

Science: forces

Y3 summer 2 term



National Curriculum subject content:

- ✓ asking relevant questions and using different types of scientific enquiries to answer them
- ✓ setting up simple practical enquiries, comparative and fair tests
- ✓ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment,
- ✓ including thermometers and data loggers
- ✓ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- ✓ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- ✓ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- ✓ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- ✓ identifying differences, similarities or changes related to simple scientific ideas and processes
- ✓ using straightforward scientific evidence to answer questions or to support their findings

National Curriculum theme:

- ✓ compare how things move on different surfaces
- ✓ notice that some forces need contact between 2 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 everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- ✓ describe magnets as having 2 poles
- ✓ predict whether 2 magnets will attract or repel each other, depending on which poles are facing

Key Vocabulary:

attract	A force that pushes objects together
contact	To touch or connect
forces	Pushes or pulls
friction	A force that acts between two surfaces or objects that are moving
magnetic	Objects which are attracted to a magnet
motion	The process of something moving or being moved.
poles	North and south pole are found at different ends of the magnet
repel	A force that pushes objects away
resistance	A force such as friction that tends to slow or stop an object
surface	The top layer of something

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Sequence of Learning:					
Objectives (key knowledge):					
Lesson 1 To learn to compare how things move on different surfaces.	Lesson 2 To know that some forces need contact between 2 objects but magnets can act at a distance. (Same as lesson 3)	Lesson 3 To know that some forces need contact between 2 objects but magnets can act at a distance. (Same as lesson 2)	Lesson 4 To learn that magnets attract and repel some materials but not others. 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.	Lesson 5 To learn that magnets have two poles and to predict whether they attract or repel each other depending on their pole. Task: to test the strength of different magnets.	Lesson 6 To know the function of a magnet in everyday life. Task: to compare different magnets that help us in everyday life, such as recycling an MRI machine a compass, button magnet.
Sticky knowledge					
<ul style="list-style-type: none">✓ Forces will change the motion of an object, they will either make it start, slow it down, speed it up or even make it stop.✓ Different surfaces different 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 it.✓ A needle on a compass is magnetic, the needle will always point north.					