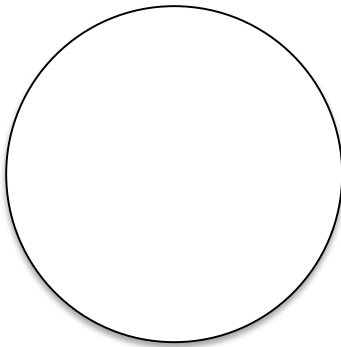


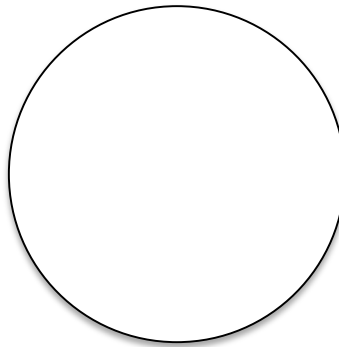
Microscope LAB

Examine your microscope and identify the parts using your notes.

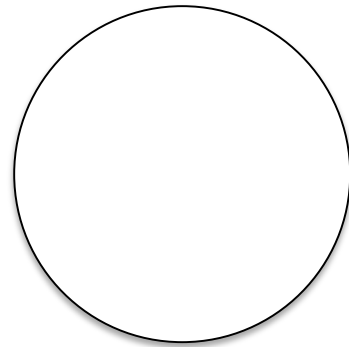
1. The magnification written on the ocular lens (eyepiece) is _____
2. The total magnification using the lenses can be determined by multiplying the objective lens with the ocular lens. What is the total magnification of an item viewed with the: _____
3. LOW power objective. _____ The HIGH POWER _____ The SCANNING _____
4. Examine the diaphragm (underneath the stage).
The numbers on the edge of it range from ONE to _____
5. Look into the eyepiece, twist it left and right. Notice the pointer (line) inside that moves as you twist. What do you think this is for? _____
6. Place the slide of the "letter e" on the stage so that the letter is over the hole and is right side up. Use the scanning objective to view the letter and use the coarse knob to focus. Repeat on the low power objective. Finally, switch to high power. Remember at this point, you should only use the FINE adjustment knob.
7. Draw the "e" as it appears at each magnification below. Drawings should be drawn to scale and you should note the orientation of the e in the viewing field (is it upside down or right side up?)



SCANNING



LOW

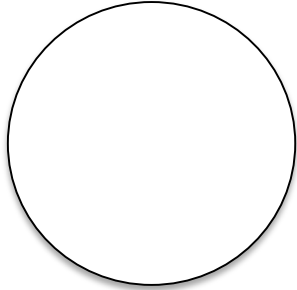


HIGH

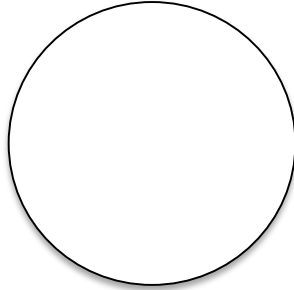
8. Have your partner push the slide to the left while you view it through the lens.
9. Which direction does the "e" appear to move? _____

Choose 3 specimens from the box of Cells. Use the circles below to sketch your specimens under SCANNING, LOW, & HIGH power. Label your specimens from the name written on the slide.

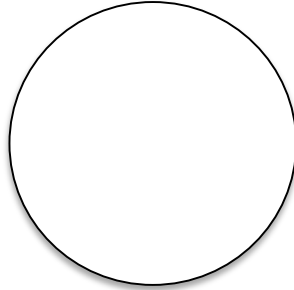
Specimen 1 _____



SCANNING

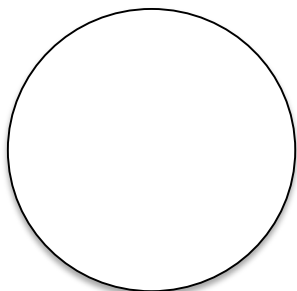


LOW

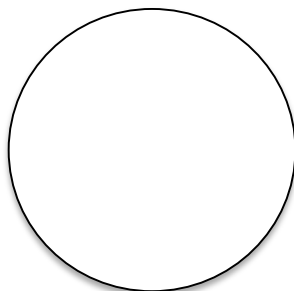


HIGH

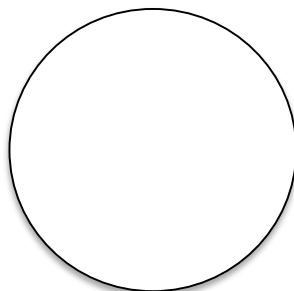
Specimen 2 _____



SCANNING

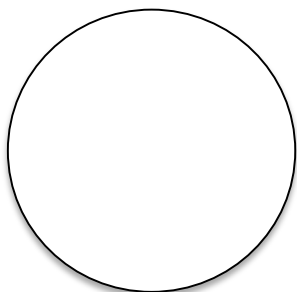


LOW

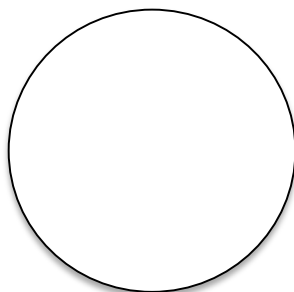


HIGH

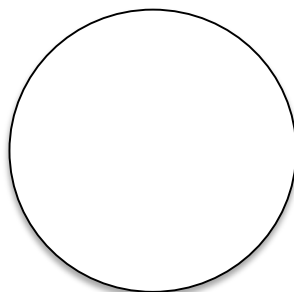
Specimen 3 _____



SCANNING



LOW



HIGH

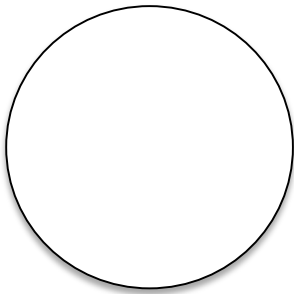
DEPTH PERCEPTION

Obtain a slide with three different colored threads on it. View the slide under scanning and then low power. You should note that you could only focus on one colored thread at one time. Figure out which thread is on top by lowering your stage all the way, then slowly raising it until the thread comes into focus. The first thread to come into focus is the one on top.

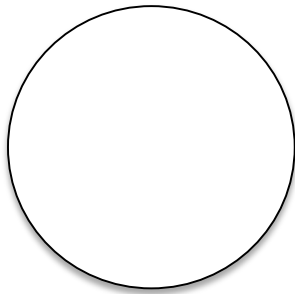
Which color thread is on top? _____

Which color thread is in the middle? _____

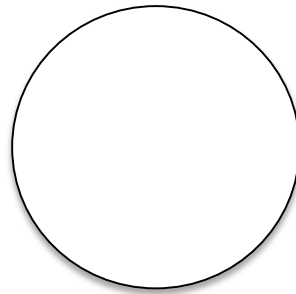
Which color thread is on the bottom? _____



SCANNING



LOW



HIGH

Conclusion:

Answer true or false to each of the statements

_____ On high power, you should use the coarse adjustment knob.

_____ The diaphragm determines how much light shines on the specimen.

_____ The low power objective has a greater magnification than the scanning objective.

_____ The fine focus knob visibly moves the stage up and down.

_____ Images viewed in the microscope will appear upside down.

_____ If a slide is thick, only parts of the specimen may come into focus.

_____ The type of microscope you are using is a scanning microscope.

_____ For viewing, microscope slides should be placed on the objective.

_____ In order to switch from low to high power, you must rotate the revolving nosepiece.

_____ The total magnification of a microscope is determined by adding the ocular lens power to the objective lens power.