

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

Group Members Names \_\_\_\_\_

# Macromolecule Project

## Carbohydrates, Lipids, Proteins and Nucleic Acids

**In your groups                      No more than 4 to a group!**

- Decide which member will be responsible for each of the four molecules
  - Carbohydrates, Proteins, Lipids, and Nucleic acids
- Read about each of the four types of macromolecules in your textbook. Then complete some research using the internet about each of the macromolecules.
- Your group is responsible for creating a fact sheet for each type of molecule.
  - All fact sheets will be compiled and turned for one project grade.

You may use the following questions to help guide your research. You are not limited to these questions; you should complete an extensive search through many different websites to learn as much as you can about your topic, so you can share with others in the group.

### Carbohydrates

- What is a carbohydrate? What are the building blocks of carbohydrates?
- How do the terms monosaccharide, disaccharide and polysaccharide fit into this category?
- Why are carbohydrates important for living things? Be sure to include functions in animals and plants.
- In what type of foods can we find carbohydrates, include at least three pictures to accompany your list of food items.

### Lipids

- What are lipids? What are the building blocks of lipids?
- How do the terms fatty acids, unsaturated, saturated, phospholipids, triglycerides, and steroids all fit into this category?
- Why are lipids important for living things? Be sure to include functions in animals and plants.
- In what types of food can we find lipids, include at least three pictures to accompany your list of food items.

### Proteins

- What is a protein? What are the building blocks of proteins?
- How do the terms amino acids, peptide bonds, protein structure, and enzymes all fit into this category?
- Why are proteins important for living things? Be sure to include functions in animals and plants.
- In what types of food can we find proteins, include at least three pictures to accompany your list of food items.

## Nucleic Acids

- What are nucleic acids? What are the building blocks?
- Why are nucleic acids important for living things?
- What are the parts of a nucleotide?
- What is ATP, and why is it important to living things?
- Include a picture of each type of nucleic acid, and a picture of a nucleotide

## Fact Sheet Requirements

**All sheet should be similar!**

1. A title identifying which molecule is being discussed in the fact sheet.
2. Information is organized and displayed to fill the entire page.
3. Minimum of 3 pictures-hand drawn or printed (**no printer available in lab**)
4. Text should be as straight as possible, sheet should be colorful and neat

## Project Rubric

**Each Fact sheet will be evaluated using the following criteria. A group grade will be determined adding the scores on each molecule sheet together.**

	10pts	7-9pts	0-6pts
<b>Title</b>	Title is eye-catching and appropriately displayed on fact sheet		Title is missing
<b>Content Information</b>	Researched information is correct and appropriate for project. Evidence of additional research beyond questions provided by instructor.	Information correctly answers questions provided by instructor	Information is incorrect and/or missing information about 1 or more suggested questions provided by instructor.
<b>Pictures</b>	More than 3 pictures are present on the sheet.	Missing 1 picture	Missing 2 or more pictures
<b>Aesthetics and Appearance</b>	Fact sheet is neat colorful, easy to read, and well-constructed	Fact sheet is organized but lacks in color and/or construction	Fact sheet is messy and/or not well constructed.

Final Score \_\_\_\_\_