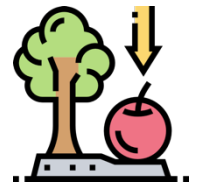


Forces and Magnets



LKS2 Science: Forces and Magnets

Scientific Concepts

Material	The matter from which a thing is or can be made.
Properties	A quality that something is known by e.g. characteristic.
Core Vocabulary	
Friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
Magnetic	Objects which are attracted to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic.
Attract	Attraction is a force that pulls objects together. For example, when a north pole is placed near the south pole of another magnet, the two poles attract (pull together).
Repel	Repulsion is a force that pushes objects away. For example, when a north pole is placed near the north pole of another magnet, the two poles repel (push away from each other).

Images/diagrams

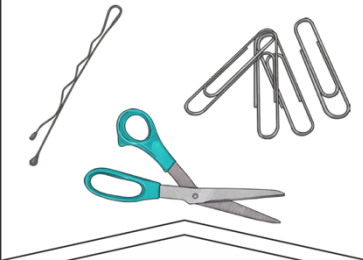
Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

The driving **force** pushes the bicycle, making it move.



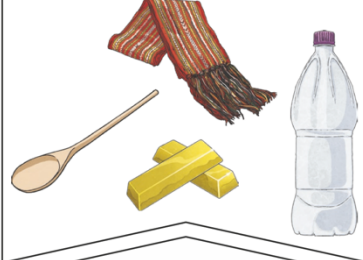
Friction pushes on the bicycle, slowing it down.

Magnetic ✓



These objects contain iron, nickel or cobalt. Not all metals are **magnetic**.

Non-magnetic ✗



These objects do not contain iron, nickel or cobalt.



Bar Magnet

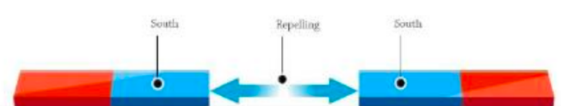
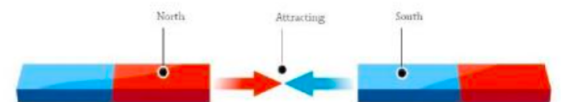


Horseshoe Magnet



Disc Magnet

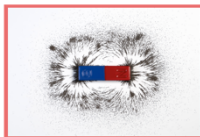
Magnets have north and south poles. These attract each other but two north or two south poles repel each other.



What Is A Magnetic Field?

A magnet has a magnetic field surrounding it.

If we were to place a magnet on a table and scatter iron filings over and around it then we would see the shape of the magnetic field.



Key Knowledge

1	Forces will change the motion of an object. They will either make it start to move, speed up, slow it down
2	The amount of friction created by an object moving over a surface depends on the roughness of the surface and the object, and the force between them.
3	Magnetism is an invisible force that acts between two materials that do not have to be in direct contact.
4	The magnetic field, is the area around the magnet which pulls magnetic objects towards it.
5	The needle in a compass is a magnet, the needle will always point towards the geographic north pole.
6	Magnets have north and south poles. Like poles repel each other and opposites attract.

