

# Microscope Care & Use



## Handling The Microscope

- ★ Always use two hands to move the microscope. Place one hand around the arm, lift the scope, and then put your other hand under the base of the scope for support.
- ★ Be gentle. Setting the microscope down on the table roughly could jar lenses and other parts loose. The microscope seems like a simple instrument, but each lens (eyepiece and objective) is actually made up of a number of other lenses; banging your microscope around, shakes about 15 to 20 lenses.
- ★ Always have clean hands when handling your microscope.

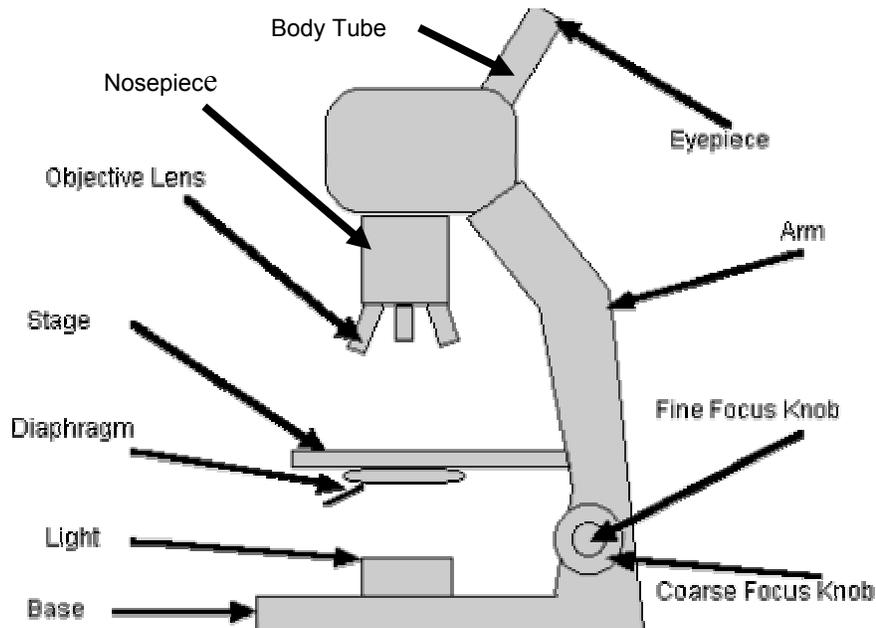
## Storing The Microscope

- ★ Dust is an enemy to microscope lenses; always keep the microscope covered when not in use.

## Cleaning the Microscope

- ★ Don't let the microscope get too dirty – always use the dust cover when not in use.
- ★ To clean the eyepiece – use a high quality lens paper. First brush any visible dust from the lens, and then wipe the lens. Do not use facial tissues, they are made from ground up wood fibers and could damage the lenses.
- ★ To clean the objective lenses – use a fresh piece of the lens paper each time so that you don't transfer dust from one lens to another.
- ★ Use lens paper on all glass parts of the microscope.
- ★ A cotton swab (Q-Tip) can be used in place of lens paper.

## Parts of the Microscope



1. Eyepiece-where you look through to see the image of your specimen.
2. Body tube-the long tube that holds the eyepiece and connects it to the objectives.
3. Nosepiece-the rotating part of the microscope at the bottom of the body tube; it holds the objectives.
4. Objective lenses-(low, medium, high, oil immersion) the microscope may have 2, 3 or more objectives attached to the nosepiece; they vary in length (the shortest is the lowest power or magnification; the longest is the highest power or magnification).
5. Arm-part of the microscope that you carry the microscope with.
6. Coarse adjustment knob, or coarse focus knob -large, round knob on the side of the microscope used for focusing the specimen; it may move either the stage or the upper part of the microscope.
7. Fine adjustment knob or fine focus knob -small, round knob on the side of the microscope used to fine-tune the focus of your specimen after using the coarse adjustment knob.

8. Stage-large, flat area under the objectives; it has a hole in it (see aperture) that allows light through; the specimen/slide is placed on the stage for viewing.
9. Stage clips-shiny, clips on top of the stage which hold the slide in place.
10. Aperture-the hole in the stage that allows light through for better viewing of the specimen.
11. Diaphragm-controls the amount of light going through the aperture.
12. Light -source of light usually found near the base of the microscope; the light source makes the specimen easier to see.
13. Base – Supports the microscope

## Using the Microscope

- ★ Always observe the specimen or object using the LOWEST POWER object first.
- ★ Focus using the COARSE ADJUSTMENT KNOB to bring the object into focus. Bring the object into sharp focus by using the fine adjustment knob.
- ★ Focus, and then move to a higher power objective, if needed.
- ★ Use only the FINE ADJUSTMENT KNOB when using the HIGHEST (longest) POWER OBJECTIVE.
- ★ Keep both eyes open to reduce eyestrain. Keep eye slightly above the eyepiece to reduce eyelash interference.
- ★ To find out the total magnification of the object, multiply the power of the eyepiece lens (10X) by the power of the objective.