

# Science Knowledge Organiser **Forces and Magnets (Term 4)** **Year 6**

## Our learning

In our science lessons this term, we will be learning about forces and magnets. This is part of the **physics** aspect of science. Through our learning we will be considering the **cause and effect** of forces. This unit links to the last as gravity is a key force that acts on Earth. We will also consider different forces that act between surfaces and on water as well as how humans have developed machines to allow forces to work more efficiently.

## Information

Forces either make something start to move, speed up, slow down or stop.

The force of gravity causes everything to be pulled towards the Earth.

On Earth, unsupported objects fall due to gravity.

Air resistance, water resistance and friction are contact forces that act between moving surfaces.

Machines use mechanisms that allow a small force to have a bigger effect.

A pulley system could be used to lift something heavy from the ground.

## Vocabulary

**Gravity**— An invisible force that pulls objects towards each other

**Force**— An action that changes or maintains the motion of a body or object

**Air resistance**— A force that acts in the opposite direction of moving objects

**Accelerate**— The measurement of change in an object's speed

**Decelerate**— To move or cause to move at decreasing speed

**Water resistance**— A type of force that uses friction to slow things down that are moving through water

**Friction**— The resistance of motion when one object rubs against another

**Lever**— Simple machines used to increase force

**Pulley**— A machine used to reduce the time and energy taken to lift heavy objects

**Gears**— Wheels with teeth that slot together. Used to increase power

**Newton**— unit of force

## As a scientist I will...

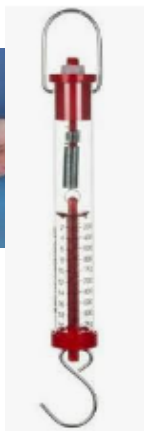
- Choose the most appropriate equipment and explain how to use it to take accurate measurements.
- Decide how long to take measurements for and check results.
- Select and plan a suitable enquiry and explain the variables that need to be controlled.
- Say how valid my conclusion is and how I might improve the enquiry next time.
- Chose the best way to record and report results.



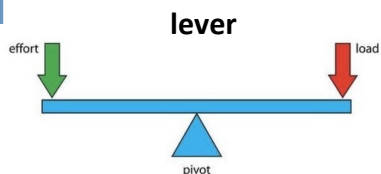
Pulley



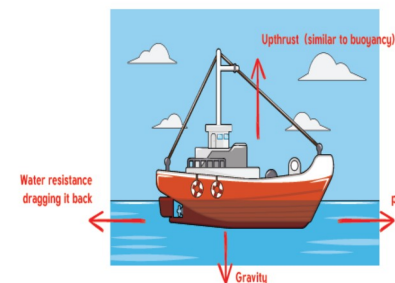
Gears



A newton meter to measure force



lever



**Some objects have more than one force acting on them**

