

Name: _____ Row: _____

Date: _____ Period: _____

Macromolecule Worksheet

1. Explain how monomers are related to polymers.
2. When polymers are broken down into monomers, what would your body do with those monomers?

3. Draw a line to match the **monomer** on the left to the **macromolecule** on the right.

Fatty acids and glycerol	protein
Monosaccharide	lipid
Nucleotide	nucleic acid
Amino acid	carbohydrate

4. Draw a line to match the **polymer** on the left to the **macromolecule** on the right.

DNA	protein
Enzyme	lipid
Triglyceride	nucleic acid
Polysaccharide	carbohydrate

5. Draw a line to match the **monomer** on the left to the **polymer** on the right.

Fatty acids and glycerol	polysaccharide
Monosaccharide	RNA
Nucleotide	enzyme
Amino acid	phospholipid

6. Draw a line to match the **monomer** on the left to the **polymer** on the right.

Fatty acids and glycerol	enzyme
Glucose	triglyceride
Nucleotide	starch
Amino acid	DNA

7. Draw a line to match the **monomer** on the left to the **polymer** on the right.

Amino acid	glycogen
Nucleotide	phospholipid
Monosaccharide	protein collagen
Fatty acids and glycerol	DNA

8. Draw a line to match the **polymer** on the left to the **macromolecule** on the right.

Cholesterol	protein
Enzyme	nucleic acid
RNA	carbohydrate
Cellulose	lipid

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Macromolecule Worksheet

1. What are the definitions of a monomer and polymer?

Monomer = _____

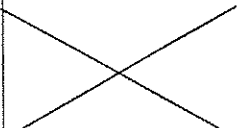
Polymer = _____

2. Draw a starch polymer containing its many monomers. Use hexagons as a monomer. Label which is a monomer and which is a polymer.

3. Explain how monomers are related to polymers.

4. When polymers are broken down into monomers, what are those monomers then used for?

5. Complete the chart below. Remember *mono* means one and *poly* means many.

Macromolecules	Food Example	Monomer	Polymer
Carbohydrates			
Lipids			
Proteins			
Nucleic Acids			

6. Monomer of a carbohydrate? _____ polymer? _____
7. How many rings are in a monosaccharide? _____ Disaccharide? _____ Polysaccharide? _____
- What is the most common monosaccharide? _____
- What is the most common polysaccharide in plants? _____ in animals? _____
8. Monomer of a lipid? _____ polymer? _____
9. Circle the Answer: Are lipids polar or non-polar? Polar Non-Polar
- Are lipids soluble in water? Yes No
- Is water polar or non-polar? Polar Non-Polar
10. Monomer of a protein? _____ polymer? _____
11. Draw the general chemical structure of an amino acid.
12. What kind of bond holds amino acids together? _____
13. How can a chain of amino acids turn into a protein? _____
- _____
14. Monomer of a nucleic acid? _____ polymer? _____
15. What two functions do nucleic acids have?
- a. _____
- b. _____
16. What are the three parts that make up a nucleotide? Draw a nucleotide.
- a. _____
- b. _____
- c. _____
17. What kind of bond holds the two strands of the double helix together? _____