

Forces

The forces are with us

Word	Pronunciation	Meaning
air resistance		A force that tries to slow things down that are moving through air. It is a type of friction.
drag		Air resistance and water resistance are both sometimes called drag.
force		A push or a pull.
force meter		Piece of equipment containing a spring, used to measure forces.
friction		A force that tries to slow things down when two things rub against each other.
gravity		The force of attraction between any two objects. The Earth is very big and so has strong gravity that pulls everything down towards it.
magnetism		A force that attracts objects made out of iron.
newton (N)		The unit of force.
newton meter		Another name for a force meter.
speed		How fast something is moving. Often measured in metres per second (m/s).
static electricity		A force which attracts things with extra electrical charges on them.
upthrust		A force that pushes things up.
water resistance		A force that tries to slow things down that are moving through water. It is a type of friction.

That floating feeling

Word	Pronunciation	Meaning
density		The amount of mass that 1cm^3 of a substance has. Measured in g/cm^3 .
upthrust		A force that pushes thing up.

Balancing act/Hooked!/Weighing in

Word	Pronunciation	Meaning
balanced forces		When two forces are the same strength, but working in opposite directions.
gram		A unit for measuring mass (g).
gravity		The force of attraction between any two objects. The Earth is very big and so has a large gravity pulling everything down towards it.
kilogram		A unit for measuring mass (kg). There are 1000 g in 1 kg.
mass		The amount of matter that something is made of. Measured in grams (g) and kilograms (kg). Your mass does not change if you go into space or to another planet.
newton		The unit of force (N).
stationary		Not moving.
unbalanced forces		When two forces working in opposite directions are not the same strength.
weight		The amount of force with which gravity pulls something towards the Earth. It is measured in newtons (N).

Friction

Word	Pronunciation	Meaning
lubricant	<i>loo-brick-ant</i>	A substance (normally a liquid) used to reduce friction.
water resistance		A force that tries to slow things down that are moving through water. It is a type of friction.

The need for speed

Word	Pronunciation	Meaning
braking distance		The distance a car travels while the brakes are trying to stop it.
distance/time graph		A graph that shows how far and how fast something travels during a journey.
kilometres per hour (km/h)		Units for speed when the distance is measured in kilometres and the time is measured in hours.
metres per second (m/s)		Units for speed when the distance is measured in metres and the time is measured in seconds.
miles per hour (mph)		Units for speed when the distance is measured in miles and the time is measured in hours.
speed		How fast something is moving. Often measured in metres per second (m/s).
stopping distance		The distance a car moves while it is stopping. The stopping distance is equal to the thinking distance and the braking distance added together.
thinking distance		The distance a car travels while the driver is deciding to press the brake pedal.

Faster and faster

Word	Pronunciation	Meaning
accelerate	<i>ack-sell-er-ate</i>	Change speed.
air resistance		A force that tries to slow down things that are moving through the air. It is a type of friction.
balanced forces		When two forces are the same strength, but working in opposite directions.
friction		A force that tries to slow things down when two things rub against each other.
unbalanced forces		When two forces working in opposite directions are not the same strength.

Drag act

Word	Pronunciation	Meaning
drag		Another name for air resistance or water resistance.
streamlined		Giving something a smooth shape to reduce the air resistance or water resistance.
water resistance		A force that tries to slow down things that are moving through water. It is a type of friction.

Hitting the limit

Word	Pronunciation	Meaning
distance–time graph		A graph that shows how far something has moved in a certain time.
terminal velocity		The maximum speed of an object. Usually only applies to falling objects when the downward force is balanced by drag.