

Second Grade Science Curriculum Connections

Physical Science

State Standard(s) and Practices	Objectives	FOSS/EIE Kits	Journeys Connection	Other Resources
2-PS1-1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	Students will: <ul style="list-style-type: none"> Be able to describe and classify matter as a solid or liquid based on observable properties. Be able to describe and classify matter based upon observable properties. 	FOSS Kit: SOLIDS and LIQUIDS Investigation 1 part 1-2, Investigation 2 Part 1, Investigation 3 Part 1, 3, 4 EIE Kit: A Work in Progress: Improving A Play Dough Process		<ul style="list-style-type: none"> Brain Pop Jr. video Science Notebooks Matching Matter Sorting Printable States of Matter book Moby Max lesson “What is Matter?” ***will have to sign in Mystery Science: Physical Science: Matter and Its Interactions https://mysteryscience.com/materials/properties-phases-of-matter
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.	Students will: <ul style="list-style-type: none"> Differentiate that different properties are suited to different purposes. 	FOSS Kit: SOLIDS and LIQUIDS Investigation 1 parts 1-3, possibly part 4, Investigation 2 part 2-3, Extension: Build a paper bridge EIE Kit: A Sticky Situation: Designing Walls		Mystery Science: Physical Science: Matter and Its Interactions https://mysteryscience.com/materials/properties-phases-of-matter
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.	Students will: <ul style="list-style-type: none"> Recognize that objects can be broken apart and reconstructed to create a new object. Demonstrate the ability to create a new object from a disassemble object. 	FOSS Kit: SOLIDS and LIQUIDS Investigation 1 Part 2-3 EIE Kit: A Sticky Situation: Designing Walls		Mystery Science: Physical Science: Matter and Its Interactions https://mysteryscience.com/materials/properties-phases-of-matter
2-PS1-4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and	Students will: <ul style="list-style-type: none"> Identify which changes can reverse and which cannot. 			<ul style="list-style-type: none"> Change or Stay Powerpoint Brain Pop Jr. “Changing States of Matter” video Moby Max lesson “Changing States” Homemade Ice Cream Science Notebooks

some cannot.	<ul style="list-style-type: none"> Understand the different causes of heating or cooling an object. 			
Earth and Space Science				
Standard(s) and Practices	Objectives	FOSS/EIE Kits	Journeys Connection	Other Resources
2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.	<p>Students will:</p> <ul style="list-style-type: none"> Compare and contrast events. Some events happen very quickly; others occur very slowly, over a time much longer than one can observe. Create examples of events could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks which happens slowly. 	FOSS Kit: PEBBLES, SAND, and SILT Investigations 1 Emphasize how the rocks are formed.		<ul style="list-style-type: none"> Brain Pop Jr. https://jr.brainpop.com/science/land/Learn360 Betterlesson.com Moby Max Earth Science “The changing surface of the earth”
2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	<p>Students will:</p> <ul style="list-style-type: none"> Understand that wind and water can change the shape of the land. Design and demonstrate solutions to erosion. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. Examples: Dikes and windbreaks. 	FOSS Kit: PEBBLES, SAND, and SILT Investigation 2 parts 1-2, combined parts 3-4		<ul style="list-style-type: none"> Mystery Science: Earth and Space Science: Earth's Systems and Place in the Universe Moby Max Earth Science “Rocks, Minerals, and Soil” Videos: Weathering and Erosion http://learn360.infobase.com/PortalPlaylists.aspx?wID=128986&xtid=74262 Moby Max Earth Science “Weather and Seasons” http://betterlesson.com/next_gen_science/browse/2083/ngss-2-ps-physical-sciences?from=megamenu_domain
2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	<p>Students will:</p> <ul style="list-style-type: none"> Recognize that maps show where things are located. Create a map to show the kinds of land and water in any area. 			<ul style="list-style-type: none"> Mystery Science: Earth and Space Science: Earth's Systems and Place in the Universe Moby Max Earth Science Natural Resources Cross Cutting into Social Studies Maps http://betterlesson.com/next_gen_science/browse/2083/ngss-2-ps-physical-sciences?from=megamenu_domain

	<ul style="list-style-type: none"> Develop a model to represent the shapes and kinds of land and bodies of water in an area. 			
2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.	<p>Students will:</p> <ul style="list-style-type: none"> Identify different types and bodies of water. Water is found in the ocean, rivers, lakes, and ponds. Understand that water exists as solid ice and in liquid form. 			<ul style="list-style-type: none"> Mystery Science: Earth and Space Science: Earth's Systems and Place in the Universe Cross Cutting into Social Studies Maps http://betterlesson.com/next_gen_science/browse/2083/ngss-2-ps-physical-sciences?from=megamenu_domain

Engineering and Technology

Standard(s) and Practices	Objectives	FOSS/EIE Kits	Journeys Connection	Other Resources
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>Students will:</p> <ul style="list-style-type: none"> Understand that engineering can be used to solve problems. Ask questions, make observations, and gather information about an identified problem. Before beginning to design a solution, it is important to clearly understand the problem. 	<p>EIE Kit: Just Passing Through: Designing Model Membranes</p> <p>It's A Long Way Down: Designing Parachutes</p>		<ul style="list-style-type: none"> What is an Engineer? http://learn360.infobase.com/PortalPlaylists.aspx?wID=128986&xtid=74262 Moby Max Physical Science "Work and Simple Machines" and "Motion and Forces" Engineering Lesson Resource Website: http://betterlesson.com/next_gen_science/browse/2103/ngss-k-2-ets-engineering-technology-and-applications-of-science?from=breadcrumb_domain
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>Students will:</p> <ul style="list-style-type: none"> Engineer and create a new or improved object or tool to solve the problem. Understand that 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. 	<p>EIE Kit: Just Passing Through: Designing Model Membranes</p> <p>It's A Long Way Down: Designing Parachutes</p>		<ul style="list-style-type: none"> Building Activities to withstand human use or natural forces (wind, water, earthquake, etc.) http://thestemlaboratory.com/stem-activities-for-kids/#_a5y_p=4873548

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.	Students will: <ul style="list-style-type: none"> Compare and contrast designs because there is always more than one possible solution to a problem 	EIE Kit: Just Passing Through: Designing Model Membranes It's A Long Way Down: Designing Parachutes		
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Life Science

Standard(s) and Practices	Objectives	FOSS/EIE Kits	Journeys Connection	Other Resources
2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.	Students will: <ul style="list-style-type: none"> Identify the characteristics of different habitats. Explain why certain habitats are suitable to certain living things. 	EIE Kit: Just Passing Through: Designing Model Membranes		<ul style="list-style-type: none"> Mystery Science: Life Science: Biological Evolution: Unity and Diversity <ul style="list-style-type: none"> https://mysteryscience.com/biodiversity/animal-biodiversity https://mysteryscience.com/animals/animal-survival-heredity What is a habitat? Moby Max lesson "Habitats" What's a habitat booklet Habitats PowerPoint What is a habitat lesson plan Survival of the Fittest Lesson Plan example Can they all live together? Lesson Plan example Forest Habitat <ul style="list-style-type: none"> Moby Max lesson "What is a Forest Habitat?" Brain Pop Jr video Lesson Plan example Wetland/March Land Habitat <ul style="list-style-type: none"> Moby Max lesson "What is a Wetland Habitat?" Lesson plan example Lesson plan example (plants) Brain Pop Jr video Arctic Habitat <ul style="list-style-type: none"> Brain Pop Jr. video Polar bear in a desert video Magic School Bus video Desert Habitat <ul style="list-style-type: none"> Moby Max lesson "What is a Desert Habitat?" Brain Pop Jr. video

				<ul style="list-style-type: none"> • Ocean Habitat <ul style="list-style-type: none"> ○ Moby Max lesson “What is an Ocean Habitat?” ○ Brain Pop Jr. video • Rainforest Habitat <ul style="list-style-type: none"> ○ Lesson plan example ○ Magic School bus video ○ Brain Pop Jr. video ○ Example Habitats project ○ Shoebox Habitat project ○ Lesson plan example ○ Betterlesson.com
<p>2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p>	<p>Students will:</p> <ul style="list-style-type: none"> • Understand that plants depend on water and light to grow. • Test one variable at a time when determining if plants need sunlight and water to grow. 			<ul style="list-style-type: none"> • Brain Pop Jr https://jr.brainpop.com/science/plants/ • Learn 360 http://learn360.infobase.com/PortalPlaylists.aspx?wid=128986&xtid=74541 • Moby Max Life Science “Plants” • Little Bind for Little Hands http://littlebinsforlittlehands.com/easy-seed-experiments-kids/ • Moby Max Life Science “Plants and Animals Working Together” • Mystery Science: Life Science Ecosystems: Interactions, Energy, and Dynamics <ul style="list-style-type: none"> ○ https://mysteryscience.com/plants/plant-adaptations ○ https://mysteryscience.com/flowers/plant-life-cycle-heredity
<p>2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>	<p>Students will:</p> <ul style="list-style-type: none"> • Recognize that plants depend on animals for pollination or to move their seeds around. • Develop a simple model that mimics the function of an animal dispersing seeds or pollinating plants. 			<ul style="list-style-type: none"> • Moby Max Life Science “Animals” and “Life Cycles” may link how pollinators are important in plant life cycle. • Pollination Activity: \\Swefps01w8\swe\HOMESTAFF\DR08138\2nd Grade Social Studies\FREEPollinationDemonstration.pdf • Mystery Science: Life Science Ecosystems: Interactions, Energy, and Dynamics <ul style="list-style-type: none"> ○ https://mysteryscience.com/plants/plant-adaptations ○ https://mysteryscience.com/flowers/plant-life-cycle-heredity