

Organizer - Basic Biochemistry

Vocabulary:

Monomer - Single unit that can be used repeatedly to build a long chain

Polymer - A chain built of repeating subunits (monomers)

Substance	Examples	Functions	Building Blocks
Proteins	Muscle tissue All enzymes Insulin and other peptide hormones Hemoglobin Antibodies	Structure Enzymes to catalyze reactions Antibodies	Amino acids (20) = monomer Proteins are polymers of amino acids. 20 amino acids creates the potential to build an infinite number of unique protein structures
Carbohydrates	Sugars (glucose, fructose, sucrose) Starches, Glycogen Cellulose (paper, wood)	Component of cell membranes Plant cell walls (cellulose) Short-term energy storage	Simple sugars = monomer (Monosaccharides) Starch, glycogen, cellulose are polymers of simple sugars
Lipids	Fats Waxes Steroids } all hydrophobic	Fats: Components of cell membranes, nerves, brain Fats: long term energy storage Steroids: hormones	Fats: glycerol and fatty acids 3 fatty acids + 1 glycerol = triglyceride
Nucleic Acids	DNA & RNA	Storage of hereditary information "Genes" "Blueprints"	nucleotides