Holy Family Halewood

Year 5 & 6 Science

Forces

Key Vocabulary:

Force – a push or a pull.

Frictional force – a contact force that is caused by one object being pushed across the surface of another.

Motion – the change in the position of an object.

Parachute – a piece of material which uses air resistance to slow something down.

Independent variable -what is changed.

Dependent variable- what is measured.

Controlled variables -what is kept the same.

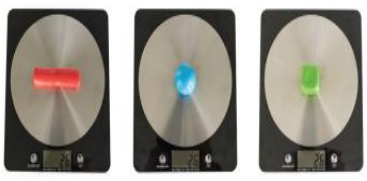
Repeatability – the likelihood of getting similar results if the experiment is carried out again.

Precision – when all of the measurements obtained in an experiment are close to each other.

Surface area – the total area of the surface of an object.

Anomalous result – data that does not fit the pattern.

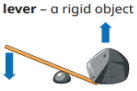
Streamlined – having a shape which reduces air or water resistance.



Learning Objectives:

- To look at the effects of friction and how it's useful in everyday life and learn that air resistance is a type of friction force on an object moving through air.
- To carry out a fair test to find out whether the surface area of a parachute affects the time it takes to fall to the ground.
- To plan a comparative test on water resistance to observe whether the shape of an object affects the time it takes for it to fall to the bottom of a measuring cylinder filled with water.
- To explore gravity and understand all objects have a gravitational pull.
- To look at different mechanisms including levers, pulleys and gears.

lever – a rigid object that can rotate around a pivot



gear – a wheel with teeth

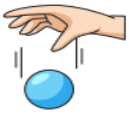
pulley – a cable on one or more wheels

machine – a device with moving parts that does a particular task

water resistance – a type of friction force on an object moving through water

air resistance – a type of friction force on an object moving through air

gravitational force – a non-contact force caused by objects with mass pulling each other



weight – the downwards gravitational pull on an object

contact force – a push or pull that affects objects which are touching

non-contact force – a push or pull that affects objects which are not touching