

7Ka – Forces

Word	Pronunciation	Meaning
force		A push, pull or twist.

7Ka – Different forces

Word	Pronunciation	Meaning
air resistance		A force on objects moving through air.
contact forces		A force where there needs to be contact between objects before the force can have an effect (e.g. friction).
friction		A force between two objects that are touching. It usually acts to slow things down or prevent movement.
gram (g)		A unit for measuring mass.
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.
kilogram (kg)		A unit for measuring mass. There are 1000 g in 1 kg.
magnetism		A force that attracts objects made of iron or other magnetic materials. Two magnets can also repel each other.
mass		The amount of matter that something is made from. Mass is measured in grams (g) and kilograms (kg). Your mass does not change if you go into space or to another planet.
newton (N)		The unit of force.
non-contact force		A force that can affect something from a distance (e.g. gravity).
static electricity		A force that can attract or repel things. It is caused when certain materials rub together.
upthrust		A force that pushes things up in liquids and gases.
water resistance		A force on objects moving through water.
weight		The amount of force with which gravity pulls things. It is measured in newtons (N). Your weight would change if you went into space or to another planet.

7Kb – Springs

Word	Pronunciation	Meaning
compress		To squash something, or make it smaller.
elastic		An elastic material changes shape when there is a force on it but returns to its original shape when the force is removed.
elastic limit		If you stretch a spring beyond its elastic limit it will be permanently stretched. It is no longer elastic.
extension	<i>ex-ten-shun</i>	The amount by which a spring or other stretchy material has stretched. It is worked out from the stretched length minus the original length.
force meter		Piece of equipment containing a spring, used to measure forces.

Word	Pronunciation	Meaning
Hooke's Law		The law that says that the extension of a spring is proportional to the force on it.
limit of proportionality	<i>prO-por-shun-al-it-ee</i>	The extension of a spring is proportional to the force on it, up to a certain point called the limit of proportionality. If you apply more force the extension is no longer proportional to the force.
plastic		A plastic material changes shape when there is a force on it, but does not return to its original shape when the force is removed.
proportional	<i>prO-por-shun-al</i>	A relationship between two variables where one doubles if the other doubles. A graph of the two variables would be a straight line through the origin.
spring		A coil of wire that can be stretched or compressed.
stretch		To pull something to make it longer.

7Kc – Friction

Word	Pronunciation	Meaning
lubricant	<i>loo-brick-ant</i>	A substance (usually a liquid) used to reduce friction.
lubrication	<i>loo-brick-ay-shun</i>	Adding a lubricant to something.

7Kd – Pressure

Word	Pronunciation	Meaning
pascal (Pa)		A unit for pressure. $1 \text{ Pa} = 1 \text{ N/m}^2$.
pressure		The amount of force pushing on a certain area. A way of saying how spread out a force is.

7Kd WS – SI Units

Word	Pronunciation	Meaning
prefix		Something added to the beginning of a word to change its meaning. In 'kilometre', 'kilo' is the prefix.
SI units		The standard international set of units used by scientists. 'SI' stands for 'Système International d'Unités'.

7Ke – Balanced forces

Word	Pronunciation	Meaning
balanced forces		When two forces are the same strength but in opposite directions.
stationary	<i>stay-shun-arry</i>	Not moving.
unbalanced forces		When two forces working in opposite directions are not the same strength. Unbalanced forces change the motion of objects.