Biological Drawing

Background:

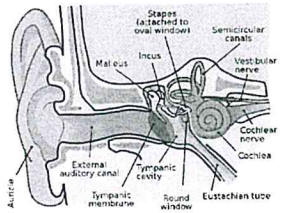
When making a biological drawing it is important to draw **what is actually seen**. This is not an art project. Imagination and memory have no place here. Drawings should be accurate.

General Directions:

1. **Drawing materials**: use a sharp HB #2 pencil and colored pencils. Use a clean eraser for mistakes. Pens are unacceptable because they can't be corrected without whiteout.
2. **Positioning**: Diagrams should be centered on the page. Do not draw in the corner.
3. **Size**: Drawings should be large enough to easily represent all details visible under the microscope if applicable. Show only as much detail as necessary to represent the relevant features of the specimen. You do NOT have to draw everything. Rather, a small cross section will often suffice.
4. **Accuracy**: Drawings should accurately represent reality. If you see a complete oval in your specimen, your drawing should be a complete oval, without any openings or crossed lines. **Avoid "idealized" drawings** which are similar or vaguely like the specimen. Proportions should also be accurate. If necessary, measure lengths.
5. **Technique**: **Never draw from memory**. Look at the specimen for 5 seconds, then draw for 5 seconds. Repeat until finished. Use simple, narrow lines. Represent depth with stippling (dots close together). Never use shading. NEVER draw when you are not looking at the specimen. (Drawing at a location away from your specimen violates scientific and academic integrity).
6. **Labels**: Leave a good margin for labels. Use accurate terminology for labeling. Labeling lines should be made with a ruler and should never cross. Keep labeling lines vertical or horizontal. Always include the following:
    a. Title above drawing which accurately identifies the specimen
    b. Magnification below specimen (e.g., 100x) or scale
    c. Names of known or identifiable structures in margins, with lines connecting the structures to their labels

Examples of Acceptable Biological Drawings (if they were in color)

Human Inner Ear



|----------| = 5 cm

Cross-section of Mammary Gland

Magnification: 400x

Practice Drawing:

1. Watch the first video in the play list: https://bit.ly/BioDrawing
2. Watch the second video in the playlist. Practice below:

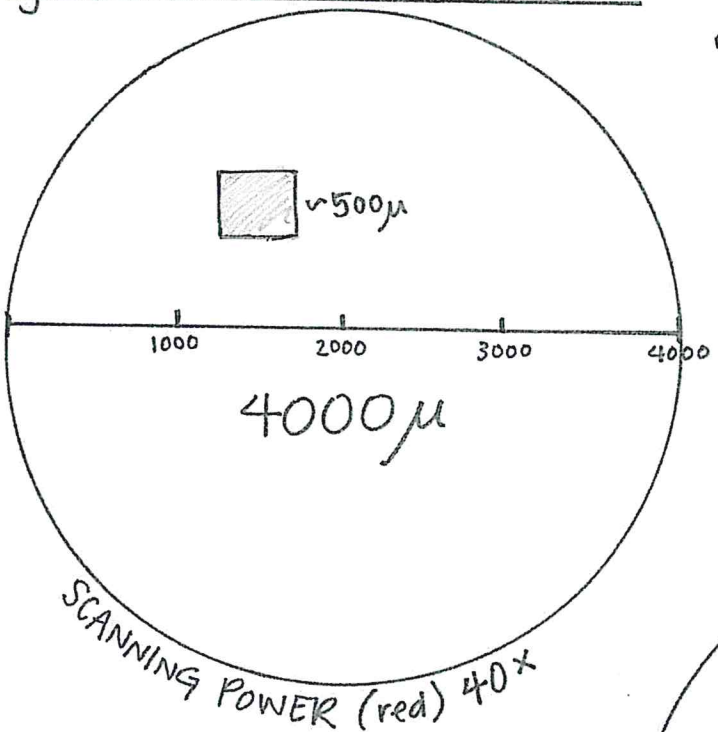
3. Watch the third video in the playlist. Practice below:

4. Watch the fourth video in the playlist. Follow along on the back of this page and using the next worksheet "Microscope Practice".

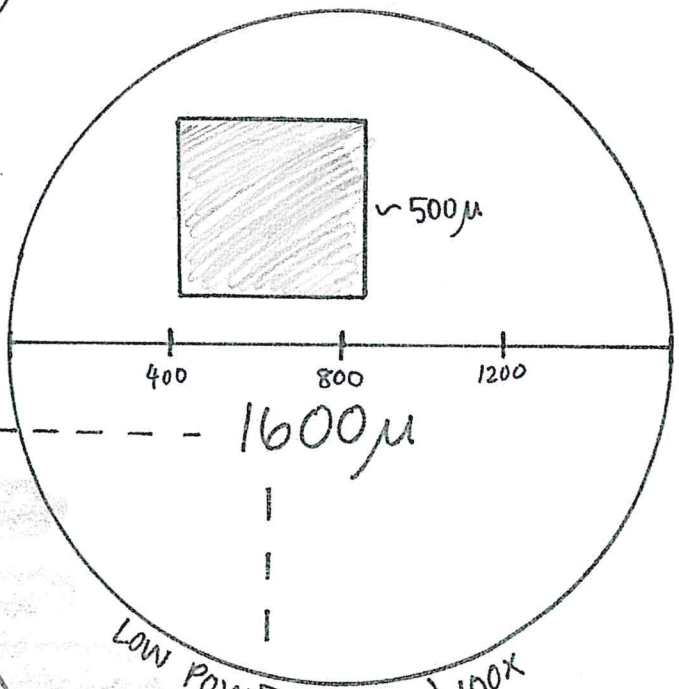
Magnification & Field of View

μ → mu
Greek letter m

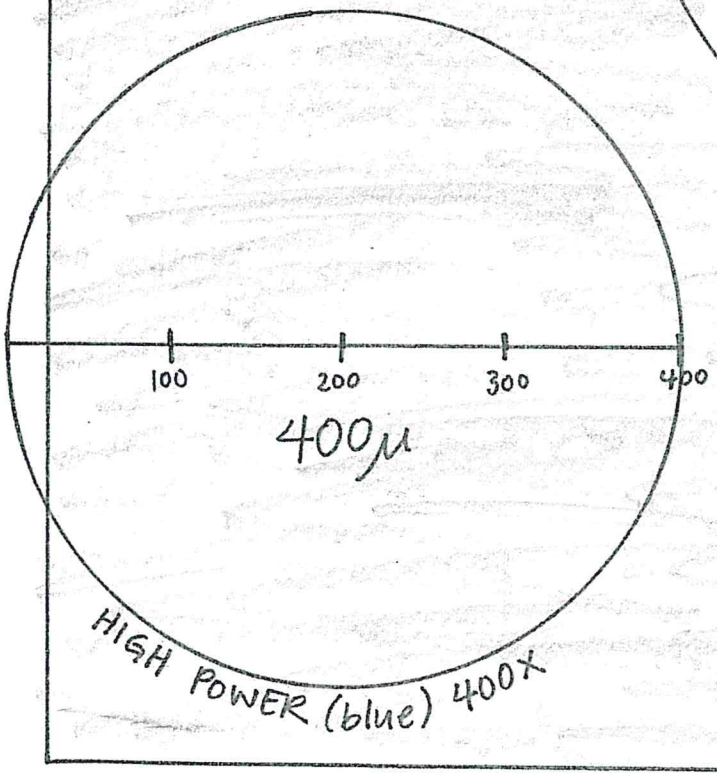
micrometers (μ)
"microns"



SCANNING POWER (red) 40X



LOW POWER (yellow) 100X



HIGH POWER (blue) 400X