Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_

**Plant and Animal Cells**

**Introduction**

Cells are the basic building block of all living things. They are not all alike even within the same body. In this activity you will look at three different kinds of cells.

**Materials**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Elodea and/or Onion Cells | Toothpicks | Methylene Blue Stain or Iodine | | Microscopes |
| Microscope Slides | Cover slips | |  | |

**Procedure**

1. Place a drop of water on your slide. Add a thin section of onion or elodea to the drop. Place cover slip over it. Tap gently on the top of the cover slip to remove air bubbles.
2. Observe under the microscope and draw at least ONE good cell. Label the chloroplasts, cell wall, cytoplasm, and cell membrane. Chloroplasts may be few in onion cells. Some of you may see nuclei.
3. Repeat procedures 1-2 for an Elodea leaf.
4. Place a drop of of Methylene Blue Stain or Iodine on your slide. Gently rub the toothpick on the inside of your cheek. Rub the toothpick in the drop of dye. Add a cover slide over it.
5. Look carefully for cells. When you think you have one, ask your teacher to look and confirm that you do.
6. Draw the cheek cell. Label the cell membrane, cytoplasm, and nucleus.
7. Clean up as directed.

**Data (LABELED drawings of cells- show details and quality work)**

Onion cells cheek Elodea cells

**DO NOT FORGET TO LABEL THE CELL PARTS! (Things you may see in *some* of the cells: cell wall, cell membrane, cytoplasm, nucleus, and chloroplast)**

**ANALYSIS:**

Complete this Venn diagram for plant and animal cells.

Plant Animal

1. How are plant and animal cells are alike (use unit vocabulary words)?
2. How are plant and animal cells different (use unit vocabulary words)?
3. Why may onion cells have fewer chloroplasts than the elodea cells?