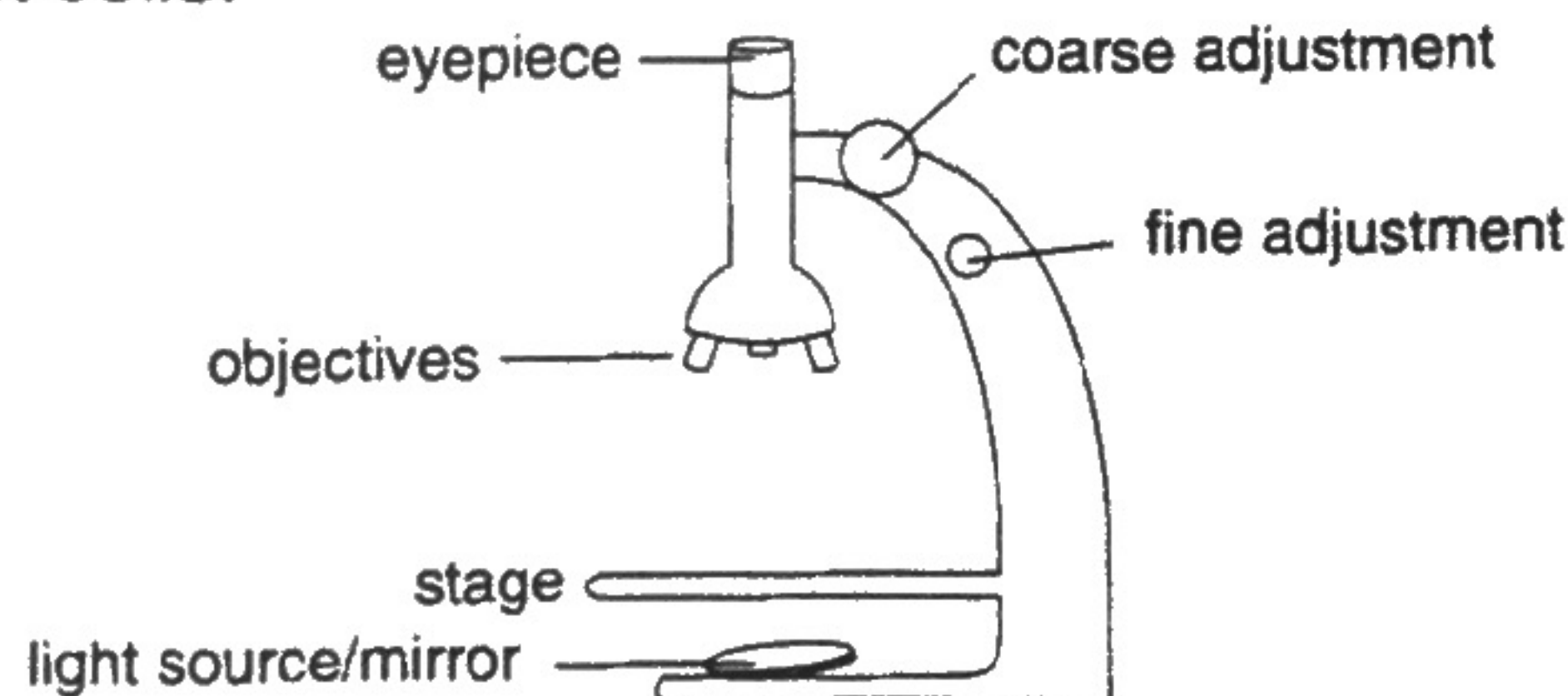


Date: \_\_\_\_\_ Names: \_\_\_\_\_

## MICROSCOPE USE OBSERVING HUMAN CHEEK CELLS

**INTRODUCTION:** What do the cells in your mouth look like? What is inside of them?

**OBJECTIVE:** In this activity, we will practice proper use of the microscope in order to observe human cheek cells.



### PROCEDURE:

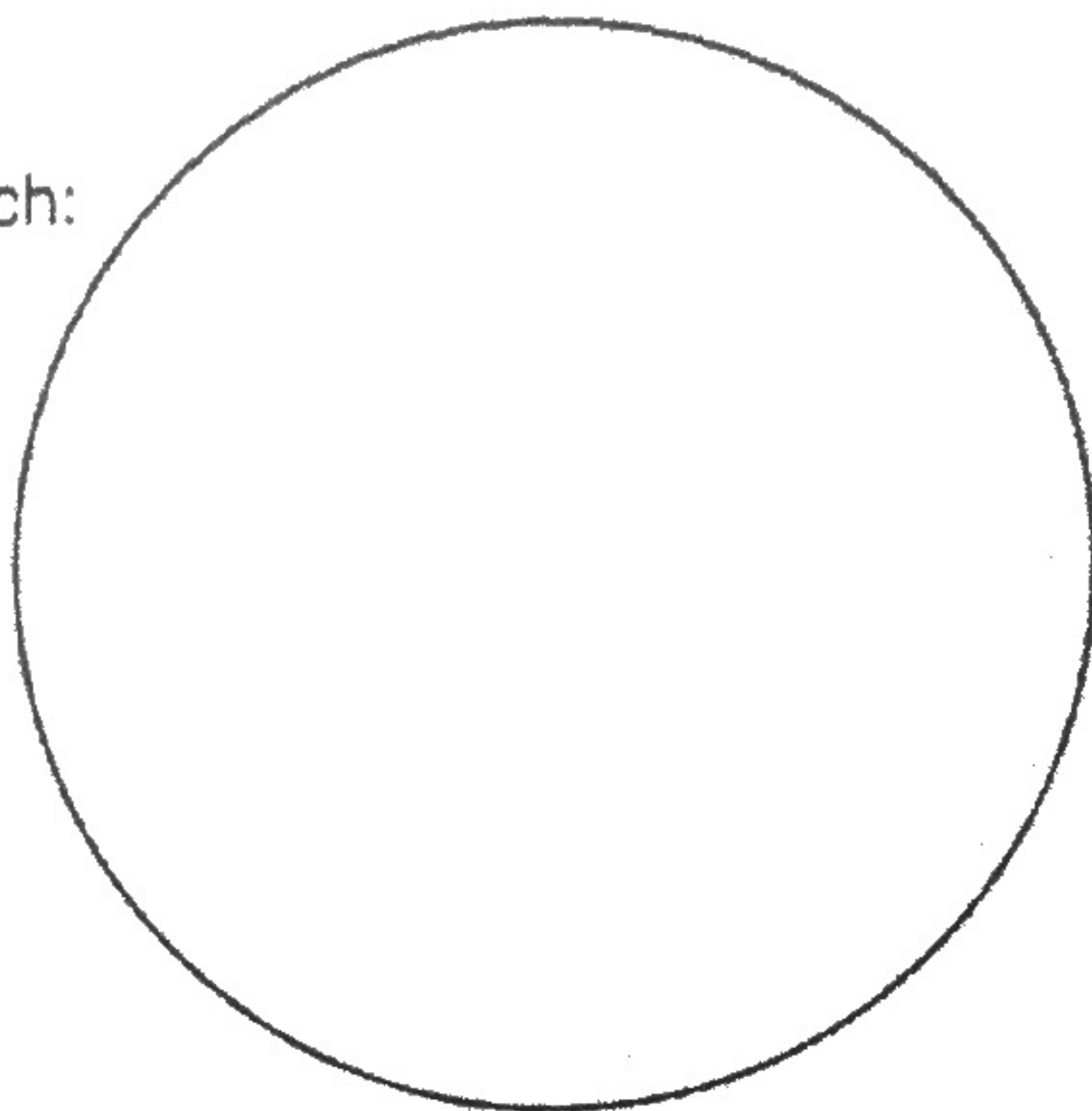
1. Clean the microscope slide by wiping it with lens paper/tissue.
2. With the dropper provided, place a drop of water onto the slide in the center.
3. Using a toothpick, gently scrape the inside wall of your cheek (in your mouth) with one end of the toothpick.
4. Gently stir that end of the toothpick in the water droplet on the microscope slide. Be careful not to smear the water droplet.
5. Squeeze one drop of iodine from the dropping bottle labeled "IODINE" into the water/cell droplet on the microscope slide.
6. Add a small glass coverslip to the droplet by standing the coverslip on its edge beside the droplet and allowing it to gently fall over onto the droplet. This will squish air bubbles from underneath the coverslip as it falls.
7. Place the slide onto the microscope stage and clip it into place using the stage clips.
8. You might need to adjust the mirror of the microscope or move the microscope so that light will reflect up through the stage and slide. If you carry the microscope, use two hands—one underneath and the other on its frame.
9. Begin focusing on the lowest power with the objective rolled down as far as it will go.
10. Once you have focused on low power, without moving the adjustment knob, switch objectives to medium power. Refocus using the fine adjustment knob.



Date: \_\_\_\_\_ Names: \_\_\_\_\_

11. Repeat step #10 for high power, except when turning the objective watch from the side to make sure that you do not crack the slide and coverslip.
12. ON THE HIGHEST POSSIBLE POWER YOU CAN FOCUS, sketch the cells that are visible in the "field of view" (circular area visible through eyepiece) as precisely as possible in the circle below.  
\*\* If a something that looks like a needle is visible through your scope, ignore it. It is a pointer that you can use to show other people an exact structure on the slide.
13. When your sketch is complete, wash your slide and coverslip, throw away your used toothpick, clean microscope stage, and store the scope on LOW POWER with the stage rolled down as far as it will go.

Cell sketch:



## QUESTIONS:

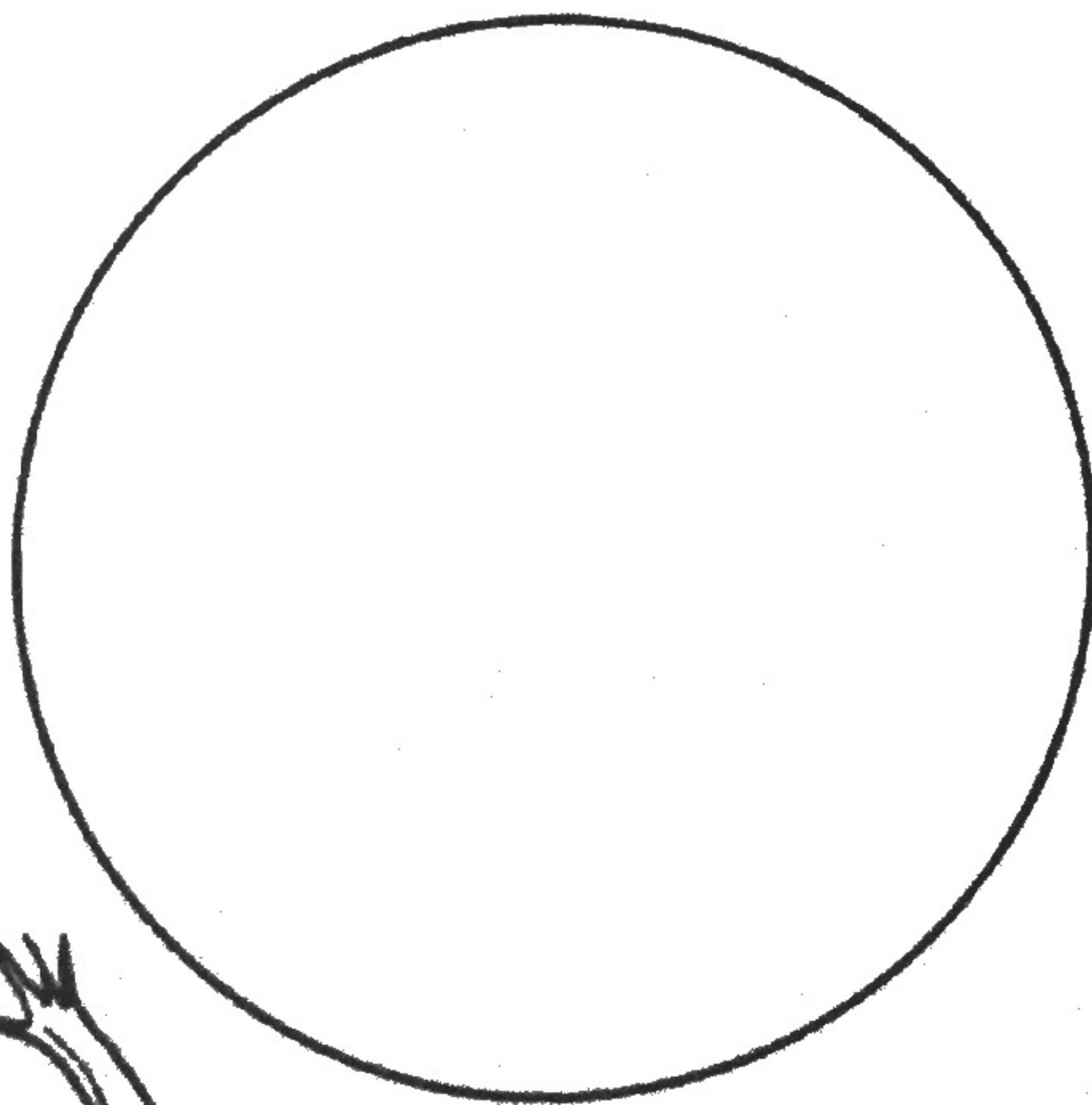
1. What job does the drop of water seem to do? \_\_\_\_\_  
\_\_\_\_\_
2. What does the iodine do to the cheek cells (and everything else it touches)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Why do you need to watch from the side of the microscope when switching to HIGH POWER? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What do your cheek cells look like? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Date: \_\_\_\_\_ Names: \_\_\_\_\_

ONION CELLS

1. Get an onion section from those provided.
2. From the bottom side of the onion section peel off a piece of the thin "skin"—about one centimeter (cm) square.
3. Place this skin in the middle of a clean microscope slide.
4. Add one drop of iodine to the skin.
5. Cover the droplet with a coverslip—let the coverslip fall onto the droplet.
6. Focus the cells on the highest power possible, and sketch them in the circle below.
7. Label the NUCLEUS, CELL WALL (MEMBRANE), CYTOPLASM, and VACU- OLES.





Date: \_\_\_\_\_ Names: \_\_\_\_\_

## QUESTIONS:

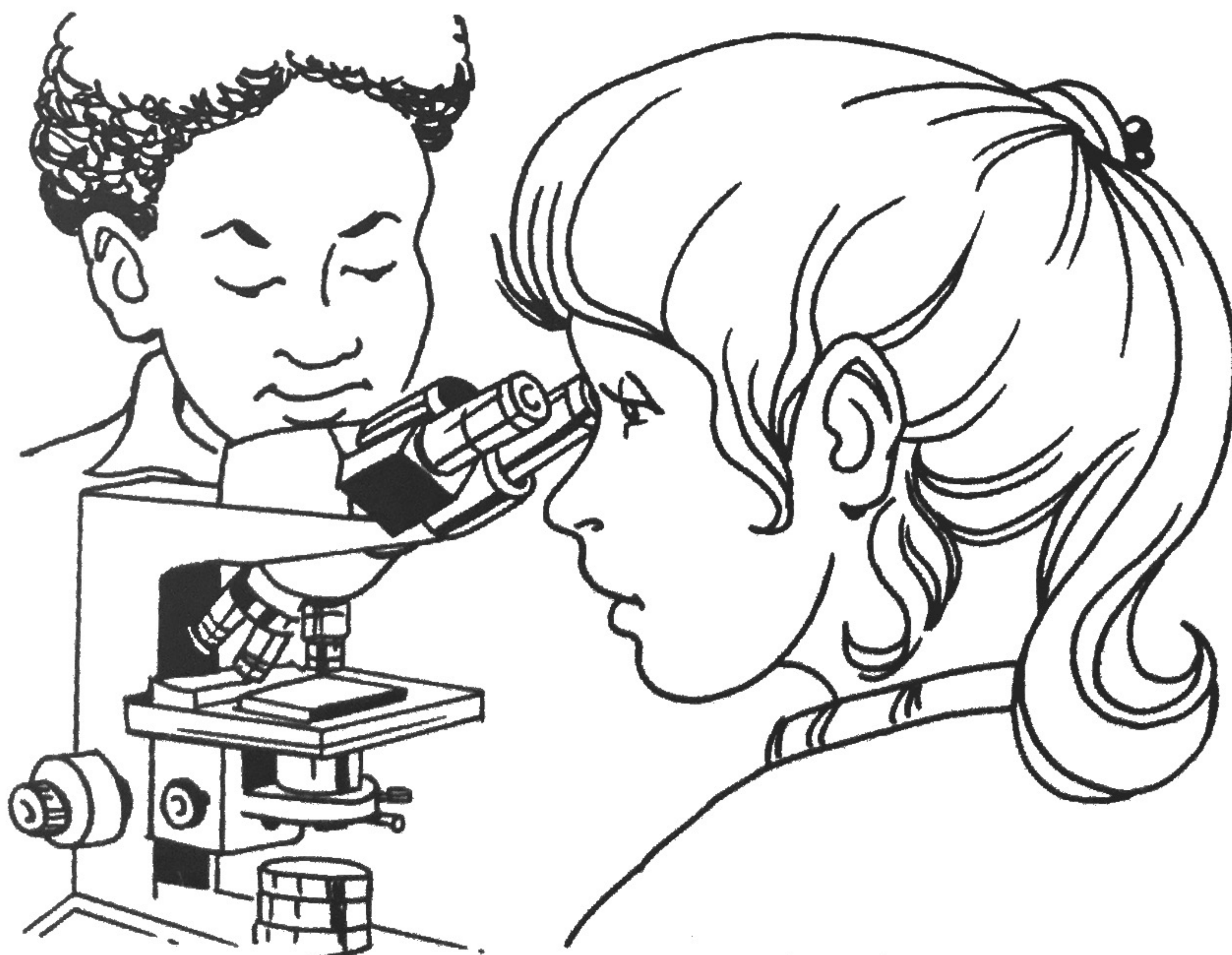
1. Why is iodine used in these slide preparations? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

2. List as many different cell structures as you were able to see in the slides.

\_\_\_\_\_  
\_\_\_\_\_

3. Why are these cell structures called "organelles"? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

Period \_\_\_\_\_

## Drawings of Microscopic Specimens

