

Directed Reading A

5-4

Section: Using the Properties of Matter
DENSITY

1. A child holding a balloon is an example of how _____ are used in technological design.
2. Because helium has a low density, it allows a helium balloon to _____.
3. What will the high density of lead make a sinker tied to a fishing line do?
4. What will the low density of a float tied to a fishing line allow the float to do?

MAGNETISM

5. Which of the following properties is useful in designing hand tools and alarms?
 - a. solubility
 - b. magnetism
 - c. density
 - d. conductivity
6. Why is a magnetic tool useful in tight places?
 - a. The tool will attract and hold onto nails or screws.
 - b. The tool won't break.
 - c. The tool will fit the space better.
 - d. The tool will fit the nail or screw better.
7. What is completed when an alarm uses an iron switch and a magnet?
8. What happens in a magnetic alarm when the circuit is broken?

ELECTRICAL CONDUCTIVITY

9. What does the property of electrical conductivity describe?
10. Metals tend to have high electrical _____.
11. What two materials that have a low electrical conductivity could you use if you do not want charges to move?

12. Why did the new golden coins have to have the same conductivity as a previous coin?

13. A mixture, or _____ of substances was developed to create the new coin with the right amount of conductivity.

MALLEABILITY

14. What substance provides a good example of malleability?
15. Why is coinmaking a good example of the uses of malleability?

SOLUBILITY

16. Scientists are finding creative ways to use _____ in _____ technological design.
17. What was the problem with using plastic-foam peanuts in packing boxes?
18. Scientists found a better packing material in peanuts made out of _____.
19. List three reasons why soluble packing peanuts are a better solution.

20. What three factors determine the rate at which water-soluble film dissolves?

21. List three ways that industry uses water-soluble films.

22. How are water-soluble films helpful to people and the environment?
