

# Grade 4

Adopted 2022

## Physical Science

### 4-PS-1. Energy 4-PS-1

1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. 4-PS-1.1
2. Make observations to provide evidence that energy can be transferred by heat, sound, light, and electric currents. 4-PS-1.2
3. Ask questions and predict outcomes about the changes in energy that occur when objects collide. 4-PS-1.3
4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. 4-PS-1.4

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### 4-PS-2. Waves 4-PS-2

1. Develop a model of a simple mechanical wave to describe patterns of amplitude and wavelength and that waves can cause objects to move. 4-PS-2.1
2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. 4-PS-2.2
3. Generate and compare multiple solutions that use patterns to transfer information. 4-PS-2.3

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## Life Science

### 4-LS-1. From Molecules to Organisms: Structures and Processes 4-LS-1

1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 4-LS-1.1
2. Use a model to describe how animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. 4-LS-1.2

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## Earth and Space Science

### 4-ESS-1. Earth's Place in the Universe 4-ESS-1

1. Identify evidence from patterns in rock formations and fossils in rock layers for changes in a landscape over time to support an explanation for changes in a landscape over time. 4-ESS-1.1

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**4-ESS-2. Earth's Systems** 4-ESS-2

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-ESS-2.1
2. Analyze and interpret data from maps to describe patterns of Earth's features. 4-ESS-2.2

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**4-ESS-3. Earth and Human Activity** 4-ESS-3

1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. 4-ESS-3.1
2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. 4-ESS-3.2