

CLASS – VII
LESSON PLAN
CHAPTER-7: Weather, Climate and Adaptation of Animals to Climate

Unit	Biology (Chapter 7: Weather, Climate and Adaptation of Animals to Climate)
Class Transaction	Total: 10 periods (approx. 40 min each)
Pre-requisite for the course	This lesson requires 1. Basic knowledge of weather and weather report. 2. Importance and impact of weather in our day to day life. 3. What is adaptation and how it is different from acclimitization. .
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. Group Discussion 4. HW notebook 5. Subject Enrichment Activity
Objective	Students will be able to:- *Define weather, climate and adaptation. *Distinguish between weather and climate. * List different types of climatic areas. * On the basis of climate explain adaptations of animals.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and understand</i> 1. The terms weather, climate, migration and adaptation. 2. The difference between weather and climate. 3. How the temperature and rainfall is recorded. 4. Sun is the ultimate source of energy. 5. The flora and fauna of Polar Regions and tropical rainforest. <u>SKILLS</u>- <i>Students would be able to</i> 1. Explain the terms weather, climate and adaptation. 2. Critically analyse that the weather of a place is determined by the sun?

	3.Collaborate with each other to record the weather of a place with respect to temperature, rainfall and humidity of a place. 4. Differentiate between weather and climate. 5. Understand the phenomenon of migratory birds. 6.Use critical and analytical skills to understand the adaptations of animals living in tropical rainforests and polar regions.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- <i>Brain Storming</i>-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. <i>Introduction of the topic</i>- PPT and Digital Content would be shared <i>Guided practice followed by Independent Practice</i>- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2,3 Independent reading Quiz MCQ Peer Assessment Graphic Organizers Any Other 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 photosynthesis and the students who knows the answer will stand in various corners of the room. (Communication, Collaboration) Differentiation- The students in a group of 10 will be presenting a skit on saprotroph and parasites (Character, Citizenship) Questioning- <i>Multiple level question</i>- Teacher will prepare a list of question on the topic “ How nutrients are replenished in the soil”. (Critical thinking, Communication)

Resources	Text Book: NCERT text book for Science Reference Book
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks 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 marks On time submission.....1 mark Presentation/ Neatness(creativity).....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 TESTS (25, 25, 25, 25).....100 Marks HALF YEARLY EXAMINATION.....80 Marks ANNUAL BOARD EXAMINATION.....80 Marks INTERNAL ASSESSMENTS.....40 Marks PERIODIC TEST By administering pen paper test we assess creativity and critical thinking. By administering pen paper test we assess creativity and critical thinking.

	Subject Enrichment 10 Marks With the help of subject enrichment activities we assess communication ,collaboration, character building and citizenship(Skit on implementation of plantation in our daily life). Note Book Submission 10 Marks By writing the answers of Exemplar and NCERT questions we can assess their knowledge critical thinking , creativity Note Book Submission 10 Marks
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 gifted students:</i> • HOTS questions • Encouragement for referring other resources <i>For weak students:</i> • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore spelling mistakes and diagram, if not drawn neatly. • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Questions for assessment	1. Give difference between weather and climate. 2. Write three adaptive features present in animals who live in tropical rain forest. 3. Draw the web chart for the adaptive features present in polar bear 4. How is temperature and rainfall of an area measured? 5. Why we find animals of certain kind living in particular climatic conditions?

Topic	DAY 1-Introduction
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of CLIMATE and weather which they had already studied in class vi and vii
Assessment of qualifying knowledge	Facilitator will ask few questions regarding the topic 1. Why does the experts discuss the weather of a particular place before the start of any game?
Objective	Student will be able to understand what are the effects of weather and climate on our daily life.
Learning Outcomes	<u>KNOWLEDGE</u> - <i>Students will know and understand</i> 1. <i>Discuss the importance of weather and climate in our day to day lives</i> <u>SKILLS AND COMPETENCIES</u> - <i>Students would be able to</i> 2. Critically analyse that how the two terms are interrelated to each other
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and	Transaction would proceed in the following manner- Brain storming- The class will be divided in the group of 5 students.Few open ended questions will be asked by the facilitator regarding the weather and climate. (Communication, Collaboration) <i>Guided practice followed by Independent Practice</i> - NCERT questions to be discussed in the classroom.

can use any other too.)	Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions from day to day daily life based on the topic.
Self Study, Home Work, Assignments	Independent Practice: Exemplar Questions
Assessments	Oral quiz
Topic	DAY 2 -Weather
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of CLIMATE and weather which they had already studied in class vi and vii
Assessment of qualifying knowledge	Facilitator will ask the students to sit in their respective groups and write the general weather report from the new paper available in the class room
Objective	Student will be able to understand the difference between weather and climate
Learning Outcomes	<u>KNOWLEDGE-</u> <i>Students will know and understand</i> 6. The terms weather, climate, migration and adaptation. 7. The difference between weather and climate. 8. How the temperature and rainfall is recorded..

	<u>SKILLS-</u> <i>Students would be able to</i> 1. Explain the terms weather, climate and adaptation. 2. Critically analyse that the weather of a place is determined by the sun? 3. Collaborate with each other to record the weather of a place with respect to temperature, rainfall and humidity of a place. 4. Differentiate between weather and climate.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students. Circle the Sage- The question will be asked by the teacher about the weather and climate of various regions and the students who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	NCERT questions
Assessments	Oral quiz

Topic	DAY 3 -Weather
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of CLIMATE and weather which they had already studied in class vi and vii
Assessment of qualifying knowledge	2. Facilitator will ask the students to sit in their respective groups and write the general weather report from the new paper available in the class room
Objective	Student will be able to understand the difference between weather and climate
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know and understand</i> 9. The terms weather, climate, migration and adaptation. 10. The difference between weather and climate. 11. How the temperature and rainfall is recorded.. <u>SKILLS</u>- <i>Students would be able to</i> 1. Explain the terms weather, climate and adaptation. 2. Critically analyse that the weather of a place is determined by the sun? 3.Collaborate with each other to record the weather of a place with respect to temperature, rainfall and humidity of a place. 4. Differentiate between weather and climate.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students. Circle the Sage- The question will be asked by the teacher about the weather and climate of various regions and the students who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom.

	Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: Exemplar Question
Topic	DAY 4 -Climate
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of CLIMATE and weather which they had already studied in class vi and vii
Assessment of qualifying knowledge	Recap of previous day learning
Objective	Student will be able to understand the basic difference between weather and climate
Learning Outcomes	KNOWLEDGE- Students will be able to compare the climate of two different regions. They can also differentiate between weather and climate SKILLS AND COMPETENCIES- Students would be able to

	Critically analyse how the flora and fauna of a particular region is dependent on the climate of a particular region. They can also collaborate with each other in their respective groups to study and compare the climate of northern and southern regions.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students and they will also collaborate with each other in their respective groups to study and compare the climate of northern and southern regions. b(Communication, Collaboration) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: NCERT Questions
Topic	DAY 5 -Climate

Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of CLIMATE and weather which they had already studied in class vi and vii
Assessment of qualifying knowledge	Recap of previous day learning
Objective	Student will be able to understand the basic difference between weather and climate
Learning Outcomes	KNOWLEDGE- Students will be able to compare the climate of two different regions. They can also differentiate between weather and climate SKILLS AND COMPETENCIES- Students would be able to Critically analyse how the flora and fauna of a particular region is dependent on the climate of a particular region. They can also collaborate with each other in their respective groups to study and compare the climate of northern and southern regions.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Group learning- The class will be divided in the group of 5 students and they will also collaborate with each other in their respective groups to study and compare the climate of northern and southern regions. b(Communication, Collaboration) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used:

	DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: Spiral level 1Questions
Topic	DAY 6 -Climate and Adaptations
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of adaptitive features present in plants and animals , what they have already studied in class vi.
Assessment of qualifying knowledge	Facilitator will ask the students to write few adaptive features which are present in their pet animals .
Objective	Student will be able to understand the relationship between adaptation and climate and how different features and habits help the animals to adapt to their surroundings.
Learning Outcomes	KNOWLEDGE- Students will know and understand 3. The importance of adaptation present in different organisms
Transaction Methodology	Transaction would proceed in the following manner-

(The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Group learning- The class will be divided in the group of 5 students. Circle the Sage- The question will be asked by the teacher about the various adaptations present in organisms around them and the students who knows the answer will stand at the various corners of the room. (Communication, Collaboration) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Summarisation by students with the help of web chart
Self Study, Home Work, Assignments	Independent Practice: NCERT Questions
Topic	DAY 7-Adaptations in Polar regions
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of climate present in polar region
Assessment of qualifying knowledge	Facilitator will ask few questions regarding the climate present in polar region

Objective	Student will be able to understand adaptive features present in the organisms of polar region.
Learning Outcomes	SKILLS AND COMPETENCIES- Students would be able to Critically analyse the adaptive features present in the organisms of polar region.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Differentiation- The students in a group of 10 will be presenting a skit on adaptive features present in animals of polar region . (Character, Citizenship Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Exemplar questions
Topic	DAY 8-Adaptations in Polar regions

Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of climate present in polar region
Assessment of qualifying knowledge	Facilitator will ask few questions regarding the climate present in polar region
Objective	Student will be able to understand adaptive features present in the organisms of polar region.
Learning Outcomes	SKILLS AND COMPETENCIES- Students would be able to Critically analyse the adaptive features present in the organisms of polar region.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Differentiation- The students in a group of 10 will be presenting a skit on adaptive features present in animals of polar region . (Character, Citizenship Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys

Self Study, Home Work, Assignments	Independent Practice: Exemplar Questions
Topic	DAY 9- Adaptations in Tropical Rain Forests
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of climate present in tropical rain forest
Assessment of qualifying knowledge	Facilitator will ask few questions regarding the climate present in tropical rain forest
Objective	Student will be able to understand adaptive features present in the organisms Of tropical rain forest.
Learning Outcomes	SKILLS AND COMPETENCIES- Students would be able to Critically analyse the adaptive features present in the organisms of tropical rain forest.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Questioning- <i>Multiple level question</i> - Teacher will prepare a list of question about the adaptive features present in the organisms of tropical rain forests. (Critical thinking, Communication) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2

	Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: NCERT Questions
Topic	DAY 10- Adaptations in Tropical Rain Forests
Class Transaction	40 min each)
Pre-requisite for the course	This topic requires Basic knowledge of climate present in tropical rain forest
Assessment of qualifying knowledge	3. Facilitator will ask few questions regarding the climate present in tropical rain forest
Objective	Student will be able to understand adaptive features present in the organisms Of tropical rain forest.
Learning Outcomes	SKILLS AND COMPETENCIES- Students would be able to Critically analyse the adaptive features present in the organisms of tropical rain forest.
Transaction Methodology (The teacher can use the	Transaction would proceed in the following manner-

mentioned techniques, wherever applicable, and can use any other too.)	Questioning- <i>Multiple level question</i>- Teacher will prepare a list of question about the adaptive features present in the organisms of tropical rain forests. (Critical thinking, Communication) Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom. Techniques to be used: DOL 1,2 Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table,compare-contrast matrix), silent/ loud reading, collaborative learning, Research work/surveys
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: NCERT Questions
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.