

Directed Reading A

Section: Chemical Properties

CHEMICAL PROPERTIES

- _____ 1. The property of matter that describes its ability to change into new matter with different properties is known as a
- chemical change.
 - physical change.
 - chemical property.
 - physical property.
- _____ 2. The chemical property that describes the ability of two or more substances to combine to form new substances is called
- reactivity.
 - flammability.
 - density.
 - solubility.
- _____ 3. The ability of a substance to burn is a chemical property known as
- reactivity.
 - flammability.
 - density.
 - solubility.
- _____ 4. An iron nail is reactive with
- rubbing alcohol.
 - other iron nails.
 - wood in a house.
 - oxygen in the air.
- _____ 5. Which of the following statements is true about characteristic properties of matter?
- Characteristic properties depend on the size of the sample.
 - Characteristic properties may be either physical or chemical properties.
 - Characteristic properties involve only chemical properties.
 - Characteristic properties involve only the physical nature of the matter.

6. Describe the ways that burning changes the nature of wood.

7. A substance always has _____ properties, even though they are difficult to observe.

8. Scientists use _____ properties to help them identify and classify matter.

Directed Reading A *continued*

CHEMICAL CHANGES AND NEW SUBSTANCES

- _____ 9. Chemical changes are the processes by which substances
- a. move from place to place.
 - b. change into new substances.
 - c. change in their physical properties.
 - d. become greater in mass.

- _____ 10. Which of the following would NOT be considered an example of a chemical change?
- a. the bubbling action of effervescent tablets
 - b. the green coating on copper statues
 - c. the melting of a Popsicle
 - d. the burning of rocket fuel

11. How do you know that baking a cake involves chemical changes?

12. List some signs or clues that show that a change you are observing is a chemical change.

13. Because _____ change the identity of the substances involved, they are hard to reverse.

14. How could some chemical changes be reversed? Give an example.

Directed Reading A *continued*

PHYSICAL VERSUS CHEMICAL CHANGES

- _____ 15. What is the most important question to ask to determine whether a change is physical or chemical?
- a. Was there a color change?
 - b. Did the composition change?
 - c. Was there a change in size?
 - d. Did the change involve a change in state?
- _____ 16. What is the name of the process by which water is broken down into hydrogen and oxygen using an electric current?
- a. electrolysis
 - b. decomposition
 - c. reactivity
 - d. reversibility
17. During _____, the composition of a substance does not change.

Identify whether the following changes are physical changes or chemical changes. Label each change either PC for physical change or CC for chemical change.

- _____ 18. mixing vinegar and baking soda
- _____ 19. grinding baking soda into a powder
- _____ 20. souring milk
- _____ 21. melting an ice cream bar
- _____ 22. burning a wooden match
- _____ 23. shooting off fireworks
- _____ 24. mixing drink mix into water
- _____ 25. bending an iron nail