

Year 3 Forces and Magnets

Key Vocabulary	
Forces	Pushes or Pulls.
Friction	Is a force that acts between two surfaces or objects that are moving, or trying to move, across each other. For example, when you try to push a book along a carpet, friction makes this difficult.
Surface	The top layer of something.
Magnet	An object which produces a magnetic force that pulls certain objects towards it. Egs of magnets bar magnet, horseshoe, button.
Magnetic	Objects which are attracted to magnets are magnetic. Objects containing iron, nickel or cobalt 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).

Friction – 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. Friction always works in the direction opposite to the direction in which the object is moving or trying to move. Ice causes little friction which is why it is easy to fall over on an icy day. However this is good for skating or sledging!

Driving force pushes the bike making it move

Friction pushes on the bike slowing it down.



Which surface produces less friction?

Grass



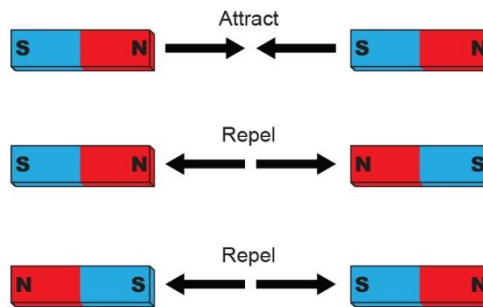
Gravel



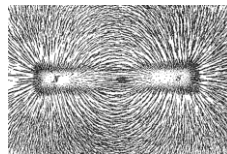
Road



Sand



Magnetic fields are invisible. You can see the magnetic field here though. It is when iron filings are placed on top of a piece of paper with a magnet beneath.



Examples of magnetic materials:

Metals like



nickel knife



cobalt coin



Steel spoon



iron nail



Examples of non-magnetic materials:



paper



glass



plastic



rubber



wood

Are all metals magnetic?

Cyvlist on road etc