

Grade 4

Adopted 2020

Physical Science PS1

1. The faster an object moves the more energy it has. PS1.4.1

- a. Use evidence to construct an explanation relating the speed of an object to the energy of that object. PS1.4.1.A
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2. Energy can be moved from place to place. PS1.4.2

- a. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat and electric currents. PS1.4.2.A
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3. When objects collide contact forces transfer so as to change objects' motion. PS1.4.3

- a. Ask questions and predict outcomes about the changes in energy that occur when objects collide. PS1.4.3.A
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4. Energy can be produced, used or released by converting stored energy. PS1.4.4

- a. Apply scientific ideas to design, test and refine a device that converts energy from one form to another. PS1.4.4.A
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5. Waves are regular patterns of motion. PS1.4.5

- a. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. PS1.4.5.A
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6. An object can be seen when light reflected from its surface enters the eyes. PS1.4.6

- a. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. PS1.4.6.A
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7. Patterns can encode, send, receive and decode information. PS1.4.7

- a. Generate and compare multiple solutions that use patterns to transfer information. PS1.4.7.A
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Life Science LS2

1. Organisms have both internal and external structures that serve various functions. LS2.4.1

- a. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior and reproduction. LS2.4.1.A
 - b. 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. LS2.4.1.B
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Earth and Space Science ESS3

1. Earth has changed over time. ESS3.4.1

- a. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. ESS3.4.1.A
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2. Four major earth systems interact. ESS3.4.2

- a. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. ESS3.4.2.A
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3. Earth's physical features occur in patterns. ESS3.4.3

- a. Analyze and interpret data from maps to describe patterns of Earth's features. ESS3.4.3.A
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4. Energy and fuels that humans use are derived from natural sources and their use affects the environment in multiple ways. ESS3.4.4

- a. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. ESS3.4.4.A
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5. A variety of hazards result from natural process; humans cannot eliminate natural hazards but can reduce their impacts' effect. ESS3.4.5

- a. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. ESS3.4.5.A