

# Year 3 – Forces and Magnets

ALP Trust Science 2019

## Language for Learning

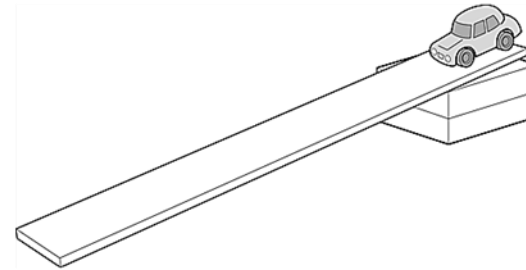
Through the activities in this topic pupils should **understand and precisely use key scientific words - spelling these words correctly**. This includes - words with **different meanings** in scientific and everyday contexts (e.g. drag), words with **precise** scientific meanings (e.g. weight and mass)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

## Key Scientific Words

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

## Key Concepts

Forces are pushes, pulls or twists

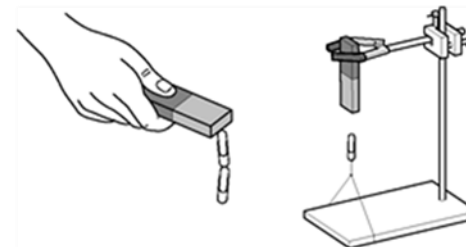


Objects move differently on different surfaces. **Rougher** surfaces cause objects to **slow down** and **stop** most quickly

## 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**

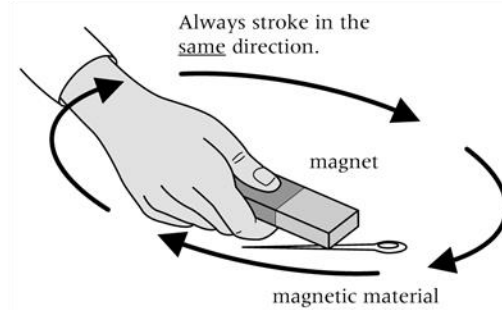
A north pole and a south pole **attract** each other.



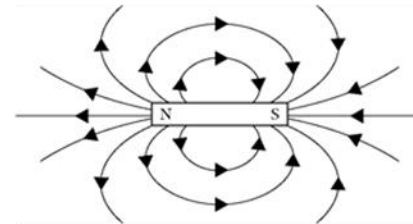
Two north poles or two south poles will **repel** (push each other away) each other.



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**.

