CHAPTER 1 REVIEW

Matter and Change

SECTION 1-2

SHORT ANSWER  Answer the following questions in the space provided.

1. Classify each of the following as a homogeneous or heterogeneous substance:
   - heterogeneous a. iron ore
   - homogeneous b. quartz
   - heterogeneous c. granite
   - homogeneous d. soft drink
   - heterogeneous e. milk
   - homogeneous f. salt
   - homogeneous g. water
   - homogeneous h. nitrogen

2. Classify each of the following as a physical or chemical change:
   - physical a. ice melting
   - chemical b. paper burning
   - chemical c. metal rusting
   - physical d. gas under pressure
   - physical e. liquid evaporating
   - chemical f. food digesting

3. Compare a physical change with a chemical change.

   A chemical change involves a rearrangement of the elements in a substance to form substances with different physical properties. A physical change may change the state of a substance but will not change the composition of that substance.
4. Compare and contrast each of the following terms:
   a. **mass** and **matter**
      
      All substances are made of matter. Mass is a measure of the amount of matter.
   
   b. **atom** and **compound**
      
      All matter is composed of atoms, which are the smallest units of an element that retain the properties of that element. Atoms can come together to form compounds.
   
   c. **physical property** and **chemical property**
      
      Physical properties are unique for a particular substance and include color, density, melting point, and boiling point. Chemical properties relate to how a substance interacts with another substance.
   
   d. **homogeneous mixture** and **heterogeneous mixture**
      
      A homogeneous mixture has a uniform composition. A heterogeneous mixture is not uniform.

5. Draw a diagram that compares the arrangement of atoms in the solid, liquid, and gas state.

   ![Solid](image)  ![Liquid](image)  ![Gas](image)

   Solid  Liquid  Gas

6. How is energy involved in chemical and physical changes?

   Energy is either absorbed or given off in all chemical and physical changes, but it is neither created nor destroyed.