



Year 3



Statutory Requirements:

- 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

Working Scientifically:

- 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

Key Vocabulary:

- | | |
|--------------------|-------------------|
| ➤ Friction | ➤ Magnetic field |
| ➤ Magnetism | ➤ Electromagnetic |
| ➤ Bar magnet | ➤ Metal |
| ➤ Horseshoe Magnet | ➤ Nickel |
| ➤ Attract | ➤ Cobalt |
| ➤ Repel | ➤ Iron |
| ➤ North pole | ➤ Steel |
| ➤ South Pole | ➤ Force |

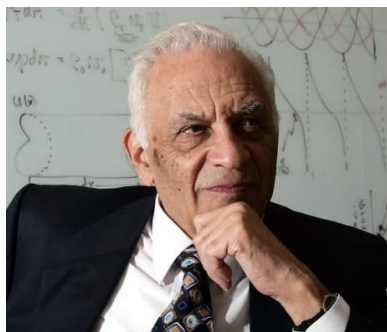
Key Scientists:



Classic

William Gilbert
(1544 – 1603)

English scientist, known as the father of electricity and magnetism.



Contemporary

Amar Bose
(1929 – 2013)

Designed high-end speakers and car suspensions using electromagnets.

Key Knowledge:

- Friction is a force which requires contact between two surfaces.
- Magnetic force can work at a distance without contact.
- Magnets can attract and repel each other, as well as attract some objects but not others.
- Magnetic materials are always metal but not all metals are magnetic.
- Magnetic metals include iron, steel, cobalt and nickel.
- Magnets have two poles: North and South.

Preparing for the Unit:

- Ensure that your magnets work well. Also check that you have lots of different types of magnets. It is