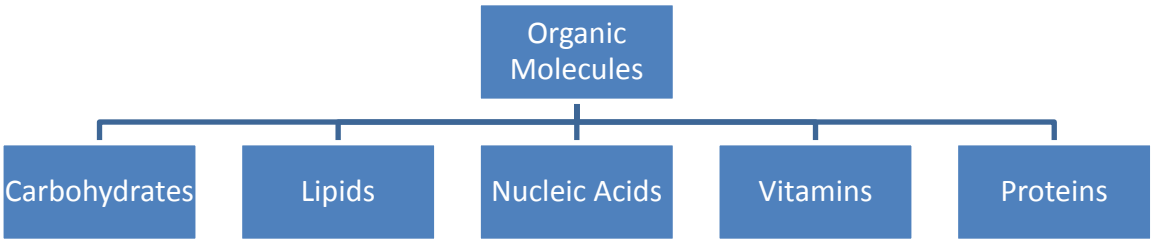
HOW TO USE THESE NOTES: EACH "=" SIGN IS A NEW BULLET UNDER THE BOLDED HEADING

Chemistry of Life

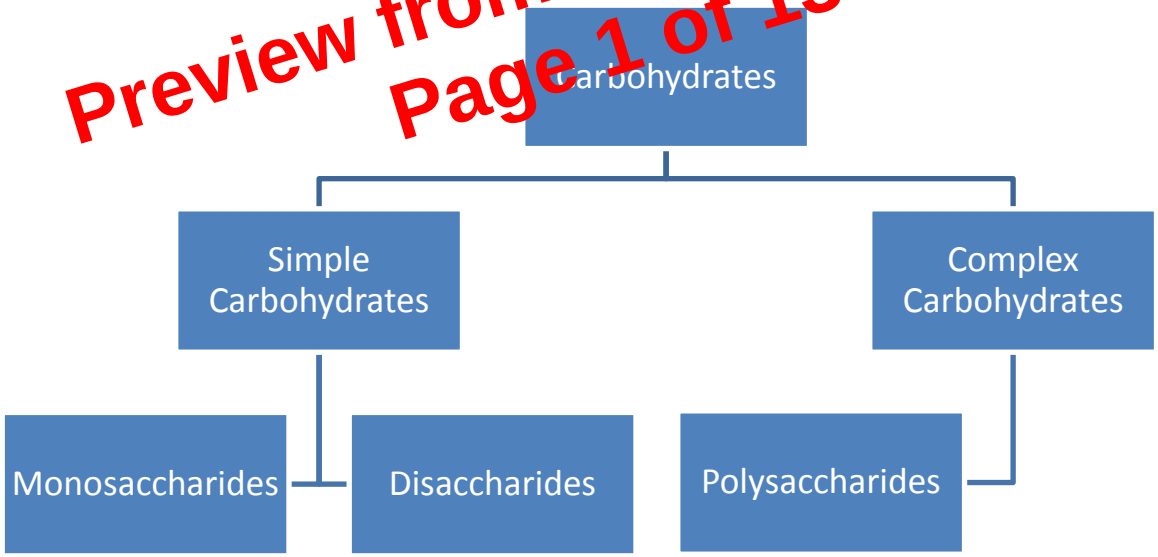
Bio-Chemistry = the study of organic molecules and their function in living organisms

Organic Molecules



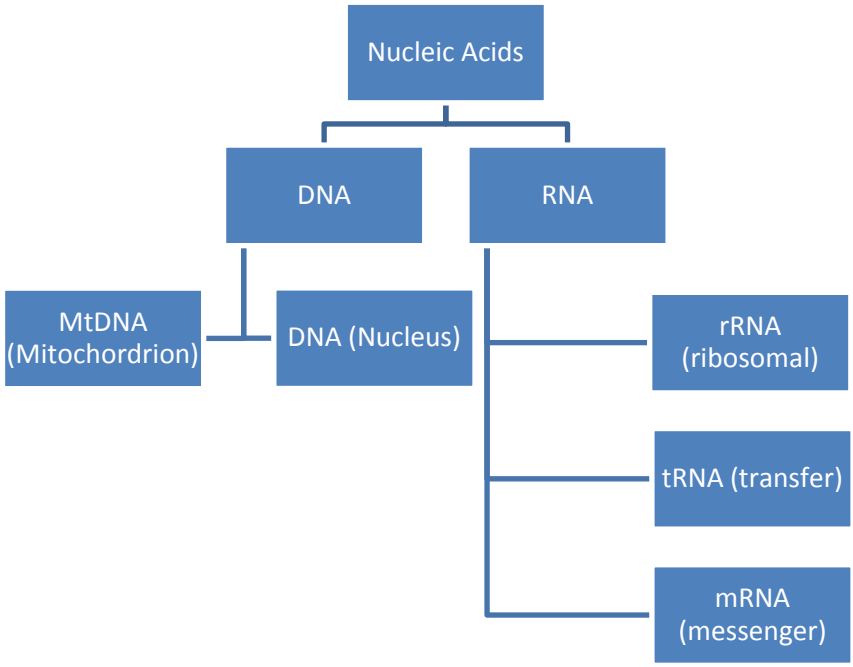
Organic Molecule = substances that are found within living organisms and contain carbon-hydrogen bonds. =major classes are vitamins, carbohydrates, proteins, lipids and nucleic acids

1. Carbohydrates



Carbohydrates = organic molecules made of carbon, hydrogen and oxygen. =the amount of hydrogen atoms in a molecule is usually double the amount of oxygen. = monomers are connected by glycosidic bonds

Function = 1- release energy when needed, 2- store energy, 3- form certain structures.



Nucleotides= the monomers that make up nucleic acids. Made of 3 parts=1-a sugar 2-a phosphate group 3-organic nitrogen base

Deoxyribonucleic Acid = found in nucleus in the form of chromosomes (spiraling around histones) =consists of a deoxyribose sugar, a phosphate and four different nitrogenous bases 1-adenine 2-thymine 3- guanine 4- cytosine

Characteristics = double helix = adenine only pairs with thymine and cytosine only pairs with guanine =they are connected by weak hydrogen bases =controls the structure and function of cells through producing different proteins =responsible for transmitting heredity information from cell to cell and parent to offspring.