

Bio 135 Lab Exercise two: Microscopy and Mitosis

Objectives:

1. To learn the component parts of a microscope:
2. To learn the proper care of a microscope
3. To learn the proper use of a microscope
4. To understand concepts of depth of field and magnification
5. To view and find the stages of mitosis using a microscope

Pre lab Activities:

1. Go to the virtual lab site and do the activities associated with the Microscope and Mitosis. I especially urge you to go to the virtual microscope. It will familiarize you with the major components of a microscope and will prepare you for our first in person lab session.
2. If online, view the video presentation on the microscope.
3. View materials on Virtual lab related to mitosis

In person lab activities.

1. Video of the microscope.
2. Instructor will demonstrate the use of a microscope.
 - a. Demonstrate care and cleaning of a microscope
 - b. Proper way to store the microscope.
 - c. How to place slides
 - d. Proper sequence in focusing
 - e. What to do when done with the microscope.
3. Perceiving depth activity: (optional)
 - a. View slides of crossed threads at 40x. Adjust the diaphragm as described in the activity on page 371 of your lab manual.
4. Make a wet mount slide using cheek scrapings from your own tissues
 - a. Take tooth pick and lightly rub off tissues
 - b. Smear this on a fresh slide
 - c. Place one drop of methylene blue on the tissues
 - d. Cover this with a plain square cover slip
 - e. Observe under the microscope at various magnifications.
5. View onion tip slides and Identify the stages of Mitosis within the cells. Draw what you see.
6. Be able to identify parts of the microscope as shown on the virtual lab site.