

Chemistry of Living Things

Essential questions: What are elements and Compounds? What organic compounds are basic to life?

What is biochemistry?

Elements

Pure substances that _____ be broken down chemically into _____.
Made of _____ type of _____.

96 % of the mass of an organism is composed of _____ elements: _____

Each element has a unique _____ I:
Consists of _____ .

Atoms

The _____ particle of an _____ that retains all the properties of that element.
All atoms consist of _____ types of smaller particles:

Compounds

Examples: _____ and _____.

Scientists classified compounds into two groups: _____

Biological Macromolecules

MACROMOLECULE is _____

1.CARBOHYDRATES

✓ They are the main _____ for the body to gain _____.

✓ They make up _____ which allows them to _____.

This type of carbohydrate is called _____.

THERE ARE 2 TYPES OF CARBOHYDRATES

SIMPLE CARBOHYDRATES

COMPLEX CARBOHYDRATES

2.Lipids : Mostly C,H and some O

THINK: Waterproof, insulate, steroids, energy, cushion...

Fat Made up of fatty acid monomers –

3. Proteins

Made up of Mostly C, H, O and N (Some Sulfur)

Made up of Amino Acid Monomers!!!

The shapes of Proteins Determines its Function

Ribosomes

Insulin

Chemical signaler protein produced in the _____.

Hemoglobin

Antibodies

Enzymes

Speed up the rate of a _____ by _____ the energy needed to _____ the reaction.

Molecule specific – _____.

-Example: ONLY Lactase will break down lactose. It will NEVER break down proteins

Lactase breaks down _____.
Pepsin breaks down _____.
Amylase breaks down _____.

Enzymes are affected by: _____

4. NUCLEIC ACIDS

DNA _____.
RNA _____.

**Monomers are called _____.

