

Biology
The Cell
2012 - 2013
#2

- I. Cell Membrane = aka: plasma membrane
 - A. structure = “fluid mosaic model”
 1. phospholipid molecules = arranged as a “lipid bilayer”
 - hydrophilic heads (polar) = like water
 - hydrophobic tails (nonpolar) = fear water
 2. Proteins
 - peripheral = found on the surface
 - integral = embedded in the lipid membrane
 3. glycoproteins = carbohydrate complexes attached to proteins
 - involved in cell recognition
 - B. Function of cell membrane
 1. selectively permeable = allows some substances to enter but not others
 - dependent upon the size and polarity of the substance moving
 - C. Movement of substances across the membrane
 1. Passive transport = does not require energy
 - Diffusion = movement of a substance from an area of greater concentration to an area of lesser concentration
 - molecules move “down a gradient”
 - Osmosis = movement of water from an area where it is most pure to an area that is less pure

- hypertonic = area that is less pure
 - hypotonic = area that is more pure
 - * isotonic = equal levels of purity (equilibrium)
 - ion channels = proteins form channels
 - facilitative diffusion = proteins carry molecules across membrane
2. active transport = requires the use of energy
- Na/K pump = runs our nerves and muscles
 - endocytosis = take in large particles
 - exocytosis = expel large particles

review website : http://library.thinquest.org/C004535/different_cell_types.html

www.biology4kids.com/files/cell_membrane.html

- read about the cell membrane and “membrane proteins” (on side list)