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

**The Human Cheek Cell**

1. List the 3 parts of the Cell Theory

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

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

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

2. Describe or define each of the following

--cell membrane \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

--cytoplasm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

--nucleus \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
--organelle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Procedure:**

1. Gently scrape the inside of your cheek with the flat side of a toothpick. Scrape lightly.
2. Stir the end of the toothpick in a microscope slide and throw the toothpick away.
3. Put a drop of iodine on the slide where the cells are. Caution: iodine will stain clothes and skin.
4. Place a coverslip onto the slide
5. View the cells with 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 very dark purple, it is probably not a cell.
6. 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)

3. Sketch the cell at low and high power. **Label the nucleus, cytoplasm, and cell membrane of a single cell**. Draw your cells to scale.

|  |  |
| --- | --- |
| circle Low Power | circle High Power |

5. Why is iodine necessary?

6. 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?

6. List 2 organelles that were NOT visible but should have been in the cheek cell.

7. Is the cheek cell a eukaryote or prokaryote? How do you know?

8. 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?

**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.