

Name _____ Date _____ Class _____

Use after Section 1:1.

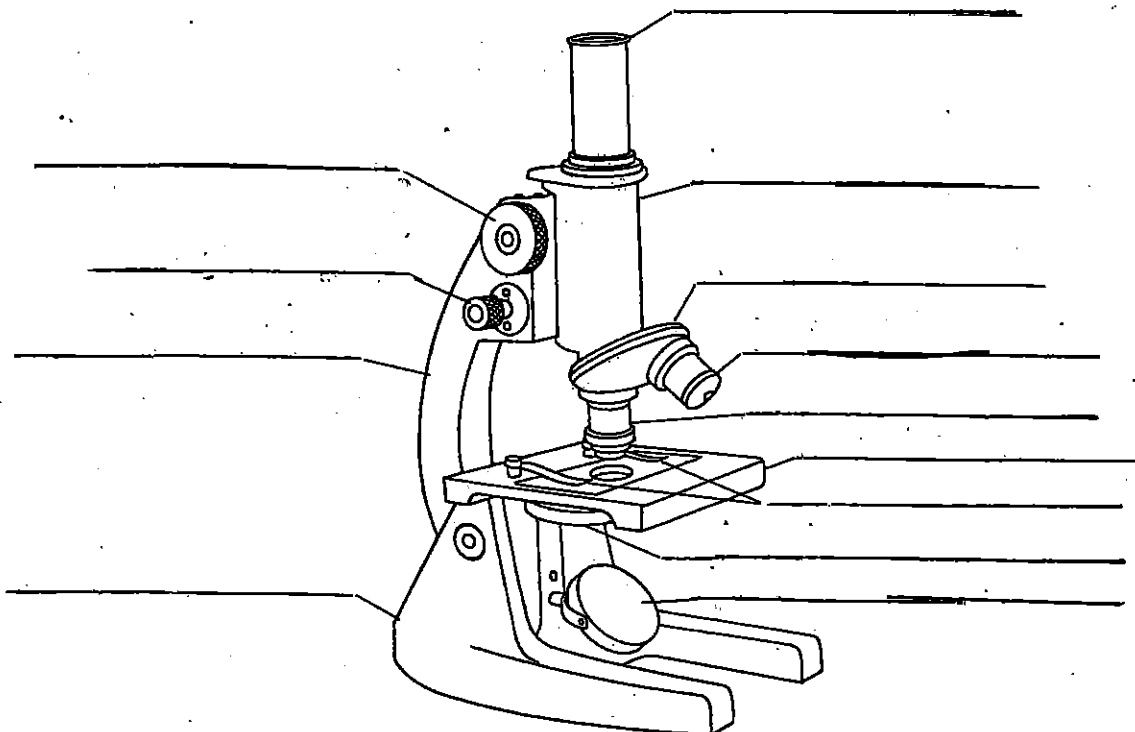
1 LOOKING AT THE MICROSCOPE

Your life has been affected in thousands of ways by the microscope. Fighting disease, understanding how your body works, and discovering tiny living things are just a few of the things that would be hard or impossible without microscopes. Label the parts of the microscope in the picture below as you read about them.

Your microscope rests on a two-pronged base. Whenever you move it or pick it up, grasp the arm or pillar and support the base with the other hand. When you are looking through the microscope, the arm will be toward you. Probably the first part of the microscope you will notice is the eyepiece at the top of the body tube. It contains a lens that magnifies objects. The body tube is connected to the arm, which has two knobs on it. The upper knob is called the coarse adjustment and the lower one the fine adjustment. The coarse adjustment is used to move the body tube up and down while focusing. The fine adjustment is described below.

At the lower end of the body tube is the nosepiece that revolves. On most microscopes there are two lenses on the nosepiece. The shorter one is the low-power objective and the longer one is the high-power objective. The fine adjustment is used to focus the objectives. Whenever you turn the nosepiece, make sure the objectives do not hit your slide or specimen. This will protect the lens and keep it from being damaged.

Below the objectives, there is a flat square with a hole in it. This is called the stage. Notice that there is a silver strip on each side of the hole. These are called stage clips. Stage clips are used to hold a slide in place. Under the hole in the stage is the diaphragm. The diaphragm controls how much light reaches the specimen. Below the diaphragm is a mirror. One side of the mirror is curved and the other side is flat. The mirror is used to direct light up through the diaphragm.



LAB SKILLS

Name _____ Date _____ Class _____

5 THE MICROSCOPE

Using a Microscope

Like a pair of glasses, a microscope is an optical instrument. The microscope helps you see things that are very small. In biology, the microscope can show you living things that you would not be able to see without it. A microscope must be handled carefully because it can be broken easily.

Fill in the blanks in the sentences that follow.

1. Always carry a microscope with one hand grasping the _____ and the other hand under the _____.
2. A microscope should be stored with the _____ objective in place.
3. Always bring an object into focus using the _____ objective.
4. Never use the _____ adjustment to focus the high-power objective.
5. Do not allow direct sunlight to fall on the _____.
6. Use only the _____ adjustment when focusing with the high-power objective.

Parts of a Microscope

Identify the parts of the microscope on the lines next to the letters.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____
- i. _____
- j. _____
- k. _____
- l. _____
- m. _____

