

Macromolecules Worksheet Packet

Science Writing: Building Vocabulary Skills

Compare your answers...correct with colored pencil as needed. I will be coming around to observe what you were able to do on your own!

1. *Carbohydrates, polysaccharide, dehydrations synthesis, hydrolysis, monosaccharide:*

Carbohydrates have a ratio of Carbon: Hydrogen: Oxygen of 1:2:1. Monomers of carbohydrates are called monosaccharides and they are connected by dehydration synthesis to form polysaccharides. Polysaccharides can then be broken down through the addition of water in a process called hydrolysis.

2. *Lipids, cholesterol, saturated fats, unsaturated fats, 3 fatty acids, membrane phospholipids, 1 glycerol.*

Lipids are fat polymers. Cholesterol is one type of fat polymer. Saturated fats are solids at room temperature, contain only single bonds, and increase blood cholesterol. Unsaturated fats are liquids at room temperature, contain double bonds, and may decrease blood cholesterol. A triglyceride fat is made up of 3 fatty acids and 1 glycerol molecule. Fats make up the cell membrane and these are called membrane phospholipids.

3. *Proteins, peptide bond, amino acid, polypeptide:*

Proteins complete a variety of functions in living things including transport and enzymes. 20 different types of amino acids can be put together with a peptide bond to make a polypeptide (polymer).

4. *OPTIONAL: Enzyme, substrate, catalyst, active site:*

Enzyme breaks down the substrate at the active site. Enzymes are catalysts which speed up chemical reactions in living things.

5. *Nucleic Acids, RNA (ribonucleic acid), nucleotides, DNA (deoxyribonucleic acid):*

There are two types of nucleic acid polymers: RNA and DNA. All are made by the dehydration synthesis of nucleotides. There are four types of nucleotides in DNA: ATCG

We will correct the other answers in class and determine a grade based on your understanding of the 4 classes of macromolecules.