Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Macromolecule Stations**

We ALL start here:

**Do Now**: What is the importance of knowing that a large percentage of our body is made of C, H, O, and N? How does this knowledge impact our daily lives?

**Brainstorming:** Explain/conclude what do you think may be happening to the proteins in the frying egg? Use you prior knowledge to answer to the best of your ability. *Hint: think about “homeostasis”*



**Carbon Compounds- Close Reading/ Annotate:**

Organic chemistry is the study of all compounds

Important Vocabulary

**Macromolecule Characteristics and Examples**

Carbohydrates

Lipids

Proteins

Nucleic Acids

that contain bonds between carbon

atoms. Carbon compounds are also called

organic compounds. Many of the molecules

in living things are so large that they are

known as macromolecules. Macromolecules

are formed in a process called polymerization.

Smaller units, called monomers, join together

to form macromolecules, or polymers.

Four groups of organic compounds

found in living things are carbohydrates,

lipids, nucleic acids, and proteins. Carbohydrates

are compounds made up of carbon,

hydrogen, and oxygen atoms. Living things

use carbohydrates as their main source of

energy. Plants and some animals use carbohydrates

in structures. Starches and sugars

are examples of carbohydrates.

Lipids are made mostly from carbon and

hydrogen atoms. Fats, oils, and waxes are

lipids. Lipids are used in living things to

store energy. Some lipids are important parts

of biological membranes and waterproof

coverings. Lipid molecules are made up of

compounds called fatty acids and glycerol.

Nucleic acids contain hydrogen, oxygen,

nitrogen, carbon, and phosphorus.

Nucleotides are the monomers that make

up nucleic acids. Each nucleotide consists of

a 5-carbon sugar, a phosphate group, and a

nitrogenous base. Nucleic acids store and

transmit hereditary, or genetic, information.

There are two kinds of nucleic acids:

ribonucleic acid (RNA) and deoxyribonucleic

acid (DNA).

Proteins contain nitrogen as well as carbon,

hydrogen, and oxygen. Proteins are

polymers of molecules called amino acids.

Some proteins control the rate of reactions

and regulate cell processes. Some are used

to form bones and muscles. Others transport

substances into or out of cells or

help to fight disease.

**What Macromolecules Are In My Food?** Analyze the food label below and answer the following questions:



1. What food is this nutrition label from?

2. What macromolecules are found in this food?

3. What type lipid is found in this food?

4. What macromolecule does cholesterol belong to?

5. What polysaccharide does this food have to help us move things through our digestive system and in what percentage?

6. Based on the percentages, what biological functions would this food mainly help us with?