Physical Science Study Guide

Chapter 2 – Matter

- **2.1: What is Matter?**
  - **Objectives**
    - Define and identify what is classified as matter
    - Define and identify what is classified as not matter
    - Discuss dark matter and its presence in the universe (How much of the universe is composed of dark matter) – Ted Ed Video
    - Categorize materials as pure substances or mixtures
      - Distinguish between elements and compounds
      - Distinguish between homogeneous and heterogeneous mixtures
  - **Vocabulary**
    - Matter
      - Mass
      - Volume
    - Energy
    - Dark matter
    - Pure substance
      - Element
      - Compound
    - Mixture
      - Heterogeneous mixture
      - Homogeneous mixture
- **2.2: Matter and Energy**
  - **Objectives**
    - State the three principles of kinetic theory
    - Use the kinetic theory to describe the properties and structures of the different states of matter (what types have more kinetic energy)
    - Distinguish between chemical and physical properties of matter
    - Describe the energy transfers involved in changes of state (melting, freezing, evaporating, sublimation, de-sublimation, and condensation) and classify them as endothermic or exothermic.
    - Read, label, and interpret heating and cooling curve graphs

        - Identify boiling/condensating and melting/freezing points.
    - Describe the relative kinetic energy in and give an example of a plasma.
- **Vocabulary**
    - Kinetic energy
    - Solid
    - Liquid
    - Gas
    - Plasma
    - Phase Change
        - Endothermic
            - Melting
            - Evaporation
            - Sublimation
        - Exothermic
            - Condensation
            - Freezing
            - Desublimation