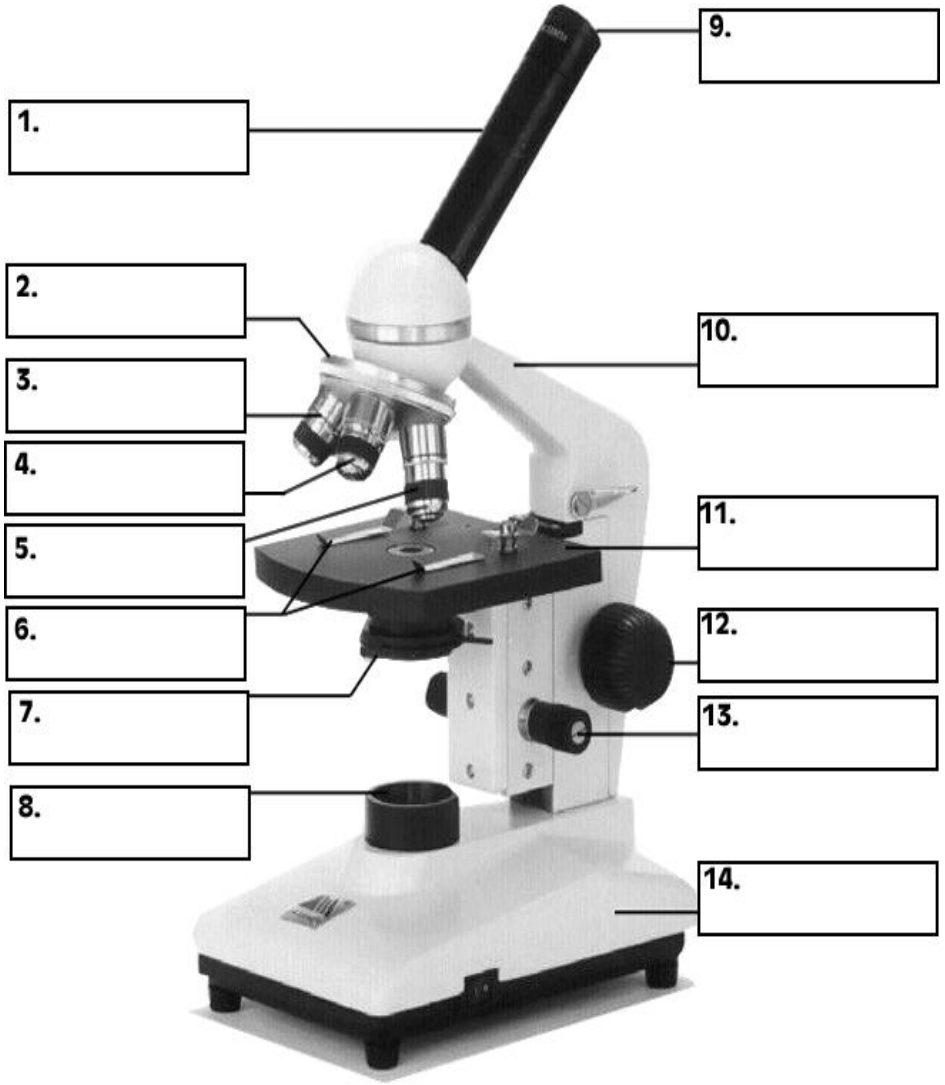
MICROSCOPE BOOK



Label Microscope using link below:

http://www.wisc-online.com/objects/ViewObject.aspx?ID=BIO905

Please write in the functions of the microscope parts below

http://wiki.answers.com/Q/What_are_the_microscope's_parts_and_functions

1. Eyepiece (ocular lens)

2. Revolving nosepiece

3. Objective lenses

4. Fine-adjustment knob

5. Coarse-adjustment knob

6. Stage

7. Diaphragm

8. Base

http://www.cas.muohio.edu/mbi-ws/microscopes/Magnification.html

Draw the images from computer at the different magnification

Total Magnification:

X


= ☐ X

4X Scanning Objective 10X Eyepiece

X

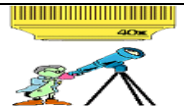

= ☐ X

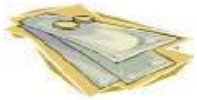
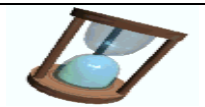
10X Objective 10X Eyepiece

X


= ☐ X

40X Objective 10X Eyepiece

Using The Microscope	http://www.cas.muohio.edu/mbi-ws/microscopes/usage.html
	
	
	
	
	
	
	
	
	
	

Taking Care of Microscope		http://www.cas.muohio.edu/mbi-ws/microscopes/care.html
So why do I need to know how to use the microscope?		
What happens if I break a microscope?		
How long will a microscope last if I take good care of it?		
Transporting		
Handling and Cleaning		
Storage		
Clean Up		

http://microscope.fsu.edu/primer/museum/index.html

Microscope Time Line – Please fill in time line using the link below

http://nobelprize.org/educational/physics/microscopes/timeline/ind

14th

1590

1669

1675

18th

1830

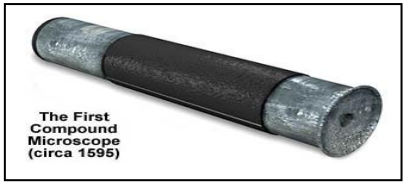
1878

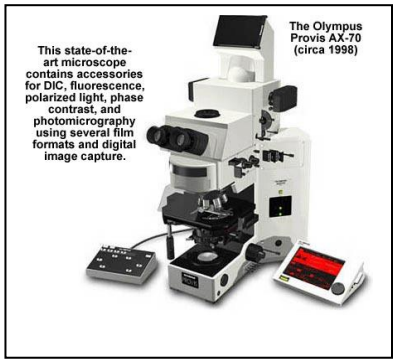
1903

1932

1938

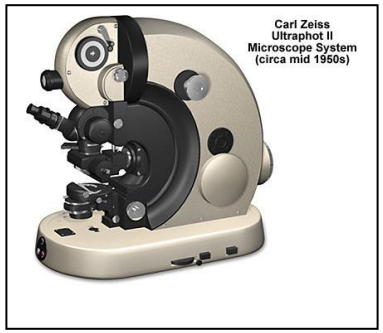
1981





Please label each Microscope with year made and person who invented each microscope. Please use link below to find information

http://microscope.fsu.edu/primer/museum/index.html



Stop Get Permission From Teacher Before You Continue

Procedure: Letter "e"

1. Cut out the letter "e" and place it on the slide face up.
2. Add a drop of water to the slide.
3. Place the cover slip on top of the "e" and drop of water at a 45-degree angle and lower. Draw what is on the slide in **Figure1**.
4. Place the slide on the stage and view in low power (4x). Center the "e" in your field of view. Draw what you see in **Figure 2**.
5. Move the slide to the left, what happens? Move the slide to the right, what happens? Up? Down?
6. View the specimen in high power (10x). Use the fine adjustment **only** to focus. Draw what you see in **Figure 3**.

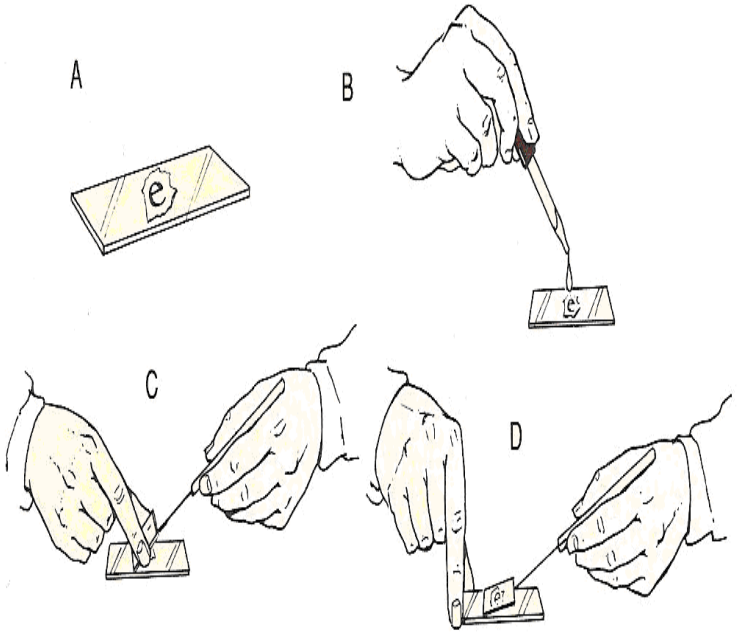


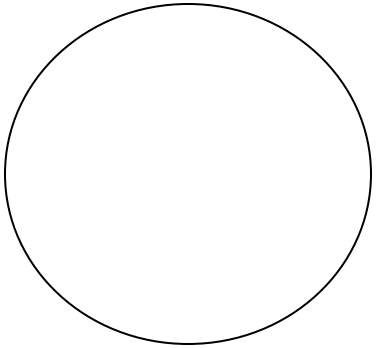
Figure 1

Figure 2

Figure 3

DEPTH PERCEPTION

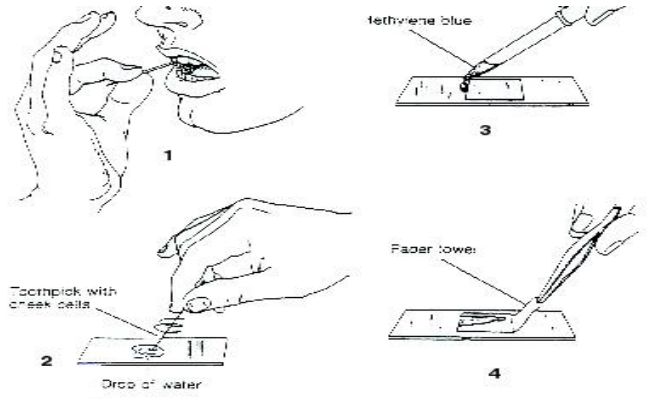
Obtain a slide with 3 different colored threads on it.
View the slide under low power (4X).
You should note that while you focus on one color of thread.
The other threads become fuzzy. The microscope can only focus on one area at a time. Sketch the slide below (4X).

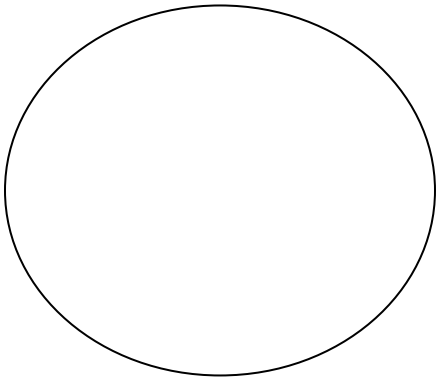


Identify the top, middle, and lower thread colors.
Figure out which thread is on top by lowering your stage all the way, then slowly raising it until the thread comes into focus.
The first thread to come into focus is the one on top.
Which color thread is on top? _____
Which color thread is in the middle? _____
Which color thread is on the bottom? _____

Wet Mount with Cheek Cells

Procedure:
1. Put a drop of methylene blue on a slide.
Caution: methylene blue will stain clothes and skin.
2. Gently scrape the inside of your cheek with the flat side of a toothpick. Scrape lightly.
3. Stir the end of the toothpick in the stain and throw the toothpick away.
4. Place a coverslip onto the slide
5. Use the SCANNING objective to focus. You probably will not see the cells at this power.
6. Switch to low power. Cells should be visible, but they will be small and look like nearly clear purplish blobs. If you are looking at something very dark purple, it is probably not a cell
7. Once you think you have located a cell, switch to high power and refocus. (Remember, do NOT use the coarse adjustment knob at this point)
8. On high power draw cheek cells in circle below.

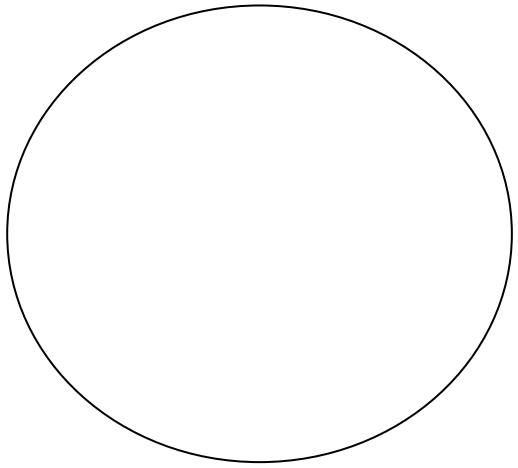




Application with Pond Water

Procedure:

1. Obtain a vile of Pond Water from your Teacher
2. Put a drop of Pond eater onto a slide and cover with cover slip
3. Start on Low Power to find substance in water
4. Move objective to the next power and focus with Fine Adjustment
5. Once you have focused move to High Power objective and use Fine Adjustment
6. Use the mechanical stage to move slide around to find on organism in Pond Water.
7. Once you find organism draw in circle below, then identify organism using the Guides on the following pages.



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Identify and Write in Organism's Name