

Magazines and Thread

A Laboratory Investigation

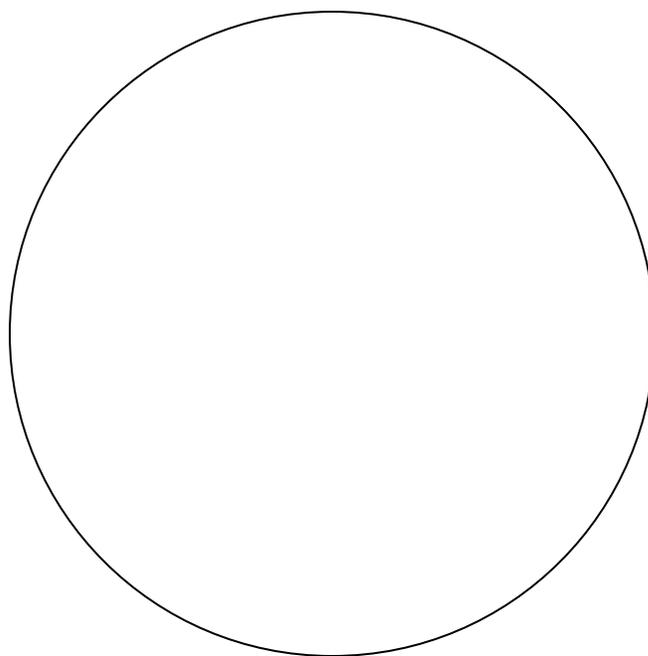
Purpose: During this investigation you will prepare and observe two different slides in order to observe three concepts in microscopy and optics. They are **Field of View (FOV)**, **resolving power** and **Depth of Field (DOF)**. A handle on these concepts will allow you to better understand how to use a microscope and also allow you to do better on the next quiz and tests.

Colored Magazine Print

Instructions: Make a wet mount of a piece of paper from a magazine that is **all one color**. You will be viewing this under lo-power.

What is the color of your paper (naked-eye view)? _____

Focus on the paper under lo-power and, using the colored pencils make a sketch of what you see in the circle below.



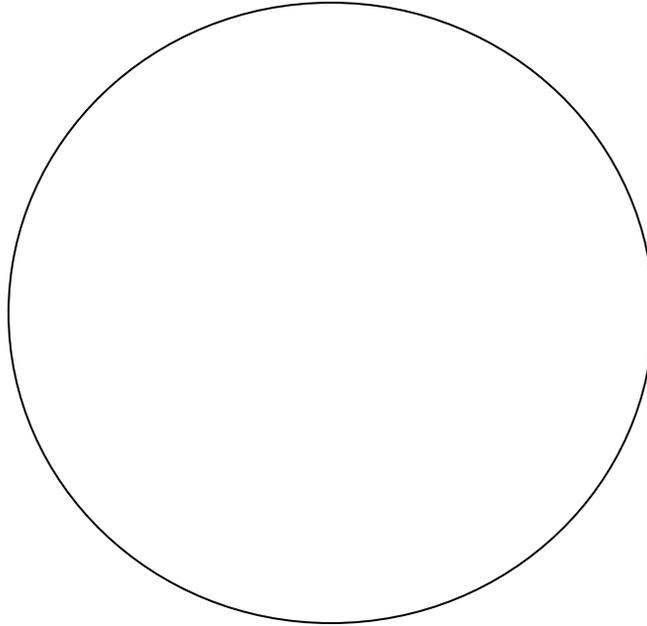
Total magnification: _____

How is your naked-eye view of the paper different from the microscope view?

Crossed Threads

Instructions: Make another wet mount. Take two pieces of different colored thread. On the slide, cross the threads. We will be looking at where the two threads intersect.

Focus on the intersection under low power. Use the fine focus to get both of the threads in focus at the same time and make a quick sketch of what you see.



Total magnification: _____

Now, turn to high power. Using the fine focus, try to get both threads in focus at the same time. Can it be done? _____

Conclusion questions:

Answer the following on a separate sheet of paper in complete sentences.

1. Why should a wet mount have no bubbles?
2. Explain why the color of the magazine picture looked different when you looked at it under the microscope.
3. If you were looking for a single cell on a slide, which objective would you use? Why?
4. Why must you center and focus the object in the field of view under low power before switching to high power?
5. Why can you only get one thread in focus under high power?