

Microscope lab

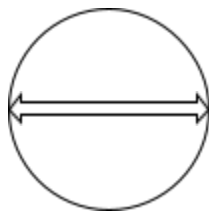
Use your lab notebook to collect data on the following questions/procedures.

Getting Comfortable with a Microscope

1. Make a wet mount with an “e” slide.
2. Note the following in your lab notebook:
 - a. Which way does it move in the viewing range when you push the slide to the...
☐ Left? Up?
3. Which power has the best in depth of focus? High depth of focus allows you to put nearly everything in crisp focus in the viewing range (the top of the slide closest to the lens to the bottom near the stage), low depth of focus only allows you to focus parts (i.e. the top area is clear but the bottom parts seem blurry).
4. Play with the light amount using the switch under the slide stage! How could this affect your observations?
5. Look through the dissection microscope (one should be set up). How is it different than the microscope you were using? Why is it called a dissection microscope?

Figure Out the Viewing Range Diameter

6. Remove the “e” slide (save it for the end), put the microscope on low power, slide a ruler in like it was a slide, and measure how many mm wide the viewing range is. This is the diameter of the viewing range on low power.

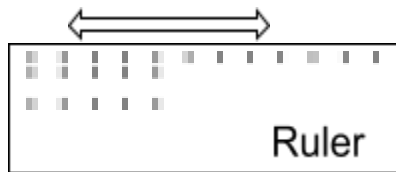


Note the following in your lab notebook:

- a. How many millimeters across is the diameter? _____ mm
- b. When looking through a microscope, scientists usually use micrometers (um). With your group convert the low power diameter into um (micrometers) and **show your work.**

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- c. If you used the ruler to measure the viewing range diameter at medium or high power, it would be less accurate. Why?
- d. With your knowledge of the low power diameter (in μm) and the powers of each lens (low = 40x, medium = 100x, and high = 400x original size), **can you determine viewing range diameter at medium? What about viewing range diameter at high?**



How wide is the viewing circle (mm)?

7. Finished? Ask for some interesting prepared slides or make a wet mount of your own hair. Tip: Look at its follicle at the base.

8. Use last 5 minutes to clean up your space and put material back :

- Lab notebooks back on the shelf
- Slides cleaned and on cart.
- Microscopes switched off.
- Any trash goes into the trash can.