Washington Science

First Grade

Physical Science

What can light and sound do?

4 Use evidence, data, and investigation to show and explain how light and sound behave; use learned understandings to design a solution to a communication problem. WA.1.PS2

- 1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-1
- 2 Make observations to construct an evidence-based account that objects can be seen only when illuminated. 1-PS2-2
- 3 Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. 1-PS2-3
- 4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. [Engineering] 1-PS2-4

Life Science

How do the structures and behaviors of living things help them survive?

1 Use research and investigation to show and explain how plants and animals use parts and behaviors to survive: use learned understandings to engineer a solution to a human problem. WA 1.LS1

- 1 Use materials to design 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. [Engineering] [ESE] 1-LS1-1
- 2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive. 1-LS1-2

How are living things similar and different from their parents?

3 Use observational evidence to show and explain similarities and differences between plant and animal parents and their offspring. WA 1.LS3

- 1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents. 1-LS3-1

Earth and Space Sciences

How do the sun, moon, and stars cause patterns in what we see on Earth?

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2 Use evidence, data, and observation to notice and describe patterns in daylight and in the movement of the sun, moon, and stars. WA 1.ESS1

1 Use observations of the sun, moon, and stars to describe patterns that can be predicted. 1-ESS1-1

2 Make observations at different times of year to relate the amount of daylight to the time of year. 1-ESS1-2

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 1.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

Environmental and Sustainability Education

Apply project-based learning to communicate about and act upon solutions for environmental problems in partnership with local communities, including tribes. WA.1.ESE.1

1 **Design an investigation to explore how money, society, and the environment are connected to environmental problems and sustainability solutions in local and tribal communities.** 1.ESE.1-1

2 **Explore school grounds to engage in inquiry and explain scientific phenomena related to how natural settings and human-built structures influence each other.** 1.ESE.1-2

3 **Apply the knowledge and skills necessary to communicate about and act on personal and collective solutions for sustainable communities.** 1.ESE.1-3