

Delhi Public School Ghaziabad

Class XII

PHYSICS

Lesson plan

based on DOL

Unit 2 CURRENT ELECTRICITY

Unit	UNIT 2 CH 3-CURRENT ELECTRICITY
Class Transaction	Total: 20 periods
Pre-requisite for the course	This lesson requires: • Basic knowledge of electric current
Assessment of qualifying knowledge	• Written test • Lab activity
Objective	To provide students with knowledge of Enhance ability to accurately recognize and use appropriate terminology related to electric current and conductivity. To make students able to research on common examples of heating effect of electric current.
Learning Outcomes	KNOWLEDGE- <i>Students will know and understand</i> <i>Modes Critical Thinking</i> <i>Creative</i> SKILLS- <i>Students would be able to demonstrate simple series and parallel circuits</i>
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Brain Storming-The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. Introduction of the topic- ppt and Digital Content would be shared Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: Student - teacher interaction, collaborative learning, independent research, differentiated teaching, peer learning Competencies: collaborative learning, critical thinking and problem solving
Resources	NCERT text book, Reference Book, CBSE Exemplar, DPSG Spiral www.learncbse.in/cbse-notes/ https://mycbseguide.com www.examfear.com
Self- Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their spirals. It is also advised that the students come to the class with proper background knowledge of the topic under discussion. They can refer to the resources stated above.
Assessments	UNIT TESTS , MID TERM EXAMINATION, HALF YEARLY EXAMINATION, ANNUAL BOARD EXAMINATION

Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For high scoring students:</i> Encouragement for referring other resources <i>For low scoring students:</i> Peer education Provide grade-up classes <i>For differently abled students:</i> Call parents at regular intervals Provide PCC classes Encourage and motivate them at every level.
Marks	Unit – 07 marks

CLASS XII LESSON PLAN

Unit 2- CURRENT ELECTRICITY

(Based on DOL)

Anticipatory Set: Facilitator introduces the topic **CURRENT ELECTRICITY**

Objective:

- Given questions based on the topic. Learners will be able to revise the basic principle of geography.
- To make students able to solve questions based on the topics to be discussed
- They will be able to track the growth of subject.

Techniques to be used:

- Peer Assessment
- Quiz

Materials required and Teaching Aids: blackboard, chalk, duster, Text book

Strategy

Student – teacher interaction, collaborative learning, independent practice

DAY 1

- Students will read, interpret and discuss the types of current.
- Students will learn the process of electric current and ohm's law.
- Students will explain resistance and resistivity.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked convention of electric current and resistance of different materials(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 2

- Students will read, interpret and discuss the types of current.
- Students will learn the process of electric current and ohm's law.
- Students will explain resistance and resistivity.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked convention of electric current and resistance of different materials(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:**Independent practice:**

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 3

- Students will read, interpret and discuss the types of current.
- Students will learn the process of electric current and ohm's law.
- Students will explain resistance and resistivity.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked convention of electric current and resistance of different materials(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:**Independent practice:**

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 4

- Student will explore the concept of drift velocity mobility and relation with electric current
Students will discuss properties of resistivity and resistance.
- Students will learn about current density.
- Collaborative learning- the students will work in groups to Ohmic and non Ohmic substance.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked to differentiate Ohmic and non Ohmic conductor (Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 5

- Student will explore the concept of drift velocity mobility and relation with electric current
Students will discuss properties of resistivity and resistance.
- Students will learn about current density.
- Collaborative learning- the students will work in groups to Ohmic and non Ohmic substance.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked to differentiate Ohmic and non Ohmic conductor (Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 6

Students will learn Carbon resistor, and color code

- Students will discuss properties of resistivity and resistance.
- Students will learn series and parallel combinations of resistor .temperature dependence of resistance

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked differentiate different resistor on the basis of color(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:**Independent practice:**

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 7

Students will learn Carbon resistor, and color code

- Students will discuss properties of resistivity and resistance.
- Students will learn series and parallel combinations of resistor .temperature dependence of resistance

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked differentiate different resistor on the basis of color(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 8

Students will learn Carbon resistor, and color code

- Students will discuss properties of resistivity and resistance.
- Students will learn series and parallel combinations of resistor .temperature dependence of resistance

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
- Students will be asked differentiate different resistor on the basis of color(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 9

- Students will be able to learn cell, e.m.f., terminal potential difference and internal resistance.
- Combinations of cells in series and parallel
- Students will be able to explain Kirchhoff's law.
- Students will solve questions of Kirchhoff's law

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
- Students will be asked to show graphical presentation in different conditions

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 10

- Students will be able to learn cell, e.m.f., terminal potential difference and internal resistance.
- Combinations of cells in series and parallel
- Students will be able to explain Kirchhoff's law.
- Students will solve questions of Kirchhoff's law

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked to show graphical presentation in different conditions

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:**Independent practice:**

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 11

- Students will be able to learn cell, e.m.f., terminal potential difference and internal resistance.
- Combinations of cells in series and parallel
- Students will be able to explain Kirchhoff's law.
- Students will solve questions of Kirchhoff's law

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked to show graphical presentation in different conditions

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:**Independent practice:**

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 12

- Students will be able to learn applications of Kirchoff's law
- Students will apply Kirchhoff's law to find the unknown resistance by using meter bridge.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked importance of meter bridge (Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 13

- Students will be able to learn applications of Kirchoff's law
- Students will apply Kirchhoff's law to find the unknown resistance by using meter bridge.

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked importance of meter bridge (Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 14

- Students will discuss principle of potentiometer
- Students will learn applications of potentiometer to measure potential difference

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked difference between potentiometer and voltmeter(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 15

- Students will discuss principle of potentiometer
- Students will learn applications of potentiometer to measure potential difference

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher
Students will be asked difference between potentiometer and voltmeter(Problem solving)

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 16

Students will learn comparing of emf by potentiometer

Students will learn to find internal resistance of cell by potentiometer

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked sensitivity of potentiometer

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 17

Students will learn comparing of emf by potentiometer

Students will learn to find internal resistance of cell by potentiometer

Guided practice:

- Students will solve selected questions from NCERT book of exercise in their note book in the class with the help of their teacher

Students will be asked sensitivity of potentiometer

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to do question in assignment copy from the given assignment.

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the lesson by mind mapping

DAY 18

Students will learn to perform experiments to find resistance per unit length

Students will learn to perform experiments to find unknown resistance using meter bridge and verify series and parallel combinations

Students will compare emfs of two primary cells and internal resistance of cell by using potentiometer

Guided practice:

Students will be asked to take observations using required apparatus

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching

- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to write practical in record file

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the practical by mind mapping

DAY 19

Students will learn to perform experiments to find resistance per unit length

Students will learn to perform experiments to find unknown resistance using meter bridge and verify series and parallel combinations

Students will compare emfs of two primary cells and internal resistance of cell by using potentiometer

Guided practice:

Students will be asked to take observations using required apparatus

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to write practical in record file

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the practical by mind mapping

DAY 20

Students will learn to perform experiments to find resistance per unit length

Students will learn to perform experiments to find unknown resistance using meter bridge and verify series and parallel combinations

Students will compare emfs of two primary cells and internal resistance of cell by using potentiometer

Guided practice:

Students will be asked to take observations using required apparatus

SUMMARIZE AND CHECK FOR UNDERSTANDING

- Oral questioning based on days teaching
- Discussion on the topic

Communication:

Independent practice:

Students will be asked to revise the work done in class.

Students will be asked to write practical in record file

Critical thinking:

Help students develop reasoned problem solving and decision making skills

Closure of the lesson

Summarizing the practical by mind mapping