Energy Word Sheets

Fuelled by fossils

Word	Pronunciation	Meaning
chemical energy		The kind of energy stored in chemicals. Food, fuels and cells (batteries) all contain chemical energy.
coal		A fossil fuel made from the remains of plants.
electrical energy		The kind of energy carried by electricity.
fossil		A dead organism that has been trapped in mud and whose body has not completely rotted away.
fossil fuels		Coal, oil and natural gas – all fuels that were formed from the remains of dead plants and animals.
fuel		Anything that stores energy that can be converted into heat energy – includes fossil fuels and nuclear fuel.
generate		Make electricity by turning a magnet inside coils of wire.
heat energy		The hotter something is, the more heat energy it has.
kinetic energy	*kin-**et**-ick*	The kind of energy in moving things.
law of conservation of energy		The idea that energy can never be created or destroyed, only changed from one form into another.
light energy		The kind of energy given out by light bulbs, candles, etc.
natural gas		Fossil fuel formed from the remains of dead plants and animals that lived in the sea.
nuclear energy		Energy stored inside the particles that things are made out of.
oil		Fossil fuel formed from the remains of dead plants and animals that lived in the sea.
sound energy		The kind of energy made by anything that is making a noise.
uranium	*yer-**rain**-ee-um*	A fuel used in nuclear power stations.

Make them last!

Word	Pronunciation	Meaning
non-renewable energy resource		Any energy resource that will run out and we cannot renew our supplies of it (e.g. oil).

Planning for the future

Word	Pronunciation	Meaning
alternative energy resources		Another name for renewable energy resources.
biomass	***bi**-O-mass*	Any fuel that comes from plants, animals, or their wastes (e.g. wood, methane from rotting plants, etc.).

generator		Large coil of wire with a magnet inside. When the magnet is turned, electricity is produced in the coil of wire.
geothermal power	*ge-O-**therm**-al*	Making electricity using heat from hot rocks underground.
hydroelectric power	*hi-drO-el-**eck**-trick*	Making electricity by letting falling water (usually from a reservoir) turn turbines and generators.
nuclear energy		Energy stored inside the particles that things are made out of.
radiation		Dangerous particles and energy given off by uranium and other radioactive materials.
renewable energy resource		An energy resource that will never run out (e.g. solar power).
solar cells		Flat plates that convert light energy into electrical energy.
solar panels		Flat plates that use the Sun's energy to heat water.
solar power		Making electricity by using light or heat energy from the Sun.
turbine		The machine in a power station that is pushed round by water or steam and turns the generator.
uranium	*yer-**rain**-ee-um*	A fuel used in nuclear power stations.
wind turbine		A kind of windmill that generates electricity using energy from the wind.
joule (J)	***jool***	The unit for measuring energy.
kilojoule (kJ)	***kill**-O-jool*	There are 1000 joules in 1 kilojoule.

The source is the Sun

Word	**Pronunciation**	**Meaning**
convection current	*con-**veck**-shun*	A flow of liquid or gas caused by part of it being heated or cooled more than the rest.
geothermal power	*ge-O-**therm**-al*	Making electricity using heat from hot rocks underground.
hydroelectric power	*hi-drO-el-**eck**-trick*	Making electricity by letting falling water (usually from a reservoir) turn turbines and generators.
nuclear power		Making electricity by using the nuclear energy stored inside uranium.
photosynthesis	*foto-**sinth**-e-sis*	Process that plants use to make their own food. It needs light to work. Carbon dioxide and water are used up. Food (a sugar called glucose) and oxygen are produced).
tidal power		Making electricity using the moving (kinetic) energy from the tides.

Hot stuff

Word	Pronunciation	Meaning
degrees Celsius (°C)	***sell**-see-us*	The units for measuring temperature.
heat energy		A form of energy, measured in joules.
joules (J)		The units for measuring energy.
temperature		How hot something is, measured in °C.
thermal energy		Another name for heat energy.

Conducting heat

Word	Pronunciation	Meaning
conduction	*con-**duck**-shun*	The way heat travels through solids.
conductor		A material which lets energy flow through it easily.
insulator		A material which does not let energy flow through it easily.

Changing size/Going up/Radiation

Word	Pronunciation	Meaning
absorb		To take in energy.
contract		Get smaller.
convection	*con-**vek**-shun*	The transfer of heat in fluids.
convection current		A current created by heat causing changes in the density of a fluid.
emit	*ee-**mit***	To give out energy.
expand		Get bigger.
fluid		A gas or a liquid.
infrared radiation		A type of wave in the electromagnetic spectrum. It can travel through transparent things and a vacuum (empty space).
medium		Any substance.
pressure		The force caused by particles hitting a certain area.
radiation		The transfer of heat energy by electromagnetic waves.

Changing state

Word	Pronunciation	Meaning
boiling point		When a liquid is at its boiling point it is as hot as it

		can get. It is evaporating as fast as it can.
condense		When a gas turns into a liquid.
evaporate		When a liquid turns into a gas.
gas		Something made of particles that are very spread out and not attached to each other. A gas does not have a fixed shape or volume and is easy to squash.
heat energy		The hotter something is, the more heat energy it has.
liquid		Something made of particles that are fairly close together, but attached weakly so that they can move past each other. A liquid has a fixed volume but not a fixed shape.
melt		When a solid turns into a liquid.
solid		Something made of particles that are very close together and attached so that they cannot move past each other. A solid has a fixed shape and volume.

Travelling light

Word	Pronunciation	Meaning
laser	***lay***-*zer*	Something which produces a narrow beam of light of one pure colour (short for Light Amplification by Stimulated Emission of Radiation).
luminous sources	***loo***-*min*-*us*	Objects which create light.
ray		A beam of light drawn on diagrams as a straight line, and showing which way it is travelling.
shadow		A place where light cannot get to, because an opaque object is stopping the light.
source		An object which creates something.

Lighting up

Word	Pronunciation	Meaning
absorb		This means to ‘soak up’ or ‘take in’. If something absorbs light it soaks it up and does not let it back out.
opaque	*O*-***pake***	Material which does not let light through.
reflect		To bounce off something.
translucent	*trans*-***loo***-*sent*	Material through which a glow of light can be seen.
transmit		To send along or pass through.
transparent		Material which light can travel through.

Mirror image

Word	Pronunciation	Meaning
angle of incidence	***in****-sid-dense*	The angle between the normal and the ray of light hitting a mirror.
angle of reflection		The angle between the normal and the ray of light leaving a mirror.
image		A picture which forms in a mirror, or on a screen, or is made by lenses.
incident ray	***in****-sid-dent*	Light ray hitting a mirror.
normal		An imaginary line at right angles to a mirror, where a ray of light hits the mirror.
plane		Smooth and flat.
plane mirror		Smooth, flat mirror.
ray diagram		A diagram showing the passage of light rays.
reflect		Light bounces back from a surface instead of passing through it.
reflection		Light bouncing back from a surface instead of passing through it.
reflected ray		The ray of light bouncing off the mirror.
scatter		When light rays bounce off something in all directions.

Light fantastic

Word	Pronunciation	Meaning
angle of incidence	***in****–sid–dense*	Angle between an incoming light ray and the normal.
angle of refraction		Angle between the light ray and the normal as it passes from one transparent material
		into another.
interface		The boundary between two materials.
ray diagram		A diagram showing the passage of light rays.
refraction		The change in direction when light goes from one transparent material to another.

Colour it white/Make it white

Word	Pronunciation	Meaning
absorb		This means to ‘soak up’ or ‘take in’. If something absorbs light it soaks it up and does not let it back out.
dispersion		The separating of the colours in light, for example

		when white light passes through a prism.
filter		Something which only lets certain colours through and absorbs the rest.
prism		A block of clear, colourless glass which is usually triangular.
spectrum		The seven colours of light.
transmit		To send along or pass through.
white light		Normal daylight, or the light from light bulbs, is white light.

8La – Sound advice

Word	**Pronunciation**	**Meaning**
intensity		The loudness or volume of a sound.
pitch		How high or low a note sounds.
vibrate		Move backwards and forwards.

8Lb – Music to your ears

Word	**Pronunciation**	**Meaning**
amplitude		Half the height of a wave.
frequency	***free****-kwen-see*	The number of waves each second.
hertz (Hz)		The unit for frequency. 1 hertz means one wave per second.
loudness		How loud a sound is; the volume of a sound.
oscilloscope	*oss-**ill**-O-skope*	An instrument which shows a picture of a wave on a screen.
pitch		How high or low a note sounds.
wave		A way of transferring energy. Waves can be side to side or backwards and forwards movements.
wavelength		The distance between the top of one wave and the top of the next.

8Lc – Sound travelling light

Word	**Pronunciation**	**Meaning**
vacuum		A completely empty space with no particles.

8Ld – ’ear ’ear

Word	Pronunciation	Meaning
cochlea	***cok**-lee-a*	The part of the ear that changes vibrations into electrical impulses.
eardrum		A thin membrane inside the ear which vibrates when sound reaches it.
impulse		Electrical signal carried by a nerve cell.

8Le – Annoyed by noise

Word	Pronunciation	Meaning
decibel (dB)	***dess**-i-bell*	Unit for measuring the loudness of a sound.
noise		Unpleasant sound.
sound intensity meter		A meter which measures the loudness of a sound.
threshold of hearing		The quietest sound that can be heard.