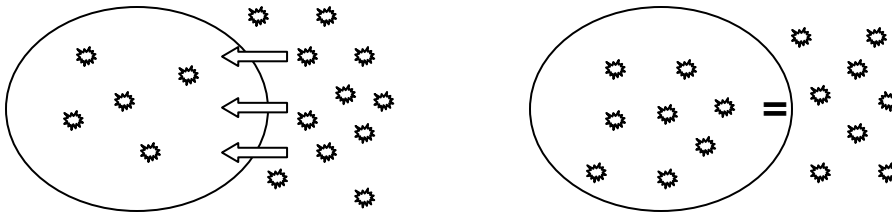


Cellular Interactions – How do things get into or out of a cell?

1. What are the three ways in which cells exchange molecules with their environment?
 - A. ___Diffusion___
 - B. ___Osmosis___
 - C. ___Active Transport___
2. Explain "Selectively Permeable" in your own words: ___Cells are "picky" about what they let in. Only food, water, and nutrients___
3. How do molecules move according to the rules of Diffusion? ___They always move down the concentration gradient, from an area of high concentration to low concentration___
4. Draw a sketch (before and after) of a cell undergoing diffusion below:



5. How are diffusion and osmosis related? ___They are both passive forms of movement into or out of a cell. Osmosis is just water, diffusion is everything else.___
6. What is the major way in which active transport differs from both diffusion and osmosis?

___active transport requires a cell to expend energy. Diffusion and osmosis are both passive transports and do not require energy. Passive transport is high concentration to low concentration. Active transport is low to high___
7. When would a cell have to use active transport (provide two scenarios)?

___Moving a molecule from an area of low concentration to an area of high concentration or trying to move a molecule that is too large to fit through the usual pores or proteins___

Using what you know about diffusion, draw arrows on the diagrams below showing in which direction the particles or molecules would be moving.

