

# Microscope Lab Procedure

## Materials you will need

- Water sample
- Microorganism Data Sheet (1 per participant)
- Print material or internet resources to help with microbe identification
- Hand lens
- Microscope
- Microscope slides
- Coverslips for microscope slides
- Pipette
- Alcohol swabs to clean the eyepiece between each participant

## Making Your Slide

1. Write down some observations about your water sample on the Microbe Data Sheet. Include a sketch of what your sample looks like and make predictions about what organisms might be found in the sample.
2. Carefully swirl your water sample to make sure nothing has settled at the bottom.
3. Remove the lid and take a sample from the container using the pipette. Replace the lid on the container.
4. Using one microscope slide, place a drop of the sample into the middle of the slide.
5. Put a coverslip on top of the sample.
6. Place the prepared slide under the microscope and adjust until microorganisms are found.

## Viewing Your Slide

1. Rotate the coarse adjustment knob so that the stage moves down and away from the objective lenses as far as it can go.
2. Rotate the nosepiece of the microscope so that the lowest power objective lens is over the iris diaphragm (this should also be the shortest lens).
3. Place your slide on the stage and center the slide over the hole in the stage.
4. Use the stage clips to secure the slide in place. If you are using a second slide as your coverslip and the stage clips disturb your slide, you may decide not to use the clips for this lab.
5. Using the coarse adjustment knob, move the stage all the way up, as close to the objective lens as it will safely move.
6. Look through the eyepiece. Use the coarse adjustment knob and slowly move the stage down until the prepared slide comes into focus.
7. If you move the stage all the way down and do not ever see anything, move your slide on the stage and repeat steps 5 & 6 again.
8. Once the slide comes into coarse focus, use the fine adjustment knob to bring it into sharper focus.
9. Carefully rotate the nosepiece so that the next higher power objective lens is now pointed at your slide. Do not move either the focus knob or the slide during this step.
10. Move the fine adjustment knob as necessary to bring the slide into sharp focus again.
11. Sanitize the eyepiece of the microscope with an alcohol swab before the next member of your group uses the microscope.
12. Carefully remove your slide from the stage and clean or dispose of it according to the instructions you are given at the appropriate time.