

Board – CBSE

Class – 6<sup>th</sup>

Topic – Electricity and Circuits

Electricity

Electricity is useful because it can be converted easily into various other forms of energy such as heat energy, light energy, mechanical energy, sound energy and magnetism. We use electricity to run many appliances in our day to day life which makes our work easier.

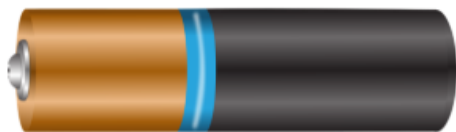
Advantages of Electricity:

- Light in our houses, offices, roads etc. even past sunset
- To operate pumps which in turn have a lot of applications
- Electrical appliances like refrigerators, fans etc.
- Building houses, installing equipment etc.

**Electric Cell:**

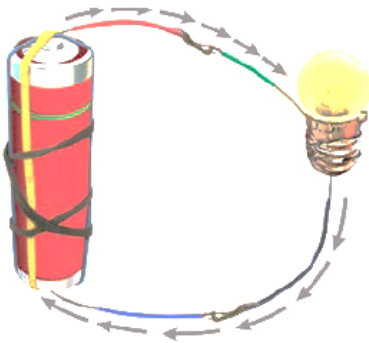
Features of an Electric Cell:

- It is a small cylindrical structure that helps in operating the devices.
- A small metal cap is placed on one side, and a metal disc is present on the other side.
- All cells have two terminals: Positive and Negative.
- The metal cap and metal disc are positive (+) and negative (-) terminals of the electric cell.
- Chemical energy is converted into electrical energy inside a cell. When the chemicals are exhausted, the cell stops working.



Electric Cell

The flow of current in a circuit: As soon as the path from one terminal of the electric cell to the other is completed, an electric current starts flowing through the circuit, and the bulb lights up. The electric current flows from the positive terminal of the electric cell to its negative terminal.



*Direction of current in an electric circuit*

## **Electric Switch**

The switch is an integral part of an electric circuit. It is a simple device that breaks or completes a circuit. When the switch is 'on', the circuit is complete. When the switch is 'off', the current does not flow in the circuit. So an electric appliance will only work if the switch is 'on'.



*An electric circuit with a switch*

## **Electric Conductors and Insulators:**

Conductors - Materials that allow electricity to flow through them easily.

Insulators - Materials that do not allow electricity to pass through them.

- The human body is a conductor, so touching a current carrying wire is detrimental, so insulating it prevents an electric shock.
- Some examples of conductors are: Metals like copper, Iron
- Some examples of insulators are: Rubber, Plastic

