

Biological Chemistry

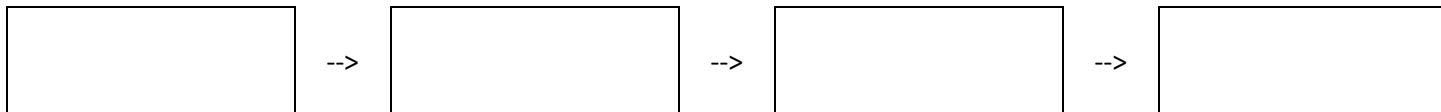
Structures and Functions of Important Macromolecules

Name: _____

SBI3C

Date: _____

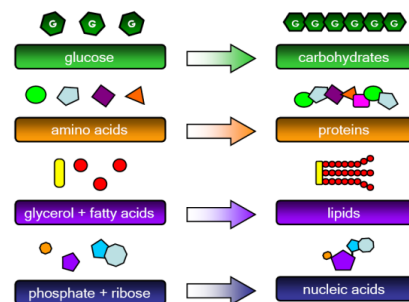
Organic Chemistry:



Macromolecules:

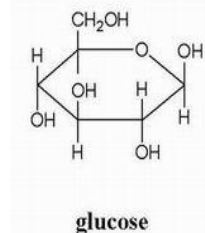
Four major types:

Monomer vs. Polymer

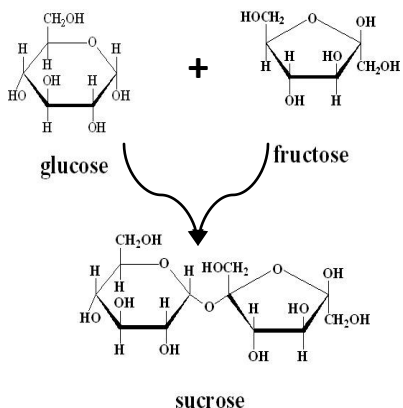


CARBOHYDRATES:

a. Monosaccharide ("one")



b. Disaccharide ("two")



c. Polysaccharide ("many") – complex carbohydrates

- Polymers of monosaccharides
- Insoluble in water
- Provide structure to cells and organisms
- Store energy

Examples

Starch:

Glycogen:

Cellulose

Chitin

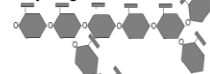
Starch



Cellulose

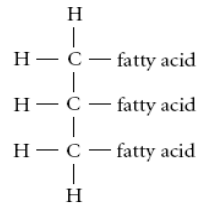


Glycogen



LIPIDS:

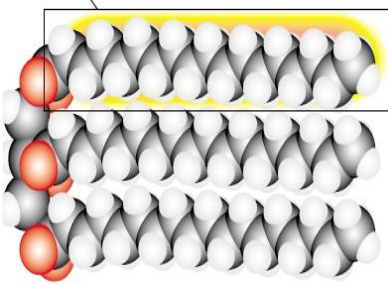
a. Oils/Fats



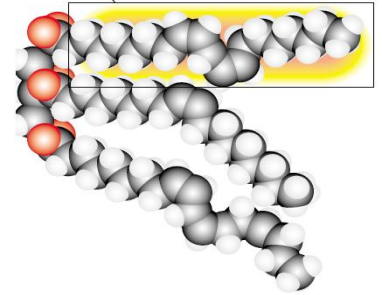
Four major types of lipids:

Saturated Fats vs. Unsaturated Fats

single bonds between carbon atoms;
straight fatty acid chains fit close together



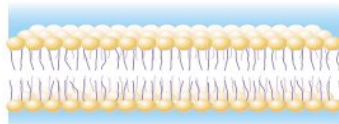
double bonds between carbon atoms;
bent fatty acid chains do not fit close together



b. Waxes

c. Phospholipids

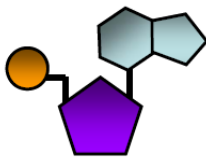
d. Steroids



PROTEINS:



NUCLEIC ACIDS:



DNA



RNA