**Virtual Microscope Lab - Cheek Cells**

Introduction: You will be completing this lab by using a "virtual microscope" which can be accessed on the internet. If we were doing this with actual microscopes, we could obtain cheek cells by scraping the inside of the mouth with a toothpick and then rubbing the toothpick on a drop of water with blue stain. The blue helps you see the cells which are normally a clear color. The virtual lab begins at the step where you place the slide on the microscope page.

Access the Virtual Microscope at <http://www.udel.edu/biology/ketcham/microscope/>  
Click on the link that says "the virtual scope"

1. Familiarize yourself with the microscope, run the tutorial using the onion root slide and examine the parts you will be working with.

When do you use coarse and fine focus knobs?

Which power do you begin using and why?

Which position should the stage be in to begin?

What does the iris diaphragm do?

How do you reposition the slide holder?

2. View the slide labeled cheek smear. Sketch the image at Scanning, Low and High Power. **LABEL on high power the CELL MEMBRANE, CYTOPLASM, and NUCLEUS.**

|  |  |  |
| --- | --- | --- |
| Scanning (4)circle | Low (10)circle | High (40)  circle |

3. Go to google and type "cheek cells" into the search box. Click on "images" to see all the images google has found on the web showing cheek cells (there should be hundreds).

What do all of these images have in common?

How do the cells vary from one picture to the next (how are they different)?

4. Why are the google images of cells different colors? What is the natural color of a cheek cell?

5. Use the internet or your textbook to define or describe each of the following terms that relate to the cell.

eukaryote

nucleus

cell membrane

cytoplasm

organelles

mitochondria

ribosomes

endoplasmic reticulum

golgi body

lysosomes

6. Knowing 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 the most numerous inside the cells of your mouth? (Hint: what organelle is responsible for breaking things down and digesting?)

Original Source: <http://www.biologycorner.com/worksheets/cheekcell-virtual.html>

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