

Directed Reading B *continued*

Circle the letter of the best answer for each question.

7. What do physical changes NOT change?
- a. the identity of the matter
 - b. the amount of matter
 - c. the state of matter
 - d. the volume of the sample
8. What makes chemical properties so hard to observe?
- a. They cause changes of state.
 - b. You can't see them until they produce new materials.
 - c. Wearing protective glasses is required.
 - d. They happen too quickly.

Characteristic Properties

9. Which of these statements is true about characteristic properties of matter?
- a. They depend on sample size.
 - b. They only involve physical properties.
 - c. They only involve chemical properties.
 - d. They can be physical properties as well as chemical properties.

CHEMICAL CHANGES AND NEW SUBSTANCES

Read the words in the box. Read the sentences. Fill in each blank with the word or phrase that best completes the sentence.

| | |
|--------|----------|
| change | property |
|--------|----------|

10. A chemical _____ describes which changes are possible for a substance.
11. A chemical _____ is the process by which substances actually change into new substances.

Directed Reading B *continued*

Circle the letter of the best answer for each question.

12. Which of these phrases describes a chemical change?

- a. pouring milk into a glass
- b. melting an ice cube
- c. burning wood, making ash and smoke
- d. bending an iron nail

What Happens During a Chemical Change?

13. Which of the following is an example of a chemical change?

- a. sugar dissolving
- b. a cake baking
- c. chocolate melting
- d. water freezing

14. Which description describes what happens to the substances involved in a chemical change?

- a. The substances keep their identities.
- b. The substances change in form.
- c. New substances with different properties are formed.
- d. The substances combine and mix.

Signs of Chemical Changes

15. Which of the following is NOT a sign that a chemical change has taken place?

- a. change in state
- b. sound or light given off
- c. foaming or bubbling
- d. production of heat or light

Matter and Chemical Changes

16. Why are chemical changes difficult to reverse?

- a. because they involve physical changes
- b. because they change the matter's form
- c. because they change the identity of the matter
- d. because their products are hard to find

Directed Reading B *continued*

PHYSICAL VERSUS CHEMICAL CHANGES

Circle the letter of the best answer for each question.

17. What is the type of matter that makes up an object and the way it is arranged?
- a. the physical properties of the object
 - b. the reactivity of the object
 - c. the flammability of the object
 - d. the composition of the object

A Change in Composition

18. Why does a physical change differ from a chemical change?
- a. The change is reversible.
 - b. The composition of the matter is unchanged.
 - c. New properties of the matter are created.
 - d. New materials are produced.
19. How can water be broken down into hydrogen and oxygen?
- a. by reactivity
 - b. by electrolysis
 - c. by composition
 - d. by flammability

Reversing Changes

20. Why are chemical changes difficult to reverse?
- a. because they involve changes in composition
 - b. because they involve changes in form
 - c. because they involve changes in state
 - d. because the temperature increases