

Equipment for CLP Students

Microscope Specification

*There are numerous manufacturers offering thousands of different microscopes.
We use a Compound Microscope with the following specification:*

Total magnification: 40X-100X-400X

Eyepieces: wide field WF10X

Objective: achromatic DIN 4X, 10X, 40X(S)

Viewing head: 45 degree inclined, 360 degree swiveling trinocular

Sliding adjustable interpupillary distance: 2-3/16inch ~ 2-15/16 inch (55mm ~ 75mm)

Ocular diopter: adjustable on one or both eye-tubes

Nosepiece: revolving quadruple

Stage: mechanical double layer size: 4-1/2 inch 4-15/16inch (115mm x 125mm)

Stage x-y stroke (travel range): 2-13/16inch x 1-3/16inch (70mm x 30mm)

Condenser and diaphragm: NA1.25 Abbe condenser with iris diaphragm

Transmitted (lower) illuminator: at least 3 Watt LED light, intensity adjustable

Focus adjustment: Coaxial coarse and fine knobs on both sides

All metal mechanical components

Power supply: AC/DC adapter, 100V-240V (UL approved)

5-year warranty against manufacturing defects

Selecting a Microscope and Camera

The Microscopes and cameras below have been tested by the Soil Food Web School. We have found each of these products to be of a reasonable build quality.

There are two microscopes listed below: One is manufactured by OMAX and the other is by LW Scientific. The build quality and level of customer support is reflected in the price. The Soil Food Web School cannot be held responsible for any manufacturer defects or for the performance of the equipment listed below.

There are several cameras to choose from. We recommend that you select the best camera you can afford. The quality of the camera you select will affect the quality of the images and videos that you are able to produce. The quality of the camera will also affect what can be observed when "remote viewing" - this is when you might want someone in another location to see what's in a sample over a Zoom meeting or Skype call. Some people are able to adequately perform remote viewing sessions with a 3MP USB2 camera. But for others this is not possible. This is

because several other factors come into play, such as: The specification of the computer, the operating system, the internet connection, the graphics card etc..

The Megapixels and the USB Connection are both factors that should be taken into consideration when selecting a camera. The higher the Megapixels, generally speaking, the better the image. USB3 offers a significant advantage over USB2.

SFS Verified Microscopes			
Number	Description (basic spec)	Price	Amazon Link
1.	OMAX 40X-2000X Trinocular Biological Compound Microscope with Replaceable [3Watt] LED Light	\$320	https://www.amazon.com/OMAX-Trinocular-Biological-Microscope-Replaceable/dp/B00FG8B5DW/ref=sr_1_1?keywords=OMAX+40X-2000X+TRINOCULAR+BIOLOGICAL+COMPOUND+MICROSCOPE+WITH+REPLACEABLE+LED+LIGHT&qid=1567637259&s=gateway&sr=8-1
2.	Revelation III Trinocular Microscope 40X-2000X Trinocular Biological Compound Microscope with [Replaceable 3Watt] LED Light	RRP \$1,030. Discounted to \$515 with special coupon code SOIL50	https://www.lwscientific.com/products/revelation-series?variant=1057486377
SFS Verified Cameras			
Number	Description (basic spec)	Price	Amazon Link
1.	OMAX 3.2MP Digital USB Microscope Camera with Advanced Software and Calibration Slide (Windows 8 & 10, Mac OS X, Linux Compatible) <ul style="list-style-type: none"> ● 3.2MP ● USB 2.0 	\$132	https://www.amazon.com/OMAX-Microscope-Advanced-Calibration-Compatible/dp/B00FG89CFK/ref=sr_1_1?dchild=1&keywords=OMAX+3.2MP+USB+DIGITAL+CAMERA+FOR+MICROSCOPE+WITH+0.01MM+CALIBRATION+SLIDE+

			%28WINDOWS%2FMAC%2FLINUX%29&qid=1594323409&sr=8-1
2.	<p>OMAX 5.0MP Digital USB Microscope Camera with Advanced Software and Calibration Slide (Windows 8 & 10, Mac OS X, Linux Compatible)</p> <ul style="list-style-type: none"> • 5MP • USB 2.0: 	\$176	https://www.amazon.com/OMAX-Microscope-Advanced-Calibration-Compatible/dp/B00FG89DR2/ref=sr_1_7?dchild=1&keywords=OMAX+5.0MP+USB+DIGITAL+CAMERA+FOR+MICROSCOPE+WITH+0.01MM+CALIBRATION+SLIDE&qid=1594323180&sr=8-7
3.	<p>OMAX 5MP USB3.0 Digital Camera for Microscope with 0.01mm Calibration Slide (Windows 8 & 10, Mac OS X, Linux Compatible)</p> <ul style="list-style-type: none"> • 5MP • USB 3.0: 	\$282	https://www.amazon.com/OMAX-Digital-Microscope-Calibration-Compatible/dp/B014V6MEUM/ref=sr_1_1?dchild=1&keywords=OMAX+5.0MP+USB+DIGITAL+CAMERA+FOR+MICROSCOPE+WITH+0.01MM+CALIBRATION+SLIDE&qid=1594323150&sr=8-1
4.	<p>OMAX 8MP USB3.0 Digital Camera for Microscope with 0.01mm Calibration Slide (Windows/Mac/Linux)</p> <ul style="list-style-type: none"> • 8MP • USB 3.0 	\$275	https://www.amazon.com/OMAX-Digital-Microscope-Calibration-Windows/dp/B01D915B3W/ref=sr_1_1?dchild=1&keywords=OMAX+8MP+USB3.0+DIGITAL+CAMERA+FOR+MICROSCOPE+WITH+0.01MM+CALIBRATION+SLIDE+%28WINDOWS%2FMAC%2FLINUX%29&qid=1594323657&sr=8-1
5.	<p>MiniVID WiFi Microscope Camera</p> <ul style="list-style-type: none"> • 5MP • Connect with either Wi-Fi or USB2 • Please note, iOS11 or higher is required • Mac OS is not supported 	<p>\$699 Reduced to \$349.50 with discount code: SOIL50</p>	https://www.lwscientific.com/products/minivid-wifi-camera?variant=32840281456726

Special Package Deal from LW Scientific:			
6.	Soil Food Web Premium Microscope Kit <ul style="list-style-type: none"> • Revelation III Trinocular Microscope • MiniVID WiFi Microscope Camera <ul style="list-style-type: none"> ○ 5MP ○ Connect with either Wi-Fi or USB2 ○ Please note, iOS11 or higher is required ○ Mac OS is not supported 	RRP \$1,730 Reduced to \$865 with discount code: SOIL50	https://www.lwscientific.com/products/soil-food-web-microscope-kit?_pos=9&_s_id=30f750bd0&_ss=r

*LW Scientific has offered SFW Students 50% off all of their microscopes and cameras with the discount code: **SOIL50**. The SFW Premium Microscope kit (both the microscope and camera) have been verified by SFW.*

Microscopy Supplies

(Please NOTE: The blue links provide examples, only. These exact products may not be available in your area or may be out of stock. You can find other brands that meet the same specifications.)

1. [Optical Lens Cleaner](#) – Works for all lenses of microscopes - objectives, eyepieces, etc.
2. [Slides](#) – Size: 1" x 3" x 0.04" (25.4x76.2x1mm)
3. [Coverslips](#) – 18mmx18mm Square Microscope Glass Cover Slides
4. [Transfer Pipettes](#) – Karter Scientific 206H2 - 3ml Graduated Transfer Pipettes, Vol 7ml, 1/2ml Graduations, 155mm
5. [Test tubes](#) – Size: 15ml, Conical bottom, Plastic, with screw top Lid, 1ml graduations
6. [Lab Scoop](#) – Stainless Steel Scoop for easily transferring samples to test tubes
7. [Microscope Stage Micrometer](#)– This may come with your microscope, but if you don't have one, you will need to purchase one like or similar to this

You will need to budget around \$50 for these supplies.