

A Magnet's Hidden Power

This exhibit is dedicated to generous Little Free Museum supporter Felipe Gacharná.

Try It Out

Hold the device in front of you with the bars straight up and down, and the ring magnets at the bottom. Quickly turn the device over and watch the magnets fall. What do you notice?

What's Going On

This device, called Eddy Current Rods, demonstrates a number of concepts:

1. A magnet's most important hidden power: it can create electricity! When a magnet moves close to a wire, an electrical current is produced inside the wire.
2. Electricity can create a magnet! When electricity flows within a wire, a magnetic field is produced around the wire. We call this an *electromagnet*.
3. Some materials allow electricity to flow more easily than others. Larger amounts of electricity produce larger electromagnets, repelling the falling magnets and slowing their fall. In the Eddy Current Rods, you can see the slowest magnet means the *most* electricity is produced in the *copper* rod.

Why It Matters

These three concepts are what allow most of the electricity in your home to work.



1. Large spinning *generators* produce electricity by constantly moving magnets close to wires.
(Image: NRC)



2. *Transformers* use electromagnets to send electricity into your home.



3. *Copper* wires send electricity to your electrical outlets.
(Image: HammerZone.com)

While You Walk...

What other "hidden powers" do you know of? For example, what type of energy heats food in your microwave oven? What hidden powers can you imagine are just *waiting* to be discovered?



What will you discover *tomorrow*?

littlefreemuseum.org

We host rotating exhibits on science and technology.
Ideas or suggestions? Let us know.

facebook.com/littlefreemuseum
[@LFMuseum](https://twitter.com/LFMuseum)
info@littlefreemuseum.org

Like us on Facebook
Follow us on Twitter
Send us an email