

Year 3/4 Forces Knowledge Organiser

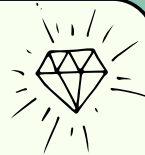


What do I already know ?



- I know that some solid shapes can be changed by squashing, bending, stretching and twisting them. (Y2)

Gems of knowledge



- I will learn what a force is.
- I will compare how things move on different surfaces.
- I will investigate how magnetic forces work.
- I will compare and group together materials based on whether they are attracted to a magnet.
- I will learn about the two poles of a magnet.

How will I work like a Scientist?



- I will ask and answer questions using different types of scientific enquiry (Y3- when prompted).
- I will set up investigations (Y3-with some support).
- I will make observations using equipment.
- I will take accurate measurements using standard units. (Y3- with some support).
- I will gather, record, classify and present data in a variety of ways to help to answer a question. (Y3- with support).
- I will record findings using simple scientific language, drawings and labelled diagrams/charts.
- I will report on my findings from an investigation.
- I will use scientific evidence to answer a question.
- I will use results to draw simple conclusions.

Key vocabulary

Meaning

Force

A force is a push or pull that can cause an object to start or stop moving or change its speed, direction or shape.

Friction

Friction is a contact force that occurs between two touching surfaces.

Magnet

An object which produces a magnetic force that pulls certain objects towards it.

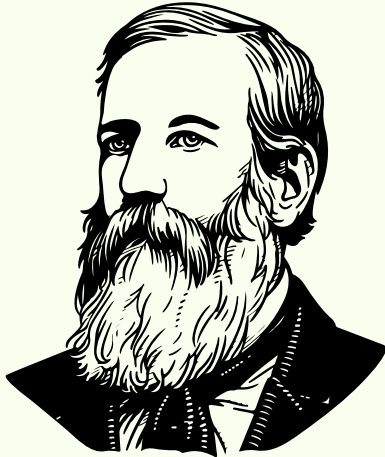
Poles

The ends of a magnet. These are called the North Pole and South Pole.

Attract/Repel

A force that pushes objects together/a force that pushes them away.

Significant Scientist



William Gilbert was a famous physician and scientist. He led research in the field of magnetism and invented the terms 'force' and 'electricity'.



Careers in Physics (learning about the earth and how it works)



Automotive engineers design, build and test cars and other vehicles.

Aeronautic engineers design aircraft and propulsion systems.

Read me!



Mr Grumpy's Motor Car by John Burningham.

Mrs Armitage: Queen of the Road by Quentin Blake.

Both available to listen to on YouTube.