

Directed Reading A

Section: Physical Properties

PHYSICAL PROPERTIES

- _____ 1. A characteristic of matter that can be observed or measured without changing the identity of the matter is a
- a. matter property.
 - b. physical property.
 - c. chemical property.
 - d. volume property.

- _____ 2. Some examples of physical properties are
- a. color, odor, and age.
 - b. color, odor, and speed.
 - c. color, odor, and magnetism.
 - d. color, odor, and anger.

Match the correct example with the correct physical property. Write the letter in the space provided.

- | | |
|--|-------------------------|
| _____ 3. Aluminum can be flattened into sheets of foil. | a. state |
| _____ 4. An ice cube floats in a glass of water. | b. solubility |
| _____ 5. Copper can be pulled into thin wires. | c. thermal conductivity |
| _____ 6. Plastic foam protects you from hot liquid. | d. malleability |
| _____ 7. Flavored drink mix dissolves in water. | e. odor |
| _____ 8. An onion gives off a very distinctive smell. | f. ductility |
| _____ 9. A golf ball has more mass than a table tennis ball. | g. density |

10. Density is the _____ that describes the relationship between mass and volume.
11. Objects such as a cotton ball and a small tomato can occupy similar volumes but vary greatly in _____.
12. If you pour different liquids into a graduated cylinder, the liquids will form layers based upon differences in the _____ of each liquid.
13. Which layer of liquid would settle on the bottom?
- _____

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14. Where will the least dense liquid be found?

15. Why would 1 kg of lead be less awkward to carry around than 1 kg of feathers?

16. What will happen to a solid object made from matter with a greater density than water when it is dropped into water?

17. How will knowing the density of a substance help you determine whether an object made from that material will float in water.

18. What is the equation for density?

19. What do D , V , and m stand for in the equation for density?

20. The units for density take the form of a mass unit divided by a(n)

_____ unit.

21. What are two reasons why density is a useful property for identifying substances?

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PHYSICAL CHANGES DO NOT FORM NEW SUBSTANCES

22. A change that only affects the physical properties of a substance is known as a(n) _____.

23. What kind of changes are melting and freezing?

Identify which of the following activities represent physical changes by writing PC in the space provided, if they cause only physical changes. Put an X beside any that do not.

- _____ 24. sanding a piece of wood
- _____ 25. baking bread
- _____ 26. crushing an aluminum can
- _____ 27. melting an ice cube
- _____ 28. dissolving sugar in water
- _____ 29. molding a piece of silver

MATTER AND PHYSICAL CHANGES

30. When a substance undergoes a physical change, its _____ does not change.

31. What is changed when matter undergoes a physical change? Give an example to explain your answer.
