

## Scientist



William Gilbert  
(Magnetism and electricity)



Jyoti Sehdev  
(Senior civil engineer)

## Skills

I'm recording findings using diagrams, charts and tables like an architect.



I'm gathering, recording and presenting data like a seismologist.



## Careers

Architect (designs buildings)

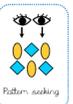
Seismologist (studies earthquakes)

## Enquiries



Which magnet is strongest?

If we magnetise a pin, how long does it stay magnetised for?



Does the size and shape of a magnet affect how strong it is?

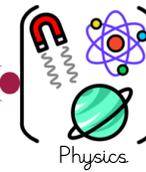
Which materials are magnetic?



How does a compass work?

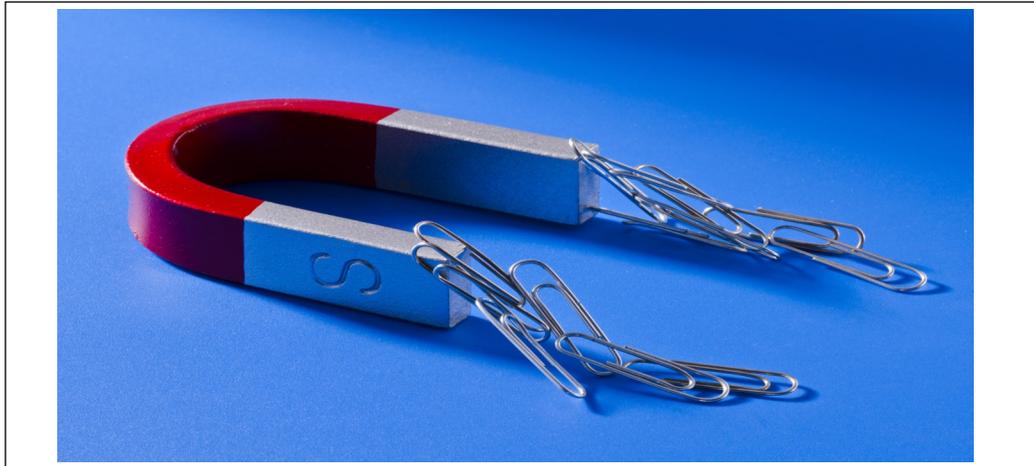


# Y3 FORCES & MAGNETS



## Main idea

Magnets attract or repel each other and attract some materials and not others, depending on how their two poles (North or South) are positioned. Magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (for example, opening a door, pushing a swing).



## What you should already know

Magnets can attract some objects, and each other depending on how they are positioned.

That objects can move if a force, such as a push or a pull, is applied to it. The greater the force, the greater the motion.

## What comes next?

Y5 - the study of gravity and that unsupported objects fall towards the Earth because of the force of it. That air resistance, water resistance and friction, that act between moving surfaces.

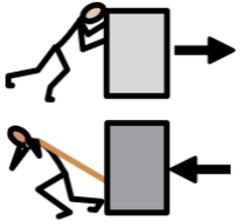
## Key Learning

- Notice that some forces need contact between two objects, but magnetic forces can act at a distance
- Observe how magnets attract or repel each other and attract only some materials
- Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.
- Explore the behaviour and everyday uses of different magnets (for example, bar, ring, button and horseshoe).
- Explore the strengths of different magnets and finding a fair way to compare them

## Key vocabulary

Force  
 Push  
 Pull  
 Surface  
 Magnet  
 Magnetism  
 Magnetic  
 Attract  
 Repel  
 Metal

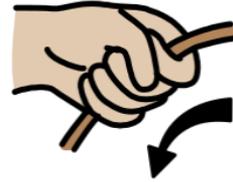
# Year 3: Forces & Magnets



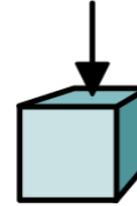
Force: power, energy, or physical strength.



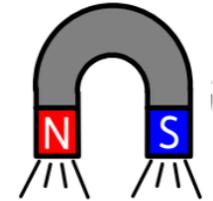
Push: to use pressure against in order to move.



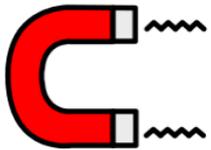
Pull: to take hold of (something) and use force to bring it nearer to oneself.



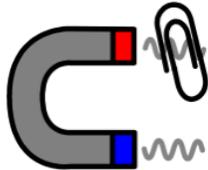
Surface: the outside limit or top layer of something. E.g. Most of the earth's surface is covered by water.



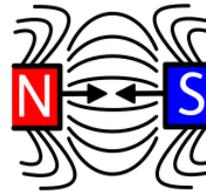
Magnet: a rock or a piece of metal that can pull certain types of metal toward itself.



Magnetism: the force of magnets.



Magnetic: any material or object that is attracted by magnets.



Attract: to pull to or draw toward a magnet.

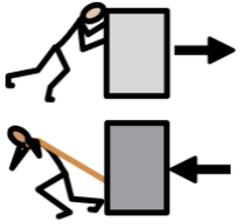


Repel: to force away from a magnet. The opposite of attract.



Metal: any solid mineral element that exhibits certain characteristics such as the ability to conduct heat or electricity.

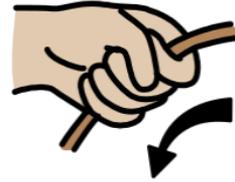
# Year 3: Forces & Magnets



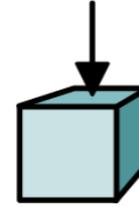
Force



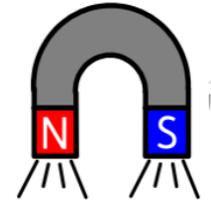
Push



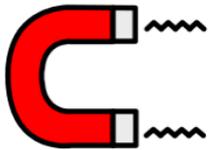
Pull



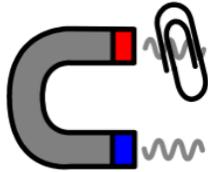
Surface



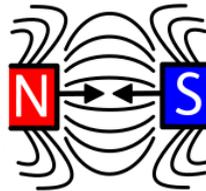
Magnet



Magnetism



Magnetic



Attract



Repel



Metal