



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.

In this activity, you will:

Use a magnet and a few household supplies to quickly and easily figure out exactly which direction is north. Which way is the North Magnetic Pole?



Supplies Required:

- Bar magnet, with north and south clearly indicated
- Tape
- Small plastic storage container with a flat bottom
- Large bowl full of water

Video

Earth and Compasses: <https://tinyurl.com/tcsb8bp6>

Overview

No matter how you move the small plastic container, it will always settle with the magnet pointing to the north. This is because Earth has a magnetic field that pulls on the bar magnet and aligns it facing north-south.



Instructions

1. Tape the magnet inside the bottom of a small plastic storage container.
2. Place the plastic container into a large bowl full of water so that it floats.
3. Wait a few minutes for the small bowl to be still.
4. Observations Which way is north? Spin the small bowl and see if the magnet settles the same way.
5. Now Try This! Magnetize a needle by stroking the needle 20 times in the same direction with one end of the bar magnet. Cut out a small circle of paper and thread the needle through it, as you would a needle through cloth. Don't run the needle all the way through, but leave the needle halfway through the paper with the needle lying flat on the surface. Float the paper in a bowl full of water so that the ends of the needle are on top of the paper and see which direction the needle ends up pointing.

Additional Resources

1. Magnetism: <https://tinyurl.com/ysh645n5>
2. What's a Compass?: <https://tinyurl.com/93uyeakh>

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:

#FloatingCompass
#ProjectExploration
#StemAtHome

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

For more activities like this one, go to 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

www.projectexploration.org