First Grade Science

Essential Standards Extended Guide

FIRST GRADE 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.**
1-PS-1.1 With guidance and support, plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	Sound can make matter vibrate, and vibrating matter can make sound. (1-PS-1.1)
1-PS-1.3 With guidance and support, plan and conduct investigations to determine the effect of placing materials in the path of a beam of light.	Some materials allow light to pass through them, others allow only some light through, and others block all the light, creating a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1-PS-1.3)
1-PS-1.4 Design and build a device that uses light or sound to communicate over a distance.	People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS-1.4)
	Supporting Standard: 1-PS-1.2 With guidance and support, make observations to construct an evidence-based explanation that objects in darkness can be seen only when illuminated.

Further explanation:

1. Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.
2. Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).
3. Examples of devices could include a light source to send signals, paper cup and string “telephones,” and a pattern of drumbeats.

Assessment limits:

1. Assessment does not include the speed of light
2. Assessment does not include technological details for how communication devices work.

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.**
1-LS-1.1 Design and build 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.	All organisms have external parts. Different animals use their body parts in different ways to see; hear; grasp objects; protect themselves; move from place to place; and seek, find, and take in food, water, and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS-1.1) Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS-1.1)
1-LS-2.1 Make observations to construct an evidence-based explanation that offspring are similar to, but not identical to, their parents	Young animals are very much, but not exactly, like their parents. Plants also are very much, but not exactly, like their parents. (1-LS-2.1) Individuals of the same kind of plant or animal are recognizable as similar but can also vary in many ways. (1-LS-2.1)
	Supporting Standard: 1-LS-1.2 Students who demonstrate understanding can: Obtain information to identify patterns of behavior in parents and offspring that help offspring survive.
	Supporting Standard: 1-LS-1.3 Students who demonstrate understanding can: Use classification supported by evidence to differentiate between living and non-living items.

Further explanation:

1. Examples of human problems that can be solved by mimicking plant or animal solutions could include: designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and detecting intruders by mimicking eyes and ears.

2. Examples of patterns could include features plants or animals share. Examples of observations could include that leaves from the same kind of plant are the same shape but can differ in size, and that a particular breed of dog looks like its parents, but is not exactly the same.

Assessment Limit:

1. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.

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.
1-ESS-1.1 Use observations of the Sun, Moon, and stars to describe patterns that can be predicted.	Patterns of the motion of the Sun, Moon, and stars in the sky can be observed, described, and predicted. (1-ESS-1.1)
1-ESS-1.2 Make observations at different times of year to relate the amount of daylight to the time of year.	Seasonal patterns of sunrise and sunset can be observed, described, and predicted. (1-ESS1.2) Seasons are created by weather patterns for a particular region and time. Local patterns create four distinct seasons. (1-ESS-1.2)

Further explanation:

1. Examples of patterns could include that the Sun and Moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our Sun are visible at night but not during the day.
2. Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.

Assessment Limit:

1. Assessment of star patterns is limited to stars being seen at night and not during the day.
2. Assessment is limited to relative amounts of daylight, not quantifying the hours or time of daylight.

For Questions Contact
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