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:

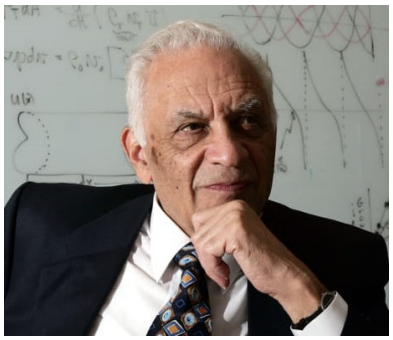
- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, 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
- Magnetism
- Bar magnet
- Horseshoe Magnet
- Attract
- Repel
- North pole
- South Pole
- Magnetic field
- Electromagnetic
- Metal
- Nickel
- Cobalt
- Iron
- Steel
- 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.