

Forces and magnets- Year 3- Kapow unit- Forces and magnets

Previous learning

Key Vocabulary for Year 3	
Magnetic	
Force	
Contact	
Attract	
Repel	
Friction	
Poles	
Push	
Pull	

Previous vocabulary

Useful links

<https://www.stem.org.uk/resources/community/collection/12391/year-3-forces-and-magnets>

<https://www.hamilton-trust.org.uk/science/year-3-science/forces-and-magnets-amazing-magnets/>

https://www.outstandingscience.co.uk/index.php?action=view_page&page=view_unit&unit=3e

Key scientists you could look at...

Albert Einstein

Scientific skills

Working scientifically	Questioning and enquiry	Observing and measuring	Investigating	Recording	Grouping and classifying
To use practical scientific methods, processes, and skills	Ask some relevant questions and use different types of scientific enquiries to answer them	Begin to make systematic and careful observations. Take accurate measurements using standard and non-standard measurements. Begin to use a range of equipment. Begin to look for naturally occurring patterns and relationships. Help to make decisions on how to carry out an investigation.	Set up simple practical experiments focusing on comparative and fair tests and begin to know when a fair test is necessary and decide how to set it up. Begin to think of more than one variable factor.	Gather, record, and begin to classify and present data in a variety of ways to help answer a question. Begin to record findings using scientific vocabulary, drawings, labelled diagrams, keys, bar charts, and tables. Begin to report on findings including oral and written explanations, displays and presentations. Begin to use notes, simple tables, and standard units to record and analyse data.	Begin to identify similarities and differences related to scientific ideas and processes. Talk about criteria for grouping, sorting, and classifying using simple keys. Begin to compare and group according to behaviour or properties, based in testing.

Experiment and activity ideas

Magnetism hunt/ experiment	Comparing surfaces and the way objects move	Create own magnetic toys and games	Experiment with push and pull forces	Testing poles and how they react with each other
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Knowledge- objectives

Compare how things move on different surfaces.
 Notice that some forces need contact between two objects, but magnetic forces can act at a distance.

Observe how magnets attract or repel each other and attract some materials and not others

Compare and group together a variety of materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials


Describe magnets as having two poles.

Predict whether two magnets will attract or repel each other depending on which poles are facing.

Resources in school


Magnets- range of different types, range of different materials, variety of different metals, friction ramp

Magnetic ✓



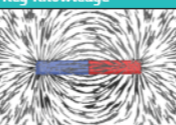
These objects contain iron, nickel or cobalt. Not all metals are **magnetic**.

Non-magnetic ✗




These objects do not contain iron, nickel or cobalt.


Key Knowledge



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. 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.