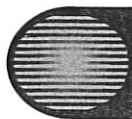

**Section 1 ■ Composition of Matter**

**Directions:** Choose the correct category from the list for each item. Each category will be used more than once.

- |   |                          |
|---|--------------------------|
| _____ 1. chalk                            | a. element               |
| _____ 2. copper                           | b. compound              |
| _____ 3. granite                          | c. suspension            |
| _____ 4. vinegar                          | d. heterogeneous mixture |
| _____ 5. pond                             | e. homogeneous mixture   |
| _____ 6. water                            | f. colloid               |
| _____ 7. salt                             |                          |
| _____ 8. permanent press fabric           |                          |
| _____ 9. an unopened bottle of soft drink |                          |
| _____ 10. paint                           |                          |
| _____ 11. gold                            |                          |
| _____ 12. a river delta                   |                          |
| _____ 13. fog                             |                          |
| _____ 14. gelatin                         |                          |
| _____ 15. lead                            |                          |

**Directions:** Complete the sentences by writing the letters of the correct terms on the lines provided.

- \_\_\_\_\_ 16. All substances are built from \_\_\_\_\_ .
- |             |           |
|-------------|-----------|
| a. mixtures | c. metals |
| b. atoms    | d. salts  |
- \_\_\_\_\_ 17. A beam of light can be seen as it passes through a(n) \_\_\_\_\_ .
- |             |             |
|-------------|-------------|
| a. colloid  | c. element  |
| b. solution | d. compound |
- \_\_\_\_\_ 18. A \_\_\_\_\_ is a homogenous mixture of particles so small they cannot be seen and will not settle to the bottom of their container.
- |             |             |
|-------------|-------------|
| a. colloid  | c. element  |
| b. solution | d. compound |


**Directed Reading for  
Content Mastery**
**Section 2 ■ Properties of  
Matter**

**Directions:** Complete the paragraphs using the terms listed. Some terms may be used more than once.

liquid                      physical change                      chemical change                      mixture  
 physical properties                      physical property                      distillation  
 equals                      melting                      conservation of mass

Scientists try to explain how changes in substances take place. By applying energy, you can tear a sheet of paper into pieces and cause a 1. \_\_\_\_\_  
 \_\_\_\_\_ in the paper. On a hot summer day, water vapor will condense into water droplets on the outside of a glass of iced tea. The glass of iced tea is a 2. \_\_\_\_\_ of sugar, tea, lemon, and water. Water is a clear, colorless 3. \_\_\_\_\_ at room temperature. The words *clear* and *colorless* describe two 4. \_\_\_\_\_  
 of water. The melting of the ice in iced tea is a 5. \_\_\_\_\_  
 \_\_\_\_\_.

In comparison, a 6. \_\_\_\_\_  
 produces new substances. When a candle burns, physical and chemical changes take place. The 7. \_\_\_\_\_ of the wax is a physical change. The melted wax, as it burns, combines with gaseous oxygen in air. After the chemical change, water vapor and carbon dioxide gas are formed. The mass of all substances before a chemical change 8. \_\_\_\_\_ the mass of all substances after a chemical change. This is called the law of 9. \_\_\_\_\_  
 \_\_\_\_\_.

To separate a solid from a liquid, such as salt from seawater, a process using the 10. \_\_\_\_\_ of boiling point called 11. \_\_\_\_\_ is used.

## SECTION

## 1

## Reinforcement

## Composition of Matter

**Directions:** Match the terms in Column II with the definitions in Column I. Write the letter of the correct term in the blank at the left.

## Column I

- \_\_\_\_\_ 1. heterogeneous mixture containing a liquid in which visible particles settle
- \_\_\_\_\_ 2. contains two or more gaseous, liquid, or solid substances blended evenly throughout the mixture.
- \_\_\_\_\_ 3. substance in which all atoms are alike
- \_\_\_\_\_ 4. any material made of two or more substances that can be physically separated
- \_\_\_\_\_ 5. the scattering of light by colloidal particles
- \_\_\_\_\_ 6. heterogeneous mixture with large particles that never settle
- \_\_\_\_\_ 7. a mixture in which different materials can be easily distinguished
- \_\_\_\_\_ 8. homogeneous mixture of particles so small they cannot be seen and will never settle to the bottom of their container
- \_\_\_\_\_ 9. substance in which two or more elements are combined in a fixed proportion

## Column II

- a. Tyndall effect
- b. colloid
- c. heterogeneous mixture
- d. mixture
- e. element
- f. suspension
- g. solution
- h. homogeneous mixture
- i. compound

**Directions:** Fill in the table below with the element below that matches its description.

gold  
americium

lead  
aluminum

titanium  
tungsten

10. Radioactive metal	
11. Most stretchable of any element	
12. Excellent reflector of heat	
13. Highest melting point of any metal	
14. Strong and lightweight	
15. Has a high density	

## SECTION

## 2

## Reinforcement

## Properties of Matter

**Directions:** Below are two sets of words. Complete the second set by choosing a word from those listed below the blank. The two words must be related in the same way as the first set of words.

**EXAMPLE**

letter: envelope:: pillow: \_\_\_\_\_ case  
case, sheet, soft, bed

1. steam: water:: water: \_\_\_\_\_  
heat, molecules, ice, matter

2. physical: chemical:: size: \_\_\_\_\_  
burning, taste, solubility, acid

3. chemical: rust:: physical: \_\_\_\_\_  
compound, condensation, element, change

4. physical: density:: chemical: \_\_\_\_\_  
size, melting, combustible, ice

5. solid: steel:: gaseous: \_\_\_\_\_  
coal, air, water, gasoline

6. burning: candle:: rust: \_\_\_\_\_  
vaporization, physical property, iron, mixture

7. smell: rotten eggs:: heat and light: \_\_\_\_\_  
burning logs, mountains, river deltas, ice water

8. gold: gold leaf:: copper: \_\_\_\_\_  
ice, wire, mass, chemical

**Directions:** Answer the following questions on the lines provided.

9. What is the difference between a physical change and a chemical change?

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10. Name some physical properties. \_\_\_\_\_

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11. Explain how a pile of ashes has the same mass as the original log before it was burned. What is the law that defines this (assuming a completely dry log and no combustible products; escaped in the air) called?

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