Louisiana Science

Grade 6

Adopted 2017

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-PS4-2

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

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

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

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