

CLASS – VIII
LESSON PLAN
CHAPTER- SOME NATURAL PHENOMENA

Unit	Physics (Chapter Some Natural Phenomena)
Class Transaction	Total periods required:6 (approx. 40 min each)
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain the cause of lightning and interaction. List the steps to minimize destruction caused by lightning and earthquake. How charges interact and bring about changes. Construct an electroscope and describe it's working.
	DOL- D1, D2, D3, D4
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> • What is the cause of lightning and earthquake • What are the steps to minimize destruction caused by lightning and earthquake? • What is the working of electroscope. <u>Skills & Competencies-</u> Students would be able to • Critically analyse various aspect of lightning and earthquake. • Appreciate the disaster caused by natural phenomena. Collaboratively • Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others
Transaction Methodology (Approaches,	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking)

Strategies, Tools and Techniques) Facilitation	Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication) 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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities <i>Guided practice to be followed by Independent Practice</i>- NCERT questions to be discussed in the classroom.
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Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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	4 UNIT TESTS25 Mark each=100 Marks HALF YEARLY EXAMINATION 80+20 (internal)=100 Marks ANNUAL EXAMINATION 80+20(internal)=100 Marks By administering pen paper test, we assess creativity and critical thinking. INTERNAL ASSESSMENT 20 Marks in each Term - Subject Enrichment Activity 10 Marks With the help of subject enrichment activities we assess communication, collaboration, character building and citizenship (Demonstration and implementation of on force and pressure in our daily life). The students in a group of 5 will be demonstrating the activity. - Note Book Submission 10 Marks
Addressing Classroom Diversity	It's a different classroom today: As the kids are from different socio economic background, So are their needs, demands and aspirations. Today all kinds of students including the gifted, the average and the differently able are mainstreamed into one class. So the teaching learning process must be devised in such that can cater to the needs and aspirations of students of abilities . The following techniques can be used for different groups: <i>For the gifted:</i>

	• Preparing a debate • Making PPT • Designing an exhibit • Writing a report • Preparing a talk • Encouragement for referring other resources <i>For the average/slow learners:</i> • Making a Chart/diagram/poster/ flashcards • Buddy system help to be provided • Provide grade-up classes <i>For differently able:</i> • Ignore grammatical inaccuracy • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
	Q 1 Draw a well labeled diagram to show the various layers of the earth. Q 2 Explain how lightning occurs between two clouds. Support your answer with a diagram. Q 3 What is lightning conductor? How does it save the building from lightning? Q 4 explain the construction and working of an electroscope with diagram. Also mention its two uses. Q 5 List four causes of tremors.

Unit	Day 1 (Charges and cause of lightning)
Class Transaction	approx. 40 min
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain the cause of lightning and interaction.
	DOL- D1, D2
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> - What is the cause of lightning <u>Skills & Competencies-</u> Students would be able to Critically analyse various aspect of lightning. - Appreciate the disaster caused by natural phenomena. Collaboratively - Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others
Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication)

	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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities <i>Guided practice to be followed by Independent Practice</i>- NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan:

	<i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.

Unit	Day 2 (Lightning conductor)
Class Transaction	approx. 40 min
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain advantage of lightning conductor.
	DOL- D2, D3
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> • What is the use of lightning conductor • What are the steps to minimize destruction caused by lightning What is the working of electroscope? <u>Skills & Competencies-</u> Students would be able to • Critically analyse various aspect of lightning. • Appreciate the disaster caused by natural phenomena. Collaboratively • Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others

Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication) 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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment
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	• Lab Activities <i>Guided practice to be followed by Independent Practice-</i> NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.

Unit	Day 3 (Electroscope)
Class Transaction	approx. 40 min
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain the Construction and working electroscopes.
	DOL- D2, D3, D4
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> • What is the working of electroscopes.

	Skills & Competencies- Students would be able to • Critically analyse various aspect of charges. • Appreciate the disaster caused by natural phenomena. Collaboratively • Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others
Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication) 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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process

	• Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities <i>Guided practice to be followed by Independent Practice-</i> NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Unit	Day 4 (Earthquake)
Class Transaction	approx. 40 min

Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain the cause of earthquake. List the steps to minimize destruction caused by earthquake.
	DOL- D2, D3
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> • What is the cause of earthquake • What are the steps to minimize destruction caused by earthquake? <u>Skills & Competencies-</u> Students would be able to • Critically analyse various aspect of lightning and earthquake. • Appreciate the disaster caused by natural phenomena. Collaboratively • Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others
Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication)

	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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities <i>Guided practice to be followed by Independent Practice</i>- NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan:

	<i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.

Unit	Day 5 (Do's and Don'ts during earthquake)
Class Transaction	approx. 40 min
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to explain and list the steps to minimize destruction caused by earthquake.
	DOL- D1, D2, D3
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> - What are the steps to minimize destruction caused by earthquake? <u>Skills & Competencies-</u> Students would be able to Critically analyse various aspect of lightning and earthquake. - Appreciate the disaster caused by natural phenomena. Collaboratively - Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others

Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication) 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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach • Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities
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	<i>Guided practice to be followed by Independent Practice-</i> NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.

Unit	Day 6 (Do's and Don'ts during thunderstorm)
Class Transaction	approx. 40 min
Pre-requisite for the course	This lesson requires Basic knowledge of charge. Basic knowledge of the terms Positive and negative charge, Conduction which students had already learnt in class VI, VII.
Assessment of qualifying knowledge	Written test Group Discussion Quiz HW Notebook
Objectives	Students would be able to List the steps to minimize destruction caused by thunderstorm.
	DOL- D2, D3
Learning Outcomes	<u>Knowledge-</u> <i>Students will know and understand</i> What are the steps to minimize destruction caused by thunderstorm? <u>Skills & Competencies-</u> Students would be able to

	• Critically analyse various aspect of thunderstorm. • Appreciate the disaster caused by natural phenomena. Collaboratively • Design Creative methods to bring a change in the life style to minimize loss caused by disaster. Built character amongst themselves by discussing /communicating the importance of <i>charging</i> in their daily life. Answer knowledge, understanding, application and diagrammatic skill based questions based on the topic. Attitudes and beliefs- <i>Students will be able to</i> Develop citizenship by visualizing and observing day to day phenomena and present it in form of a skit to sensitize others
Transaction Methodology (Approaches, Strategies, Tools and Techniques)	Transaction would proceed in the following manner- Active learning- <i>Frayer Model</i> on natural phenomena. (Critical thinking) Group learning- The class will be divided in the group of 5 students. <i>Circle the Sage</i>- The question will be asked by the teacher about the lightning and earthquake who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be demonstrating the Precaution taken during natural disaster. (Character, Citizenship) Questioning- Multiple <i>level question</i>- Teacher will prepare a list of question about the natural disaster. and will ask these questions during discussions. (Critical thinking, Communication) 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 Facilitation of content The facilitator will enable the learners to understand the fundamental concept of lightning and earthquake He will be able to define focus, epicenter, earthing, etc. Approaches The facilitator should apply some or all of the approaches while administering the teaching learning process • Didactic approach

	• Summarizing approach • Feedback approach Techniques to be used: • Quiz • MCQ • PPT • Computer aided simulation/3D pictures • Skit/Role playing • Group discussion • HOTS questions • Peer Assessment • Lab Activities <i>Guided practice to be followed by Independent Practice-</i> NCERT questions to be discussed in the classroom.
Resources	Text Book: NCERT text book Reference Books CBSE Exemplar
Self-Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W note books as mentioned in the monthly planner by which we can assess their critical thinking and creativity HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 Rubrics On time submission.....1 mark Presentation/ Neatness.....1 mark Content (critical thinking and creativity).....3 marks 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.
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.