

Forces and Magnets

What you've learnt already

- describe the simple physical properties of a variety of everyday materials
- compare and group together a variety of everyday materials on the basis of their simple physical properties
- find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching

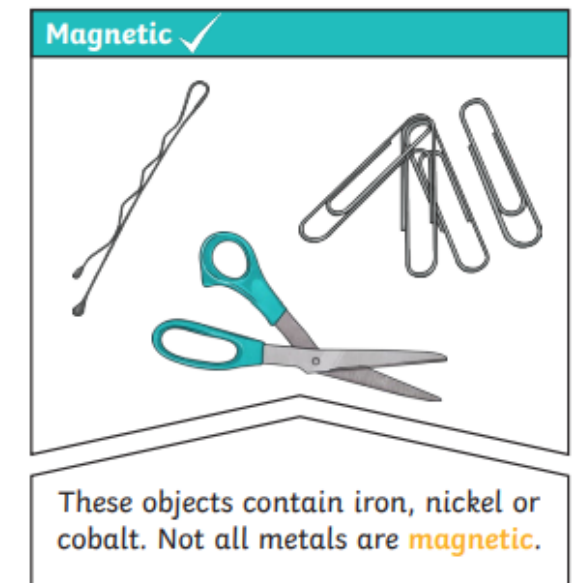
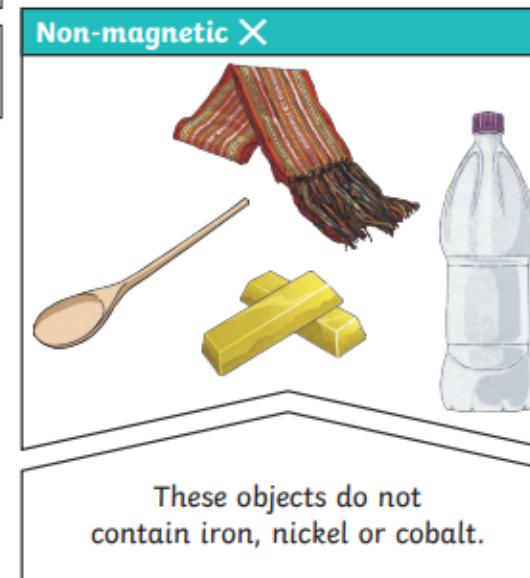
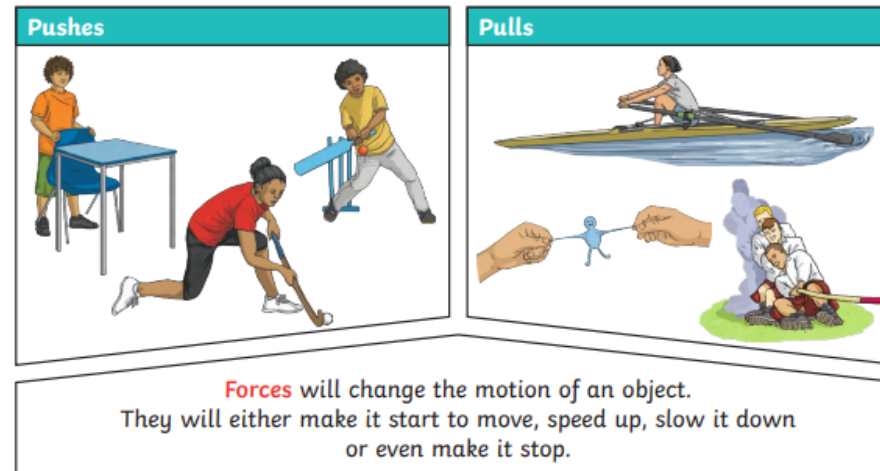
Choices

- Pupils to give their choices about how they would test the magnetism of different objects

Key Vocabulary

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forces	Pushes or pulls.
friction	A force that acts between two
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 .
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).

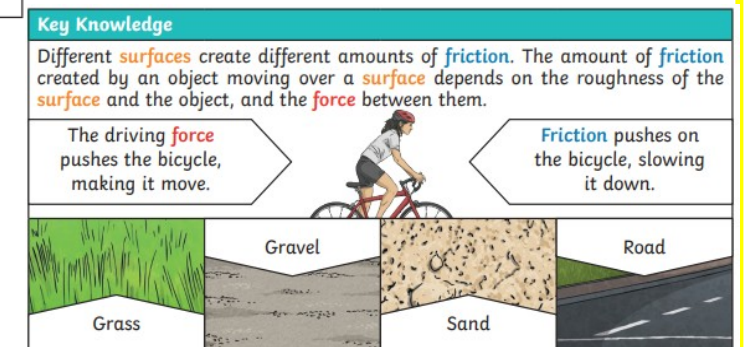
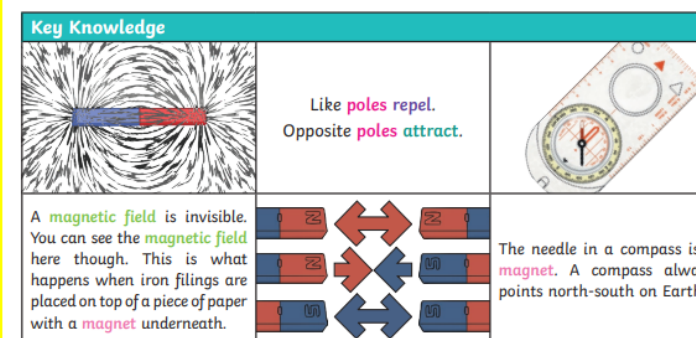
Diagrams



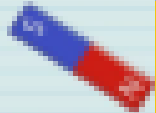



Lesson Sequence

L1	WALT: identify the forces acting on objects.
L2	WALT: group magnetic and non-magnetic items
L3	WALT: Investigate the poles of different magnets
L4	WALT: Investigate the strength of magnets
L5	WALT: uses of magnets
L6	WALT: investigate how far a vehicle travels on different surfaces.

Key Knowledge



Forces and Magnets Retrieval Grid

What is a force?	Would a south pole and a south-pole attract or repel?	Does friction speed up or slow down an object?	Which way does a compass always point?
Give 4 examples of a force P____,P____,Tw____,Tu____	What kind of force is jumping on a trampoline? Push or pull	What metals are magnetic? I____, Ni____, Co____	Which is the rough surface? Polished wood or carpet?
<div>   </div> <div>   </div> <p>Give 3 types of magnets</p>	Can you see a magnetic field?	What kind of force is hitting a ball with a bat? Push or pull	Would a south pole and a north pole attract or repel?
Name 3 objects that are not magnetic	Would a north pole and a north pole attract or repel?	Forces can make an object start/stop or speed/slow down?	What kind of force is a car taking a trailer somewhere? Push or pull

One Point

Two Points

Three Points

Four Points