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Energy in the home

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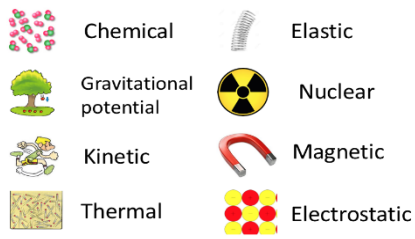
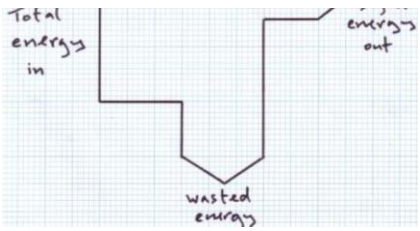
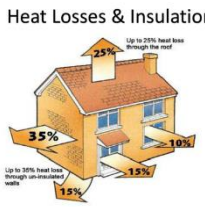
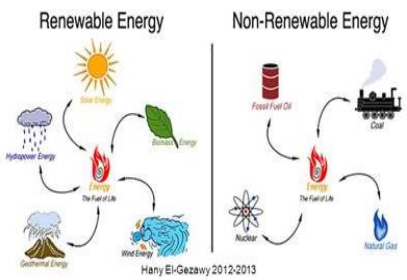
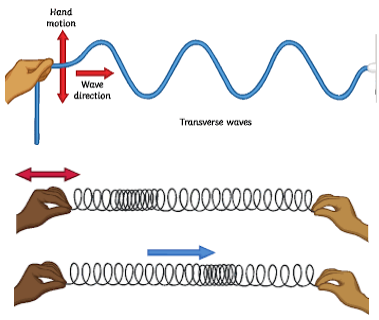
Rationale

The concept of energy emerged in the 19th century. The idea was used to explain the work output of steam engines and then generalised to understand other heat engines. It also became a key tool for understanding chemical reactions and biological systems. Limits to the use of fossil fuels and global warming are critical problems for this century. Physicists and engineers are working hard to identify ways to reduce our energy usage.

Diagrams	Keywords	Definitions
	Energy stores Energy transfers	The eight ways energy can be stored such as, Thermal, chemical, Gravitational, Elastic, electrostatic, magnetic, Nuclear, Kinetic. Energy can be transferred from one store to another and this is when we see something happening in our universe. There are 4 ways this happens: Heating by particles, heating by radiation, electrical working and mechanical working.
	Efficiency Dissipated	How good something is at transferring energy to a useful store Energy can sometimes be wasted and we call this dissipated. When a machine is not 100% efficient, energy is transferred to an unwanted store, this is usually a thermal store.
	Insulation	A material designed to reduce the amount of energy transfer. Typical used to reduced lost of energy in a thermal store from a house, drink or unwanted electricity transfer.
	Renewable energy resource Non Renewable energy resources	Energy resources which are made as quick/faster than being used e.g. Solar, Wind, Geothermal. Energy resources which are being used faster than can be remade e.g. fossil fuels.
	Waves Transverse waves. Longitudinal Spectrum	Waves are a transfer of energy. Transverse waves are waves that the particles move in right angles to the direction of energy. Waves that particles move in the same direction as the transfer of energy. A range.