

SAMPLE  
USE  
Chapter Summary  
ONLY

## Introduction

Lets have a look at the contents of this chapter. We will discuss about electricity, its sources like electric cells, Electric bulb, how it can be connect to a circuit with the help of a switch, electric torch and conductors and insulators.



## Electricity

Electricity is one of the most useful forms of energy; it makes our life more comfortable. It provides both light and heat for use in our homes, offices and other workplaces by power stations.

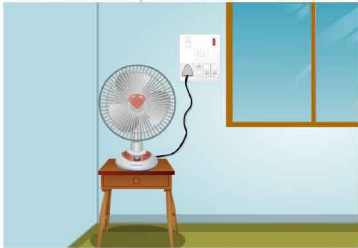


No place is left where we are not using electricity. It is easily convertible to the other forms of energy and can flow along cables, which makes it easy to transport. It is used to power many devices which make our work easier.

## Use electricity

Now have a look where we can use electricity or electric energy i.e. some common examples where we use electricity:

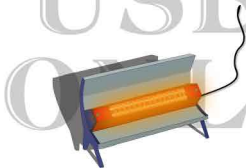
Electricity is used to light our homes, offices, roads, factories, etc. this electric energy is converted into light energy by the medium of electric bulbs and tube lights.



## Use electricity

Electricity helps reduce our physical work and time consumption. Most of the home appliances run on electricity, e.g., mixer grinder, washing machine etc. Many heavy machineries, like cranes etc., also run on electric energy.

Electricity is used to produce heat. It is used to operate iron, electric heater, geyser, etc.



## Source of electricity

Now we will discuss one source of electricity i.e. electric cell. An electric cell is a device used to turn chemical energy into electrical energy. It is used to power small appliances, like a torch, remote control etc.



## Structure of an electric cell

Now we will see the structure of an electric cell. Every cell must have two terminals. Here we will discuss the simplest one. That is dry cell.

It has one metal cap on one side and a metal disc on the other side.

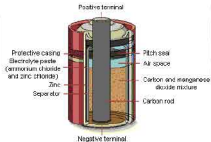
All the electric cells have two terminals: positive and negative.

The metal cap behaves as positive terminal (cathode).

The metal disc behaves as a negative terminal (anode).

When electric current flows electrons move from negative to positive terminal.

When an electric current flows, electrons flow from negative to positive terminal and current flows from positive to negative terminal of the cell.



## Electric cell

Now let's see how an electric cell works. When an electric cell is connected in a circuit, a chemical reaction starts in the cell, leading to the generation of electric current, resulting in the lighting of the bulb connected to the circuit.

Over a period of time when the chemical energy is totally used up, the current stops to flow and the electric then has to be replaced to a new one.





## Electric energy

Electric energy is converted into light energy by the means of an electric bulb or tube lights.

A bulb has a thin wire inside it made up of tungsten called filament. It is supported by two thick wires. One of these thick wires is connected to the metal case at the base of the bulb. Whereas the other one is connected to the metal tip at the centre of the base. Thus formed two terminals of the bulb.

When these two terminals are connected with an electric cell it glows.

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## Example

To understand fused bulb firstly we will see this simple example. You can see the filament of second bulb is broken so it will not glow. But that of first one is o.k. So it will work. As it gives complete path to the electric current through bulb.

