Microscope Maintenance

Compound microscopes should generally be serviced after about 200 hours of use. For most schools, this would be about every three years; possibly more frequent if the microscope is used multiple times each day. Ken-A-Vision repairs their own microscopes and also has a nationwide list of science dealers who repair our microscopes.

Simple Microscope Maintenance at School

Proper Quick Techniques

- Hold from base & carrying handle.
- Use the provided dust cover.
- ***Do not*** store a microscope without any eyepieces, even if it is covered. This can allow dust to collect within the eye tubes, which can be difficult to clean.
    - If the microscope eyepieces must be removed, simply cover the tubes with caps or a plastic bag with a rubber band around the eye tube.

Do not store your microscope in an area that has corrosive chemical fumes that can destroy lenses or metal parts.

Cleaning Microscope Eyepiece Lenses

Never use sharp instruments or anything abrasive to clean the microscope lens.

- Clean the microscope eyepiece or the microscope objective lens:
    1. Moisten lens paper with lens cleaning solution and clean the lens with a circular motion.
    2. Dry the lens with a clean, dry piece of lens paper and when you are finished use an aspirator to remove any lingering dirt or particles.
- Determine if your microscope eyepieces need cleaning:
    1. Loosen the small set screw for the eyepiece (if there is one)
    2. Rotate the eyepiece in a circular motion while looking through the microscope
    3. If there is a dust particle that rotates as you rotate the eyepiece, remove the eyepiece from the microscope and clean both sides of the lens with lens paper.
    4. If you need to use any liquid for cleaning, distilled water is recommended.
    5. It is not recommended that you take the eyepiece apart, as there are generally multiple lenses in the eyepiece and they can be difficult to put back together in the correct order.

Microscope Maintenance

Cleaning Objectives

- Determine which of your objective lenses need cleaning:
    1. Take a clean blank glass slide and put it under your microscope.
    2. Once the microscope is focused you should be able to move the slide and determine if the visible dust is moving with the slide or staying in the same place (which means the dust is on the objective lens).
- Cleaning immersion oil on the highest power objective lens (usually 100x)
    1. Clean with a piece of lens paper, no cleaning solutions are needed.
    2. Dust may build up on the lightly oiled surface so if you wish to completely remove the oil then you must use an oil soluble solvent.
        - Use Naphtha, Xylene, or turpentine (use very small amounts on the lens paper).
        - ***Do not*** use water, alcohol or acetone as the oil is insoluble to these solvents.

Mechanical Maintenance

- Each microscope comes with a user's manual.
- Always consult this user's manual before making any adjustments to your microscope.
- ***Never*** over-tighten or use force when performing any maintenance on your microscope.
- This can damage metal parts in the microscope.

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