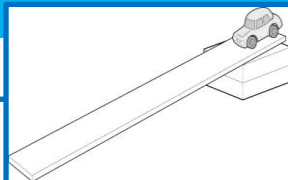




Forces and magnets



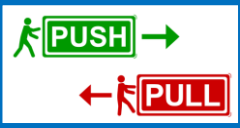
We will learn...

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.

Forces act in opposite directions to each other. When an object moves across a surface, friction acts as an opposite force. Friction is a force that holds back the motion of an object. Some surfaces create more friction than others which means that objects move across them slower. On a ramp, the force that causes the object to move downwards is gravity. Objects move differently depending on the surface of the object itself and the surface of the ramp.

Magnets produce an area of force around them called a magnetic field. When objects enter this magnetic field, they will be attracted to or repelled from the magnet if they are magnetic. When magnets repel, they push each other away. When magnets attract, they pull together.

Key vocabulary:

attract	If one object attracts another object, it causes the second object to move towards it.
repel	When a magnetic pole repels another magnetic pole, it gives out a force that pushes the other pole away.
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.
	
non-magnetic	An object that is not magnetic.
resistance	A force which slows down a moving object or vehicle.

Objects that are magnetic are attracted to magnets. Iron and steel are magnetic. Aluminium and copper are non-magnetic.

The ends of a magnet are called poles. One end is called the North Pole and 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. If you place the magnets so that two of the same poles face each other, the magnets will move away from each other. They are repelling each other.

Investigate:



- Which materials are magnetic?
- What happens when magnets with similar poles are placed next to each?
- Which material creates the most friction?

Inspirational Scientists

Leonardo Da Vinci - scientist and mathematician who discovered friction.

Working scientifically

In this topic we develop the following practical skills:

- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions