

Glossary

Unit 5.1

Chemical energy: energy stored within a substance such as fuel or food that may be released when the substance is burnt or digested

Elastic potential energy: energy stored within a stretched or compressed object, like a spring or elastic material

Electrical energy: energy that causes charged particles to move

Energy: the ability to make a change happen; different forms include heat energy, light energy and sound energy

Gravitational potential energy: stored energy of an object that is held above the Earth's surface

Heat energy: a measure of the total kinetic energy possessed by particles in a substance

Joule (J): unit of measurement for energy

Kinetic energy: energy possessed by a moving object

Light energy: form of energy that is visible, such as that produced by the Sun

Nuclear energy: energy stored inside an atom

Photosynthesis: process in which green plants convert light energy into chemical energy

Potential energy: stored energy possessed by an object, such as elastic potential energy of a squashed spring

Sound energy: energy that travels as vibrating waves and can be heard by our ears as sound

Work: this is done whenever an object is moved or is forced to change shape



Kinetic energy



Light energy

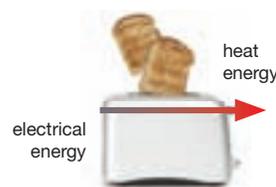


Potential energy

Unit 5.2

Energy efficiency: the proportion of useful energy output from a device compared to the amount of energy that is input. This is usually expressed as a percentage.

Energy flow diagram: diagram using arrows that shows the way energy is passed on or changed into other forms in a particular situation



Energy flow diagram

Energy transfer: the flow of energy from one object into another object; for example, the flow of heat from a metal spoon to your hand, or the flow of kinetic energy from a bat to a ball that it hits

Energy transformation: the conversion of one type of energy into another type of energy; for example, the conversion of electrical energy used in an MP3 player into sound, light and heat energy

Law of conservation of energy: Energy cannot be created or destroyed. It can only be transferred from one object to another or transformed into another form of energy.

Unit 5.3

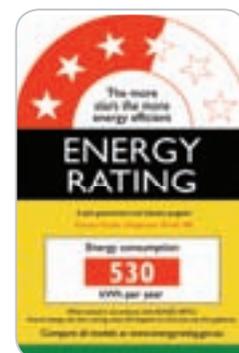
Energy rating label: a label showing a number of stars (usually from 1 to 6), which can be used to compare the energy efficiency of different appliances

Insulation: material added into ceilings and between the walls of a house to reduce heat transfer

National House Energy Rating Scheme: a scheme that uses computer simulations to provide a star rating (to a maximum of 10 stars) to houses based on the effectiveness of the external walls against heat loss

Organic photovoltaics: a new generation of flexible and cheap solar cells made from carbon-based materials

Regenerative braking: vehicle braking system that stores some of the kinetic energy of a car as it slows down and uses this energy to power the car



Energy rating label