The 5 Requirements for Life

Water, Nutrients (CHONSP), Energy, Electron acceptors, and suitable temperatures

Major Co-Enzymes

Acetyl- CoA, NAD, FAD, and NADP

Terms

Coenzyme

> An organic molecule that binds to the active sites of certain enzymes

Catabolism

> (Oxidized) The breaking of big molecules to make enegry

Anabolism

> (Reduced)the building of small molecules to big molecules

The 4 molecular families

	Carbohydrates	Proteins	Nucleic Acids	Lipids
Monomers	Glucose	Amino Acids	Nucleotides	Fatty acid, Backbone, and polar head
Types of bonds	Glycosidic bond	peptide bond	phosphodiester	ester
polymers	Sucrose, Cellulose	Keritine, Enzymes	DNA, RNA	Triglicerides
Functions	Store erergy and structure	Reaction catalysis	Storage and gene expression	Store energy and stucture
Structure	Monosaccharide, disaccharide and polysaccharide	Primary, secondary, tertiary, and quaternary	DNA and RNA	N/A

Cell membrane and the polymers involved

phospholipids (lipids) are important for cell membrane structure and function. They allow compartmentalization in cells, regulate exchanges, and allow formation of gradients.

Be able to draw:

Glucose, Ribose, Amino Acid, Glycerol, and a fatty acid

Calculations

Caclulate the number of electrons stored on any organic molecule

> In a lewis dot structure, the atom with the highest electronegativity gets all the electrons stored on it

Calculate the number of electrons needed in an organic molecule

> Count each molecule ig