6th Grade Physical Science Standards

1. Identify and calculate the direction and magnitude of forces that act on an object, and explain the results in the object's change of motion
2. There are different forms of energy, and those forms of energy can be changed from one form to another – but total energy is conserved
3. Distinguish between physical and chemical changes, noting that mass is conserved during any change
4. Recognize that waves such as electromagnetic, sound, seismic, and water have common characteristics and unique properties
5. Mixtures of substances can be separated based on their properties such as solubility, boiling points, magnetic properties, and densities
6. All matter is made of atoms, which are far too small to see directly through a light microscope. Elements have unique atoms and thus, unique properties. Atoms themselves are made of even smaller particles
7. Atoms may stick together in well-defined molecules or be packed together in large arrays. Different arrangements of atoms into groups compose all substances
8. The physical characteristics and changes of solid, liquid, and gas states can be explained using the particulate model
9. Distinguish among, explain, and apply the relationships among mass, weight, volume, and density