Microscope Lab

Plant & Soil Science I

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**Objectives**:

To learn the parts of the microscope;

To find specimens using low and high power;

To make a wet mount;

To examine plant cells.

\*Write your observations, drawings, and analysis answers on the worksheet provided. Attach extra paper if needed.

**Procedure**:

Letter “e”

1. Cut out the letter “e” and place it on the slide face up.

2. Add a drop of water to the slide.

3. Place the cover slip on top of the “e” and drop of water at a 45-degree angle and

lower. Draw what is on the slide in **Figure1**.

4. Place the slide on the stage and view in low power (4x). Center the “e” in your

field of view. Draw what you see in **Figure 2**.

5. Move the slide to the left, what happens? Move the slide to the right, what

happens? Up? Down?

6. View the specimen in high power (10x). Use the fine adjustment **only** to focus.

Draw what you see in **Figure 3**.

**Data**: Part 1- The letter “e”

**Figure 1**: Drawing of the letter “e” on the slide. (half page)

**Figure 2**: Drawing of the letter “e” in low power (4x). (half page)

**Figure 3**: Drawing of the letter “e” in high power (10x) (half page)

**Analysis:**

1. How does the letter “e” as seen through the microscope differ from the way an

“e” normally appears?

2. When you move the slide to the left, in what direction does the letter “e” appear to

move? When you move it to the right? Up? Down?

3. How does the ink appear under the microscope compared to normal view?

4. Why does a specimen placed under the microscope have to be thin?

**Procedure**: Part 2 - The Elodea leaf

1. Place a drop of water on a clean slide.

2. Place an Elodea leaf in the drop of water, place a coverslip on top.

**3.** Observe under low power first (4x), then under high power (10x) Draw in **Figure**

**6**. Label the following organelles: nucleus, cytoplasm, cell wall, chloroplasts.

**Data**: Part 3 – The Elodea Cell

**Figure 6**: Drawing of the Elodea cell in high power (10x) (half page)

**Analysis**:

1. Was anything happening in your cell?

2. What structures were in the plant and animal cell?

3. What structures were only in the Elodea cell?

**Conclusion**: 2-3 sentences on what you learned.

**YOU MUST CLEAN UP! ALL SLIDES ARE CLEANED AND PUT AWAY!**