



Key Vocabulary

force	A push or pull
friction	The rubbing between two surfaces when at least one of them is moving
magnet	An object that is made of materials that create a magnetic field. Magnets have at least one north pole and one south pole
poles	The end of the magnet with the strongest push or pull
attract	A pull
repel	A push

Key Facts

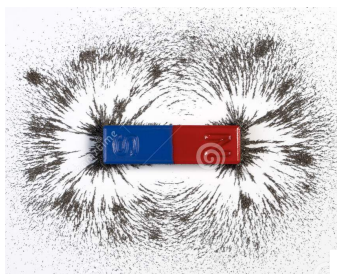
- A force is a push or a pull, it is also a start or a stop.
- Friction is the resistance from two surfaces rubbing against each other. You can feel friction when you rub your hands together as it also makes heat.
- Magnets work without contact. This means they can work through objects such as paper!
- The earth has two magnetic poles (north pole and south pole). Compasses use the earth's poles the help people navigate.
- Opposite poles attract (pull), while similar poles repel (push). North and south are opposite poles.
- Not all metals are magnetic - the main magnetic metals are iron, nickel and cobalt.

Key Questions

- Do different surfaces make different amounts of friction?
- Do all forces need contact?
- Are all objects magnetic?
- Why are there two poles to a magnet?
- What is a force?

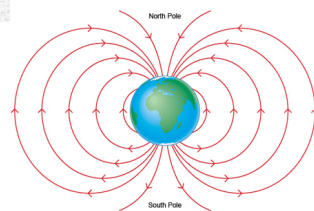
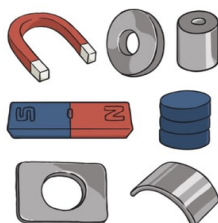
Links to other Learning

- EYFS - ELG: Gross Motor Skills
Move energetically such as climbing and jumping
- Year 1 - Everyday materials
Know the names of simple materials and their properties
- Year 2 - Uses of everyday materials
How a particular material is chosen to make an object because of the properties it has
- Year 5 - Forces
Identify the effects of different forces acting between moving surfaces
- Geography - map skills (location of north and south pole) and compass directions.



A magnet showing its magnetic field using iron filings

A diagram of the Earth's magnetic field



Examples of different magnet types

Famous Scientist

William Gilbert
1544-1603

Gilbert discovered that the earth has two magnetic poles. This led to the understanding of how compasses work. He also paved the way for the discovery of electricity!

