Tech Support's Guide to

Choosing a Microscope & Microscope Maintenance

There are several different microscopes available on the market from a basic one through to specialised electron microscopes. In schools, the most common are the **compound microscope** and the **stereo microscope.**

Compound Microscope

Familiarise yourself with the equipment and tools you will be using in your role as a science technician. This includes understanding how to use them safely and correctly, as well as how to maintain and troubleshoot them if necessary. If in doubt – ask someone else in the department if they can help! Or contact our tech support for advice.

Stereo or Dissecting Microscope

A stereo microscope is generally used to inspect larger objects such as small mechanical pieces, minerals, insects, and leaves and has a magnification of 2 to 100 times. This uses incident light, reflected off the surface of the sample. This passes through the objectives and two optical paths at slightly different angles to represent a 3D object giving contrast and depth.

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Choosing a Microscope

When looking for a microscope, primarily, you need to know what your application is, what specimens you want to study, and what magnification you require. Then you need to establish what other features you would like:

1. Focusing – do you need course and fine adjustment?
2. Do you want it to be battery driven as well as AC powered?
3. Would a mechanical stage be useful?
4. What accessories do you need, from graticules to cameras?

Don't forget to consider your budget as well.

Microscope Care

1. Always carry your microscope by the base and support arm
2. Always cover the microscope when not in use
3. Store in a clean dry place
4. Keep all manuals and maintenance tools in a safe place
5. Ensure the microscope bulb is turned to minimum and the unit switched off after use
6. If using x100 oil objective, clean oil off lens with dry lens tissue after use
7. Your slide should never come in to contact with the objective
8. Clean the body of the microscope with a damp wet cloth to remove dust and grime.
9. Clean the objectives with lens cleaner

Top Tip:
If a microscope is broken beyond repair and you have some extra storage space – keep it, or any parts that might be salvageable. In future, if other microscopes sustain minor damages, you might be able to use the old one for spare parts!