

LESSON PLAN
CLASS – VII GEOGRAPHY
CHAPTER-4: AIR
SESSION: 2019-20

Unit	Geography Ch-4 Air
Class Transaction	Total: 8 periods (approx. 40 min each)
Pre-requisite for the course	This lesson requires - Knowing of the existence of a blanket of air surrounding the earth known as Atmosphere. - All living beings on this earth depend on the atmosphere for their survival. - It provides us the air we breathe and protects us from the harmful effects of the sun's rays.
Assessment of qualifying knowledge	- Written test - Group Discussion - Assignments - UT Plans
Objective	- Outline the characteristics of the layers of atmosphere. - Differentiate between the terms weather and climate. - Identify the elements determining the weather i.e. temperature, air pressure, winds and rainfall. - Diagrammatically explain the pressure belts, planetary winds and types of rainfall.
Learning Outcomes	KNOWLEDGE- Given the content of the chapter, the students will be able to – - Describe the importance of each component of the atmosphere relating to presence of life on earth – nitrogen, oxygen, carbon di oxide water vapour and dust particles. - List the characteristics of each layer of the atmosphere troposphere, stratosphere, mesosphere, thermosphere and exosphere. - Differentiate between the terms weather and climate. - List the major elements of weather and climate – Temperature, Pressure, Winds and rainfall. - Comprehend the factors affecting atmospheric temperature and pressure in relation to altitude, temperature and water vapour. - Comprehend the movement of the wind in relation to changes in temperature and pressure. - Elaborate the different three types of rainfall through diagrammatic representation SKILLS and COMPETENCIES- <i>Students would be able to</i> Critical Thinking – Learner will critically analyze the relationship between the elements of temperature, pressure and winds Citizenship- understanding diversity in world with actual regional examples Collaboration- Group work and planning to collect and plot the weather data
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner DOL 1,2,3 <i>Introduction of the topic-</i> ppt and Digital Content would be shared <u>Topic: Composition of Atmosphere</u> (Competencies- Communication) Jigsaw technique - The teacher is going to divide the class into four groups. - Each member will be given a specific portion to read. - Every group will first do the silent reading of the topic allotted to them. - Then all members of similar topics will sit together and discuss their topics. - The expert members will now return to their home groups and explain their respective content to their groups.

	• Towards the end of the period there will be a group discussion on the green house effect and global warming. • Teacher is going to summarize the topic. <u>Topic: Layers of Atmosphere</u> (Competencies- Critical thinking and communication) • The teacher is going to divide the class into five groups and will be given one layer of atmosphere to discuss. • Every group will read discuss the topic allotted to them. • One by one each group will come and explain their content to the rest of the class. • To summarize the discussion each student will do this activity - • The students will use an A4 sheet to draw the layers of the atmosphere. • The sheet will be folded in 5 parts. • The students will number each part as TSMTE according to the layers of the atmosphere. • They will paste/ draw pictures and write features relating to the particular layer <u>Topic: Weather and Climate</u> (Competencies- Critical thinking) • To elicit the terms weather – the teacher will shoot a simple question in the class, “so, how is the weather today?” the responses will be used to frame the definition- it is the day to day condition of the atmosphere with respect to temperature, humidity or precipitation. • The term Climate will be explained with the ides that the sum total of average weather conditions over a long span of years will be • The elements of weather and climate will be elicited from the students. • Students will be divided into groups and asked to collate the data <u>Topic: Temperature and Pressure</u> (Competencies- Critical thinking) • Relation between air temperature and air pressure will be explained with the help of the ppt. • Define insolation and describe the heat zones. • Draw and explain the major pressure belts of the earth. <u>Topic: Winds and Rainfall</u> (Competencies- Critical thinking) • Relation between air pressure and winds will be explained with the help of the ppt. • Explain different types of winds with the help of ppt. • Represent the different types of rainfall diagrammatically. <i>Guided practice followed by Independent Practice-</i> NCERT questions to be discussed in the classroom. Techniques to be used: Jigsaw Explanation with the help of diagram Flow Chart PPT MCQ
Resources	• Text Book: NCERT text book • PPT
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner. 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.....1 mark Content.....3 marks FA activities to be assessed as per the following format: <i>Individual Activity:</i> Assessment Parameters: The total marks for the activity is 20 marks Lab/Work Ethics..... 5 marks Performance of task.....5 marks Record/Viva.....5 marks <i>Group activity:</i> Assessment Parameters: The total marks for the activity is 20 marks Lab/Work Ethics..... 5 marks Performance of task.....3 marks Record/Viva.....5 marks Group Dynamics/ Project work.....2 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 (critical thinking)5-7 Marks each HALF YEARLY EXAMINATION (critical thinking) 20 Marks ANNUAL EXAMINATION (critical thinking) 20 Marks INTERNAL ASSESSMENT 20 Marks • Subject Enrichment Activity 10 Marks (creativity and collaboration) • Note Book Submission 05 Marks + HW Notebook 05 marks Through various test students critical thinking, creativity and collaboration skills will be enhanced.
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 to be given • Encouragement for referring other resources <i>For weak students:</i> • Knowledge based questions to be completed. • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore spelling mistakes and formulae, if not written • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Assessment Questions	1. Name the layer of atmosphere where the weather phenomenon exists. 2. Which is the most plentiful gas in the atmosphere? 3. Differentiate between weather and climate. 4. What is the relation between temperature and pressure?

5. Draw a diagram to depict the pressure belts of the earth.

DAY WISE CONSOLIDATED LESSON PLAN
CLASS – VII GEOGRAPHY
Ch.4 AIR

DAY	ONE
Objective	Understand the composition of Atmosphere.
Assessment of qualifying knowledge	- Name the components of natural environment that consists of the sphere of air. - Define the term Atmosphere. - Name some components of Atmosphere.
Learning Outcomes	- Describe the importance of each component of the atmosphere relating to presence of life on earth - List the characteristics of each layer of the atmosphere.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- DOL 1,2,3 Anticipatory Set The following questions will be asked to check their understanding: Closure by students with the help of muddiest point - Guided practice- Students will be asked to draw the diagram of different types of layers of the atmosphere - Assignment : NCERT questions
Resources	- Text Book: NCERT text book - PPT based on the content
Self Study, Home Work, Assignments	Guided Practice- Spiral Level- 1- Questions topic wise Independent Practice- Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner.
Assessments	<u>Oral questions -</u> - Which gas do we inhale and exhale? - Which gases apart from oxygen and carbon dioxide constitute to form atmosphere? - Define atmosphere. - What is global warming? - List the characteristics of each layer of the atmosphere. - Home assignment attached.

DAY	TWO
Objective	Outline the characteristics of the layers of atmosphere.

Assessment of qualifying knowledge	- Name the components of natural environment that consists of the sphere of air. - Define the term Atmosphere. - Name some components of Atmosphere.
Learning Outcomes	Describe the importance of each component of the atmosphere relating to presence of life on earth List the characteristics of each layer of the atmosphere.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- DOL 1,2,3 Anticipatory Set Topic: Layers of Atmosphere (Competencies- Critical thinking and communication) - The teacher is going to divide the class into five groups and will be given one layer of atmosphere to discuss. - Every group will read discuss the topic allotted to them. - One by one each group will come and explain their content to the rest of the class. - To summarize the discussion each student will do this activity - - The students will use an A4 sheet to draw the layers of the atmosphere. - The sheet will be folded in 5 parts. - The students will number each part as TSMTE according to the layers of the atmosphere. - They will paste/ draw pictures and write features relating to the particular layer Closure by students with the help of muddiest point - Guided practice- Students will be asked to draw the diagram of different types of layers of the atmosphere - Assignment : NCERT questions
Resources	- Text Book: NCERT text book - PPT based on the content
Self Study, Home Work, Assignments	Guided Practice- NCERT questions Independent Practice- Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner.
Assessments	<u>Oral questions –</u> The following questions will be asked to check their understanding: - Which layer has all the weather phenomenon? - In which layer do the aero planes fly? - Which layer has the layer of ozone? - Which is the coldest layer? - List the characteristics of each layer of the atmosphere.

DAY	THREE
Objective	- Differentiate between the terms weather and climate. - Understand the concepts of temperature, pressure and winds

Assessment of qualifying knowledge	- Recap of previous day - Enlist the layers of atmosphere
Learning Outcomes	<u>KNOWLEDGE</u>- Students will know the major elements of weather and climate. The relation between temperature, pressure and winds Types of rainfall <u>SKILLS and COMPETENCIES</u> Students would be able to <i>Critical thinking</i> – Students will be able to critically analyze the reason behind the climate of a particular place and elicit the factors effecting the temperature of a place <i>Creative</i> – Will be able to draw the diagrams to depict different types of rainfall <i>Citizenship</i> – Will be able to develop the global citizenship and relate to world climatic zones
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- DOL 1,2,3 Anticipatory Set The teacher will ignite the zeal for the topic with questions like - - How is the weather today? - What type of climate does Ghaziabad has in the month of July? Teaching strategy- Set induction, Think, pair and share, Wipro strategy(graphic organiser), SmartClass module Wipro Technique: Brain storming, flow chart, (KWL- What you Know, What you will Learn, What you have learned), Group work by presentation. Closure by students with the help of muddiest point - Guided practice- Students will be asked to draw the diagram of different types of rainfall, pressure belts and Permanent winds. - Assignment : Spiral level 2 Question Closure- Summarization by students with the help of mind map on their own.
Resources	- Text Book: NCERT text book - PPT based on the content
Self Study, Home Work, Assignments	- Guided Practice- NCERT questions - Independent Practice-
Assessments	Oral Test (5 minutes) The following questions will be asked to check their understanding: - Why do we feel cooler on the mountains - Why do coastal areas have moderate temperature? - What is the unit of measuring temperature ? - Which instrument is used to measure temperature - Why the temperature in the cities is higher than that of villages?

DAY	Four
Objective	Identify the relationship between temperature, pressure and winds
Assessment of qualifying knowledge	Recap of the previous day
Learning Outcomes	KNOWLEDGE - - Define atmospheric pressure - Identify the movement of the wind in relation to changes in temperature and pressure SKILLS AND COMPETENCIES- - Critical Thinking – They will be able to critically analyze the relation between air temperature and air pressure on the surface of the earth - Creative – Will be able to draw the diagrams depicting the pressure belts of the earth and the types of rainfall
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	- Air pressure is defined as the pressure exerted by the weight of air on the earth's surface. - As we go up the layers of atmosphere, the pressure falls rapidly. The air pressure is highest at sea level and decreases with height. <i>Permanent winds</i> – The trade winds, westerlies and easterlies are the permanent winds. These blow constantly throughout the year in a particular direction. <i>Seasonal winds</i> – These winds change their direction in different seasons. For example monsoons in India. <i>Local winds</i> – These blow only during a particular period of the day or year in a small area. For example, land and sea breeze. - Closure by students - Assignment- Spiral level 2 questions
Resources	- Text Book: NCERT text book - PPT based on the content
Self Study, Home Work, Assignments	Guided Practice- Spiral Level- 1- Questions topic wise Independent Practice- Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner.
Assessments	Oral Test (5 minutes) The following questions will be asked to check their understanding: - What is meant by air pressure? - What is the relation between air temperature and air pressure on the earth's surface? . Enlist the major pressure belts of the earth

DAY	Five and Six
Objective	- Differentiate between horizontal and vertical movement of the air - Identify and explain different types of winds
Assessment of qualifying knowledge	Recap of the previous day

Learning Outcomes	KNOWLEDGE – The students will acquire knowledge about – • The different types of winds – seasonal, local, permanent/planetary winds • Draw and explain the planetary wind belts of the earth. SKILLS AND COMPETENCIES – • Critically analyze the pressure belts and the permanent wind system of the earth. • Collaborative Learning – the students will work in groups and explain research about the various types of seasonal and local winds • Creativity – the students will be able to depict the land and sea breeze and planetary winds with the help of a diagram
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- DOL 1,2,3 Anticipatory Set • The teacher will show the video and start a discussion on the different types of winds. • The teacher will use a ppt to explain the different types of rainfall and the processes involved in it. Teaching strategy- Set induction, Think, pair and share, Wipro strategy(graphic organiser), SmartClass module Wipro Technique: Brain storming, flow chart, (KWL- What you Know, What you will Learn, What you have learned), Group work by presentation. Closure by students with the help of muddiest point • Guided practice- Students will be asked to draw the diagram of different types of winds • Assignment : NCERT questions Closure- Summarisation by students with the help of mind map on their own. •
Resources	• Text Book: NCERT text book • PPT based on the content
Self Study, Home Work, Assignments	• Guided Practice- Knowledge based questions topic wise • Independent Practice- Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner.
Assessments	Oral Test (5 minutes) The following questions will be asked to check their understanding: • Name the instrument used to measure the direction and speed of the wind. • What are trade winds? • Name the types of local winds. • Which instrument is used to measure rainfall?

DAY	SEVEN AND EIGHT
Objective	- Define Moisture - State various processes due to change in temperature of day and night - Elaborate the different three types of rainfall through diagrammatic representation
Assessment of qualifying knowledge	Recap: Types of winds.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know</i> - When water evaporates from land and different water bodies, it becomes water vapour. Moisture in the air at any time, is known as humidity. - When the water vapour rises, it starts cooling. The water vapour condenses causing formation of droplets of water. Clouds are just masses of such water droplets. - Precipitation that comes down to the earth in liquid form is called rain. Most of the ground water comes from rainwater. <u>SKILLS and COMPETENCIES</u> <i>Students would be able to</i> Critically analyze the relation between winds and moisture with respect to the direction of the winds and the surface they are blowing from [land or ocean] Creativity – draw the diagram of the three types of rainfall to explain their process.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- DOL 1,2,3 Anticipatory Set The teacher will use a ppt attached to the plan to explain the different types of rainfall and the processes involved in it. Discussion about the hydrological cycle Teaching strategy- Set induction, Think, pair and share, Wipro strategy(graphic organiser), SmartClass module Wipro Technique: Brain storming, flow chart, (KWL- What you Know, What you will Learn, What you have learned), Group work by presentation. Closure by students with the help of muddiest point - Guided practice- Students will be asked to draw the diagram of different types of endogenetic and exogenetic forces. - Assignment : Understanding based questions Closure- Summarisation by students with the help of mind map on their own.
Resources	- Text Book: NCERT text book - PPT based on the content
Self Study, Home Work, Assignments	Guided Practice- knowledge based Questions topic wise Independent Practice- Students would do the given questions in their H.W. notebooks as mentioned in the monthly planner.

Assessments	Oral Test (5 minutes) The following questions will be asked to check their understanding: • Elaborate the similarities and differences between three types of rainfall. • Which instrument is used to measure rainfall? • Why wet clothes take longer time to dry on a humid day?