

8Ka – Temperature changes

Word	Pronunciation	Meaning
degrees Celsius (°C)	<i>sell-see-us</i>	A unit for measuring temperature.
evaporate		When a liquid turns into a gas.
internal energy		The energy stored in the movement of particles. Sometimes called thermal energy.
joule (J)	<i>jool</i>	A unit for measuring energy.
temperature		How hot something is, usually measured in degrees Celsius.
thermal energy		Another term for internal energy.

8Kb – Transferring energy

Word	Pronunciation	Meaning
absorb		'To soak up' or 'to take in'.
conduction	<i>con-duck-shun</i>	The way energy is transferred through solids by heating.
convection	<i>con-veck-shun</i>	The way energy is transferred by heating in fluids.
convection current	<i>con-veck-shun</i>	A flow of liquid or gas caused by part of it being heated or cooled more than the rest.
density		The amount of mass that one cubic centimetre of a substance has. Often measured in grams per cubic centimetre (g/cm^3).
emit		To give out.
fluid		A gas or a liquid.
infrared radiation	<i>ray-dee-ay-shun</i>	A way of transferring energy by heating that does not need a medium (material). Infrared radiation can travel through transparent things and a vacuum (empty space).
medium		Any substance through which something travels.
radiation	<i>ray-dee-ay-shun</i>	A way of transferring energy by heating. Also known as infrared radiation. Infrared radiation can travel through transparent things and a vacuum (empty space).
reflect		To bounce off a surface instead of passing through it or being absorbed.
thermal conductor		A material that allows internal (thermal) energy to be transferred through it easily.
thermal imager		A device like a camera that makes images by detecting infrared radiation.
thermal insulator		A material that does not allow internal (thermal) energy to be transferred through it easily.

8Kc – Controlling energy transfers

Word	Pronunciation	Meaning
solar cell	<i>sell</i>	A flat plate that uses energy transferred by the light to produce electricity.
solar panel		A panel that uses energy from the Sun to heat water.

8Kc WS – Accuracy and precision

Word	Pronunciation	Meaning
accurate	<i>ak-yer-it</i>	A measurement that is close to the true value.
precise		Measurements that are close to one another.
random error		An error that can be different for every reading.
systematic error	<i>sis-tem-at-ick</i>	An error that is the same for all readings, such as when forgetting to zero a balance before using it to measure a series of masses.
valid		Something is valid if it is doing what it is supposed to do. A measurement is valid if it measures what it is supposed to measure. A valid conclusion is drawn only from the data that the conclusion is supposed to be drawn from.

8Kd – Power and efficiency

Word	Pronunciation	Meaning
appliance		A machine, usually one powered by electricity and used in the home.
efficiency	<i>e-fish-en-see</i>	A way of saying how much energy something wastes.
kilowatt (kW)		A unit for measuring power. There are 1000 watts (W) in 1 kilowatt (kW).
power		The amount of energy (in joules, J) transferred every second. It is measured in watts (W).
power rating		The number of joules of energy an appliance uses every second.
Sankey diagram		A diagram showing energy transfers, where the width of each arrow is proportional to the amount of energy it represents.
watt (W)		A unit for measuring power. 1 watt (W) is 1 joule (J) per second.

8Ke – Paying for energy

Word	Pronunciation	Meaning
kilowatt-hour (kWh)		The amount of energy used by a 1 kilowatt (kW) appliance in one hour. It is equal to 3600 kilojoules (kJ).
payback time		The time it takes to get back (in energy savings) the money you spent on making an energy-saving change.

8Ke – Keeping warm

Word	Pronunciation	Meaning
climate change		Changes that will happen to the weather as a result of global warming.
fossil fuel		A fuel formed from the dead remains of organisms over millions of years (e.g. coal, oil or natural gas).