

Household magnets

Chances are very good that you have experimented with magnets. People have been fascinated with magnetism for thousands of years. As familiar to us as they may be, magnets still have some surprises for us. Here is a small collection of some of our favorite magnet experiments.

What happens when we break a magnet in half? Radio Shack sells cheap ceramic magnets in several shapes. Get a ring shaped magnet and break it with pliers or a tap with a hammer. Try to put it back together. What happens? Why? Try to find a bar magnet that is magnetized end to end and break that. What is the difference? Can you break off just the north (or just the south) end of a magnet?

Are magnets stronger than gravity? Hold a magnet in the air. Place a nail against it. The magnet holds the nail up against gravity, proving that magnetism is stronger than gravity, right? Now take off the nail and lay it in your hand or on a surface several inches below the magnet. Now which is stronger, gravity or magnetism? What is going on?

How do flexible refrigerator magnets work? Get 2 of these magnets, they are often the size of a business card. If you only have one, then cut it in half with scissors. Put them together printed side to printed side. How sticky are they? Turn one over and try that. Put them together black to black and pull them apart. Turn one 90 degrees. Does it make a difference? With black to black, slide one across the surface of the other. Try it with them turned at different angles to each other. Try sliding them in different directions. What do you feel? Draw a diagram describing what you have figured out.

Make a chaotic magnet pendulum! Hang a magnet on a string from the ceiling or a light fixture (be careful) over a table. Tape other magnets around the area below where the magnet hangs. Swing the magnet and watch its motion. If you want to get fancy, use hot glue to attach a ring magnet to a dowel about a foot long so it hangs facing the table, and tie the string to the other end.