

Laboratory 14

Symbiotic Relationships

Student Tip Sheet

Laboratory 14 gives several illustrations of the different symbiotic relationships. There are others in nature that you can use as examples. Search your resources and bring in examples of these various pairings with a discussion of the relationships. Your teacher will be delighted to have additional examples from nature. This information is not difficult to understand and can be fascinating to study. Nature has provided for many variations and surprising interdependencies. If you do have trouble keeping the examples separate, quick flash cards or a master chart illustrating the examples will assist in the learning process.

In order to investigate the larger organisms mentioned in this lab, particularly the various worms, you will need to use a dissecting microscope for observation, in addition the compound light microscope. The following is a convenient sheet of instructions for the use of the dissecting scope.

Learn to Focus the Dissecting Microscope

The dissecting microscope (also called the stereoscopic microscope) enables one to observe objects that are too thick or too large to see with other methods of magnification but too small to see with the naked eye. Such specimens as small insects or the details of plant anatomy are enlarged and can be observed easily for dissection or identification.

Follow the instructions below in order to focus this instrument:

1. Place an object for viewing on the stage.
2. Turn on the top and/or bottom light by twisting the small buttons on the sides of the base. For other models, turn on the available lamp and position it for best viewing. Different positions of the light source will highlight different portions of the specimen.
3. Adjust the eyepieces to fit the distance between your eyes in order to see one single image. This space is called the interocular distance.
4. Turn the coarse adjustment knob up or down to view different parts of the specimen.
5. Change from lower to higher magnification for an additional perspective.

Observe your skin, fingernails, coins, keys, and any available objects in the lab. See if you can find Lincoln sitting in the Lincoln Memorial on the back of a five-dollar bill! Make any adjustments that make your image clearer, such as changing the light source from top to bottom or use both light sources or neither. Notice textures and details of the objects. As you are observing an object through the eyepiece, move the object to the left or right. Note carefully in which direction your observed image moves. Later you will compare this feature with what happens when you move a specimen while using the compound light microscope.