

[Elementary Science]

How to read this document:

This curriculum map outlines, for each grade, the topics that your student will learn about. In each topic area students work to learn and apply the Common Core/Next Generation Standards that are relevant to their content while acquiring a set of important understandings that apply to the topic. These understandings are the big ideas that we expect students to carry forward with them as they move from grade to grade.

[Grade level]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
This is the subject that the students will learn about.	Focus Standards are the skills that students will learn and apply while studying the topic of this unit.	Essential Understandings are the big ideas that students should understand by the end of the unit.	Assessment(s)/Product(s) are the student work products that students will do as part of the unit to demonstrate their knowledge of the skills and understandings.

[Kindergarten]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
Trees	<p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.</p> <p>K-ESS2-2. Construct an argument supported by evidence for how plants and animals can change the environment to meet their needs.</p> <p>K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals and the places they live.</p>	<ul style="list-style-type: none"> ▪ Trees require water, soil nutrients, light and air ▪ Different structures serve different functions needed for growth, survival and reproduction ▪ Trees have life cycles that include seeds, mature trees and the formation of seeds. ▪ Trees cause changes to the environment 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Teacher and Student observation
Animals Two by Two	<p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.</p>	<ul style="list-style-type: none"> ▪ Animals require air, food, water and space 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Teacher and Student observation

	<p>K-ESS2-2. Construct an argument supported by evidence for how plants and animals can change the environment to meet their needs.</p> <p>K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals and the places they live.</p>	<ul style="list-style-type: none"> ▪ Different structures serve different functions needed for growth, survival and reproduction ▪ Animal behavior is influenced by cues and environment ▪ Young animals closely resemble their parents 	<ul style="list-style-type: none"> ▪ Hatch chicks (if applicable)
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[1st Grade]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
Air & Weather	<p>K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface</p> <p>K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area</p> <p>K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.</p> <p>K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p>	<ul style="list-style-type: none"> ▪ Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation. ▪ Earth materials include air, which has specific measurable properties ▪ Weather changes day to day and season to season ▪ Objects in the sky have patterns of movement that can be observed and described. 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Conducting Investigations ▪ End of module assessment
New Plants	<p>1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals</p>	<ul style="list-style-type: none"> ▪ Plants require water, soil nutrients, light and air and their availability influence growth 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Fully mature plant ▪ Conducting Investigations

	<p>use their external parts to help them survive, grow, and meet their needs</p> <p>1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive</p> <p>1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</p>	<ul style="list-style-type: none"> ▪ Distinct environment support different types of plants ▪ Different structures serve different functions needed for growth, survival and reproduction ▪ Plants have life cycles that may include sprouting, growing leaves, flowers and seeds, and dying. 	<ul style="list-style-type: none"> ▪ End of module assessment
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[2nd Grade]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
Pebbles, sand & silt	<p>2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties</p> <p>2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.</p> <p>2-PS1-3. Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.</p>	<ul style="list-style-type: none"> ▪ Earth materials include solid rocks and soils ▪ Physical properties of earth materials make them useful in different ways ▪ Natural forces such as ice, rain, wind, landslides, etc break apart and smooth rock 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Conducting Investigations ▪ End of module assessment

	<p>2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p>		
Insects	<p>2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.</p> <p>3-LS2-1. Construct an argument that some animals form groups that help members survive.</p> <p>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p>	<ul style="list-style-type: none"> ▪ Insects require air, food, water and space ▪ Insects have life cycles that include being born, developing into adulthood, reproducing and dying. ▪ Insect behavior is influenced by cues and environment ▪ All insects change the environment, some in good ways, some in bad ways 	<ul style="list-style-type: none"> ▪ Mini science journals ▪ Conducting Investigations ▪ End of module assessment

[3rd Grade]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
Water	<p>2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p> <p>2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.</p> <p>2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area</p>	<ul style="list-style-type: none"> ▪ Earth materials include solid rocks and soils, and gases of the atmosphere ▪ Earth materials have varied chemical and physical properties ▪ Water covers most of the earth's surface and moves via the water cycle ▪ Clouds affect weather and climate 	<ul style="list-style-type: none"> ▪ Science journals ▪ P&P acrostic poem ▪ Movement piece for the water cycle ▪ Conducting Investigations ▪ End of module assessment

	2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.		
Structure of Life	<p>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p> <p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p>	<ul style="list-style-type: none"> ▪ Organisms have basic needs and can survive only in environments in which their needs can be met ▪ Each plant and animal has different structures that serve different functions in growth, survival, and reproduction ▪ Many characteristics of an organism are inherited from the parents 	<ul style="list-style-type: none"> ▪ Science journals ▪ PRC2 Pre/Post assessment ▪ Conducting Investigations ▪ End of module assessment

[4th Grade]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
Human Body	3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	<ul style="list-style-type: none"> ▪ Organisms have different structures that serve different functions in growth, and survival ▪ Humans have distinct body structures for form, movement and protection ▪ The human organism has systems for movement, control, coordination and circulation ▪ Some characteristics result from interaction with the environment 	<ul style="list-style-type: none"> ▪ Science journals ▪ Conducting Investigations ▪ End of module assessment

<p>Earth Materials</p>	<p>4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p> <p>4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</p> <p>4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.</p> <p>4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.</p>	<ul style="list-style-type: none"> ▪ Earth materials include rocks ▪ Rocks have different physical and chemical properties that make them useful ▪ Earth materials provide many resources to humans 	<ul style="list-style-type: none"> ▪ Science journals ▪ Conducting Investigations ▪ End of module assessment
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[5th Grade]

Topic / Unit	Focus Standards (Next Generation Science Standards)	Enduring Understanding	Assessment(s) / Product(s)
<p>Environments</p>	<p>5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p> <p>5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to</p>	<ul style="list-style-type: none"> ▪ Growth and survival of organism depend on the biotic and abiotic factors in the environment ▪ Lack of resources and other factors limits population growth ▪ Organisms change because of changes in their environment 	<ul style="list-style-type: none"> ▪ Science journals ▪ Conducting Investigations ▪ End of module assessment

	<p>provide evidence about the distribution of water on Earth</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.</p>	<ul style="list-style-type: none"> ▪ Behavior is one response organisms can have to their environment ▪ The sun provides energy, which is passed between organisms in the food chain 	
Mixtures & Solutions	<p>5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.</p> <p>5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.</p> <p>5-PS1-3. Make observations and measurements to identify materials based on their properties</p> <p>5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	<ul style="list-style-type: none"> ▪ Substances have characteristic properties, such as solubility ▪ A mixture of substances can be separated into original substances by using properties (such as magnetism, size, etc) ▪ More than 100 known elements combine to produce compounds. ▪ Compounds account for all living substances on Earth ▪ Substances react chemically in characteristic ways with other substances to form new substances 	<ul style="list-style-type: none"> ▪ Science journals ▪ End of module assessment
Family Living and Human Sexuality	<p>National Health Education Standards Students will comprehend concepts related to health promotion and disease prevention to enhance health.</p> <p>Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.</p>	<ul style="list-style-type: none"> ▪ There are both physical and emotional changes that can be expected to experience during puberty ▪ Proper personal hygiene, exercise, and good nutrition are important in maintaining a strong, healthy body, as well as a positive body image. 	<ul style="list-style-type: none"> ▪ Science journals ▪ End of module assessment