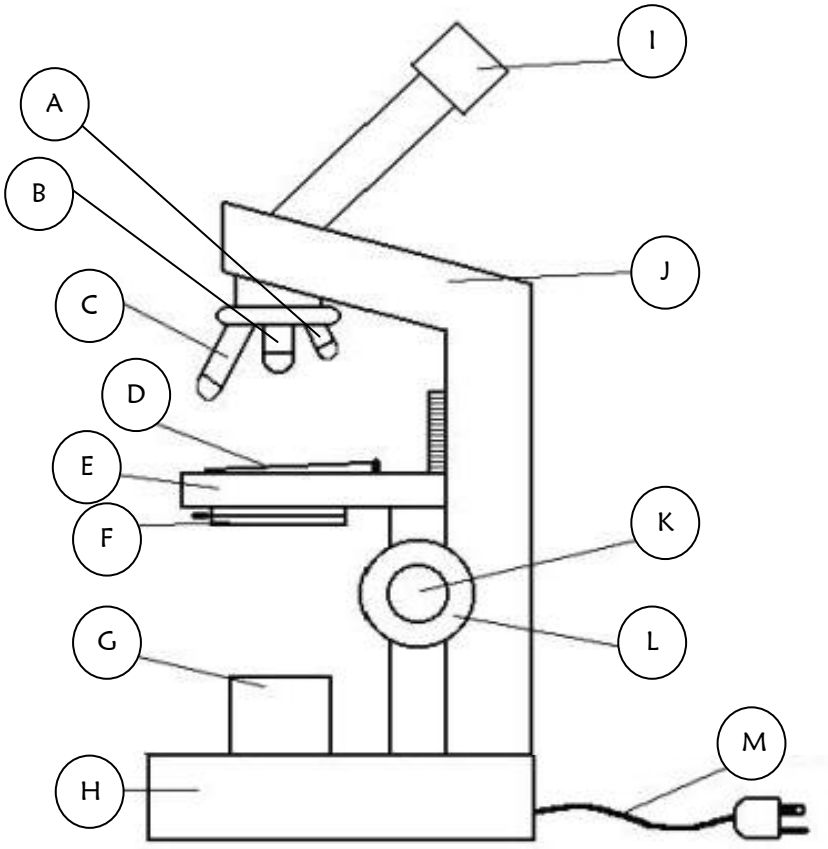
Name: _____
Date: _____ Period: _____

Lab: The Light Microscope & Histology

1. Examine your microscope. Familiarize yourself with the parts of the microscope. The magnification written on the ocular lens (eyepiece) is _____
   The magnification written on the:
   scanning objective _____ x low power objective is _____x high power objective is _____x

2. Label the parts below:



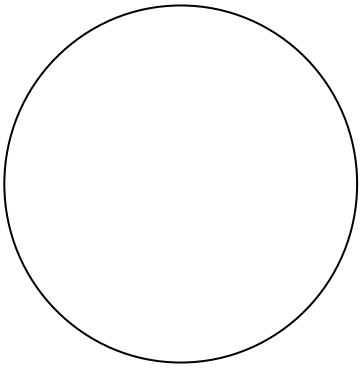
A) _____
B) _____
C) _____
D) _____
E) _____
F) _____
G) _____
H) _____
I) _____
J) _____
K) _____
L) _____
M) _____

3. 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:
   SCANNING objective. _____ LOW POWER objective _____ HIGH POWER objective _____

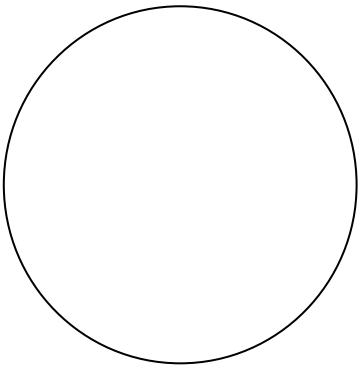
4. Examine the **diaphragm** (underneath the stage). What does it control? _____

5. Look into the eyepiece, twist it left and right. Notice the line inside that moves as you twist. What do you think this is for? _____

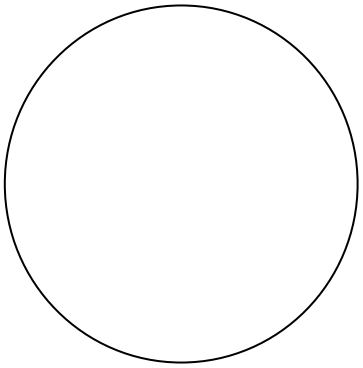
5. **Cheek Cell**
   a. Obtain a clean microscope slide, a cover slip, and 2 toothpicks.
   b. Place 1-2 drops of methylene blue onto your slide.
   c. **GENTLY** scrape the inside of your cheek and stir the tip into the methylene blue on your slide.
   d. Place the cover slip over your specimen; making sure not to create air bubbles.
   e. Draw what you see into the appropriate circles. Label the **nucleus** of each cell.



Scanning Power

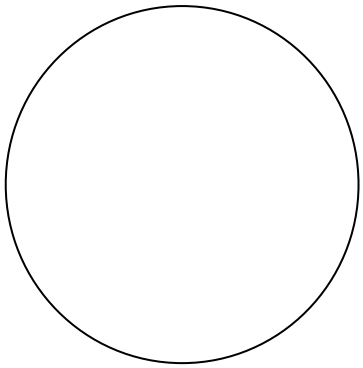


Low Power



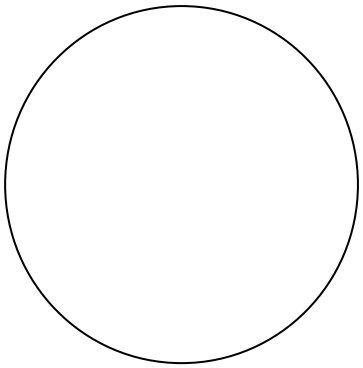
High Power

6. 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.
   _____ Images viewed in the microscope will appear upside down.
   _____ 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.
7. Obtain 4 other specimen slides and sketch them with *as much detail as possible*. Try to do at least **2** of those specimens in **high power**.



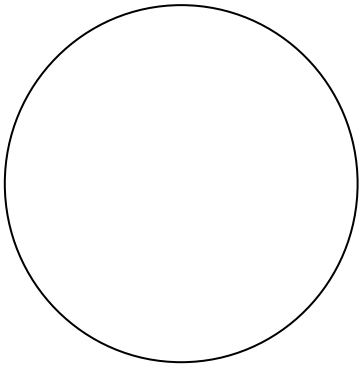
Specimen: _____

Power: _____x



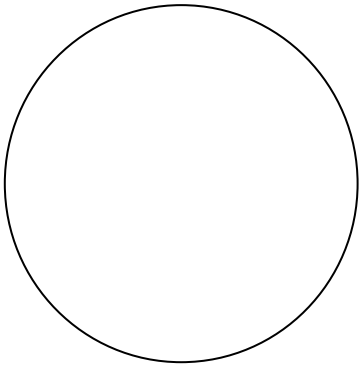
Specimen: _____

Power: _____x



Specimen: _____

Power: _____x



Specimen: _____

Power: _____x