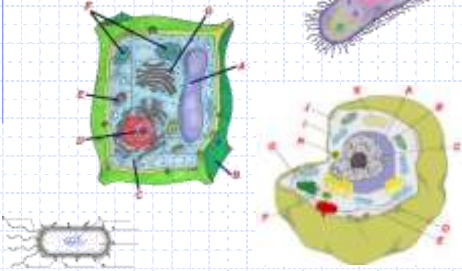


Cells

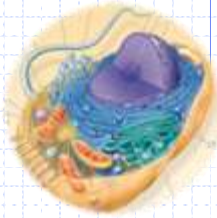


Cell

- Smallest unit of life capable of carrying out all life functions
 - Metabolism
 - Transport
 - Excretion
 - Regulation
 - Respiration
 - Nutrition
 - Synthesis
 - Reproduction
 - Growth
 - Development

Cells

- Organized
 - Membranes
 - Separate "cell" from environment
 - Create functional compartments within cell



Lipids

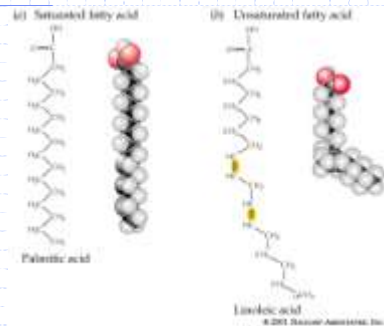
- Large molecules with lots of carbon and hydrogen, and little oxygen
- Insoluble in water (hydrophobic)
- Used for energy storage, structure, protection, hormones

Fats (Triglycerides)

- Function
 - Energy storage
 - Insulation
- Structure
 - 1 glycerol
 - 3 fatty acids



Fats (Triglycerides)



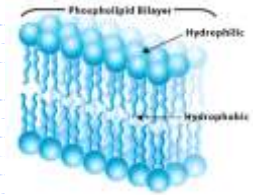
Fats (Triglycerides)

- Examples
 - Butter
 - Olive oil
 - Lard



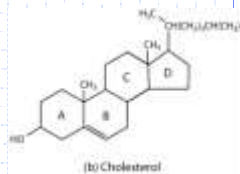
Phospholipids

- Function
 - Major component of cell membranes
- Structure
 - Phosphate (hydrophilic) "head"
 - 2 fatty acids (hydrophobic) "tails"



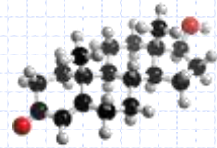
Steroids

- Structure
 - Fused carbon-based rings
- Function:
 - Varies: hormones, reduce inflammatory response, increase cell growth,



Steroids

- Testosterone
- Estrogen
- Cholesterol
 - important component of cell membranes



Waxes

- Structure:
 - Tightly packed fatty acids
- Function
 - Creates waterproof barrier



Waxes

- Examples
 - Cuticle
 - Ear wax



Testing for Lipids

- The Brown Paper Bag Test
 - check for a “grease” (fat) stain
 - (+) result: paper is “translucent” (you can see through it)

