6th Grade Science Standards for Oklahoma

MS = Middle School
PS = Physical Science
LS = Life Science
ESSS = Earth and Space Science

- **MS-PS1-4 Develop a model that predicts and describes changes** in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.
- **MS-PS2-3 Ask questions about data to determine** the factors that affect the strength of electric and magnetic forces.
- **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.
- **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.
- **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.
- **MS-PS3-3 Apply scientific principles to design, construct, and test** a device that either minimizes or maximizes thermal energy transfer.
- **MS-PS3-4 Plan an investigation to determine** the relationships among the energy transferred, the type of matter, the mass, and the change in the average kinetic energy of the particles as measured by the temperature of the sample.
- **MS-LS1-1 Conduct an investigation to provide evidence that** living things are made of cells; either one cell or many different numbers and types of cells.
- **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.
- **MS-LS1-3 Use argument supported by evidence for how** the body is a system of interacting subsystems composed of groups of cells.
- **MS-LS1-6 Construct a scientific explanation based on evidence for** the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.
- **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.
- **MS-LS2-2 Construct an explanation that predicts** patterns of interactions among organisms across multiple ecosystems.
- **MS-LS2-3 Develop a model to describe** the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
- **MS-LS2-4 Construct an argument supported by empirical evidence that** changes to physical or biological components of an ecosystem affect populations.
- **MS-LS2-5 Evaluate competing design solutions** for maintaining biodiversity and ecosystem services.
- **MS-ESS2-4 Develop a model to describe** the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
- **MS-ESS3-3 Apply scientific principles to design** a method for monitoring and minimizing human impact on the environment.