

Name: \_\_\_\_\_

Date: \_\_\_\_\_ Period: \_\_\_\_\_

## 15.1 – Water and Its Properties

1. How much of the Earth's surface is covered in water?
2. What does it mean for a molecule to be polar?
3. Draw a molecule of water and include the areas of positive and negative charges.
4. What is hydrogen bonding?
5. What is surface tension?
6. Explain why a drop of water has surface tension.
7. What is a surfactant?
8. Name two surfactants.

9. How does water's polarity affect the Earth's surface water, like lakes and oceans?

10. At what temperature is water most dense?

11. Why is ice less dense than liquid water?

## 15.2 – Homogeneous Aqueous Systems

12. Water samples containing dissolved substances are called \_\_\_\_\_.

13. What is a solvent?

14. What is a solute?

15. If you make a pitcher of Kool-Aid, what is the solvent and what is the solute?

16. What is solvation?

17. Explain how solvation happens when you put the ionic compound sodium chloride, NaCl in water. Discuss and draw pictures of the aqueous solution.

18. What is an electrolyte? What types of compounds are electrolytes?
  
  
  
  
  
  
  
  
  
  
19. Why don't nonelectrolytes behave the same as electrolytes?
  
  
  
  
  
  
  
  
  
  
20. What is special about deliquescent compounds?
  
  
  
  
  
  
  
  
  
  
21. Why is the deliquescent compound, silica gel, put in a new box of shoes?

### **15.3 – Heterogeneous Aqueous Systems**

22. What are heterogeneous and homogeneous mixtures?
  
  
  
  
  
  
  
  
  
  
23. What is a suspension?
  
  
  
  
  
  
  
  
  
  
24. What must you do to a suspension before it can be used?
  
  
  
  
  
  
  
  
  
  
25. List four examples of suspensions.
  - 1.
  - 2.
  - 3.
  - 4.

26. What is a colloid?

27. List four examples of colloids.

1.

2.

3.

4.

28. What is the Tyndall effect?

29. What can the Tyndall effect tell us about types of liquid mixtures?

30. What is an emulsion?

31. Fill in the following table.

<b>Property</b>	<b>Solution</b>	<b>Colloid</b>	<b>Suspension</b>
Particle type/size			
Effect of light			
Effect of gravity			
Effect of filtration			
Uniformity			