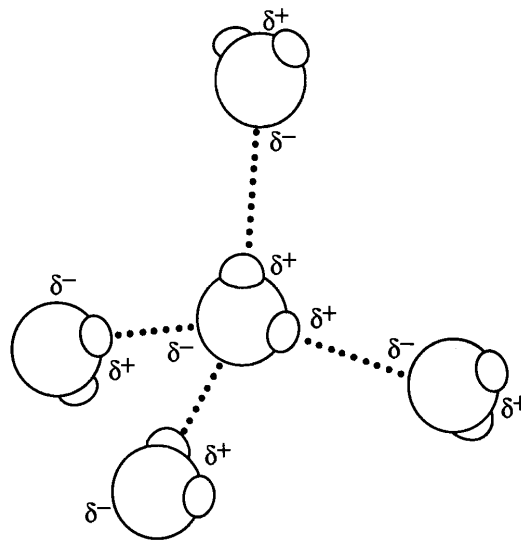
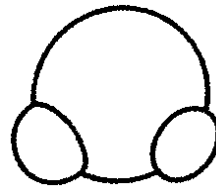


WATER, ACIDS, BASES, BUFFERS

STRUCTURE & GEOMETRY OF WATER:



PROPERTIES OF WATER:

QUESTIONS:

1. Explain why water is a polar molecule.

2. Explain how water is able to form 4 hydrogen bonds.

3. List the 5 emergent properties of water.

4. Define the following terms.

Cohesion	
Adhesion	

5. Why is water cohesive?

6. What is the biological importance of water's cohesive and adhesive properties?

7. Why does water have a greater degree of surface tension than most other liquids?

8. Why does water have a high specific heat?

9. What is the biological importance of water's high specific heat?

10. Why does water have a relatively high heat of vaporization?

11. What is the biological importance of water's relatively high heat of vaporization?

12. Why does water expand when it freezes?

13. Why does ice float?

14. What is the biological importance of the expansion of water when it freezes.

15. Match the description/definition with the correct term.

A. Aqueous solution

D. Solute

B. Hydrophilic

E. Solution

C. Hydrophobic

F. Solvent

_____ Homogenous mixture of 2 or more substances

_____ Dissolving agent

_____ Material being dissolved

_____ Solution where water is solvent

_____ Water loving; molecules with an affinity for water

_____ Water fearing; molecules that do not have an affinity for water

16. Why is water a versatile solvent?

17. In general, what kinds of materials will not dissolve in water?
