

## Microscope Lab:

**ANSWER THE QUESTIONS ON YOUR OWN PAPER AND EACH STUDENT MUST PRODUCE THEIR OWN ANSWER SHEET and DRAWINGS EVEN THOUGH WE WILL BE WORKING IN GROUPS.**

1. Define a microscopes magnification:
2. Define a microscopes resolution:
3. How is the power of magnification computed for a compound microscope? Compute all three total magnifications of our microscopes-show your work?
4. What two places do you place your hands while carrying a microscope?
5. What do you use to clean the microscope lenses?
6. Draw a complete sketch of a microscope and label all the parts. (tracing the microscope picture out of the book is a suggestion).
7. How many objective lenses does your microscope have and what are their magnifications? (the number is labeled on each objective lens).
8. What is the purpose of stage clips?
9. Cut out a small colored letter "e" out of a magazine or paper. Place it on a slide and cover the letter "e" with a cover slip.
10. To view something with your microscope, place the slide under the stage clips. Next make sure the stage is completely turned all the way down using the coarse focus knob and always begin with the **LOWEST** power objective lens. **DO NOT TOUCH THE SLIDE WITH THE OBJECTIVE LENS! THE SLIDES AND COVER SLIPS ARE GLASS WITH SHARP EDGES AND WILL BREAK EASILY!**
11. Which focus knob will you use first to bring the slide into focus? Slowly bring the stage up until you see your specimen. If you cannot see anything, what might be the problem?
12. Which knob do you fine tune the image with so that it is clear and sharp?
13. Once you see your specimen, make a sketch of it the size of your palm? (use a petri dish to trace the circle) Always label each drawing with a **TITLE, MAGNIFICATION, and ANY DETIALS SHOULD BE LABELED THAT ARE SEEN IN THE DRAWING.**
14. While looking through the microscope-slowly move your slide to the left. Which direction does your specimen appear to move?
15. Center your specimen again, move your slide upward. Which direction does the specimen appear to go?
16. Next, rotate the nosepiece to switch objective lenses. Try to keep the course focus where it is and make sure the objective lens does not hit the slide. Use only the fine focus to see your specimen better. If you cannot see anything, what may be the problem and how do you fix it?
17. Repeat step 13 with the view of medium and high power objective lenses once the specimen is in focus. There should be **THREE DRAWINGS** for each specimen OR slide that is viewed-using low, medium and high power magnification.
18. Repeat steps 10-17 with three prepared slides found at the front table. Please only take one slide at a time for sharing purposes.
19. Repeat steps 10-17 with a slide you make yourself. It can be any eyelash, hair, piece of skin, some salt, colored feather, or cotton-anything you want.

**\*\*\*\*\*YOU SHOULD HAVE A TOTAL OF 15 DRAWINGS-YOU LOOKED AT 5 DIFFERENT SLIDES AND MADE 3 DRAWINGS OF EACH!**

20. Finally-write a conclusion using our 6 steps to writing a lab conclusion!!!!