

## HANDOUT 5.1-2 FUNCTIONS OF MICROSCOPE PARTS

**Ocular:** This is the eyepiece lens that usually magnifies by a power of 10. (*Note:* To determine the power of the microscope, one multiplies the power of the ocular by the power of the objective lens being used.)

**High-power objective:** It is located just above the stage. It is the longer of the objectives. Its lens has a magnifying power usually of 43.

**Low-power objective:** It is located just above the stage. It is the shorter objective. Its lens has a magnifying power usually of 10.

**Stage:** This is a horizontal platform just below the objectives that supports the microscope slide for observation.

**Revolving nosepiece:** The objective lenses are attached to this part. It can be manually rotated to select the objective lens that you wish to use.

**Stage clips:** They clamp over the edges of the microscope slide to secure it to the stage.

**Diaphragm (or condenser):** Located just below the stage, it can be hand adjusted to regulate the amount of light entering the microscope. An image viewed through the microscope should not be dark but should have plenty of light.

**Mirror:** This is adjusted to reflect light from the microscope lamp up into the microscope. Although the mirror is sometimes used to regulate the amount of light entering the microscope, this is not good technique.

**Coarse adjustment:** This is used to focus the microscope. It is always used first, and it is used *only* with the low-power objective.

**Fine adjustment:** This is used to focus the microscope. It is used with the high-power objective to "fine tune" the focus.

**Arm:** This is the back of the microscope and it is used along with the base to transport the microscope.

**Base:** This is the bottom of the microscope and it is used along with the arm to transport the microscope.

**Note:** Both eyes should be open when viewing through the microscope. This prevents eye fatigue, which occurs when the nonviewing eye is kept closed. Keeping both eyes open does take some practice, but it is highly recommended.