write or select response	Production responses	Generates production responses	Production responses
Administration	Teacher administers test individually to each student	Teacher administers test individually to each student	Standardized administration and scoring procedures. Produces reliable and valid data	Each measure from DIBELS is teacher administered for a 1 or 2 minute time period
Frequency	Multiple times to assess learning	Multiple measures	Is repeated over time. Long term assessment	Twice yearly (fall/winter, spring) to monitor literacy skills

SOURCE: CAST Website: http://www.cast.org/publications/ncaac/ncaac_curriculumbe.html

Response to Intervention

Curriculum-Based Measurement: Advantages as a Set of Tools to Monitor RTI/Academic Cases

- Aligns with curriculum-goals and materials
- Is reliable and valid (has 'technical adequacy')
- Is criterion-referenced: sets specific performance levels for specific tasks
- Uses standard procedures to prepare materials, administer, and score
- Samples student performance to give objective, observable 'low-inference' information about student performance
- Has decision rules to help educators to interpret student data and make appropriate instructional decisions
- Is efficient to implement in schools (e.g., training can be done quickly; the measures are brief and feasible for classrooms, etc.)
- Provides data that can be converted into visual displays for ease of communication

Source: Hosp, M.K., Hosp, J. L., & Howell, K. W. (2007). *The ABCs of CBM*. New York: Guilford. www.interventioncentral.org

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Standards for Judging Academic Measures for RTI

(National Center for Student Progress Monitoring)

Tools Area	Foundational Psychometric Standards		Progress Monitoring Standards				
	Reliability	Validity	Alternate Forms	Sensitive to Student Improvement	AYP Benchmarks	Improving Student Learning or Teacher Planning	Rates of Improvement Specified
Accelerated Math and Reader	•	•	•	•	•	•	•
Math Reading	○	•	•	•	•	•	•
AIMSweb	•	•	•	•	•	•	•
Early Literacy	•	•	•	•	•	○	•
Early Numeracy	•	•	•	○	•	•	•
Math	•	•	•	•	•	•	•
Maze	•	•	•	•	•	•	•
Reading	•	•	•	•	•	•	•
Spelling	•	•	○	•	•	•	•
Written Expression	•	○	•	•	•	•	•

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Standards for Judging Academic Measures for RTI

(National Center for Student Progress Monitoring)

Evaluation Information Standard on Reliability

Reliability estimates (e.g., Cronbach's alpha, test-retest, and/or inter-rater reliability) are reported.	Yes	Any other patterns of responses
Provided information is relevant and specific to the tool submitted.	Yes	
TRC Decision	<i>Meets basic evidence standards</i>	<i>Does not meet evidence standards</i>

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Response to Intervention

Standards for Judging Academic Measures for RTI

(National Center for Student Progress Monitoring)

Evaluation Information Standard on Validity

Validity information (e.g., content, concurrent, predictive, and/or construct) is reported.	Yes	Any other patterns of responses
Provided information is relevant and specific to the tool submitted.	Yes	
TRC Decision	<i>Meets basic evidence standards</i>	<i>Does not meet evidence standards</i>

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Some Types of Validity

- **Construct Validity.** Extent to which a measure assesses the 'underlying construct' of interest. For example, a CBM oral reading fluency probe would be assumed to have some correlation with the construct 'reading ability' but may have limited construct validity for a construct such as 'general intelligence'.
- **Content Validity.** Extent to which a measure covers all dimensions of the construct being assessed. For example, a CBM math computation probe may have limited content validity to measure 'math reasoning skills' (as computation probes are too limited to be a good measure of so global a skill). However, computation probes appear to have good content validity as a measure of 'math computation fluency'.

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Response to Intervention

Some Types of Validity (cont.)

- **Concurrent Validity.** 'Correlation of a [measure] with present behavior, or with other existing tests or measures.' For example, CBM oral reading fluency probes may be found to have good concurrent validity for student performance on the reading portion of commercial individual academic achievement tests.
- **Predictive Validity.** The accuracy of a measure to 'predict' or correlate with a future, different test or assessment. For example, CBM oral reading fluency probes in the 2nd grade may be found to have good predictive validity for future student performance on the 4th grade state reading test.

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Response to Intervention
Standards for Judging Academic Measures for RTI
(National Center for Student Progress Monitoring)

Frequent Progress Monitoring Standard (Number of Alternate Forms)

Alternate Forms of equal and controlled difficulty.	Yes	Any other patterns of responses
Number of alternate forms is sufficient for frequent (at least monthly) progress monitoring.	Yes	
TRC Decision	Meets basic evidence standards	

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Standards for Judging Academic Measures for RTI
(National Center for Student Progress Monitoring)

Sensitive to Student Improvement

Use of the specific tool produces data that are sensitive to children's development of academic competence and/or to the effects of intervention.	Yes	Any other patterns of responses
Evidence/data are research based.	Yes	
TRC Decision	Meets basic evidence standards	Does not meet evidence standards

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Standards for Judging Academic Measures for RTI
(National Center for Student Progress Monitoring)

Benchmarks for Adequate End-of-Year Performance or Goal Setting Specified

Benchmarks for adequate end-of-year performance or goal setting are specified.	Yes	Any other patterns of responses
Basis for identifying benchmarks for adequate end-of-year performance or goal setting is specified. Basis can be norm-referenced, criterion-referenced, or other appropriate procedures.	Yes	
Evidence is based on specifically using this tool OR is based on test construction principles from tools used in referred studies.	Yes	
TRC Decision	Meets basic evidence standards	Does not meet evidence standards

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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(National Center for Student Progress Monitoring)

Improving Student Learning or Teacher Planning

Provided evidence shows improved teacher planning or student achievement by using the specific tool.	Yes	Any other patterns of responses
Evidence/data are research based.	Yes	
TRC Decision	Meets basic evidence standards	Does not meet evidence standards

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Standards for Judging Academic Measures for RTI
(National Center for Student Progress Monitoring)

Rates of Improvement Specified

Adequate growth or goal setting is specified.	Yes	Any other patterns of responses
Basis for measuring adequate growth or goal setting is specified. Basis can be norm-referenced, criterion-referenced, or other appropriate procedures.	Yes	
Evidence is based on specifically using this tool OR is based on test construction principles from tools used in referred studies.	Yes	
TRC Decision	Meets basic evidence standards	Does not meet evidence standards

Source: National Center on Student Progress Monitoring. Retrieved January 24, 2009, from <http://www.studentprogress.org/chart/chart.asp>

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Response to Intervention

RTI Literacy: Assessment & Progress-Monitoring (Cont.)

To measure student 'response to instruction/intervention' effectively, the RTI Literacy model measures students' reading performance and progress on schedules matched to each student's risk profile and intervention Tier membership.

- **Benchmarking/Universal Screening.** All children in a grade level are assessed at least 3 times per year on a common collection of literacy assessments.
- **Strategic Monitoring.** Students placed in Tier 2 (supplemental) reading groups are assessed 1-2 times per month to gauge their progress with this intervention.
- **Intensive Monitoring.** Students who participate in an intensive, individualized Tier 3 reading intervention are assessed at least once per week.

Source: Burns, M. K., & Gibbons, K. A. (2008). Implementing response-to-intervention in elementary and secondary schools: Procedures to assure scientific-based practices. New York: Routledge.

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Limitations of Intervention Research...

“...the list of evidence-based interventions is quite small relative to the need [of RTI].... Thus, limited dissemination of interventions is likely to be a practical problem as individuals move forward in the application of RTI models in applied settings.” p. 33

Source: Kratochwill, T. R., Clements, M. A., & Kalyman, K. M. (2007). *Response to Intervention: Conceptual and methodological issues in implementation*. In Jimerson, S. R., Burns, M. K., & VanDerHeyden, A. M. (Eds.), *Handbook of response to intervention: The science and practice of assessment and intervention*. New York: Springer.

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Response to Intervention

RTI Interventions: What If There is No Commercial Intervention Package or Program Available?

“Although commercially prepared programs and the subsequent manuals and materials are inviting, they are not necessary. ... A recent review of research suggests that interventions are research based and likely to be successful, if they are correctly targeted and provide explicit instruction in the skill, an appropriate level of challenge, sufficient opportunities to respond to and practice the skill, and immediate feedback on performance... Thus, these [elements] could be used as criteria with which to judge potential tier 2 interventions.” p. 88

Source: Burns, M. K., & Gibbons, K. A. (2008). *Implementing response-to-intervention in elementary and secondary schools*. Routledge: New York.

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Response to Intervention

Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

1. *Define the Academic or Behavioral Needs Requiring Intervention in Detail and Using Standard Terminology.*

Effective interventions cannot be reliably identified and matched to student needs if those needs are loosely or vaguely defined.

- Overly broad academic goal statement: a student will "know her letters."
- More focused goal statement: "When shown any letter in uppercase or lowercase form, the student will accurately identify the letter name and its corresponding sound without assistance."

When possible, describe academic behaviors selected as intervention target using standard terminology to make it easier to locate appropriate evidence-based intervention ideas.

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Response to Intervention

Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

2. *Develop Consensus in Your School About What is Meant by 'Evidence-Based'.*

- Compile a list of trusted professional organizations and journals. Continue to add to this list of trusted organizations and journals over time.

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Response to Intervention

Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

2. *Develop Consensus in Your School About What is Meant by 'Evidence-Based'.*

- Draft a definition of 'evidence-based.' Example: The International Reading Association (2002) provides these guidelines:
 - Produce 'objective' data—so that different evaluators should be able to draw similar conclusions when reviewing the data from the studies.
 - Have valid research results that can reasonably be applied to the kinds of real-world reading tasks that children must master in actual classrooms.
 - Yield reliable and replicable findings that would not be expected to change significantly based on such arbitrary factors as the day or time that data on the interventions were collected or who collected them.
 - Employ current best-practice methods in observation or experimentation to reduce the probability that other sources of potential bias crept into the studies and compromised the results.
 - Checked before publication by independent experts, who review the methods, data, and conclusions of the studies.

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Response to Intervention

Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

2. *Develop Consensus in Your School About What is Meant by 'Evidence-Based'.*

- Adopting a 'research continuum.' It can be useful for schools to use a 'research continuum' that establishes categories for interventions in descending levels of research quality.

The continuum would be used as an aid to judge whether specific instructional practices or interventions are supported by research of sufficient quantity and quality for use in schools.

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Response to Intervention

Evaluating the Quality of Intervention Research:
The 'Research Continuum'



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Intervention 'Research Continuum'

Evidence-Based Practices

“Includes practices for which original data have been collected to determine the effectiveness of the practice for students with disabilities. The research utilizes scientifically based rigorous research designs (i.e., randomized controlled trials, regression discontinuity designs, quasi-experiments, single subject, and qualitative research).”

Source: The Access Center Research Continuum (n.d.). Retrieved on June 1, 2008 from http://www.k8accesscenter.org/training_resources/documents/ACResearchApproachFormatted.pdf

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Intervention 'Research Continuum'

Promising Practices

“Includes practices that were developed based on theory or research, but for which an insufficient amount of original data have been collected to determine the effectiveness of the practices. Practices in this category may have been studied, but not using the most rigorous study designs.”

Source: The Access Center Research Continuum (n.d.). Retrieved on June 1, 2008 from http://www.k8accesscenter.org/training_resources/documents/ACResearchApproachFormatted.pdf

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Response to Intervention
Intervention 'Research Continuum'

Emerging Practices

“Includes practices that are not based on research or theory and on which original data have not been collected, but for which anecdotal evidence and professional wisdom exists. These include practices that practitioners have tried and feel are effective and new practices or programs that have not yet been researched.”

Source: The Access Center Research Continuum (n.d.). Retrieved on June 1, 2008 from http://www.k8accesscenter.org/training_resources/documents/ACResearchApproachFormatted.pdf

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Response to Intervention

Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

3. Use Impartial On-Line Rating Sites to Evaluate Commercial Intervention Products. Cautions to keep in mind when using these sites:

- They typically rely on existing research only.
- There can potential delays / lag time between the publication of new research and these sites' evaluation of that research.

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FCRR

The Florida Center for Reading Research

Location & Hours
 227 N. Broadway Street
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Contact
 Send email
 904-644-9332

For Teachers
 For Coaches
 For Administrators
 For Parents
 For Researchers
 For FCRR Faculty and Staff

New

"Florida Assessments for Instruction in Reading" presented by Dr. Barbara Foorman and Dr. Evan Lefsky at the meeting of the FL Organization of Instructional Leaders (FOIL) Nov. 3-6, 2008 in Tampa, FL, and in regional meetings with FL district leaders during November.

"Teaching all students to read: Is it really possible?" Presentation by Dr. Joseph Torgesen at meetings of the International Dyslexia Association, Seattle, Washington, November, 2008.

"Reading First in Florida." Presentation made by Drs. Barbara Foorman, Evan Lefsky, and Sandy Robinson as part of a symposium on Reading First at the International Reading Association meeting in Atlanta, GA, May 6, 2008.

"The Linguistic Basis of Reading Disabilities." Keynote address at the U.C. Davis M.L.R.D. Institute in Sacramento.

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Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

4. *Know the Research-Based Components That Are Building Blocks of Effective Interventions.* Research indicates (Burns, VanDerHeyden, & Boice, 2008) that, to be maximally effective, interventions should:

- be matched to the student's academic needs
- be delivered using explicit instruction
- provide the student with adequate success in the instructional task
- give the student a high opportunity to respond
- provide timely performance feedback.

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Finding a Way Out of the 'Research-Based' Maze: A Guide for Schools

5. *Keep Up With Emerging Intervention Research Through 'Knowledge Brokers'.*

- Districts first define manageable and sensible intervention topic areas, such as 'alphabets' and 'reading fluency'.
- Then district or school staff members are selected to serve as 'knowledge brokers' based on their training, experience, and/or interest.
- Knowledge brokers regularly read educational research journals and other publications from reputable organizations or government agencies to keep up with emerging research in their intervention topic area.
- They periodically share their expertise with other district RTI planners to ensure that the schools are using the best available intervention strategies.

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Response to Intervention

Tier 1 (Classroom) Literacy Interventions for Middle & High Schools: A Skill-Building Lab

Jim Wright
 www.interventioncentral.org



INTERVENTION CENTRAL

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Tier 1 (Classroom) Literacy Interventions for Middle & High Schools: Workshop Agenda

- RTI & Tier 1 Strategies: Key Concepts
- What Works: Explicit Vocabulary Instruction
- What Works: Extended Discussion
- What Works: Reading Comprehension
- Promoting Consistent Literacy Strategies Across Classrooms: Winning Over 'Reluctant' Teachers
- Tier 1 Secondary Literacy: Promoting Systems-Level Change

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Promoting Literacy in Middle & High School Classrooms: Three Elements

- Explicit vocabulary instruction
- Reading comprehension
- Extended discussion

Source: Kamil, M. L., Borman, G. D., Dole, J., Kral, C. C., Salinger, T., & Torgesen, J. (2008). Improving adolescent literacy: Effective classroom and intervention practices: A practice guide (NCEE #2008-4027). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wvc>.

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Key Concepts About Tier 1 (Classroom) Interventions



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Tier I Instruction/Interventions

Tier I instruction/interventions:

- Are universal—available to all students.
- Can be delivered within classrooms or throughout the school.
- Are likely to be put into place by the teacher at the first sign that a student is struggling.

All children have access to Tier 1 instruction/interventions. Teachers have the capability to use those strategies without requiring outside assistance.

Tier 1 instruction/interventions encompass:

- The school's core curriculum and all published or teacher-made materials used to deliver that curriculum.
- Teacher use of 'whole-group' teaching & management strategies.
- Teacher use of individualized strategies with specific students.

Tier 1 instruction/interventions attempt to answer the question: *Are routine classroom instructional strategies sufficient to help the student to achieve academic success?*

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Increasing the Intensity of an Intervention: Key Dimensions

Interventions can move up the RTI Tiers through being intensified across several dimensions, including:

- Student-teacher ratio
- Length of intervention sessions
- Frequency of intervention sessions
- Duration of the intervention period (e.g., extending an intervention from 5 weeks to 10 weeks)
- Type of intervention strategy or materials used
- Motivation strategies

Source: Burns, M. K., & Gibbons, K. A. (2008). Implementing response-to-intervention in elementary and secondary schools. Routledge: New York.

Kratochwill, T. R., Clements, M. A., & Kalymon, K. M. (2007). Response to intervention: Conceptual and methodological issues in implementation. In Jimerson, S. R., Burns, M. K., & VanDerHeyden, A. M. (Eds.), Handbook of response to intervention: The science and practice of assessment and intervention. New York: Springer.

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Response to Intervention

Documenting Tier 1 Interventions

Teachers can conveniently document their Tier 1 (classroom) intervention and progress-monitoring by using the *Tier 1 Intervention Planner* form (next slide). The *Tier 1 Intervention Planner* is most useful when it is filled in as part of a conversation with other educators about effective intervention ideas. For example:

- The teacher can bring the student up for discussion in a planning meeting with other teachers from the same grade level. Together, those instructors can brainstorm intervention strategies that the classroom teacher can try with the student.
- The teacher may have a list of consultants (e.g., reading specialist, school psychologist, special education teacher, school administrator) with whom that teacher is welcome to meet with to generate additional evidence-based classroom intervention strategies.

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Tier I (Classroom) Intervention Planner

Teacher/Team: _____ Date: _____ Student: _____

Student Concern #1: _____

Student Concern #2: _____

(Optional) Person(s) assisting with intervention planning process:

Intervention Description	Intervention Delivery	Progress-Monitoring Data	Check-Up Date
<small>Describe each intervention that you plan to use to address the student's concerns.</small>	<small>List key details about delivery of the intervention, such as: (1) where & when the intervention will be used; (2) the adult to student ratio; (3) how frequently the intervention will take place; (4) the length of time each session of the intervention will last.</small>	<small>Note what classroom data will be used to demonstrate the student's progress during this intervention.</small>	<small>Select a date when the data will be reviewed to evaluate the intervention.</small>

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Response to Intervention

Tier 1: What Are the Recommended Elements of 'Core Curriculum'?: More Research Needed

"In essence, we now have a good beginning on the evaluation of Tier 2 and 3 interventions, but no idea about what it will take to get the core curriculum to work at Tier 1. A complicating issue with this potential line of research is that many schools use multiple materials as their core program." p. 640

Source: Kowelski, J. F. (2007). Response to intervention: Considerations for research and systems change. *School Psychology Review*, 36, 638-646.

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Response to Intervention

Schools Need to Review Tier 1 (Classroom) Interventions to Ensure That They Are Supported By Research

There is a lack of agreement about what is meant by 'scientifically validated' classroom (Tier 1) interventions. Districts should establish a 'vetting' process—criteria for judging whether a particular instructional or intervention approach should be considered empirically based.

Source: Fuchs, D., & Deshler, D. D. (2007). What we need to know about responsiveness to intervention (and shouldn't be afraid to ask). *Learning Disabilities Research & Practice, 22*(2), 129–136.
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Response to Intervention

Introducing Academic Strategies to Students: A Direct-Instruction Approach



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Response to Intervention

Introducing Academic Strategies to Students: A Direct-Instruction Approach

1. “Show them!”: The teacher demonstrates to students how to use the skill.
 - Introduce the skill
 - Describe & demonstrate the skill
 - Elicit student participation
 - Assess student understanding

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Response to Intervention

Introducing Academic Strategies to Students: A Direct-Instruction Approach (Cont.)

2. “Watch them & praise them!”: Students practice the skill under teacher supervision.
3. “Make them use it!”: Students employ the skill independently in real academic situations.
4. “Expand their horizons!”: Students use the strategy in all appropriate settings or situations.

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Response to Intervention

RTI & Secondary Literacy: Explicit Vocabulary Instruction



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Response to Intervention

Vocabulary: Why This Instructional Goal is Important

As vocabulary terms become more specialized in content area courses, students are less able to derive the meaning of unfamiliar words from context alone.

Students must instead learn vocabulary through more direct means, including having opportunities to explicitly memorize words and their definitions.

Students may require 12 to 17 meaningful exposures to a word to learn it.

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Response to Intervention

Provide Dictionary Training

The student is trained to use an Internet lookup strategy to better understand dictionary or glossary definitions of key vocabulary items.

- The student first looks up the word and its meaning(s) in the dictionary/glossary.
- If necessary, the student isolates the specific word meaning that appears to be the appropriate match for the term as it appears in course texts and discussion.
- The student goes to an Internet search engine (e.g., Google) and locates at least five text samples in which the term is used in context and appears to match the selected dictionary definition.

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Response to Intervention

Enhance Vocabulary Instruction Through Use of Graphic Organizers or Displays: A Sampling

Teachers can use graphic displays to structure their vocabulary discussions and activities (Boardman et al., 2008; Fisher, 2007; Texas Reading Initiative, 2002).

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Response to Intervention

4-Square Graphic Display

The student divides a page into four quadrants. In the upper left section, the student writes the target word. In the lower left section, the student writes the word definition. In the upper right section, the student generates a list of examples that illustrate the term, and in the lower right section, the student writes 'non-examples' (e.g., terms that are the opposite of the target vocabulary word).

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Response to Intervention

This Word	Examples of This Word
4-Square Word Activity	
Definition of This Word	Non-Examples of This Word

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Response to Intervention

Semantic Word Definition Map

The graphic display contains sections in which the student writes the word, its definition ('what is this?'), additional details that extend its meaning ('What is it like?'), as well as a listing of examples and 'non-examples' (e.g., terms that are the opposite of the target vocabulary word).

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Response to Intervention

Word Definition Map Example

What is this?
A powerful ruler

Examples
Sovereign King
Emperor

Potentate

Non-examples
President
Prime Minister

What is it like?
Has great power
Is not elected by the people
Stays in office for life

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Response to Intervention

Semantic Feature Analysis

A target vocabulary term is selected for analysis in this grid-like graphic display. Possible features or properties of the term appear along the top margin, while examples of the term are listed on the left margin. The student considers the vocabulary term and its definition. Then the student evaluates each example of the term to determine whether it does or does not match each possible term property or element.

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Response to Intervention

Semantic Feature Analysis Example

• VOCABULARY TERM: *TRANSPORTATION*

	two wheeled	four wheeled	one wheeled	foot powered	motor powered	on land	in the water	in the air
bicycle	+	-	-	+	-	+	-	-
car	-	+	-	-	+	+	-	-
unicycle	-	-	+	+	-	+	-	-
airplane								
boat								
hovercraft								
supersonic transport								
velocipede								

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Semantic Feature Analysis for This Concept: _____

Possible Features of This Concept

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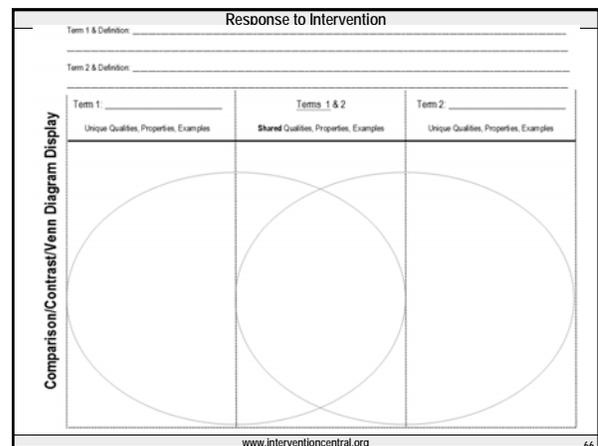
Response to Intervention

Comparison/Contrast (Venn) Diagram

Two terms are listed and defined. For each term, the student brainstorms qualities or properties or examples that illustrate the term's meaning. Then the student groups those qualities, properties, and examples into 3 sections:

- items unique to Term 1
- items unique to Term 2
- items shared by both terms

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Response to Intervention

Promote 'Wide Reading'

Students read widely in the content area, using texts that supplement and extend information supplied by the textbook. 'Wide reading' results in substantial increases in student vocabulary over time due to incidental learning. To strengthen the positive impact of wide reading on vocabulary development, have student texts available that vary in difficulty and that are of high interest. Discuss readings in class. Experiment with ways to document student independent reading and integrate that 'wide reading' into an effort grade for the course. If needed, build time into the student's school schedule for supervised 'wide reading' time.

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Response to Intervention

Hold 'Read-Alouds'

Select texts that supplement the course textbook and that illustrate central concepts and contain important vocabulary covered in the course. Read those texts aloud for 3 to 5 minutes per class session--while students follow along silently. Read-alouds provide students with additional exposure to vocabulary items in context. They can also lower the threshold of difficulty: Students may be more likely to attempt to read an assigned text independently if they have already gotten a start in the text by listening to a more advanced reader read the first few pages aloud. Read-alouds can support other vocabulary-building activities such as guided discussion, vocabulary review, and wide reading.

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Response to Intervention

Provide Regular In-Class Instruction and Review of Vocabulary Terms, Definitions

Present important new vocabulary terms in class, along with student-friendly definitions. Provide 'example sentences' to illustrate the use of the term. Assign students to write example sentences employing new vocabulary to illustrate their mastery of the terms.

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Response to Intervention

Generate 'Possible Sentences'

The teacher selects 6 to 8 challenging new vocabulary terms and 4 to 6 easier, more familiar vocabulary items relevant to the lesson. Introduce the vocabulary terms to the class. Have students write sentences that contain at least two words from the posted vocabulary list. Then write examples of student sentences on the board until all words from the list have been used. After the assigned reading, review the 'possible sentences' that were previously generated. Evaluate as a group whether, based on the passage, the sentence is 'possible' (true) in its current form. If needed, have the group recommend how to change the sentence to make it 'possible'.

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Response to Intervention

RTI & Secondary Literacy: Extended Discussion



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Response to Intervention

Extended Discussions: Why This Instructional Goal is Important

Extended, guided group discussion is a powerful means to help students to learn vocabulary and advanced concepts. Discussion can also model for students various 'thinking processes' and cognitive strategies (Kamil et al. 2008, p. 22). To be effective, guided discussion should go beyond students answering a series of factual questions posed by the teacher: Quality discussions are typically open-ended and exploratory in nature, allowing for multiple points of view (Kamil et al., 2008).

When group discussion is used regularly and well in instruction, students show increased growth in literacy skills. Content-area teachers can use it to demonstrate the 'habits of mind' and patterns of thinking of experts in various their discipline: e.g., historians, mathematicians, chemists, engineers, literacy critics, etc.

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Response to Intervention

Use a 'Standard Protocol' to Structure Extended Discussions

Good extended classwide discussions elicit a wide range of student opinions, subject individual viewpoints to critical scrutiny in a supportive manner, put forth alternative views, and bring closure by summarizing the main points of the discussion. Teachers can use a simple structure to effectively and reliably organize their discussions...

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'Standard Protocol' Discussion Format

- A. Pose questions to the class that require students to explain their positions and their reasoning .
- B. When needed, 'think aloud' as the discussion leader to model good reasoning practices (e.g., taking a clear stand on a topic).
- C. Supportively challenge student views by offering possible counter arguments.
- D. Single out and mention examples of effective student reasoning.
- E. Avoid being overly directive; the purpose of extended discussions is to more fully investigate and think about complex topics.
- F. Sum up the general ground covered in the discussion and highlight the main ideas covered.

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Response to Intervention

RTI & Secondary Literacy: Reading Comprehension



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Response to Intervention

Reading Comprehension: Why This Instructional Goal is Important

Students require strong reading comprehension skills to succeed in challenging content-area classes.

At present, there is no clear evidence that any one reading comprehension instructional technique is clearly superior to others. In fact, it appears that students benefit from being taught any self-directed practice that prompts them to engage more actively in understanding the meaning of text (Kamil et al., 2008).

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Assist Students in Setting 'Content Goals' for Reading

Students are more likely to be motivated to read—and to read more closely—if they have specific content-related reading goals in mind. At the start of a reading assignment, for example, the instructor has students state what questions they might seek to answer or what topics they would like to learn more about in their reading. The student or teacher writes down these questions. After students have completed the assignee reading, they review their original questions and share what they have learned (e.g., through discussion in large group or cooperative learning group, or even as a written assignment).

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Response to Intervention

Teach Students to Monitor Their Own Comprehension and Apply 'Fix-Up' Skills

Teachers can teach students specific strategies to monitor their understanding of text and independently use 'fix-up' skills as needed. Examples of student monitoring and repair skills for reading comprehension include encouraging them to:

- Stop after every paragraph to summarize its main idea
- Reread the sentence or paragraph again if necessary
- Generate and write down questions that arise during reading
- Restate challenging or confusing ideas or concepts from the text in the student's own words

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Collect a Bank of 'Intervention Scripts' to
Teach Specific Comprehension Strategies

Teachers can collect 'intervention scripts' to
address different comprehension issues that
arise in their classrooms.