

New York State P-12 Science Learning Standards

K. Matter and Its Interactions

Students who demonstrate understanding can:

K-PS1-1. Plan and conduct an investigation to test the claim that different kinds of matter exist as either solid or liquid, depending on temperature. [Clarification Statement: Emphasis should be on solids and liquids at a given temperature and that a solid may be a liquid at higher temperature and a liquid may be a solid at a lower temperature.] [Assessment Boundary: Only a qualitative description of temperature, such as hot, warm, and cool, is expected]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> With guidance, plan and conduct an investigation in collaboration with peers. (K-PS1-1) <p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> Record information (observations, thoughts, and ideas). (K-PS1-1) Analyze data from tests of an object or tool to determine if it works as intended. (K-PS1-1) <p style="text-align: center;">----- <i>Connections to Nature of Science</i> -----</p> <p>Scientific Investigations Use a Variety of Methods</p> <ul style="list-style-type: none"> Scientists use different ways to study the world. (K-PS1-1) 	<p>PS1.A: Structure and Properties of Matter</p> <ul style="list-style-type: none"> Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (K-PS1-1) 	<p>Cause and Effect</p> <ul style="list-style-type: none"> Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS1-1) <p>Energy and Matter</p> <ul style="list-style-type: none"> Students observe objects may break into smaller pieces, be put together into larger pieces, or change shapes. (K-PS1-1)
<p><i>Connections to other DCIs in kindergarten: K.ETS1.A (K-PS2-2); K.ETS1.B (K-PS2-2)</i></p> <p><i>Articulation of DCIs across grade-levels: 2.ETS1.B (K-PS2-2); 3.PS2.A (K-PS2-1),(K-PS2-2); 3.PS2.B (K-PS2-1); 4.PS3.A (K-PS2-1); 4.ETS1.A (K-PS2-2)</i></p>		
<p><i>New York State Next Generation Learning Standards</i></p> <p><i>Connections: ELA/Literacy–</i></p> <p>KR1 Develop and answer questions about a text. (K-PS1-1)</p> <p>KW6 Develop questions and participate in shared research and exploration to answer questions and to build and share knowledge. (K-PS1-1)</p> <p>KSL3 Develop and answer questions to clarify what the speaker says. (K-PS1-1)</p> <p><i>Mathematics–</i></p> <p>MP.2 Reason abstractly and quantitatively. (K-PS1-1)</p> <p>NY-K.MD.1 Describe measurable attributes of object(s), such as length or weight, using appropriate vocabulary. (K-PS1-1)</p> <p>NY-K.MD.2 Directly compare two objects with a common measurable attribute and describe the difference. (K-PS1-1)</p> <p>*Connection boxes updated as of September 2018</p>		

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The text in the “Disciplinary Core Ideas” section is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas unless it is preceded by (NYSED).

New York State P-12 Science Learning Standards

K. Forces and Interactions: Pushes and Pulls

Students who demonstrate understanding can:

- K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.** [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] [Assessment Boundary: Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.]
- K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.*** [Clarification Statement: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.] [Assessment Boundary: Assessment does not include friction as a mechanism for change in speed.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1) <p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> Analyze data from tests of an object or tool to determine if it works as intended. (K-PS2-2) <p>-----</p> <p style="text-align: center;"><i>Connections to Nature of Science</i></p> <p>Scientific Investigations Use a Variety of Methods</p> <ul style="list-style-type: none"> Scientists use different ways to study the world. (K-PS2-1) 	<p>PS2.A: Forces and Motion</p> <ul style="list-style-type: none"> Pushes and pulls can have different strengths and directions. (K-PS2-1),(K-PS2-2) Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1),(K-PS2-2) <p>PS2.B: Types of Interactions</p> <ul style="list-style-type: none"> When objects touch or collide, they push on one another and can change motion. (K-PS2-1) <p>PS3.C: Relationship Between Energy and Forces</p> <ul style="list-style-type: none"> A bigger push or pull makes things speed up or slow down more quickly. (secondary to K-PS2-1) <p>ETS1.A: Defining Engineering Problems</p> <ul style="list-style-type: none"> A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (secondary to K-PS2-2) 	<p>Cause and Effect</p> <ul style="list-style-type: none"> Simple tests can be designed to gather evidence to support or refute student ideas about causes. (K-PS2-1),(K-PS2-2)

Connections to other DCIs in kindergarten: **K.ETS1.A** (K-PS2-2); **K.ETS1.B** (K-PS2-2)

Articulation of DCIs across grade-levels: **2.ETS1.B** (K-PS2-2); **3.PS2.A** (K-PS2-1),(K-PS2-2); **3.PS2.B** (K-PS2-1); **4.PS3.A** (K-PS2-1); **4.ETS1.A** (K-PS2-2)

New York State Next Generation Learning Standards Connections:

ELA/Literacy –

- KR1** Develop and answer questions about a text. (K-PS2-2)
- KW6** Develop questions and participate in shared research and exploration to answer questions and to build and share knowledge. (K-PS2-1)
- KSL3** Develop and answer questions to clarify what the speaker says. (K-PS2-2)

Mathematics –

- MP.2** Reason abstractly and quantitatively. (K-PS2-1)
- NY-K.MD.1** Describe measurable attributes of object(s), such as length or weight, using appropriate vocabulary. (K-PS2-1)
- NY-K.MD.2** Directly compare two objects with a common measurable attribute and describe the difference. (K-PS2-1)

*Connection boxes updated as of September 2018

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The text in the “Disciplinary Core Ideas” section is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas unless it is preceded by (NYSSED).

New York State P-12 Science Learning Standards

K. Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

Students who demonstrate understanding can:

- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.**
[Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and that all living things need water and other materials to live, grow, and thrive.]
- K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.** [Clarification Statement: Examples of plants and animals changing their environment could include a squirrel digs in the ground to hide its food and tree roots can break concrete.]
- K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.** [Clarification Statement: Examples of relationships could include that deer eat buds and leaves, therefore, they usually live in forested areas, and grasses need sunlight so they often grow in meadows. Plants, animals, and their surroundings make up a system.]
- K-ESS3-3. Communicate solutions that will reduce the impact of humans on living organisms and non-living things in the local environment. *** [Clarification Statement: Examples of human impact on the environment (land, water, air, plants, and animals) could include cutting trees to produce paper and using resources to produce bottles. Examples of solutions could include reusing paper and recycling cans and bottles.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> ▪ Use a model to represent relationships in the natural world. (K-ESS3-1) <p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> ▪ Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-LS1-1) <p>Engaging in Argument from Evidence Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).</p> <ul style="list-style-type: none"> ▪ Construct an argument with evidence to support a claim. (K-ESS2-2) <p>Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.</p> <ul style="list-style-type: none"> ▪ Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas. (K-ESS3-3) <p style="text-align: center;">----- <i>Connections to Nature of Science</i></p> <p>Scientific Knowledge is Based on Empirical Evidence</p> <ul style="list-style-type: none"> ▪ Scientists look for patterns and order when making observations about the world. (K-LS1-1) 	<p>LS1.C: Organization for Matter and Energy Flow in Organisms</p> <ul style="list-style-type: none"> ▪ (NYSEd) All animals need food, air, and water in order to live, grow, and thrive. Animals obtain food from plants or from other animals. Plants need water, air, and light to live, grow, and thrive. (K-LS1-1) <p>ESS2.E: Biogeology</p> <ul style="list-style-type: none"> ▪ Plants and animals can change their environment. (K-ESS2-2) <p>ESS3.A: Natural Resources</p> <ul style="list-style-type: none"> ▪ Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1) <p>ESS3.C: Human Impacts on Earth Systems</p> <ul style="list-style-type: none"> ▪ Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (secondary to K-ESS2-2),(K-ESS3-3) <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> ▪ Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem’s solutions to other people. (secondary to K-ESS3-3) 	<p>Patterns</p> <ul style="list-style-type: none"> ▪ Patterns in the natural and human designed world can be observed and used as evidence. (K-LS1-1) <p>Cause and Effect</p> <ul style="list-style-type: none"> ▪ Events have causes that generate observable patterns. (K-ESS3-3) <p>Systems and System Models</p> <ul style="list-style-type: none"> ▪ Systems in the natural and designed world have parts that work together. (K-ESS2-2),(K-ESS3-1)

Connections to other DCIs in kindergarten: K.ETS1.A (K-ESS3-3)

Articulation of DCIs across grade-levels: 1.LS1.A (K-LS1-1),(K-ESS3-1); 2.LS2.A (K-LS1-1); 2.ETS1.B (K-ESS3-3); 3.LS2.C (K-LS1-1); 3.LS4.B (K-LS1-1); 4.ESS2.E (K-ESS2-2);

New York State Next Generation Learning Standards Connections:

ELA/Literacy–

KR1 Develop and answer questions about a text. (K-ESS2-2)

KW1 Use a combination of drawing, dictating, oral expression and/or emergent writing to state an opinion pieces about a familiar topic, personal experience and state a reason to support that topic. (K-ESS2-2)

KW2 Use a combination of drawing, dictating, oral expression, and/or emergent writing to name a familiar topic and supply information. (K-ESS2-2),(K-ESS2-3)

KW7 Develop questions and participate in shared research and exploration to answer questions and to build and share knowledge. (K-LS1-1)

KSL5 Create and/or utilize existing visual displays to support descriptions. (K-ESS3-1)

Mathematics–

MP.2 Reason abstractly and quantitatively. (K-ESS3-1)

MP.4 Model with mathematics. (K-ESS3-1)

NY-K.CC Counting and Cardinality (K-ESS3-1)

NY-K.MD.2 Directly compare two objects with a common measurable attribute and describe the difference. (K-LS1-1)

*Connection boxes updated as of September 2018

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The text in the “Disciplinary Core Ideas” section is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas unless it is preceded by (NYSEd).

New York State P-12 Science Learning Standards

K. Weather and Climate

Students who demonstrate understanding can:

- K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.** [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]
- K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.*** [Clarification Statement: Emphasis is on local forms of severe weather and local resources available for preparedness measures.]
- K-PS3-1. Make observations to determine the effect of sunlight on Earth’s surface.** [Clarification Statement: Examples of Earth’s surface could include sand, soil, rocks, and water] [Assessment Boundary: Assessment of temperature is limited to relative measures such as warmer/cooler.]
- K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.*** [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

Asking Questions and Defining Problems

Asking questions and defining problems in grades K–2 builds on prior experiences and progresses to simple descriptive questions that can be tested.

- Ask questions based on observations to find more information about the designed world. (K-ESS3-2)

Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.

- Make observations (firsthand or from media) to collect data that can be used to make comparisons. (K-PS3-1)

Analyzing and Interpreting Data

Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.

- Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions. (K-ESS2-1)

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.

- Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem. (K-PS3-2)

Obtaining, Evaluating, and

Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.

- Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world.

-----Connections to Nature of Science

Scientific Investigations Use a Variety of Methods

- Scientists use different ways to study the world. (K-PS3-1)

Science Knowledge is Based on Empirical Evidence

- Scientists look for patterns and order when making observations about the world. (K-ESS2-1)

Disciplinary Core Ideas

PS3.B: Conservation of Energy and Energy Transfer

- Sunlight warms Earth’s surface. (K-PS3-1),(K-PS3-2)

ESS2.D: Weather and Climate

- Weather is the combination of sunlight, wind, snow or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time. (K-ESS2-1)

ESS3.B: Natural Hazards

- Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events. (K-ESS3-2)

ETS1.A: Defining and Delimiting an Engineering

Problem

- Asking questions, making observations, and gathering information are helpful in thinking about problems. (secondary to K-ESS3-2)

Crosscutting Concepts

Patterns

- Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. (K-ESS2-1)

Cause and Effect

- Events have causes that generate observable patterns. (K-PS3-1),(K-PS3-2),(K-ESS3-2)

-----Connections to Engineering, Technology and Applications of Science

Interdependence of Science, Engineering, and Technology

- People encounter questions about the natural world every day. (K-ESS3-2)

Influence of Engineering, Technology, and Science on Society and the Natural World

- People depend on various technologies in their lives; human life would be very different without technology. (K-ESS3-2)

Connections to other DCIs in kindergarten: **K.ETS1.A** (K-PS3-2),(K-ESS3-2); **K.ETS1.B** (K-PS3-2)

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The text in the “Disciplinary Core Ideas” section is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas unless it is preceded by (NYSED).

New York State P-12 Science Learning Standards

Articulation of DCIs across grade-levels: 1.PS4.B (K-PS3-1),(K-PS3-2); 2.ESS1.C (K-ESS3-2); 2.ESS2.A (K-ESS2-1); 2.ETS1.B (K-PS3-2); 3.ESS2.D (K-PS3-1),(K-ESS2-1); 3.ESS3.B

New York State Next Generation Learning Standards Connections:

ELA/Literacy–

KR1 Develop and answer questions about a text. (K-ESS3-2)

KW6 Develop questions and participate in shared research and exploration to answer questions and to build and share knowledge. (K-PS3-1),(K-PS3-2),(K-ESS2-1)

KSL3 Develop and answer questions to clarify what the speaker says. (K-ESS3-2)

Mathematics–

MP.2 Reason abstractly and quantitatively. (K-ESS2-1)

MP.4 Model with mathematics. (K-ESS2-1),(K-ESS3-2)

NY-K.CC Counting and Cardinality (K-ESS2-1),(K-ESS3-2)

NY-K.MD.1 Describe measurable attributes of objects, such as length or weight, using appropriate vocabulary. (K-ESS2-1)

NY-K.MD.2 Directly compare two objects with a common measurable attribute and describe the difference. (K-PS3-1),(K-PS3-2)

NY-K.MD.3 Classify objects into given categories; count the objects in each category and sort the categories by count. (K-ESS2-1)

*Connection boxes updated as of September 2018

New York State P-12 Science Learning Standards

K-2.Engineering Design		
Students who demonstrate understanding can:		
<p>K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</p> <p>K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</p> <p>K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>		
The performance expectations above were developed using the following elements from the NRC document <i>A Framework for K-12 Science Education</i> :		
Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions.</p> <ul style="list-style-type: none"> ▪ Ask questions based on observations to find more information about the natural and/or designed world. (K-2-ETS1-1) ▪ Define a simple problem that can be solved through the development of a new or improved object or tool. (K-2-ETS1-1) <p>Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.</p> <ul style="list-style-type: none"> ▪ Develop a simple model based on evidence to represent a proposed object or tool. (K-2-ETS1-2) <p>Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.</p> <ul style="list-style-type: none"> ▪ Analyze data from tests of an object or tool to determine if it works as intended. (K-2-ETS1-3) 	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <ul style="list-style-type: none"> ▪ A situation that people want to change or create can be approached as a problem to be solved through engineering. (K-2-ETS1-1) ▪ Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-2-ETS1-1) ▪ Before beginning to design a solution, it is important to clearly understand the problem. (K-2-ETS1-1) <p>ETS1.B: Developing Possible Solutions</p> <ul style="list-style-type: none"> ▪ Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (K-2-ETS1-2) <p>ETS1.C: Optimizing the Design Solution</p> <ul style="list-style-type: none"> ▪ Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (K-2-ETS1-3) 	<p>Structure and Function</p> <ul style="list-style-type: none"> ▪ The shape and stability of structures of natural and designed objects are related to their function(s). (K-2-ETS1-2)
<p><i>Connections to K-2-ETS1.A: Defining and Delimiting Engineering Problems include:</i> Kindergarten: K-PS2-2, K-ESS3-2</p> <p><i>Connections to K-2-ETS1.B: Developing Possible Solutions to Problems include:</i> Kindergarten: K-ESS3-3, First Grade: 1-PS4-4, Second Grade: 2-LS2-2</p> <p><i>Connections to K-2-ETS1.C: Optimizing the Design Solution include:</i> Second Grade: 2-ESS2-1</p>		
<p><i>Articulation of DCIs across grade-bands: 3-5.ETS1.A (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.B (K-2-ETS1-2),(K-2-ETS1-3); 3-5.ETS1.C (K-2-ETS1-1),(K-2-ETS1-2),(K-2-ETS1-3)</i></p>		
<p><i>New York State Next Generation Learning Standards Connections:</i></p> <p><i>ELA/Literacy –</i></p> <p>2R1 Develop and answer to demonstrate understanding of key ideas and details in a text. (K-2-ETS1-1)</p> <p>2W7 Recall and represent information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>2SL5 Include digital media and/or visual displays in presentations to clarify ideas, thoughts, and feelings. (K-2-ETS1-2)</p> <p><i>Mathematics –</i></p> <p>MP.2 Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.4 Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>MP.5 Use appropriate tools strategically. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>NY-2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)</p> <p>*Connection boxes updated as of September 2018</p>		

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea. The text in the "Disciplinary Core Ideas" section is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas unless it is preceded by (NYSSED).