Year 3 – Forces and Magnets

ALP Trust Science 2020

Language for Learning

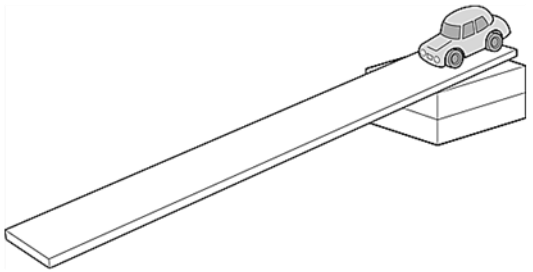
Through the activities in this topic pupils should **understand and precisely use key scientific words - spelling these words correctly**. This includes - words with **different meanings** in scientific and everyday contexts (e.g. drag), words with **precise** scientific meanings (e.g. weight and mass) and words relating to **scientific enquiry** (e.g. variable).

Key Scientific Words

Key Word	Definition (Meaning)
Attract	When a magnet pulls a magnetic material or another magnet towards it
Repel	When a magnet pushes another magnet away from it
Magnetic materials	Magnetic materials are attracted to magnets
Iron	A metal that is a magnetic material
Steel	A mixture made using iron
Magnet	A substance that can attract magnetic materials
Bar magnet	A magnet shaped like a bar
Magnetism	A non-contact force
Magnetic field	The area around a magnet that affects magnetic materials
North pole	One end of a magnet
South pole	One end of a magnet
Compass	A magnet that is free to move – pointing north

Key Concepts

Forces are pushes, pulls or twists

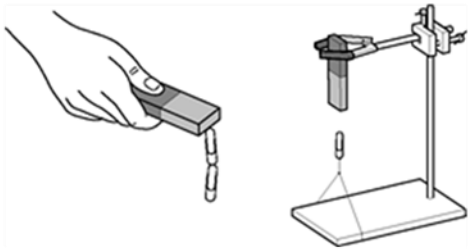


Objects move differently on different surfaces. **Rougher** surfaces cause objects to **slow down** and **stop** most quickly

Magnets and Magnetism

Contact forces need to touch the thing that they are affecting. **Magnetism** is a non-contact force. This means **magnetic forces** can act at a distance.

Magnets attract **magnetic materials**.



Iron is a magnetic material. Mixtures, like **steel**, that include a magnetic material, are also be attracted to a magnet.

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Key Concepts

Substances that are not magnetic material are **not attracted to magnets.** Wood and plastic are examples of materials that are not magnetic materials.

Most metals, like **aluminium**, are not magnetic and will not be attracted to a magnet.

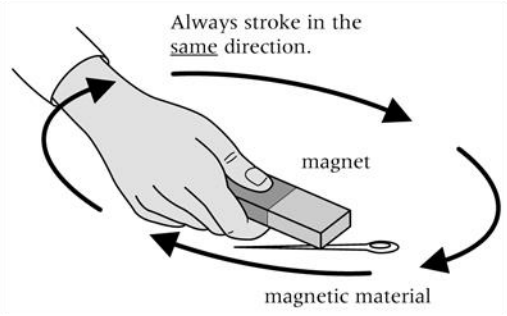
Magnets can be **useful**. Magnets can be used to sort iron and aluminium cans for recycling. Only the iron cans are attracted to the magnet.

The two ends of a bar magnet are called the **north pole** and **south pole**

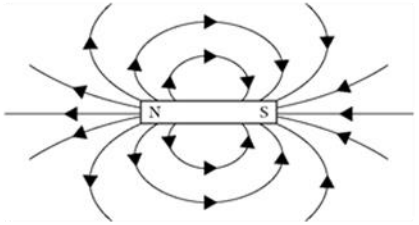
A north pole and a south pole **attract** each other.

Two north poles or two south poles will **repel** (push each other away) each other.

You can **make a magnet** from a piece of iron.



The space around a magnet where it can affect magnetic materials and other magnets is called its **magnetic field**



The **Earth** has a **magnetic field**.