



10 minutes

Learn how to make your own self-propelling electromagnet car using a battery and magnets.

Understand the Science

- ★ By connecting the battery to the aluminum foil through the magnets, you are creating an electric current.
- ★ The magnets create a strong magnetic field around the battery.
- ★ When a strong magnetic field and an electrically charged metal interact, it creates a force. This is the same force that makes an electric motor work!

Try it!

Step 1:

Make a 1-foot square of aluminum foil and place it on a flat surface.



Step 2:

Rotate your magnets so that they repel each other. Then, attach the magnets to the ends of the battery.



Materials:

- ☐ 1 AAA battery
- ☐ 1 neodymium magnet larger than the battery
- ☐ 1 neodymium magnet larger than the other magnet
- ☐ 1 sheet of aluminum foil

Step 3:

Place the battery with the magnets onto the aluminum foil.



Step 4:

You can also try different sizes of magnets to make the battery roll in different ways.

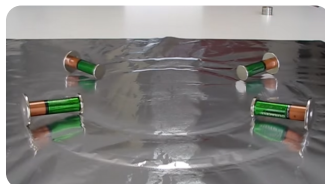
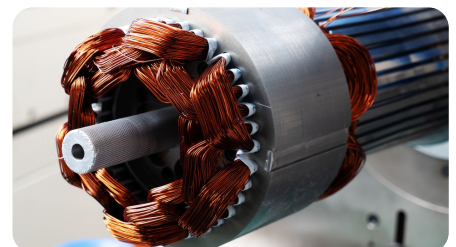


Image credits: Magnet Games on YouTube

Troubleshooting

- If the battery doesn't move, flip the magnets and try again.
- If the battery rolls off the aluminum foil, make a bigger piece of aluminum foil.



This reaction is how an electric motor works! They power electric cars, dishwashers, vacuum cleaners, and more!



Caution: The battery will get very hot, so don't touch it after running the car!