Observing Moss and Cheek Cells

Name: Block:

Partner(s): Date:

**!! SAFETY PRECAUTIONS !!**

 Methylene blue solution will stain clothes and skin.

 Broken slides should be handled with paper towels, not bare hands.

**Purpose**:

**Materials**:

 1 microscope

 2 microscopic slides

 2 cover slips

 1 lens paper

 1 pair of tweezers

 1 medicine dropper

 1 paper towel

 1 flat toothpick

 10 mL of Water

 1 bottle of Methylene blue solution

 1 sample of moss

**Procedure**:

Part 1: Moss Cell

1. Pick up your microscope and your materials you will need to make a wet mount slide.

2. Clean your slides with lens paper before you begin.

3. Prepare a wet mount slide by putting a drop of water on the slide.

4. Using tweezers, take a small leaf of moss and place on the water droplet on the slide.

5. Place a coverslip overtop of the moss.

6. Observe the leaf under low, medium and high power.

Part 2: Cheek Cell

1. Put a drop of methylene blue on a slide.

2. Gently scrape the inside of your cheek with the flat side of a toothpick.

3. Stir the end of the toothpick in the drop of methylene blue on your slide. Discard toothpick.

4. Place a coverslip onto the slide.

5. Switch to low power and observe the cells. Cells should be visible, but they will be small and look like clear purplish blobs. If you are looking at something very dark purple, it is probably not a cell.

6. Once you think you have located a cell, switch to medium and then high power and refocus.

(Remember, do NOT use the coarse adjustment knob at this point).

**Observations**: Using pencil, sketch what you observed in Part 1 and Part 2 of the procedure. Sketch the moss and cheek cells under low power, and then choose medium or high power for a second sketch.

*Figure 1: Moss cell under low power. Figure 2: Moss cell under power.*

*Figure 3: Cheek cell under low power. Figure 4: Cheek cell under power.*

**Discussion**: Answer the following in full sentences.

1. Was there any difference in the appearance of the plant and cheek cells? If so, explain.

2. What was the most difficult step in preparing your slides?

3. What is the purpose of using methylene blue for the cheek cells? What would happen if you

had forgotten to use it?

**Conclusion**: Write a paragraph that includes the following: What were you doing in this activity? Why were you doing this? What did you observe in the onion and cheek cells? What is one thing you learned from this investigation?

**SELF ASSESSMENT RUBRIC**

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|  | **4** | **3** | **2** | **1** |
| **PAGE SET‐UP/****PURPOSE/ MATERIALS/ PROCEDURE** | Format is correct.All present, neat, using dark, blue or black ink. | All/ most present,using dark, blue or black ink/or pencil. | Some filled in,using dark, blue or black ink/or pencil. | Most missing. |
| **OBSERVATIONS** | Diagrams areaccurate, neat, and completed in pencil. | Diagrams are neatand complete. | Diagrams aremessy and/or incomplete. | Diagrams aremissing. |
| **DISCUSSION QUESTIONS** | All questions areanswered neatly and in detail in full sentences using dark blue or black ink or pencil. | Most questions areanswered in detail, using dark blue or black ink or pencil. | Some questionsare answered detail, using dark blue or black ink or pencil. | Many questionsanswered in little detail. |
| **CONCLUSION** | Conclusion neatlyand accurately addresses the prompt in full complete sentences, using dark blue or black ink or pencil. | Conclusionaddresses most of the prompt in full complete sentences, using dark blue or black ink or pencil. | Conclusion statedbut does not refer to the prompt, using dark blue or black ink or pencil. | Conclusion ismissing or simply restates what was done during the lab. |
| **SAFETY AND SKILL** | Student is on taskand follows procedures safely. Much skill is demonstrated in the use of the microscope. All materials are cleaned up and put away. | Student requiresminimal reminders to be on task and follow procedures safely. Some skill is demonstrated in the use of the microscope. All/most materials are cleaned up and put away. | Student requiresmany reminders to be on task and follow procedures safely. Satisfactory skill is demonstrated in the use of the microscope. Most materials are cleaned up and put away. | Student requiresmany reminders to be on task and follow procedures safely. There is a lack of skill demonstrated in the use of the microscope. Materials were not cleaned up or put away. |

TOTAL: /20

**TEACHER ASSESSMENT RUBRIC**

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|  | **4** | **3** | **2** | **1** |
| **PAGE SET‐UP/****PURPOSE/ MATERIALS/ PROCEDURE** | Format is correct.All present, neat, using dark, blue or black ink. | All/ most present,using dark, blue or black ink/or pencil. | Some filled in,using dark, blue or black ink/or pencil. | Most missing. |
| **OBSERVATIONS** | Diagrams areaccurate, neat, and completed in pencil. Cell parts are labelled. | Diagrams are neatand complete. Labels may or may not be present. | Diagrams aremessy and/or incomplete. | Diagrams aremissing. |
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TOTAL: /20