1. What is the **Key Concept** of section 2-2? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Main Idea: Life depends on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water.

**Choose whether the statement is true or false. IF the statement is false, correct it.**

\_\_\_\_\_\_\_\_1. Polar molecules have *two* regions with a slight positive charge.

\_\_\_\_\_\_\_\_2. Water is a *polar* molecule.

\_\_\_\_\_\_\_\_3. Slightly charged regions of water molecules form *hydrogen* bonds.

\_\_\_\_\_\_\_4. Which property allows water to resist changes in temperature?

a. high specific heat c. adhesion

b. cohesion d. polarity

\_\_\_\_\_\_5. Which property causes water to form beads?

a. high specific heat c. adhesion

b. cohesion d. polarity

\_\_\_\_\_\_6. Which property of water helps plants to transport water from their roots to their leaves?

a. high specific heat c. adhesion

b. cohesion d. polarity

Main idea: Many compounds dissolve in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Circle the word or phrase that best completes the sentence.

7. A solution is a mixture of substances that is *evenly* / *unevenly* distributed throughout the entire mixture.

8. Blood plasma is an example of a *solvent* / *solute*.

9. “Oil and water don’t mix” because a *polar* / *nonpolar* molecule can’t easily dissolve in a polar solvent.

Main Idea: Some compounds form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. In the pH table below, add labels to show which side of the table shows pHs that are more acidic, & which side shows more basic. Add a label to show which pH is neutral.

7

8

9

10

11

12

13

14

6

5

4

3

2

1

Vocabulary Check

a. Hydrogen bond b. cohesion c. adhesion d. solution

e. solvent f. solute g. acid h. base i. pH

\_\_\_\_\_11. Dissolves in a solution.

\_\_\_\_\_12. Attraction between a slightly positive hydrogen atom and a slightly negative atom

\_\_\_\_\_13. Mixture of substances that is the same throughout – meaning it’s homogeneous

\_\_\_\_\_14. A solution’s acidity is measured on this scale

\_\_\_\_\_15. Attraction among molecules of *different* substances

\_\_\_\_\_16. Compound that releases a proton (H+) when dissolved in water

\_\_\_\_\_17. Attraction that makes water molecules stick to each other (water beading up)

\_\_\_\_\_18. Substance that is dissolved in a solute, such as sugar in coffee

\_\_\_\_\_19. Substance that removes H+ from solution

20. What determines whether a compound will dissolve in water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. **Connect:** Describe an example of cohesion or adhesion that you might observe during your daily life?

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22. **Thinking question:** When sugars are broken down to produce usable energy for cells, a large amount of heat is released. Explain how the water inside a cell helps to keep the cell’s temperature constant.

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23. Go to your online student edition of the text and go to “interactive review” and then on “self-checks”. Take the 1-1 Self-Check Quiz and record your score below. Write out the question AND answer to the ones you missed or the most difficult one. \_\_\_\_\_\_\_ / \_\_\_\_\_\_\_