



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences --particularly students of color and girls -- by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at [www.projectexploration.org/stemathome](http://www.projectexploration.org/stemathome).

### In this activity, you will:

Can you move a toy car around without ever touching it? You can, by turning a regular toy car into a magnet-powered car. Push it forward, make it turn, and park it using magnetism, an incredible invisible force.



### Supplies Required:

Masking tape or painters tape  
Toy car  
Bar magnet  
Magnetic wand or horseshoe magnet

### Video

Fun with Magnets: <https://tinyurl.com/5t9uvukb>

### Overview

Magnets have an invisible magnetic field around them that attracts other magnets and magnetic materials. One end of a magnet is the "north" end and the other end is the "south" end. Similar poles (north and north or south and south) repel each other, while poles that are different (north and south) attract each other. If you find that one end of the magnet repels something, flip it around to see if it will attract that same object. In this experiment, the magnetic force is strong enough to propel a toy car around the room.



## Instructions

1. With an adult's permission, use masking tape or painter's tape to make a road on a smooth floor. Add parking lots and other highways on which to drive a toy car.
2. Tape a bar magnet securely to the top of the toy car.
3. Use a magnetic wand to push and pull the car around the floor. See if you can make the car turn around, go backward, and drive along the road without touching it with your hands.
4. Observations Did you find it easier to use your magnet to push or to pull the car along the road?
5. Now Try This! Make several magnet-powered cars and see how they interact as they drive into and next to one another.

## Additional Resources

1. Magnetism: <https://tinyurl.com/ysh645n5>
2. Magnetic Field: <https://tinyurl.com/8mn7m49s>

## Share It Out

Share on social media: Record a video or take a picture of your activity and post the results online using the hashtags:

#MagnetCar  
#ProjectExploration  
#StemAtHome

Tag a friend and challenge them to do it, too!

For more activities like this one, go to [www.projectexploration.org/stemhome](http://www.projectexploration.org/stemhome). If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634



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