

Physical Science

Matter and its Interactions

6-MS-PS1-1. Develop models to describe the atomic composition of simple molecules and extended structures. [6-MS-PS1-1](#)

Motion and Stability: Forces and Interactions

6-MS-PS2-1. Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. [6-MS-PS2-1](#)

6-MS-PS2-2. Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. [6-MS-PS2-2](#)

6-MS-PS2-3. Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. [6-MS-PS2-3](#)

6-MS-PS2-4. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. [6-MS-PS2-4](#)

6-MS-PS2-5. Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. [6-MS-PS2-5](#)

Energy

6-MS-PS3-1. Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object. [6-MS-PS3-1](#)

6-MS-PS3-2. Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system. [6-MS-PS3-2](#)

Waves and their Applications in Technologies for Information Transfer

6-MS-PS4-1. Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave and how the frequency and wavelength change the expression of the wave. [6-MS-PS4-1](#)

6-MS-PS4-2. Develop and use a model to describe that waves are refracted, reflected, absorbed, transmitted, or scattered through various materials. [6-MS-PS4-](#)

Earth and Space Science

Earth's Place in the Universe

- 6-MS-ESS1-1.** Develop and use a model of the Earth-sun-moon system to describe the reoccurring patterns of lunar phases, eclipses of the sun and moon, and seasons. [6-MS-ESS1-1](#)
 - 6-MS-ESS1-2.** Use a model to describe the role of gravity in the motions within galaxies and the solar system. [6-MS-ESS1-2](#)
 - 6-MS-ESS1-3.** Analyze and interpret data to determine scale properties of objects in the solar system. [6-MS-ESS1-3](#)
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Earth and Human Activity

- 6-MS-ESS3-4.** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. [6-MS-ESS3-4](#)
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Life Science

From Molecules to Organisms: Structures and Processes

- 6-MS-LS1-1.** Conduct an investigation to provide evidence that living things are made of cells, either one or many different numbers and types. [6-MS-LS1-1](#)
 - 6-MS-LS1-2.** Develop and use a model to describe the function of a cell as a whole and ways parts of cells contribute to the function. [6-MS-LS1-2](#)
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Ecosystems: Interactions, Energy, and Dynamics

- 6-MS-LS2-1.** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. [6-MS-LS2-1](#)
- 6-MS-LS2-2.** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. [6-MS-LS2-2](#)
- 6-MS-LS2-3.** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. [6-MS-LS2-3](#)