

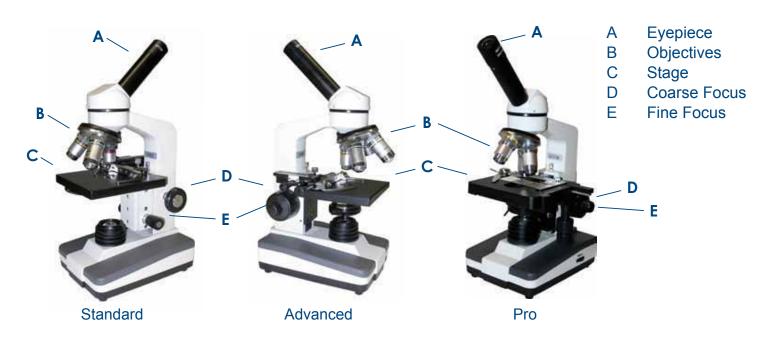
# <u>Student Scopes</u>

## Instruction Manual









#### Introduction

LW Scientific is an international manufacturer of quality microscopes and optical equipment. Thank you for your purchase of a Student Series microscope.

Should you have any questions regarding your new purchase, we have factory-trained technical support staff available to take your call. Feel free to contact us with any questions or comments you may have.

Setup

Your microscope is packaged in form-fitting molded Styrofoam for safe transportation to you. Please inspect the outer and inner cotnainers for any visual damage. If there is damage, please contact the shipping company to place a claim.

Remove the microscope from the packing material and set on a stable surface. Remove any tissue or protective plastic from the stage, eyepiece, and objectives.

#### Your microscope should include the following parts:

1-Microscope body 1-This Instruction Manual

1-10x eyepiece with pointer (Installed)
3-Objectives 4x, 10x, 40x (Installed)\*
1-Dust Cover
1-Warranty Card

If any parts are missing, contact your distributor or LW Scientific.

<sup>\*</sup>Some models of Advanced and Pro will also include a 100x oil objective and a vial of immersion oil.

## Add-on Mechanical Stage Installation (Optional for Student Advanced and Standard models)

If you ordered a Mechanical Stage with your microscope, install it now. First, remove the stage clip on the stage with a Phillips head screw-driver. Now, set the mechanical stage on top of the stage and align the posts on the mechanical stage with the appropriate holes on the stage. Once it is seated, tighten the thumb screw on the back of the mechanical stage.

For information on purchasing a mechanical stage, please contact your LW Scientific dealer.

## **Operation**

- 1 Turn the light source on using the on/off switch on the back of the microscope.
- 2 Place a prepared slide onto the stage, under the stage clips or on the mechanical stage.
- 3 Position the slide so that the specimen is centered underneath the objective.
- **4** Turn the nosepiece to the 4x objective and look through the eyepiece.
- 5 Using the larger, coarse focus knob, bring the image into focus. To perfect the image, use the smaller, fine focus knob.
- 6 Now switch to the 10x then 40x objectives, adjusting the focus slightly.
- 7 To adjust the brightness and contrast, adjust the diaphragm located under the stage. Depending on which model you purchased, the diaphragm may consist of a disk with different sized holes or an iris.

#### Using the 100x Oil Immersion Objective

If you purchased the model Student Advanced or Pro, then your microscope may include a 100x oil objective. To focus clearly, this objective requires the use of immersion oil.

First, focus on the target spot using the 40x objective. Rotate the nosepiece between the 40x and 100x objective and place a drop of the included immersion oil over the target. Rotate the 100x oil objective into place and focus carefully using the fine focus adjustment.

Do NOT use oil with any other objective. Damage to the 4x, 10x, and 40x objectives caused by oil is not covered under warranty.

When finished, clean the tip of the objective and your slide with lens paper and lens cleaning fluid available at camera supply stores or contact your LW Scientific dealer for information on our Microscope Cleaning Kit.

## **Lamp Replacement**



**Caution**: Unplug the microscope before attempting to replace the lamp.

The bulb on your microscope will need to be replaced occasionally depending on the amount of use.

After unplugging the microscope, turn the microscope on its side and remove the four screws inside the four rubber feet using a Phillips head screwdriver. Then, gently remove the base.

- Unscrew the base condenser counter clockwise and remove it
- Unscrew the outermost screws using a 2 mm allen wrench
- Pull the LED with heat puck vertically out until the quick disconnect is exposed
- Disconnect the quick disconnect
- Reverse the procedure with your new LED assembly

Replace the base and return the microscope to the upright position. To purchase a replacement bulb, you may contact your local home improvement or lighting store, your microscope dealer, or LW Scientific.