

Consolidated List of Experiment Supplies

Many of the experiments in this course require a kit that contains some specialized equipment and chemicals, which are listed below:

Contents of the Experiment Kit

| | |
|--------------------------------|---------------------------|
| Safety goggles | Watch glass |
| Funnel | Filter paper |
| Two 50-mL graduated cylinders | Litmus paper |
| Two medicine droppers | Alcohol burner |
| Mass scale (accurate to 0.1 g) | Thermometer |
| 250-mL beaker | Stirring rod |
| 100-mL beaker | Sodium hydroxide (40 g) |
| Four test tubes | Strontium chloride (20 g) |
| | Cupric sulfate (40 g) |

Other Materials for the Experiments

In addition to the kit, there are some readily available things you will need in order to do the experiments. Most of them are items you have around the house, but there are some you may have to purchase ahead of time. They are printed in bold in the chapter-by-chapter list given below:

- 4 eggs
- A $\frac{1}{8}$ measuring teaspoon
- A $\frac{1}{4}$ measuring teaspoon
- A $\frac{1}{2}$ measuring teaspoon
- A measuring teaspoon
- A measuring tablespoon
- A $\frac{1}{2}$ -cup measuring cup
- A 9-volt battery
- A bar of soap (It doesn't have to be a new bar.)
- A battery (any of the smaller conventional sizes, such as AAA, AA, or C)
- A bowl
- A can or bottle of soda pop that has been in the refrigerator and has not been opened.
- A candle that can stand on its own or is in a holder
- A canning jar (It needs to be a transparent jar that can withstand big temperature changes and has an airtight lid.)
- A clear plastic cup
- A dish towel
- A feather (It can be one you found outside or one purchased from a craft store. If you are using one you found, please note that many bird feathers, like eagle and hawk feathers, are actually illegal to have, even if you just pick them up from the ground. Duck and goose feathers are legal. You want a feather that is at least partially flat. It can't be all fuzzy. Also, the lighter the color, the better. There is a picture on page 97 that shows some examples of the kinds of feathers that will work.)
- A few small pebbles

- A freezer
- A funnel
- A galvanized nail (It should look silvery, not like it is made of iron.)
- A glass casserole dish that is large but fits in the microwave
- A glass cleaner (the kind you use to clean windows)
- A hammer
- A knife
- A lamp with a bare bulb (Remove the shade if there is one.)
- A large bowl
- A lighter or matches
- A magnifying glass (optional)
- A marker or crayon to mark the cups
- A metal object, such as a washer or nut (It should have a mass of at least 5 grams. Ideally, the mass will be 10-15 grams.)
- A metal pie pan
- A microwave oven
- A paper towel
- A pen or sharpened pencil
- A piece of waxed paper
- A pot in which to boil water
- A room that can be made fairly dark and has a sink
- A rubber band
- A ruler that uses both centimeters and inches (or two different rulers, one that uses centimeters and one that uses inches)
- A sheet of paper
- A shiny penny (or any copper coin)
- A sink with a faucet
- A small balloon
- A small ceramic (or other hard material) plate, like the saucer for a coffee cup (It cannot be paper or plastic, as you will burn a small volume of liquid on it.)
- A small cylindrical container, like a pill bottle or the jars in which spices are sold (It needs to be able to hold water.)
- A small jar, like a baby food jar
- A small plate or saucer
- A softcover book
- A spoon for stirring
- A stove
- A strainer
- A towel
- A tub and tile cleaner
- A turkey baster
- A wall mirror
- A weather report that tells you the atmospheric pressure.
- A whisk
- Active dry yeast

- Aluminum foil
- Ammonia
- An Alka-Seltzer tablet (Any effervescent tablet will do.)
- An apple
- An index card
- Baking soda
- Bleach
- Blue food coloring (It must be liquid, not a gel.)
- Cardboard
- Charcoal (you need only four briquettes)
- Chervil (This is an herb. Any leafy herb, such as chopped parsley, will work. It can be dried or fresh.)
- Cooking oil
- Denatured alcohol (You can get this in any hardware store that sells paint. This is the same alcohol you need for your alcohol lamp.)
- Dish soap
- Distilled water (You can get this at any large grocery store. It is sold where the drinking water is sold, but be sure to get a bottle that says “distilled water.” You will use this from time-to-time in the course, so go ahead and get half a gallon, or two liters).
- Eight round balloons (7-12 inch diameter works best)
- Four ½-liter plastic bottles, like the kind in which water is sold
- Four Styrofoam cups
- Hydrogen peroxide (sold in drugstores for disinfecting wounds)
- Ice
- Kitchen tongs
- Laundry detergent (liquid or solid)
- Liquid hand soap (optional)
- Matches or a lighter
- Milk
- Nine Styrofoam cups
- Olive oil (or any other oil that is different from the vegetable oil)
- Orange juice or lemon juice
- Pot holders or oven mitts
- Red (sometimes called “purple”) cabbage
- Scissors
- Soda pop
- Some Play-Doh or modeling clay
- Some string
- Some thread
- Steel wool
- Sugar
- Table salt
- Tape (Masking tape is best, because you are using it to mark the water level in a glass.)
- Three small glasses, like juice glasses
- Three tall glasses of roughly the same size
- Toothpicks (You need only one, but you might want a spare or two.)

- Two antacid tablets (TUMS or some other antacid whose active ingredient is calcium carbonate.)
- Two metal thumbtacks
- Two paper plates
- Two plastic bags
- Vegetable oil
- Water
- Waxed paper
- White Vinegar
- Yogurt (optional)