

Grade 2 Science Standards

Earth & Space Science

2.ESS1 *Earth's Place in the Universe*

- 2.ESS1.1 Use observations from several sources to provide evidence that Earth events can occur quickly or slowly.*[^]** [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.]

2.ESS2 *Earth's Systems*

- 2.ESS2.1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.*[^]** [Clarification Statement: 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 Boundary: Assessment does not include explicit naming of hydrosphere, biosphere, atmosphere, and geosphere.]
- 2.ESS2.2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.** [Clarification Statement: Examples of model could include a map identifying components of specific bodies of water (e.g. creek, ocean, lake, river) and shapes of land describing their relationship (e.g. playground, park, hill).][Assessment Boundary: Assessment does not include quantitative scaling in models.]
- 2.ESS2.3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.** [Clarification Statement: Emphasis is on having students identify reliable sources (e.g texts, digital media, observation) to identify patterns where water is found as a solid or liquid source.][Assessment Boundary: Assessment does not include relative amounts of saltwater and freshwater on Earth.]

Engineering, Technology, and the Application of Science

2.ETS1 *Engineering Design*

- 2.ETS1.1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.** [Clarification Statement: Identifying a problem or need is necessary before designing a solution. For example, students can describe desired features or tools to solve a simple problem.][Assessment Boundary: Assessment does not include information regarding constraints (restraints or limitations).]
- 2.ETS1.2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.** [Clarification Statement: Solutions or designs can be addressed in stages before describing the overall plan or design.][Assessment Boundary: Assessment is limited to the development of a single, simple solution illustrated by a sketch, drawing, or physical model.]
- 2.ETS1.3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.** [Clarification Statement: Observations and measurements are collected and information is displayed to compare the performance of two objects. Students test solutions and collect data to identify the strengths and weaknesses of each object. Objects could

feature shape, thickness, strength, speed, etc.][Assessment Boundary: Assessment is limited to sharing observations about the strengths and weaknesses of the analyzed data. Students will not be asked to propose an improved design based on the analyzed data.]

Life Science

2.LS2 Ecosystems: Interactions, Energy, and Dynamics

2.LS2.1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.

[Clarification Statement: Plants depend on air, water, light, and minerals (in the soil) to grow. Examples of an investigation could include plant growth with different amounts of sunlight or water.] [Assessment Boundary: Assessment is limited to testing one variable at a time. Assessment is limited to the effects of sunlight and water on plant growth.]

2.LS2.2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.* [Clarification Statement: Examples of dispersing seeds or pollinating plants could include a simple model that describes plants and animals disperse seeds or pollinate plants (i.e squirrel cheek pouches that transport seeds or pollen that sticks to bees fuzzy body). Simple models could be a simple sketch, drawing, or physical model to communicate the relationship between structure and function.] [Assessment Boundary: Assessment does not include food webs or the health of ecosystems.]

2.LS4 Biological Evolution: Unity and Diversity

2.LS4.1 Make observations of plants and animals to compare the diversity of life in different habitats.

[Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]

Physical Science

2.PS1 Matter and Its Interactions

2.PS1.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

[Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.][Assessment Boundary: Assessment is limited to classification by observable properties and does not include Moh's hardness scale or identification of materials based on their properties.]

2.PS1.2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.* [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.][Assessment Boundary: Assessment of quantitative measurements is limited to length.]

2.PS1.3 Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. [Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.][Assessment Boundary: Assessment is limited to objects large enough to be seen without magnification or advanced technology.]

2.PS1.4 **Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.** [Clarification Statement: 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 Boundary: Assessment does not include conservation of mass or the mixing of substances to form new substances.]

*This performance expectation integrates traditional science content with engineering through a practice or disciplinary core idea.

^This performance expectation references [a proximal connection to climate change](#) and the disciplinary core ideas: Earth's Systems and Earth and Human Activity.