

Comparing Plant And Animal Cells Lab**Problem**

How are plant and animal cells alike? How are they different?

Procedures

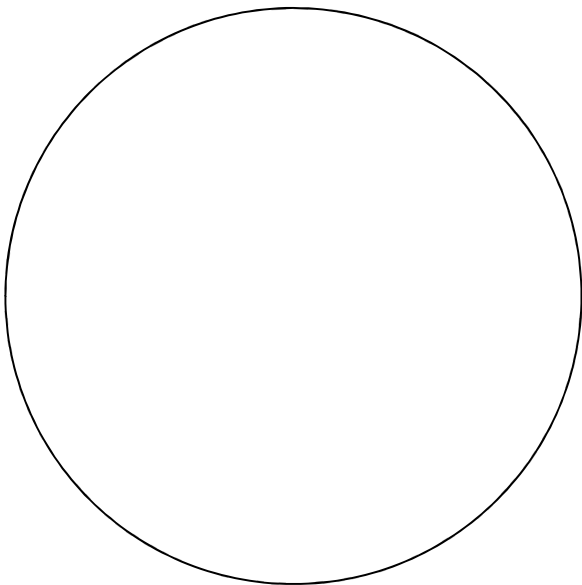
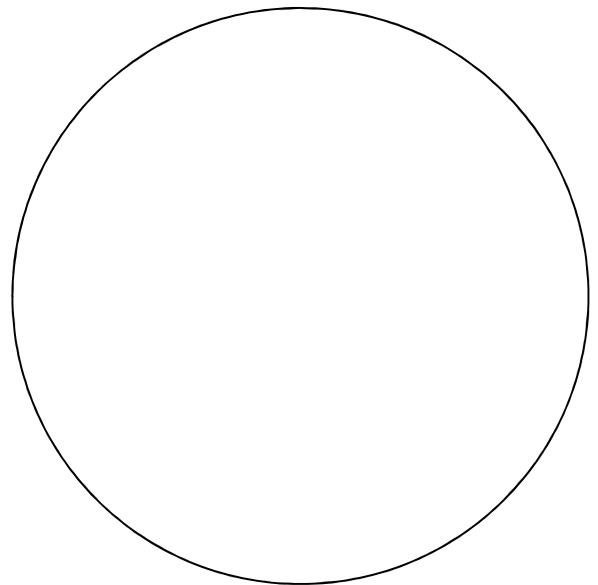
In this lab, you will view cells from elodea, which is a water plant and your cheek cells (animal cells). Careful observation should reveal similarities and differences between the cells.

Diagram

In the circles, you will put your drawings from the microscope. **ALL DIAGRAMS MUST BE: neat, done in pencil, colored, and labeled.**

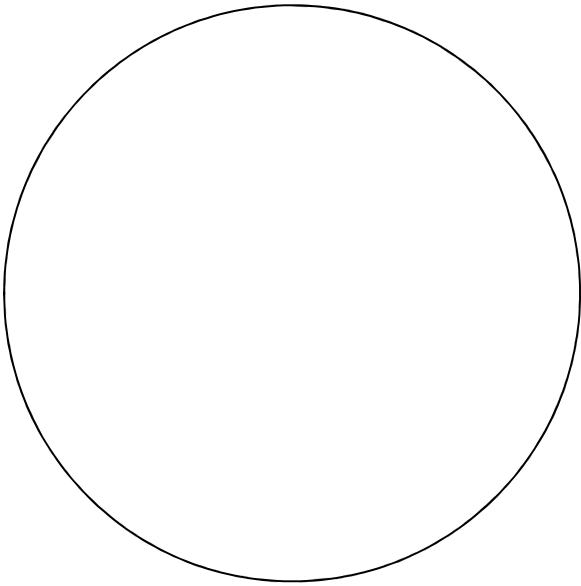
PART A: What's in that Elodea?

1. Cut a small piece of elodea leaf and prepare a wet mount.
2. When you are looking for plant cells, they will resemble a green brick wall.
3. Sketch your cells under medium (100x) and high power (400x), also paying attention to scale.
 - The nucleus of these cells will not be visible but you should see many chloroplasts within each cell.
 - Plant cells also have a rigid cell wall, outside the cell membrane that will also be visible.
4. **Label the cell wall, cell membrane, chloroplast, and cytoplasm.**

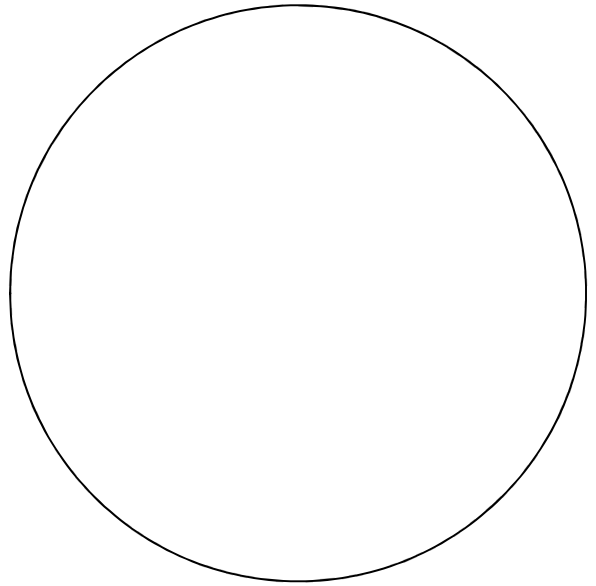
**100x****400x**

PART B: What do animal cells look like?

1. Add a drop of methylene blue to a clean slide.
2. Gently scrape a toothpick over the inside of your cheek.
3. Swirl the toothpick in the drop of methylene blue to stain the cells (otherwise they will be clear and difficult to see).
4. You are looking for light colored blobs with dark spots in them. Perfect circles with black outlines are air bubbles!
5. Sketch the cheek cells under medium (100x) and high power (400x), also paying attention to scale.
 - The nucleus of these cells will be very visible and appear as dark spots in the center of the cell.
 - At the edge of the cell will be cell membrane.
6. **Label the following on each diagram: cell membrane, nucleus and cytoplasm.**



100x



400x

Analysis and Conclusion Questions: Answer the following questions in **COMPLETE SENTENCES**.

1. Are the cells you observed today prokaryotic or eukaryotic cells? Explain your answer.

2. What structures (organelles) do both plant and animal cells have?

3. What structures (organelles) do plant cells have that animal cells do not?