



## A Guide to Microscopes

Carolina offers a full range of compound microscopes and stereomicroscopes spanning virtually all grade levels and applications. We're sure you'll find the right one for your application. If you're a first-time buyer and a bit overwhelmed by the selection, the guide below can help you focus your search.

### There are 2 types of microscopes: compound microscopes and stereomicroscopes.



#### Choose a compound microscope to

- View slide-mounted, micro-sized specimens that are thin enough to allow light to pass through them
- Examine premounted slides and pond water specimens such as algae and protozoans
- Provide high-power magnification (40× to 1,000×), a narrow field of view, and a short working distance



#### Choose a stereomicroscope to

- Observe unmounted, macro-sized specimens that are too thick to allow light to pass through them
- View insects, plants, rocks, coins, and more
- Provide low-power magnification (10× to 40×), a wide field of view, and a long working distance

### Why buy a digital microscope or camera?

A digital microscope is basically a standard microscope with a digital camera built into the head. It has USB outputs that connect to your computer and comes with scientific software that allows students to capture images, produce video clips, measure specimens, label body parts, and more. You can make a quality microscope digital by adding a specially designed camera that connects to the eyepiece of your microscope. The camera also comes with the scientific software.

#### Features to consider:

- Image resolution or pixel count—the higher the count, the better the image quality
- Images can be displayed on a computer monitor or projected on a large screen—we recommend a camera or microscope with 1.3 megapixels or higher if using a projector

### Most microscopes use one of these types of illumination:

#### Tungsten

- Yellowish light—can distort the colors of viewed specimens
- Hot light—preferred for illuminating nonliving specimens
- Least expensive to purchase and most common

#### Fluorescent

- White light—gives specimens a more natural appearance
- Cool light—preferred for illuminating living specimens
- More expensive than tungsten to purchase, but less expensive to operate

#### Halogen

- Very bright white light—gives specimens a more natural appearance
- Hot, concentrated light—preferred for use with binocular compound microscopes and for illuminating nonliving specimens
- Commonly found in research-level microscopes

#### LED

- White light—gives specimens a more natural appearance
- Cool light—preferred for illuminating living specimens
- Energy efficient and a popular choice for cordless microscopes

#### • Repair, Parts, and Service

Our commitment to customer satisfaction extends to our complete microscope service facility, providing top-of-the-line repair and reconditioning. We offer expert repair at a reasonable cost, in-stock parts, estimates upon request, and guaranteed satisfaction. If you have worn or damaged instruments, call the Microscopes Department at 800.227.1150 to discuss options regarding repair and instructions on shipment, if necessary.

#### • Quantity Discounts

Discounts are available on special quotations. Call our Quotations Department at 800.227.1150 for details.

#### • Special Requests

Our products are backed by a comprehensive inventory of in-stock parts and accessories. We can also custom configure many of our microscopes to suit your needs. When your requirements involve the Wolfe®, Leica®, or Swift® product lines—microscopes, accessories, repair, or bid requests—please contact us even if you don't find what you need here.