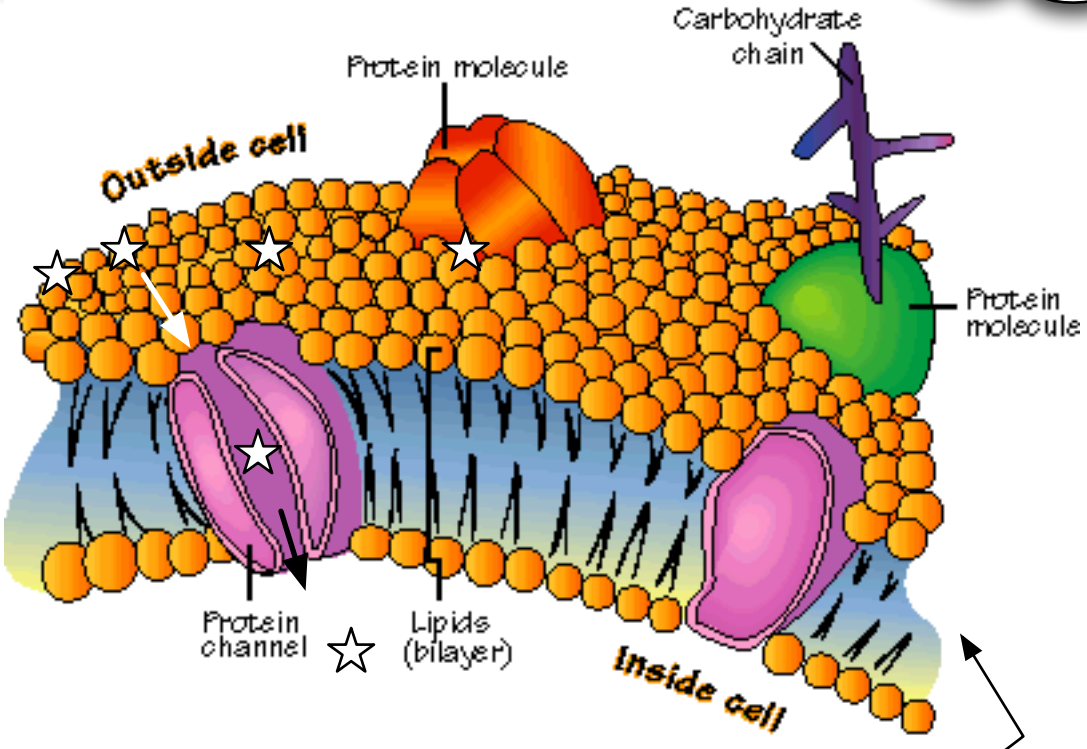
Transport

Passive — High to Low

Active — Low to High

Absorption across a *membrane* and the circulation of materials throughout a cell or organism.

Water and gases (O2 & CO2) can go through the lipid bi-layer freely (diffusion)

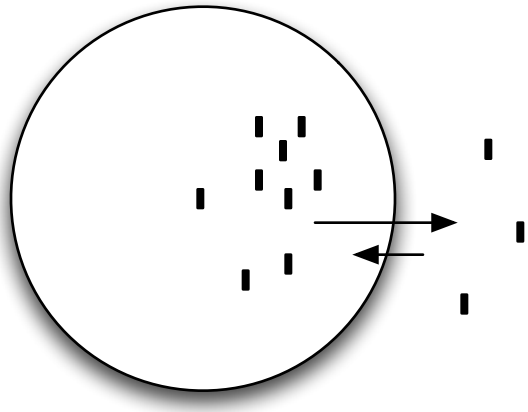


Selectively Permeable

Nutrients and other important molecules must enter the cell and waste products must be removed through the cell membrane.

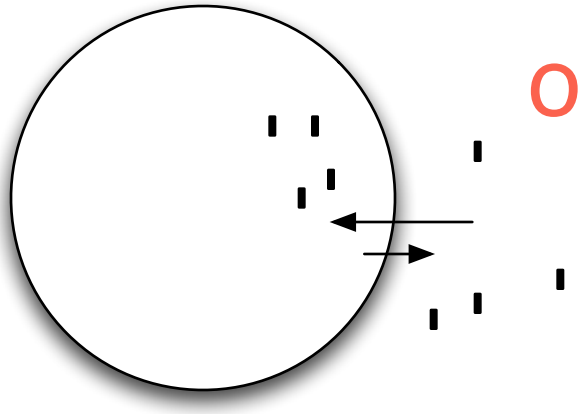
Some things can go through the membrane and others cannot

Outward Diffusion

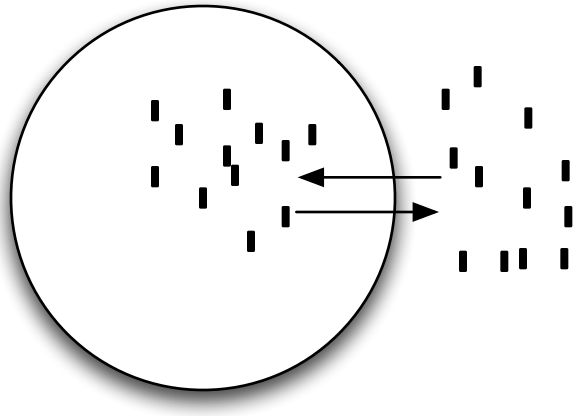


Inward Diffusion

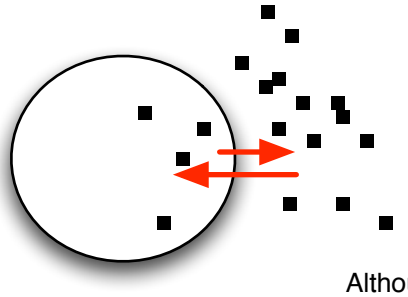
fix this one



Equilibrium



Inward Diffusion



Although there is movement in both directions across the cell membrane, the net (overall) direction is **High** to **Low** concentration.

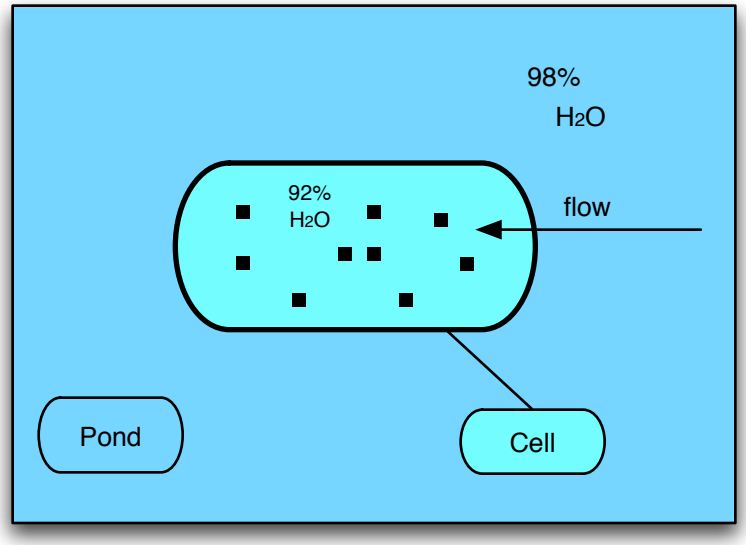
Diffusion of water (**osmosis**) - **osmosis** is the movement of water from an area of high concentration to an area of lower concentr

The key to understanding Osmosis is to be able to figure out where the highest concentration of water is. How do we do this?

Simple: just see where the percent of water is the highest. For example, when the solution is pure water (distilled) the concentration is 100%. If anything is mixed with the water then the concentration of water is less than 100%.

Paramecium

A contractile vacuole is a structure used to pump out water that diffuses in. Without it the paramecium may explode.



Inward Osmosis