Washington Science

Second Grade

Physical Science

How do we know which materials are right for the job?

1 Use evidence, data, and investigation to describe matter and its properties; apply learned understandings about properties to identify and explain materials suitable for a given purpose. WA 2.PS1

- 1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. 2-PS1-1
- 2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. [Engineering] [ESE] 2-PS1-2
- 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. 2-PS1-3
- 4 Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. 2-PS1-4

Life Science

How do plants get what they need to grow and reproduce?

2 Use evidence, investigation, and modeling to show and explain how matter, energy, and sometimes animals are needed for plants to grow and reproduce. WA 2.LS2

- 1 Plan and conduct an investigation to determine if plants need sunlight and water to grow. [ESE] 1-LS1-1
- 2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants. [Engineering] 1-LS1-2

How many different plants and animals can live in a habitat?

4 Use evidence and data to identify and compare the variety of living things in different habitats. WA 2.LS4

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

Earth and Space Sciences

What do Earth's features look like and how do they change?

1 Use research, evidence, and data to show and explain quick and slow changes in the Earth's appearance. WA 2.ESS1

- 1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly. [Climate] 1-ESS1-1

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2 Use research, maps, and modeling to understand and represent land and water on Earth; use engineering thinking to analyze and compare solutions to erosion changing the land's appearance. WA 2.ESS2

1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. [Engineering] [ESE] 2-ESS2-1

2 Develop a model to represent the shapes and kinds of land and bodies of water in an area. [ESE] 2-ESS2-2

3 Obtain information to identify where water is found on Earth and understand that it can be solid or liquid. [ESE] 2-ESS2-3

K–2 Engineering, Technology, and Applications of Science

How do we engineer solutions to a problem?

1 Use modeling, investigation, and data to design, test, and improve solutions to simple problems that can be solved through engineering. WA 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. K-2-ETS1-1

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. K-2-ETS1-2

3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. K-2-ETS1-3

Environmental and Sustainability Education

How do we work together to ensure a healthy environment and sustainable economy for future generations?

1 Through project-based learning, synthesize information from multiple sources about local ecological, social, and economic systems to communicate and act upon solutions for environmental problems in the community with partners, including tribes. WA.2.ESE.1

1 Research multiple perspectives to understand and communicate ideas about how money, society, and the environment are connected to environmental problems and solutions found in class, at school, at home, and in local tribal communities. 2.ESE.1-1

2 Use the school grounds and campus to identify connections between the natural world and human-made structures, then gather, analyze, and draw conclusions from data gathered during field-based learning. 2.ESE.1-2

3 Apply knowledge and skills to select a cost-effective approach to solve an environmental problem among many alternative solutions, then take individual or collective action to authentically communicate about or implement their solution. 2.ESE.1-3