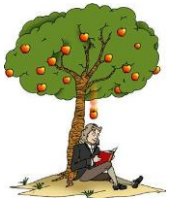
GREENLEYS JUNIOR SCHOOL

Science - Magnets and Forces

Knowledge Organiser Year 3 Term 5

Key Questions

- What is a force?
- What is gravity?
- What forces can slow objects down?
- What is a magnet?
- What makes a magnet attract or repel?



What I should already know

- Things move when they are pushed or pulled, this is called a force.
- Some metals stick to magnets.

What I will know by the end of the unit?

- Gravity is a force that causes objects to fall to the floor.
- Air resistance is a force that pushes back at the object falling.
- Friction happens when two objects rub against each other.
- Magnets have two poles called north and south that either attract or repel against each other.
- Some materials are magnetic so attract (stick) to the magnet.
- Some materials are not magnetic so repel (don't stick) to the magnet.

Key people

Isaac Newton (1643 - 1727) published a comprehensive theory of gravity in 1687. Though others had thought about it before him, Newton was the first to create a theory that applied to all objects, large and small, using mathematics that was ahead of its time.

Michael Faraday (1791 –1867) was an English scientist who contributed to the study of electromagnetism.

Useful web links:

https://www.bbc.co.uk/bitesize/topics/znmmn39

Scientific Enquiry

During this unit I will:

- Investigate how gravity and air resistance work.
- Carry out a fair test to investigate friction of different surfaces.
  Explore what materials are attracted to a magnet.

Key Vocabulary

force – A **push**, a **pull** or a **twist.**
gravity – A **force** that pulls an object to the ground (towards the center of the Earth).
air resistance – As an object moves, air resistance slows it down.
friction – A **force** that acts between two surfaces or objects that are moving across each other.
magnet – An object that produces a **magnetic** force that **pulls** certain objects towards it. There are different types of magnet:

bar magnet, **ring magnet**, **button magnet**, **horseshoe magnet**

magnetic – objects that are attracted to a magnet are magnetic. Objects containing **iron**, **steel nickel** or **cobalt** metals are magnetic.
attract – A force that pulls objects together.
repel – A force that pushes objects away.
poles – **North** and **South Poles** are found at either end of the **magnet.**