Name: Date: Period:

**Organic Compounds**

*They put the “O” in Outstanding!*

**Organic Compounds** are any - based molecules.

The element **Carbon** is the backbone of life because it has electrons in its outermost electron shell.

**Carbon** can make covalent bonds because of its amount of electrons in its outermost electron shell.

**Hydrocarbons** are compounds composed of only and .

**Isomers** are compounds with the ***SAME*** , but ***DIFFERENT*** .

**Formula for Hydrocarbons:**

|  |  |  |
| --- | --- | --- |
| **Type of Bonds** | **How Bonds Are Shown** | **Name Ending with Specific Bonds** |
| Single Bond |  | *Ex)* |
| Double Bond |  | *Ex)* |
| Triple Bond |  | *Ex)* |



***HYDROCARBONS***

|  |  |  |  |
| --- | --- | --- | --- |
| **Hydrocarbon** | **Number of Carbons** | **Molecular Formula** | **Structural Formula** |
| **Methane** |  |  |  |
| **Ethane** |  |  |  |
| **Propane** |  |  |  |
| **Butane** |  |  |  |
| **Pentane** |  |  |  |
| **Hexane** |  |  |  |
| **Heptane** |  |  |  |
| **Octane** |  |  |  |
| **Nonane** |  |  |  |
| **Decane** |  |  |  |

***Functional Groups***

The unique properties of an organic compound depend NOT ONLY on the size and shape of its but also on the groups of that are attached to the carbon skeleton.

There are **functional groups** that are essential to the chemistry of life.

**Functional Groups** are polar because and

atoms exert a strong pull on the shared electrons.

|  |  |  |  |
| --- | --- | --- | --- |
| **Functional Group** | **Category** | **Structural Formula** | **Example** |
| Hydroxyl Group |  |  |  |
| Carbonyl Group |  |  |  |
| Carbonyl Group |  |  |  |
| Carboxyl Group |  |  |  |
| Amino Group |  |  |  |
| Phosphate Group |  |  |  |