SOCIAL EMOTIONAL LEARNING
ESSENTIAL FOR LEARNING, ESSENTIAL FOR LIFE

SUGGESTED SOCIAL EMOTIONAL LEARNING ACTIVITIES AND TEACHING PRACTICES
SCIENCE, GRADES 6-8

Social Emotional Learning Competency

Self-awareness: The ability to recognize one’s emotions, thoughts, goals, and values and how they influence one’s behavior. This includes accurately assessing one’s strengths and limitations, possessing a well-grounded sense of self-efficacy and optimism and a “growth mindset.” High levels of self-awareness require the ability to recognize how thoughts, feelings, and actions are interconnected.

- Identifying emotions
- Accurate self-perception
- Recognizing strengths and personal growth areas
- Self-confidence
- Self-efficacy

Fostering Self-awareness may integrate with the following Science Standards:
This compendium is not exhaustive; alignment with additional Standards may be possible. The crosswalk identifies standards that are applicable to teaching and/or reinforcing one or more of SEL competencies, providing examples for infusion into instruction. The bullets following each competency list what students (at age and developmentally appropriate levels) will know and be able to do.

New York State P-12 Science Learning Standards
MS-ETS1-4; MS-ESS3-5; MS-LS1-7 (http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/p-12-science-learning-standards-updated10-18.pdf)

SAMPLE SEL ACTIVITY

- Pose a real world problem to the class that has an environmental impact and have students problem solve around their personal responsibility and how their own behavior and the behaviors, laws, and policies of society contribute to the impact (e.g., building a landfill, composting food scraps from lunch, solutions to Styrofoam lunch trays, how laws and policies can have a human impact).
- Have students design an experiment to test hypothesis of how different foods impact the way they feel or perform on tests or physical activity.
- Have students identify/draw themselves as a scientist and include characteristics of a successful scientist.
- Use a structured note-taking system to take notes and process (i.e., AVID strategies, Cornell notes).
- Role play how to work in groups.
- Use activities that teach following directions.
- Have students create experiment procedures, share with small group and have other students try the experiment by following the procedure. Role play how to give feedback - constructive/destructive feedback.
- Gallery walk - collecting/providing peer feedback

1 Adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL), 2017
● Facilitate a group discussion on the definition of success (e.g., What does success look like? Is success an outcome or a process?).

**GENERAL TEACHING PRACTICES**

● Routinely provide authentic feedback and ask dialoguing questions that help students reflect on their own strengths and interests. Examples:
  ○ “Can you tell me what about this is making you feel so energized/motivated/happy?”
  ○ “Can you tell me what about this you’re most proud of?”
  ○ “How did you feel when you first heard this problem? How do you feel now?”

● Routinely give students opportunity through journal entries or student pair shares to reflect on what kinds of science related material they’re interested in and why.

● Routinely tell students authentic reasons why you as their teacher feel happy/optimistic for them and their future.

● Create class roles and responsibilities that emphasize individual strengths, areas to improve, and personal and group goals (e.g., gather equipment, recorder, reporter, time keeper, etc.).

● Establish clear norms and consequences so that students can see the impact of their own actions and behaviors on outcomes (e.g., help students develop appropriate strategies for providing feedback to each other if someone is not pulling their weight on the team or during a lab).

● Hold regular class meetings to teach and model emotional self-awareness (e.g., community building circles) and to give students an opportunity to share.

● Use current media/technology sources to make science relevant to the students’ world and encourage appropriate self-awareness behavior for teamwork.

● Consistently engage students in peer review of written work (labs).

● Provide access to more challenging work when students have mastered earlier material.

● Encourage risk-taking by creating a classroom atmosphere where making mistakes is okay, and even expected.

● Allow for corrections and edits.

● Have students identify their emotions when faced with new challenges.

● Routinely reinforce the connection between effort and outcomes.

● Empower successful students to help others.

● Teach students how to approach a problem and when and how to advocate for support.

● Model methods of test preparation strategies e.g., use of study guides, colored pencils, drawings, Cornell Notes.
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SCIENCE, GRADES 6-8

Social Emotional Learning Competency

Self-management: The ability to successfully regulate one’s emotions, thoughts, and behaviors in different situations; the ability to effectively manage stress, deal with difficult emotions and control impulses; the ability to motivate oneself, to set and work toward personal and academic goals and persist in long term and challenging tasks.

- Impulse control
- Stress management
- Self-discipline
- Self-motivation
- Goal-setting
- Organizational skills

Fostering Self-management may integrate with the following Science Standards:

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New York State P-12 Science Learning Standards

MS-ESS3-2; MS-ETS1-4; MS-LS4-2 (http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/p-12-science-learning-standards-updated10-18.pdf)

SAMPLE SEL ACTIVITIES

- Have students conduct simple experiments to practice experimental design and method to develop skills for applying scientific method to address more complex, meaningful, or socially relevant problems.
- Teach self-management techniques such as belly breathing, yoga positions, counting to ten, positive self-talk, relaxation exercises, or mental rehearsal, to help students develop concrete techniques for managing stress or anxiety, including for learning, testing or public speaking situations.
- Have student brainstorm ways to motivate themselves.
- Lead students in a discussion of how to use their awareness of emotions as a guide to decision making. For example, lead a discussion that encourages students to “press pause” when making a decision, or when they are feeling angry or hurt. Help students understand that it is always better to make important decisions when we are feeling calm.
- Have students communicate scientific results based only on evidence and data without being influenced by personal emotions and opinions.
- Have students draw conclusions based on data and reflect on how it applies to their own life.

2 Adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL), 2017
● Have students critically review other people’s research.

● Lead discussions about positive ways we can express our feelings (e.g., talk to an adult or friend, putting our feelings into words; create media or write an essay (or in a journal) about how we feel, show our feelings through dance).

● Teach lessons on the THINK process to help students recognize responsible use of social media before posting an unkind or untrue remark about a person because you are upset (T is it true, H is it helpful, I is it inspiring, N is it necessary, K is it kind).

● Over the course of several weeks, have students work on individual goal projects using goals they identify for themselves. Have them monitor and document their progress for several weeks.

● Define perseverance as a vocabulary word.

● During a lesson, talk about how you motivate yourself when you need to.

● Teach students to identify what they know about a lesson topic or objective and to identify what they need to know to understand the lesson objective, then how to set a goal to achieve that learning.

● Lead a discussion that encourages students to reflect on barriers they may encounter when completing an assignment (e.g., writing a paragraph) and that also help them think about ways they can overcome them, including how to approach others for help (e.g., peer assistance).

● Lead a discussion (ask questions) about who might be able to help, or what other resources might be available, to complete an assignment.

● Create projects/assignments that require effort and encourage students through to completion.

● Use examples from history to discuss how scientists persevered through failure to solve a problem or reach a goal.

● Use a phenomenon to spark discussion and thinking around unpopular or controversial questions.

GENERAL TEACHING PRACTICES

● Teach a lesson and create visual reminders of procedures for class transitions and create class goals for improving the time it takes for completing them.

● Teach a lesson and create visual reminders of how to use lab equipment and other resources appropriately and safely.

● Teach a lesson and create visual reminders of how lab equipment should be put away.

● Provide reminders of lab safety rules prior to each lab.

● Hold regular class meetings to teach and model self-management.

● Use role playing to expose children to appropriate self-management behavior.

● Routinely practice self-management techniques as regular part of the school day (e.g., start class with a deep breathing exercise).

● As a teacher, consistently model effective self-management in an age-appropriate way for students (e.g., “I’m feeling a little frustrated, so I’m going to stop and take a breath, before I decide what to do next.”)

● Give students authentic feedback for self-management (e.g., “I saw the way you handled conflict with your lab partner. You seemed frustrated that he wasn’t measuring accurately, but I saw you take a breath and then ask him politely to check his work. I’m proud of you, and you should be proud of yourself.”)

● Give students support and/or authentic feedback for expressing emotions appropriately (e.g., “I know you’re angry at her right now (e.g., for interrupting you). What are some calm ways you could tell her what you’re upset about?” or “I know you were feeling sad about what happened recently. I was proud of you for writing about how you were feeling, and what you were doing to feel more peaceful. I’m here if you ever want to talk to me about it.”).
● Establish a separate space in the classroom for individual self-management (e.g., reading corner).
● Routinely encourage students to save a desired activity or experience until they have completed tasks or duties (e.g., until they have finished their homework).
● Routinely develop and complete short-term classroom goals (e.g., getting settled after a transition).
● Routinely work with the class to establish and complete projects/assignments (e.g., lab work with a partner or small group – set goals, break the goal down into weekly sub-goals, lay out steps for achieving weekly goals, monitor progress toward achieving goals, celebrate achievements).
● Routinely teach students how to use resources appropriately (e.g., how to use reference resources).
● Routinely model and talk about your own goals.
● Routinely provide authentic feedback to students when you’re observing them managing themselves well (e.g., regulating their emotions by taking a breath, taking a break to think about a decision, etc.).
● Students can also be taught the powerful strategy of self-assessment in order to reach their goals.
● Routinely ask questions that encourage students to reflect on barriers they may encounter and that also help them think about ways they can overcome them, in any difficult situation they are facing.
● Routinely ask students who might be able to help them in various situations, or what other resources might be available.
● Help students think through and suggest alternatives when students encounter challenges.
● Offer to help when needed.
● Give authentic feedback when students persevere (e.g., “I know how hard that was, but you never gave up. You kept on going. I’m very proud of you, and you should be proud of yourself.”)
● Routinely encourage students to write in journals or share with partner in pair shares to reflect on why their efforts in certain situations succeeded or failed, and what they might do differently in the future.
● Have students identify their emotions when faced with new challenges.
● Routinely reinforce the connection between effort and outcomes.
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SUGGESTED SOCIAL EMOTIONAL LEARNING ACTIVITIES AND TEACHING PRACTICES
SCIENCE, GRADES 6-8

Social Emotional Learning Competency

Social awareness: The ability to take the perspective of and empathize with others, including those from diverse backgrounds and cultures. The ability to understand social and ethical norms for behavior and to recognize family, school, and community resources and supports.

- Perspective-taking
- Empathy
- Appreciating diversity
- Respect for others
- Recognizing and using resources and supports

Fostering Social awareness may integrate with the following Science Standards:
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New York State P-12 Science Learning Standards

MS-LS4-5; MS-PS1-3; MS-ESS3-3; MS-ETS1-2; MS-ETS1-1; MS-ES1-4; MS-ESS3-5; MS-ESS3-1

SAMPLE SEL ACTIVITIES

- Link science content to the real world to make it culturally relevant for students (e.g., current weather, hurricanes, tornadoes, earthquakes, mineral depletion, water contamination, sinkholes, point source pollution).
- Use analytical thinking to make connections to previous material.
- Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments), and the assumption that theories and laws that describe the natural world operate today as they did in the past, and will continue to do so in the future.
- Teach an age appropriate lesson on how to communicate effectively during public speaking.
- Define and discuss the word empathy as part of vocabulary.
- Discuss the expectations and demands of different settings (e.g., safe behavior during labs).
- Organize and encourage student projects and labs that explore different cultures and celebrate diversity.
- Celebrate scientists who resisted stereotypes or worked to promote justice and equality for all individuals.

3 Adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL), 2017
● Ask students to reflect (including in journals) on questions about the negative effects of stereotyping. Give them opportunities to discuss in pair shares.
 ● Lead project/assignments connected to literature to promote awareness of the rights of others.
 ● Discuss and analyze the origins and negative effects of stereotyping and prejudice, as reflected in literature.
 ● Ask students to write in their journals, or discuss in pair shares, how they try to be helpful in their families or with their peers.
 ● Encourage participation in school-wide community service project.

**GENERAL TEACHING PRACTICES**

● Empower successful students to help others.
● Hold regular class meetings to teach and model social awareness (e.g., community building circles) and to give students an opportunity to share.
● Hold regular class meetings to teach and model social awareness.
● Create small groups that allow students a chance to talk about their learning in science and how their interests relate to science, so that students can learn from each other and begin to see the ways in which other students have similar or different preferences.
● Routinely talk about how others feel in different situations.
● Provide students with opportunities to share in small groups how they feel in different situations.
● Model respect and enthusiasm for learning about diversity – show enthusiasm for literature by introducing authors from many different cultures, show enthusiasm for learning about different cultures.
● Model acceptance of others who have different attitudes and values.
● Use cooperative learning and project based learning strategically to build diverse working groups.
● Model respectful behavior.
● Model concern for the well-being of others.
● Model service to others.
● Give feedback to students in authentic ways when they are respectful toward others. Encourage students to identify how they feel when they were respectful or supportive of another person.
● Ask routine questions throughout the day to draw attention to how students’ behavior is affecting those around them (positive and negative; privately or whole group).
● Routinely give specific and timely feedback to students for accepting direction well from authority figures.
● Develop and revise classroom rules and norms with students to work together to promote understanding and respect.
● Routinely discuss why we have classroom or school rules in the context of current experiences and discuss how these rules affect student behavior.
● Model and routinely promote a school norm of treating others the way you would want to be treated.
● Routinely remind students, in developmentally appropriate ways, anytime they need help, to think about the resources (formal and informal) that are available to them.
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SCIENCE, GRADES 6-8

Social Emotional Learning Competency

Relationship skills: The ability to maintain healthy and rewarding relationships with diverse individuals and groups. The ability to communicate clearly, listen well, cooperate with others, resist inappropriate social pressure, negotiate conflict constructively, and seek help when needed.

- Communication skills
- Social engagement
- Relationship-building
- Conflict resolution skills
- Teamwork
- Seeking help when needed

Fostering Relationship skills may integrate with the following Science Standards:

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New York State P-12 Science Learning Standards

MS-PS1-8; MS-PS2-4; MS-LS2-5; MS-ETS1-2

SAMPLE SEL ACTIVITIES

- Teach lessons to develop speaking and listening skills (e.g., how to identify and prepare one’s message, how to introduce oneself and be sure others are listening, how to speak loudly and clearly so that others can hear, etc.).
- Teach lessons on active listening and give students chances to practice, taking turns in pair shares.
- Teach students how to give feedback in specific situations that will help students improve their communication skills.
- Teach lessons on how to give and receive constructive feedback.
- Teach lessons on how to offer help in a sensitive, appropriate way.
- Teach lessons on how to say thank you and receive help well.
- Break down tasks or projects and have students assign roles for all group members (e.g., gather equipment, recorder, reporter, timekeeper, etc.).
- Link science content to the real world to make it culturally relevant for students (e.g., current weather, hurricanes, earthquakes).
- Use and/or develop a model of simple systems with uncertain and less predictable factors.

Adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL), 2017
● Develop or modify a model-based on evidence to match what happens if a variable or component of a system is changed.
● Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the shapes, composition, and relationships among its parts; therefore, complex natural and designed structures/systems can be analyzed to determine how they function.
● Structures can be designed to serve particular functions by taking into account properties of different materials, and how materials can be shaped and used.
● Construct, use, and/or present an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem.
● Make an oral or written argument that supports or refutes the advertised performance of a device, process, or system, based on empirical evidence concerning whether or not the technology meets relevant criteria and constraints.
● Integrate qualitative and/or quantitative scientific and/or technical information in written text with that contained in media and visual displays to clarify claims and findings.
● Respectfully provide and receive critiques about one’s explanations, procedures, models and questions by citing relevant evidence and posing and responding to questions that elicit pertinent elaboration and detail.
● Ask questions that require sufficient and appropriate empirical evidence to answer.
● Ask questions that can be investigated within the scope of the classroom, outdoor environment, and museums and other public facilities with available resources and, when appropriate, frame a hypothesis based on observations and scientific principles.
● Ask questions that challenge the premise(s) of an argument or the interpretation of a data set.
● Ask questions that arise from careful observation of phenomena, models, or unexpected results, to clarify and/or seek additional information.
● Ask questions to identify and/or clarify evidence and/or the premise(s) of an argument.
● Ask questions to determine relationships between independent and dependent variables and relationships in models.
● Ask questions to clarify and/or refine a model, an explanation, or an engineering problem.
● Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.
● Apply scientific reasoning to show why the data or evidence is adequate for the explanation of conclusion.
● Construct an explanation using models or representations.
● Construct, analyze, and/or interpret graphical displays of data and/or large data sets to identify linear and nonlinear relationships.
● Analyze and interpret data to provide evidence for phenomena.
● Analyze and interpret data to determine similarities and differences in findings.
● Use graphical displays (e.g., maps, charts, graphs, and/or tables) of large data sets to identify temporal and spatial relationships.
● Distinguish between causal and correlational relationships in data.

**GENERAL TEACHING PRACTICES**

● Empower successful students to help others.
● Build relationships with students. Hold regular class meetings to teach and model relationship skills (e.g., community building circles) and to give students an opportunity to share.
● Use role playing to expose children to appropriate relationship skills/behavior.
● Use team-based, collaborative teaching practices such as cooperative learning and project based learning to provide students with opportunities to develop and routinely practice communication, social and assertiveness skills. Be very intentional when creating groups to balance students, so that there are natural leaders who can inspire the others they are working with.
● Give students opportunities to practice social skills in small groups and project based learning activities.
● Hold individual students accountable for the work produced in small groups.
● Give students authentic feedback both positive and negative.
● Model and reinforce effective communication and relationship skills.
● Establish a conflict resolution process that is used any time there is a conflict.
● Model good conflict resolution skills.
● Give students support as needed when they are working out a conflict.
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SUGGESTED SOCIAL EMOTIONAL LEARNING ACTIVITIES AND TEACHING PRACTICES
SCIENCE, GRADES 6-8

Social Emotional Learning Competency

Responsible decision-making: The ability to make constructive choices about personal behavior and social interactions based on ethical standards, safety concerns, and social norms; the ability to make a realistic evaluation of consequences and various actions and to consider the well-being of oneself and others.

- Identifying problems
- Analyzing situations
- Problem-solving
- Evaluating consequences
- Constructive decision making based upon consideration of the wellbeing of self and others

Fostering Responsible decision-making may integrate with the following Science Standards:

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New York State P-12 Science Learning Standards

MS-PS1-2; MS-PS1-3; MS-PS1-6; MS-PS2-4; MS-PS3-5


SAMPLE SEL ACTIVITIES

- Teach students a formula for making good decisions (e.g., stop, calm down, identify the problem, consider the alternatives, make a choice, try it out, re-evaluate).
- Define responsibility and related terms (ethical, safe, values, honesty).
- Discuss higher order values demonstrated by scientists – being a good citizen, ways to help the community or country.
- Walk through the steps of problem-solving.
- Link science content to the real world to make it culturally relevant for students (e.g., current weather, hurricanes, earthquakes).
- Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.
- Gather, read, synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence.
- Compare and critique two arguments on the same topic and analyze whether they emphasize similar or different evidence and/or interpretations of facts.

5 Adapted from the Collaborative for Academic, Social, and Emotional Learning (CASEL), 2017
Construct, use, and/or present an oral and written argument supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon or a solution to a problem.

Make an oral or written argument that supports or refutes the advertised performance of a device, process, or system, based on empirical evidence concerning whether or not the technology meets relevant criteria and constraints.

Construct an explanation that includes qualitative or quantitative relationships between variables that predict and/or describe phenomena.

Respectfully provide and receive critiques about one’s explanations, procedures, models and questions by citing relevant evidence and posing and responding to questions that elicit pertinent elaboration and detail.

Ask questions that require sufficient and appropriate empirical evidence to answer.

Ask questions that can be investigated within the scope of the classroom, outdoor environment, museums and other public facilities with available resources and, when appropriate, frame a hypothesis based on observations and scientific principles.

Ask questions that challenge the premise(s) of an argument or the interpretation of a data set.

Ask questions that arise from careful observation of phenomena, models, or unexpected results, to clarify and/or seek additional information.

Ask questions to identify and/or clarify evidence and/or the premise(s) of an argument.

Ask questions to determine relationships between independent and dependent variables and relationships in models.

Ask questions to clarify and/or refine a model, an explanation, or an engineering problem.

Apply scientific reasoning to show why the data or evidence is adequate for the explanation of conclusion.

Distinguish between causal and correlational relationships in data.

Apply scientific ideas, principles, and/or evidence to construct, revise and/or use an explanation for real-world phenomena, examples, or events.

Construct an explanation using models or representations.

Construct, analyze, and/or interpret graphical displays of data and/or large data sets to identify linear and nonlinear relationships.

Use graphical displays (e.g., maps, charts, graphs, and/or tables) of large data sets to identify temporal and spatial relationships.

Analyze and interpret data to provide evidence for phenomena.

Analyze and interpret data to determine similarities and differences in findings.

Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students’ own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.

GENERAL TEACHING PRACTICES

Hold regular class meetings to teach and model responsible decision making.

Routinely use read aloud to convey the message of responsible decision making.

Use role playing to expose children to appropriate responsible decision making.

Routinely model good decision making.

Support students through the steps of deciding anytime they face a choice or decision.

Give students authentic feedback for making good decisions.
- Develop and enforce class rules and shared norms, discussing them routinely.
- Create, agree to, and help students understand logical consequences, discussing them frequently and whenever appropriate.

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