Biology - Chemistry & Energy

Carbon

Organic Compounds are a Class of Compounds that contain CARBON

Carbon is a relatively small atom

- 6 protons and 6 neutrons for an atomic weight of 12

Carbo needs four extra electrons, so it will bond with whatever molecule is nearby.

- It can bond with up to four at the same time

Electron Shells

Carbon, as said before, has 6 protons, 6 neutrons and 6 electrons

- Atoms have electron shells and they need to have these shells filled in order to be “happy”

Carbon forms a type of bond called covalent

- Covalent: atoms share electrons with each other
    - For example -> Methane (covalent bond) takes 1 carbon and 4 hydrogen
        - Carbon is sharing its 4 electrons in its outer shell with 4 atoms of hydrogen
        - Hydrogen atoms only have one atom, since there are four of them, they give the carbon the amount of extra atoms they need, which is 4

Polar and Non-Polar Covalent Groups

Electrons that are shared equally within a covalent bond, such as O_2 is called a non-polar covalent bond.

- However, often one participant is more greedy than the other.
    - Let’s take water for example, in Water the oxygen molecules sucks up the electrons in, resulting in more time with oxygen than in hydrogen. Creating a slight positive charge around the hydrogens and a slight negative charge around the oxygen