

Name: _____ Community: _____ Date: _____

Group Members: _____

Cheek Cell Lab

Overview:

Medical laboratory technicians play a vital role in the testing and diagnosing process that a patient must go through during treatment. Besides conducting a variety of tests and gathering data, a key function of the medical laboratory technician is to prepare specimens for examination. This lab will introduce you to the preparation and research that medical laboratory technicians perform using a cheek swab and a microscope.

Materials:

- Toothpick
- Microscope Slide
- Microscope Slide Cover
- Microscope
- Stain

Hypothesis: What do you think you will see when you view the slide of your cheek cells under the microscope?

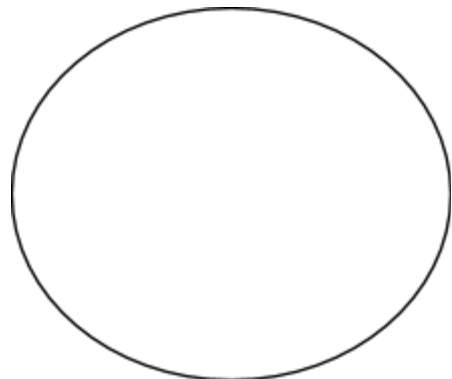
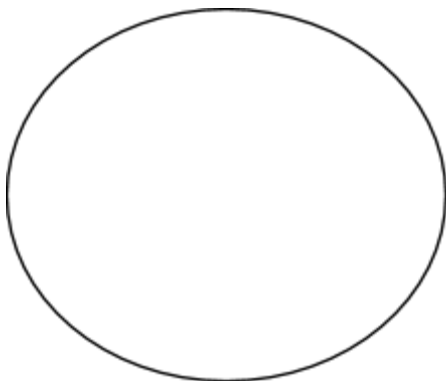
Directions:

1. Use the end of a toothpick to gently rub the back inside of your cheek.
2. Put a drop of stain on the slide and smear the end of the toothpick (the end you used to scrape your cheek) around in the drop to release the cells.
3. Carefully place a coverslip on top of the slide, avoiding air bubbles.
4. Observe and sketch what you see both under low and high magnification in the spaces below.

Analysis: Sketch what you see below under both low and high power magnification. Label the nucleus, cytoplasm and the cell membrane on each diagram.

Low Power= (Lense X Nose piece)_____

High Power =(Lense X Nose piece)_____



Conclusion:

1. The cells you viewed today came from your very own cheeks! Were these cells an example of a plant or an animal cell?

2. Were the cells you viewed today prokaryotes or eukaryotes? Justify your answer with details from your slide.

3. If we had an extremely high power microscope we would be able to look at all of the organelles in detail. Describe which organelles we would NOT see and which type of cell they exist in.

4. The mouth is the first site of chemical digestion in humans. Your saliva starts the process of breaking down the food you eat. What organelle do you think would be numerous inside the cells of your mouth? You may want to refer back to the cell books you made!

Extension:

Become an expert! You will do some research to learn about the many different ways cheek swabs are performed and used. Choose at least two different uses and explain the following for each:

| | Method 1 | Method 2 |
|---|-----------------|-----------------|
| What it is used for | | |
| How the test is performed | | |
| Type of career that would use this | | |
| Something new you learned | | |