

Name: _____ Period: _____ Date: _____

Macromolecule Stations

Station 1: Overview

1. Fill in the following table:

Macromolecule	Contain the Elements	Building Blocks (monomer)	Examples

Station 2: Identifying Macromolecules

1. Label each of the cards as a nucleic acid, protein, lipid, or carbohydrate.

A. _____ F. _____
B. _____ G. _____
C. _____ H. _____
D. _____ I. _____
E. _____ J. _____

Station 3: Dehydration Synthesis: Nucleic Acids & Proteins

1. Three nucleotides in a row is called a codon. Each codon “codes” for an amino acid. A row of amino acids is joined and folded to make a protein. Look at the following mRNA sequence.

GGUGCUGUU

2. How many codons/amino acids are shown in this mRNA? _____

3. Look at the codon to amino acid table provided. What three amino acids does this code for (in the correct order)?
4. Build these amino acids. Line them up in the correct order and connect them by dehydration synthesis as shown on the card. What type of bond keeps amino acids together?

Station 4: Dehydration Synthesis: Carbohydrates

1. Build 2 glucose molecules using the balls provided.
2. When you are finished, line them up side by side and join the molecules as shown on the station card. What molecule did you just make?
3. What molecule was released when you joined these molecules? Why do you think this type of reaction (joining monomers) is called a dehydration synthesis reaction?
4. When starch is digested, the bonds between the monomers in the starch molecule are broken. The breakdown of starch is an example of a hydrolysis reaction. What is a hydrolysis reaction? What is released and/or needed for hydrolysis to occur?

Station 5: Lipids

5. How are lipids similar to starch and to polypeptides? How are they different?
6. Draw a lipid bilayer. Label the hydrophobic and hydrophilic regions.
7. If you put lipids in water, what would happen? Why?