THE INVISIBLE FORCE

by Johanna Knox

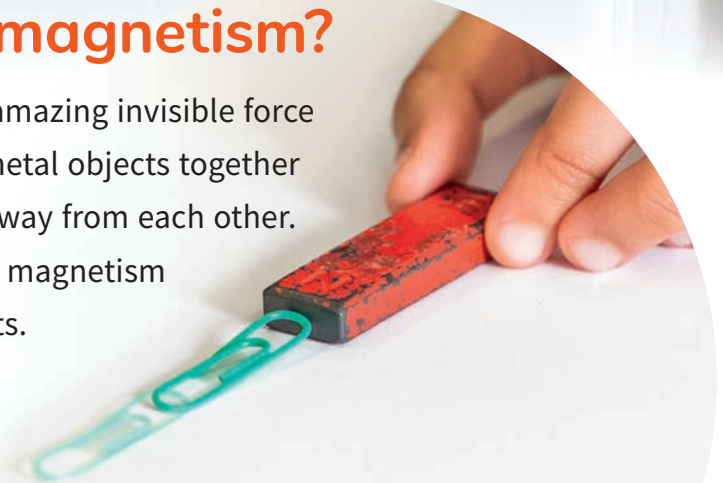
Why do these letters stick to the fridge?

What keeps the fridge door closed?

The answer to these questions is **“magnetism”**.

What is magnetism?

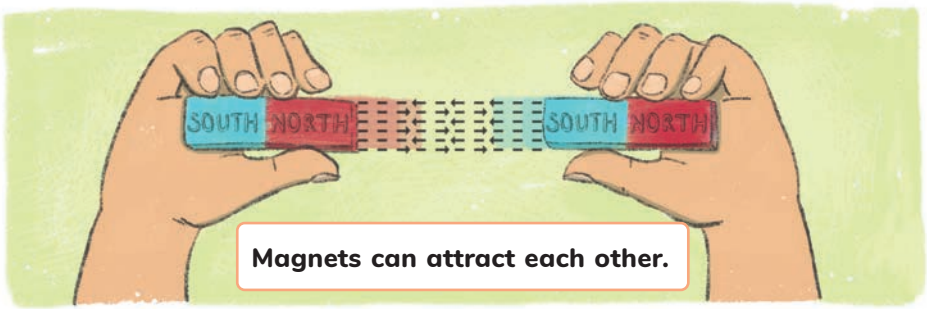
Magnetism is an amazing invisible force that pulls some metal objects together or pushes them away from each other. Objects that have magnetism are called magnets.



If you hold two magnets close to each other, you can feel this invisible force at work. Sometimes the magnets will “attract” (pull towards) each other. If you turn one of the magnets around, they will “repel” (push away) each other.

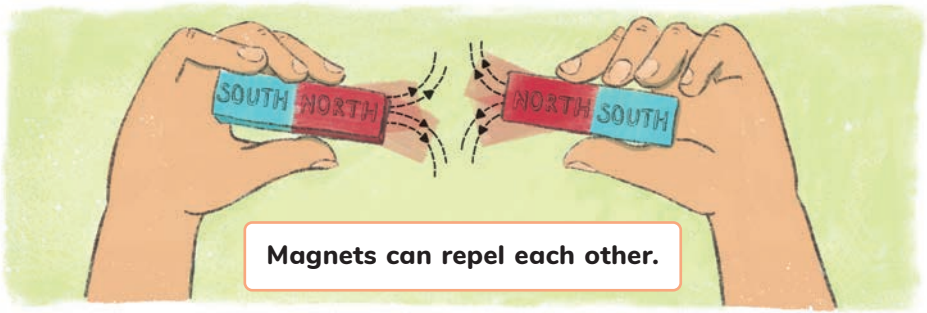
They do this because each end of a magnet is different. The ends of the magnets are called “poles”. One end is called the north pole, and the other end is called the south pole.

If you hold one magnet so that its north pole is facing another magnet’s south pole – bam! They try to join together. Have you ever heard the saying “opposites attract”? It comes from magnets!



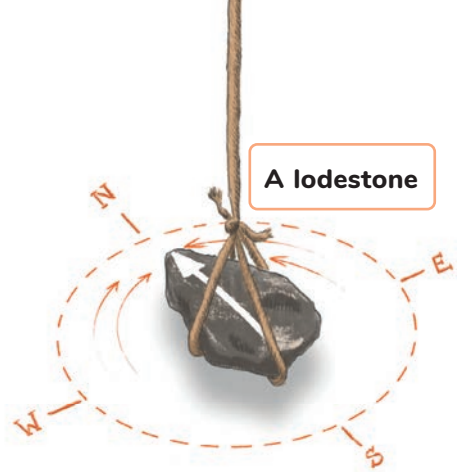
Magnets can attract each other.

But poles that are the same – two north poles or two south poles – repel each other.



Magnets can repel each other.

The first magnets



A lodestone

Thousands of years ago, people in Greece and China discovered that a special kind of stone could attract some metals. This special stone is called a lodestone.

People also found that if they held up a lodestone and let it swing round, the lodestone would always turn to face north. They discovered that they could use lodestones to help them find their way on long journeys. When travellers knew which way was north, they could check where they were and work out which way they needed to go.

Later, people used this idea to make compasses. A compass has a magnetic needle that always points north.

A compass

Magnets today

In 1820, a scientist called William Sturgeon discovered that he could make magnets by sending electricity through some metals. These days, magnets are made this way in factories.

Some magnets can be as big as a room. Others are so small you can only see them with a microscope. Wherever they are and whatever they look like, they all have an invisible force.

A large magnet being used to pick up metal in a factory

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