**Monday, October 23, 2017 Name:**

Day 13 AIM: What is ***diffusion*** and what does it have to do with ***concentration?***

DO NOW: Explain why putting an air freshener in the corner of a room will make the entire room smell good.

**What is diffusion?**

* is the movement of molecules from an area of concentration to an area of concentration.
* An arrow is used to show the of diffusion

high conc. Low conc.

**What is meant by Concentration?**

* refers to the ratio of to in a solution.
* = material being dissolved
* =material doing the dissolving
* = resulting mixture

**Why does diffusion occur?**

* Diffusion occurs because are always .
* Because they are moving they tend to into each other.
* This bumping causes them to move from each other over .
* Over time these molecules become distributed

**Why does diffusion occur? (cont)**

* Because molecules are and in to each other and moving from each other, it is said that molecules move from areas of to areas of .
* This stops when the molecules reaches an .

**So what does diffusion and concentration have to do with Biology?**

* Diffusion is a occurring process.
* Molecule move and of cell through this process because the cells need to perform the 8 .
* Some things that move into the cell are …..


  + Nutrients (sub units: , , & )
* Some things that move out of a cell are …..
  + Cellular ( and )
  + Cell ( )

**The Cell Membrane (the bouncer)**

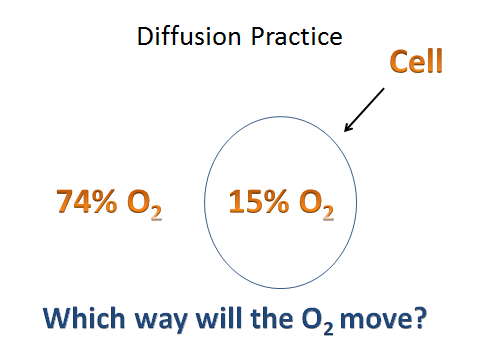
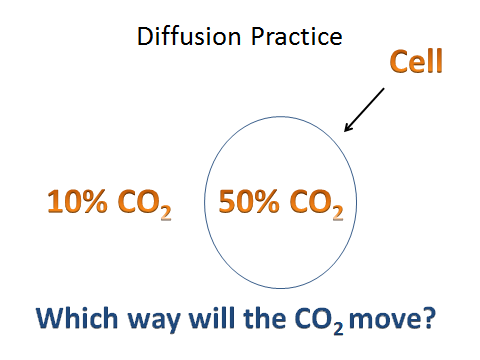
* Not every can enter or leave the cell by .
* These molecules are by the cell membrane.
* The cell’s membrane acts like a net, those molecules that are small can easily through the holes of the membrane, while large molecule are too to fit through the hole and stay behind.

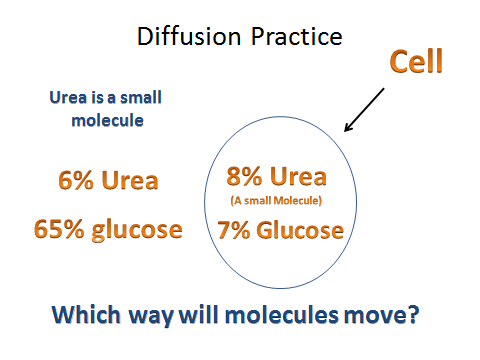
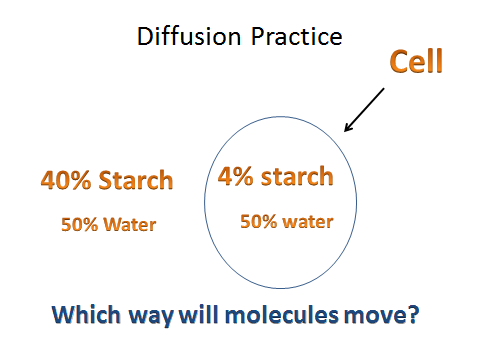
**What can go through the membrane and what can’t?**

**What can**

**What Can’t**

**What is the pattern between those things that can and those that can’t go through the membrane?**

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**Day 14  
DO NOW: What happens when you put salt on a slug or a snail?**

**AIM: What is Osmosis?**

**What is osmosis?**

* is the of through a .
* Like regular diffusion, water will move from one concentration to another until both sides in concentration

**How is osmosis different than diffusion?**

* In diffusion, the (the dissolved material) moves from a high concentration to a low concentration.
* Remember that the solute is molecules such as , , , , and .
* But because some molecules are too to get across the membrane, has to move in toward these large molecules in order to dilute the concentration.

**What are the effects of osmosis? (a)**

* If the concentration of inside the cell and outside the cell is the , there is no net osmosis occurs.

**What are the effects of osmosis? (b)**

* If the concentration of water is outside the cell than inside the cell, the water outside the cell will move the cell.

**What are the effects of osmosis? (c)**

* If the concentration of water is inside the cell then outside the cell, the water inside the cell will move the cell.

**How does osmosis affect plant cells?**

* All goes through .
* Because plant cells have a surrounding it, the cell looks differently when osmosis occurs.

**Draw Plant cell**

* If the plant cell is placed in a solution of concentration of solute……then the water will the cell causing the to .
* The cell wall remains the !!
* If the plant cell is placed in a solution of concentration of solute…… then the water will the cell causing the cytoplasm to .
* The cell wall begins to swell, the shape!!

Draw Plant cell

**Day 15  
What is Passive and Active Transport?**

**DO NOW: How would you define someone who is active?**

**How would you define someone who is passive?**

**There are 2 ways molecules can get in a cell.**

* **1)**  – This type of transport requires  **(no**  **)**. The cell uses the natural process of different concentration and molecule size to help molecules move from one area to another.

**How to Remember Passive Transport**

Draw

**There are 2 ways molecules can get in a cell. (cont)**

* **2)**  – This type of transport requires  **(** **)** to move molecules across the membrane. Some molecules must go against the concentration grain, therefore they rely on protein “ ”. To get them across.

**How to Remember Active Transport**

* Active transport that requires . Movement molecules from concentration to

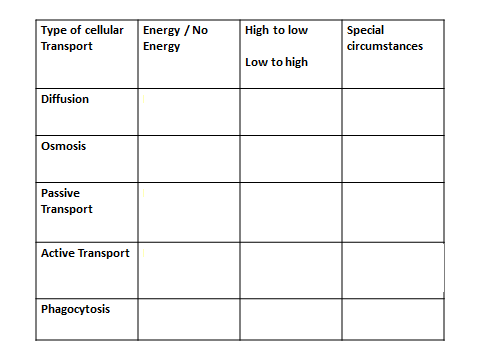
Draw

**Other Type of Active Transport**

* - Movement of material into the . Cell “pinches” the membrane forming a “ bubble” around the large material.

**Why is Cellular Transport Important?**

* Cells need in order to carry out the 8 life functions
* Cells need and to perform
* Cells need to get rid of ( & excess )
* Cells need to and itself
* Cells need molecules to apart and recombine to make new .
* Without cellular transport, cells could not do what they do.



* Red Onion in tap water

Draw

* Red Onion in distilled water starting to rehydrate

Draw

* Red Onion eventually goes back

Draw