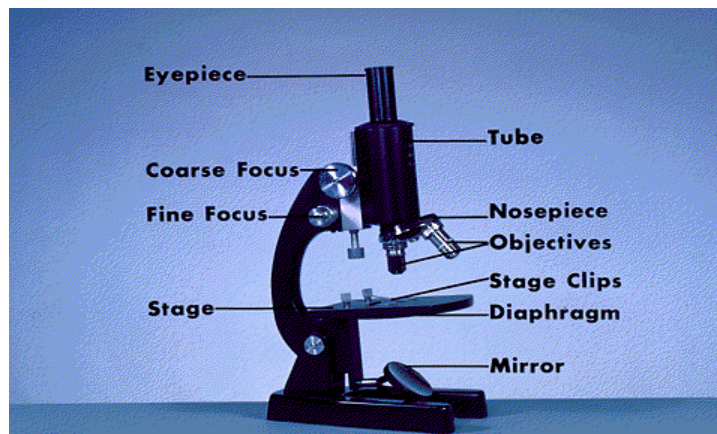


Microscope Parts and Functions

Microscope

One or more lenses that makes an enlarged image of an object.



Types of Microscopes

- Simple
- Compound
- Stereoscopic
- Electron



Simple Microscope

- Similar to a magnifying glass and has only one lens.



Compound Microscope

- Lets light pass through an object and then through two or more lenses.



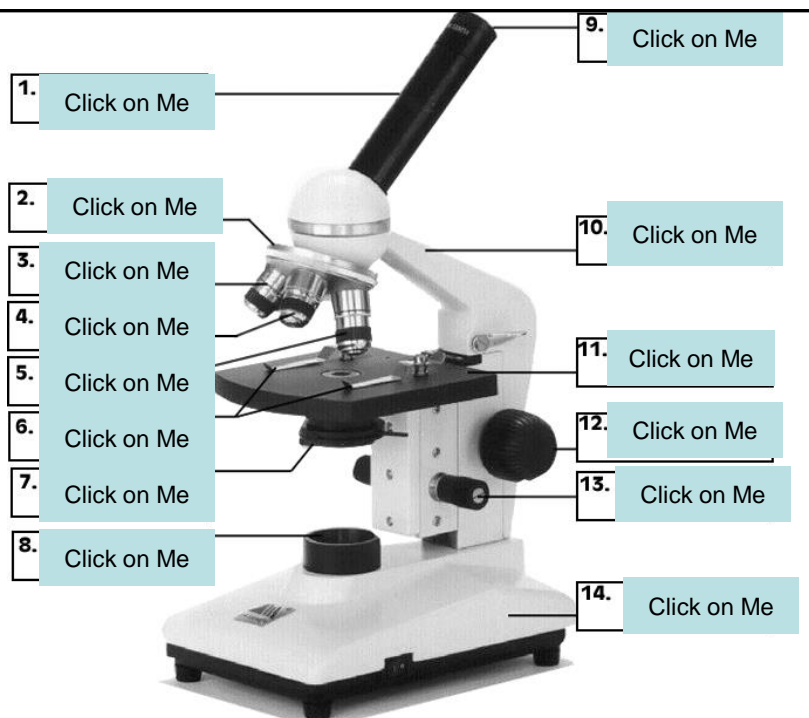
Stereoscopic Microscope

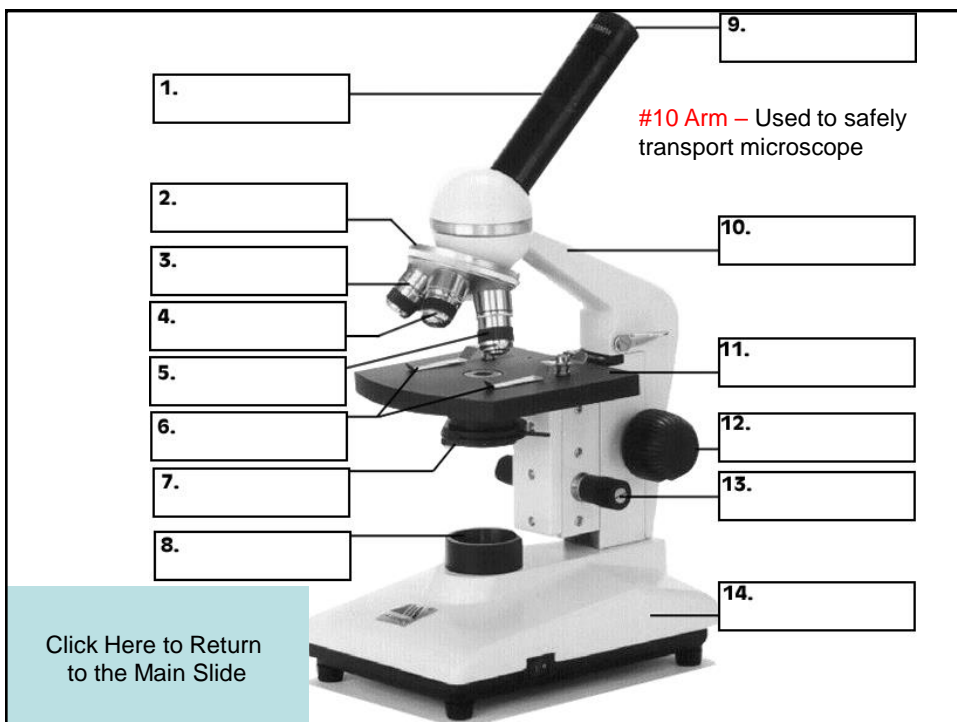
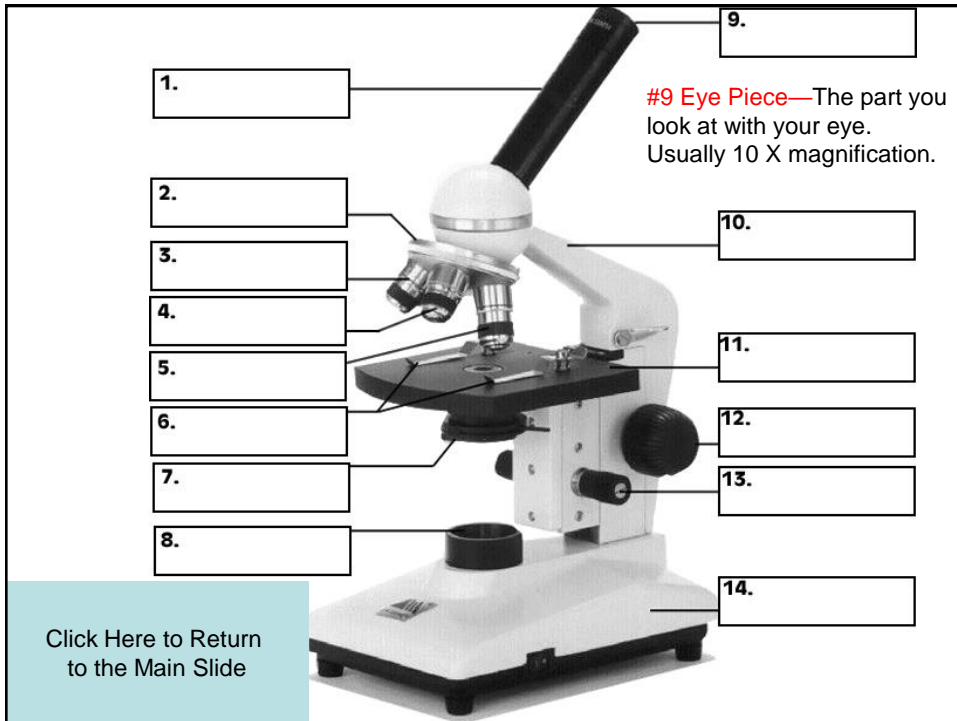
- Gives a three dimensional view of an object. (Examples: insects and leaves)

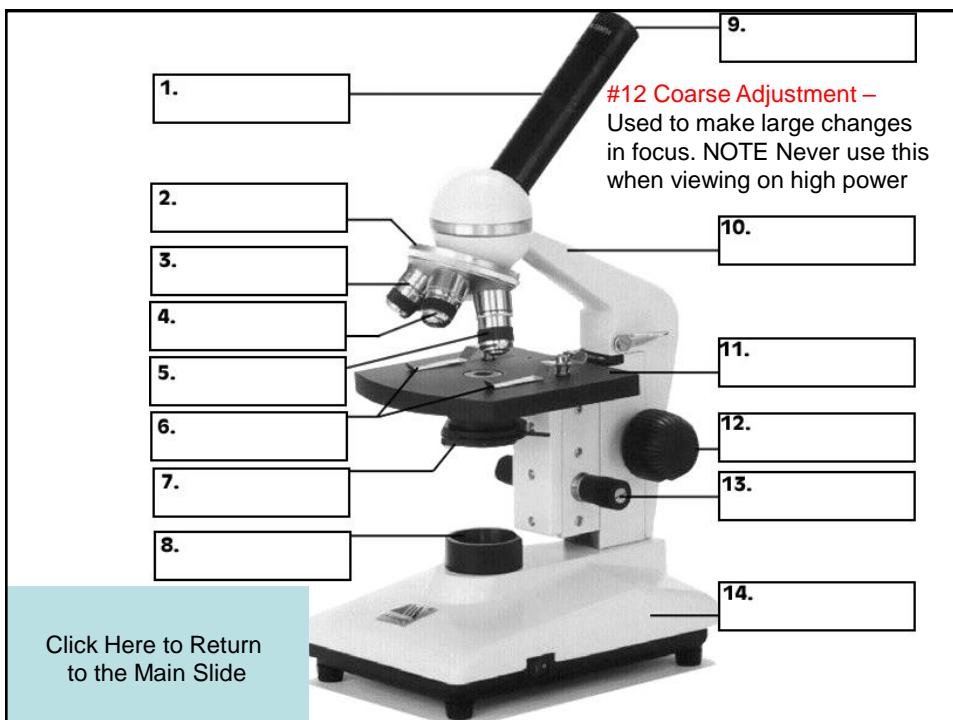
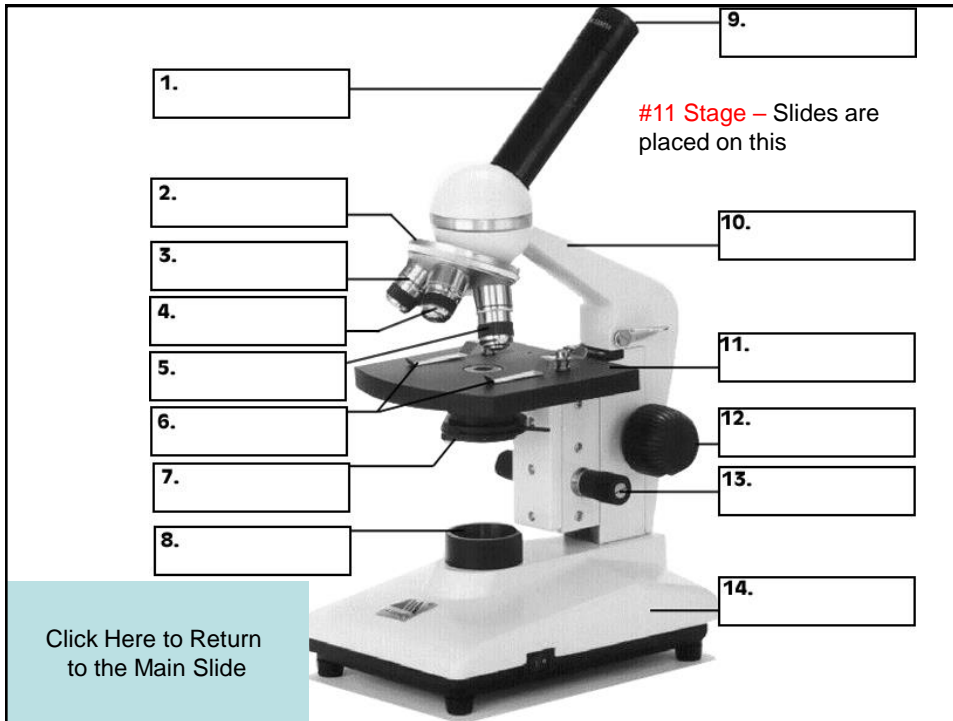


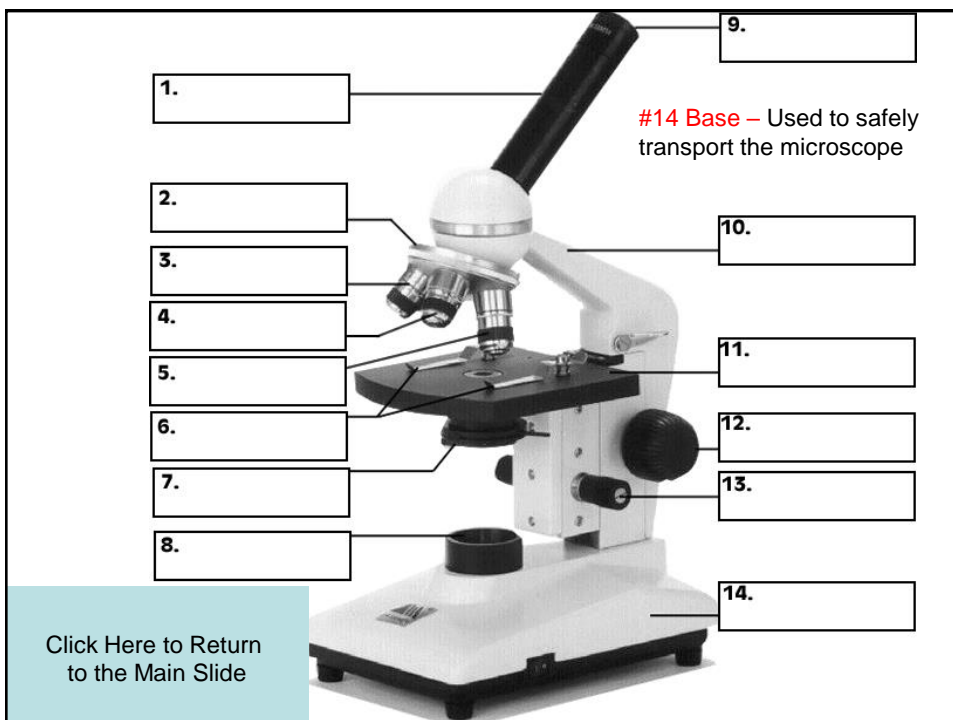
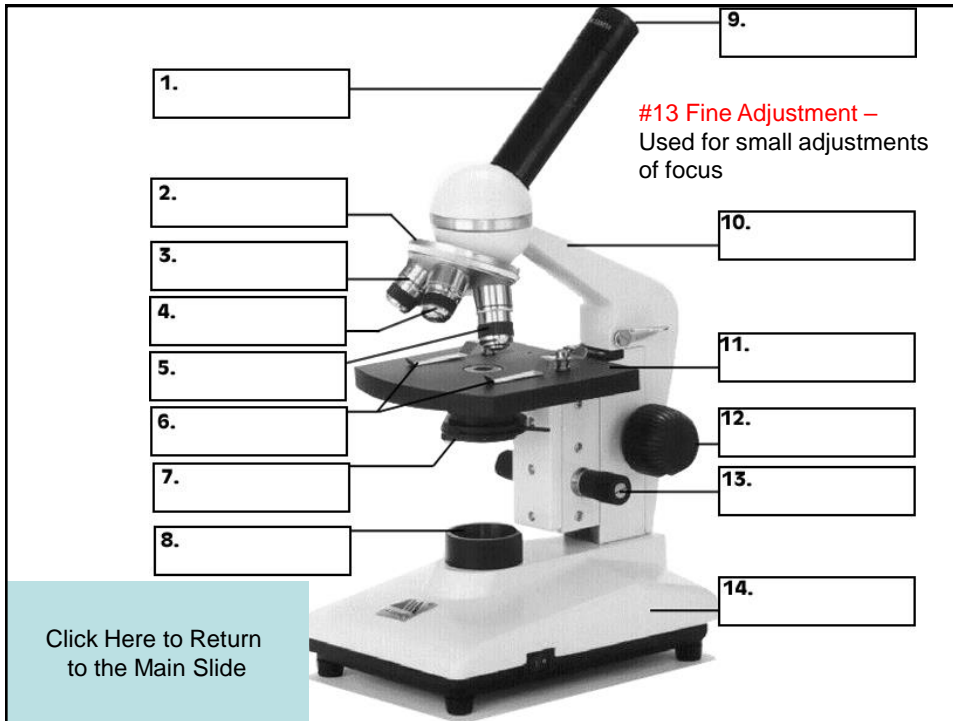
Electron Microscope

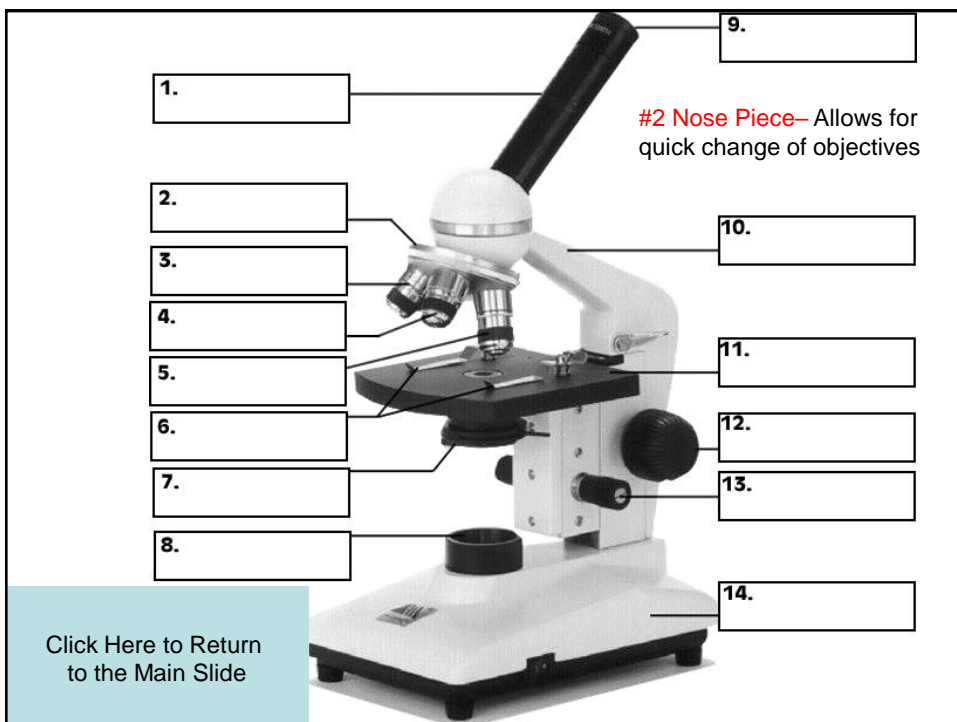
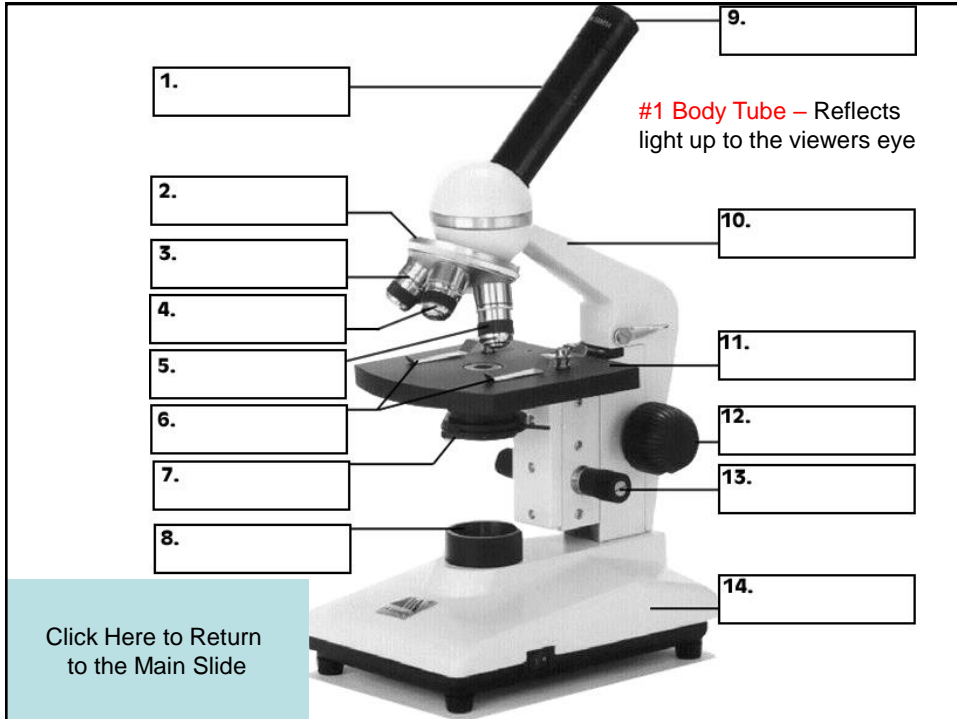
- Uses a magnetic field to bend beams of electrons instead of using lenses to bend beams of light.

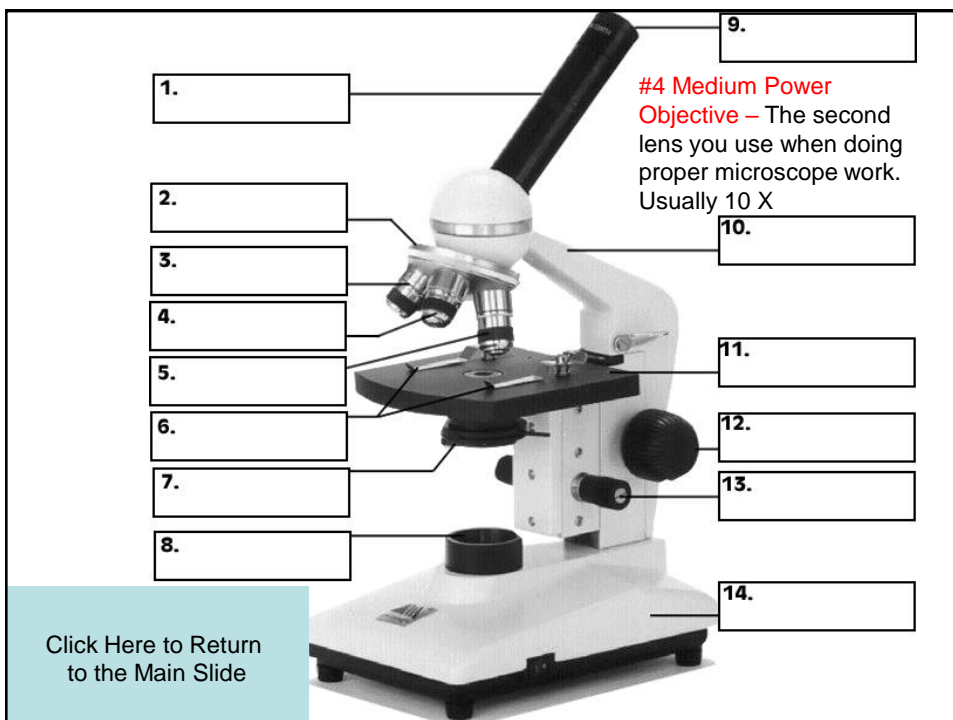
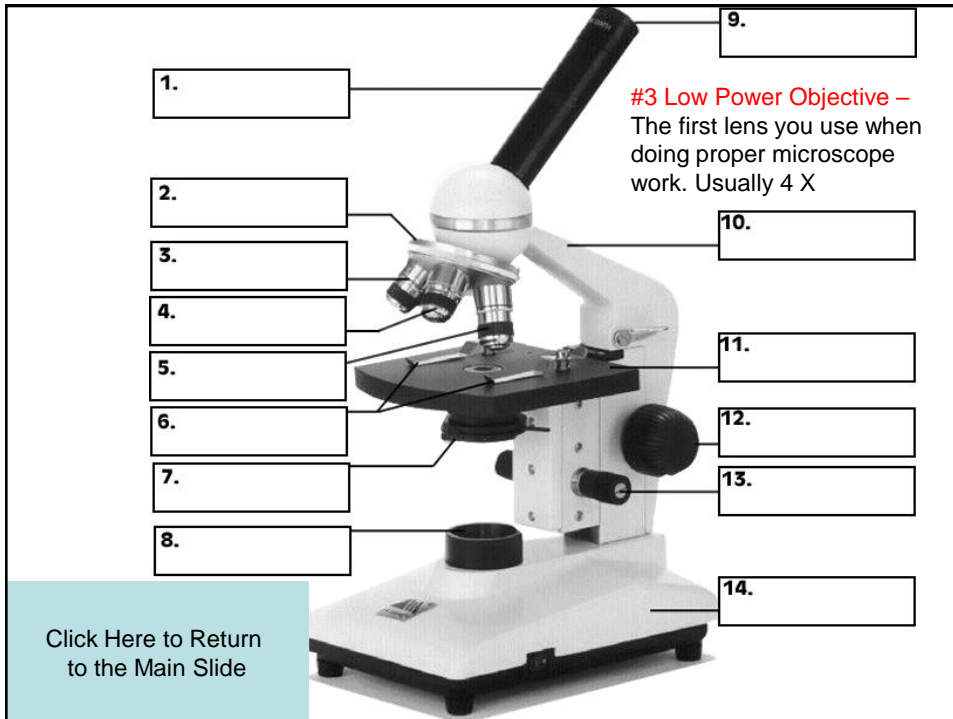


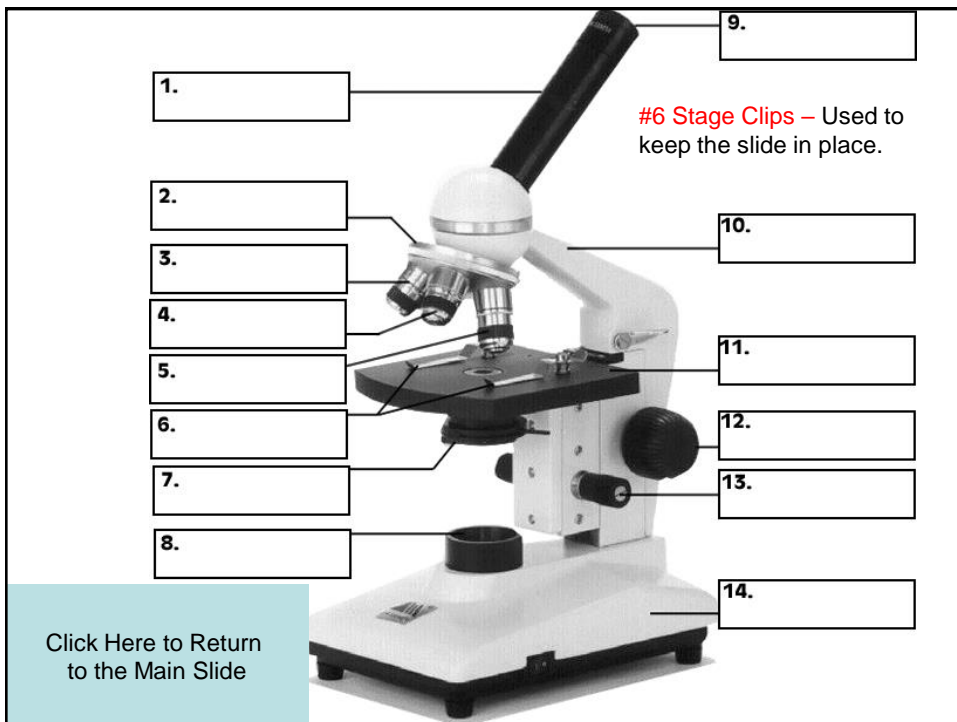
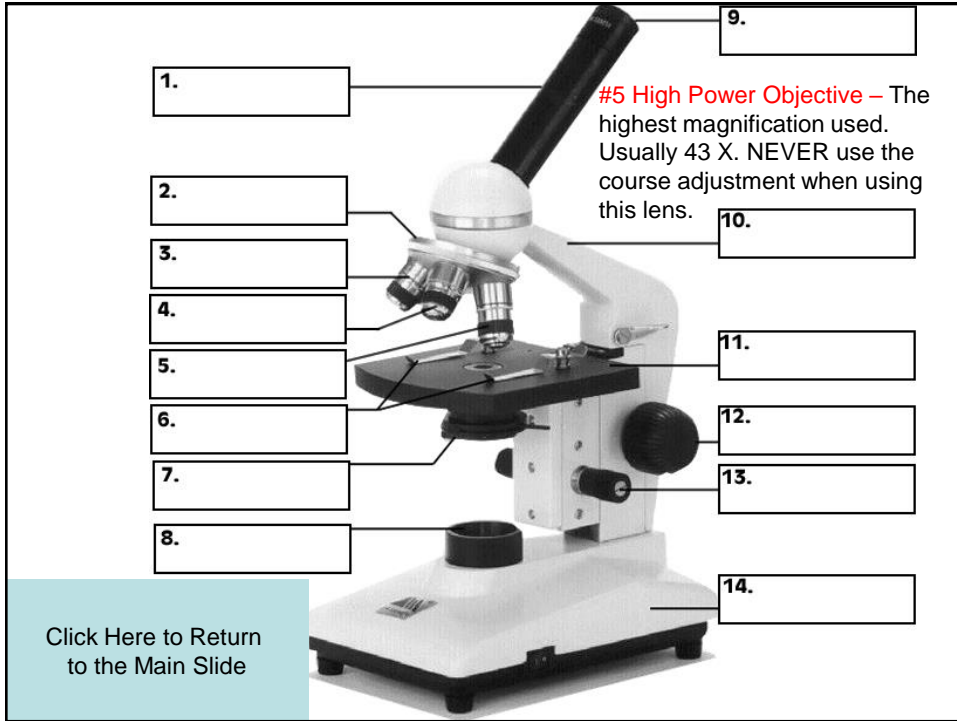


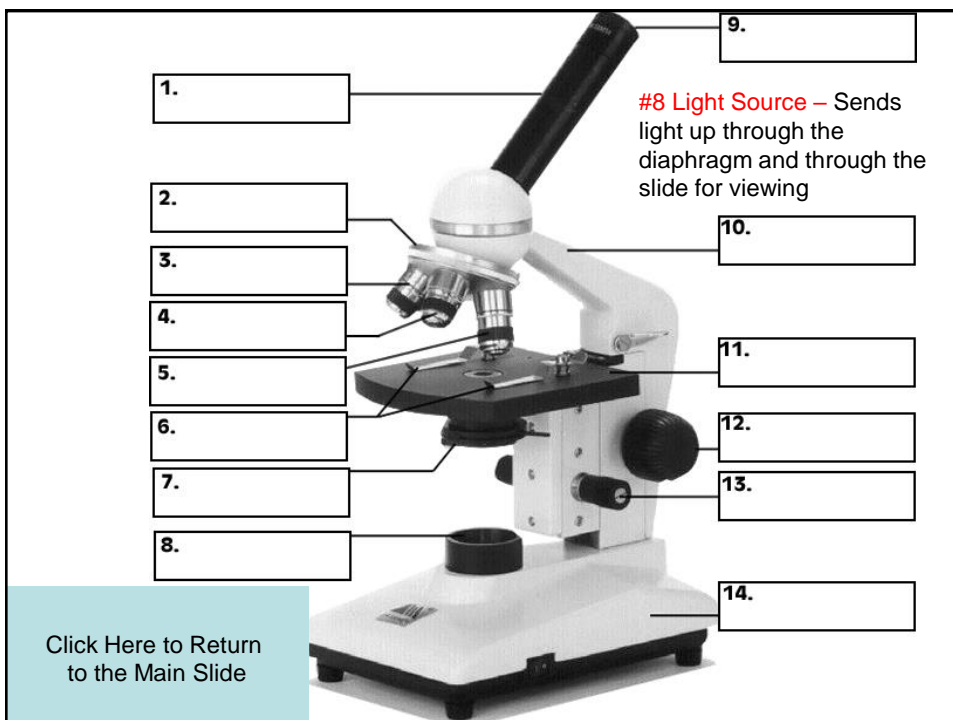
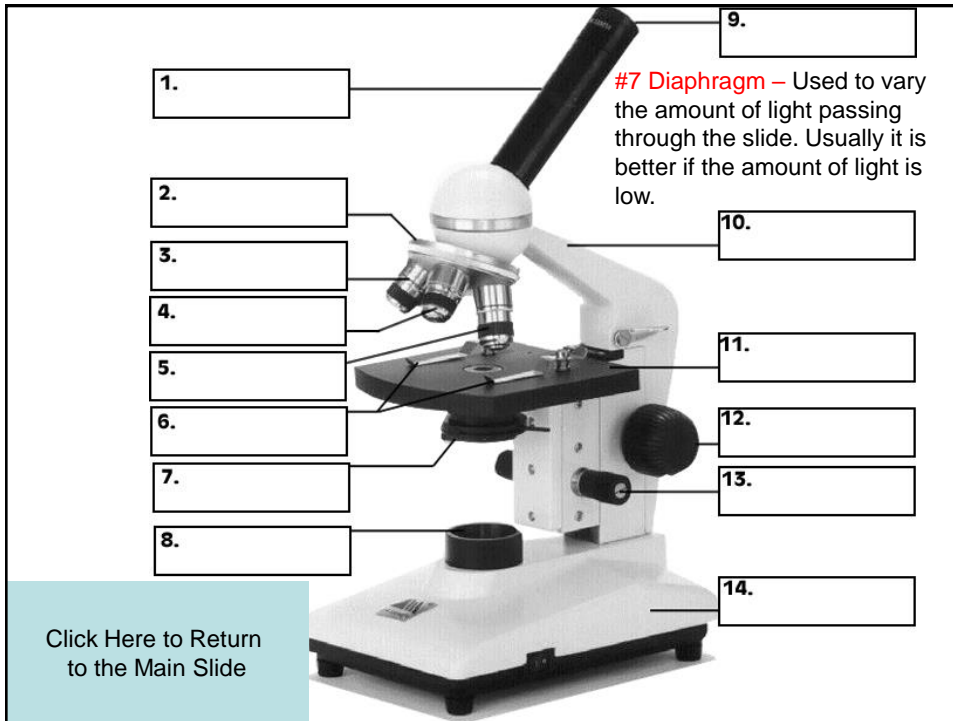


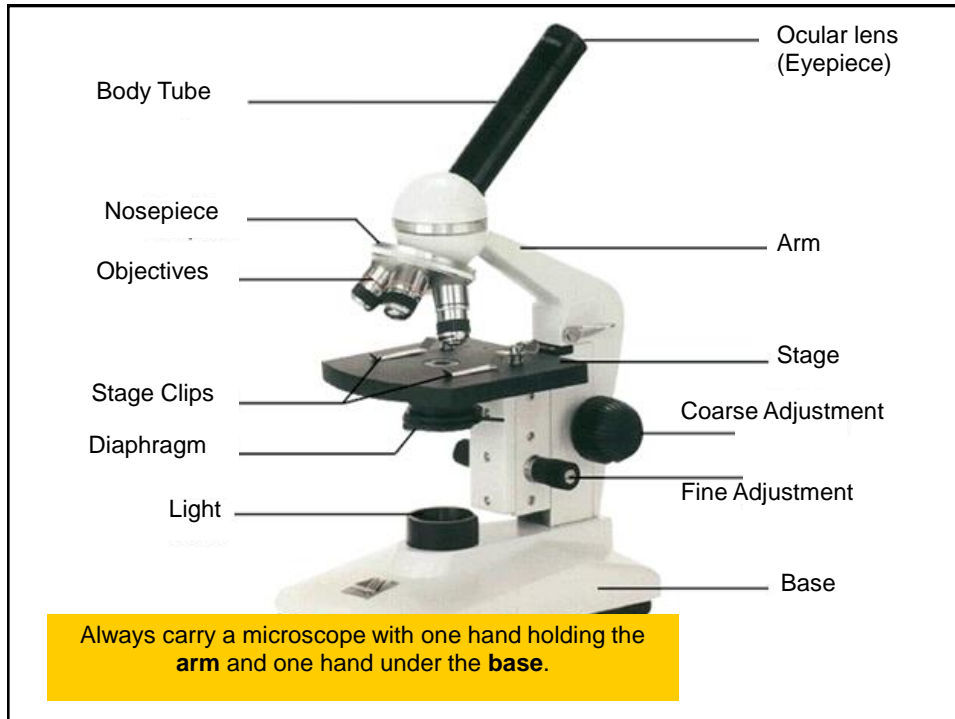




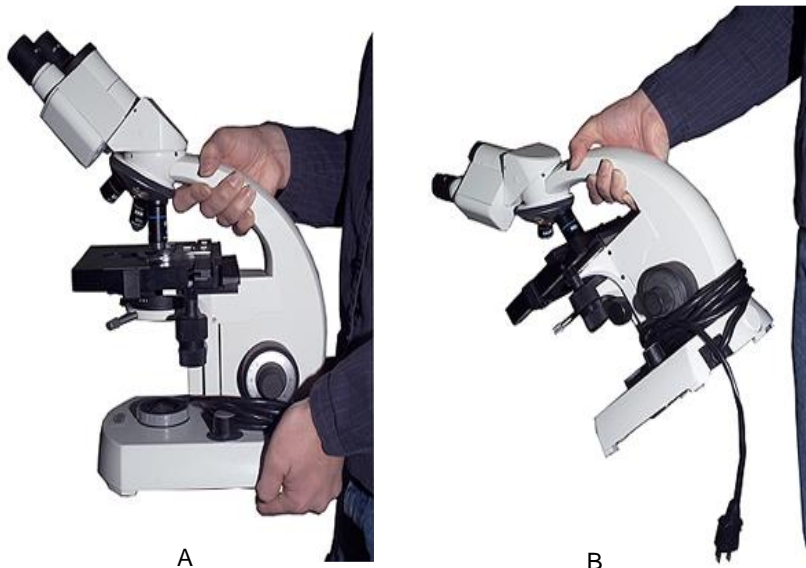








Carrying a Microscope



What's my power?

To calculate the power of magnification, multiply the power of the ocular lens by the power of the objective.



What are the powers of magnification for each of the objectives we have on our microscopes?

Comparing Powers of Magnification



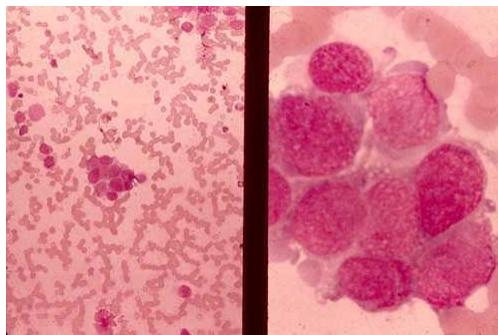
7x






10x

We can see better details with higher the powers of magnification, but we cannot see as much of the image.







Which of these images would be viewed at a higher power of magnification?



Storing The Microscope

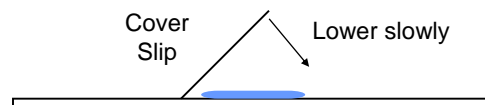
-  Return the lowest power objective in place and lower base
-  Wrap the cord around the base
-  Turn power off

Using the microscope

-  Always observe using the LOWEST POWER objective first.
-  Focus using the COARSE ADJUSTMENT KNOB to bring the object into focus. Bring the object into sharp focus by using the fine adjustment knob.
-  Focus, and then move to a higher power objective, if needed.
-  Use only the FINE ADJUSTMENT KNOB when using the HIGHEST (longest) POWER OBJECTIVE.
-  Keep both eyes open to reduce eyestrain.
-  Determine total magnification of the object by multiplying the power of the ocular (10x) the power by the power of the objective.

How to make a wet-mount slide ...

- 1 – Get a clean slide and coverslip from your teacher.
- 2 – Place **ONE** drop of water in the middle of the slide. Don't use too much or the water will run off the edge and make a mess!
- 3 – Place the edge of the cover slip on one side of the water drop.
- 4 - Slowly lower the cover slip on top of the drop.



- 5 – Place the slide on the stage and view it first with the red-banded objective. Once you see the image, you can rotate the nosepiece to view the slide with the different objectives.

You do not need to use the stage clips when viewing wet-mount slides!