

Shopping List for 4th Grade: Electricity

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How many of these items do you already have? We've tried to keep it simple for you by making the majority of the items things most people have within reach (both physically and budget-wise). NOTE: some materials (such as alligator wires, batteries and battery cases) can be used more than once if you dismantle previous experiments.

- [1.5-3v DC motors, 3-4 \(Jameco 231925 - can also be taken from old toys or personal fans\)](#)
 - 4-6" piece of steel or (uninsulated) copper wire
 - 9v battery, 2
 - 9v battery clip
 - AA batteries, 20 (NOT alkaline, if possible)
 - [AA battery case, 10 \(Jameco 216081 – can also be taken from old toys\)](#)
 - [alligator wires, 25 \(at least 10 -Jameco 10444\)](#)
 - aluminum foil
 - baking soda
 - balloon (7-9" round)
 - brass fasteners
 - bubble juice
 - [buzzer](#) (3-6 volt)
 - [CdS cell](#)
 - comb
 - copper strips, 2 (or shiny copper pennies)
 - [copper sulfate \(MSDS\)](#)
 - cup
 - dill (dried)
 - [DPDT relay](#)
 - drill (with adult help)
 - fluorescent bulb (burnt-out bulbs are fine to use)
 - foam block (any kind will do that is at least 2" on each side)
 - glass jar, 3 (one with lid)
 - head of hair
 - hot glue gun and sticks
 - index card
 - LED, 6 (any)
 - lemon (large - or other fruit)
 - long match (or popsicle stick and a match)
 - masking tape
 - metal objects (zippers, chairs, etc.)
 - metal tray (shiny)
 - multimeter
 - neon bulb
 - nylon stocking (AKA 'panty-hose')
 - OPTIONAL: digital multimeter
 - OPTIONAL: propeller
 - OPTIONAL: SPST switch
 - packing peanuts
 - paper clips (large)
 - penny
 - ping pong ball
 - plastic grocery bag
 - popsicle sticks (large size)
 - potentiometer
 - razor (with adult help)
 - rubber bands
 - salt
 - sand paper
 - scissors
 - silverware (not stainless, real silver)
 - sink
 - skillet
 - [sodium sulfate](#) (OR salt)
 - spoon (large)
 - stove (with adult help)
 - tape
 - test tubes, 2
 - thin sponge (or foam square - about 1" square)
 - tissue paper
 - vegetable oil (or mineral oil)
 - vice grips
 - vice grips (or a hacksaw)
 - water
 - wire coat hangers
 - wires, 2 (one copper, at least 12", with bare ends)
 - wood block (or foam)
 - wood clothespins
 - wooden skewers, 10
 - wool sweater (or scarf)
 - yardstick (or meterstick)
 - zinc strip
 - yarn (12")
- OPTIONAL (for advanced students):
- [MPF 102](#) (buy 2 – one for back up)
 - vinegar (distilled white)
 - bleach (IMPORTANT: wear goggles)
 - electrodes
 - glass container

- real silverware (not stainless)
- shiny nail (galvanized)
- dull nail (iron)
- wood screws (brass)
- copper pennies (minted prior to 1982 - OR a section of copper pipe)
- graphite (from a pencil)
- alligator wires, 2
- activated charcoal
- paper towel
- alligator wires, 2