

Macromolecule Guided Notes

What are living things made of?

CHNOPS

- 6 most common elements: _____

Carbon, Hydrogen, Nitrogen, Oxygen

- Where are these elements found? _____

Phosphorous Sulfur
in large, organic macromolecules

- Why is carbon especially important? _____

backbone for macromolecules

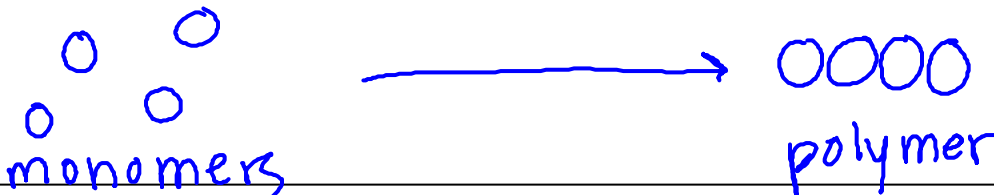
What are the four different types of organic macromolecules?

proteins, carbohydrates, lipids, nucleic acids

How are **organic macromolecules** organized?

- **Monomer** individual building blocks, links in a chain
- **Polymer** chain of monomers

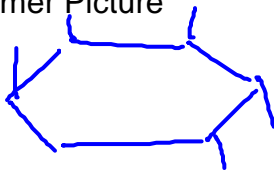
Draw a picture representing the relationship between a monomer and a polymer:



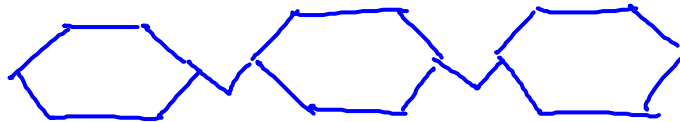
How do organisms (like us) obtain these macromolecules? diet

Macromolecule (Polymer) Carbohydrates **Monomer** monosaccharide

Monomer Picture

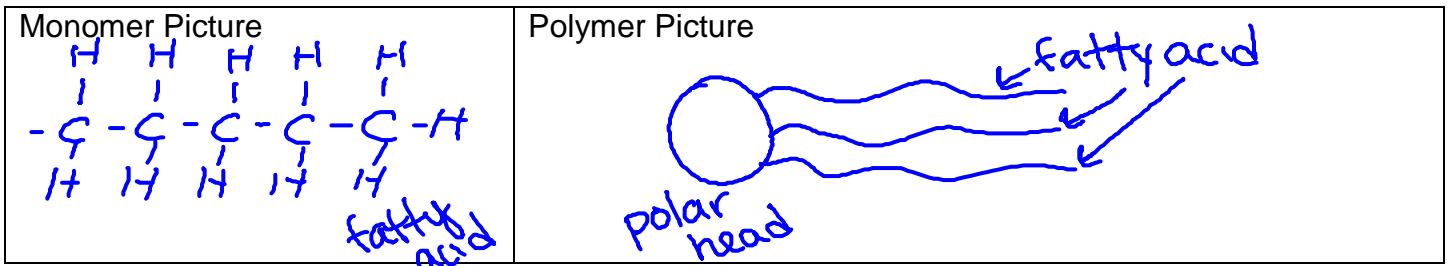


Polymer Picture



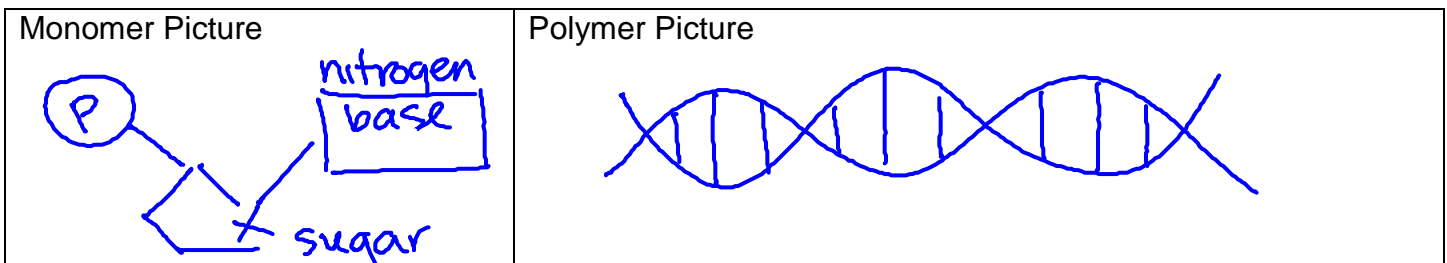
- Function(s) immediate energy source; cell walls of plants
- Example(s) cellulose, glucose, sucrose, starches
- Where do we obtain this in our diet? sugar, bread, pasta

Macromolecule (Polymer) lipids Monomer fatty acids



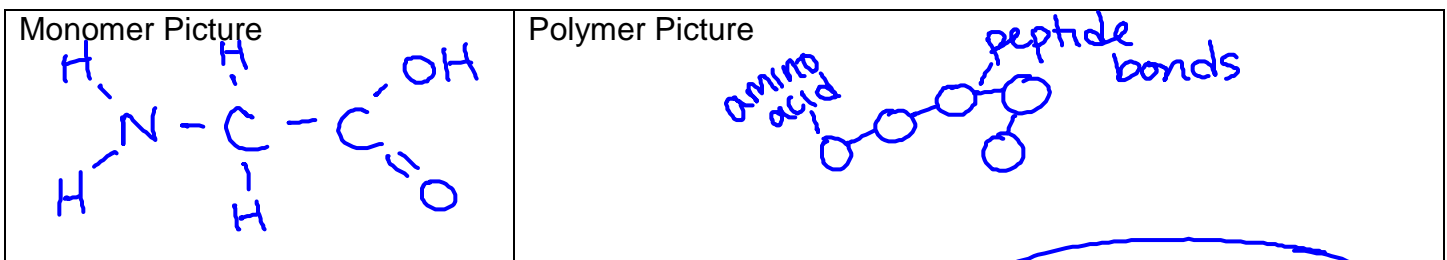
- Function(s) long term energy storage; cell membranes; insulation
- Example(s) fat, oil, wax, phospholipid
- Where do we obtain this in our diet? oil, fat, butter

Macromolecule (Polymer) nucleic acids Monomer nucleotide



- Function(s) genetic information
- Example(s) DNA, RNA
- Where do we obtain this in our diet? fresh foods

Macromolecule (Polymer) Protein Monomer amino acid



- Function(s) structure, cell transport, control metabolism
- Example(s) enzymes cytoskeleton, channel proteins
- Where do we obtain this in our diet? meat, fish, eggs