



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 \(\\$74.99\)](#)
 - [Bebang 100X-2000X Microscopes for Kids Students Adults, with Microscope Slides Set, Phone Adapter, Powerful Biological Microscopes for School Laboratory Home Education \(\\$84.99\)](#)
 - [National Optical 40X-1000X Compound Microscope Set with Slides for Students and Kids Biology Cordless Beginner Microscope All Metal \(\\$89.99\)](#)

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

These should be purchased from [Home Science Tools](#). If any links have changed, search the SKU.

- Bromthymol blue solution 0.04% Aqueous Laboratory Grade (100ml bottle)
[\(SKU: CH-BROMOBL\) \\$4.95](#)
- Protozoa culture kit
[\(SKU: LM_PROTIST\) \\$7.95](#)
- Microscope slide set
[\(SKU: MS-SLIDSET\) \\$8.50](#)
- Dissecting tools
[\(SKU: DE-SET1\) \\$11.95](#)
- Animal specimen set of 9
[\(SKU: PM-SPEC-3\) \\$24.95](#)

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 asterisk.

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

- 7 water bottles
- 7 to 9" balloons
- 12 tbsp. white granulated sugar (or 12 sugar cubes)
- 14 tsp. dry activated yeast
- 6 cups warm water

Materials List 2022-23



- 1 cup cold water measuring tape (cm)
- measuring cups and spoons

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

Blood Type Pedigree Lab

- 100ml whole or 2% milk
- Red and green food coloring
- 200ml water
- 100ml white distilled vinegar
- 4 droppers or plastic pipettes
- 3 popsicle sticks or plastic spoon for stirring
- 6 plastic cups
- Permanent marker for labeling



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