8th Grade Integrated Science
Standard 1

Chemistry

Essential Understanding

Students will understand the nature of changes in matter.

	Objective #	Essential Learning Objectives
1	1a/1b/1c	I can list the properties of a substance or object and classify them as physical properties or chemical properties.
2	2a/2b/2c/2d	I can explain the difference between a chemical change and a physical change.
3	2a/3b	I can explain what is happening at the molecular level when a substance changes from one state to another.
4	2a	I can give examples of physical changes and explain how I know they are physical changes.
5	2b	I can give examples of chemical changes and explain how I know they are chemical changes.
6	2c/4b	I can give examples of common chemical changes involving oxygen and explain how it is involved.
7	2d	I can give examples of how a chemical change affects the physical properties of the materials involved.
8	3a/3e	I can identify the kinds of energy produced or taken in during a chemical reaction.
9	3c	I can measure and graph the temperature of water as it changes state. Using the graph, I can identify where the state changes occur.
10	4a	I can distinguish between the products and reactants in a chemical reaction.
11	4c	I can explain the Law of Conservation of Mass and evaluate a chemical equation to make sure it follows this law.
12	4d	I can explain what influences the rate at which a chemical reaction occurs.
13	4e	I can give examples of how changes in matter influence my life.

Science Language students should know and use	chemical properties, physical properties, chemical change, physical change, reaction, reactants, products, respiration, photosynthesis, temperature, molecules, heat energy, chemical energy, atoms, energy