

<p><b>G</b> r a d e  K</p> <p><b>Weather</b> K-PE-ESS2-1: Use and share observations of local weather conditions to describe patterns over time. K-PE-ESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.*</p>	<p><b>Wood</b> K-PE-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><b>Trees</b> K-PE-ESS2-2: Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. K-PE-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.* K-PE-LS1-1: Use observations to describe patterns of what plants and animals (including humans) need to survive.</p>
<p><b>G</b> r a d e  1</p> <p><b>Organisms</b> 1-PE-LS1-1: Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.* 1-PE-LS1-2: Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. 1-PE-LS3-1: Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.</p>	<p><b>Sunshine &amp; Shadows</b> 1-PE-ESS1-1: Use observations of the sun, moon, and stars to describe patterns that can be predicted. 1-PE-ESS1-2: Make observations at different times of year to relate the amount of daylight to the time of year. K-PE-PS3-1: Make observations to determine the effect of sunlight on Earth's surface.</p>	<p><b>Force &amp; Motion</b> K-PE-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. K-PE-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><b>G</b> r a d e  2</p> <p><b>Butterflies</b> 3-PE-LS1-1: Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. 3-PE-LS2-1: Construct an argument that some animals form groups that help members survive. 3-PE-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. 3-PE-LS3-2: Use evidence to support the explanation that traits can be influenced by the environment. 3-PE-LS4-1: Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. 3-PE-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. 3-PE-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. 3-PE-LS4-4: Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.</p>	<p><b>Solids &amp; Liquids</b> 2-PE-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 2-PE-PS1-2: Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.* 2-PE-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. 2-PE-PS1-4: Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p>	<p><b>Rocks &amp; Soil</b> 4-PE-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time.  2-PE-ESS1-1: Use information from several sources to provide evidence that Earth events can occur quickly or slowly.  4-PE-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.* (build something safe from an earthquake - engineering task - example from EIE - <a href="http://www.eie.org/eie-curriculum/curriculum-units/stick-mud-evaluating-landscape">http://www.eie.org/eie-curriculum/curriculum-units/stick-mud-evaluating-landscape</a> - or <a href="http://www.eie.org/eie-curriculum/curriculum-units/solid-rock-replicating-artifact">http://www.eie.org/eie-curriculum/curriculum-units/solid-rock-replicating-artifact</a>)</p>

<p><b>G</b> r a d e 3</p> <p><b>Weather</b> 3-PE-ESS2-1: Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. 3-PE-ESS2-2: Obtain and combine information to describe climates in different regions of the world. 3-PE-ESS3-1: Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. K-PE-ESS2-1: Use and share observations of local weather conditions to describe patterns over time. K-PE-ESS3-2: Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.* 5-PE-ESS2-1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interacts</p>	<p><b>Chemical Tests</b> 5-PE-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. 5-PE-PS1-3: Make observations and measurements to identify materials based on their properties. 5-PE-PS1-4: Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	<p><b>Plants Kits</b> 2-PE-LS2-1: Plan and conduct an investigation to determine if plants need sunlight and water to grow. 2-PE-LS2-2: Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.* EIE - Hand pollinator - Adding an engineering task 2-PE-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats. - Add in lessons about how the plants would grow in different habitats - show videos - what would happen if ... in different habitats 2-PE-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats. 5-PE-PS3-1: Use models to describe that that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p>
<p><b>G</b> r a d e 4</p> <p><b>Land &amp; Water and Rocks Kit</b> 2-PE-ESS2-1: Compare multiple solutions designed to slow or prevent a wind or water from changing the shape of the land.* 2-PE-ESS2-2: Develop a model to represent the shapes and kinds of land and bodies of water in an area. 2-PE-ESS2-3: Obtain information to identify where water is found on Earth and that it can be solid or liquid. 4-PE-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. 4-PE-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features. 4-PE-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.  5-PE-ESS2-2: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth. 5-PE-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>	<p><b>Force &amp; Motion</b> 3-PE-PS2-1.: Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. 3-PE-PS2-2: Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. sound, light, heat, and electric currents. 4-PE-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide. 4-PE-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.</p>	<p><b>Electricity (Magnets)</b> 3-PE-PS2-3: Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. 3-PE-PS2-4: Define a simple design problem that can be solved by applying scientific ideas about magnets.* 4-PE-PS3-2: Make observations to provide evidence that energy can be transferred from place to place by 4-PE-PS3-4: Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.*</p>

G  
r  
a  
d  
e  
5

**Sound, Light & Senses**  
 4-PE-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.  
 4-PE-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

**Sound**  
 4-PE-PS4-1: Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.  
 4-PE-PS4-2: Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.  
 4-PE-PS4-3: Generate and compare multiple solutions that use patterns to transfer information.\*

**Sun, Moon, & Stars**  
 5-PE-ESS1-1: Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from the Earth.  
 5-PE-ESS1-2: Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.  
 5-PE-PS2-1: Support an argument that the gravitational force exerted by Earth on objects is directed down.  
 5-PE-PS3-1: Use models to describe that that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

**Microworlds**  
 5-PE-LS1-1: Support an argument that plants get the materials they need for growth chiefly from air and water.  
 5-PE-LS2-1: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.  
 5-PE-PS1-1: Develop a model to describe that matter is made of particles too small to be seen.