

CLASS – X
LESSON PLAN
CHAPTER-3 Water Resources
Geography

Unit	Water resources
Class Transaction	Total: 6 periods (approx. 40 min each)
Pre-requisite for the course	Recalling and interaction through question based on their previous knowledge like 1. Why do we call earth as water planet? 2. What percentage of earth is covered with water? 3. Why do we face water scarcity?
Assessment of qualifying knowledge	1. Written test 2. Oral test 3. HW notebook and spiral 4. Group discussion
Objective	Understand the importance of water resources as a resource as well as develop awareness towards judicious use and conservation.
Dimensions of Learning	DOL 1, 2,3
Learning Outcomes	<u>KNOWLEDGE-</u> <i>Students will know and understand</i> - Understand the importance of water resources as a resource as well as develop awareness towards judicious use and water conservation. - Factors responsible for water scarcity - How multipurpose river valley project solve the problem of water scar city. - Advantages of multipurpose river valley projects and why they were called as temples of modern India. with 95% accuracy. - Disadvantages of MPRV Projects. - To develop awareness towards judicious use and water conservation by the help of rain water harvesting. . <u>SKILLS-</u> <i>Students will critically think about water resources as a resource and develop awareness towards judicious use and water conservation to solve the problem of water scarcity.</i> <i>Students will develop citizenship through by using water in judicious manner and saving for future generation, it also develop awareness towards judicious use and water conservation by the help of rain water harvesting</i>

	• <i>Students would be able to enhance their creativity by creating mind map for entire chapter.</i> • <i>Students would be able to enhance their communication skills by debating on positive and negative impact of multipurpose river valley projects and why they were called as temples of modern India. with 95% accuracy of Globalisation on people of India.</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- <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>- Digital Content would be shared Active Learning and group learning- Pass word : facilitator gives a definition of a word or a concept and students guess the word. Students will be divided into teams . one team member describes the things on his list for team mates before the time runs out . (Critical thinking, Communication) Numbered heads together : Students work in groups to discuss the material or the answer to the question. Each group has a number and each participant in each group has a number. After the groups discuss, the facilitator draws a group number and a participant number to respond to the question. This ensures that everyone in the group is paying attention and that group prepares everyone to answer the question. (Critical thinking, Communication) Group Learning • Topic- Water resources : Water scarcity , Multipurpose river valley project, rain water harvesting. (Competencies: Critical thinking and problem solving) Students will be divided into 6 groups (6 x 5). Each group will study the topic given to them. Analysis will be done by groups, followed by cross questioning. • Topic- Advantages and disadvantages of multipurpose river valley project. (Competencies: Critical thinking and citizenship) Students will critically analyses the disadvantages of multipurpose river valley project and analyses why in recent years, multi-purpose projects and large dams have come under great scrutiny and opposition

- **Topic- multi purpose river valley projects and rain water harvesting (Competencies: Citizenship, Critical thinking)**

Students will get aware through discussion why in recent years, multi-purpose projects and large dams have come under great scrutiny and opposition Hence, students will analyse rain water harvesting is more economic and feasible method to conserve water than MPRVP.

Differentiation:

Class will be divided into three parts – Average, Weak and gifted students.

Three types of worksheet will be made for three categories:

Gifted students	Pictures of different types of rainwater harvesting system : in a group they will identify the type of rain water harvesting system, analyse the importance, working and how they benefit the environment. They will also innovate new technique of rain water harvesting.
Average students	Name and picture of rainwater harvesting system will be given and they will analyse where these system are used in India and how they benefit us.
Weak students	Name, picture, and how water harvesting takes place by different parts of India . these children will write what benefit we get by these systems.

- **Topic -Revision of chapter** Students *would be able to enhance their creativity* by creating mind map for entire chapter using topics and subtopics for each.

Questioning- Multiple questions to cater the needs of various students.

Guided practice followed by Independent Practice- NCERT questions to be discussed in the classroom.

Techniques to be used:

Quiz

Daily Practice Problem

MCQ

Peer Assessment

Case Studies

Map work

Any Other

Web charts

Resources	Text Book: NCERT text book for Geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks 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.....1mark Presentation/ Neatness.....1 mark Content.....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	3 UNIT TESTS (20+25+35) Marks HALF YEARLY EXAMINATION 80 Marks ANNUAL BOARD EXAMINATION 80 Marks INTERNAL ASSESSMENT 20 Marks - Note Book Submission 5 Marks - Enrichment Activity 5 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> - High order questions to be done - Encouragement for referring other resources <i>For weak students:</i> - Basic question to be completed - Buddy help to be provided - Provide grade-up classes <i>For differently abled students:</i> - Call parents at regular intervals - Provide grade-up classes
Marks	The weightage would be given by CBSE.
Assessment	1. Why are different water harvesting systems considered a viable

questions.	alternative both socio - economically and environmentally in a country like India?
	2.Describe three traditional methods of rain water harvesting practiced in India
	3.Explain any three disadvantages of Multipurpose Projects.
	4.Which state has made rooftop rainwater harvesting structure compulsory to all the houses across the state ? (a) Kerala (b) Karnataka (c) Tamil Nadu (d) Andra Pradesh
	5.Why is there an urgent need to conserve and manage our water resources ? Mention three reasons.
	6.Explain any three reasons responsible for water scarcity in India

CLASS – X
DAY WISE CONSOLIDATED LESSON PLAN
CHAPTER-3 WATER RESOURCES
SUBJECT: GEOGRAPHY
SESSION: 2019-20

DAY	ONE
Objective	Understand the importance of water resources as a resource as well as develop awareness towards judicious use and water conservation
Assessment of qualifying knowledge	Basic Questions related to water .1..Why do we call earth as water planet? 2. What percentage of earth is covered with water? 3. Why do we face water scarcity?
Learning Outcomes	KNOWLEDGE- <i>Students will know</i> The importance of water resources as a resource as well as develop awareness towards judicious use and water conservation. SKILLS and COMPETENCIES <i>Students would be able to analyse</i> the importance of water resources as a resource . in collaboration with each other.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Topic : Introduction to the water as a resource Transaction would proceed in the following manner- Anticipatory Set: <u>10 min</u> Facilitator will ask few questions to introduce the topic- ..

	- How much water is available on the earth surface? - Distinguish between availability of water and water scarcity. - How water is a renewable resource. - Wipro Technique: Brain storming, web chart, (KWL- <i>What you Know, What you will Learn, What you have learned</i>), Group work by presentation. Activity : Introduction of water resource with the help of interactions with student through Brain storming' and by asking questions based on their previous knowledge and formation of groups and assigning their topics. So that discussion of the topics (group wise) will take place. Class will be divided into six groups . Group 1 – Water scarcity and the need for water conservation and management Group 2 Water scarcity and factors responsible for water scarcity. Group 3 Multi-purpose river projects and integrated water resources management: Hydraulic Structures in Ancient India Group 4 Advantages of Multi purpose River Valley projects . Group 5 Dis advantages of Multi purpose River Valley projects . Group 6 Rainwater harvesting students will sit together and in Collaboration they will discuss the topic given to them Guided Practice- NCERT questions Closure- Summarisation by students with the help of mind map on their own. Independent Practice-preparation of group presentation Closure: 5 min A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebook.
Assessments	Oral Test (5 minutes)

DAY	TWO
Objective	To evaluate the factors responsible for water resources with 90% accuracy.
Assessment of qualifying knowledge	Questions from previous class about water from the whole class group.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will know about factors responsible for water scarcity.</i> <u>SKILLS and COMPETENCIES</u> <i>Students would be able to critically</i>

	evaluate the factors responsible for water resources with 90% accuracy. in collaboration with each other.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Activity- Activity- Class presentation by • Discussion of water resources by group no -1 • Discussion of the factors responsible for the management of water resources by group no-2 and compilation will be done teacher. After discussion All the students will write qualitative and quantitative factors for water scarcity in their notebooks on their own. The following questions will be asked to check their understanding: • List the various factors responsible for water scarcity. • How industries are responsible for decreasing fresh water resources. Topic- Factors responsible for water scarcity. (Competencies: Critical thinking , collaboration) Students will be critically analyses in groups how industries , intensive agriculture , increase in population causes water scarcity . Analysis will be done by groups, followed by cross questioning. • Independent Practice: Students will go through NCERT text book • After discussion All the students will write qualitative and quantitative factors for water scarcity in their notebooks on their own. Closure: 5 min Closure- Summarization by students with the help of muddiest point A short oral test would be taken to check proper assimilation of the topic discussed.
Resources	Text Book: NCERT text book for Geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebook
Assessments	Oral Test (5 minutes)

DAY	THREE
Objective	Objective To evaluate the advantages of multipurpose river valley projects and why they were called as temples of modern India. with 95% accuracy.To develop awareness towards judicious use and water conservation

Assessment of qualifying knowledge	Recapitulation of the previous day
Learning Outcomes	KNOWLEDGE- <i>Students will know about multipurpose river valley projects.</i> SKILLS and COMPETENCIES <i>Students would be able to critically Analyse how multipurpose river valley projects solve the problem of water scarcity, in collaboration with each other.</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- Activity Group presentation by Group 3 multi-purpose river projects and integrated water resources management: Hydraulic Structures in Ancient India and Group 4 Advantages of Multi purpose River Valley projects and compilation will be done teacher Guided Practice After discussion - All the students will write about how construction of multi purpose river valley project would integrate development of agriculture and the village economy with rapid industrialisation and growth of the urban economy Topic : Multi purpose river valley projects .(advantages) . (Competencies: Citizenship , collaboration) Students will work in pair and discuss about how construction of multi purpose river valley project would integrate development of agriculture and the village economy with rapid industrialisation and growth of the urban economy Independent Practice: Students will go through NCERT text book. Closure: 5 min Closure- Summarization by students with the help of mind map
Resources	Text Book: NCERT text book for geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebook
Assessments	Oral Test (5 minutes)

DAY	Four
Objective	To Compare the advantages and disadvantages of multi purpose river valley projects 90% accuracy
Assessment of qualifying	Questions from previous class about MPRVP from whole class group.

knowledge	
Learning Outcomes	KNOWLEDGE- Students will know known disadvantages of multi purpose river valley projects 90% accuracy SKILLS and COMPETENCIES Students would be able to critically compare the advantages and disadvantages of multi purpose river valley projects 90% accuracy in collaboration with each other.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Activity- Group presentation by Discussion of water resources by group no -5 and compilation will be done teacher. The following map questions will be asked to check their understanding: Map activity : students will locate important dams on political map of India Topic-- disadvantages of Multi purpose river valley projects (Competencies: Citizenship, Critical thinking) Students will get aware through discussion about write why in recent years, multi-purpose projects and large dams have come under great scrutiny and opposition L Hence, students will analyse an alternative method to conserve water to solve the problems of disadvantages of MPRVP. Independent Practice: Students will go through NCERT text book. After discussion - All the students will write why in recent years, multi-purpose projects and large dams have come under great scrutiny and opposition Closure: 5 min Closure- Summarization by students with the help of flow chart
Resources	Text Book: NCERT text book for Geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebook
Assessments	Oral Test (5 minutes)

DAY	Five
Objective	Understand the importance of water resources and to develop awareness towards judicious use and water conservation.

Assessment of qualifying knowledge	Questions from previous class .
Learning Outcomes	• <u>KNOWLEDGE</u>- Students will know about different techniques of rainwater harvesting used in these regions for water conservation and judicious use of water <u>SKILLS and COMPETENCIES</u> Students would be able to critically analyses that why rain water harvesting is better method to conserve water then MPRVP in collaboration with each other.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set- Recapitulation of the previous day. Activity- Group presentation of group 6 will analyses the regions where water scarcity is there and different techniques of rainwater harvesting used in these regions for water conservation and judicious use of water. The following questions will be asked to check their understanding: • What are guls or kuls? • What technique are used semi arid and arid area? • Topic- Rain water harvesting. (Competencies: Citizenship, critical and problem solving) Students will work in group and analyses the regions where water scarcity is there and different techniques of rainwater harvesting used in these regions for water conservation and judicious use of water to solve the problem of water scarcity Independent Practice: Students will go through NCERT text book. • Independent Practice- table of different methods of rain water harvesting level 2 questions Closure: 5 min Summarization by students with the help of mind map
Resources	Text Book: NCERT text book for geography
Self Study, Home Work, Assignments	Independent Practice: Students would do the given questions in their H.W. notebook
Assessments	Oral Test (5 minutes)
Day 6	Class Test and doubt clarification class.