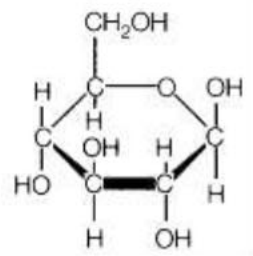
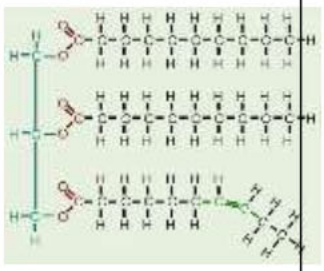
MACROMOLECULE SUMMARY CHART

Macromolecule	Monomer name and chemical composition and Name of bond between adjacent monomers	Types of this macromolecule and example(s) for each type.	Functions (make sure they correspond to the type)
Carbohydrates 	-Monosaccharides (CH_2O) -Glycosidic linkage (aka ether linkage)	1) Monosaccharides (glucose, galactose) 2) Disaccharides/ Oligosaccharides (sucrose, lactose) 3) Polysaccharides Starch / Glycogen Cellulose Chitin	Energy storage Energy storage Long-term energy storage Structural component of plant cell wall, component of exoskeletons Component of cell walls of fungi
Lipids 	-Glycerol and fatty acids -Ester bond	1) Fats (triglycerides: vegetable oil, animal fat) 2) Phospholipids (cell membranes) 3) Steroids -Cholesterol -Estrogen / Testosterone 4) Waxes	Long-term energy storage. Insulation, protection and cushioning of organs. Amphophilic nature forms cell membranes. Maintains fluidity of m/b, cell signaling Hormone (chemical messenger) Prevents water loss

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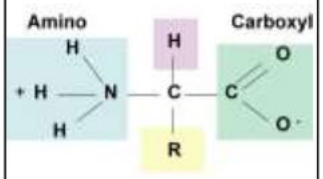
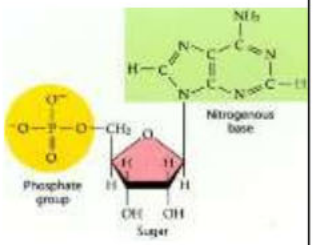
Proteins  	Amino Acids Peptide bonds	1) Globular (Enzymes "catalase") 2) Fibrous -Keratin -Fibrinogen -Actin/Myosin -Silk	Extremely diverse molecules. With a huge variety of different functions from chemical catalysts to structural building blocks. Enzymes regulate nearly all cell functions Diverse array of molecules often used structurally
Nucleic Acids  	Nucleotides (phosphate group, N-containing base, sugar) Phosphodiester bonds	1) DNA 2) RNA mRNA tRNA rRNA snRNA 3) ATP	Genetic code/ heredity Protein synthesis Copy of genes for cytoplasm Delivers AAs to ribosome Part of ribosomes modifies mRNA in nucleus Cellular Energy molecule