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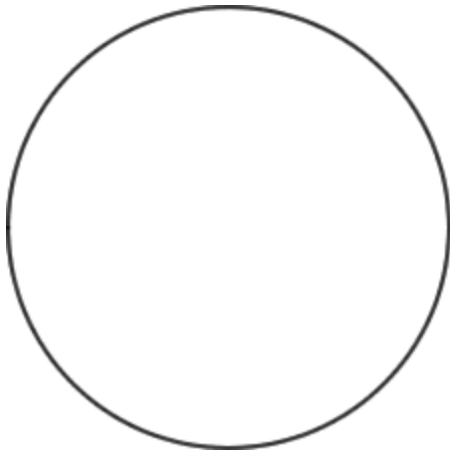
Date: _____

Human Cheek Cell Lab

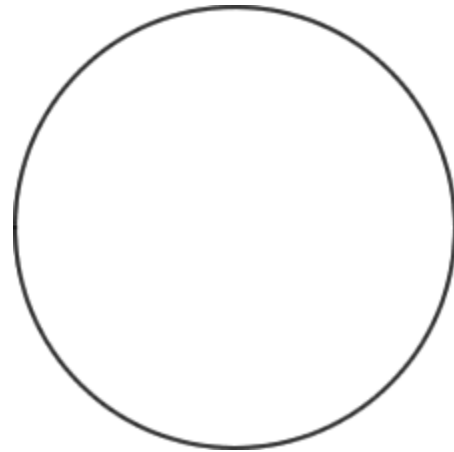
1. Put a drop of distilled water and a drop of methylene blue on a slide. Caution: methylene blue will stain clothes and skin. It is also toxic if ingested.
2. Wash your hands. Lightly scrape the inside of your cheek with the flat side of a wooden splint, for about a minute.
3. Stir the end of the splint in the stain for 10 seconds and throw the splint away. Wash your hands.
4. Place a coverslip onto the slide at an angle. If there is extra moisture, use the edge of a paper towel to absorb it, but do not press down on the slide.
5. Switch to low power and focus. When you are focused and you move the slide, the objects should move too. Cells should be visible, but they will be small and look like nearly clear purplish blobs. If you are looking at something very dark purple, it is probably not a cell.
6. Once you think you have located a cell, switch to medium power and refocus, using the coarse or fine adjustment.
7. Switch to high power and refocus. (Remember, ONLY USE THE FINE ADJUSTMENT knob at this point.)

* IMPORTANT: If at any point you "lose" your cell or it becomes out of focus, switch to a lower magnification and re-focus. Only when the cell is focused at this lower magnification should you switch to the higher magnification, or else you may break the microscope.

- 1a. Sketch the cell at low and high power. Draw your cells to scale.



Low Power



High Power

- 1b. Label the **nucleus**, **cytoplasm**, and **cell membrane** of a single cell in your high power drawing.
2. Why is methylene blue necessary?
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. Keeping in mind that the mouth is the first site of chemical digestion in a human. Your saliva starts the process of 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

Purpose: Students will observe plant cells using a light microscope. Two cells will be observed, one from the skin of an onion, and the other from a leaf. Students will compare both types of cells.



Prelab Questions

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 in animal cells.
4. What structure surrounds the cell membrane (in plants) and gives the cell support?
5. Obtain a slide and place a thin piece of onion onto the slide. Then add a drop of iodine to stain the cells for viewing. Finally add a coverslip to the slide. Do not press the coverslip. View under the microscope and sketch the cells at low and high magnification. Label the cells as they appear under high power.

