

Forces and Magnets



Year Group: 3

Subject Focus: Science

Term: Spring 2

Key facts

- A force is a push or a pull.
- You cannot see forces but you can feel and/or see the effects of them.
- Some forces can only be created when objects come into contact with each other. Other forces (magnetism/gravity) can occur at a distance.
- Magnets can attract and repel each other.
- Magnets have a north pole and a south pole.
- When opposite poles meet the magnets will attract (pull together), when the same poles meet, they repel each other (push away).
- There are different types of magnets e.g. horse shoe, bar magnet, button, ring.

Key people

Andre Marie Ampere – French physicist and mathematician who worked on electro-magnetism
The Wright Brothers – American inventors who built and flew the first planes.

Exciting books/ web links:

Act Normal, Don't Tell Anyone about the Rhinoceros Magnet – Christian Darkin.

<https://www.bbc.co.uk/bitesize/topics/znmmn39>

<https://learning-resources.sciencemuseum.org.uk/resources/magnetic-maze/>

Our Learning Journey:

We Are Learning To

- know that forces are pushes or pulls
- know how friction affects the movement of objects
- identify magnetic materials
- describe the effects of magnetic poles

Our five enquiry types:



Working Scientifically Skills:

In this unit we will be:



Asking Questions



Making Predictions



Observing



Interpreting and Communicating Results



Evaluating

Key words:

force	a push or pull. Forces can change an object's speed, direction, and even shape
push	a force on something to move it away from yourself.
pull	a force on something to move it towards yourself.
friction	friction is the force that resists the motion of objects moving against each other.
magnet	a piece of metal with a strong attraction to another metal object.
attract	a pull to move something closer - for example, a magnet and a paper clip.
repel	a push to force something to move away or apart.
contact force	forces which can act on an object through direct physical contact with it (touching it)
non-contact force	forces which can act on an object without being in physical contact with it
poles	the two ends of a magnet; magnets have a North and a South pole. The relationship between poles impacts the magnetic force.

Parents as partners:

Create 'magnet maze' out of card, then use a magnet held underneath to guide a steel ball around the maze (see weblinks)

Could your child use magnets to create 'magic' floating paperclips (see weblinks)

Make a compass then use this to navigate your way round the garden (or for a treasure hunt!)