

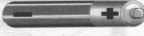
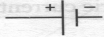



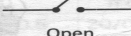
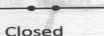






Closed circuit:

A circuit in which electric current flows from one terminal of a cell to the other is called a closed circuit.

Open circuit:

A circuit in which electrical contact at any point gets broken then it is called an open circuit. No current flows in an open circuit.

Electric current flows in a particular direction. In an electric circuit, the electric current flows from the positive terminal to the negative terminal of an electric cell.

Component	Symbol	
 Cell	 The shorter line denotes the negative terminal and the longer line denotes the positive terminal.	
 Battery	 Two or more cells joined together form a battery.	
 (a) (b) Switch (also called key) (a) open (b) closed	 Open	 Closed
 (a) (b) Bulb (a) ON (b) OFF	 On	 Off
 Wire	 On	 Off

Electric switch: Learning With Innovation.....

We use electric switches to put on or off the electrical devices and machines. But do you know how it works? An electric switch is a device that is used to open or close an electric circuit. When we open an electric circuit, the flow of electric current in the circuit stops and when we close an electric circuit, an electric current flows through it. In an electrical circuit, a switch is sometimes referred to as a 'key'.

Electric Fuse:

A fuse, short for fusible link, is a safety device that prevents a large amount of current from flowing into a device or appliance. It consists of a metal wire that melts easily when heated.

Electric torch:

Let us now study the parts of a torch and see how it works.

A torch has the following parts.

A Bulb: an electric bulb consists of a transparent glass covering. It encloses a thin, coiled metal wire known as the filament. The filament is made up of tungsten.

Electric Cells: the cells provide the electricity for the bulb to glow. Each cell has two terminals marked positive (+) and negative (-).

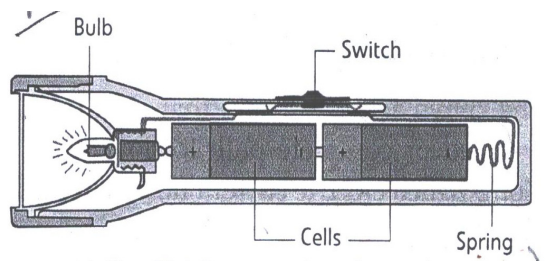
6th – Electric Circuits II



A Switch: the switch slides between the ON and OFF positions. The bulb glows in the ON position and stops glowing in the OFF position.

Wire and spring: wire is a link between the bulb and the switch. Spring is a link between the cells and the switch.

When the switch is pushed to the 'on' position, the circuit is complete and the bulb glows. When the switch is pushed to the 'off' position, the circuit is incomplete (broken). Light goes out.



Conductor:

Any material that allows the electric current to flow through it is called a conductor.

Insulators:

The materials which do not allow an electric current to flow through them are called insulators.

S.No	Conductors	Insulators	S.No.	Conductors	Insulators
1.	Silver	Plastic	7	Human body	Silk
2	Copper	Glass	8	Living plant	Pure water
3	Aluminum	Bakelite	9	Brass	Rubber
4	Lead	Cotton	10	Tin	Leather
5	Tap water	Wood	11	Iron	Ebonite
6	Gold	Cork	12	steel	Nylon

The handles of screwdrivers and testers used by electricians are usually made of wood or hard plastic. They also wear rubber gloves while repairing an electric switch to avoid electric shock.

Safety precautions:

1. Never touch any electrical device with wet hands. you may get a shock.
2. While using electrical devices, always wear rubber-soled footwear as rubber is a bad conductor of electricity and prevents a large current from passing through your body.

Never play or try to conduct experiments with electrical connections, wires, switches or sockets at home.

