

# CELL LAB

Name \_\_\_\_\_

Date \_\_\_\_\_ Per \_\_\_\_

**Purpose:** To observe and study plant and animal cells, and to identify the following cell parts (organelles): \_\_\_\_\_

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**Materials:** microscope      slide      cover slip      dropper      probe      water  
toothpick      forceps      stains      cell specimens (will be provided)

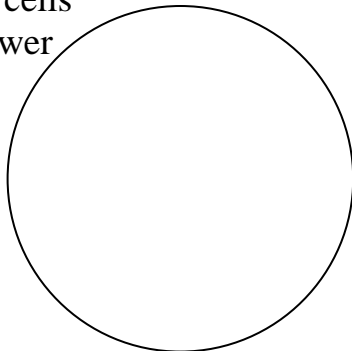
## **Procedure: Part 1 – Onion cells**

1. Follow the directions to obtain a thin piece of onion tissue.
2. Place the onion tissue on your slide. Smooth it out so that there are no folds or wrinkles.
3. Add 1 drop of **Iodine** stain. Add the cover slip.
4. Start on low power. Center and focus the cells. Switch to medium power. Center and focus.
5. Switch to high power and **draw 4 onion cells** in the circle below on the left. Your drawing should be accurate and very detailed.
6. **Label the cell wall, cytoplasm, and nucleus.**
7. Carefully clean off your slide and cover slip with the paper towel provided. Put the used onion in the waste container on your table.

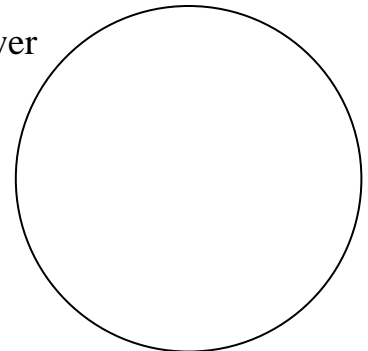
## **Procedure: Part 2 – Elodea cells**

1. Obtain 1 *Elodea* leaf from the teacher.
2. Place the leaf on your slide and add one drop of water. Add the cover slip.
3. Start on low power. Center on the tip of the leaf. Focus.
4. Switch to medium power. Center and focus.
5. Switch to high power. You may be unable to get the cells focused enough to draw well on high power. If so, go back down to medium power.
6. **Draw 4 Elodea cells** in the circle below on the right. Your drawing should be accurate and detailed.
7. **Label the cell wall, chloroplasts, and vacuole.**
8. Carefully clean off your slide and cover slip with the paper towel provided. Put the used leaf in the waste container on your table.

4 Onion cells  
High Power

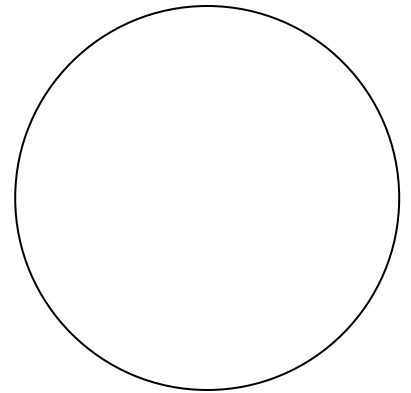


4 *Elodea* cells  
\_\_\_\_\_ power



**Procedure: Part 3 – Human cheek cells**

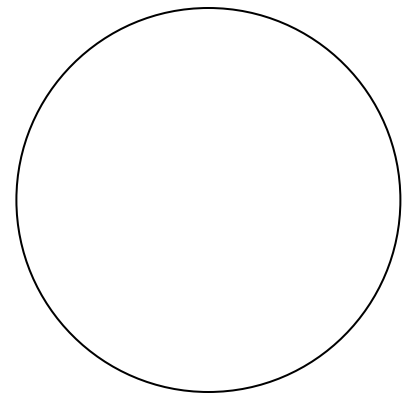
1. Using a toothpick, gently scrape the inside of your cheek  
Smear the cells you get onto your slide.
2. Raise your hand to get a drop of blue stain.
3. Add the cover slip.
4. Start on low power. Center and focus the cells.  
Switch to medium power. Center and focus.
5. Switch to high power and draw one cell in the space to the left.
6. Label the cell membrane, cytoplasm, and nucleus.



Cheek cell  
High power

**Procedure: Part 4 – Banana cell**

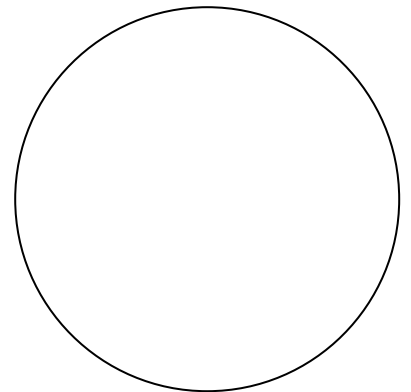
1. Swipe some banana cells on your slide as shown by the teacher.
2. Add one drop of Iodine and a cover slip.
3. Start on low power. Center and focus the cells.  
Switch to medium power. Center and focus.
4. Draw one banana cell on medium or low power in the space on the left.
5. Label the cell wall, cytoplasm, and vacuoles.



Banana cell  
\_\_\_\_\_ power

**Procedure: Part 5 – A one-celled organism**

1. Make a drawing of one of the prepared slides,  
which contain one-celled organisms.
2. Label your drawing with the name of the organism and the  
power of magnification you used.



Drawing of a \_\_\_\_\_  
on \_\_\_\_\_ power.

**Conclusion:** List 3 ways plant and animal cells are different. \_\_\_\_\_

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