Name: _____ Date:_____ Mrs. E'Nama, Pd: _

The Molecules of Life

Part A: ***Carbon and its Compounds***

Carbon has the ability to bond with _____ different atoms at the same time. This ability is the basis for building large, complex molecules. _____ _____ are molecules composed of only Hydrogen and Carbon. Some examples include methane and propane. Molecules containing Carbon are also able to form many different shapes like chains, _____, and rings. _____ _____ are molecules with the same formula but different structures. In class we built butane and isobutene to demonstrate this.

All organic compounds begin with a _____ skeleton. From there we add _____ _____, groups of atoms that give the organic compounds their unique properties. One example of a functional group is the -OH, or hydroxyl.

Further, all organic compounds are composed of basic units called _____ _____ which can be combined into long chains called _____. To put two monomers together you must remove _____ in a process called _____synthesis. To break two monomers apart you must add _____ in a process called _____.

Part B: ***Carbohydrates***

Carbohydrates are essential for living things because they provide us with _____. Some examples of carbohydrates that we eat are _____ _____, _____, and _____. Carbohydrates are composed of basic building blocks called _____ _____. These molecules always contain two functional groups: _____ _____ and _____. Two common monosaccharides are _____ and _____.

When two monosaccharides are combined they form a _____. One common disaccharide is sucrose, or table sugar. When even more combine they form a _____. Starch and glycogen, common examples, are used to store food in plants and animals, while _____ is found in plant cell walls.