



Second Grade Science

Essential Standards Extended Guide

SECOND 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.
2-PS-1.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	Different kinds of matter exist and many of them can be solid, liquid, or gas, depending on temperature. Matter can be described and classified by its observable properties. (2-PS-1.1)
2-PS-1.4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. (2-PS-1.4)
	Supporting Standard: 2-PS-1.2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
	Supporting Standard: 2-PS-1.3 Make observations to construct an evidence-based argument that objects, when disassembled, may be used to create new objects using the same set of components.

Further explanation:

1. Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.
2. Examples of reversible changes could include materials such as water and butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.

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.
2-LS-1.1 Plan and conduct an investigation to determine the impact of light and water on the growth of plants.	Plants depend on water and light to grow. (2-LS-1.1)
2-LS-1.2 Develop a model that demonstrates how plants depend on animals for pollination or the dispersal of seeds.	Some plants can depend on animals, wind, and water for pollination or to move their seeds around. (2-LS-1.2) 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. (2-LS-1.2)
2-LS-2.1 Make observations of plants and animals to compare the diversity of life in different habitats.	There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS-2.1)

Further explanation:

1. Assessment is limited to testing one variable at a time.
2. Emphasis is on the interaction between animals and plants rather than all forms of pollination and seed dispersal.
3. Emphasis is on the diversity of living things in each of a variety of different habitats.

Assessment Limit:

1. Assessment does not include inheritance or animals that undergo metamorphosis or hybrids.
2. Assessment does not include specific animal and plant names in specific habitats.

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.
2-ESS-2.1* Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	Wind and water can change the shape of the land. (2-ESS-2.1) Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (2-ESS-2.1)
2-ESS-2.2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.	Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS-2.2)
	Supporting Standard: 2-ESS-1.1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.
	Supporting Standard: 2-ESS-2.3 Students who demonstrate understanding can: Obtain information to identify where water is found on Earth and that it can be solid or liquid.

Further explanation:

1. Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.

Assessment Limit:

1. Assessment does not include quantitative scaling in models.

For Questions Contact

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