

STUDY GUIDE

Chapter 22

How Solutions Form

In each of the following statements, a term has been scrambled. Unscramble the term and write it on the line provided.

- _____ 1. Solid solutions composed of metals usually are called *loyals*.
- _____ 2. When the particles of a mixture are evenly distributed throughout, the mixture is *housenoggeom*.
- _____ 3. In a solution of sugar and water, the water is the *notvels*.
- _____ 4. In a solution of salt and water, the salt is the *stoleu*.
- _____ 5. Grinding a solid solute increases its *farceus* area.
- _____ 6. A gas dissolves best in a liquid solvent when the solution is under high *spursere*.

Circle the term in each set that is least related to the others. Then write a sentence explaining how the remaining terms are related. Compare your answers to those of your classmates. There may be more than one correct set of relationships.

- 1. solute, solution, ion solvent _____

- 2. stir, grind, heat, hydrate _____

- 3. dental amalgam, soda pop, sterling silver, brass _____

- 4. metal, air, alloy, solid _____

- 5. club soda, sugar water, vinegar, brass _____

- 6. air, gas, nitrogen, carbon _____

REINFORCEMENT

Chapter 22

How Solutions Form

Complete the table below by writing the missing information in the appropriate box. Then answer the following questions.

Solution Type	Solvent	Solute	Example
gas		gas	
		solid	salt water
solid			dental amalgam
	liquid		club soda
	liquid	liquid	
	solid		brass

Study the information in your table carefully. What is true about the state of the solvent and the type of solution produced? _____

Circle the term in parentheses that makes each statement true.

1. A solid dissolves faster in a liquid if the temperature of the liquid is (increased, decreased).
2. A gas dissolves faster in a liquid if the temperature of the liquid is (increased, decreased).
3. The (larger, smaller) the surface area of a solid, the faster it will dissolve.
4. When a gas is being dissolved in a liquid, stirring (speeds up, slows down) the dissolving process.
5. When a solid is being dissolved in a liquid, stirring (speeds up, slows down) the dissolving process.
6. A gas dissolves faster in a liquid when under (high, low) pressure.

Study your responses to the exercise above. Use your responses to answer the following question.

7. How do the methods of speeding the rate of solution for dissolving a solid in a liquid compare _____
