**Chapter 21 Review**

1. Describe the structure and shape of a water molecule.
2. Water is a polar molecular. What does this mean? Show the separation of charge in a water molecule.
3. What are hydrogen bonds?
4. How does hydrogen bonding cause ice to take up more space than liquid water?
5. Describe the properties of water that are related to hydrogen bonding.
6. Why is water called the “universal solvent?”
7. How does water dissolve ionic compounds such as salt and molecular compounds such as sugar?
8. What does “like dissolves like” mean?
9. Define a mixture and differentiate between a homogeneous and a heterogenous mixture.

10.What is the difference between a colloid and a suspension?

11.What are the two parts of a solution?

12.Define the following terms.

a. solubility:

b. unsaturated solution:

c. saturated solution:

d. supersaturated solution:

13. How does temperature affect the dissolving of solids in liquids?

14. How does temperature affect the dissolving of gases in liquids?

**Essay Prompt**: Water has both a high specific heat capacity and a high boiling point. Describe these properties and how hydrogen bonding relates to them..