

Year 3 – Term 3

What does it mean to be strong?

SCIENCE



National Curriculum Links:

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 everyday 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.

Essential Prior Learning:

Children should know:

Magnets attract things – certain things ‘stick’ to magnets.

Children should be able to :

Measure accurately to the nearest centimetre.
Draw and label diagrams.

Progression in Skill:

Ask relevant questions about the world around them and using different types of scientific enquiries to answer them.

Set up simple practical enquiries, comparative and fair tests.

Make systematic and careful observations.

Take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Develop criteria to identify, group, sort and classify, taking into account differences, similarities or changes related to simple scientific ideas and processes.

Use results to draw simple conclusions, e.g. The ___-er the ____, the ___-er the ____.

Read and spell simple scientific vocabulary correctly. Collect, gather, record, present data and report on findings from their own enquiries/observations and measurements using simple scientific language in a variety of ways to help in answering questions: including oral and written explanations, displays or presentations, drawings, labelled diagrams, bar charts and tables of results and conclusions.

Long-term Memory Knowledge:

Children should know:

Magnets have a north and a south pole. The pole is where the pull of a magnet is strongest. Opposite poles will attract; the same poles will repel. This force can happen at a distance. Only metals containing iron, steel, cobalt and nickel are magnetic.

Children should be able to:

Sort and group materials according to whether or not they are magnetic.

Key Vocabulary

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| magnetic | a force that can attract (pull closer) or repel (push away) objects |
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| force | a push or pull on an object; can cause an object to accelerate, slow down, remain in place, or change shape |
| attract | to draw to or toward something else |
| repel | to push away |
| north and south poles | each end of a magnet where the pull is strongest; a magnet will have a north and a south pole |
| magnetic field | the area around a magnet in which there its magnetic force works |
| friction | a force: the resistance of motion when one object rubs against another |

Progression in Resources:

Use of magnets to experiment – bar and horseshoe
Fair test experiments

Relevance

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| Now | Children know that the properties of magnets are useful to us in everyday life. |
| Future | Understanding of magnets allows children to understand why something does or does not work and be able to make minor repairs. |
| Aspiration | In adult life, children have a career in industry, using magnets to generate cleaner electricity or make other technological advances. |