

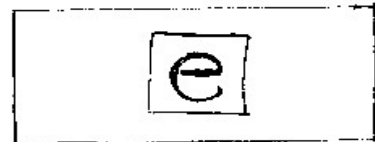
Name: _____ Date: _____ HR: _____

Introduction to the Microscope

Procedure

Preparing a wet mount of the letter "e."

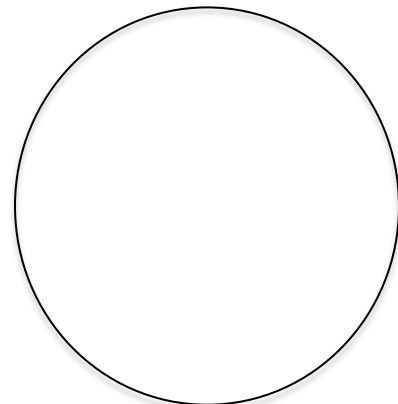
1. With your scissors **cut out a word with the letter "e" from the newspaper.**
2. Place it on the **glass slide** so it is right side up
3. **Cover it with a clean cover slip.** See the figure to the right.
4. **Using your eyedropper, place a drop of water on the edge of the coverslip** where it touches the glass slide. The water should be sucked under the slide if done properly.



Using the microscope.

5. Remove the dust cover from the microscope. Make sure the objective is on scanning (**red**) power and the stage is completely lowered.
6. **Turn on the microscope and place the slide on the stage; making sure the "e" is facing the normal reading position** (see the figure above).
7. Using the coarse focus and low power (red), move the stage up until the "e" can be seen clearly. **Draw what you see** to scale in the circle to the right. **Describe it** briefly in the space under the drawing.
8. The eyepiece has a magnification of 10x. The red objective has a power of 4x. What is the total magnification you are seeing?
 $10 \times 4 =$ _____
9. Locate the diaphragm under the stage. What happens when you move it?

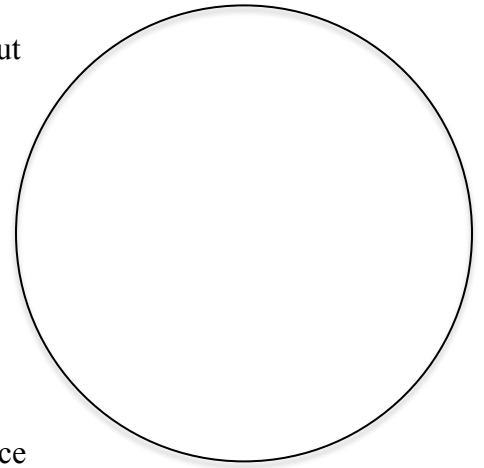
10. While looking through the eyepiece, move the slide to the **upper right** area of the stage. What direction does the image move? _____
11. Now, move it to the **lower left** side of the stage. What direction does the image move? _____
12. Re-center the slide and **change the scope to medium (yellow) power.** You will notice the "e" is out of focus. Use the focus to resolve the picture and re-center the slide.
13. The eyepiece has a magnification of 10x. The yellow objective has a power of _____x. What is the total magnification you are seeing? $10 \times$ _____ = _____



14. Change the scope to high (blue) power. You will notice the "e" is out of focus again. **DO NOT** touch the coarse focus knob, instead **use the fine focus** to resolve the picture. **Draw the image** you see of the letter e (or part of it) on high power. **Describe it** briefly in the space under the drawing.

15. The eyepiece has a magnification of 10x. The blue objective has a power of ____x. What is the total magnification you are seeing? $10 \times \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

16. **Remove the slide** and rinse it off at the sink. Dry it off carefully. Turn off the microscope. Place the low (red) power objective in place and lower the stage. Cover the scope with the dust cover.



Teacher's initials that microscope was cleaned up properly: _____

Conclusion Questions:

1. Images observed under the light microscope are **reversed** and **inverted**. Explain what this means.
2. Explain why the specimen must be centered in the field of view on low power before going to high power.
3. How does the procedure for using the microscope differ under high power (blue) as opposed to low power (red)?

Label the following on the microscope: (Some lines on the diagram will be left blank.)

