



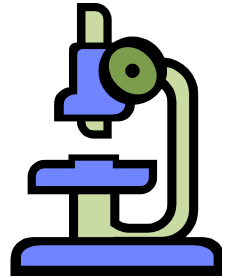
Microscope Use

Name _____

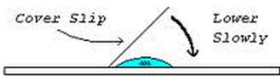
Period _____

- ✓ a) You need to know the parts of the microscope to use it correctly. See Science Home → Microscope → Microscope Parts Quiz.
 ___ b) First do the Microscope Parts Quiz. Your # correct ___ minus the # wrong ___ = your points. ___.

- _1. **Keep Microscope Upright:** Always keep the microscope upright. Use 2 hands to move by holding the ARM and BASE.
- _2. Light: **Be Safe.** Check that the light is plugged in and the cord is not hanging or in the sink. Turn on. If your microscope has a mirror and lamp, arrange so mirror catches light and directs it up.
- _3. **ALWAYS START on LOW POWER.**
 _Set your microscope on LOW POWER by the ZOOM wheel or by turning the OBJECTIVE LENS to click in at 10X. Your eyepiece has a magnification of 10X. It combined with the low power OBJECTIVE gives you a low power magnification of 100X.

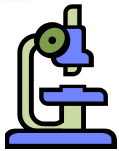


- _4. **ALWAYS USE a SLIDE and COVERSLIP** to hold what you want to view.
 _Try it. _a) Obtain a slide and coverslip.
 _b) Place a lower case "e" from newspaper on your slide.
 _c) Add a drop of water to the "e", using your pinky finger as a dropper.
 _d) Hold the coverslip at a 45 degree angle (/) next to the "e".
 _e) Slowly drop the coverslip on to the "e". Tap lightly to remove air bubbles.

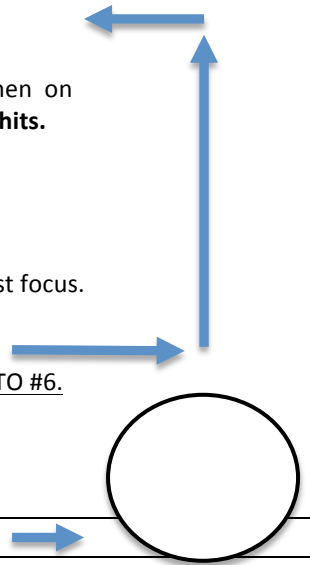


- _5. **ALWAYS USE STAGE CLIPS** to hold your slide in place, **even when you move it.**
 _Try it. _a) Place your slide on the STAGE so the "e" is over the opening and light.
 _b) Place the STAGE CLIPS over the slide. Leave them on to hold and steady your slide.

- _6. **ALWAYS START CLOSE**
 _Try it. **Watch** from the **outside**, as you use COARSE ADJUSTMENT to move your OBJECTIVE LENS very close to the slide and stage. Most microscopes will stop when on low power, BUT don't count on it. **WATCH** as you turn the wheel. **Stop before it hits.**



- _7. **ALWAYS FOCUS AWAY**
 _FINALLY, you are ready to look in the EYEPIECE!! **Read ahead** for this part!!
 _a) Look in the EYEPIECE as you turn the COARSE ADJUSTMENT to move the stage slowly **away** from the slide and STAGE.
 _b) **Slow down and stop** as you see something come into focus. Move to the best focus.
 _OR... _c) If you see nothing, **STOP** and check:
 ?? Is the item in the light? If not, move it. **GO BACK TO #6.**
 ?? Is your objective a centimeter away from you stage? **If so, GO BACK TO #6.**



- _8. **Record as you look.** Draw an **outline** drawing of your "e" as it looks in the microscope
Do not sketch or shade your drawing. Scientific drawings are drawn "Part for Part".

****Have Checked NOW.....while in focus.** _____

- _9. **Record** what happens. Move your "e" to the right. It seems to move to the _____

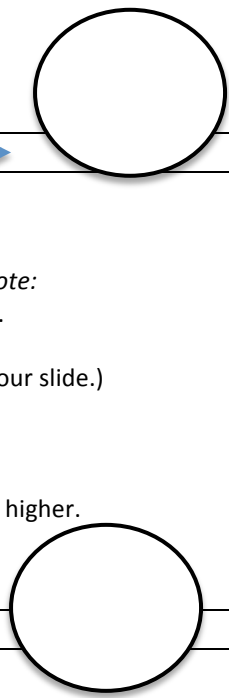
- _10. **HIGHER POWER:** Use these directions to View at 400X. (If you have a Zoom Microscope, see #11. Note:
 _a) FIRST, look in eyepiece and move your image to the **center.** Use **both hands + stage clips on.**
 _b) Focus with FINE ADJUSTMENT to improve the focus.
 _c) Watch in the eyepiece as you center your image. Use **2 hands and stage clips** as you move your slide.)
 _d) Move the **high power objective** into place. **USE ONLY FINE ADJUSTMENT on high power.**
 _c) Adjust light diaphragm to improve your view, using the handle or wheel.

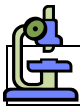
- _11. **Note:** If you have a Zoom Microscope, watch...stop....center...refocus, as you turn the zoom number higher.

- _12. **RECORD AS YOU LOOK.** Draw an outline scientific drawing of what you see at 400X

****Have CHECKED NOW.....while in focus.** _____

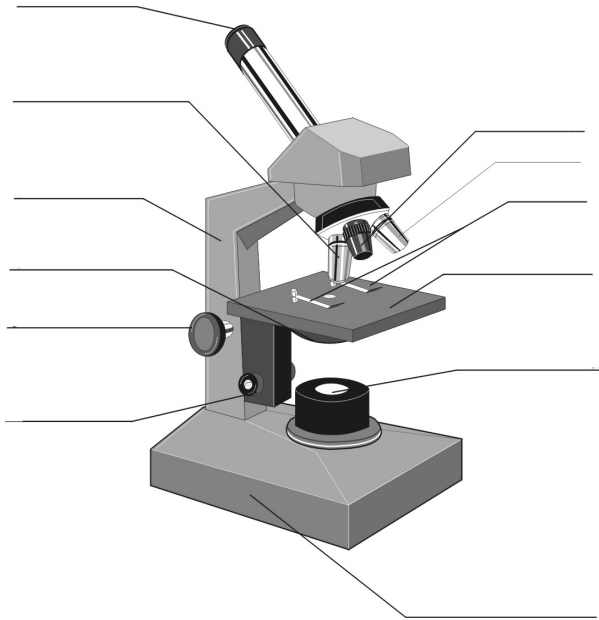
If time: Ask for the Plant Cell Directions.





Compound Light Microscopes have the same basic parts, even if they look much different.

The Compound Microscope



PARTS OF THE LIGHT MICROSCOPE

- A. EYEPIECE**
Contains the **OCULAR** lens
- B. NOSEPIECE**
Holds the **HIGH-** and **LOW-** power objective **LENSES**; can be rotated to change **MAGNIFICATION**.
- C. OBJECTIVE LENSES**
Magnification ranges from **10 X** to **40 X**
- D. STAGE CLIPS**
HOLD the slide in place
- E. STAGE**
Supports the **SLIDE** being viewed
- F. LIGHT SOURCE**
Projects light **UPWARDS** through the diaphragm, the **SPECIMEN**, and the **LENSES**
- G. BASE**
Supports the **MICROSCOPE**
- H. DIAPHRAGM**
Regulates the amount of **LIGHT** on the specimen
- I. FINE ADJUSTMENT KNOB**
Moves the stage slightly to **SHARPEN** the image
- J. COARSE ADJUSTMENT KNOB**
Moves the stage up and down for **FOCUSING**
- K. ARM**
Used to **SUPPORT** the microscope when carried

