



Year 3 Forces and Magnets

Respect,
Believe,
Achieve

As a Scientist, what do I already know?

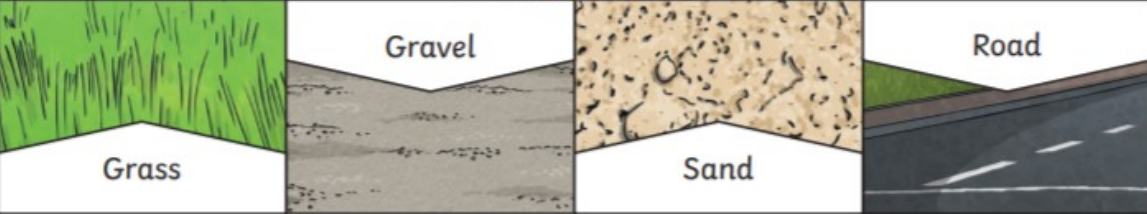
- Objects move when you push or pull them.
- Some things move faster or slower than others.

Vocab/Key Words

forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
surface	The top layer of something.

Key Knowledge

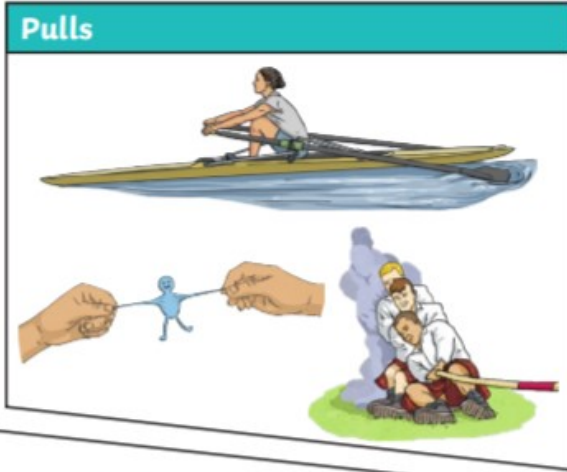
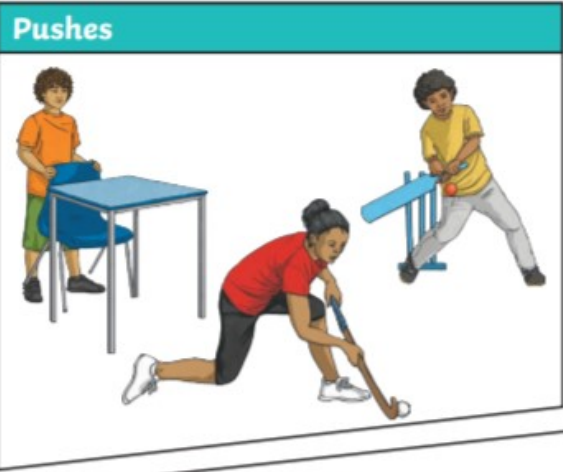
Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.



Key Skills

I should be able to:

- Compare how things move on different surfaces;
- 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 some materials and not others;
- Compare and group together a variety of everyday materials and say whether they are attracted to a magnet;
- Identify some magnetic materials;
- Describe magnets as having two poles;
- Predict whether two magnets will attract or repel each other, depending on which poles are facing.

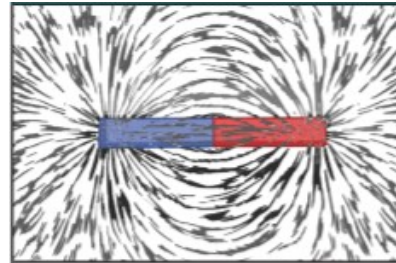


Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.

Vocab/Key Words

poles	North and south poles are found at different ends of a magnet .
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).
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).
magnet	An object which produces a magnetic force that pulls certain objects towards it.
magnetic	Objects which are attracted to a magnet are magnetic . Objects containing iron, nickel or cobalt metals are magnetic .
magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet .

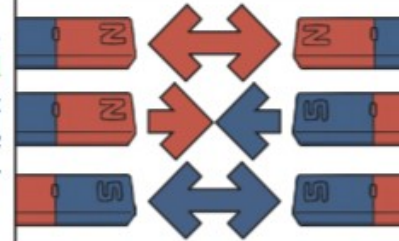
Key Knowledge



Like **poles repel**.
Opposite **poles attract**.



A **magnetic field** is invisible. You can see the **magnetic field** here though. This is what happens when iron filings are placed on top of a piece of paper with a **magnet** underneath.



The needle in a compass is a **magnet**. A compass always points north-south on Earth.

Magnetic ✓



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

Non-magnetic ✗



These objects do not contain iron, nickel or cobalt.

As a Scientist, here's what I will know by the end

I can compare how objects move on different surfaces.

Know some forces need contact between two objects, but magnetic forces can act at a distance.

I have felt magnets attract or repel each other and know they attract some materials and not others.

Compare and group a variety of everyday materials using a magnet and identify some magnetic materials .

Know magnets have two poles.

Predict whether two magnets will attract or repel each other, depending on which poles are facing.

FORCE AND MOTION



Push



Pull



Magnetism



Gravity



Friction



Acceleration

ATTRACTION



REPULSION



OR



Websites for more information

<https://www.bbc.co.uk/bitesize/articles/zg6q96f>

<http://yr4cc.weebly.com/smooth-moves---forces.html>