

## Year 5

## Science: Forces (half-term)

### Learning to Recap (Year 3):

- A force is direct contact between two objects. Forces aren't visible. Push and pull are examples.
- Friction slows down moving objects. Smooth surfaces have less friction and rough surfaces have more friction.

### New Knowledge and vocabulary

Gravity	<p>From the Latin word '<i>gravis</i>' meaning 'heavy'.</p> <p>It is the invisible force that <b>pulls</b> objects towards the centre of the Earth. Other planets have gravity—the larger the planet, the stronger the <b>pull</b>.</p>
Air resistance	<p>The force which acts against a moving object. A parachute falls more slowly because of the air resistance acting against it.</p>
Water resistance	<p>Similar to air resistance. It is the force acting against a moving object in water. This is the force which slows you down when swimming.</p>
Sir Isaac Newton	<p>Discovered gravity when sitting under an apple tree! Newton was also a Member of Parliament and a historian. Forces are measured in Newtons.</p>

**Sir Isaac Newton**  
(1643—1727)



**Parachutes work because air resistance slows the speed at which humans fall**



Air resistance slows a parachute **because...**

Air resistance slows a parachute **but....**

Air resistance slows a parachute **therefore....**

### Application of knowledge

**Conduct a fair test on egg-drop parachutes. Investigate cross-sectional area of the chute or the weight of egg(s).**

Design and create a poster for display about Isaac Newton

Connection with space topic—sketch each planet to scale and investigate how *heavy* humans would be on each.

**Gravity is an invisible force pulling objects towards the centre of the Earth.**

**Without gravity, we would float off into space!**

