

Key Vocabulary

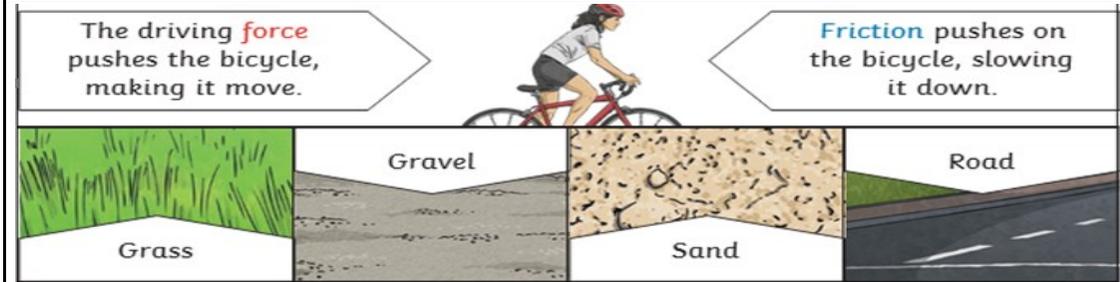
forces	Pushes or pulls.
friction	A force that acts between two surfaces or objects that are moving, or trying to move, across each other.
surface	The top layer of something.
magnet	An object which produces a magnetic force that pulls certain objects towards it.
magnetic	Objects which are attracted to 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).

Working Scientifically Skills

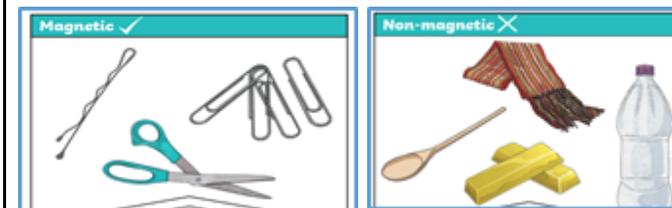
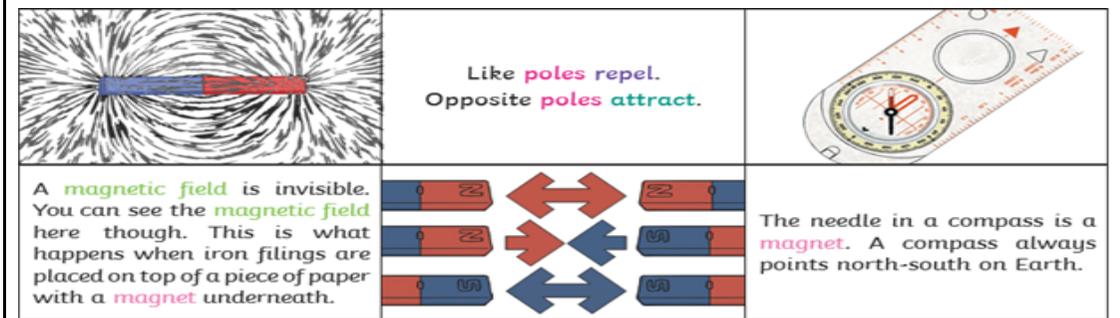
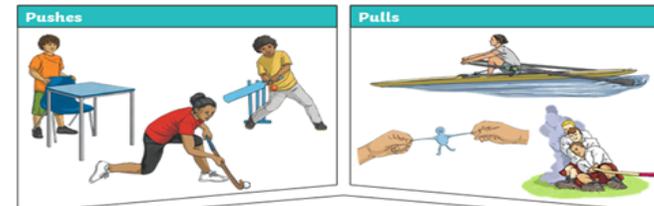
- **Compare** how different things move and group them.
- **Raise questions** and **carry out tests** to find out how far things move on different surfaces.
- **Gather and record data** to find answers to their questions.
- **Explore** the strengths of different magnets and **find a fair way to compare them**.
- **Sort materials** into those that are magnetic and those that are not.
- **Look for patterns** in the way that magnets behave in relation to each other and what might affect this e.g. how strong is the magnet or which pole faces another.
- **Identify** how these properties make magnets useful in everyday items and suggest creative uses for different magnets.

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.



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



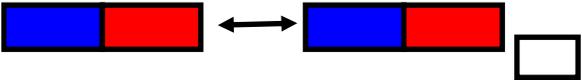
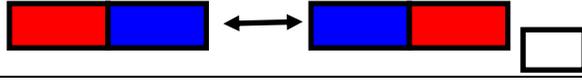
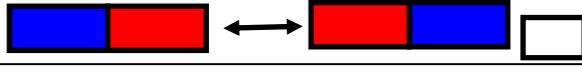
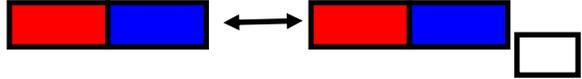
Not all metals are **magnetic**. Objects that contain iron, nickel and cobalt are **magnetic**.

Question 1: Which of these surfaces would a toy car	Start of Unit:	End of Unit:
Carpet		
Shiny Wooden Floor		
Sandpaper		
Ice		

Question 2: Surfaces with more friction are:	Start of Unit:	End of Unit:
Smoother		
Rougher		

Question 3: Tick the words which are kinds of forces:	Start of Unit:	End of Unit:
Pushing		
Friction		
Skipping		
Pulling		
Running		

Question 4: How many poles does a magnet have (tick) and what can they be called?	Start of Unit:	End of Unit:
2		
3		
4		
They can be called _____		

Question 5: Write an 'A' or an 'R' in the box to show whether these magnets would Attract or Repel.	Start of Unit:	End of Unit:
		
		
		
		

Question 6: Place a tick next to the objects that are magnetic and a cross next to those that are not magnetic.	Start of Unit:	End of Unit:
A wooden spoon		
A metal paper clip		
A radiator		
A plastic bottle		

The red and blue magnets are called bar magnets.

Can you draw / name any other types of magnet