

Introduction to Microscope: What are they good for?

Today, we will use three different types of magnifying tools to investigate mystery samples of materials supplied by your instructor. First, you will look at the samples with your eye and describe what you see in your notes. Then you will use a magnifying glass or hand lens to examine the samples and make further notes and/or drawings. You will then be introduced to the dissecting or stereo microscope and use it to examine the samples. Finally, you will use a compound microscope to examine the samples. While you are doing this, pay especial attention to the differences you see with each tool. Microscopes: What are they good for? Let's find out! As you explore this, try to keep your observations to yourself.

- A. Look at the provided samples with your eye and describe what you see in the box below:

Sample 1

Sample 2

--	--

- B. Now, use a hand lens or magnifying glass to examine the samples. Can you see anything different?
1. Describe and/or draw what you see in the box below. Note any differences you notice between what you saw with your eye and what you now see.

Sample 1

Sample 2

--	--

2. What is the magnification of your hand lens or magnifying glass? _____
3. What is Sample 1 and how do you know? _____

4. What is Sample 2 and how do you know? _____

C. Your instructor will demonstrate how to use a dissecting microscope or stereoscope. Have you used one before? _____

1. Look at each sample with the dissecting microscope/stereoscope. Can you see anything different? Describe and/or draw what you see in the box below. Note any differences you notice between what you saw with the hand lens or magnifying glass and what you now see.

Sample 1

Sample 2

--	--

2. At what magnification or magnifications did you make your observations? _____
3. What is Sample 1 and how do you know? _____

4. What is Sample 2 and how do you know? _____

D. Your instructor will demonstrate how to use a compound microscope. Have you used one before?

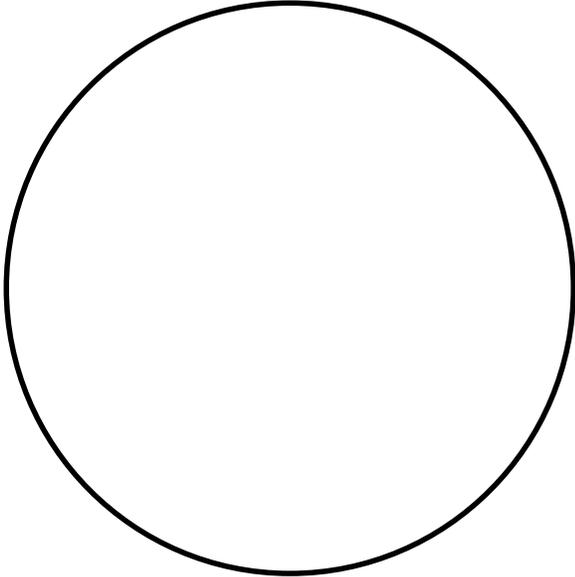
_____.

Look at each sample with the compound microscope.

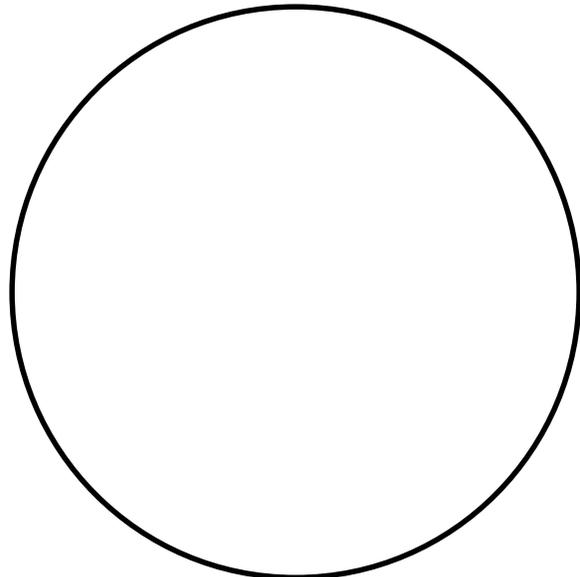
1. First, examine the samples at the lowest magnification. What magnification is this? _____

Draw what you see below and label anything you recognize.

Sample 1



Sample 2

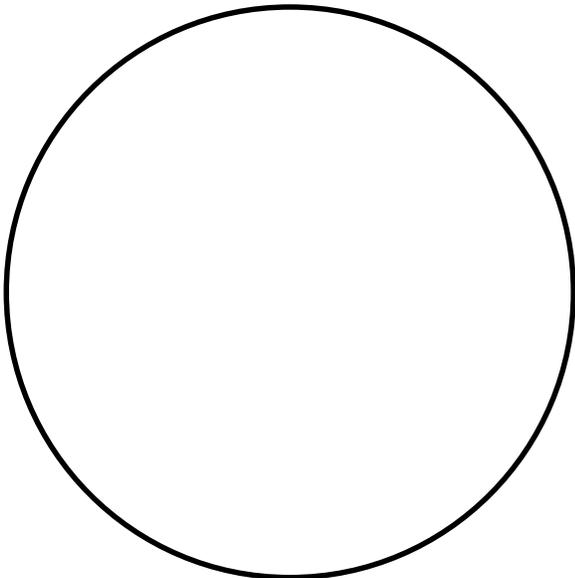


2. Now, examine the samples with the next magnification. What magnification is this? _____

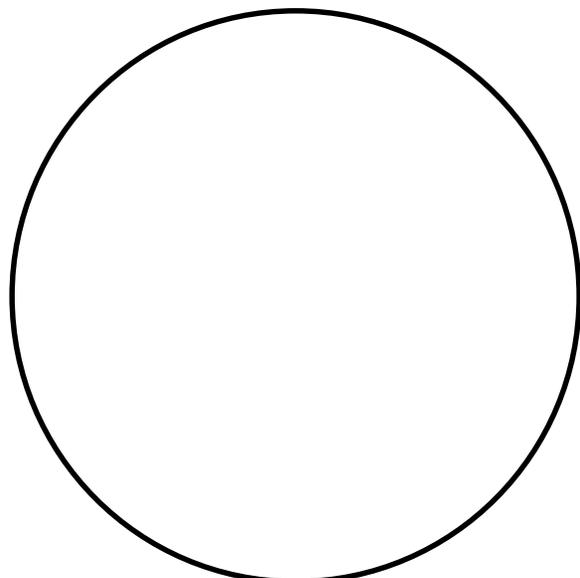
Draw what you see below and label anything you recognize.

3.

Sample 1



Sample 2



4. What differences did you notice between what you saw with the dissecting microscope/stereoscope and what you saw with the compound microscope? Describe them in the box below:

Sample 1

Sample 2

--	--

5. Which sample could you see better with the dissecting/stereoscope (if any)?

6. Which sample could you see better with the compound microscope (if any)?

7. What is Sample 1 and how do you know? _____

8. What is Sample 2 and how do you know? _____

9. Briefly describe what you think each type of magnifying tool is best used for.