

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**
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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**
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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**
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Earth and Space Sciences

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

- 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**