

Name: \_\_\_\_\_

# We're Going to the Onion

A human cannot be a plant and Calvin should know that! That is because animal cells and plant cells have some differences. For instance, animal cells have \_\_\_\_\_ and plant cells do not, while

plant cells have \_\_\_\_\_, \_\_\_\_\_ & \_\_\_\_\_ and animal cells do not. So Calvin should not fear the produce truck because he is not produce. He should fear the butcher.



In today's lesson you will prepare and examine a slide with a plant cell specimen and take a closer look at parts of the cell.

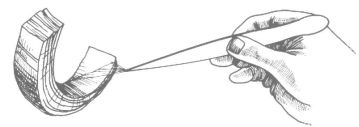
## O-Celling


### MATERIALS

- Microscope
- Onion
- Slide
- Slide Cover
- Scissors
- Eyedropper
- Iodine
- Water
- Paper Towel
- Toothpick
- Tweezers/ Forceps

### PROCEDURE

1. Separate the layers of your onion and use the forceps/tweezers or your fingernails to remove a piece of the thin skin found between the layers of the onion.
2. Carefully cut a piece of the skin about 2cm long.
3. Lay the skin flat on your slide being careful not to fold or wrinkle it. Use the toothpick to smooth it. \*\*It is important that you do not fold the skin. If the skin is folded you will be looking through 2 layers of cells
4. Place 2 drops of water on the skin and then apply the slide cover. Make sure no air bubbles are under the slide cover.
5. Place a drop of Iodine Stain on one edge of the cover slip.
6. Touch the opposite edge of the cover slip with paper towel to draw the stain under the slip.

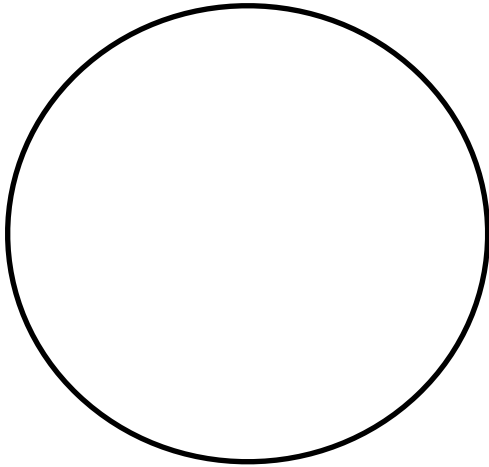




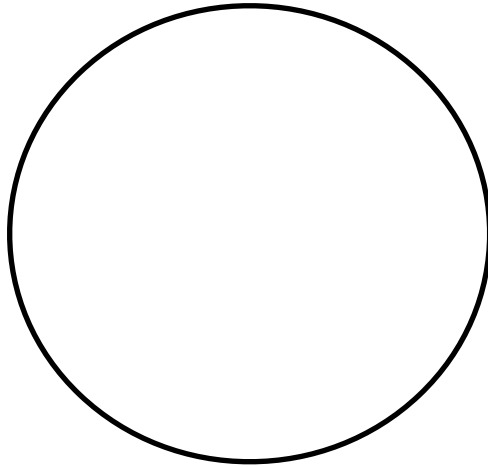
**Characteristics of Living Things**  
Living things have certain characteristics that distinguish them from non-living things. List the CHARACTERISTICS OF LIVING THINGS below.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

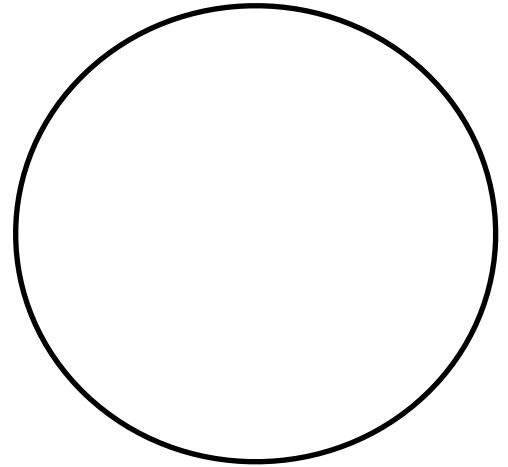
- Place the prepared slide on the microscope stage and secure it with the slide clips.
- Examine the onion cells under each of the objective lenses of your



Magnification \_\_\_\_\_



Magnification \_\_\_\_\_



Magnification \_\_\_\_\_

microscope. Sketch the cells at each magnification.

- What is distinctive about the onion cell or the arrangement of the onion cells?
- Can you see any of the **ORGANELLES** of the cell? If yes, then which one(s)?
- In the diagrams above properly label those **CELL STRUCTURES** that you can identify.



I'M THE ONION, AND I SAY, "IN ADDITION TO SUPPLYING VITAL NUTRIENTS, MANY VEGETABLES ARE A SOURCE OF DIETARY FIBER."

WATERS

