

Question - Do you need to touch something to make it move?

What I should already know : Children will have investigated if wheels are needed for travel and have learnt about Sir Isaac Newton in the Scientist Study.

Enquiry Questions:

1. Can we explore contact and non-contact forces?
2. Can we compare how things move on different surfaces?
3. Can we explore the different types of magnets?
4. Can we explain the properties of magnets?
5. Can we investigate if magnetic forces can act at a distance?
6. Can we explain the everyday use of magnets?

Key Vocabulary

- ★ **Attract** ~ to pull or draw something towards itself.
- ★ **Bar magnet** ~ a cuboid shaped magnet.
- ★ **Contrast** - to find differences between things.
- ★ **Compare** - finding similarities between objects.
- ★ **Compass** ~ an instrument that shows direction with a magnetised pointer.
- ★ **Experiment** - a scientific test.
- ★ **Forces** - something that can change an object's movement.
- ★ **Gravity** - a force that makes things fall to the ground, It is a pull force.
- ★ **Group** - to put things together.
- ★ **Horseshoe magnet** ~ a U shaped magnet.
- ★ **Impact**- the effect or influence something has.
- ★ **Magnets** ~ an object that attracts or repels certain materials.
- ★ **Magnetic field** ~ the area around the magnet from each pole.
- ★ **Observe** - to watch something carefully.
- ★ **Poles** ~ each end of the magnet (North and South Pole).
- ★ **Prediction**- to make an educated guess.
- ★ **Record**- to write down what is happening.
- ★ **Repel** ~ to force back or push away something.
- ★ **Theory** - to come up with a scientific idea.

Scientific Skills**Pupils will:****Skills and Knowledge (Forces and magnets)**

- FM1) Compare how things move on different surfaces.
 FM2) Notice that some forces need contact between two objects but magnetic forces can act at a distance.
 FM3) Observe how magnets attract or repel each other and attract some materials but not others.
 FM4) 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.
 FM5) Describe magnets as having two poles.
 FM6) Predict whether two magnets will attract or repel each other, depending on which poles are facing.

(Working Scientifically)**Year 2 & Year 3**

- WS1) Ask simple questions and understand they can be answered in different ways/ [ask relevant questions and use different types of scientific enquiries to answer them.](#)
 WS2) [Use straightforward scientific evidence to answer questions or to support findings](#)
 WS3) Observe closely, using simple equipment / [make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.](#)
 WS4) Perform simple tests / [set up simple practical enquiries, comparative & fair tests.](#)
 WS5) Identify & classify / [identify differences,](#)

similarities or changes related to simple scientific ideas and processes.

WS6) Use observations & ideas to suggest answers or questions / use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.

WS7) Gather & record data to help answer questions / record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables.

WS8) Gather, record, classify and present data in a variety of ways to help answer questions.

WS9) Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Pupils should read and spell scientific vocabulary correctly.

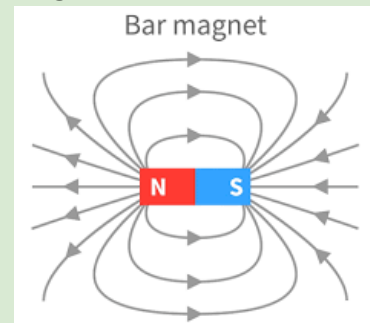
Bar Magnet



Horseshoe Magnet



Magnetic Field



Compass



Links to Other Areas of the Curriculum: Whole class reading, Writing,