



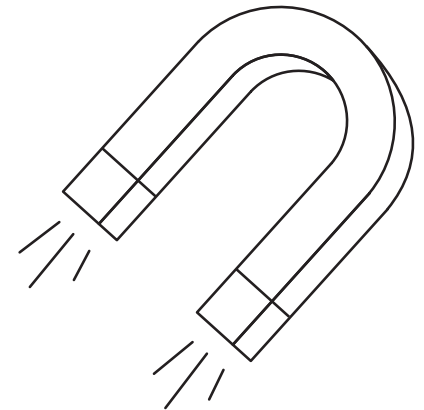
DAY 1

Magnetic Attraction

A magnet has a north and a south pole, which are the ends of the magnet where the external magnetic field is the strongest. Where have you heard of the north and south pole before? The Earth! That is because Earth is a giant magnet, due to the iron and nickel it contains in the form of molten rock. A magnetic field runs between the north and south poles of Earth, much like your little magnet, but it is much stronger and extremely important in sustaining life on our planet.

This magnetic field is the reason why a compass points north, as it is pointing in the direction of the magnetic north pole. In this bonus experiment, you will be making your own compass!

Ask an adult to provide you with the necessary materials and a helping hand during this experiment.



You will need

- Your magnet from day 1
- Water, a bowl, a sewing needle, a flat piece of cardboard, tape

Here's how

1. Fill the bowl with water.
2. Use the tape to attach the sewing needle to the piece of cardboard.
3. Now, you want to magnetize your needle. Point the north pole of your magnet at the eye of the sewing needle (the end with the loop). Run the magnet down the entire length of the needle, from the eye to the pointy end, 20 times.
4. Place your needle on the surface of the water, cardboard side down. It will turn until it is pointing North. You can verify this by comparing it to a compass or use a compass app on a mobile device.



Important! Be extra careful when handling the needle. Make sure not to drop it.



WHAT'S HAPPENING?

Remember when you rubbed the needle with the magnet? This caused the needle to become magnetized, giving the needle a north and south pole, making it interact with Earth's magnetic field. Because the cardboard can float on the water, Earth's magnetic field pulled the magnetized needle so that it pointed north!