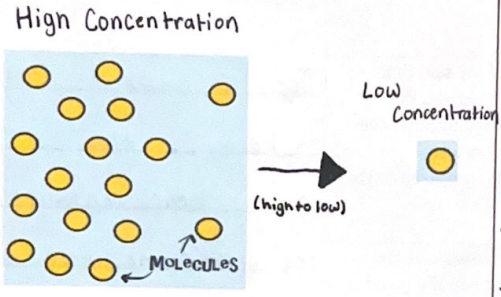
# Amoeba Sisters Video Recap of *Osmosis*

1. The below picture represents **diffusion** of molecules. Place the following labels in the diagram: **high concentration, low concentration,** and **an arrow** showing the direction that the molecules would travel before equilibrium is reached.




2. **Osmosis** is a type of diffusion, but it involves the movement of water. Similar to diffusion, osmosis is the movement of molecules (water molecules if osmosis) from a high concentration to a low concentration.

The video clip explains that you can also look at water as moving to a higher/greater concentration of **solute** molecules.

Why can it also be viewed this way?

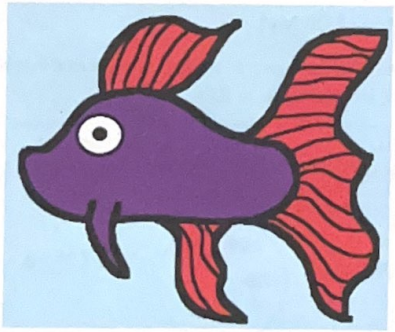
It can be viewed this way because the solutes dissolve when combined with a solvent, like water.

3. **Osmosis Scenario:** The video clip mentioned a disaster scenario of a saltwater fish being placed in fresh water.

What would occur if, instead, a freshwater fish was placed in saltwater? The cells of the saltwater fish would expand since the pure water (hypotonic) flows to the salt filled cells (hypertonic)

Your answer needs to have an **arrow** indicating the direction of water flow in osmosis, a label for "**hypertonic**," and a label for "**hypotonic**."

high concentration of water → high concentration of solutes



4. **Osmosis Scenario:** Fluid movement into the brain after traumatic brain injury can result in dangerous brain swelling.

One treatment that can be used in some of these cases is adding a hypertonic saline. You need to decide whether this blank should be the word hypertonic or hypotonic. Remember, you are trying to reduce the excessive fluid in the brain.

Explain your answer:

If you added a hypotonic solution, that would mean that the saline would combine with the fluid, causing more expansion and swelling.