



What I should already know:

- Objects will move on different surfaces
- Contact and non-contact forces make things start and stop moving
- Magnets repel or attract each other and can attract some materials
- Magnets have two poles (North and South)
- Forces is measured in the unit Newtons (N)

By the end of this unit I will:

- Know how forces, including gravitational attraction and drag forces (friction, air resistance, water resistance and upthrust in water) affect movement.
- Know how mechanisms, including levers, pulleys and gears allow a smaller force to have a greater effect.
- Know that Scientists have impacted this area of Physics with their theories.



Investigation:

- How long does it take for a parachute to fall and what are the effects of air resistance?
- Does the shape of the object affect its movement in a liquid?

YEAR 5: Feel the Force

Science: Physics



Working Scientifically

Taking measurements, using a wide range of scientific equipment, with increasing accuracy and precision, and taking repeat readings when appropriate.



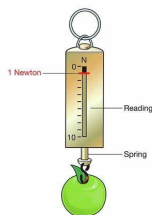
Identifying scientific evidence that has been used to support or refute ideas or arguments.

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.

Using test results to make predictions to set up further comparative and fair tests.

Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs and bar and line graphs.



Vocabulary

Air resistance	A type of friction between air and another material: eg: an aeroplane flying through the air.
Force	The pulling or pushing effect that something has on something else
Friction	The resistance of motion when there is contact between two surfaces
Gears	Gears are wheels with teeth that slot together. When one gear is turned the other one turns as well
Gravity	The force which causes things to drop to the ground
Lever	A lever can be described as a long rigid body with a fulcrum along its length
Mechanisms	The parts that work together in a machine
Newton	The scientist that developed the theory of gravity
Parachute	A device used to slow down an object that is falling towards the ground. As a parachute opens the air resistance increases
Pulleys	A pulley is a simple machine which comprises of a wheel on a fixed axle, with a groove along the edges to guide a rope or a cable
Simple machines	Any device used for applying forces
Water resistance	The friction between an object and water: eg: your skin and the water when you go swimming

