# Science: Grade 6

| | | |
|---|---|---|
| **MATTER AND ITS INTERACTIONS** | **1a** | **Identify a model that shows an atom's nucleus is made of protons and neutrons, and is surrounded by electrons.** LC-6-MS-PS1-1A |
| | **1b** | **Identify a model that shows individual atoms of the same or different types that repeat to form compounds (e.g., sodium chloride).** LC-6-MS-PS1-1B |
| **MOTION AND STABILITY: FORCES AND INTERACTIONS** | **1a** | **Describe the motion of two colliding objects in terms of the strength of the force and the relationship of action and reaction forces given a model or scenario.** LC-6-MS-PS2-1A |
| | **1b** | **Develop a solution to a problem involving the motion of two colliding objects.** LC-6-MS-PS2-1B |
| | **2a** | **Identify using provided data, that a change in an object's motion is due to the mass of an object and the forces acting on that object.** LC-6-MS-PS2-2A |
| | **3a** | **Identify that electricity can be used to produce magnetism, or magnetism can be used to make electricity.** LC-6-MS-PS2-3A |
| | **3b** | **Examine data of objects (e.g., a model that demonstrates that a piece of metal, when magnetized by electricity, can pick up many times its own weight) to identify cause and effect relationships that affect electromagnetic forces.** LC-6-MS-PS2-3B |
| | **4a** | **Using a chart displaying the mass of those objects and the strength of interaction, compare the magnitude of gravitational force on interacting objects of different mass (e.g., the Earth and the sun)** LC-6-MS-PS2-4A |
| | **5a** | **Evaluate a change in the strength of a force (i.e., electric and magnetic) using data.** LC-6-MS-PS2-5A |
| | **5b** | **Identify evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.** LC-6-MS-PS2-5B |
| **ENERGY** | **1a** | **Use graphical displays of data to describe the relationship of kinetic energy to the mass of an object and to the speed of an object.** LC-6-MS-PS3-1A |
| | **2a** | **Describe, using models, how changing distance changes the amount of potential energy stored in the system (e.g., carts at varying positions on a hill).** LC-6-MS-PS3-2A |

Skip to main content

| | | |
|---|---|---|
| **WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER** | **1a** | **Identify how the amplitude of a wave is related to the energy in a wave using a mathematical or graphical representation.** LC-6-MS-PS4-1A |
| | **2a** | **Describe, using a model, how sound waves are reflected, absorbed, or transmitted through various materials (e.g., water, air, glass).** LC-6-MS-PS4-2A |
| | **2b** | **Describe, using a model, how light waves are reflected, absorbed, or transmitted through various materials (e.g., water, air, glass).** LC-6-MS-PS4-2B |
| **EARTH'S PLACE IN THE UNIVERSE** | **1a** | **Use an Earth-sun-moon model to show that the Earth-moon system orbits the sun once an Earth year and the orbit of the moon around Earth corresponds to a month.** LC-6-MS-ESS1-1A |
| | **1b** | **Use an Earth-sun-moon model to explain eclipses of the sun and the moon.** LC-6-MS-ESS1-1B |
| | **1c** | **Use an Earth-sun-moon model to explain how variations in the amount of the sun's energy hitting Earth's surface results in seasons.** LC-6-MS-ESS1-1C |
| | **2a** | **Use a model to identify the solar system as one of many systems orbiting the center of the larger system of the Milky Way galaxy, which is one of many galaxy systems in the universe.** LC-6-MS-ESS1-2A |
| | **2b** | **Use a model to describe the relationships and interactions between components of the solar system as a collection of many varied objects held together by gravity.** LC-6-MS-ESS1-2B |
| | **3a** | **Use data (e.g., statistical information, drawings and photographs, and models) to determine similarities and differences among solar system objects.** LC-6-MS-ESS1-3A |
| **EARTH AND HUMAN ACTIVITY** | **4** | **Identify changes that human populations have made to Earth's natural systems using a variety of resources.** LC-6-MS-ESS3-4 |
| **FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES** | **1a** | **Identify that living things may be made of one cell or many different numbers and types of cells.** LC-6-MS-LS1-1A |
| | **2a** | **Using a model(s), identify the function of a cell as a whole.** LC-6-MS-LS1-2A |
| | **2b** | **Using a model(s), identify special structures within cells are responsible for particular functions.** LC-6-MS-LS1-2B |
| | **2c** | **Using a model(s), identify the components of a cell.** LC-6-MS-LS1-2C |
| | **2d** | **Using a model(s), identify the functions of components of a cell.** LC-6-MS-LS1-2D |
| **EC IN** | | **Recognize data that shows growth of organisms and population increases are limited by access to resources.** LC-6-MS-LS2-1A |

Skip to main content

**AND DYNAMICS**

**1b** **Identify factors (e.g., resources, climate or competition) in an ecosystem that influence growth in populations of organisms.** LC-6-MS-LS2-1B

**2a** **Use an explanation of interactions between organisms in an ecosystem to identify examples of competitive, predatory, or symbiotic relationships.** LC-6-MS-LS2-2A

**3a** **Using a model(s), describe energy transfer between producers and consumers in an ecosystem using a model (e.g., producers provide energy for consumers).** LC-6-MS-LS2-3A

**3b** **Using a model(s), describe the cycling of matter among living and nonliving parts of a defined system (e.g., the atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem).** LC-6-MS-LS2-3B