

Name: _____

FUN WITH MAGNETS

ELECTRICITY & MAGNETISM together make a circuit!

Electricity and magnetism are best buddies. Magnets can be used to make electricity, and electricity can be used to magnetize objects. Essentially, everything that operates via electricity gives off its own small magnetic field, and when the object is unplugged, the magnetic field stops.

Voltage is the muscle behind a current, pushing electrons along a circuit so that we can use electricity. If the circuit is broken, the electrons cannot travel and poof — no more electricity.

WHAT YOU NEED:

In this exercise you'll combine these three items to form an electric current and light the lightbulb:



A battery
(D or C)



Aluminum foil
(a 12-inch by 4-inch strip)



A flashlight bulb
(from the hardware store)

WHAT YOU'LL DO:

1. Try to use these items to create a circuit. Try to figure it out yourself first! Go away, and come back in a few minutes. (Stop reading!)



- NEED A HINT?
Squish your aluminum foil to form a thick cable. Continue to try to figure it out yourself.

The Solution:

Were you successful? Yay!
Unsuccessful? Here's how you do it: One end of the foil should be connected to the thread (the part that screws in) on the light bulb. The other end should be connected to the negative end of the battery (the end with the minus sign). The bottom of the light bulb should then be placed on the positive end of the battery. What happens if you flip the battery? Try it, and then write down what you observe! This is just what scientists do!

