

# Energy

## What would we do without it?

### What is 'energy'?

#### Types of energy?

#### Why is it important?

#### Energy Transfer

### What is 'energy'?

**Energy is the power that makes things work.**

In the World, energy allows the wind to blow and the sea to move.

We get our energy from FOOD. Plants get energy from the SUN.

### Types of Energy

**Kinetic** – movement energy, everything that moves has kinetic energy

**Potential** – stored energy, the water at the top of the waterfall has energy that is released as it falls to the river below

**Light** – from the Sun

**Electrical** – energy is transferred from where it is stored by an electrical current to where it is needed

**Sound** – transferred to its surroundings by vibrations

**Thermal (heat)** – heat is a form of energy and heating is a process of energy transfer

**Nuclear** – everything is made up of atoms. When an atom is split, nuclear energy is released.

### ENERGY TRANSFER

When energy changes from one thing to another it is known as energy transfer. For example, FOOD we eat is known as chemical energy. Initially it is potential energy as it is stored energy. After digestion, we use the energy from food as kinetic energy when we move and thermal energy that keeps us warm.

### ENERGY is important because we cannot do much without it!

Think about your life – your house, your school, how you get about, how your clothes are washed, how your food is cooked, how your mobile phone works, what you eat...they all require energy.

There are ENERGY SOURCES all around us – wind, sun, water. There are also energy sources stored in the ground, for example, coal, oil or gas.

Energy sources are FUELS, which can be used to produce electricity.

### ELECTRICITY

Electricity can be produced in various ways. Some are more efficient than others, some are more polluting than others and some are more reliable than others.

