بت آطا Pratham



Electricity

Generating Electricity: Chemical to Electrical

NCF and/or NCERT Learning Outcomes:

- To understand how to generate electricity from chemical energy.
- To understand types of chemical cells and batteries

Why should we learn this?

• You will learn about generating electricity from chemical energy and you will get to know about various types of cells/batteries and their use.

Look, Think and Write

Look at the images below and answer the questions.



The electric current that powers many appliances in our home comes through wires. However, to operate devices like a TV remote control, torch, or mobile phone, we need to use cells or batteries.



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What if cell or batteries didn't exist?

- Would you be able to carry your mobile phone or laptop everywhere with you? Why or why not?
- Cells or batteries allow us to use our devices everywhere and at all times.

But what is a cell or battery? How does it work?

- A cell is a tiny energy box, which stores chemical energy.
- Inside the cell, chemical reactions take place causing electrons to flow, thus generating an electric current.



- This transforms chemical energy into electrical energy.
- Multiple cells can be combined together to form a battery.



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Why do cells and batteries stop generating electricity?

- What do you think happens inside them?
- Explore it with the help of your teachers, parents, internet, and AI (Artificial Intelligence)



rockets and spaceships

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Now, here's something to think about

• Look at these batteries and identify where they are used. What is the difference between them in terms of usage?



A Fun Challenge for You!

- If cells/batteries store chemical energy, can we make one ourselves?
- Try making a simple battery using lemons and see if you can light up a small LED bulb! Let us know what you discover!
- You can also take help from the internet for this.

