

What I should already know:

1. The shape of some materials can be changed when they are **stretched, twisted, bent** and **squashed**.
2. Know how different toys move.
3. Know what a **force** is and be able to explain that a **push** and **pull** are types of **forces**.
4. That when **forces** are applied to an object they allow them to move or stop moving.
5. The strength of the **force** determines how far and fast an object moves.

What I will know by the end of the unit:

What are forces?	<p>Forces are pushes and pulls. These forces change the motion of an object. They will make it start to move or speed up, slow it down or even make it stop.</p> <p>For example, when a cyclist pushes down on the pedals of a bike, it begins to move. The harder the cyclist pedals, the faster the bike moves. When the cyclist pulls the brakes, the bike slows down and eventually stops.</p>
How do different surfaces affect the motion of an object?	<p>Forces act in opposite directions to each other. When an object moves across a surface, friction acts as an opposite force.</p> <p>Friction is a force that holds back the motion of an object.</p> <p>Some surfaces create more friction than others which means that objects move across them slower.</p> <p>On a ramp, the force that causes the object to move downwards is gravity.</p> <p>Objects move differently depending on the surface of the object itself and the surface of the ramp.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> grass gravel carpet concrete sand wood </div>
How do magnets work?	<p>Magnets produce an area of force around them called a magnetic field.</p> <p>When objects enter this magnetic field, they will be attracted to or repelled from the magnet if they are magnetic.</p> <p>When magnets repel, the push each other away When magnets attract, they pull together.</p>
Which materials are magnetic?	<p>Objects that are magnetic, are attracted to magnets.</p> <p>Iron and steel are magnetic. Aluminium and copper are non-magnetic.</p>

Vocabulary:

New vocabulary will be listed in green.

Attract	one object attracts another object, it causes the second object to move towards it
Bendy	an object that bends easily into a curved shape
Friction	the resistance of motion when there is contact between two surfaces
Force	the pulling or pushing effect that something has on something else
Gravity	the force which causes things to drop to the ground
Magnet	a piece of iron or other material which attracts magnetic materials towards it
Magnetic Field	an area around a magnet , or something functioning as a magnet , in which the magnet's power to attract things is felt
Metal	a hard substance such as iron, steel, gold, or lead
Motion	the activity of changing position or moving from one place to another
Non-Magnetic	an object that is not magnetic
Opposite	Opposite is used to describe things of the same kind which are completely different in a particular way. For example, north and south are opposite directions
Position	The position of someone or something is the place where they are in relation to other things
Pull	When you pull something, you hold it firmly and use force in order to move it towards you or away from its previous position
Push	When you push something, you use force to make it move away from you or away from its previous position
Repel	When a magnetic pole repels another magnetic pole , it gives out a force that pushes the other pole away
Resistance	a force which slows down a moving object or vehicle
Squash	pressed or crushed with such force that something loses its shape
Stretchy	slightly elastic
Surface	the flat top part of something or the outside of it
Twist	turn something to make a spiral shape

What I will know by the end of the unit:

How do magnetic poles work?

The ends of a **magnet** are called poles. One end is called the north pole, the other end is called the south pole.

Opposite poles **attract**, similar poles **repel**. If you place two **magnets** so the south pole of one faces the north pole of the other, the **magnets** will move towards each other. This is called **attraction**.

