AMA
LEARNING

Biochemistry: Practice Activity

Directions: Read and answer the following questions to assess your knowledge of cells.

1. What is the difference between cohesion and adhesion?
2. Baking soda is an example of a _____.
3. _____ are the building blocks of macromolecules.
4. What forms polymers?
5. What is an example of adhesion?
6. What does organic mean?
7. What does an indicator show and what does it do to show it?
8. What is the difference between a solute and a solvent?
9. Why can some insects walk on water?
10. What does polar mean in terms of water properties?

Directions: Fill in the charts.

Property	**Acids**	**Bases**	**Neutral Substances**
Taste			-
Example 1			-
Example 2			
Reaction w/ metals			-
Kind of ion			-
pH numbers			

Polymer	Monomer
Carbohydrates	
Lipids	
Proteins	
Nucleic Acids	

Carbohydrate

Monomer	
Function	
Elements	
Shape	

Lipids

Monomer	
Function	
Elements	
Shape	

Protein

Monomer	
Function	
Elements	
Shape	

Nucleic Acids

Monomer	
Function	
Elements	
Shape	

Sample Answers

1. Cohesion is attraction between properties of the same substance and adhesion is attraction between two different substances
2. Buffer
3. Monomers
4. Dehydration synthesis
5. Capillary action
6. Contains carbon
7. It shows the presence of an acid or base and it changes color to let you know
8. A solute is a substance being dissolved and a solvent is the substance a solute dissolves into
9. Surface tension
10. It means that water has unequal charged ends

Property	**Acids**	**Bases**	**Neutral Substances**
Taste	sour	bitter	-
Example 1	Hydrochloric Acid	Acetone	-
Example 2	Acetic Acid	Ammonia	water
Reaction w/ metals	React	Don't React	-
Kind of ion	H^+	OH^-	-
pH numbers	0-6.9	7.1-14	7

Polymer	**Monomer**
Carbohydrates	Monosaccharides
Lipids	Fatty Acids
Proteins	Amino Acids
Nucleic Acids	Nucleotide

Carbohydrate

Monomer	Monosaccharide
Function	Short term energy
Elements	Carbon, hydrogen, oxygen
Shape	Ring

Lipids

Monomer	Fatty Acids (Triglyceride)
Function	Long term energy, cell membrane
Elements	Carbon, hydrogen, oxygen
Shape	E-shape

Protein

Monomer	Amino Acids (20 different kinds)
Function	Body Structure (muscles, organs), enzymes
Elements	Carbon, hydrogen, oxygen, nitrogen
Shape	No set shape; Shape determines function

Nucleic Acids

Monomer	Nucleotide
Function	Contain genetic information
Elements	Carbon, hydrogen, oxygen, nitrogen, phosphate
Shape	Helix