

Unit 5: Cell Transport

_____ – a membrane that surrounds plant and animal cells

_____ – when molecules cannot pass through the cell membrane

_____ – when molecules can pass through the cell membrane

_____ – where the cell membrane is permeable to some molecules but not others

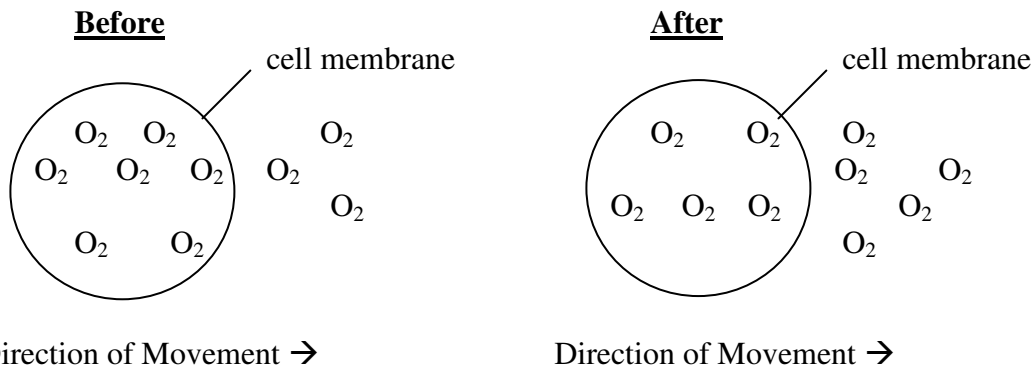
_____ – the equal distribution of substances

2 Types of Transport:

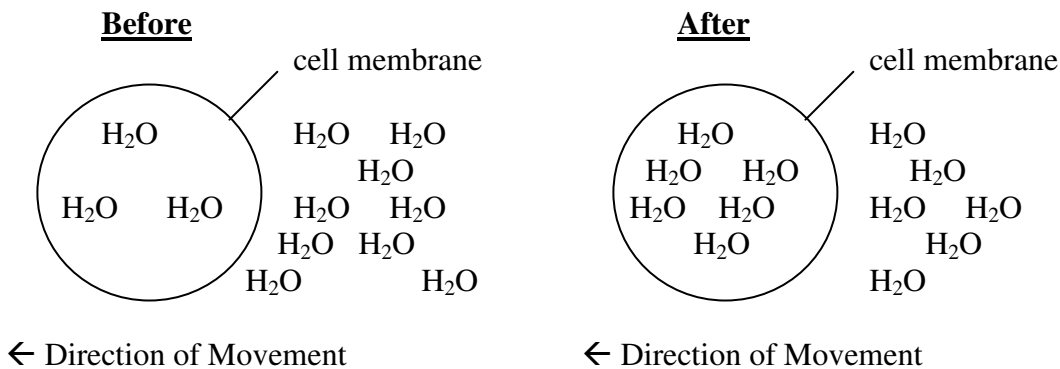
- _____ – energy is not required, molecules move through the cell membrane from areas of high concentration to areas of low concentration until equilibrium is reached
- _____ – energy in the form of ATP is required, molecules move through the cell membrane from areas of low concentration to areas of high concentration

Examples of Cell Transport:

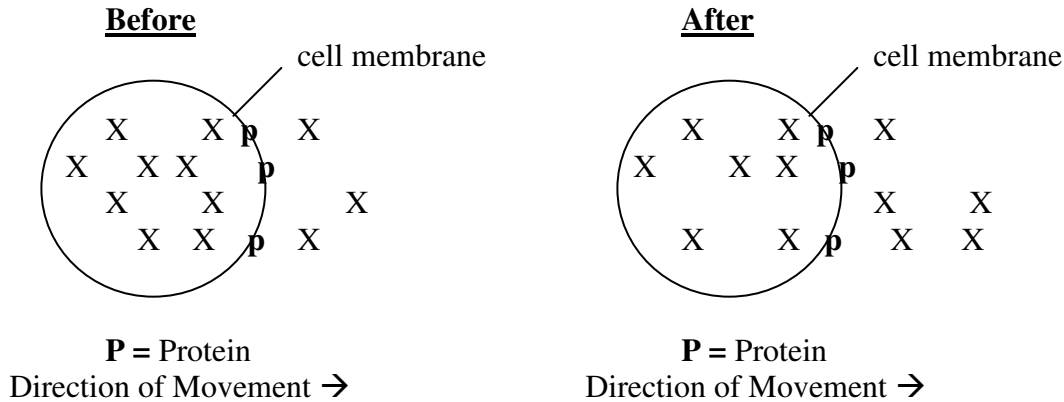
- _____ – the process by which _____ such as oxygen and carbon dioxide move through the cell membrane from areas of _____ concentration to areas of _____ concentration until equilibrium is reached (passive transport)



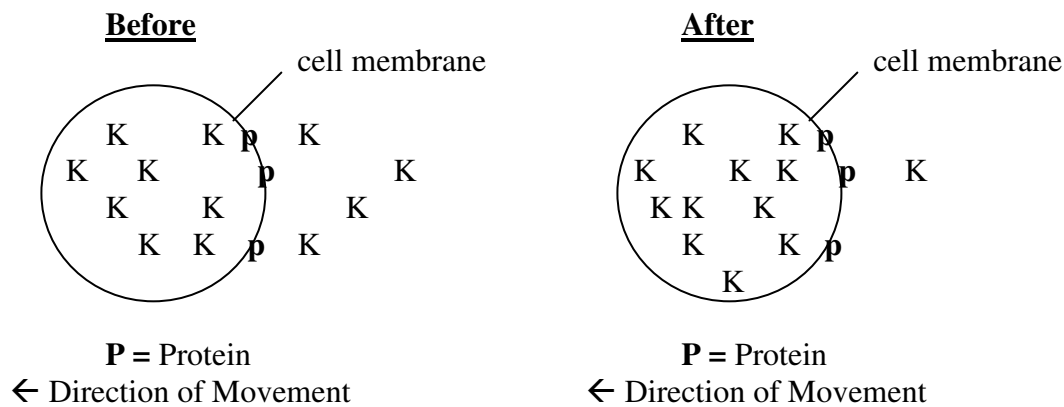
- _____ – the process by which _____ molecules move through the cell membrane from areas of _____ concentration to areas of _____ concentration until equilibrium is reached (passive transport)



- _____ – the process by which molecules such as glucose move through the cell membrane with the help of a _____ from areas of _____ concentration to areas of _____ concentration (passive transport)
 - The carrier proteins are located in the _____ and act as a gatekeeper to help the glucose molecules move through the cell membrane.



- _____ – the _____ process by which molecules/ions such as sodium and potassium move through the cell membrane with the help of a carrier protein from areas of _____ concentration to areas of _____ concentration



Osmotic pressure can cause problems for a cell:

- Because the cytoplasm of a cell is filled with salts, sugars, proteins, and other molecules it will almost always have a much lower concentration of water than outside the cell.
- This means that if water moves freely through the cell membrane, the net movement of water can cause the cell to fill and burst (example – a balloon, when inflated too far will pop).

Cells solve the osmotic pressure problem in 2 ways:

- By the cells remaining in fluids such as blood that have a concentration of dissolved materials equal to the cell.
- Plant cells have a cell wall outside the cell membrane, which keeps the cells from expanding and being able to burst.