

# Grade 4

## Energy PS3

- 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 PS4

- 1 Develop and use a model of waves to describe patterns in terms of amplitude and wavelength and to show that waves can cause objects to move. 4.PS4.1
- 2 Develop a model to describe the 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: Structure and Processes LS1

- 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 ESS1

- 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 ESS2

- 1 Plan and conduct an investigation to gather evidence on the effects of water, ice, wind, and vegetation on the rate of weathering and erosion. 4.ESS2.1
- 2 Analyze and interpret data from maps to describe patterns of Earth's features. 4.ESS2.2

## Earth and Human Activity ESS3

- 1 Obtain and combine information to describe that energy and fuels are derived from renewable and non-renewable resources and how 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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