



Acquire a Light Compound Microscope (Required in Unit 2)

Check your local library and homeschool community to see if you can borrow one, before you purchase. They are often easy to find in these ways.

- Specifications Required:
 - Magnification 40-1000x
 - Illuminated (mirror or electric)
- Some recommendations, if purchasing:
 - [AmScope M150C-I 40X-1000X All-Metal Optical Glass Lenses Cordless LED Student Biological Compound Microscope \(\\$74.99\)](#)
 - [ZENY 40X-1000X Magnification Cordless All-Metal Optical Glass Lenses Cordless LED Illumination Biological Compound Microscope for Students \(\\$ 57.99\)](#)
 - [National Optical 40x-1000x Student Science Compound Monocular Microscope for Kids, WF10x and WF25x Eyepieces, LED Illumination \(\\$69.99\)](#)

Other items to purchase (Required on the schedule below):

These should be purchased from [Home Science Tools](#):

- Bromthymol blue solution 0.04% Aqueous Laboratory Grade (100ml bottle)
[\(SKU: CH-BROMOBL\) \\$3.90](#)
- Protozoa culture kit
[\(SKU: LM_PROTIST\) \\$6.95](#)
- Microscope slide set
[\(SKU: MS-SLIDSET\) \\$7.80](#)
- Dissecting tools
[\(SKU: DE-SET1\) \\$9.80](#)
- Animal specimen set of 9
[\(SKU:PM-SPEC-3\) \\$23.50](#)

These items should be purchased. Any source is fine:

- Mead Quadrille Notebook
- Mead Composition notebook or Note taking notebook
- Black or Blue indelible ink pen
- Pencils
- Ruler with both inches and centimeters
- Calculator



Complete Materials List by Lab:

What follows is a list of materials for each lab. The majority of the materials are common household items. Students should ensure that all materials are ready before work is begun on each lab throughout the year. Items on the purchase list above are marked with an asterix.

SEMESTER ONE

Properties of Water

- 1 bottle distilled water
- 1 small container of isopropyl alcohol or ethanol
- 2 pennies
- 2 plastic pipette or medicine dropper
- 2 small metal paper clips
- 2 stirrers (popsicle sticks or spoon)
- 4 small clear plastic cups
- About 2 tbsp. salt
- Measuring spoon
- Paper towel for cleaning

Osmosis Lab

- 10 fresh eggs
- 1 large glass jar that can fit in all the eggs
- Enough white distilled vinegar to cover the six eggs
- 8 clear plastic cups or glass jars to place individual egg
- 800ml or 4 cups of water
- 400ml or about 4 cups of clear corn syrup
- 2 tbsp. of clear corn syrup mixed with 2 cups water
- Measuring cups and spoons
- Food scale in grams or measuring tape in centimeter
- Paper towel for cleaning

Cellular Respiration Lab

- 2 empty plastic water bottles
- Bromthymol blue solution, 0.04% Aqueous Laboratory Grade, 100ml bottle*
- 2 straws
- Stopwatch
- 1L distilled water

DNA Extraction Lab

- 1 clear cup (0.4 oz) or glass test tube
- ½ cup water
- 1 tsp salt
- 2 drops of liquid soap
- 70-90% alcohol (chilled)
- 2-3 Toothpicks

Meiosis Activity

- 2 different colored pipe cleaners (four for each color)
- 6 plastic beads
- 3 big white paper plates
- 2 small white paper plates
- Scissors
- Black marker



SEMESTER TWO

Bacteria and Protist Mini-Lab

- Protozoa culture kit*
- Microscope slide set*
- 1 pipet
- Light compound microscope*

Flower Dissection Lab

- 1 daffodil flower or daylily
- Dissecting tools*
- 1 Microscope slide
- 1 pipet
- Light compound microscope
- Water

Animal Dissection Lab

- Animal specimen set of 9*
- Dissecting tools*
- Goggles
- Apron
- Gloves
- 1 Gallon Ziplock bag
- 1 plastic container with lid to store specimens