

## **APPENDIX C: Microscope Use**

Note: Before proceeding with this information, please check with your Science Department, and/or your Science Laboratory Technologist, as there may already be agreed upon procedures in place.

All microscope parts have been underlined in the following microscope use procedure:

1. Review the parts of a microscope.
2. Collect a microscope, by holding it upright with one hand on the base and one hand on the arm.  
**Warning:** Never hold a microscope with one hand, and sideways/upside down as the ocular lens may fall out and break, or worse.
3. Carefully remove the dust cover, and place it in a location that is easy to keep track of and not in the way.
4. Unwrap the cord, and plug in the microscope and turn on the light source.
5. Ensure that the revolving nosepiece is turned to the lowest power objective lens (usually 4x).
6. Carefully place the glass slide to be viewed under the stage clips (if a wet mount is needed see below).
7. While looking through the ocular lens carefully turn the course adjustment knob until the sample is in focus.
8. If there is a problem, the stage controls may need to be adjusted, so make sure that the sample is in the light.
9. Once the sample is located, carefully move to next objective lens (usually 10x) and use the fine adjustment knob.
10. Once the sample is located, carefully move to the highest power objective lens (usually 40x) and **ONLY** use the fine adjustment knob. Use of the wrong knob may result in the lens or the slide or both breaking.
11. If you have been asked to draw what you see only use a pencil, be sure to record the power you are drawing from, giving your diagram a title, and including what it is, labelling the sample using a ruler, and drawing the sample.
12. Once complete, return the slide to the correct location, turn the objective lens back to the lowest power.
13. Turn off the light source and unplug the microscope.
14. Wrap the cord, and put the dust cover back on the microscope.
15. Using two hands, hold the microscope by the arm and the base and return it to the location that you got it from.

### **Wet Mount:**

1. Collect a clean rectangular slide, by holding the edges of the glass and avoiding fingerprints.
2. Using tweezers, place a thin sample onto the slide and one drop of water using an eyedropper.
3. Carefully pick up a square coverslip and hold it at 45 degrees from the slide. Slowly lower one side of the coverslip down on top of the slide, to ensure there are no bubbles.
4. If a stain is needed for contrast, use an eyedropper to put one drop of the provided stain on one edge of the coverslip.

5. Hold a piece of paper towel on the other side of the coverslip, to pull the stain through the sample. This will also help remove excess liquid on the slide.
6. View your sample starting with the lowest objective lens.
7. Carefully rinse off the coverslip and slide, and return both for reuse. If one breaks, be sure to alert the teacher, and to sweep up the glass and place it into the glass disposal.