Chapter Review

USING VOCABULARY

For each pair of terms, explain the difference in their meanings.

1. mass/volume

2. volume/density

3. physical property/chemical property

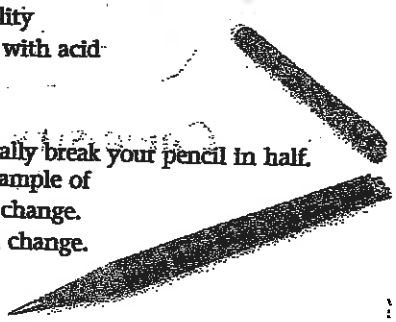
4. physical change/chemical change

UNDERSTANDING CONCEPTS

Multiple Choice

5. The mass of an elephant on the moon would be
   a. less than its mass on Mars.
   b. more than its mass on Mars.
   c. the same as its weight on the moon.
   d. None of the above

6. Which of the following is *not* a chemical property?
   a. reactivity with oxygen
   b. malleability
   c. flammability
   d. reactivity with acid



7. You accidentally break your pencil in half. This is an example of
   a. a physical change.
   b. a chemical change.
   c. density.
   d. volume.

8. Which of the following statements about density is true?
   a. Density depends on mass and volume.
   b. Density is weight per unit volume.
   c. Density is measured in milliliters.
   d. Density is a chemical property.

9. A jar contains 30 mL of glycerin (mass = 37.8 g) and 60 mL of corn syrup (mass = 82.8 g). Which liquid is on top? Show your work, and explain your answer.

Short Answer

10. In one or two sentences, explain the different processes in measuring the volume of a liquid and measuring the volume of a solid.

11. What is the formula for calculating density?

12. List three characteristic properties of matter.

CRITICAL THINKING AND PROBLEM SOLVING

13. You are making breakfast for your picky friend, Filbert. You make him scrambled eggs. He asks, "Would you please take these eggs back to the kitchen and poach them?" What scientific reason do you give Filbert for not changing his eggs?

INTERPRETING GRAPHICS

Examine the photograph below, and answer the following questions:

14. List three physical properties of this can.

15. Did a chemical change or a physical change cause the change in this can's appearance?

16. How does the density of the metal in the can compare before and after the change?