Biology Internet Assignment: Passive Transport

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Diffusion

Go to my website at [www.mcquadesbioconnect.weebly.com](http://www.mcquadesbioconnect.weebly.com) and click on the Homework tab under Biology. Scroll down to the website titled Diffusion and open the animation to watch. OR type the following address into your browser:

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter2/animation__how_diffusion_works.html>

1. What does the kinetic energy of molecules cause them to do in solution?
2. What is one result of this kinetic energy?
3. The tendency of molecules to spread out is an example of \_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_
4. In a solid lump of sugar composed of many individual sugar molecules, are the molecules moving or do they have to be put in water to make them move?
5. In a glass of water, individual sugar molecules move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ UP/DOWN their concentration gradient.
6. What is diffusion?
7. What affects the rate of diffusion?
8. Is diffusion a process unique to solutions or can cells use it too?

# Facilitated Diffusion

Now look at the brown bar on the right and click on How Facilitated Diffusion Works. OR go to:

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter2/animation__how_facilitated_diffusion_works.html>

1. What kind of protein is used in facilitated diffusion?
2. What do these proteins do
3. Can any molecule bind any carrier protein?
4. What are 2 examples of molecules that carrier proteins move?
5. How does the carrier protein facilitate diffusion?
6. How is facilitated diffusion similar to simple diffusion?
7. How is facilitated diffusion different from simple diffusion?
8. What determines which direction facilitated diffusion will occur in?

# Osmosis

Now go to the brown bar on the left side and click How Osmosis Works, OR type in :

<http://highered.mcgraw-hill.com/sites/0072495855/student_view0/chapter2/animation__how_osmosis_works.html>

1. What is diffusion
2. What are 2 examples of molecules that can cross the plasma membrane using diffusion
3. What are 2 examples of molecules that can’t cross the plasma membrane through diffusion, and why can’t they?
4. Why can water pass through the plasma membrane even though they are polar?
5. What is the diffusion of water molecules across a membrane called?
6. Why can’t urea cross the plasma membrane
7. What do polar molecules (like urea) do when put in water? Does this increase or decrease the number of free water molecules on that side of the membrane.
8. Why do free water molecules diffuse to the side with the urea
9. Does this cause the water level to RISE or LOWER on the Left side?
10. When are two solutions isotonic?
11. When solutions have unequal osmotic concentrations,