



There are different forms of energy in existence all around us. There is energy in the light from the sun and energy in the waves on the sea. Energy in your body helps keep you warm and allows you to move around.

It is important that you can recognise these different energies and use their correct names.

Energy is measured in Joules. We use the symbol J to represent this.

- Kinetic Energy :** This is the energy an object may have due to its movement. Any moving object has kinetic energy. e.g. A car driving along the road will have Kinetic energy
- Gravitational Energy :** This is the energy an object may have due to its position above a certain point. e.g. A bird flying above the ground will have gravitational energy.
- Chemical Energy :** This is a form of stored energy. All fuels are stores of Chemical energy. e.g. Coal contains stored energy which can be burned to produce heat and light.
- Light Energy :** This energy is given out by luminous objects. Any object which glows gives off light energy. e.g. A candle flame is luminous, it gives off light
- Heat Energy :** This energy can be felt in the warmth of an object. Almost every object contains some heat energy, cold objects have only a small amount of heat energy. e.g. Your body contains heat energy.
- Sound Energy :** This energy is produced by vibrating objects. Any object which wobbles backwards and forwards quickly enough can produce a sound wave. e.g. a guitar string can wobble the air to produce a sound.
- Nuclear Energy :** This energy is contained within the centre of atoms. It is possible to split some atoms and use the nuclear energy from them. e.g. Polaris submarines use nuclear energy.
- Stored Elastic Energy :** This energy is contained by any object which has been squeezed or squashed and tries to return towards its original shape. e.g. a tennis ball will attempt to spring back into shape if it is squashed.
- Electrical Energy :** This energy is due to the collection or movement of electrical charges. The collection of still electrical charges produce static electricity. If the charges move we have current electricity. e.g. a lightning strike contains huge amounts of electrical energy.

Note down the energies which could be present in the following situations. Set out your answers as shown in part a.

- a. A rock falling from the top of a cliff.
  1. Gravitational Energy - due to the height of the rock.
  2. Kinetic Energy - the rock is moving
  - 3.
- b. A cricket ball smashing through a second floor window.
- c. A steam train running through Trumpton Station.
- d. Postman Pat driving up hill at night, to deliver his letters.
- e. Delbert Down-beat strutting his stuff at the local disco.