

Unit: Motion & Stability: Forces & Interactions

Timeline: 4 weeks

Grade K

<u>PERFORMANCE EXPECTATIONS</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>SUGGESTED RESOURCES</u>
<p>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.</p>	<p>1. PS2.A: Forces and Motion</p> <ul style="list-style-type: none"> •Pushes and pulls can have different strengths and directions. •Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. <p>2. 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. <p>[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.]</p>	<ul style="list-style-type: none"> •With guidance, plan and conduct an investigation in collaboration with peers. 	<p>Chapter 8 Test (pp. 19-20)</p>	<p>Scott Foresman Chapter 8</p> <p>Books</p> <ul style="list-style-type: none"> -<u>How Things Move</u> by John Peter Morris (Science Reader) -<u>Motion</u> by Darlene Stille <p>Videos</p> <ul style="list-style-type: none"> -http://www.brainpopjr.com/science/forces/pushesandpulls/ <p>Hands-On Activities</p> <ul style="list-style-type: none"> -wagon, object on string, rolling and stopping a ball-pushing a student on a swing <p>Force and Motion Printables</p>

Unit: Motion & Stability: Forces & Interactions (Cont.)

Grade K

<p>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.</p>	<p>1. PS2.A: Forces and Motion</p> <ul style="list-style-type: none">•Pushes and pulls can have different strengths and directions.•Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.•Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. <p>2. 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. <p>[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.]</p>	<ul style="list-style-type: none">• Analyze data from tests of an object or tool to determine if it works as intended.	<p>Chapter 8 Test (pp. 19-20)</p>	<p>Scott Foresman Chapter 8</p> <p>Books</p> <ul style="list-style-type: none">-<u>Speed Machines</u> by Ian Graham <p>Hands-On Activities</p> <ul style="list-style-type: none">-dominoes-ramps (ramp for car, slide)-marble maze-collisions (ball hitting wall)
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Unit: Energy

Timeline: 3 Weeks

Grade K

<u>PERFORMANCE EXPECTATIONS</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>SUGGESTED RESOURCES</u>
<p>K-PS3-1. Make observations to determine the effect of sunlight on Earth’s surface.</p>	<p>1. PS3.B: Conservation of Energy and Energy Transfer</p> <ul style="list-style-type: none"> •Sunlight warms Earth’s surface. <p>[Clarification Statement: Examples of Earth’s surface could include sand, soil, rocks, and water]</p>	<ul style="list-style-type: none"> •Make observations (firsthand or from media) to collect data that can be used to make comparisons. 	<p>Chapter 7 Test (pp. 17-18)</p>	<p>Scott Foresman Chapter 7</p> <p>Books</p> <ul style="list-style-type: none"> -<u>Heat and Light</u> by John Peter Morris (Science Reader) -<u>Day and Night</u> by Adam Finnegan (Science Reader) -<u>Energy</u> by Darlene Stille -<u>Day and Night</u> by JoAnne Nelson (Big Book) -<u>What the Sun Sees; What the Moon Sees</u> by Nancy Tafuri -<u>Good Morning, Good Night</u> by Michael Grejniec
<p>K-PS3-2. Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on Earth’s surface.</p>	<p>1. PS3.B: Conservation of Energy and Energy Transfer</p> <ul style="list-style-type: none"> •Sunlight warms Earth’s surface. <p>[Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]</p>	<ul style="list-style-type: none"> •Use tools and materials provided to design and build a device that solves a specific problem or a solution to a specific problem 	<p>Monsters Need Shade Performance Assessment</p>	<ul style="list-style-type: none"> -<u>Sun</u> by Susan Canizares -<u>The Moon</u> by Martha Rustad <p>Videos</p> <ul style="list-style-type: none"> - http://www.brainpopjr.com/science/space/sun/ - http://www.brainpopjr.com/science/space/moon/ <p>Hands-On Activities</p> <ul style="list-style-type: none"> -sand, rock, soil, water under a heat lamp versus not under a heat lamp <p>Energy Printables</p> <p>Day and Night Printables</p>

<u>PERFORMANCE EXPECTATION</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>SUGGESTED RESOURCES</u>
<p>K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.</p>	<p>1. LS1.C: Organization for Matter and Energy Flow in Organisms</p> <ul style="list-style-type: none"> All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. <p>[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.]</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. 	<p>Chapter 1 Test (pp. 1-2)</p> <p>Chapter 2 Test (pp. 3-4)</p>	<p>Scott Foresman Chapters 1 & 2</p> <p>Books</p> <ul style="list-style-type: none"> -<u>Needs of Plants and Animals</u> by Michelle Dubourg (Science Reader) -<u>Growing and Changing</u> by Michelle Dubourg (Science Reader) <p>Videos</p> <ul style="list-style-type: none"> -http://www.brainpopjr.com/science/plants/partsofaplant/ - http://www.brainpopjr.com/science/animals/frogs/ <p>What Do Plants and Animals Need? Printables</p>

Unit: Earth's Systems

Timeline: 5 Weeks

Grade K

<u>PERFORMANCE EXPECTATION</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>RESOURCES</u>
<p>K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.</p>	<p>1. ESS2.D: Weather and Climate <ul style="list-style-type: none"> 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. <p>[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.]</p> </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. 	<p>Chapter 5 Test (pp. 11-12)</p>	<p>Scott Foresman Chapter 5</p> <p>Books <ul style="list-style-type: none"> -<u>Weather and Seasons</u> by Tract A. Zeiser (Science Reader) <p>Videos <ul style="list-style-type: none"> - http://www.brainpopjr.com/science/weather/seasons/ - http://www.brainpopjr.com/science/weather/spring/ - http://www.brainpopjr.com/science/weather/summer/ - http://www.brainpopjr.com/science/weather/fall/ - http://www.brainpopjr.com/science/weather/winter/ - Seasons Smart Notebook <p>Weather Printables</p> </p></p>

Unit: Earth's Systems (Cont.)

Grade K

<p>K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p>	<p>ESS2.E: Biogeology •Plants and animals can change their environment.</p> <p>ESS3.C: Human Impacts on Earth Systems •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.</p> <p>[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.]</p>	<p>•Use observations (firsthand or from media) to describe patterns in the natural world in order to answer scientific questions.</p>		<p>Books <u>What If You Have Animal Hair</u> by Sandra Markle <u>Hibernation</u> by Carolyn Scrace <u>Monarch Butterflies: Mysterious Travelers</u> by Bianca Lavies <u>Hiding Out: Camouflage In the Wild</u> by James Martin <u>Find the Snake</u> by Cate Foley <u>Where In the Wild</u> by David Schwartz</p> <p>Hands On Activities -Glove/Spoon Hands - Toilet Paper Roll Goggles & Dropping Clothespins - Butterfly Camouflage Classroom Search</p>
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Unit: Earth and Human Activity

Timeline: 6 Weeks

Grade K

<u>PERFORMANCE EXPECTATION</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>RESOURCES</u>
<p>K-ESS3-1. Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.</p>	<p>1. ESS3.A: Natural Resources •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.</p> <p>[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.]</p>	<p>•Use a model to represent relationships in the natural world.</p>	<p>Chapter 3 Test (pp. 5-6)</p>	<p>Scott Foresman Chapter 3</p> <p>Books</p> <p>-<u>Plants and Animals All Around</u> by Aimee Cable (Science Reader)</p> <p>Videos</p> <p>- http://www.brainpopjr.com/science/habitats/rainforests/</p> <p>- http://www.brainpopjr.com/science/habitats/desert/</p> <p>- http://www.brainpopjr.com/science/habitats/forests/</p> <p>- http://www.brainpopjr.com/science/habitats/freshwaterhabitats/</p> <p>- http://www.brainpopjr.com/science/habitats/oceanhabitats/</p> <p>- http://www.brainpopjr.com/science/habitats/arctichabitats/</p> <p>- http://www.brainpopjr.com/science/conservation/</p> <p>-Guess Where I Live? Printables</p> <p>-Exploring Nature Printables</p>

Unit: Earth and Human Activity (Cont.)

Grade K

<p>K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p>	<p>1. ESS3.B: Natural Hazards <ul style="list-style-type: none"> •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. </p> <p>2. ETS1.A: Defining and Delimiting an Engineering Problem <ul style="list-style-type: none"> •Asking questions, making observations, and gathering information are helpful in thinking about problems. </p> <p>[Clarification Statement: Emphasis is on local forms of severe weather.]</p>	<ul style="list-style-type: none"> •Read grade-appropriate texts and/or use media to obtain scientific information to describe patterns in the natural world. 	<p>Weekly Weather Graphing Activity</p>	<p>Books <u>Wild Weather</u> by Melvin Berger <u>The Violent Earth</u> by Jonathan Rutland <u>Tornado Alert</u> by Franklyn M. Branley <u>Why Why Why Do Tornadoes Spin</u> by Chris Oxlade <u>Blizzards</u> by Liza N. Burby</p> <p>Videos <ul style="list-style-type: none"> - https://jr.brainpop.com/science/land/fastlandchanges/ -Tornado PowerPoint -Hurricane PowerPoint </p> <p>Hands On Activities: <ul style="list-style-type: none"> - Tornado In a Jar - Rain In a Bottle - Cloud Project - Making Snow </p>
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Unit: Earth and Human Activity (Cont.)

Grade K

<p>K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment</p>	<p>ESS3.C: Human Impacts on Earth Systems • 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.</p> <p>ETS1.B: Developing Possible Solutions • 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> <p>[Clarification Statement: Examples of human impact on the land 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.]</p>	<p>• Communicate solutions with others in oral and/or written forms using models and/or drawings that provide detail about scientific ideas</p>	<p>Natural Resources/Not a Natural Resource Sort</p>	<p>Books <u>Earth Day</u> by Mir Tamim Ansary <u>Reduce, Reuse, Recycle</u> by Rozanne Lanczak Williams <u>Recycle: A Handbook For Kids</u> by Gail Gibbons <u>Garbage</u> by Robert Mass</p> <p>Videos <u>Taking Care of Our Earth</u> (VHS in library) - https://jr.brainpop.com/science/conservation/naturalresources/ - https://jr.brainpop.com/science/conservation/reducereuserecycle/</p> <p>Hands On Activities - Nature Walk/Scavenger Hunt - Letter to Mother Earth</p>
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Unit: Engineering Design

Timeline: 3 Weeks & Monthly Activities

Grade K

<u>PERFORMANCE EXPECTATION</u>	<u>CORE IDEA</u>	<u>PRACTICES</u>	<u>ASSESSMENTS</u>	<u>RESOURCES</u>
<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>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. •Asking questions, making observations, and gathering information are helpful in thinking about problems. •Before beginning to design a solution, it is important to clearly understand the problem. 	<ul style="list-style-type: none"> •Ask questions based on observations to find more information about the natural and/or designed world(s). •Define a simple problem that can be solved through the development of a new or improved object or tool. 	<p>Chapter 10 Test (pp. 25-26)</p> <p>Challenge Observations</p>	<p>Scott Foresman Chapter 10</p> <p>Books</p> <ul style="list-style-type: none"> -<u>How Things Work</u> by Adam Finnegan (Science Reader) <p>Videos</p> <ul style="list-style-type: none"> - http://www.brainpopjr.com/science/forces/simplemachines/ <p>Hands-On Activities</p> <ul style="list-style-type: none"> -Monthly School-Wide Challenge -Putting a flashlight back together -Gnome bridge cross -Boat Float <p>Simple Machines Printables</p> <p>Monthly Challenges Printables</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>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. 	<ul style="list-style-type: none"> •Develop a simple model based on evidence to represent a proposed object or tool. 		
<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>	<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. 	<ul style="list-style-type: none"> •Analyze data from tests of an object or tool to determine if it works as intended. 		