Unit 1 (Quarter 1) Chemical and Physical Properties

Learning Objectives:

1. Use physical properties of substances, including density, to identify an unknown substance.
2. Investigate various ways to separate mixtures and identify the properties that allow the separation.
3. Investigate how physical changes result in changes to the energy of the system.
4. Understand intermolecular forces and the relationship between temperature (energy changes) and phase changes.
5 Explain the similarities and differences between physical and chemical changes.

G. Chemistry Pacing Guide

Date	Chapter	Topic/ Assignment	Homework
10/5/16-10/6/16	Chapter 1.1	- Chemistry and matter/Directed reading and vocabulary. (textbook pp.14-42) - Matter: Physical and Chemical Properties: Elements, compounds, and mixtures packet (classwork assignment).	Read pp. 14-42 (textbook) Section 1.2 assessment pg. 42 Chem. Math Study-Guide (for extra credit)
10/7/16	Handouts: 2.1, 2.2, and 2.3	Chemistry- Math Test	
10/11/16		Chem. Math Test (cont.) SLO (make) Forces of Attraction: dispersion forces, dipole-dipole Forces and hydrogen bonds.	Matter: Properties and changes homework packet.
10/13/16	Ch. 9 and Handout.	- Density lab.	Worksheet phase homework Lab. Reports are due 10/20/16
10/14/16	Ch. 1.2-Ch. 9 and handout	Matter/properties and changes review. Quiz	Study Guide
10/18/16	Ch. 1.2 , Ch.(pp.188-199) and handout.	Unit test	

Essential questions:

- How do substances have different physical and chemical properties than their component elements?
- How can physical and chemical properties be used to identify an unknown substance?
- How do the physical and chemical properties of a substance determine the amount of energy needed for a physical or chemical change?
- When examining the density of a substance, why is temperature an important factor to consider?