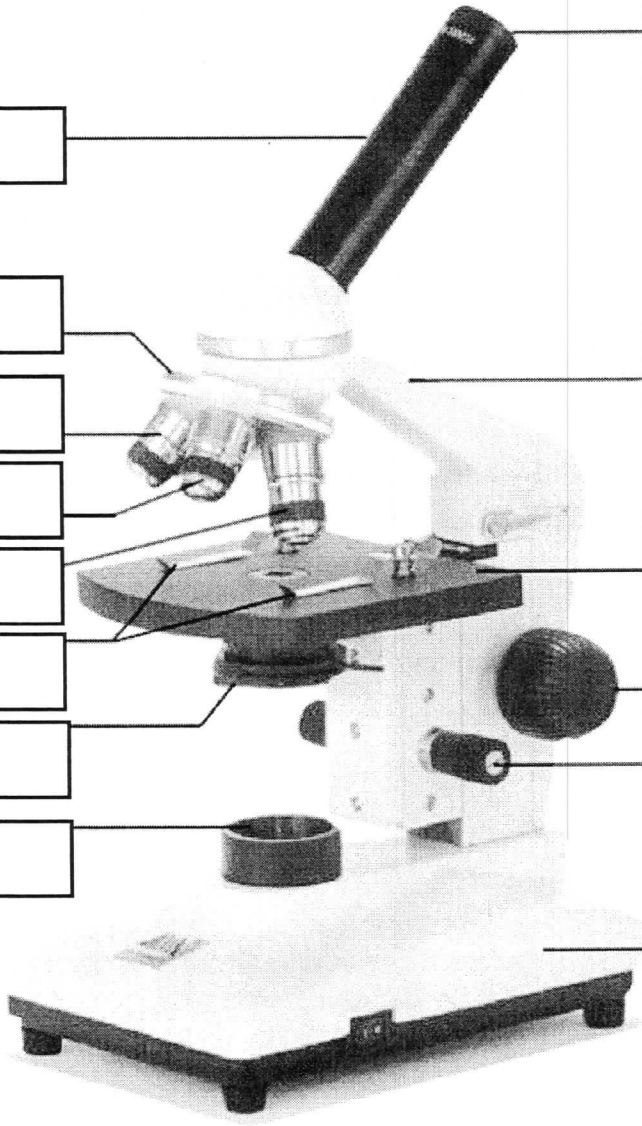
Microscope Labeling

Name_____

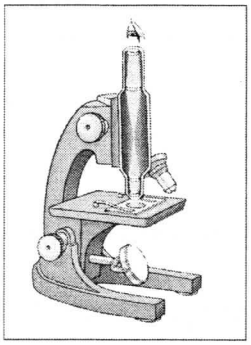


Microscope Use:

15. When focusing a specimen, you should always start with the _____ objective.
16. When using the high power objective, only the _____ knob should be used.
17. The type of microscope used in most science classes is the _____ microscope.
18. You should carry the microscope by the _____ and the _____.
19. The objectives are attached to what part of the microscope (it can be rotated to click lenses into place?) _____
20. A microscope has an ocular objective of 10x and a high power objective of 50x, what is the microscope's total magnification? _____

Microscope Lab - Using the Microscope and Slide Preparation

Examine the microscope and familiarize yourself with the parts of the microscope.



1. Magnification

The magnification written on the ocular lens (eyepiece) is _____

The magnification on the Low Power Objective _____
High Power Objective _____

What is the total magnification for each lens (multiply ocular times objective) Low Power _____ High Power _____

2. Diaphragm

While looking through the eye piece examine the diaphragm, what happens when you close the diaphragm? _____

What happens when you reopen the diaphragm? _____

3. Stage

Put the low power objective over the stage opening. Click it into place. While looking from the side, turn the coarse focus/adjustment in one direction until it stops. Repeat in the other direction. What does the coarse focus/adjustment do to the stage?

_____

Repeat the same procedure with the fine focus/adjustment. How does the movement differ between the two?

_____

Examine the lengths of the objective lenses. Why do you think it's important to only use the fine adjustment when using high power? _____

_____

4. Focusing your microscope to view a slide

First:	Make sure the lowest power objective is over the stage opening.
Second:	Place a slide to be viewed onto the stage using the stage clips. Center slide with the specimen to be viewed over the opening.
Third:	Roll the coarse focus/adjustment and the fine focus/adjustment all the way back toward your body until they stop.
Fourth:	While looking through the eyepiece (ocular lens) slowly turn the coarse focus away from your body until the image comes into focus.

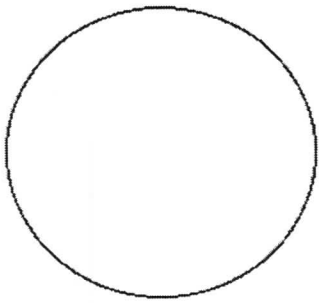
Trouble shooting: **If you move to fast with your adjustment you will miss it, repeat the focusing procedure twice before calling for help.**

5. Viewing a Specimen

Obtain a prepared slide. Place the slide, on the stage in the stage clips so it is secure. Use the adjustment knobs on your microscope to center the specimen over the opening in the stage. Focus the slide under low power.

Draw exactly what you see as it appears in your viewing field. The circle below represent your viewing field. The drawing should take up as much space in the drawing as it does in your viewing field while you're looking at it.

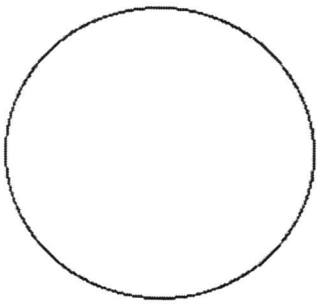
Low Power Magnification _____



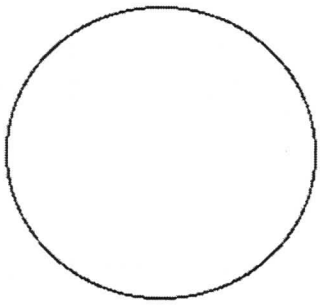
6. Preparing Slides

Your teacher has provided several different materials for you to examine under the microscope. Create a slide for 3 separate materials. Remember to cover your sample with a cover slip before placing it on the microscope.

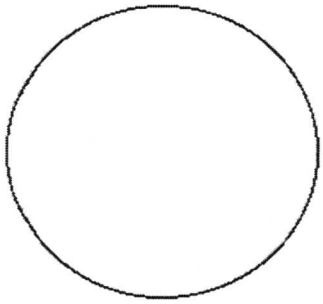
Low Power Magnification _____



Low Power Magnification _____



Low Power Magnification _____



7. Cheek Cells

1. Using a clean toothpick, gently scrape the inside of your cheek with the flat side. Rub it on a clean glass slide.

2. Add one small drop of iodine to the slide. Be careful Iodine will stain your hands and clothing.

3. Hold a clean coverslip by its edges at a 45 degree angle with your slide. Slowly drop the slip onto your specimen, you want to try and avoid getting air bubbles.View your slide under low power.

Low Power Magnification _____