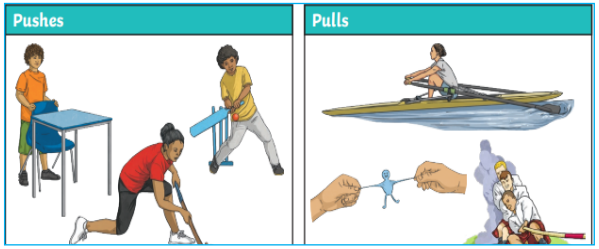
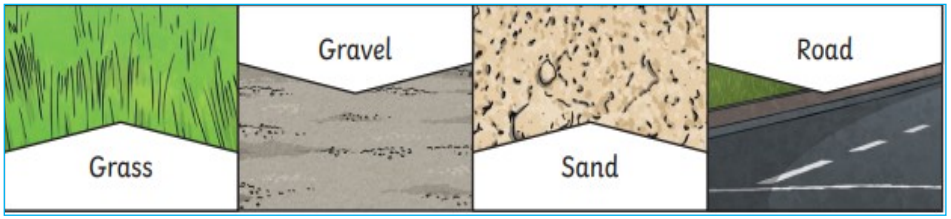
Forces and Magnets - Year 3

Previous learning:

In Year 1, you distinguished between an object and the material from which it is made and identified and named a variety of everyday materials. You described the properties of a variety of everyday materials and compared and grouped them on the basis of their simple physical properties. In Year 2, you identified and compared the suitability of a variety of everyday materials for particular uses. You found out how the shapes of solid objects made from some materials can be changed.



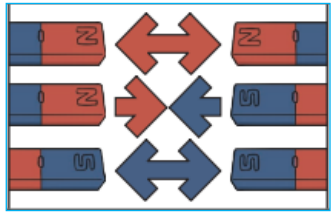
Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.



A driving force pushes things forwards, making it move. Friction pushes on an object, slowing it down. A force can be a push or a pull.

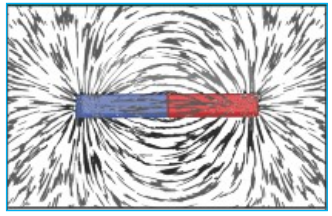
Different surfaces create different amounts of friction. The amount of friction created by an object moving over a surface depends on the roughness of the surface and the object, and the force between them.

Key vocabulary	Definitions
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.
attract	Attraction is a force that pulls objects together.

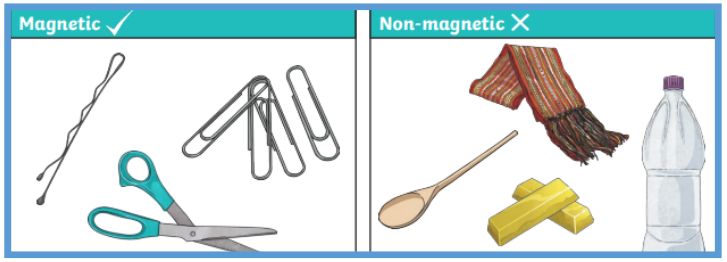


Like poles repel.
Opposite poles attract.

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



A magnetic field is invisible. This is what happens when iron filings are placed on top of a piece of paper with a magnet underneath.



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

These objects do not contain iron, nickel or cobalt.

Future learning: In Year 5, you will revisit forces, such as 'push', 'pull' and 'friction'. You will explore 'air resistance' and 'water resistance'.