
Lesson N°3

Energy cannot be created or destroyed but it can be transferred, dissipated or stored in different ways. Energy exists in various forms. Some of the main forms of energy are:

MECHANICAL ENERGY: The energy possessed by a body both due to its motion or position is called mechanical energy. Water running down a stream, wind, a moving car, a lifted hammer, a stretched bow, a catapult or a compressed spring etc. possess mechanical energy.

HEAT ENERGY: Heat is a form of energy given out by hot bodies. Large amount of heat is obtained by burning fuel. Heat is also produced when motion is opposed by frictional forces. Thermal energy is energy that comes from a substance whose molecules and atoms are vibrating faster due to a rise in temperature. The Sun is the main source of heat energy.

ELECTRICAL ENERGY: Electricity is one of the widely used form of energy. Electrical energy is caused by moving electrical charges. These charged particles are called electrons. Electrical energy can be supplied easily to any desired place through wires. We get electrical energy from batteries and electric generators. These electric generators are run by hydro power, thermal or nuclear power.

SOUND ENERGY: When you knock at the door, you produce sound. Sound is a form of energy. It is produced when a body vibrates; such as vibrating diaphragm of a drum, vibrating strings of a sitar and vibrating air column of wind instruments such as flute pipe etc.

LIGHT ENERGY: Light is an important form of energy. It is a form of **electromagnetic radiation**. Light consists of **photons**, which are produced when an object's atoms heat up. Light travels in waves and is the only form of energy visible to the human eye. Name some sources of light that you come across. Plants produce food in the presence of light. We also need light to see things. We get light from candles, electric bulbs, and fluorescent tubes and also by burning fuel. However, most of the light comes from the Sun.

CHEMICAL ENERGY: is energy that is stored in the bonds between chemical compounds, such as atoms and molecules. Chemical energy is present in food, fuels and in other substances. We get other forms of energy from these substances during chemical reactions. The burning of wood, coal or natural gas in air is a chemical reaction which releases energy as heat and light. Electric energy is obtained from electric cells and batteries as a result of chemical reaction between various substances present in them. Animals get heat and muscular energy from the food they eat.

NUCLEAR ENERGY: Nuclear energy is the energy released in the form of nuclear radiations in addition to heat and light during nuclear reactions such as fission and fusion reactions. Heat energy released in nuclear reactors is converted into electrical energy. The energy coming from the Sun for the last billions of years is the result of nuclear reactions taking place on the Sun.

Questions:

- 1- Give a title to the text.
- 2- How is light energy formed? What are some examples of light energy?
- 3- What are some examples of electrical energy?
- 4- Give the synonym of the underline word in text.
- 5- Extract from the text five adjectives.
- 6- Summarize the text.