

Everyday Chemistry

Book

Everyday Chemistry, Heron Books

Other Materials

- a room that can be darkened
- hot plate
- microwave
- propane gas burner/flame
- sink or fireproof surface/tray

SUPPLIES

- microwave safe container
- 10 mL syringe without needle (an oral syringe from a pharmacy is just right)
- 2 insulated copper wire stiff enough to hold its shape (about 1 ft. long)
- aluminum foil
- apron (for you and your partner)
- batteries: 6-v (2) (a 12-volt DC transformer could also be used)
- beaker (2)
- black light
- bright light bulb on a stand
- cabbage juice indicator (commercial, such as Red Cabbage Jiffy Juice, or homemade which the students does as an optional activity)
- candles:
 - birthday candle
 - short
 - that stand by themselves (2 of them)
- clay
- cloth or sponge
- connector wires (at least 1 ft. long) with alligator clips attached to both ends: 3 of them, with alligator clips attached to both ends (at least 1 ft. long)
- cotton swabs like a Q-tip
- cotton wads
- dishwashing liquid (different types)
- disposable rubber or plastic gloves
- eye dropper

- | | |
|--|---|
| <input type="checkbox"/> filter or filter paper (like coffee filter) | <input type="checkbox"/> pennies (4 shiny) |
| <input type="checkbox"/> food colors; red, yellow, blue | <input type="checkbox"/> protective eye wear (for you and your partner) |
| <input type="checkbox"/> hammer | <input type="checkbox"/> scissors |
| <input type="checkbox"/> lighter | <input type="checkbox"/> sponge |
| <input type="checkbox"/> magnifying glass | <input type="checkbox"/> steel wool pad (not soaped)
("0000" steel wool pads is the thinnest and works best) |
| <input type="checkbox"/> masking tape | <input type="checkbox"/> tape |
| <input type="checkbox"/> wooden matches | <input type="checkbox"/> test tubes and tube holder: 20 mL or larger (3 identical) |
| <input type="checkbox"/> old washcloth | <input type="checkbox"/> transparent beaker or cup, about 1 cup (250 mL) |
| <input type="checkbox"/> paper: | <input type="checkbox"/> timer |
| <input type="checkbox"/> notebook for recording results | <input type="checkbox"/> tongs or large tweezers |
| <input type="checkbox"/> paper towels | <input type="checkbox"/> small tweezers |
| <input type="checkbox"/> sheets of white paper | <input type="checkbox"/> white glue, or polyvinyl acetate |
| <input type="checkbox"/> waxed paper | <input type="checkbox"/> wire stripper or knife |
| <input type="checkbox"/> pens: | <input type="checkbox"/> wood splint (wooden coffee stirrer) |
| <input type="checkbox"/> a set of highlighters | <input type="checkbox"/> wooden coffee stirrers—5 or more |
| <input type="checkbox"/> ballpoint pen with blue ink | |
| <input type="checkbox"/> marker (thin) | |
| <input type="checkbox"/> pencils #2 (2 of them) | |
| <input type="checkbox"/> permanent marker | |

DISHES

- | | |
|--|--|
| <input type="checkbox"/> 4 jars ½ pint or larger (same size) with tops | <input type="checkbox"/> cork or rubber stopper for bottle |
| <input type="checkbox"/> bottle cap or similar small container | <input type="checkbox"/> cups: |
| <input type="checkbox"/> bowl | <input type="checkbox"/> a cup |
| <input type="checkbox"/> bowl or other container large enough to lay the test tube flat inside | <input type="checkbox"/> disposable (for glue) |
| <input type="checkbox"/> clean slender stick, such as a coffee stirrer | <input type="checkbox"/> measuring cup |
| | <input type="checkbox"/> paper cups (4 small) |
| | <input type="checkbox"/> gallon container |

- glass bottle (half-liter or less) used for carbonated drinks
- glasses or jars
 - 2 small, clear, heat-proof
 - 2 drinking glasses or beakers (heat resistant)
 - 1 large, clear, heat-proof
 - small but not too short
 - second beaker or small glass
- knife
- measuring spoons
- plastic bottle—500 ml or larger with lid
- plastic soda bottle—16 oz, or half-liter
- plastic soda straw, not too narrow
- plates:
 - flat glass plate
 - small clean plate
 - paper or plastic plate
- quart jar or bottle with cap
- small mouth bottle
- small pan
- spoon or other mixing implement
- zip-lock sandwich bag

FOOD

- cooking oil or mineral oil
- egg, hard-boiled
- fresh, bright-green, thin leaf such as spinach (preferred), leaf or butter lettuce (many others may do as well)
- lemon juice
- milk:
 - a cup of milk other than nonfat - can be from powdered
 - nonfat milk
- red cabbage
- slice of apple, potato or another vegetable
- sugar
- sugar cubes
- table salt
- tonic water in a clear glass bottle (not club soda or soda water). It does not need to be opened.
- vinegar, regular and white
- water:
 - distilled
 - tap
- yeast (packets or dried)

CHEMICALS

- antacid tablets that contain calcium carbonate (2)
- baking soda
- Borax™ laundry powder
- chemicals to test (a selection of at least 5 from this list):
 - boric acid
 - calcium chloride or calcium mineral supplement
 - copper chloride or copper sulfate
 - iron powder or iron supplement
 - magnesium sulfate (Epsom salt)
 - salt substitute or cream of tartar
 - strontium chloride or flare material
 - zinc powder or zinc supplement
- dilute HCl, or washing soda
- dilute NaOH, or vinegar
- Epsom salt (magnesium sulfate)
- household ammonia cleaner
- hydrogen peroxide—6% (from hair dresser) or 3% from drugstore
- isopropyl alcohol (approx. 90%)
- liquid chlorine bleach
- liquid dish soap or detergent
- Manganese dioxide (MnO_2), sodium iodide (NaI) or potassium iodide (KI)
- Milk of Magnesia
- mossy zinc (purchase online)
- potassium nitrate fertilizer (from garden store) (cigarette ash could also be used)
- Various substances to test such as:
 - lemon, grapefruit or orange juice
 - plain yogurt
 - hydrogen peroxide
 - soil in water
 - milk
 - distilled water
 - powdered antacid
 - liquid soap
 - toothpaste
 - egg white
 - Milk of Magnesia
 - oven cleaner
 - toilet bowl cleaner
- washing soda (sodium carbonate)
- zinc sulfate (from garden store)

