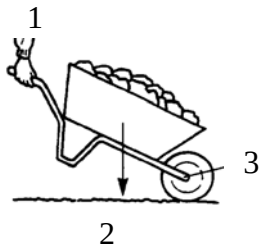
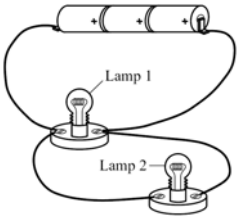
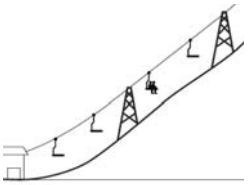
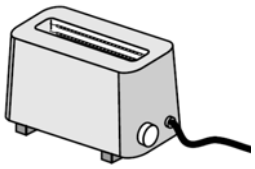
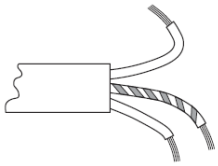
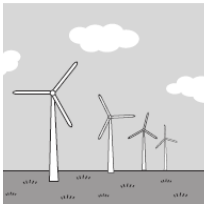
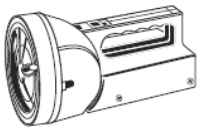
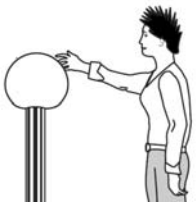
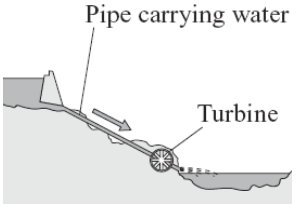
Equal and opposite forces which occur in pairs	Upward force acting on objects when they are placed in water	Substance which allows electric current to pass through it	Force applied at one point of a machine to overcome the load force
action and reaction force	**buoyancy**	**conductor**	**effort force**
Energy stored in a compressed or stretched spring or elastic band	Opposition of a substance to the flow of an electric current. When high, heat is produced	Continuous path around which an electric current is able to flow	Flow of electricity around an electric circuit
elastic potential energy	**resistance**	**circuit**	**current**
Temporary magnet made from a nail with wire wound around it when electricity flows	Ability to do apply a force to an object and make it move. Measured in joules	Unit work / energy is measured in	A push, pull; it may act by contact or at a distance
electromagnet	**work**	**joules**	**force**
Toothed wheels used to transfer force from one wheel to another	Force of attraction between two objects; eg. Between a person and Earth	Type of energy which raises the temperature of object, measured in joules	Slanting surface (ramp) an example of a simple machine
gear	**gravity**	**heat**	**inclined plane**

Unit used to measure work or energy	Type of energy a moving object has, symbol E_K	Long bar which moves around a fix point called the pivot	Force a machine is used to overcome; the resistance against which work is done
joule (J)	**kinetic energy**	**lever**	**load**
Any device designed to help you do work easier	The space in which the force of a magnet act	Amount of matter in an object. Does not change as you move to space. Measured in kg	Unit used to measure force
machine	**magnetic field**	**mass**	**newton (N)**
Energy stored inside the nucleus of an atom	Method of connecting electrical components so the current divides	Point or support on which a lever pivots or turns	Stored energy, available to be converted into other forms of energy
nuclear energy	**parallel**	**pivot**	**potential energy**
Type of simple machine made up of a grooved wheel with a rope around it	Method of connecting electrical components so the current passes through one then the next, no branching in the circuit	Build up of electrical charge on an object due to friction	Measure of the average kinetic energy particles have. Unit °C
pulley	**series circuit**	**static electricity**	**temperature**

When an object is moving eg. falling or the direction of motion changed, we say the forces are	Measure of how much energy is given to electrons in a circuit, or how much energy each component uses	Force exerted on an object due to gravity. Measured in Newton's	The result of a force moving an object a certain distance. Measured in joules
unbalanced	**voltage**	**weight**	**work**
Forms of simple machines	Machines made up of more than one simple machine working together	A crowbar is a type of	The _____ is the force you put into a simple machine
levers, pulleys, inclined plane, screws, gears	**complex machine**	**lever**	**effort**
Some machines help you change the _____ of the force	The _____ is the fixed point around which levers move	Simple machines help you in three ways. These are	Name three contact forces
direction	**pivot**	**magnify the forces, change direction of force, make things move faster**	**push, friction, pull, etc.**
Name three non-contact forces	The force which acts in the opposite direct to movement	The piece of equipment we use to measure forces	Why does the cricket ball do more work than a golf ball moving at the same speed?
magnetic, electrostatic, gravitational.	**friction**	**spring balance or newton meter**	**cricket ball has more mass than a golf ball**

The force which works opposite to weight	What is the form of stored energy found in an object when it is up high?	List four forms of active energy	What is the main form of energy found in petrol?
uplift or supporting	**gravitational potential energy**	**heat, light, sound, kinetic**	**chemical potential energy**
List two objects which contain chemical potential energy	What is the main energy type in a apple hanging on a tree	A moving object has _____ energy	Which of these is a form of active energy? Chemical, elastic, heat and light
food, fuel, batteries etc.	**gravitational potential energy**	**kinetic**	**heat and light**
What is the main form of energy in a bent ruler?	Name an object which transfers electrical energy into sound	Name an object which transfers chemical energy into kinetic	Name an object which transfers light into electrical
elastic potential	**loudspeaker**	**car, person, lawn mower etc.**	**solar cell**
What is the energy transformation for a lift going up?	What is heat?	What is temperature?	What is always lost as energy is transfer?
electrical → kinetic → gravitational	**heat is a form of energy and is measured in J**	**temperature is the amount of kinetic energy the particles have and is measured in °c**	**heat**

Heat energy is always transferred from _____ to _____	As an object temperature increases, what happens to the particles kinetic energy?	Finish this sentence: like charges _____	Finish this sentence: unlike charges _____
hot to cold	**it increases as the particles move faster**	**repel**	**attract**
What type of charge does an electron have?	What type of charge does a proton have?	An object that doesn't allow an electric current to pass through it is called an _____	Most conductors are made of _____
negative	**positive**	**insulator**	**metals**
Which of these objects are insulators: iron, copper, plastic, gold, rubber	An insulator has high _____ and that's why electric current can't flow.	What are some uses of electromagnets?	When a metal has high resistance what is produced when electricity is passed through it?
plastic, rubber	**resistance**	**lifting of car wreck, maglev train, metal detectors**	**heat**
Fuses are a	Why should you not fly a kite near power lines?	What happens to bulbs in a series circuit if one bulb blows or is removed.	Which battery provides more energy to electrons in a circuit: 6V, 3V, 9V or 12V?
safety device which burns out if current in a circuit is too high	**if it touches, current travels down kite, through you and into the ground. can kill.**	**circuit is no longer complete so other bulbs go out**	**12V**

	 What's the force?	 Series or parallel?	 What energy are the skiers gaining?
1.effort 2.load 3. pivot	**friction**	**parallel**	**gravitational potential energy**
 What useful energy form does it produce?	 What useful energy form does it produce?	 What useful energy form does it produce?	 The 2 forces are
heat	**kinetic**	**sound**	**X – air resistance Y - weight**
 What energy do these lamps use?	 What metal is used in wiring?	 Renewable or non renewable energy?	 The 2 forces are
solar energy	**copper**	**renewable**	**thrust & weight**
What useful energy form does it produce? 	 Is the symbol for	 Why does the hair stand up?	 What is this method of generating electricity?
light	**battery / power supply**	**like charges repel**	**hydroelectric power HEP**