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**Big Ideas/Substantive Concepts**

Contact force and friction

Non-contact force

Magnetic force

Pupils should be taught to:

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

Questions

What are contact forces?

How do surfaces affect the motion of an object?

How does friction affect moving objects?

What is a non-contact force? How is this different to a contact force?

How do magnets attract and repel?

Which materials are magnetic?

**Key Vocabulary**

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| --- | --- |
| **Tier 2** | **Tier 3** |
| consequence | magnet |
| contact | resistance |
| force | friction |
| attract | repel |
| north | pole |
| south | magnetic field |
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Year 3: Forces and Magnets

**Resources:** [CUSP curriculum](https://www.unity-curriculum.co.uk/history/history-ks2/) and [Curriculum vision](https://www.curriculumvisions.com/indexHistory.html) resources for online non-fiction texts

Making connections to prior learning

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| **Year 1:** Everyday materials**Year 2:**Uses of everyday materials |

Working Scientifically

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| Ask relevant questions | Set up simple, practical enquiries and comparative fair tests | Make accurate measurements using standard units, using a range of equipment, eg. thermometers & data loggers | Gather, record, classify and present data in a variety of ways to help in answering questions. |
| Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables | Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions | Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests | Identify differences, similarities or changes related to simple, scientific ideas and processes |

**Outdoor Learning Opportunities**