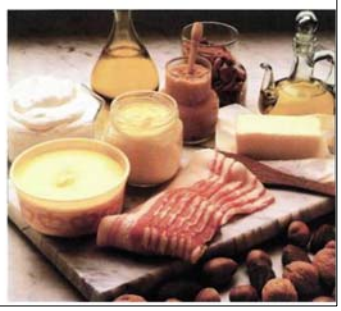
Lipids (aka Fats)

-Made up of C, H, O (very long chains)

-**Monomers** = fatty acid and glycerol



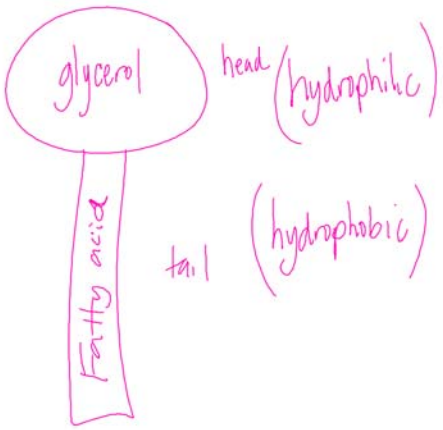
LIPIDS

In H2O:

Insoluble = doesn't dissolve; Nonpolar; **Hydrophobic**

Soluble = dissolves; Polar; **Hydrophilic**

MONOMER OF LIPIDS:



LIPIDS

- Types:
  1. Triglycerides (food fats)
  2. Phospholipids (cell fats)
  3. Steroids (hormones & cholesterol)
  4. Waxes (H2O proof covering)

Functions of Lipids

- Make up the cell membrane
- Provide H2O proof coverings
- Insulation (to keep warm)
- Protection (bones, organs)
- Long term E storage

energy

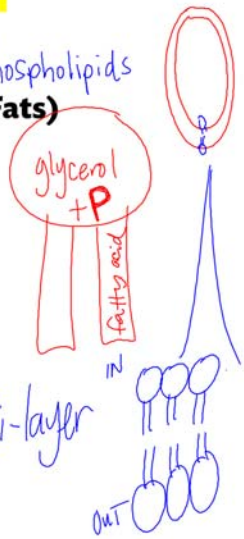
POLYMERS OF LIPIDS:

(Food Fats) Triglycerides

Saturated: animals, Solid @ room temp

Unsaturated: plants, oils, liquid @ room temp

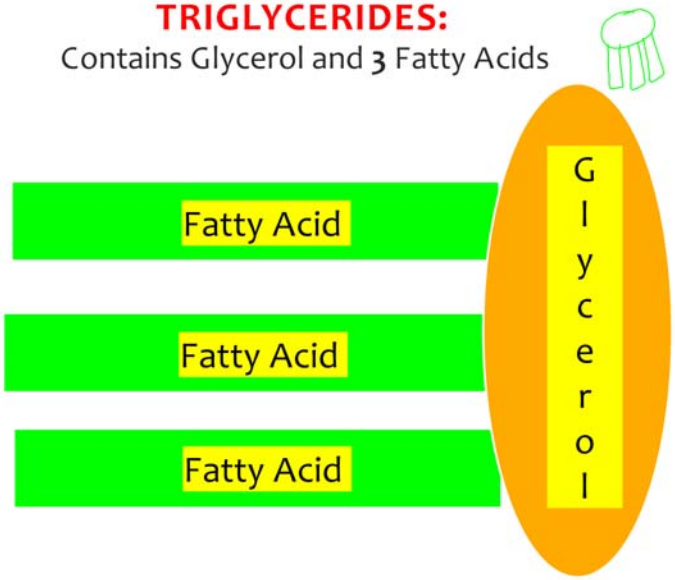
(Cell Fats) Phospholipids



Bi-layer

TRIGLYCERIDES:

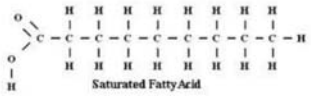
Contains Glycerol and **3** Fatty Acids



Saturated:

Solid @ room temp; from animals

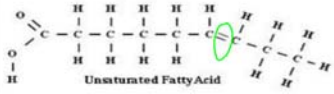
Ex: Butter, lard, bacon grease, crisco

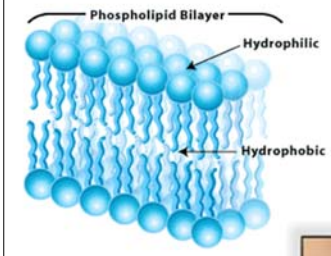


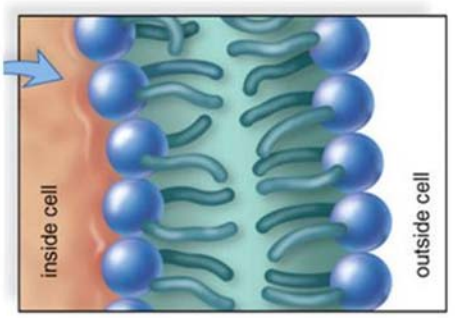
Unsaturated:

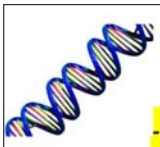
Liquid @ room temp; from plants

Ex: Oil









Nucleic Acids

-Made up of C, H, O, N, P

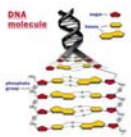
-**Monomer** = nucleotide

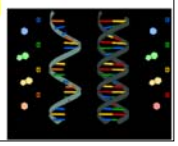
1 Nucleotide:

-5 Carbon Sugar $C_5H_{10}O_5$

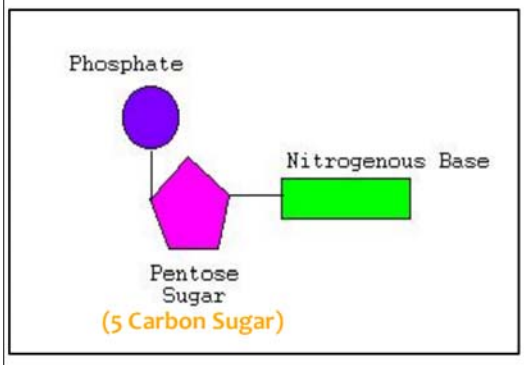
-Phosphate

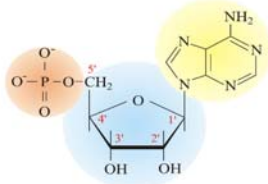
-Nitrogen Base





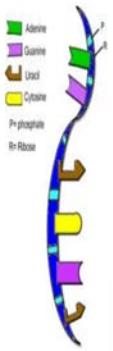
MONOMER: NUCLEOTIDE

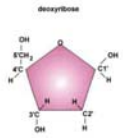


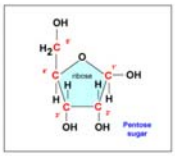


2 EXAMPLES:

DNA **RNA**





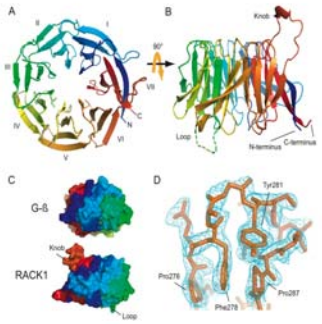


FUNCTIONS

DNA **RNA**

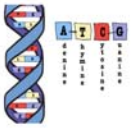
Stores genetic information & info to replicate itself

To make protein



DNA

DeoxyriboNucleic Acid



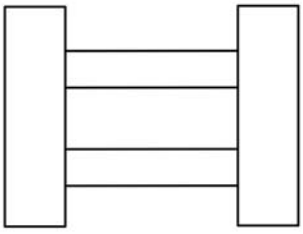
Shape = Double Helix

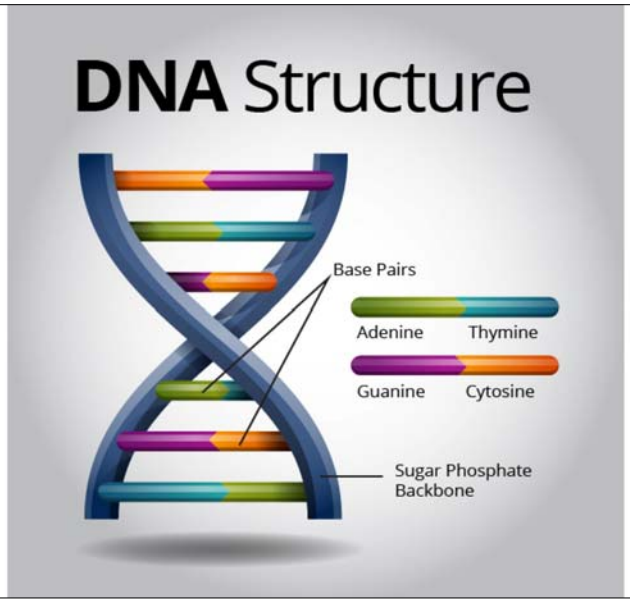
5-C Sugar = Deoxyribose

Nitrogen Bases: Adenine, Thymine, Guanine, Cytosine

A pairs with T (2 H bonds)

G pairs with C (3 H bonds)





RNA

RiboNucleic Acid

- Single Helix
- 5-C Sugar = Ribose
- N Bases = A, U, G, C
  - U = Uracil (only in RNA)