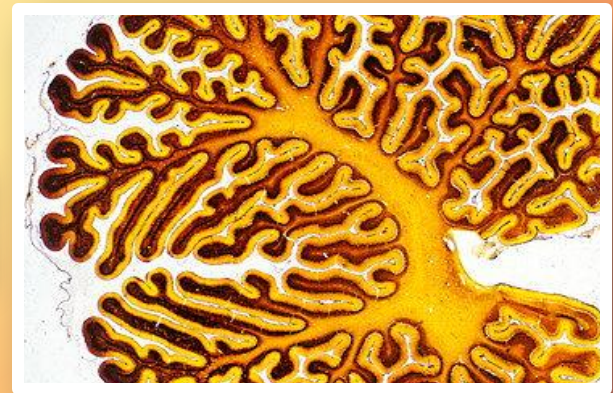
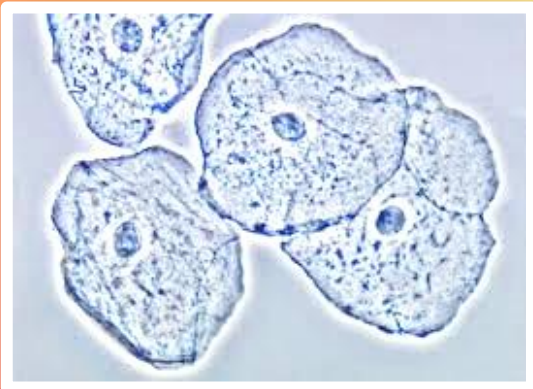
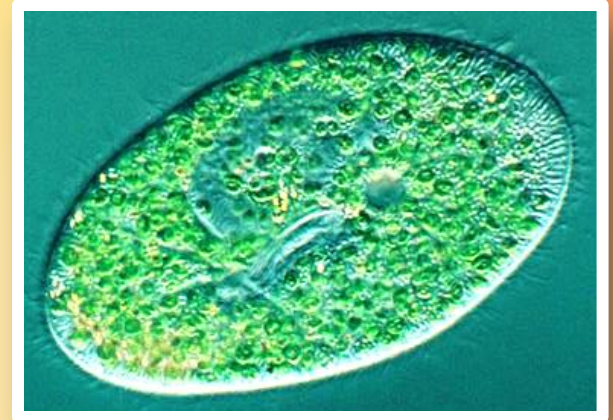


MICROSCOPE PARTS



CONCEPTS EXPLORED IN THIS LESSON

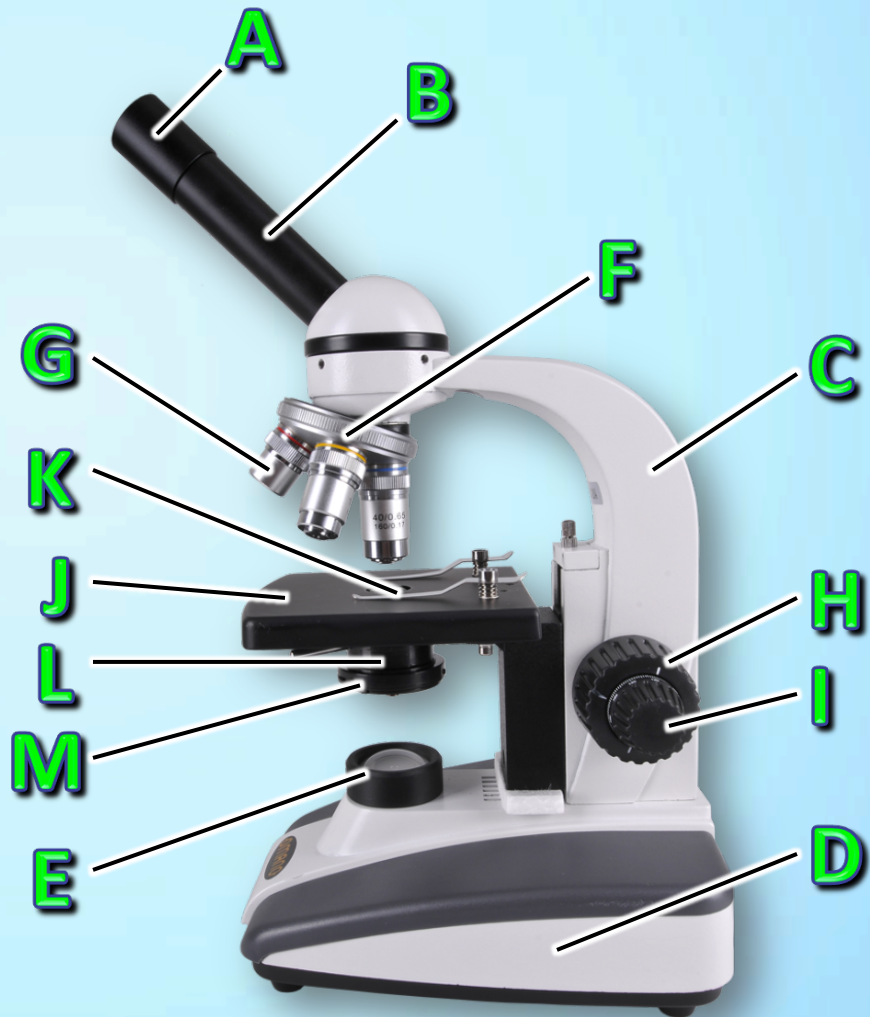
1. ocular lens / eyepiece
2. body tube
3. arm
4. base
5. light source/illuminator
6. revolving/rotating nosepiece
7. objective lenses
8. coarse adjustment knob
9. fine adjustment knob
10. stage
11. stage clips
12. condenser lens
13. diaphragm

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Do you know some of these parts?

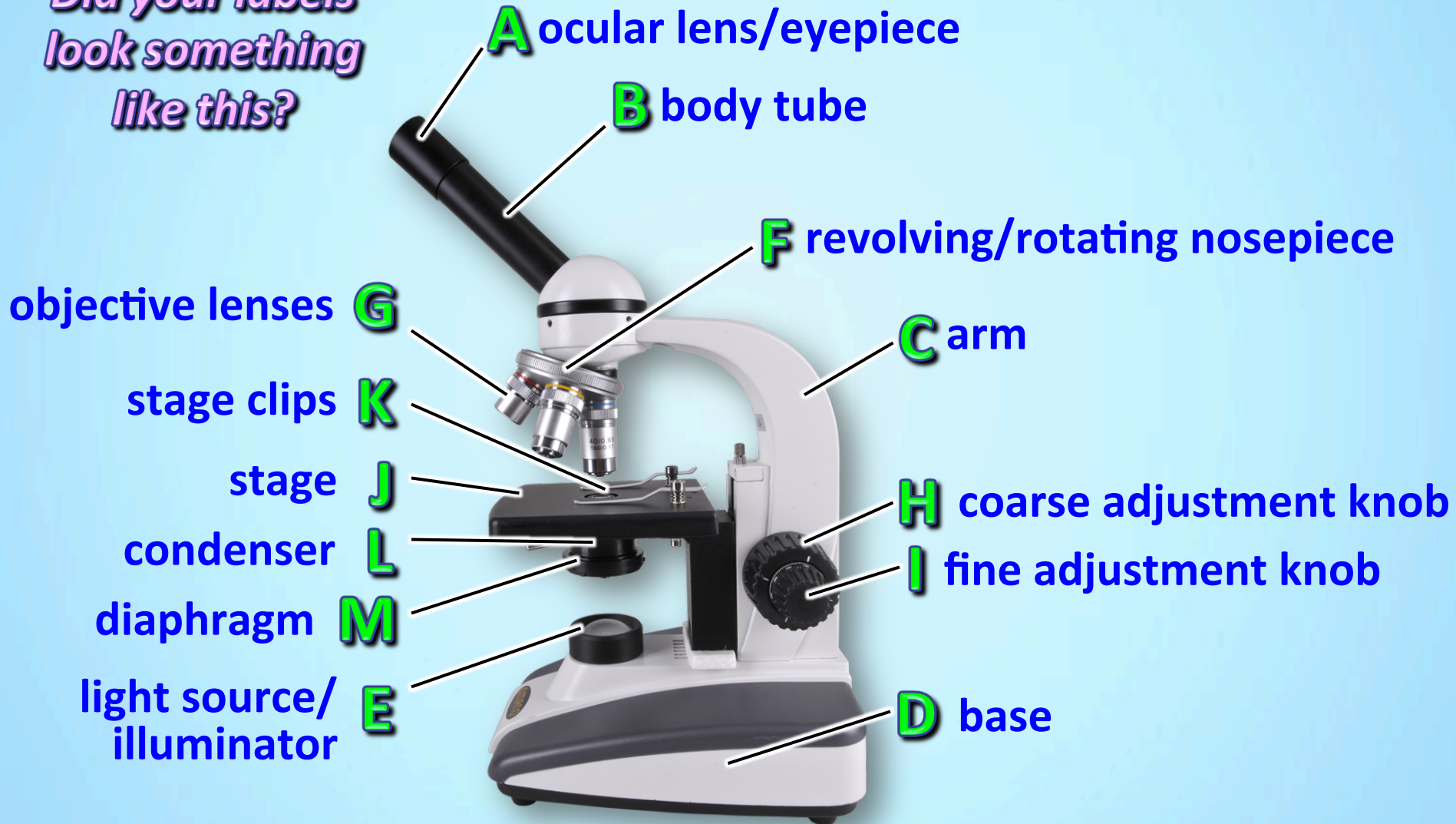
Label as many parts as you can using the terms provided.

revolving nosepiece
arm
diaphragm
ocular lens / eyepiece
condenser
objective lenses
stage clips
body tube
base
light source / illuminator
coarse adjustment knob
stage
fine adjustment knob



PARTS OF THE COMPOUND LIGHT MICROSCOPE

*Did your labels
look something
like this?*



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Ocular Lens / Eyepiece



- Contains a lens to magnify the image of the specimen.
- The usual magnification is 10 X.



PARTS OF THE COMPOUND LIGHT MICROSCOPE

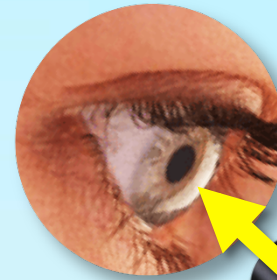
Ocular Lens / Eyepiece



- Contains a lens to magnify the image of the specimen.
- The usual magnification is 10 X.
- Some microscopes have two ocular lenses.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Body Tube



- It **connects** the eyepiece to the objective lenses.
- It ensures the correct **alignment** of the microscope components to correctly **direct** the light from the specimen into the viewer's eye.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Arm



- It connects the body tube to the base.
- One hand should be around the arm when carrying the microscope (the other should be under the base).



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Arm



- It **connects** the body tube to the base.
- One **hand** should be around the arm when **carrying** the microscope (the other should be under the **base**).



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Base



- It supports the weight of the microscope.
- It contains the electronics and light source.
- One hand should be under the base while carrying the microscope (the other hand should be holding the arm).



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Base

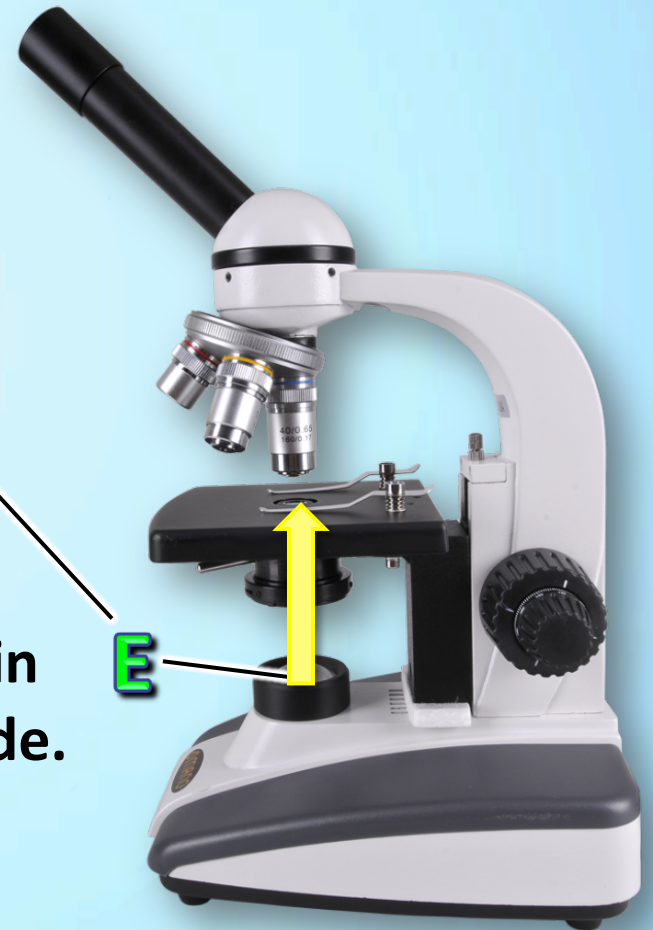
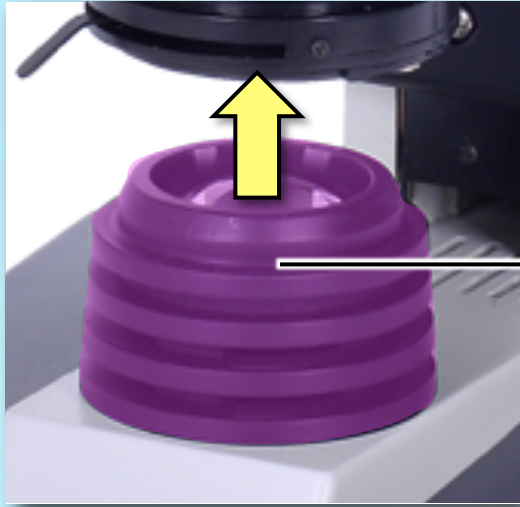


- It supports the weight of the microscope.
- It contains the electronics and light source.
- One hand should be under the base while carrying the microscope (the other hand should be holding the arm).



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Light Source / Illuminator



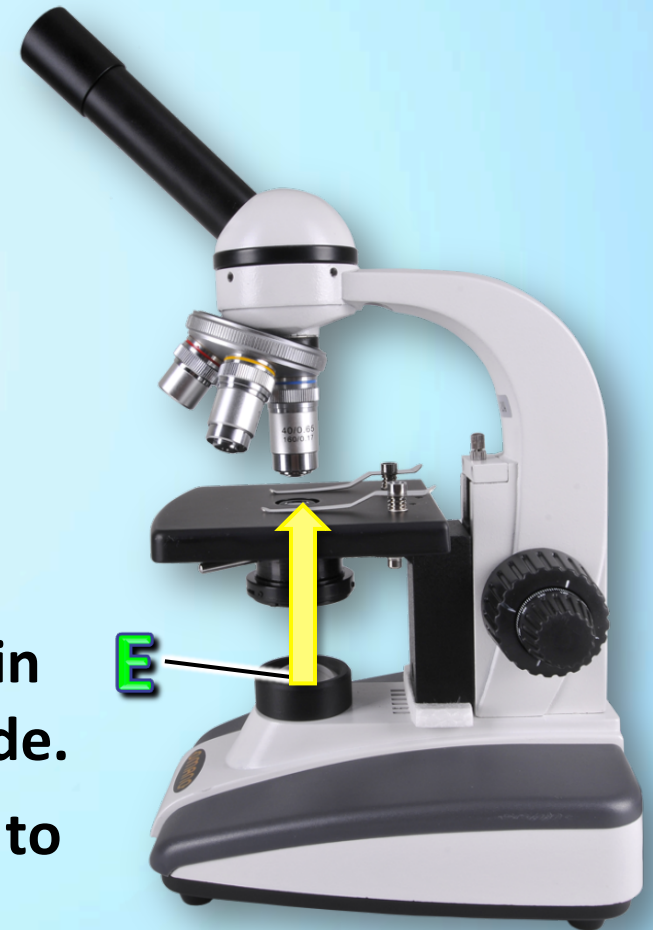
- It sends light upwards through the condenser lens and through the hole in the stage onto the specimen on the slide.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Light Source / Illuminator



- It sends light upwards through the condenser lens and through the hole in the stage onto the specimen on the slide.
- Older microscopes used to use mirrors to reflect the ambient light upwards.



PARTS OF THE COMPOUND LIGHT MICROSCOPE

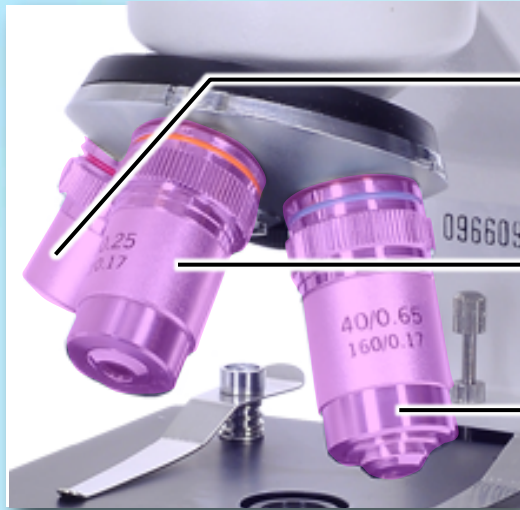
Revolving/Rotating Nose Piece



- The **objective lenses** are attached to it.
- **Rotating** the nose piece allows you to **switch** between the different lenses.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Objective Lenses



Low (scanning) **4 X**

Medium **10 X**

High **40 X**

G



- These lenses further magnify the image of the specimen.
- The magnifications are usually 4 X , 10 X and 40 X .
- There are usually 3 lenses

PARTS OF THE COMPOUND LIGHT MICROSCOPE

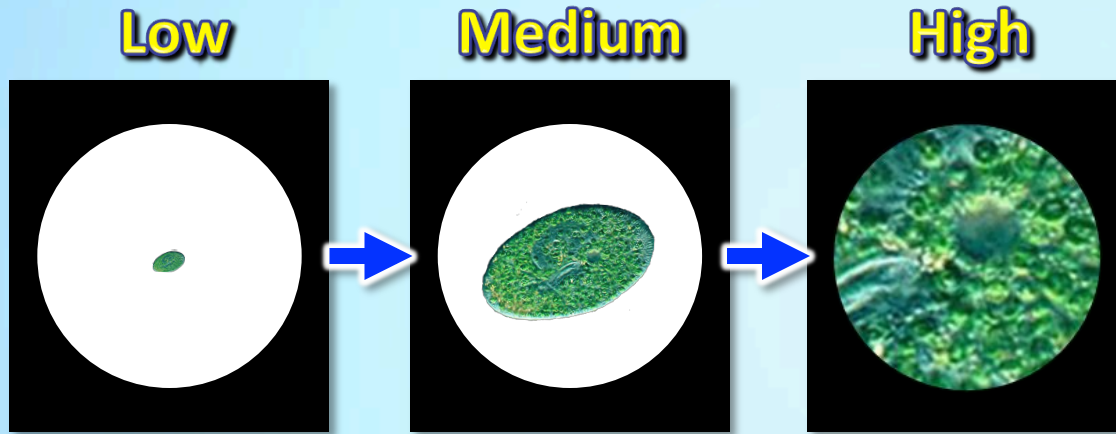
Objective Lenses



- These lenses further magnify the image of the specimen.
- The magnifications are usually 4 X , 10 X and 40 X .
- There are usually 3 lenses but some have 4 lenses.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Objective Lenses



- As the power increases, the magnification becomes **larger** , but the field of view (visible area) becomes **smaller** .

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Coarse Adjustment Knob



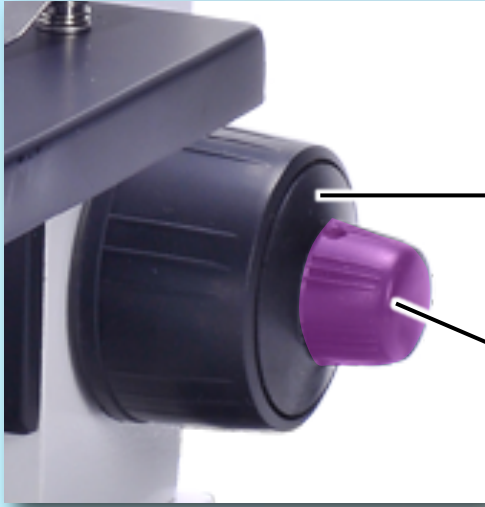
H

- The first knob you should use, and always under low power. Never use it in high power.



PARTS OF THE COMPOUND LIGHT MICROSCOPE

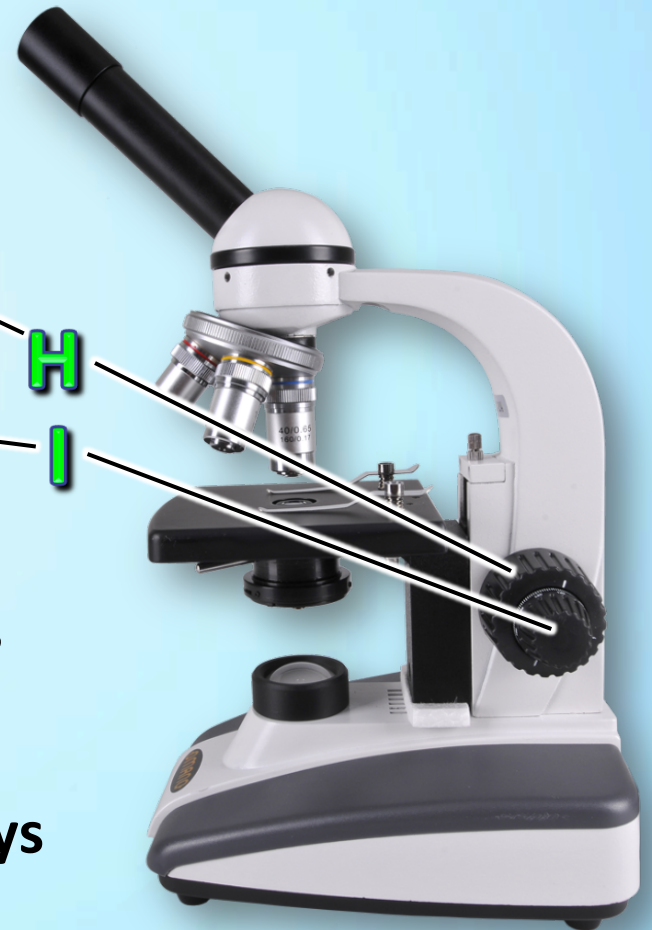
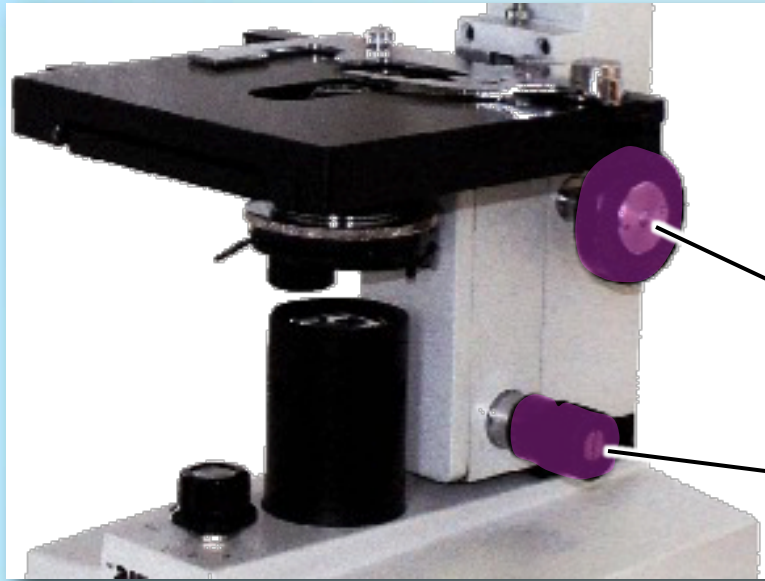
Fine Adjustment Knob



- The first knob you should use, and always under low power. Never use it in high power.
- The second knob you should use under higher power for exact focusing.
- Both knobs move the stage up and down to help put the specimen in focus .

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Fine Adjustment Knob



- Some microscopes have the two knobs located **one on top of the other**.
- The smaller one on the bottom is always the **fine** adjustment knob.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Stage



- The stage is where you place the slide which contains the specimen.
- It contains a hole that allows light to pass through the stage and onto the specimen.



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Stage Clips



K

J



- The stage is where you place the slide which contains the specimen.
- It contains a hole that allows light to pass through the stage and onto the specimen.
- The stage clips secure the slide on the stage.

PARTS OF THE COMPOUND LIGHT MICROSCOPE

Condenser Lens

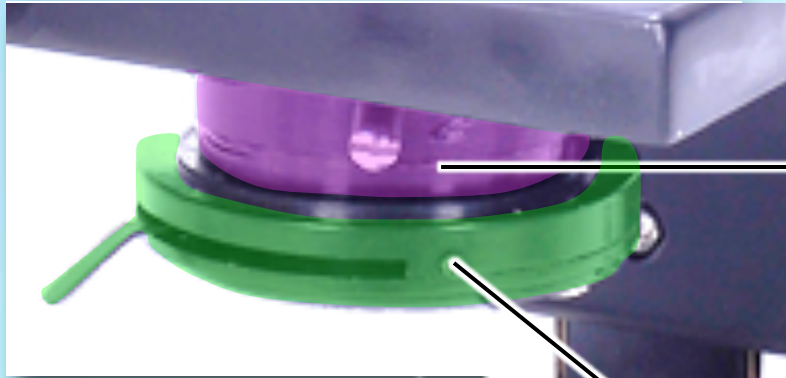


- The lens under the stage that focuses light from the illuminator through to the hole in the stage.



PARTS OF THE COMPOUND LIGHT MICROSCOPE

Diaphragm



- The lens under the stage that focuses light from the illuminator through to the hole in the stage.
- It contains a dial that rotates to adjust the amount of light that reaches the specimen.



The End!





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