

Knowledge Organiser: Year 3 Science: Forces and Magnets

Hethersett Woodside Primary & Nursery



I already know ...	The difference between a push and a pull.
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New Knowledge	<p>I will be able to compare how things move on different surfaces</p> <p>I will be able to notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>I will observe how magnets attract or repel each other and attract some materials and not others</p> <p>I will be able to compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.</p> <p>I will be able to describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>
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Key Vocabulary	This means ...
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.
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).
Magnet	An object which produces a magnetic force that pulls certain objects towards it.
Magnetic field	The area around a magnet where there is a magnetic force which will pull magnetic objects towards the magnet.
Magnetic	Objects which are attracted to a magnet are magnetic. Objects containing iron, nickel or cobalt metals are magnetic.

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Pushes	Pulls
<p>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.</p>	

Magnetic ✓	Non-magnetic ✗
<p>These objects contain iron, nickel or cobalt. Not all metals are magnetic.</p>	<p>These objects do not contain iron, nickel or cobalt.</p>

Key Knowledge	
<p>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.</p>	
<p>The driving force pushes the bicycle, making it move.</p>	<p>Friction pushes on the bicycle, slowing it down.</p>

Key Knowledge		
	<p>Like poles repel. Opposite poles attract.</p>	
<p>A magnetic field is invisible. You can see the magnetic field here though. This is what happens when iron filings are placed on top of a piece of paper with a magnet underneath.</p>		<p>The needle in a compass is a magnet. A compass always points north-south on Earth.</p>