

Chapter 4, continued

**Section 3: Mixtures** (p. 90)

1. A pizza is not a mixture. True or False? (Circle one.)

**Properties of Mixtures** (p. 90)

2. When two or more materials combine without reacting with each other, they form a mixture. True or False? (Circle one.)
3. How do the granite in Figure 11 and the pizza at the top of the page show you that the identity of a substance doesn't change in a mixture?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Mixtures are separated through \_\_\_\_\_ changes. \_\_\_\_\_ must be broken down through chemical changes.

Look at the pictures on page 91. Match the technique for separating a mixture in Column B with the substances in Column A, and write the corresponding letter in the appropriate space.

Column A	Column B
___ 5. crude oil	a. distill the mixture
___ 6. aluminum and iron	b. centrifuge the mixture
___ 7. parts of the blood	c. filter the mixture
___ 8. sulfur and water	d. pass a magnet over the mixture

9. Granite can be pink or black, depending on the ratio of feldspar, mica, and quartz. True or False? (Circle one.)

**Review** (p. 92)

Now that you've finished the first part of Section 3, review what you learned by answering the Review questions in your ScienceLog.

Chapter 4, continued

---

**Solutions** (p. 92)

10. Which of the following is NOT true of solutions?
- a. They contain a dissolved substance called a solute.
  - b. They are composed of two or more evenly distributed substances.
  - c. They contain a substance called a solvent, in which another substance is dissolved.
  - d. They appear to be more than one substance.
11. In a gaseous or liquid solution, the volume of solvent is \_\_\_\_\_ the volume of solute.  
(less than or greater than)
12. The solid solution used to build the ship *Titanic* was a(n) \_\_\_\_\_ called steel.
13. Which of the following is true of particles in solutions?
- a. Particles scatter light.
  - b. Particles settle out.
  - c. Particles can't be filtered out of their mixtures.
  - d. Particles are large.
14. Concentration is a measure of the volume of a solution.  
True or False? (Circle one.)
15. What is the difference between a concentrated solution and a dilute solute?
- \_\_\_\_\_
- \_\_\_\_\_
16. When a solution is holding all the solute it can hold at a given temperature, we say the solution is \_\_\_\_\_.
17. Solubility is not dependent on temperature. True or False?  
(Circle one.)
18. Solubility is measured in grams of solute per \_\_\_\_\_ of solvent.
19. Solubility of *gases* in liquids tends to \_\_\_\_\_ with an increase in temperature. Solubility of *solids* in liquids tends to \_\_\_\_\_ with an increase in temperature.

**Chapter 4, continued**

**20.** What are three ways to make a sugar cube dissolve more quickly in water?

\_\_\_\_\_

\_\_\_\_\_

**Suspensions** (p. 96)

**21.** Which of the following does NOT describe a suspension?

- a. Particles are soluble.
- b. Particles settle out over time.
- c. Particles can be seen.
- d. Particles scatter light.

**22.** Look at the Life Science Connection at the top of the page. Why is blood a suspension?

\_\_\_\_\_

\_\_\_\_\_

**Colloids** (p. 97)

**23.** What do gelatin, milk, and stick deodorant have in common?

\_\_\_\_\_

Match the mixtures in Column B to the characteristics in Column A, and write the corresponding letter in the appropriate space. Mixtures may be used more than once.

Column A	Column B
<p>___ <b>24.</b> Particles do not settle out.</p> <p>___ <b>25.</b> Particles are larger.</p> <p>___ <b>26.</b> Particles scatter a beam of light.</p> <p>___ <b>27.</b> Particles cannot be filtered out.</p>	<p><b>a.</b> colloids and suspensions</p> <p><b>b.</b> colloids and solutions</p>

**28.** Look at Figure 18. How can a colloid be dangerous to drivers?

\_\_\_\_\_

\_\_\_\_\_

**Review** (p. 97)

Now that you've finished Section 3, review what you learned by answering the Review questions in your ScienceLog.