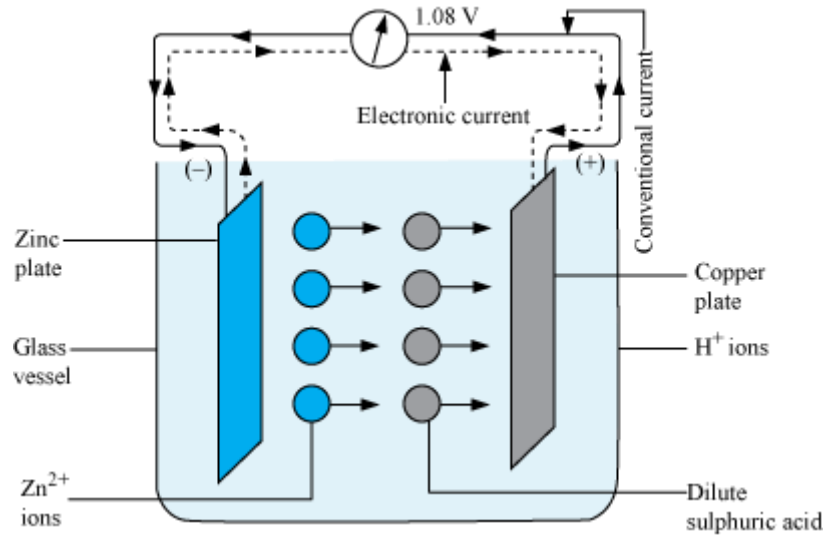


Electricity and Circuits

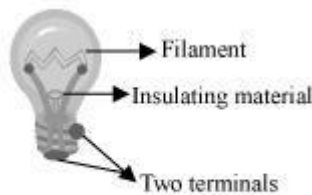
- Electricity is the flow of electric charges when the negative and positive terminals of an electric cell are connected by a certain substance.
- A simple cell consists of a vessel with two metal rods or plates, known as electrodes, and a chemical substance known as electrolyte.



- **Electric cell:** It is a source of electricity. There are two terminals of a cell – Positive (+) and Negative (-).



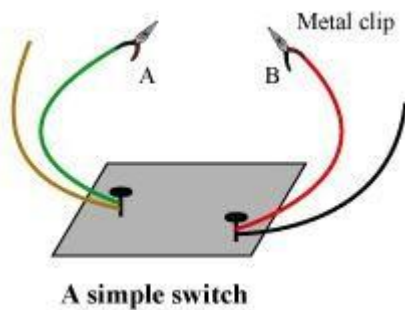
- Electricity is generated in a cell because of chemical reactions that take place inside it.
- When all the chemicals stored inside it are used, the cell stops generating electricity.
- **Electric Bulb**



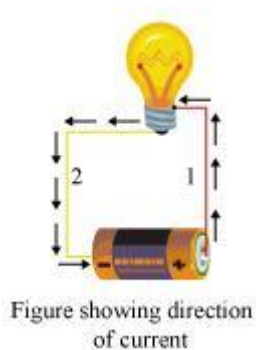
An electric bulb

- - A bulb has a filament and two terminals.

- The filament gives off light when an electric current flows through it.
- **Electric switch:** A switch either breaks or connects the circuit.



- The **electric circuit** provides a complete path for electricity to pass between the two terminals of the electric cell.
- In an electric circuit, the **direction of current** is taken from the **positive to the negative terminal** of a cell that is connected to the circuit.



- A **fused bulb** does not emit light, as no current flows through its filament.
- The main electric component of a **torch** are a cell or a battery, a bulb, and a switch.
- Materials which allow electric current to pass through them are called **conductors** of electricity.
- Materials which do not allow electric current to pass through them are called **insulators**.
- Differences between Conductors and Insulators:

Electrical conductors	Electrical insulators
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Electricity can pass through certain materials. These materials are known as electrical conductors.	Electricity cannot pass through certain materials. These materials are known as electrical insulators.
All metals (for example, aluminium, copper, iron, and steel) are good conductors of electricity. Therefore, electrical wires are made up of metals such as aluminium and copper.	Few examples of good electrical insulators are plastic, wood, glass, and rubber. Therefore, plastic or rubber is often used to cover electrical wires.

- Conductors and insulators are equally important for us.