

6th Grade Physical Science Course Syllabus for Mr. Crowder

First Quarter: Formative units where graphing, experimentation, scientific method and conclusion styles are a primary focus.

- 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
 9. Distinguish among, explain, and apply the relationships among mass, weight, volume, and density

Second Quarter: Formative units, Science project, more labs, and the scientific method is further explored through movement physics.

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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
 9. Distinguish among, explain, and apply the relationships among mass, weight, volume, and density

Third Quarter: More knowledge based units where matter and energy, their interactions, and the understanding of chemistry is observed.

- Standards:**
3. Distinguish between physical and chemical changes, noting that mass is conserved during any change
 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

Fourth Quarter: Knowledge based units where more experimentation and a deeper understanding of the nature of the universe is explored.

- Standards:**
3. Distinguish between physical and chemical changes, noting that mass is conserved during any change
 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
 4. Recognize that waves such as electromagnetic, sound, seismic, and water have common characteristics and unique properties