Unit 2 Test Review

Water

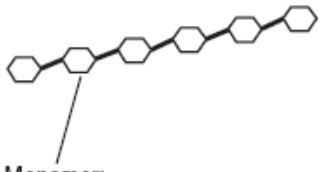
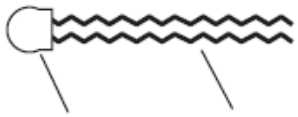
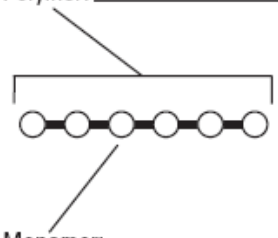
1. What is adhesion? Provide at least one example.
2. What is cohesion? Provide at least one example
3. What is surface tension? What causes surface tension to occur?
4. (a) What is a solvent? (b) What is a solute? (c) What is a solution?
5. Draw the water molecule. Label each atom in the molecule and indicate their charges.
6. Draw a picture of at least 3 water molecules that are bonded together. Be sure the molecules are bonded correctly.
7. How does adhesion and cohesion relate to water transport in plants?
8. When water freezes what happens to the water molecules.
9. Why does ice float? Why is this property essential for life?
10. Water has a high specific heat capacity. What does this mean?
11. What does pH measure? Would a solution with a low H ion concentration be an acid or base?
12. Would a substance with a pH of 4 be considered and acid or base?

Macromolecules

13. What is a macromolecule?
14. What is the relationship between a polymer and a monomer?
15. Describe the properties of the carbon atom that make the diversity of carbon compounds possible.
16. Are lipids polar or non-polar? Are lipids soluble in water?
17. Explain the difference between organic and inorganic compounds.

Enzymes

18. What is a chemical reaction? What are the reactants/products?
19. What is an enzyme?
20. What is a catalyst?
21. What is activation energy?
22. How does a catalyst affect the activation energy of a chemical reaction?
23. Some organisms live in very hot or acidic environments. Would their enzymes function in a person's cells? Why or why not?
24. What three factors impact the effectiveness of enzymes?

Type of Molecule	Functions	Example
1. Carbohydrate		Polymer – cellulose  Monomer: _____
2.		Molecule: _____  _____ _____
3.		Polymer: _____  Monomer: _____

Nucleic Acids	Types:	Functions: