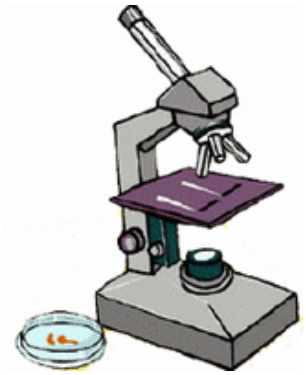
Name:_____Date:_____

Observing Human Cells



Procedure:

1. Put a drop of methylene blue or other stain on the slide.
2. Gently scrape the inside of your cheek with the flat side of a toothpick and stir the end of the toothpick into the stain to create a smear.
3. Place a coverslip onto the slide. (Cover slips are small, thin, square plastic or glass pieces).

Focusing the Microscope

1. Use the **SCANNING** objective to focus.You probably will not see the cells at this power, but you should see the blue stain and perhaps some air bubbles.
2. Switch to **LOW POWER**. Cells should be visible, but they will be small and look like nearly clear purplish blobs. If you are looking at something dark dark purple, it is probably not a cell
3. Once you think you have located a cell, switch to **HIGH POWER** and refocus.(Remember, do NOT use the coarse adjustment knob at this point)

---Sketch the cell. **Label the nucleus, cytoplasm, and cell membrane** under high power. **Draw your cells to scale**.

Scanning Power

Low Power

High Power

QUESTIONS - answer thoroughly and thoughfully.

1. Why might a person have trouble viewing their cells with the microscope?

2. What does it mean to draw a cell "to scale?"

3. The light microscopes are not powerful enough to see many of the tiny organelles present in the cell. Name two organelles found in the animal cell that could **not** be seen in your cheek cells.

4. 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 most numerous inside the cells of your mouth? (HINT: In your muscle cells, the mitochondria are the most numerous.)

Alternative: Observing Skin Cells

1. Wash the underside of a wrist that will be sampled for epidermal cells with soap and water.
2. Stick a clean piece of clear tape on the underside of the washed wrist.
3. Gently remove the piece of tape from the wrist being careful to avoid getting fingerprints on the tape. A forceps might help to remove the tape and avoid fingerprinting the tape.
4. Place the tape, sticky-side up, on a clean microscope slide.
5. Stain the top, sticky side of the tape with 2 or 3 drops of 1% methylene blue solution.
6. Place a cover slip over the sticky tape. (Tweezers may help you avoid staining your fingertips.)
7. Examine the slide under a microscope. Look for cells with low power first, and then switch to high power for details.