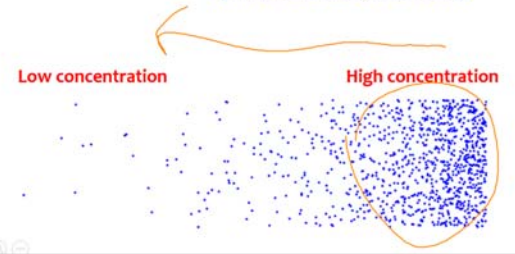


# Transport Across Membrane

- **Passive Transport** - requires no energy (diffusion, osmosis)
- **Active Transport** - requires the cell to use energy (ATP)

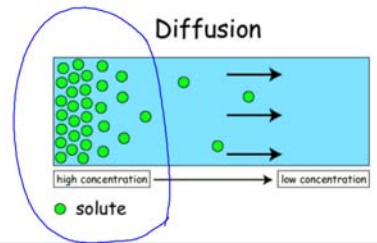
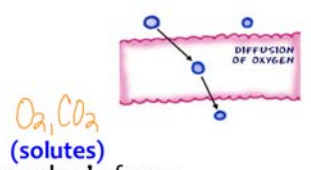
# Concentration Gradient

- Particles move “with the flow” from an area of **high concentration to low concentration** to reach **equilibrium** (homeostasis, balance)



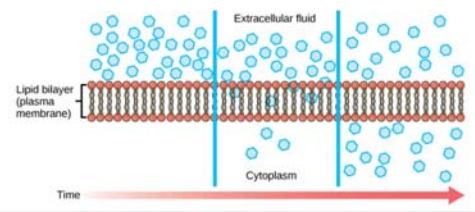
# Diffusion

- Diffusion = movement of molec's from **high conc → low conc across the bi-layer**
- Until Equilibrium (distributed equally)

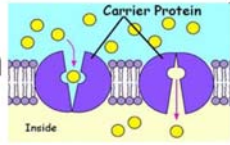


# Factors Affecting Diffusion

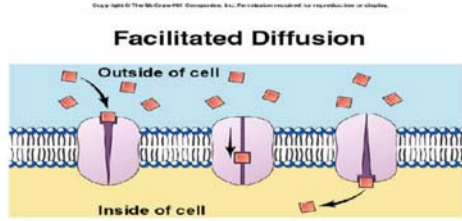
- Mass of solute
- Temperature of environment
- Solvent density
- Distance traveled



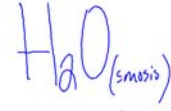
## Facilitated Diffusion



- Diffusion= movement of molec's from **high conc → low conc using a channel protein**  
(Ex: GLUCOSE)



## Osmosis



- Diffusion of  $H_2O$  across a selectively permeable membrane due to concentration differences
  - Moves from high conc → low conc

