

Year 5 - Forces

How are forces used in different sports?

Prior learning

In Year 3, you learnt about the behaviour of magnets and that some forces need direct contact whereas magnetic forces can act at a distance

Future learning

In secondary school, you will learn more about the behaviour of forces.

In this unit you will:

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect in a simple series circuit

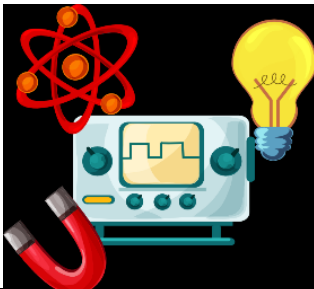
Key Scientist: Isaac Newton



Isaac Newton made many scientific breakthroughs in his life time. One of which was investigating light. He found that although light appears white to the human eye, it is actually made up of all of the colours of the rainbow and this can be seen by splitting up light through a prism.

Science discipline: Physics

Physics is a science that studies matter and its motion as well as how it interacts with energy and forces.



Scientific diagram



Vocabulary:

- **Gravity:** An invisible force that pulls objects toward each other
- **Friction:** A force between two surfaces that are sliding, or trying to slide, across each other.
- **Air resistance:** A kind of friction that occurs between air and another object.
- **Water resistance:** A type of force that uses friction to slow things down that are moving through water.
- **Mechanisms:** Any tool used to convert or control motion or transmit control or power.
- **Fluid:** A substance (such as a liquid or gas) tending to flow or conform to the outline of its container.
- **Streamline:** The contouring of an object, such as an aircraft body, to reduce its drag, or resistance to motion through a stream of air.