

Year 3 – Forces and Magnets.



Scientific Knowledge and Conceptual Understanding:

1. LO: I can compare how different things move.
[What is a force?](#)
2. LO: I can plan and conduct a fair test to compare how objects move on different surfaces.
[Do objects move the same on different surfaces?](#)
3. LO: I can explore how magnetic forces act at a distance.
[How do magnetic forces work?](#)
4. LO: I can compare and group various everyday materials based on whether they are attracted to a magnet.
[Which materials are magnetic?](#)
5. LO: I can predict whether two magnets will attract or repel each other, depending on which poles are facing.
[Do magnets attract each other?](#)
6. LO: I can record my findings using simple scientific vocabulary.
LO: I can use my results to draw simple conclusions.
[Are all magnets the same strength?](#)

Previous and Future Learning:

Year 2	Children have explored different forces before, during the 'Uses of everyday materials' topic in Year 2 whilst investigating how some materials can be changed by bending, squashing, twisting and stretching. They may be able to link those movements to simple pushes and pulls. Magnets are not studied in KS1. However, children may have come across magnets in everyday life and seen that they 'stick together' (attract) in objects such as bags, toys or kitchen appliances.
Year 5	Children will study forces again in Year 5. Children will build upon their knowledge of simple pushes and pulls from Year 3 by exploring more difficult concepts such as gravity, friction and air resistance. They will also create different size forces using mechanisms such as levers and pulleys. Magnets are broadly looked at again in Year 5 'Properties and changes of materials', where they compare and group materials based on their response to magnets.
KS3	Children will further study forces in physics lessons. They will deepen their understanding of pushes, pulls, friction, gravity and resistance. They will also be introduced to diagrams showing forces, forces measured in Newtons and the relationship between force and motion. Magnets are studied again during the electricity topic in KS3, where children are taught about electromagnetism, magnetic fields and the Earth's magnetism.

Key Vocabulary:

force
non-contact
magnetic

magnet
attract
non-magnetic

contact
repel
iron