

Grade 4

Energy

- 1 Use evidence to construct an explanation relating the speed of an object to the energy of that object. 4-PS3-1
- 2 Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2
- 3 Ask questions and predict outcomes about the changes in energy that occur when objects collide. 4-PS3-3
- 4 Apply scientific ideas to design, test, and refine a device that converts energy from one form to another 4-PS3-4

Waves and Their Applications in Technologies for Information Transfer

- 1 Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. 4-PS4-1
- 2 Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. 4-PS4-2
- 3 Generate and compare multiple solutions that use patterns to transfer information. 4-PS4-3

From Molecules to Organisms: Structures and Processes

- 1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 4-LS1-1
- 2 Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. 4-LS1-2

Earth's Place in the Universe

- 1 Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. 4-ESS1-1

Earth's Systems

- 1 Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. 4-ESS2-1
- 2 Analyze and interpret data from maps to describe patterns of Earth's features. 4-ESS2-2

Earth and Human Activity

- 1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.** 4-ESS3-1
 - 2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.** 4-ESS3-2
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Engineering Design

- 1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.** 3-5-ETS1-1
- 2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.** 3-5-ETS1-2
- 3 Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.** 3-5-ETS1-3