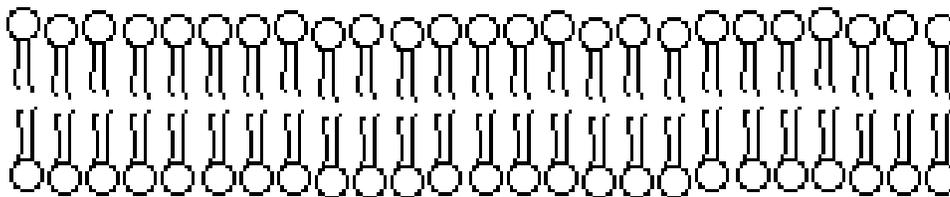


A Closer Look at the Cell Membrane...

- The **cell membrane** is sometimes known as the “_____” because it _____
 - The cell membrane is known to be _____.
This means only some things can enter and leave the cell.
 - Ex: think of it acting like a strainer or filter.
- The structure of the cell membrane is made up of a _____
 - **Phospho** = _____.
 - _____ of phospholipid molecule
 - **Hydrophilic** = _____
 - **Lipid** = _____
 - _____ of phospholipid molecule
 - **Hydrophobic** = _____
 - **Bilayer** = _____



- The **phospholipid bilayer** is folded in a way so that the _____ face the _____ and _____ of the cell where the environment is “_____”.
- In order for substances to actually enter and leave the cell, the cell membrane must be _____, or _____
 - This is accomplished by the fact that the hydrophobic tails are made up of unsaturated hydrocarbons, which allow the structure to have kinks and prevent them from packing together (allowing for movement)

- In addition to the phospholipids, there are many _____ that are either on the surface of the membrane or span the entire membrane. There are 3 main general types of proteins:
 - _____ Proteins: regulate which molecules enter and leave the cell.
 - Proteins for _____: stick out from the cell surface and help cells identify each other
 - Proteins for _____: located on the inside and attach the membrane to internal support structures. Provide flexibility.

Concentration & Transport of Molecules Across the Membrane

- In our bodies we care about maintaining the balance of the concentration of certain ions and macromolecules inside and outside our cells. **Concentration** is the _____

- **Passive Transport:**
 - Substances will naturally move from an area of _____ to an area of _____.
 - **Diffusion** is the general term referring to the passive transport of _____ across a membrane.
 - **Osmosis** is the specific term referring to the passive transport of _____ across a membrane.

Cell Membrane WS

1. Define “cell membrane”, and explain the main function of cell membranes.
2. What does it mean when we say the cell membrane is *selectively permeable*?
3. Draw one phospholipid molecule. Label the hydrophobic and hydrophilic regions.
4. Draw a phospholipid bilayer. Label all important parts of the structure, including the hydrophobic & hydrophilic regions as well as any structures (such as proteins) found in and around the phospholipid bilayer.
5. Cell membranes contain membrane proteins found within the layer. What are some functions of membrane proteins?
6. Diffusion and osmosis are two types of passive transport.
 - a. What is meant by passive transport?
 - b. In passive transport, molecules travel from areas of _____ concentration to areas of _____ concentration.
 - c. What is the main difference between osmosis and diffusion?