The Microscope

The microscope led to the discovery of the cell

Types of Microscopes

1. Stereomicroscope/Dissecting Microscope
a. 2 eyepieces: does not flip the specimen in the field of view
c. Used to observe fine detail

2. *Compound Light Microscope*
a. 2 lenses used at a time (eyepiece & objective)
b. Objects must be very thin for light to pass through

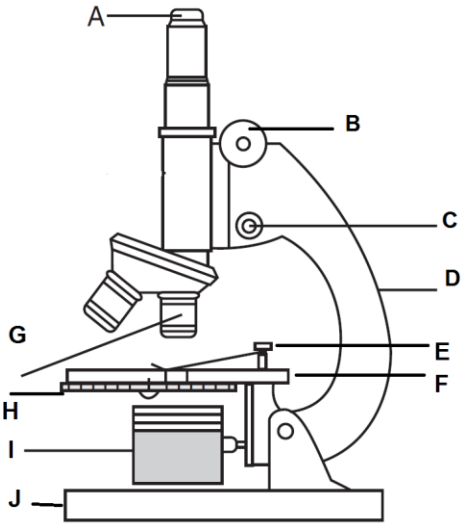
3. *Electron Microscope (most detail)*
a. Uses electrons to magnify an image.

Field of View (FOV): What you see in the illuminated circle

Objects under a microscope are

- Upside down
- Backwards
- Larger/magnified/bigger
- More detailed

Movement of slide: In the FOV the specimen moves in the opposite direction of the slide.

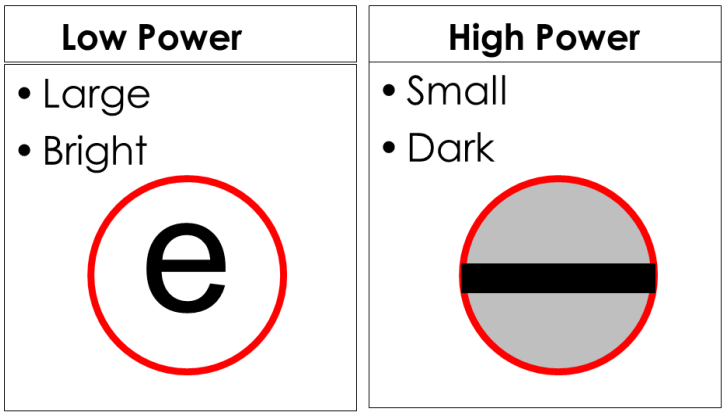


Letter	Name of Part	Function
A	Eyepiece/Ocular	Magnifies
B	Coarse Adjustment	Moves stage only when using low power
C	Fine Adjustment	Used to focus

D	Arm	Used to carry the scope
E	Stage Clips	Secure the slide
F	Stage	Slide is placed here
G	Objective	Magnifies
H	Diaphragm	Controls the amount of light
I	Light source	Provides light
J	Base	Used to carry the scope

Field of view differences under low & high power

Low Power	High Power
• Large • Bright	• Small • Dark



Total Magnification: How much the specimen is magnified using the 2 lenses.

Formula: (Ocular) x (Objective) = TM (total magnification)

Microscope Rules

- Always start with the lowest objective
- Always **center under low power** & then switch to high power
- Never use the coarse adjustment (large knob) when using high power, it may break the lens or the slide.