Name_____ Date_____

Model 5 – Cell Structure and Function Lab 3

(How do aquatic plant cells respond to different environments?
Elodea Lab

Apparatus

Microscope
Slide
Coverslip
Elodea
Elodea water (water Elodea has been sitting in overnight)
Tap water
Saturated sucrose solution or salt solution

Instructions

Set up microscope slide with three leaves on it. This will make observation and comparison easy.

Add 1 drop of Elodea water to one leaf, 1 drop of sugar solution to another and 1 drop of tap water to a third.

Add coverslips to all three leaves and mark one end of the slide to remember which is which.

Make sketches of each leaf right after placing the solution on the cells

Make another set of sketches 5-10 minutes later.

1. Describe the location of the chloroplasts in a normal plant cells.

2. Describe the location of the chloroplasts in a plant cell that lost water.

3. In which direction did water move through the plasma membrane of the cells when the sugar or salt solution was added? How do you know?

4. Describe how a “land” plant would appear after a severe loss of water.