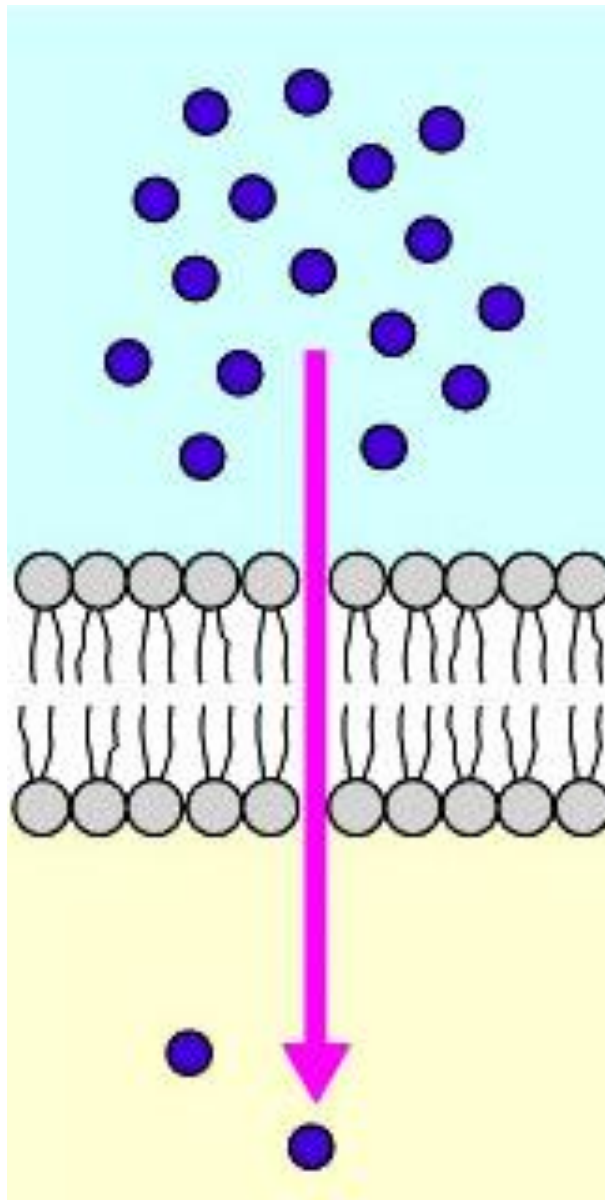


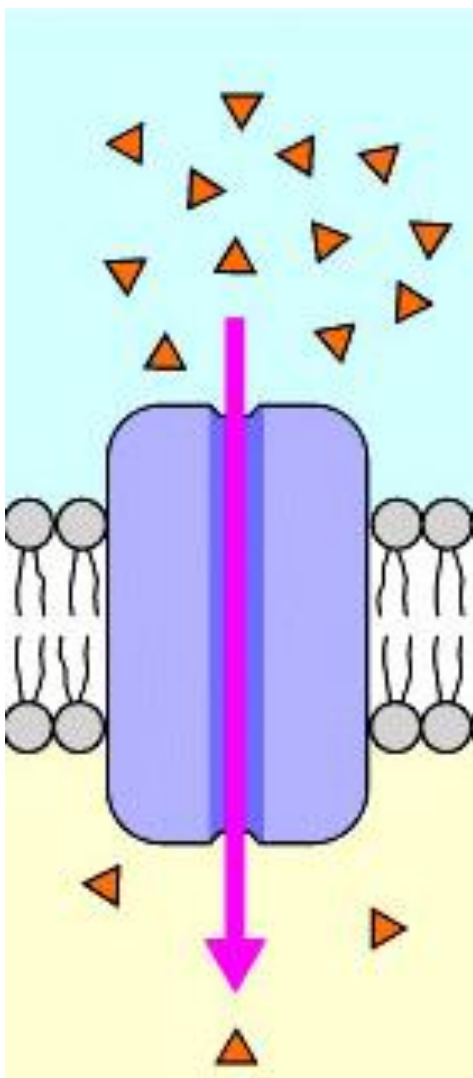
Station 1: Simple Diffusion

Small, nonpolar molecules like O_2 and CO_2 move from high to low concentrations, down their concentration gradient, across the lipid bilayer. Simple diffusion is passive transport that does not require channel proteins or energy.



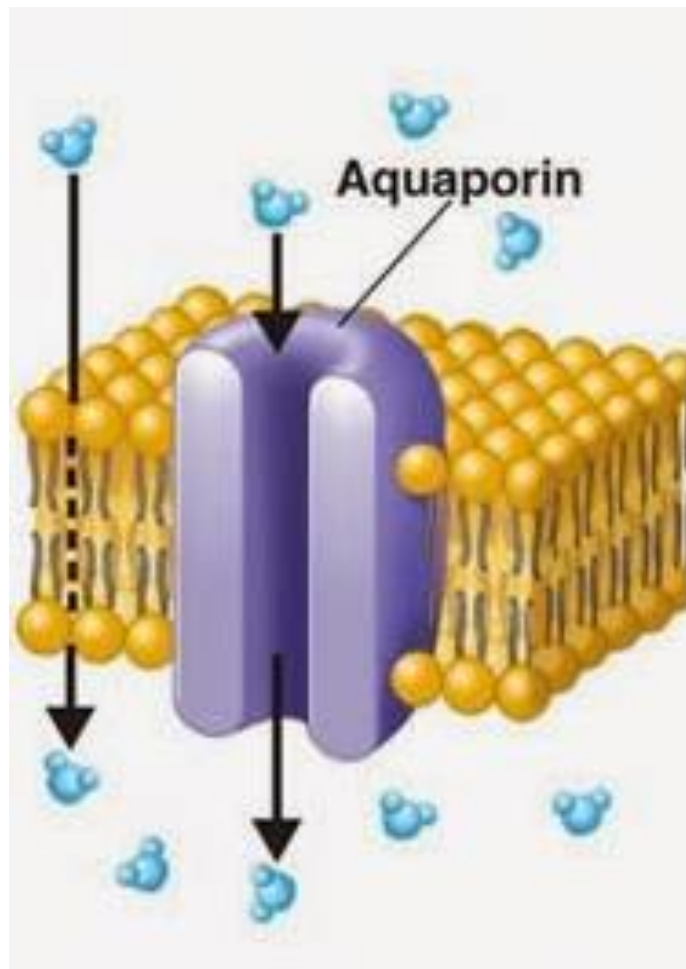
Station 2: Facilitated Diffusion

Large and/or polar molecules like glucose and amino acids move from high to low concentrations, down their concentration gradient, through channel or carrier proteins because they cannot cross the lipid bilayer. Facilitated diffusion is passive transport that does not require energy.



Station 3: Osmosis

Water moves from high to low concentrations, down their concentration gradient, across the lipid bilayer *and* through channel proteins called aquaporins. Osmosis is the diffusion of water – a form of passive transport that does not require energy but may require channel proteins.



Station 4: Active Transport

Molecules through channel proteins from low to high concentrations, up their concentration gradient. Channel proteins require energy in the form of ATP to pump molecules, so they are considered active transport. A common example of active transport is a pump that moves sodium (Na^+) and potassium (K^-) ions.

