

Detecting Diffusion

Name: _____

Period: _____

Pre-Lab:

1. What cell part is the dialysis tube modeling?
2. What does a positive starch test look like?
3. What does a positive glucose test look like?
4. Review the chemical structure of starch. Do you predict that starch will diffuse through the tubing? **Why or why not?**
5. Review the chemical structure of glucose. Do you predict that glucose will diffuse through the tubing? **Why or why not?**

Data:

MASS BEFORE:

MASS AFTER:

	Inside Tubing				Outside Tubing			
	Color	Is starch present?	Is iodine present?	Is glucose present?	Color	Is starch present?	Is iodine present?	Is glucose Present?
Initial								
Final								

Analysis Questions:

1. In this investigation, the dialysis tubing acts as a model of the cell membrane. Give two ways the dialysis tubing and cell membrane are similar to each other.
2. Review the predictions you made in your Pre-lab questions about the diffusion of starch and glucose. Did your observations support your predictions? Explain why or why not using data from the lab.
3. How do the molecular structures of starch and glucose molecules help explain your observations?
4. Did the mass of the dialysis bag change during the experiment? If so, how? What might have accounted for any change in mass that you observed?
5. Active cells are constantly using energy. So they require a steady input of energy to maintain homeostasis. How does evidence from the model you used help explain the homeostasis of energy in cells?
6. When a student performed this experiment, he observed the solution outside the tubing turn black. What might have happened?

