Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**STUDENT RECORD SHEET**

Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Osmosis and Diffusion Lab**

*Observations and Notes*

**Dialysis Bag**

1. Glucose and starch movement prediction🡪
2. Draw a picture showing predicted movement of glucose and starch in lab set up.
3. “Cell” *starting* mass = \_\_\_\_\_\_\_\_ “Cell” *ending* mass= \_\_\_\_\_\_\_\_\_\_
4. “Cell” starting color= \_\_\_\_\_\_\_\_\_\_ “Cell” ending color =\_\_\_\_\_\_\_\_\_
5. Beaker starting color=\_\_\_\_\_\_\_\_\_\_ Beaker ending color =\_\_\_\_\_\_\_\_\_\_
6. Diastick result before =\_\_\_\_\_\_\_\_\_\_ Diastick result after =\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Presence of starch outside “cell” before\_\_\_\_ (+/-).
8. Presence of starch outside “cell ” after\_\_\_\_ (+/-).
9. Presence of GLUCOSE outside the cell before \_\_\_\_\_\_(+/-).
10. Presence of GLUCOSE outside the cell after \_\_\_\_\_\_(+/-)

**Elodea Leaf Test**

1. Draw the cell in the hypotonic environment. Label in which direction water is flowing.
2. Draw the cell in the isotonic environment. Label in which direction water is flowing.
3. Draw the cell in the hypertonic environment. Label in which direction water is flowing?

**Carrot Observation**

1. Describe the carrot in a hypotonic solution. What has happened to carrot cells?
2. Describe the carrot in an isotonic solution. What has happened to carrot cells?
3. Describe the carrot in a hypertonic solution. What has happened to carrot cells?

**Analysis & Conclusion**

1. Why was it necessary to “wash off” the cell after filling it?
2. Did your prediction about the movement of starch and the movement of glucose prove to be true given your lab data? Explain.
3. Does the cell contain more water than it began with? What is the evidence for this to be true?
4. Did starch move through the membrane by dialysis? Explain, using evidence, why this is true?
5. Did iodine move through the membrane by dialysis? Given your lab data, why is this true?
6. Did sugar move through the membrane by dialysis? Explain, using evidence, why this is true?
7. Do cell membranes permit all, some, or no substances to pass through? Give evidence to support your answer.
8. Explain why cell membranes are referred to as semi-permeable or selectively permeable. Give evidence to support your answer.
9. In what environment (hypertonic, isotonic, or hypotonic) was the “cell” in for this lab. Explain your answer.