

TOPIC : ELECTRICITY AND CIRCUITS

<u>Pre-content/ Content / Post-Content</u>	<u>Learning outcomes / Objectives</u>	
<u>PRE-CONTENT</u>	General	Specific
	Students will be able to	Students will be able to
Interactive discussion and brainstorming session will be taken up of electricity and simple questions will be asked to introduce the chapter like 1. Why do you think electricity is important in our daily life ?	• recall electricity and its importance	apply the knowledge of importance of electricity in daily life and its environmental side effects.
<u>CONTENT</u> • Sources of electricity • Electric Bulb • Electric circuit • Electric Switch • Electric conductors and insulators	• identify various sources of electricity. • identify the filament of a bulb • recall the elements of a circuit and construct an electrical circuit. • construct an electrical switch • recall and differentiate between conductors and insulators.	• list various sources of electricity. • draw the diagram of bulb and understand the importance of two terminals in a bulb • differentiate between open and closed circuit • appreciate the role of an electric switch in an electric circuit. • analyse the role of conductors and insulators in an electric circuit.
<u>POST CONTENT</u> • Uses of electricity	• apply the usage of electricity for various purposes.	• correlate and apply in daily life situations and create awareness to save electricity

HOMEWORK / ASSIGNMENT

1. Work exercises from the “ N.C.E.R.T Science Textbook “
2. Practice assignments from assignment booklet.

CLASS-VI

Teacher's Activity	Student's activity	Teacher's observation and Remedial
Teacher will take up the brainstorming session and previous knowledge of the students will be tested. Views from student will also be taken about what they think electricity come from ?	Students will actively participate in the session and share their views on electricity and its uses at various places.They will be given a chance to speak on ways to save electricity as well.	
• explain the sources of electricity and ask the students to collect pictures of the same. • show arrangement of a bulb and a cell and will explain the working of a bulb and ask students to draw a diagram . • conduct an activity to show that current flows in a closed circuit and further will show them the elements of an electrical circuit and tell them the difference between open and closed circuits. Annexure 12 (A) • conduct an activity to make an electrical switch • show that electricity can be passed through good conductors only.	• perform the activity given by the teacher and collect the pictures. and will paste it in their copies • record their observations and draw a diagram and do the worksheet questions as well. • perform the activity and make their own circuits and write the difference between open and closed circuits Annexure 12 (a) • perform the activity and make their own switch and torch bulb • record their observations.	
• ask students to prepare posters on ways to save electricity	• draw posters on save electricity to create awareness of importance of light.	

Teaching Aids – Physics Lab , Active Inspire , ICR , coloured sheets , Different objects like cells , wires , bulb , conductors , insulators , plastic tape.

Methodology/Innovative Methods : Deductive Activity Method , Known to Unknown , Brainstorming sessions

Interdisciplinary Links- Linked with Real life : **English** - It will improve the power of expression while explaining the activity and also vocabulary. **Environment:** It will sensitize students to save environment by saving electricity.

HOD

COORDINATOR

HEADMISTRESS

PRINCIPAL

ANNEXURE 12
LET'S CREATE A SWITCH!

Subject	Science
Class	VI
Chapter/Unit	Electricity and circuits
Topic	Switch
Time	40 mins
Nature of Activity	Individual

What will I learn ?(Learning Outcome) :

To verify that the purpose of a switch in a circuit is to

- make it easy to open or close the electrical circuit
- turning the flow of electricity on or off.

Skills:

Applying, Creating, Evaluating

What I have to do ?

To glow an electric bulb with the help of a switch.

What do I require ?

An electric bulb, an electric cell , plastic coated copper wires, a safety pin, insulated plastic tape, cardboard , board pins

What do I need to know ?

Electric cells are a common source of electrical energy for many equipments. Electric cells and switches are used in transistors , calculators , wristwatches , remotes , toys , clocks , cameras , video games etc. The role of switch is to turn on or off the circuit.

➤ **Teacher's Activity:**

Teacher will

- (1) give instructions to make the connections and set up the circuit to make a switch.
- (2) arrange the materials required to make a simple electric circuit.

How will I proceed ?

➤ **Student's Activity :**

Students will

- (1) insert a board pin into the ring of the safety pin and fix it on a cardboard.
- (2) fix another board pin in the cardboard close to the previous one to make the switch.
- (3) make an electric circuit by connecting the wires with switch , battery and bulb .

What have I observed ?

For each arrangement find out whether the bulb glows or not. Also, try to find out the reason wherever the bulb is not glowing.

S.No	Arrangement	Did the bulb glow ?	Reason
1	When the other end of safety pin is not attached with board pin		
2	When the other end of safety pin is attached with board pin		

What have I learnt ?

- (a) When the switch is in _____ position the circuit is complete. Hence, current flows and the bulb _____.
- (b) When the switch is in _____ position, the circuit is incomplete. Hence no current flows and the bulb _____.

What am I curious to learn ? :

Let us discover whether the above circuit will work if safety pin is replaced by a rubber band or a plastic sharpener.

Let me evaluate myself

Q1. What is the direction of electric current in the circuit ?

Q2. Differentiate between insulators and conductors .

Insulators	Conductors

Q3. Draw a symbol of switch (off and on both).

Q4. What is the importance of switch ?

Q5. Think of creating any small appliance (including electric circuit and a switch) which can be of some use in your daily life.
