Grade 6 Science MATTER AND ITS INTERACTIONS	
Louisiana Student Standards	**Louisiana Connectors (LC)**
6-MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.	**LC-6-MS-PS1-1a** Identify a model that shows an atom's nucleus is made of protons and neutrons, and is surrounded by electrons.
	LC-6-MS-PS1-1b Identify a model that shows individual atoms of the same or different types that repeat to form compounds (e.g., sodium chloride).

Grade 6 Science MOTION AND STABILITY: FORCES AND INTERACTIONS	
Louisiana Student Standards	**Louisiana Connectors (LC)**
6-MS-PS2-1 Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	**LC-6-MS-PS2-1a** 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-PS2-1b Develop a solution to a problem involving the motion of two colliding objects.
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.	**LC-6-MS-PS2-2a** Using provided data, identify that a change in an object's motion is due to the mass of an object and the forces acting on that object.
6-MS-PS2-3 Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.	**LC-6-MS-PS2-3a** Identify that electricity can be used to produce magnetism, or magnetism can be used to make electricity.
	LC-6-MS-PS2-3b 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.
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.	**LC-6-MS-PS2-4a** 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)
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.	**LC-6-MS-PS2-5a** Evaluate a change in the strength of a force (i.e., electric and magnetic) using data.
	LC-6-MS-PS2-5b Identify evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

Grade 6 Science ENERGY	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-PS3-1a** 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.
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.	**LC-6-MS-PS3-2a** 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).

Grade 6 Science WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-PS4-1a** Identify how the amplitude of a wave is related to the energy in a wave using a mathematical or graphical representation.
6-MS-PS4-2 Develop and use a model to describe that waves are refracted, reflected, absorbed, transmitted, or scattered through various materials.	**LC-6-MS-PS4-2a** Describe, using a model, how sound waves are reflected, absorbed, or transmitted through various materials (e.g., water, air, glass).
	LC-6-MS-PS4-2b Describe, using a model, how light waves are reflected, absorbed, or transmitted through various materials (e.g., water, air, glass).

Grade 6 Science EARTH'S PLACE IN THE UNIVERSE	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-ESS1-1a** 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-ESS1-1b Use an Earth-sun-moon model to explain eclipses of the sun and the moon.
	LC-6-MS-ESS1-1c 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.
6-MS-ESS1-2 Use a model to describe the role of gravity in the motions within galaxies and the solar system.	**LC-6-MS-ESS1-2a** 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-ESS1-2b 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.
6- MS-ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system.	**LC-6-MS-ESS1-3a** Use data (e.g., statistical information, drawings and photographs, and models) to determine similarities and differences among solar system objects.

Grade 6 Science EARTH AND HUMAN ACTIVITY	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-ESS3-4** Identify changes that human populations have made to Earth's natural systems using a variety of resources.

Grade 6 Science FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-LS1-1a** Identify that living things may be made of one cell or many different numbers and types of cells.
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.	**LC-6-MS-LS1-2a** Using a model(s), identify the function of a cell as a whole.
	LC-6-MS-LS1-2b Using a model(s), identify special structures within cells are responsible for particular functions.
	LC-6-MS-LS1-2c Using a model(s), identify the components of a cell.
	LC-6-MS-LS1-2d Using a model(s), identify the functions of components of a cell.

Grade 6 Science ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS	
Louisiana Student Standards	**Louisiana Connectors (LC)**
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.	**LC-6-MS-LS2-1a** Recognize data that shows growth of organisms and population increases are limited by access to resources.
	LC-6-MS-LS2-1b Identify factors (e.g., resources, climate or competition) in an ecosystem that influence growth in populations of organisms.
6-MS-LS2-2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	**LC-6-MS-LS2-2a** Use an explanation of interactions between organisms in an ecosystem to identify examples of competitive, predatory, or symbiotic relationships.
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.	**LC-6-MS-LS2-3a** 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-LS2-3b 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).