

**Note-taking  
Worksheet**

# Classification of Matter

## Section 1 Composition of Matter

- A. \_\_\_\_\_—either an element or a compound
1. When all the atoms in a substance are alike, the substance is an \_\_\_\_\_.
  2. A \_\_\_\_\_ is a substance with two or more elements combined in a fixed proportion.
- B. Two or more substances that can be easily separated by physical means form a \_\_\_\_\_.
1. \_\_\_\_\_ **mixture**—mixture of different and easily distinguishable materials
  2. \_\_\_\_\_ mixture—contains two or more gaseous, liquid, or solid substances blended evenly; also called a solution
  3. \_\_\_\_\_—heterogeneous mixture with larger particles that never settle; colloids scatter light in the Tyndall effect
  4. A heterogeneous mixture containing a liquid in which visible particles settle is called a \_\_\_\_\_.

## Section 2 Properties of Matter

- A. \_\_\_\_\_—characteristics of a material which can be observed without changing the identity of the substances in the material; examples include color, shape, size, melting point, and boiling point
1. \_\_\_\_\_—physical description of a substance
  2. \_\_\_\_\_—how a substance acts; for example, magnetism, viscosity, ductility
  3. Physical properties such as size and magnetism can be used to \_\_\_\_\_ mixtures.
- B. \_\_\_\_\_—change in a substance's size, shape, or state of matter
1. Substance does not change \_\_\_\_\_ when it undergoes a physical change
  2. \_\_\_\_\_ is a process for separating a mixture by evaporating a liquid and condensing its vapor.

**Note-taking Worksheet** (continued)

- C. \_\_\_\_\_ property—characteristics of a substance indicating that it can change chemically; for example, flammability or light sensitivity of a substance
- D. When one substance changes to another substance, a \_\_\_\_\_ has occurred.
1. Some chemical changes are indicated by \_\_\_\_\_ change, smell, or bubble formation.
  2. Other chemical changes occur very slowly, such as the formation of \_\_\_\_\_.
  3. Chemical changes can be used to \_\_\_\_\_ substances such as metals from their ores.
- E. \_\_\_\_\_ of Earth's surface involves both physical and chemical changes.
1. \_\_\_\_\_—big rocks split into smaller ones; streams carry rock particles from one location to another
  2. \_\_\_\_\_—Chemical changes can occur in rocks when calcium carbonate in limestone changes to calcium hydrogen carbonate due to acid rain.
- F. Law of \_\_\_\_\_—Mass of all substances present before a chemical change equals the mass of all substances after the change.