Chapter 4

Carbon is the “backbone” of life.

What about the bonding of carbon makes it special?

Carbon can bond to four other atoms

Name four different variations that can arise in a carbon skeleton.

1. length

2. branching

3. double bonds (triple bonds are also possible)

4. rings

An isomer is:

Compounds that have the same number and type of atoms but different structures

Isomers have what properties in common?

Because the structures are different, isomers have different properties.

3 types of isomers:

1. Structural-different branching

2. Geometric-differ in arrangement around the double bond

3. enantiomers-differ in spatial arrangement around an asymmetric carbon. Give mirror images.

Organic molecules: How to tell if they are –anes, -enes, or –ynes.

She had it on the projector so it may be tested on the test.

-anes: CnH2n+2

-enes: CnH2n

-ynes: CnH2n-2

Functional group flashcards (cut these out and we will go over them in class)

For these, I recommend drawing the molecule, naming it, and stating some functional properties.

|  |
| --- |
| Hydroxyl |
| Carbonyl |
| Carboxyl |
| Amino |
| Sulfhydryl |
| Phosphate |
| Methyl |