

Science: Magnets and Forces

Year 3 Spring 1

Key Vocabulary

Force	The push or pull on an object with mass causes it to change its velocity.
Contact force	A contact force is any force that occurs as a result of two objects making contact with each other.
Non-contact force	A non-contact force is a force which acts on an object without coming physically in contact with it.
Magnetic force	The magnetic force is a consequence of the electromagnetic force.
Attract	Where two objects come together. The opposite of repel.
Repel	To force (something) to move away or apart.
North Pole	The north pole of a magnet is the pole that - as long as the magnet can spin freely - points towards the north.
South Pole	The south pole of a magnet is the pole that - as long as the magnet can spin freely - points towards the south.
Iron	A strong, hard magnetic silvery-grey metal.

Enquiry Questions

Does anything move voluntarily without touching it?
Are most objects magnetic or not?
How can we test if materials are magnetic or not?
What is a force?
What would happen if we put lots of magnets together?
Is the north or south pole of a magnet more magnetic?
If the road had water on it, does it affect the friction?

Scientific Knowledge

Comparing how things move on different surfaces; noticing that some forces need contact between two objects, but magnetic forces can act at a distance.
Observing how magnets attract or repel each other and attract some materials and not others.
Comparing and grouping together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identifying some magnetic materials.
Describing magnets as having two poles.
Predicting whether two magnets will attract or repel each other, depending on which poles are facing.

Why don't you...

Create a magnetic game to play?
Find things which are magnetic in your house?
Create a collage out of anything you can find that is magnetic?
Write an explanation about how the north and south poles work?

Website Links

<https://www.bbc.co.uk/bitesize/topics/zyttyrd>

<http://www.sciencekids.co.nz/>

<https://www.bbc.co.uk/bitesize/topics/zvpp34j>

Scientific Concepts

Energy - Strength and power.
There are many forms such as thermal (heat), radiant (light) or kinetic (movement).

Comparison - To compare two or more things, including their similarities and differences.

Scientific Skills

Use different ideas and suggest how to find something out. Make and record a prediction before testing.

Plan a fair test and explain why it was fair. Set up a simple fair test to make comparisons.

Explain why they need to collect information to answer a question.

Obtaining and presenting evidence.

Measure using different equipment and units of measure.

Record their observations in different ways.

Make accurate measurements using standard units.

Considering evidence and evaluating.

Use a range of equipment (including a data-logger) in a simple test.