

# Shopping List for 4<sup>th</sup> Grade: Magnetism

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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.

- 1/2" strip from soup can
- 9-18V DC motor
- 9V battery with clip, 3
- AA batteries, 11
- AA battery case, 5
- alligator wires, 12
- aluminum foil
- amplified speaker (like an iPod speaker)
- audio plug ([RS #42-2420](#) or other cable that fits into your stereo)
- baby oil (or vegetable oil)
- bowl
- brass fasteners
- business cards, 3
- candle (with adult help)
- cardboard
- cereal
- clay (or foam or tissue)
- compass
- copper wire
- D cell battery, 2
- disposable cup (plastic)
- film canisters, (or small containers like M&M containers)
- foam blocks
- foam plate
- framework to hold Curie heat engine (check video first)
- gloves
- goggles
- hammer
- hot glue gun
- index cards
- insulated wire, 3' (at least - magnet wire works best, but others will do)
- large ceramic magnet
- LEDs (bi-polar)
- magnet wire (thin, 26-28g)
- magnet wire (AWG 30 or 32)
- masking tape
- medicine dropper
- metal bolt with nut and large washer
- milk
- nails (that can be picked up by a magnet)
- old toner cartridge from a laser printer or copy machine
- OPTIONAL: 1/2" (12 mm) ball bearings, 9
- OPTIONAL: drill
- OPTIONAL: toilet paper tube or paper towel tube
- paper
- paperclips
- pen
- plastic bag
- plastic cup (disposable, with lid)
- pliers
- popsicle stick
- reed switch
- relay
- rubber bands (thick)
- ruler (wood or plastic with groove in the center)
- sandpaper
- scissors
- several magnets (an assortment - some ceramic so that you can break them; 3 that are identical; 7+ round ones, [a donut-shaped magnet](#), a tiny bead magnet, and 4 strong ones - neodymium or similar)
- shallow dish (or use the bathtub)
- small screw
- steel ball bearings , 9 (1/2", 5/8", or other sizes)
- string
- super-strong magnets, 4 (try 12mm or 1/2" neodymium magnets)
- tape
- water
- wire (stripped on both ends)