



Kindergarten Science

Essential Standards Extended Guide

KINDERGARTEN SCIENCE

Background information about this document:

In response to requests from schools and districts for guidance on essential standards, committees of educators from around Idaho collaborated in the summer of 2024 to categorize science standards into two groups:

- **Essential standards** are explicitly taught, assessed multiple times, and receive targeted interventions for students who have not yet reached proficiency.
- **Supporting standards** are taught to reinforce essential standards and may or may not be formally assessed.

This guidance helps LEAs prioritize the most critical standards, recognizing that not all standards are of equal importance. This document serves as a resource—not a mandate—to assist local efforts. Importantly, this work did not remove or revise any of the adopted Idaho Content Standards and is intended to refocus time and effort.

Physical Science

Essential Standards Standards are to be explicitly taught, assessed more than once, and intervened upon in this cluster of standards.	Supporting Standards and Content Taught to support the learning of essential standards and may or may not be formally assessed.
K-PS-1.1 With guidance and support, 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.	Pushes and pulls can have different strengths and directions. (K-PS-1.1, K-PS-1.2) Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS-1.1, K-PS-1.2) When objects touch or collide, they push on one another and can change motion. (K-PS-1.1) A bigger push or pull makes things speed up or slow down more quickly. (K-PS-1.1)
K-PS-1.2 With guidance and support, analyze data to determine if a design solution works as intended to change the motion of an object with a push or a pull.	A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (K-PS-1.2)
K-PS-2.2 Design and build a structure that will reduce the warming effect of the Sun’s energy on a material.	Sunlight warms Earth’s surface. (K-PS-2.1, K-PS-2.2)
	Supporting Standard: K-PS-2.1 Students who demonstrate understanding can: Make observations to determine the effect of the Sun’s energy on the Earth’s surface.

Further explanation:

1. 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.
2. 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.
3. Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the Sun on Earth’s surface.

Assessment limits:

1. Assessment is limited to different relative strengths or different directions, but not both at the same time. Assessment does not include non-contact pushes or pulls such as those produced by magnets.
2. Assessment does not include friction as a mechanism for change in speed.

Life Science

Essential Standards Standards are to be explicitly taught, assessed more than once, and intervened upon in this cluster of standards.	Supporting Standards and Content Taught to support the learning of essential standards and may or may not be formally assessed.
K-LS-1.1 Use observations to describe how plants and animals are alike and different in terms of how they live and grow	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. (K-LS-1.1)

Further explanation:

1. Examples of observations could include that animals need to take in food, but plants produce their own; 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.

Earth and Space Science

Essential Standards Standards are to be explicitly taught, assessed more than once, and intervened upon in this cluster of standards.	Supporting Standards and Content Taught to support the learning of essential standards and may or may not be formally assessed.
K-ESS-1.1 Use and share observations of local weather conditions to describe variations in patterns throughout the year	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 patterns over time. (K-ESS-1.1) The four seasons occur in a specific order due to their weather patterns. (K-ESS-1.1)
K-ESS-2.1 Use a model to represent the relationship between the needs of different plants and animals and the places they live.	Living things need water, air, and resources from the land. They live in places that have the things they need. (K-ESS-2.1)
K-ESS-2.2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	Some kinds of weather are more likely than others in a given region. Weather scientists forecast the weather so that local communities can prepare for and respond to these events. (K-ESS-2.2) Asking questions, making observations, and gathering information are helpful in thinking about problems. (K-ESS-2.2)
K-ESS-2.3 Communicate ideas that would enable humans to interact in a beneficial way with the land, water, air, and/or other living things in the local environment.	Things that people do can affect the world around them. People can reduce their effects on the land, water, air, and other living things. (K-ESS-2.3)

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	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. (K-ESS-2.3)
	Supporting Standard: K-ESS-1.2 With guidance and support, use evidence to construct an explanation of how plants and animals interact with their environment to meet their needs.

Further explanation:

1. 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.
2. 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.
3. Emphasis is on local forms of weather. Examples relating weather forecasting to preparing and responding could include using forecasts to plan for staying indoors during severe weather, going to cooling centers during heat waves, and covering windows before storms.
4. Examples of human influence on the land could include planting trees after a burn, protecting farm fields from erosion, or keeping plastic trash out of waterways.

Assessment Limit:

1. Assessment of quantitative observations limited to whole numbers less than 20 and relative measures such as warmer/cooler.

For Questions Contact

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