

Science Kindergarten Scope & Sequence

Time Frame	Unit	NGSS Standard(s)/Outcome(s)	Essential/Guiding Questions
Fall and Spring	Interdependent Relationships in Ecosystems	<p>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.]</p> <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. [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>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. [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>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.* [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>	<ul style="list-style-type: none"> ● How are the needs of humans, plants and animals the same? ● How does the Monarch butterfly depend on milkweed? ● How can we help increase the number of Monarch butterflies?

<p>February March, (after the measur- em-ent unit in math)</p>	<p>Forces and Interactions</p>	<p><u>K-PS2-1:</u> Plan and conduct an investigation to plan and 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. Assessments do not include non-contact pushes or pulls such as those produced by magnets.</p> <p><u>K-PS2-2:</u> 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.)</p>	<ul style="list-style-type: none"> ● How can you make an object move? ● How can you make an object go faster/slower/change direction and stop? ● What are some of the causes for change in motion? ● What happens when objects collide? ● How are pushes and pulls the same and how are they different? ● How can you plan and use data to solve problems?
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<p>Through out the year</p>	<p>Weather and Climate</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> <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>	<ul style="list-style-type: none"> ● How can weather patterns and conditions change over time? ● How do weather patterns and conditions connect to the different seasons? ● What types of severe weather occur in our region? ● What is the effect of the sun on Earth's surfaces? ● Why is one surface cooler/warmer than another? ● How does shade affect the temperature of a surface? ● Why does shade have that effect on the various surfaces?