

# Cell Observation Lab Make-up

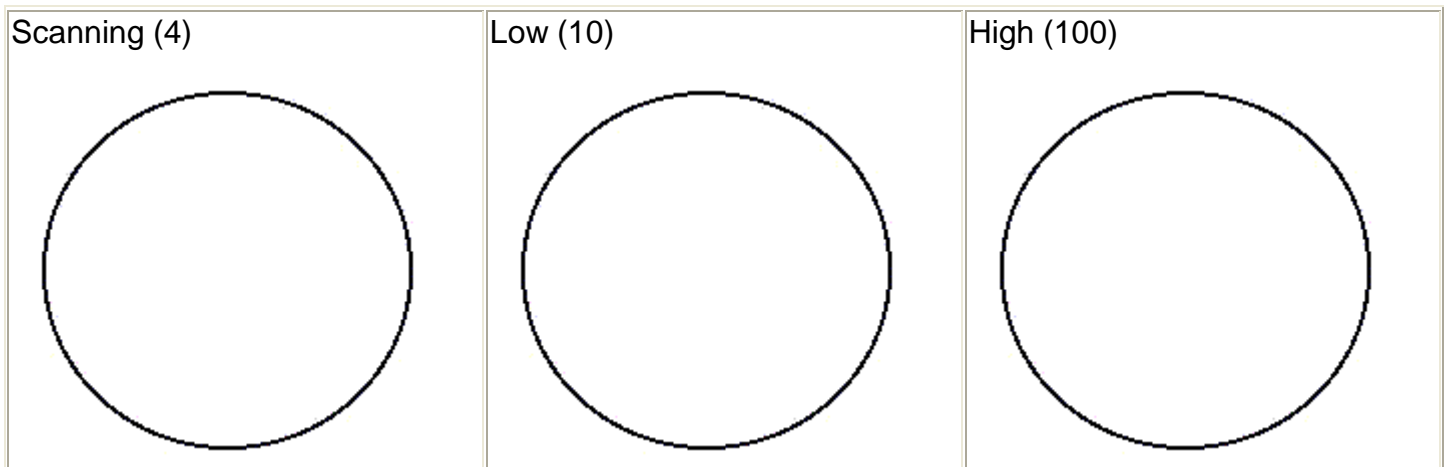
Name \_\_\_\_\_

--Internet Lab-- Animal and Plant Cells

Introduction: If you missed the microscope lab we did in class, you will need to make it up by using a "virtual microscope" which can be accessed on the internet. The virtual microscope is a little more complicated than the microscope we used in the lab, but it will not be difficult to use.

Access the Virtual Microscope at <http://www.udel.edu/biology/ketcham/microscope/>  
Click on the link that says "the virtual scope"

1. Familiarize yourself with the microscope, run the tutorial and examine the parts you will be working with.
2. View the slide labeled cheek smear. Sketch the image at Scanning, Low and High Power. **LABEL on high power the CELL MEMBRANE, CYTOPLASM, and NUCLEUS.**



3. The light microscope used in the lab is not powerful enough to view other organelles in the cheek cell. What parts of the cell were visible?
4. List 2 organelles that were NOT visible but should have been in the cheek cell.
5. Is the cheek cell a eukaryote or prokaryote? How do you know?
6. Your saliva starts the process of chemical digestion or breaking down the food you eat. Keeping this in mind, what organelle do you think would be numerous inside the cells of your mouth?

# Plant Cell Lab

Name \_\_\_\_\_

Visit [www.biologycorner.com/worksheets/plantcells.html](http://www.biologycorner.com/worksheets/plantcells.html). Instead of using the microscope in class, you will look at the pictures on that page.

1. What is the function of chloroplasts?
2. Name two structures found in plant cells but not animal cells.
3. Name three structures found in plant cells AND animal cells.

## PART A - Onion Cells

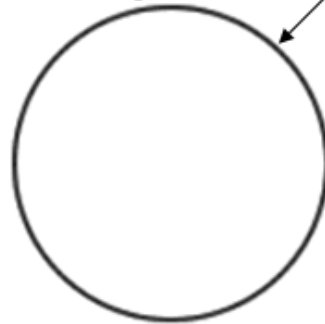
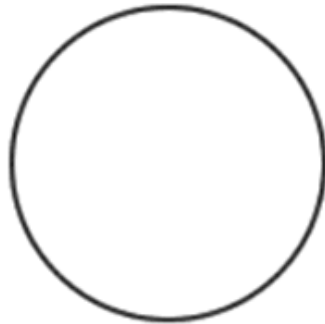
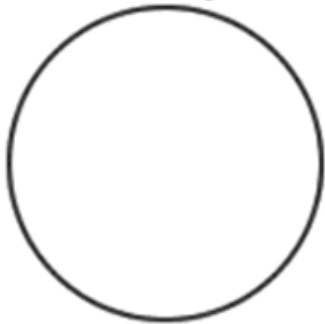
Obtain a prepared slide of onion cells. View under scanning, low and high power. Sketch the **cells** at each magnification.

Label the:  
- Cell Wall  
- Nucleus  
- Cytoplasm

Scanning

Low Power

High Power



Estimate how many cells you can see under low power: \_\_\_\_\_ high power: \_\_\_\_\_

## PART B - Elodea Cells

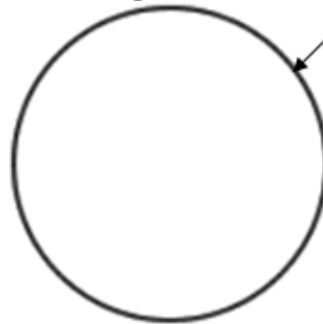
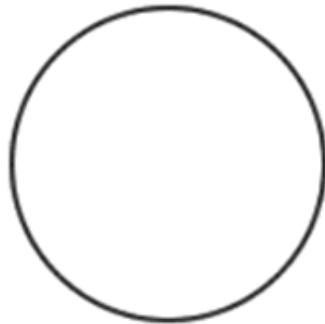
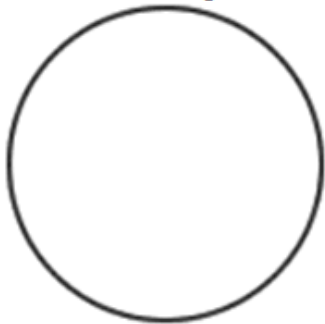
View a prepared slide of an elodea (a simple water plant). Sketch the cells at each magnification. As the slide warms, you may see chloroplasts moving.

Label the:  
- Cell Wall  
- Chloroplasts  
- Cytoplasm

Scanning

Low Power

High Power



Estimate how many cells you can see under low power: \_\_\_\_\_ high power: \_\_\_\_\_

4. What structure surrounds the cell membrane (in plants) and gives the cell support.

### Post Lab Questions

1. Describe the shape and the location of chloroplasts.
2. Why were no chloroplasts found in the onion cells? (hint: think about where you find onions)
3. Which type of cell was smaller - the onion cells or the elodea cells?
4. Fill out the Venn Diagram below to show the differences and similarities between the onion cells and the elodea cells.

