

## BIOLOGY LAB

### Comparing Plant and Animal Cells--(Recommended for Chapter 3)

**Purpose:** To further the students understanding of cells and to give them the experience of using a microscope.

**Materials:** microscope, microscope slide, cover slip, toothpick, onion, iodine stain, methylene blue stain, dropper bottle of water.

#### Procedure:

##### Onion Cells

1. Place a drop of water on your slide.
2. Take a piece of onionskin off the onion (It is a thin layer underneath an onion layer).
3. Place it flat in the drop of water on your slide.
4. Place a drop of iodine stain on the onionskin.
5. Carefully put on a cover slip remembering to angle it.
6. Examine the cell under low and then medium power.
7. Draw a few cells showing what you observed in the space provided.

##### Cheek Cells

1. Place a drop of water on your slide.
2. Using a toothpick scrape the inside of your mouth.
3. Place it carefully in the drop of water on your slide and twirl the toothpick in the water.
4. Place a drop of methylene blue stain on the slide.
5. Carefully put on a cover slip remembering to angle it.
6. Examine the cell under low power, medium power, and, finally, high power.
7. Draw a few cells showing what you observed in the space provided

**Data:** *Draw the best view of each of the cell type and label the parts of the cell that you can see.*

Onion Cells

Cheek Cells

**Conclusion:**

1. How were the onion and cheek cells different in shape?
2. How were the onion and cheek cells different in size?
3. What part did the onion cell have that the cheek cell did not have?  
What is the function of this part?