

# A STEM in the Park

## Take Home Activity

# STEM

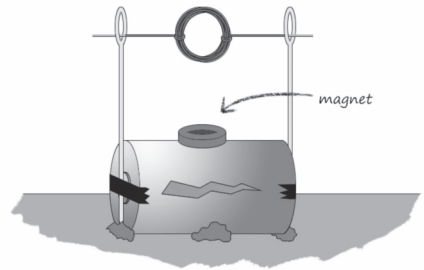
in the **PARK**™

Science, Technology, Engineering, and Mathematics

# Build a Simple Electric Motor

### ***What You Need***

- One AA Battery
- Copper Wire – We used 18 gauge
- A neodymium (rare earth) magnet



### ***What To Do***

- First, cut a section of wire 7 inches long
- Bend a small loop in the wire in the center, then bend both sides down
- Attach your magnets to the negative end of a AA battery
- Now bend each of the ends of the copper wire. You need the both ends of the copper wire to gently touch the magnet. It will take a little bit of work to adjust the copper wire so that it touches the top of the battery and both ends touch the magnet.
- Once you have it just right, the wire will begin to spin!

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## ***The Science***

Electricity flows out of the battery, through the copper wire, and into the magnet. The magnet sends an electrical charge through the other side of the wire and back to the battery, completing the circuit. The wire and the magnet both have electric fields around them, and these fields repel each other, exerting a force on the wire causing the wire to spin.

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