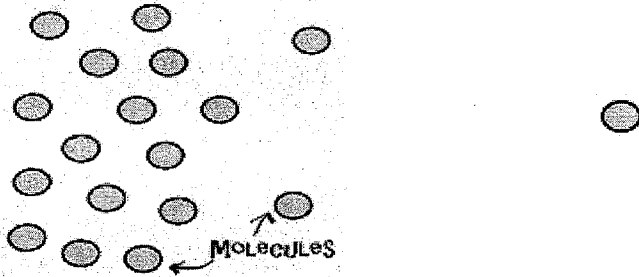


1. The below picture represents **diffusion** of molecules. Place the following labels in the diagram: **high concentration**, **low concentration**, and an **arrow** showing the direction that the molecules would travel before equilibrium is reached.



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.

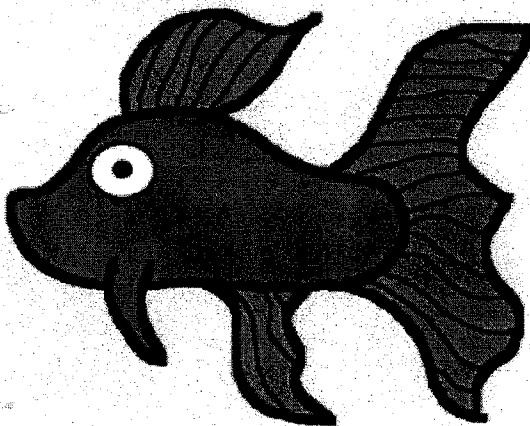
The video clip explains that you can also look at water as moving to a _____ concentration of **solute** molecules.

Why can it also be viewed this way?

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?

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



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

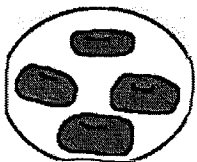
One treatment that can be used in some of these cases is adding a _____ saline. You need to decide whether this blank should be the word hypertonic or hypotonic. Remember, you are trying to reduce the excessive fluid in the brain.

Explain your answer:

Hypertonic, Hypotonic, or Isotonic? Oh My!

These red blood cells have all been placed in different solutions! Based on their appearance after being placed in these solutions for a period of time, place on each line (A) for **hypertonic**, (B) for **hypotonic**, or (C) for **isotonic**.

7. The cells are _____ compared to the _____ solution.



SWELLING

8. The cells are _____ compared to the _____ solution.



SHRINKING

9. The cells are _____ compared to the _____ solution.



Stable

Amoeba Sisters Video Recap of *Homeostasis and the Cell Membrane King*

1. Define the word **homeostasis** in your own words.



2. The video clip places a lot of emphasis on the importance of the cell membrane in maintaining **homeostasis** in cells. Based on how you defined the word homeostasis, why is the **cell membrane** so important for maintaining homeostasis?



Your body, which contains billions of cells, must maintain homeostasis. Cells make up tissues in your body. Tissues make up organs in your body. The organs in your body make up different organ systems that have to work together to maintain **homeostasis**. In box #3 and box #4, write how your body would respond in order to maintain homeostasis in the scenarios listed.

You are outside on a very cold day, and you have no coat. You feel very cold!



3.

You went out running on a hot day. After your run, you sit down and feel very warm.



4.

