



## Laboratory Task

### Using a Microscope

#### What You'll Do

1. Correctly carry the microscope from its storage place to your work area and back to its storage place.
2. Place a prepared slide on the stage and bring it into sharp focus.

#### Materials

- microscope
- prepared slide

#### Safety Precautions



**WARNING:** Do NOT touch the lenses. Use only special lens paper to clean the lenses. Moisten the lens paper with a drop of water or alcohol if the lens does not wipe clean with dry lens paper.

#### Procedure

1. Review and identify the parts of a microscope. (See Laboratory Equipment on page 32.)
2. Clear your work area of any objects not needed for the activity you're working on.
3. Pick up the microscope from its storage area. ALWAYS carry the microscope with both hands. Hold the arm with one hand. Put your other hand under the base as shown in Figure 1 on the next page.
4. Place the microscope on a table gently, with the arm facing you.
5. Plug in the cord to the microscope.  
**WARNING:** Make sure that electric cords from microscopes or lamps do NOT block aisles.
6. Turn on the light if the microscope has one. (If the microscope does not have a light, use a lamp as a light source. **WARNING:** (Outdoors, NEVER use direct sunlight as a light source. It can damage your eyes.)
7. Look through the eyepiece and adjust the mirror so that light from the lamp is reflected up through the opening in the stage.
8. Place the slide in the stage slips.  
**WARNING:** Be careful when using coverslips and microscope slides because they may crack or shatter when dropped.
9. Adjust the diaphragm so that the greatest amount of light comes through the opening. (The circle of light that you see is called the field of view.)
10. Turn the nosepiece so that the low power objective lens (4X) clicks into place.
11. Focus the low power objective lens by turning the coarse adjustment knob. **WARNING:** When using the coarse adjustment to lower the low power objective, always look at the microscope from the side. If you look through the eyepiece, you may accidentally force the objective into the coverslip.

DRAW WHAT YOU SEE

12. Repeat # 11 for medium power objective lens (10x).

Activity 16, continued

12b. Turn the nosepiece again until the high power objective lens clicks into place.

13. Focus the high power objective lens by turning the fine adjustment knob. **WARNING:**

*NEVER turn the coarse adjustment knob when the high power objective lens is in place.*

→ Draw what you see!

\* Repeat #'s

10-13

for 2 more specimens

14. Always click the low power objective lens back into place over the field of view when you are finished using the microscope.

15. Turn the coarse adjustment to raise the body tube until the low power objective lens is about two or three centimeters above the stage.

16. Unplug the microscope. **WARNING:** Do NOT unplug the microscope by pulling on the cord.

17. Carry the microscope properly to its storage place.

When finished with all 3 specimen

**Task Assessment**

\_\_\_\_\_ I carried the microscope correctly.

\_\_\_\_\_ I brought the slide into sharp focus using the adjustment knobs properly.

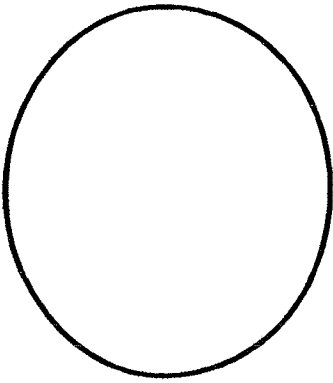
\_\_\_\_\_ I need to try the task(s) again because \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

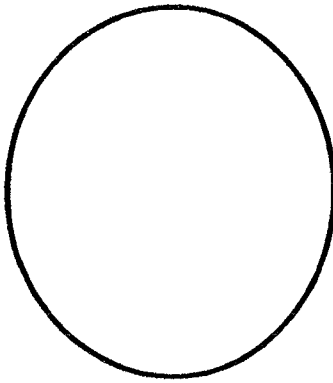
# Microscope Mania!

Name: \_\_\_\_\_  
Date: \_\_\_\_\_  
Per/Block: \_\_\_\_\_  
Assign #: \_\_\_\_\_

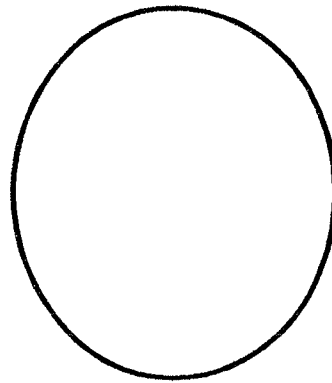
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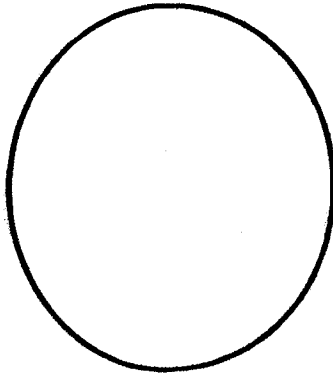


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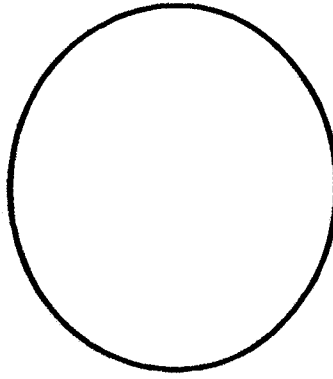


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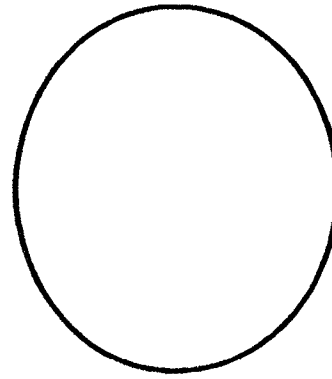
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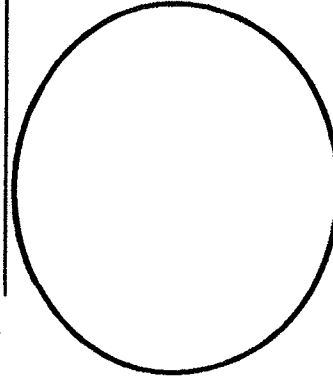


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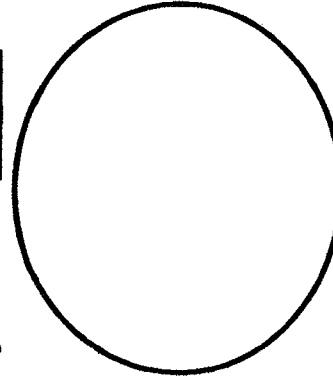


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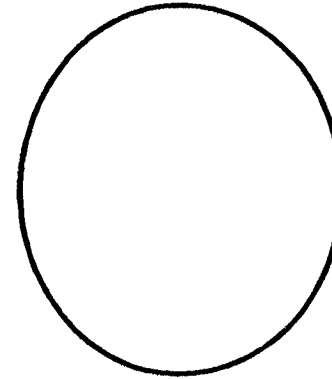
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Magnification: 4



Magnification: 10



Magnification: 40

