Name _____ Date _____

Section 6.1
Vocabulary
Chapter 6

Use with textbook pages 160–164.

Solutes and solvents

Read section 6.1 about solutes and solvents.

Vocabulary			
soluble	insoluble	concentration	dilute solution
concentrated solution			

Use the terms in the vocabulary box above to fill in the blanks. Use each term only once. Then write a sentence to show you understand each term.

1. _____ means able to dissolve in a certain solvent.

2. A material that is unable to dissolve in a certain substance is _____.

3. A(n) _____ has a large mass of dissolved solute for a certain quantity of solvent.

4. The quantity of solute that is dissolved in a certain quantity of solvent is the _____ of the solution.

5. A(n) _____ has a small mass of dissolved solute for a certain quantity of solvent.

Name _____ Date _____

Illustrating Concepts

Chapter 6

Use with textbook pages 160–164.

Illustrating dilute and concentrated solutions

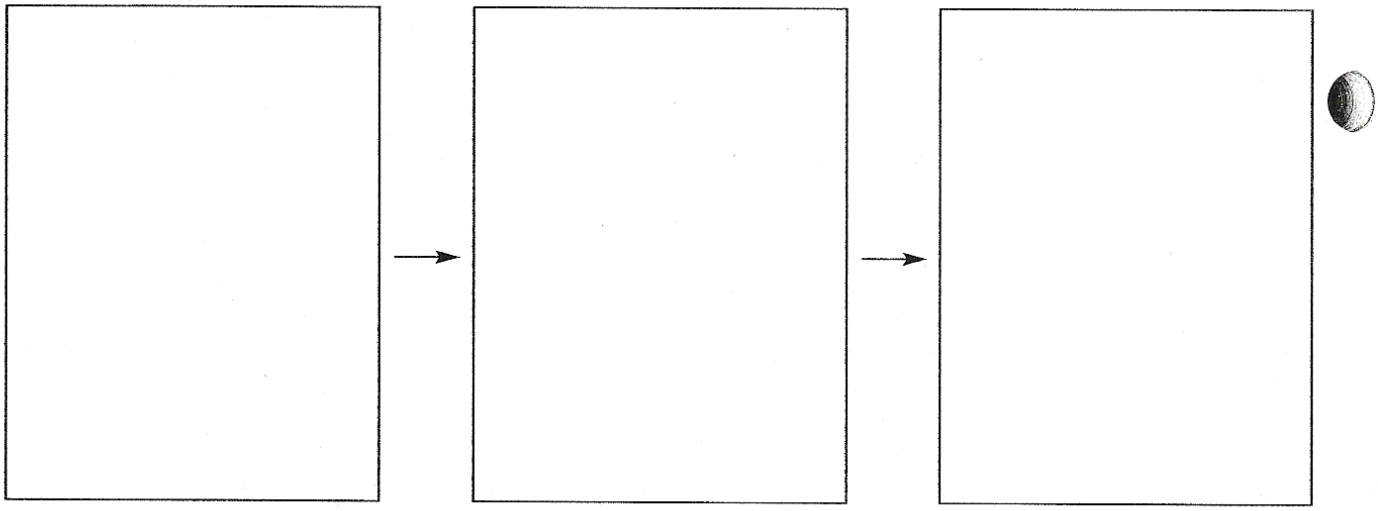
The particle model of matter provides a way to visualize the particles in solutions. For example, look at Figure 6.3 C on page 162 of your textbook. Create similar models to illustrate the situations described below.

Use the particle model to draw how the particles of the liquid look at the end of each of the following steps.

1. A student has some pure water.

2. The student adds a little sugar to the water and stirs until all the sugar dissolves.

3. Then the student adds a lot more sugar to the water and stirs until it all dissolves.



1. Pure water

2. Water + a little sugar (dilute solution)

3. Water + a lot more sugar (concentrated solution)

Name _____ Date _____

Section 6.1 Comprehension

Chapter 6

Use with textbook pages 160–164

True or false?

Read section 6.1 about solutes and solvents.

Read the statements given below. If the statement is true, write "T" on the line in front of the sentence. If it is false, write "F" and circle the word or words that make it false.

1. ___ Soluble substances can dissolve in certain solvents.
2. ___ Insoluble substances can dissolve in all solvents.
3. ___ All substances are soluble in water, which is called the "universal solvent."
4. ___ Table salt is insoluble in water.
5. ___ Grass stains are difficult to wash out because chlorophyll is insoluble in water.
6. ___ When sugar dissolves in water, water particles pull sugar particles off the sugar crystal.
7. ___ Water particles are not actually water molecules.
8. ___ Concentrated solutions contain a large amount of solute for a certain volume of solvent.
9. ___ Dilute solutions contain a large amount of solute for a certain volume of solvent.
10. ___ Solutions with high concentrations of solutes are concentrated.
11. ___ Solutions with low concentrations of solutes are dilute.
12. ___ You can decrease the concentration of a solution by adding more solute.

Name _____ Date _____

Applying Knowledge

Chapter 6

Use with textbook pages 160–164.

Solutes and solvents

Define the terms "solute" and "solvent" in your own words.
Then list the solvent and the solute for each solution that follows.

Define these terms in your own words.

1. Solute: _____

_____

2. Solvent: _____

_____

For each solution, identify the solvent and the solute.

3. Taku mixed some water and juice crystals to make a fruit drink.
   (a) The solute is _____.
   (b) The solvent is _____.

4. Kim swished salt water in her mouth after she lost her tooth in a soccer game.
   (a) The solute is _____.
   (b) The solvent is _____.

5. Rosanna put rubbing alcohol on the grass stain that was on her sock.
   (a) The solute is _____.
   (b) The solvent is _____.

6. Justin added a little sugar to his tea because it tasted bitter.
   (a) The solute is _____.
   (b) The solvent is _____.

7. The tea from Mei's tea bag coloured the water as it brewed.
   (a) The solute is _____.
   (b) The solvent is _____.