Third Grade Science

Essential Standards Extended Guide

THIRD 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.**
3-PS-1.1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	Each force acts on one particular object with both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative, additions of forces are used at this level.) (3-PS-1.1) Objects in contact exert forces on each other (3-PS-1.1)
3-PS-1.2 Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	Force applied to an object can alter the position and motion of that object: revolve, rotate, float, sink, fall, and at rest. (3-PS-1.2) The patterns of an object's motion in various situations can be observed and measured; when that past motion exhibits a regular pattern, future motion can be predicted from it. (Boundary: Technical terms, such as magnitude, velocity, momentum, and vector quantity, are not introduced at this level, but the concept that some quantities need both size and direction to be described is developed.) (3-PS-1.2)
3-PS-1.3 Ask questions to determine cause and effect relationships of static electricity or magnetic interactions between two objects not in contact with each other.	Electric and magnetic forces between a pair of objects do not require that the objects be in contact. The sizes of the forces in each situation depend on the properties of the objects and their distances apart. For forces between two magnets, the size of the force also depends on their orientation relative to each other. (3-PS-1.3, 3-PS-1.4)
	Supporting Standard: 3-PS-1.4 Define a problem that can be solved by applying scientific ideas about magnets.

Further explanation:

1. Examples could include that an unbalanced force on one side of a ball can make it start moving; and that balanced forces pushing on a box from both sides will not produce any motion at all.

2. Examples of motion with a predictable pattern could include a child swinging in a swing, a ball rolling back and forth in a bowl, and two children on a see-saw.
3. An example of static electricity force could include the force on hair from an electrically charged balloon. Examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paper clips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.

Assessment limits:

1. Assessment is limited to one variable at a time: number, size, or direction of forces. Assessment does not include quantitative force size, only qualitative and relative. Assessment is limited to gravity being addressed as a force that pulls objects down.
2. Assessment does not include technical terms such as period and frequency.
3. Assessment is limited to forces produced by objects that can be manipulated by students, and electrical interactions are limited to static electricity.

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.
3-LS-1.1 Develop models to demonstrate that living things, although they have unique and diverse life cycles, all have birth, growth, reproduction, and death in common.	Reproduction is essential to the continued existence of every kind of organism. Plants and animals have unique and diverse life cycles. (3-LS-1.1)
3-LS-3.1 Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exist in a group of similar organisms.	Many characteristics of organisms are inherited from their parents. (3-LS-3.1) Different organisms vary in how they look and function because they have different inherited information. (3-LS-3.1)
3-LS-3.2 Use evidence to support the explanation that traits can be influenced by the environment.	Many characteristics involve both inheritance and environment. Characteristics result from individuals' interactions with the environment, which can range from diet to learning. (3-LS3.2) The environment affects the traits that an organism develops. (3-LS-3.2)
3-LS-3.3 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.	For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS-3.3)
	Supporting Standards: 3-LS-2.1 Construct an argument that some animals form groups that help members survive.

Further explanation:

1. Changes organisms go through during their life form a pattern.
2. Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on non-human organisms.
3. Examples of the environment affecting a trait could include that normally tall plants grown with insufficient water are stunted, and a pet dog that is given too much food and little exercise may become overweight.
4. Examples of evidence could include needs, characteristics of the organisms, and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.

Assessment Limit:

1. Assessment of plant life cycles is limited to those of flowering plants. Assessment does not include details of human reproduction.

2. Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.

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.**
3-ESS-1.1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.	Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next. (3-ESS-1.1)
3-ESS-1.2 Obtain and combine information to describe climates in different regions of the world.	Climate describes a range of an area's typical weather conditions and the extent to which those conditions vary over years. (3-ESS-1.2)
3-ESS-2.1 Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.	A variety of natural hazards result from natural processes. Humans cannot eliminate natural hazards but can take steps to reduce their impacts. (3-ESS-2.1)

Further explanation:

1. Examples of data could include average temperature, precipitation, and wind direction.
2. Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind-resistant roofs, and lightning rods.

Assessment Limit:

1. Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.

For Questions Contact
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