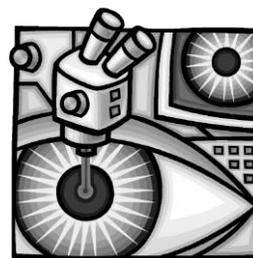


Name _____

Microscope Observations



Part 1 – Setting Up

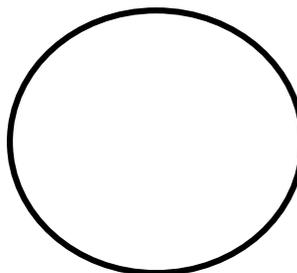
1. Turn on the microscope.
2. Turn the nosepiece until the low power lens clicks into place over the stage.
3. Look through the eyepiece (keep both eyes open).
4. While looking through the eyepiece, adjust the diaphragm until you see a circle of light.
5. Continue looking through the eyepiece while turning the diaphragm. Describe what you see:

6. Look at the microscope from the side. Slowly turn the coarse adjustment knob AWAY from you – toward the stage. Which way does the stage move?

7. Turn the coarse adjustment knob toward you. Which way does the stage move?

Part 2 – Focusing

1. Always start with low power.
2. Use the coarse adjustment knob to raise the stage about 3 cm.
3. Put a slide on the stage with the object or specimen over the center of the opening. Use the stage clips to hold the slide in place.
4. Look at the microscope from the side and slowly lower the stage with the coarse adjustment knob.
5. Look through the eyepiece and slowly turn the coarse adjustment knob to move the stage up until the slide comes into focus.
6. Use the fine adjustment knob to bring the slide into sharp focus. Move the slide until you can see as much of the object or specimen as possible.
7. Draw what you see (USE A PENCIL!!!!). Include details:



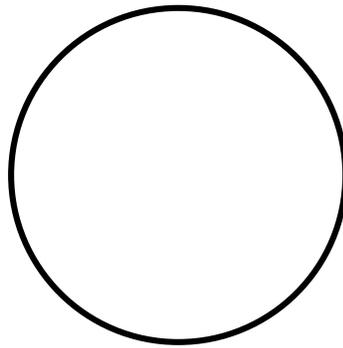
8. Observe what happens as you move the slide. Move the slide toward you. How does the slide appear to move?

9. Move the slide to the right. How does the slide appear to move?

10. Look at the microscope from the side and click the high power lens into place. Watch to make sure that the lens does not touch the slide.

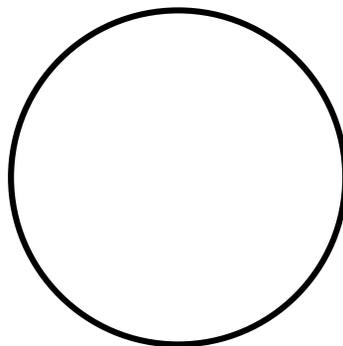
11. Use the fine adjustment knob to sharpen the focus.

12. Draw what you see:



Part 3 – Practicing & Teacher Check:

1. Get a new slide.
2. Observe the slide under low power.
3. Draw what you observe. Label the drawing.

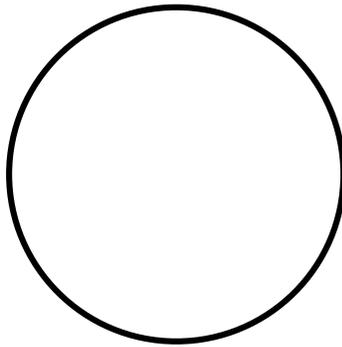


4. Calculate how many times the slide is magnified under low power:

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Low power magnification Eyepiece magnification Total magnification

5. Using the same slide, switch to high power. Draw what you observe:



6. Calculate how many times the slide is magnified under low power:

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Low power magnification Eyepiece magnification Total magnification

7. Have your teacher check your work so far and initial here:

Teacher Initials:

8. Compare the two drawings. How are they different?

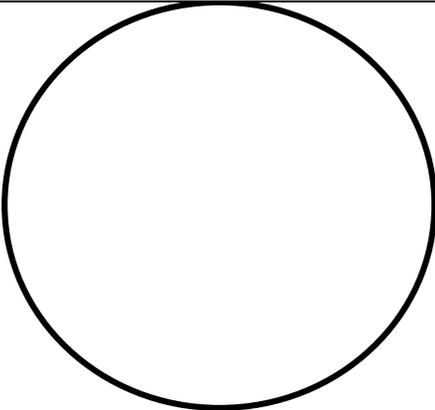
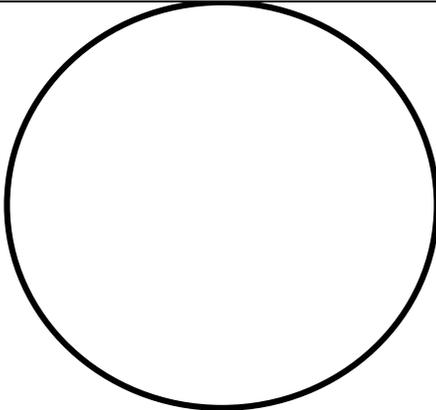
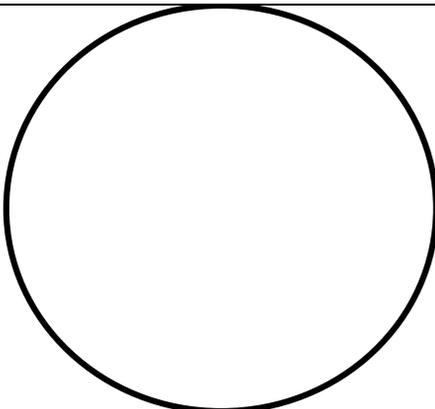
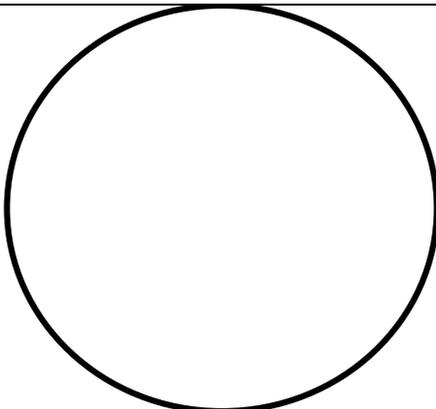
9. How many more times larger is the slide under high power?

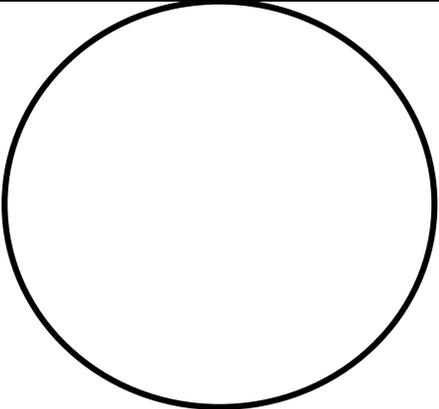
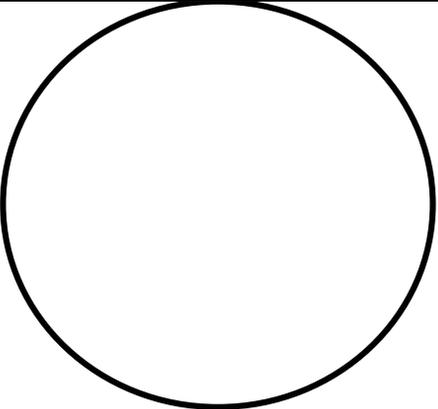
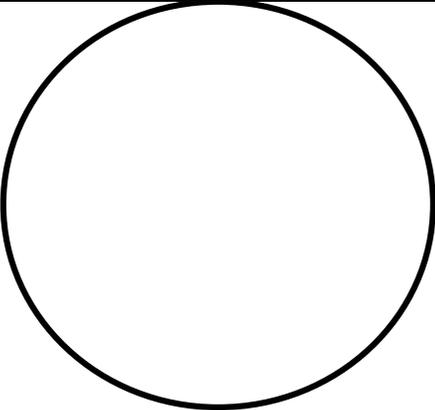
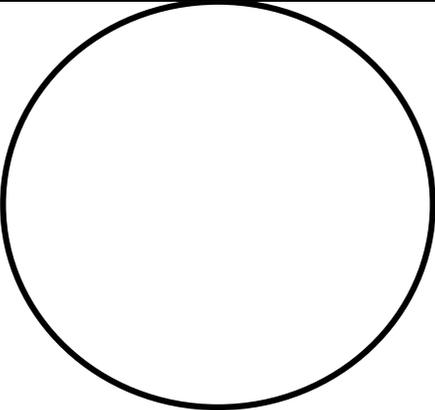
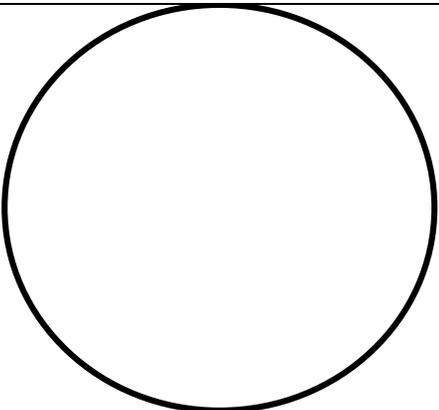
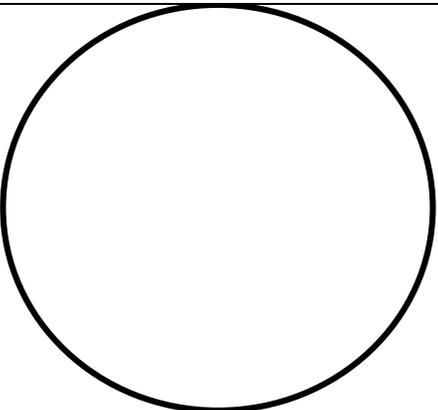
Part 4 – On Your Own

1. Find 5 different classroom objects to observe under a microscope. Observe the slides under low power and high power. Draw your observations. Label each slide with the name of the object or specimen and the total magnification.

LOW POWER OBSERVATION

HIGH POWER OBSERVATION

Part 5 – Review

Match the following microscope parts to their function:

_____ 1. Used for high magnification	A. Arm
_____ 2. Holds slide in place	B. Stage
_____ 3. Controls amount of light	C. Base
_____ 4. What you look through	D. Diaphragm
_____ 5. Use to carry the microscope, supports the body tube	E. Eyepiece
_____ 6. Supports the microscope	F. Light
_____ 7. Holds eyepiece and nosepiece	G. Nosepiece
_____ 8. Moves the stage quickly when focusing	H. Low power lens
_____ 9. Holds slide, allows light to pass through	I. High power lens
_____ 10. Moves the stage slightly, fine focusing	J. Coarse adjustment knob
_____ 11. Holds low and high power lenses	K. Fine adjustment knob
_____ 12. Directs light through diaphragm	L. Body tube
_____ 13. Used for low magnification	M. Stage clips