

# Shopping List for 6<sup>th</sup> Grade: Energy

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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).

- 2-liter soda bottle
- 3/4" [pipe foam insulation](#) (NOT neoprene and NOT the kind with built-in adhesive tape)
- alcohol burner (you can [build one out of soda cans](#) or Sterno canned heat)
- alligator clip leads
- aluminum foil
- apple (or something that weighs about 100 grams (or 4 ounces))
- balloons
- bathtub (or sink)
- board (or book or car track)
- can (with lid)
- CDs, 3 (old ones!)
- coin
- copper flashing sheet, 1/2 square foot (check the scrap bin at a hardware store)
- copper tubing (1/4" diameter and 12" long)
- copper tubing (1/8"-1/4" dia x 12" long)
- DC motor (1.5 - 3v)
- DC motor (9-18V)
- dowel (short, or a cardboard tube from wire coat hanger)
- drill (with 1/16" bit)
- [drinking bird](#)
- electric fan
- electric stove (NOT gas - with adult help)
- electrical tape
- electrical wire (3- conductor solid wire)
- Energy
- fat marker (for wrapping things around, not writing)
- fishing line (15lb. test or similar)
- foam block
- foam block (about 6" long)
- freezer
- heavy rock (or large nut)
- hole punch
- hot glue gun
- hot water (not scalding!)
- ice water
- inner tube (old - from a bike wheel)
- lamp (with a single incandescent bulb)
- LED (bi-polar)
- lighter (with adult help)
- lightweight string (about 4 feet)
- long tube (gift wrapping tube or the clear protective tube that covers fluorescent lighting)
- magnets, 6 (at least - more is better)
- magnifying lens
- marbles (at least 4 the same size)
- masking tape
- measuring cups
- measuring tape
- multimeter, digital
- nail (or something else that is pokey)
- nylon bushing (from hardware store)
- one balloon
- OPTIONAL: kitchen scale
- paper
- paper clips
- paper cups
- pennies, many! (or other small items like washers, marbles, quarters - must be small and the same mass)
- penny
- permanent marker
- ping pong ball (or marshmallow, or wadded up aluminum foil)
- pinwheel (can be made from construction paper)
- plastic bottles, 2
- plastic spoon
- pliers
- popsicle sticks (tongue depressor sized)
- propeller (from an old or cheap fan, or balsa wood airplane)
- pulley (from the hardware store... get small ones that spin as freely as possible. You'll need three single pulleys or if you can find one get a double pulley to make our later experiment easier.)
- push pin
- razor

- refrigerator (with a freezer compartment)
- room temperature water
- rubber bands
- ruler
- ruler (wooden)
- salt, 1/4 cup
- sandpaper
- saucepan
- scissors
- sheet metal shears
- shoe box (small - child's size)
- sink
- soda cans, 3
- spool (or eraser or pencil - this will be a fulcrum)
- spray paint, black
- spray paint, white or silver
- steel wool
- stopwatch (or timer)
- straw (longer than the width of the shoebox)
- string
- sunlight (or incandescent light)
- super glue and instant dry
- Swiss army knife (with can opener option)
- syringe (no needle)
- table
- tape
- tea light candles
- [template](#)
- toy cars (or anything that rolls like a skate)
- washer (or a weight of some kind)
- watch (or clock)
- wire cutters