Lesson-2: India – Water Resources

Theme 2: How do we save nature?

11 Periods (40 minutes each)

Learn Better, Stay Ahead, Maps, Physical Items for Activities- plastic bottle, Blackboard, poster

Animation, Animated Activities, Concept Map, Dictionary, eBook, I Explain, Infographic, Quiz, Slideshow

Confirming better: I water plants at home.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand the natural sources of water.
- to learn the means of irrigation used by farmers.
- to understand the importance of rainwater harvesting.
- to learn key terms and their meanings (groundwater, irrigation, sprinklers, etc.).
- to answer questions based on the lesson independently.
- to improve habits related to water usage.
- to realize the need for clean drinking water for birds.
- to act as responsible citizens and pledge to achieve SDG 6 for Clean Water and Sanitation.

Methodology

Period 1

SHOULD DO — 10 MIN.

Teacher: Good morning, class. Today, we are starting an exciting topic about India's Water Resources. Let us play a quick game to warm up. I will say a water-related word and you will tell me what comes to mind. For example, if I say rain, you might say clouds. Are you ready?
(Spend 2-3 minutes on this activity.)

Confirming better

Teacher: Before we dive into the lesson, let us start with a quick affirmation: 'I water plants at home.' Repeat after me: 'I water plants at home.'
To help us organise our thoughts and learning, we are going to use a KWL chart. Draw a KWL chart in your notebooks.

K	W	L

Teacher: The KWL chart has three sections. The first section is labelled 'K,' where you will tell me what you already know about the topic. In the second section, 'W,' you will share what you want to know. Finally, the third section is labelled 'L,' which stands for what you have learnt and we will discuss this at the end of the lesson.

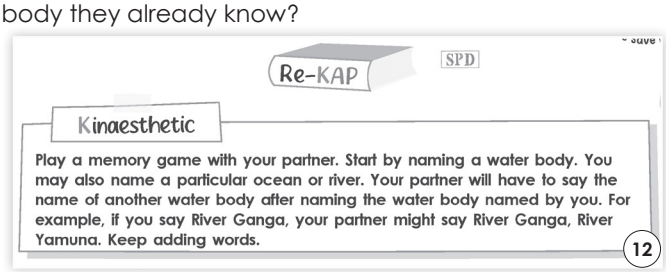
Teacher: Take a few moments to think about your ideas. Once you are ready, raise your hand and share your thoughts with the class. If you have any questions, feel free to ask.

Teacher: You all did an amazing work in this discussion. Now, let us move to the Re-KAP activities. We will explore Kinaesthetic, Auditory and Pictorial activities today to make our learning even more exciting. Let us start with the Kinaesthetic activity.

Kinaesthetic

MUST DO — 10 MIN.

Teacher: Today, we will learn about water bodies like rivers, oceans, lakes and seas. Can anyone name a water body they already know?



(Students respond with examples like River Nile, Pacific Ocean, etc.)

Teacher: Excellent. Now, we will play a memory game to help us remember the names of different water bodies.

Teacher: Pair up with a partner. One of you will start by naming a water body. Your partner will repeat the name

you said and add another one. For example, if you say 'River Ganga,' your partner will say 'River Ganga, River Yamuna.' Then you will add another name and continue.

Teacher: If someone forgets a name or names something that is not a water body, the round will restart.

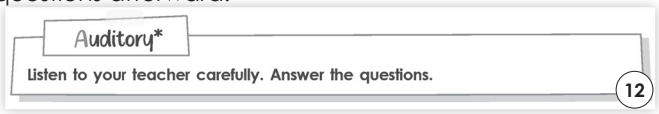
(Students pair up and play for 8-10 minutes. Teacher monitors and supports.)

Teacher: Great work, everyone. Let us hear from a few pairs. How many water bodies were you able to name?
(Students share their responses.)
Teacher: Well done. You all named so many water bodies. Now let us shift our focus to listening carefully, as we begin our auditory activity. Listening is just as important as remembering and it helps us understand things better.

Auditory Activity

MUST DO
10 MIN.

Teacher: I will read out some words related to water bodies. Listen carefully, because I will ask you some questions afterward.



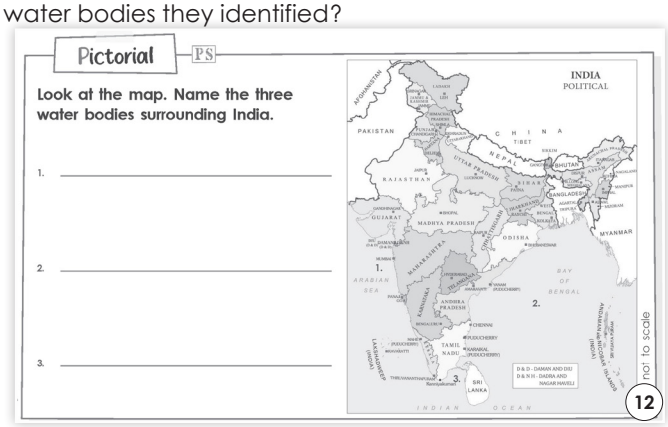
(Read the following words aloud, clearly and slowly, pausing after each one for emphasis.)
Pacific, Atlantic, Hooghly, Brahmaputra, Arabian, Yamuna, Southern, Arctic, Ganga.
Teacher: Now, I would like you to write down the names of the rivers you heard. Think carefully—rivers only.
(Students write their answers.)
Teacher: Excellent. Let us go through the answers together. Raise your hand and tell me the name of one river you wrote down.
(Students respond. Teacher writes the correct answers on the board: Hooghly, Brahmaputra, Yamuna, Ganga.)
Teacher: Well done, everyone. You listened carefully and did a great work identifying the rivers. Now let us move on to our next activity, where we will use pictures to learn more about water bodies. we will explore a map. Maps are a useful tool to help us see and understand the locations of different places more clearly.

Pictorial Activity

MUST DO
10 MIN.

Teacher: Open your books to page number 12. You will see a map of India.

Teacher: Look at the map carefully. Your task is to name the three main water bodies that surround India. These are large water bodies, like seas or oceans, not rivers. Write your answers in the space provided on the page.
(Students look at the map and write their answers.)
Teacher: Once you have written your answers, let us discuss them together. Who would like to share one of the water bodies they identified?



(Students share their responses. Teacher writes the correct answers on the board: Arabian Sea, Bay of Bengal, Indian Ocean.)
Teacher: Excellent work. You have now learned to identify the three water bodies that surround India. This activity helps us connect what we hear, see and understand.
Teacher: Who can quickly remind us of the three water bodies surrounding India?
(Students respond.)
Teacher: Well done. Remember, water bodies are crucial for life and the environment. We will explore this topic further. For homework, I want each of you to plant a sapling in a small pot and bring it to school tomorrow. You can choose a sapling like a sunflower, marigold, basil (tulsi) or any small plant available at home or nearby.
Teacher: Tomorrow, we will take your saplings to the school garden and plant them together. It will be a fun activity and we will learn how to care for plants.
Teacher: Remember to water your sapling gently after planting it and if you need help, ask an adult at home. Let us all work together to make our garden green and beautiful.
Teacher: Are you excited? I cannot wait to see your saplings and plant them with you in the garden.

Differentiated Activity

110 km/hr

Write five sentences about why water bodies are important.

80 km/hr

Write the names of three water bodies and draw one of them.

40 km/hr

Write the names of two water bodies.

Home Task

Bring a sapling in a small pot, like sunflower, marigold or basil, to school tomorrow. We will plant it in the school garden together and learn how to care for plants.

Period 2

Teacher: Good morning, class. Let us start with a fun refreshing activity to warm up. I will say a word and you will act it out. For example, if I say 'rain,' you can show me how rain falls using your hands. Are you ready?

SHOULD DO
05 MIN.

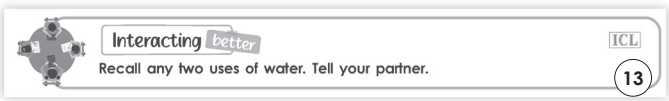
(Call out water-related words like rain, river, waves and drinking water. Students act them out.)

Teacher: That was wonderful. You all are so creative with your actions. Now that we are warmed up, let us move to our next activity.

Interacting better

You may show the **eBook**, given on the digital platform.

MUST DO
05 MIN.

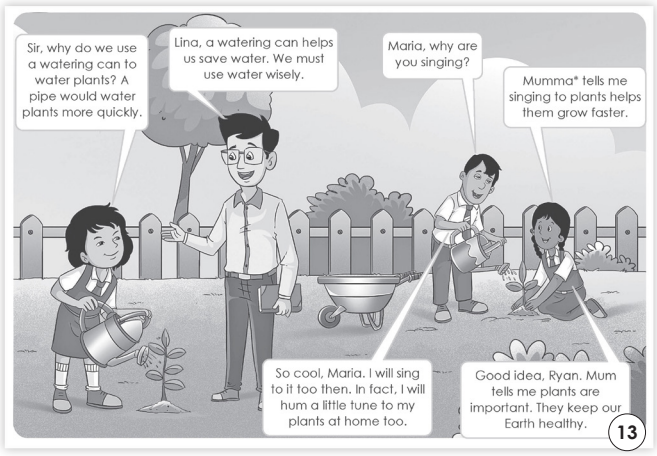


Teacher: Let us think about how we use water every day. Turn to your partner and recall two uses of water. For example, we use water for drinking. What else can you think of?

(Students discuss with their partners for 2-3 minutes.)

Teacher: Excellent. Let us share our ideas with the class. Raise your hand and tell me one way you or your partner uses water.

(Students share answers like cooking, bathing, watering plants, etc.)



Teacher: Wonderful class, I can see all the beautiful saplings you have brought today. Great work. Are you ready to take them to the garden and give them a new home?

(Students respond excitedly.)

(Explanation of story through activity)

SHOULD DO
25 MIN.

Teacher: Let us make a neat line and march like gardeners on a mission. Remember, no pushing or running—we are carrying precious lives with us.

(Show CMR sign- line up and students form a line and walk to the garden with smiles.)

Teacher (in the garden): Welcome to our school garden. Today, we are starting something very special—our 'Plant a Sapling Drive.' Do you know why planting trees is important?

Teacher: That is right. Plants are like our friends—they give us air to breathe, shade and even food. Today, each of you will plant your sapling and become its special caretaker. How does that sound?

Teacher: Before we start, let us play a quick game. Everyone, pick a name for your sapling. It can be anything fun or meaningful. Who wants to share their sapling's name?

(Students excitedly share names like 'Sunny,' 'Leafy,' or 'Ganga.')

Teacher: Such creative names. Now, let us plant them. I will show you how to dig a small hole, place your sapling gently, cover it with soil and give it water. Watch closely and then it will be your turn.

Teacher: Fantastic work. Your saplings look so happy in their new home. Remember, you are now their guardian. Water them regularly and watch them grow. Let us all promise to take care of our plants and keep our Earth green.

(Students repeat after the Teacher: 'We promise to care for our plants and keep our Earth green.')

Teacher: Great work, everyone. You are now official junior gardeners. Now, it is time to head back to the classroom. Let us make a neat line again and quietly walk back.

(Students line up and walk back to the classroom with the teacher.)

Teacher: Once we are back in class, we will talk about how to keep track of our saplings' growth. Let us go.

Teacher: Now that we are back in the classroom, let us quickly recap what we learned today. Why is it important to plant trees and take care of them?

COULD DO
05 MIN.

Teacher: That is right. By planting these saplings, we are helping the Earth become greener and healthier.

Teacher: Remember, taking care of your saplings is just as important as planting them. Make sure to water them regularly and check on them. We will visit the garden often to see how they are growing.

Teacher: Give yourselves a big round of applause for your hard work today. You all made a big difference. I am so proud of you. See you in the next class.

You may show the **Animation** given on the digital platform.

Differentiated Activity

110 km/hr

Write 3-5 creative slogans or short rhymes about the importance of trees and plants. Example: 'Plant a tree, set it free, to clean the air for you and me.'

80 km/hr

Create a 'Tree Fact Card' by drawing a tree and writing 3 facts about how trees help us (e.g., trees give oxygen, shade, fruits).

40 km/hr

Colour a tree picture (provided by the teacher or draw your own) and write 1 simple sentence like 'Trees give us oxygen.'

Home Task

Observe your sapling in the garden daily and write 2 sentences about how you take care of it.

Period 3

SHOULD DO — 05 MIN.

Teacher: Good morning, everyone. Before we start today's lesson, I want all of you to take a sip of water. Water keeps us fresh and ready to learn.

(Students take a sip of water.)

Teacher: Great. Now that we are refreshed, let us settle down (use CMR signs).

(Students follow the CMR signs to calm themselves, sit mindfully and get ready to focus.)

Teacher: Wonderful. Today, we are going to learn about the different sources of water. Let us open our books and dive into the topic.

MUST DO — 20 MIN.

Sources of water

You may show the **I Explain** given on digtal platform.

Teacher: Open your books to page number 13. Let us read about 'Sources of Water' together. I will read one part and then you can take turns reading aloud.

Teacher: Now, let us understand what we just read through fun. Are you ready?

Rain

Teacher: I fall from the sky, make puddles and help farmers grow crops. Who am I?

(Students shout: 'Rain.')

- **Rain** – A majority of freshwater** is obtained from rain. Farmers rely on rain for their crops.
- **Groundwater** – When rainwater falls on the Earth, much of it is absorbed by the ground. This is known as groundwater.
- **Ponds and lakes** – Ponds are small areas of water surrounded by land. Lakes are bigger than ponds. Ponds and lakes usually contain rainwater.

Discovering better

sources: here, places in which something is found — LAD

absorbed: here, to have taken in a liquid from the surface

*Tell the students that Maria calls her mother 'Mumma'.
**Check the 'Grasping better' section to learn the meaning of the word.

13

Teacher: Correct. Farmers depend on me for their crops and I am the main source of freshwater. Now, can anyone tell me something fun you like to do when it rains?

Groundwater

Teacher: When rainwater goes underground, it hides and becomes something important. We dig wells to find it. Who am I?

Ponds

Teacher: I am smaller than a lake and surrounded by land. People like to picnic near me. Who am I?

(Students shout: 'Pond.')

Lakes

Teacher: I am smaller than a lake and surrounded by land. People like to picnic near me. Who am I?

(Students respond: 'Lake.')

Teacher: Perfect. Now, let us make a pond and lake in the classroom. Everyone stand in a circle. The smaller circle is the pond and the larger circle outside is the lake. Now, pretend you are rainwater filling up the pond and lake. Jump in.

Rivers

Teacher: I flow from the mountains, carrying water from melted snow and rain. Some of me flow all year, but others dry up in summer. Who am I?

(Students guess: 'River.')

Teacher: Correct. Let us create a river in the classroom. Line up in a wavy formation and move your arms like flowing water. You are a river now.

Seas and Oceans

Teacher: I am salty, very large and full of waves. You cannot drink my water. Who am I?

(Students shout: 'Seas and Oceans.')

Discovering better

MUST DO — 10 MIN.

Teacher: Now, let us take a closer look at the 'Discovering better' in your books to learn two important words: Sources and Absorbed.

Teacher: 'Sources' means places where something is found. Let us play a quick game. Look around the classroom and find a 'source' of something—for example, the board is the source of today's lesson. What other sources can you find?

(Students respond with ideas like 'the window is the source of light' or 'the bottle is the source of water.')

Teacher: 'Absorbed' means to take in a liquid from the surface. Now, who can tell me a sentence using the word 'absorbed'?

(Students respond with creative sentences)

COULD DO — 05 MIN.

Teacher: Let us wrap up with a quick and fun 'Water Rapid Fire' game. I will ask fast questions and you give quick answers. Ready?

1. What falls from the sky to water crops? (Answer: Rain)

2. What water source is stored underground? (Answer: Groundwater)
3. Which is salty—rivers or oceans? (Answer: Oceans)
4. Name a water body surrounded by land. (Answer: Pond or Lake)

Teacher: Fantastic. Give yourselves a big cheer. See you next class for more fun learning.

Differentiated Activities

110 km/hr

Create a mini-poster and facts about three sources of water.

80 km/hr

Create a list of all the water sources discussed in class and draw one of them.

40 km/hr

Colour a simple water cycle diagram and identify where rainwater and groundwater are found.

Home Task

Make a 'Save Water' poster with a drawing and a short message.

Period 4

Teacher: Good morning, everyone. To refresh our minds, let us play a quick game called 'Stand and Sit.' Here are the rules:

SHOULD DO
10 MIN.

I will say something related to water or farming.
If it is true, you stand up.
If it is false, you stay seated.

Statements:

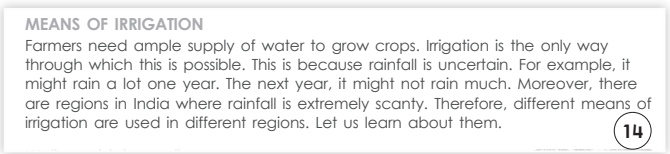
1. Farmers need water to grow crops. (True—Students stand.)
2. Canals are natural rivers. (False—Students sit.)
3. Wells are dug into the ground to get water. (True—Students stand.)
4. Oceans are used for irrigation. (False—Students sit.)
5. Tube wells bring water up using electricity. (True—Students stand.)

(Students laugh and enjoy the quick movement game.)

Teacher: Fantastic. You all did an amazing work. Now that we are refreshed, let us dive into today's lesson on Means of Irrigation.

MUST DO
25 MIN.

Means of Irrigation

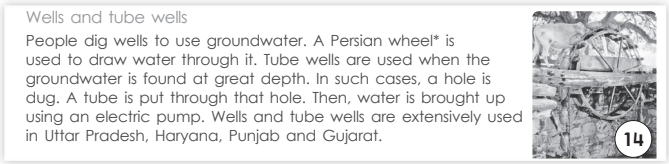

MEANS OF IRRIGATION
Farmers need ample supply of water to grow crops. Irrigation is the only way through which this is possible. This is because rainfall is uncertain. For example, it might rain a lot one year. The next year, it might not rain much. Moreover, there are regions in India where rainfall is extremely scanty. Therefore, different means of irrigation are used in different regions. Let us learn about them.
14

Teacher: Open your books, page 14 to the 'Means of Irrigation' section. Let us read about wells, tube wells and canals together. I will read the first part and then you will take turns reading aloud.

(Read aloud.)

Teacher: Excellent reading, everyone. Now let us explore about them with pictures and activities to understand them better.

Wells and Tube Wells


Wells and tube wells
People dig wells to use groundwater. A Persian wheel* is used to draw water through it. Tube wells are used when the groundwater is found at great depth. In such cases, a hole is dug. A tube is put through that hole. Then, water is brought up using an electric pump. Wells and tube wells are extensively used in Uttar Pradesh, Haryana, Punjab and Gujarat.
14

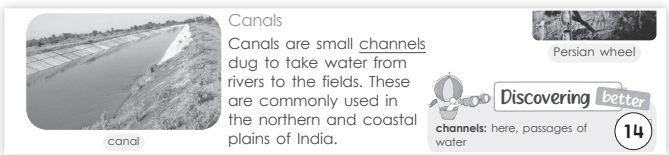
Teacher: Farmers use wells to bring groundwater to the surface, often with the help of a Persian wheel. Tube wells, on the other hand, use electricity to pump water from deep underground.

Teacher: Why do you think tube wells are faster than traditional wells?

Teacher: Excellent, Now pretend to use a Persian wheel by moving your hands in a circular motion.

Teacher: Great. Now, let us move on to canals, another important irrigation method.

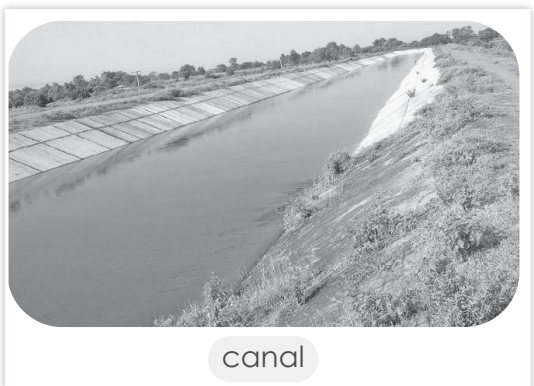
Canals


Canals
Canals are small channels dug to take water from rivers to the fields. These are commonly used in the northern and coastal plains of India.
canal
Persian wheel
Discovering better
channels: here, passages of water
14

You may show the **Infographic** given on digtal platform.

Teacher: Canals are man-made channels that carry water from rivers to fields. They are used in regions where rivers are nearby, especially in the northern and coastal plains of India.

Show Picture:


canal

Teacher: How are canals different from rivers?

Teacher: Amazing students, before I tell you a new word, let us think together. Have you heard the word 'chanel' before?

Teacher: Great. A channel can mean many things. Today, we are learning about channels in irrigation. Can anyone guess what it might mean in this context?

Teacher: Fantastic guesses. In irrigation, a channel is a pathway through which water flows, like a canal. It carries water from rivers to fields so that farmers can irrigate their crops.

Teacher: Let us now bring everything together with a quick discussion.

Teacher: Now that we have learned about wells, tube wells and canals, let us discuss:

COULD DO
05 MIN.

Why is irrigation important for farmers?

(Students respond: 'To water crops when there is no rain.')

Which method would you choose for an area with no rivers nearby?

(Students respond: 'Tube wells or wells.')

Teacher: Fantastic answers. Give yourselves a big round of applause for your active participation today. See you all in the next class.

Differentiated Activities

110 km/hr

Divide into two groups and debate: 'Which is better: Tube Wells or Canals?'

80 km/hr

Conduct a quiz with questions like:

1. What is used to draw water from a well? (Answer: Persian wheel)
2. What method is powered by electricity? (Answer: Tube Well)
3. What is a man-made channel for water called? (Answer: Canal)

40 km/hr

Write 2-3 sentences about why irrigation is important for farmers.

Home Task

1. Draw and label one irrigation method (well, tube well or canal).
2. Write two benefits of the irrigation method you drew.

Period 5

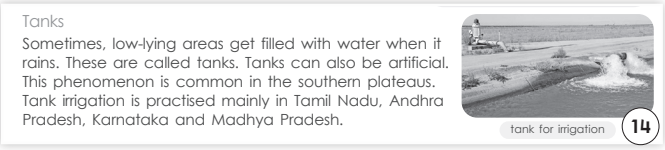
Teacher: Good morning, everyone. Before we start today's lesson, let's do a quick check-in on the plants we have been growing. How are your saplings doing? Have you noticed any changes or growth since you planted them?

SHOULD DO
05 MIN.

Teacher: That is wonderful. It is important to care for plants. Just like you have been taking care of your saplings, today we will learn about how farmers take care of their crops using irrigation methods like tanks and sprinklers. Let us dive into that.

MUST DO
30 MIN.

Tanks


Tanks
Sometimes, low-lying areas get filled with water when it rains. These are called tanks. Tanks can also be artificial. This phenomenon is common in the southern plateaus. Tank irrigation is practised mainly in Tamil Nadu, Andhra Pradesh, Karnataka and Madhya Pradesh.
tank for irrigation
14

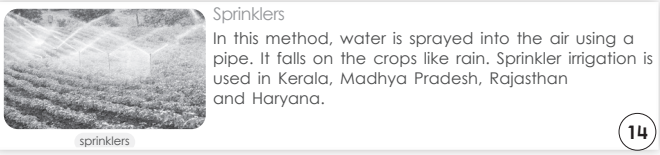
Teacher: Let us begin by opening your books to **page 14** and read the section about Tanks together. I will read the first part and then we will take turns reading aloud.

Teacher: Excellent reading, everyone. Now, let us discuss what we just read.

Teacher: Tanks are large containers that store water. Sometimes, water fills low-lying areas when it rains. This collected water is stored in tanks. Tanks can be natural or artificial and they help store water for later use. Tank irrigation is practised in states like Tamil Nadu andhra Pradesh, Karnataka and Madhya Pradesh.

Teacher: Why do you think storing water in tanks might be helpful for farmers?

Sprinklers



Teacher: Excellent, let us explore how sprinklers work with a fun hands-on activity. In this activity, we will simulate how water comes out of sprinklers. Are you ready?

Teacher: Great. We need a plastic bottle, a pin and some water. First, I will show you how to turn this bottle into a sprinkler. Use the pin to make small holes in the bottom and sides of the bottle. These holes will act like the openings in a sprinkler and fill the bottle with water.

Teacher: Hold the bottle upside down over your sink or tray and watch what happens when we tip it.

Teacher: Look at the water spraying in all directions. What does this remind you of?

(Students respond: 'Rain.' or 'Sprinklers.')

Teacher: Exactly. Sprinklers spray water just like rain to water crops evenly.

Teacher: Why do you think sprinklers are a good way to water crops?

Teacher: Great. You just learned how sprinklers help water crops like rain.

Teacher: Let us finish today's lesson with a quick round of True or False to see what we learned. I will say a statement and you have to tell me if it is True or False. Ready?

Teacher: Tanks are used to store water for later use. (True)

COULD DO
05 MIN.

Sprinklers water crops by storing water underground. (False)

Sprinklers spray water in all directions like rain. (True)

Tanks are not helpful when there is not enough rain. (False)

Sprinklers help water crops evenly, just like nature does. (True)

Teacher: Fantastic work, everyone. You really understood how tanks and sprinklers work. Well done.

Differentiated Activities

110 km/hr

Match the Following

Match the irrigation method with its correct description:

1. Tank
2. Sprinkler
   a. Water sprays out like rain
   b. Stores water for later use

80 km/hr

• Task: Fill in the Blanks

Complete the sentences with the correct irrigation method (Tank or Sprinkler):

1. A _____ stores water for crops when it does not rain.
2. A _____ sprays water on crops like rain.
3. Farmers use _____ in areas with irregular rainfall.

40 km/hr

True or False

Read the statements and decide if they are true or false. Circle the correct answer.

1. A tank stores water for later use. (True / False)
2. A sprinkler helps water crops evenly like rain. (True / False)
3. Farmers use sprinklers to store water for future use. (True / False)
4. A tank is used to spray water on crops. (True / False)

Home task

Discuss with a family member which irrigation method is most commonly used in your area.

Period 6

Teacher: Good morning, everyone. Before we start today's lesson, let us do a quick check-in with each other. How are you feeling today? Are you excited for today's lesson?

SHOULD DO

05 MIN.

Teacher: It is great to see so many smiling faces. Now that we are all feeling good, let us get started with today's topic—Dams.

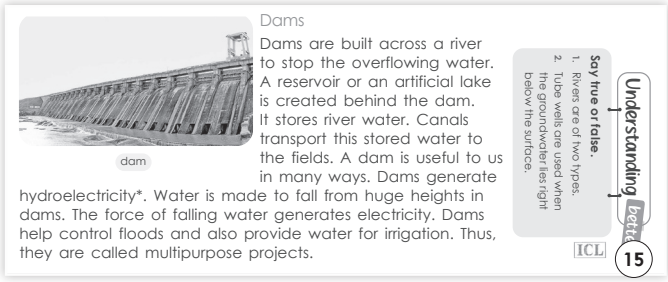
Teacher: Let us begin by opening your books to page 15 and looking at the picture of a dam. What do you see in the picture?

MUST DO

20 MIN.

(Students describe the image of the dam and its surroundings.)

Dam



You may show the **Animated Activities** given on digtal platform.

Teacher: Great observations. That is a picture of a dam. Dams are large structures built across rivers to stop water from overflowing. They help prevent floods and store water for different uses. What do you think the purpose of this dam is?

Teacher: Exactly. Now, let us read the information on this page about dams together. I will read the first part and then I will ask you to read aloud.

Let's break this down. What are some of the uses of dams? What does multipurpose mean?

Teacher: Exactly. Dams are multipurpose because they serve many important functions.

Teacher: Now, I want you to think about why dams are so important for our country. Can anyone give an example of how dams might help farmers or people living near rivers?

Teacher: Yes, great answers. Dams are important for providing water to fields, generating electricity and helping with flood control.

(Explain and discuss about dams)

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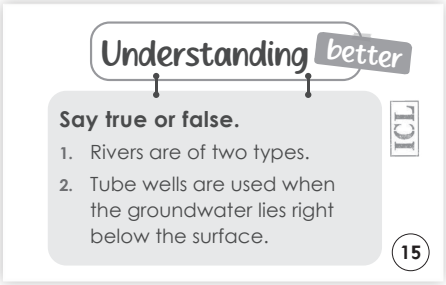
Teacher: Yes, great answers. Dams are important for providing water to fields, generating electricity and helping with flood control.

Understanding better

Teacher: Now, let us test our understanding with a True or False activity. I will read a statement and you have to tell me whether it is True or False. Ready?

MUST DO

10 MIN.



Teacher: Rivers are of two types.
(Students respond: 'False.')
Teacher: That is correct. Rivers can be of more than two types. There are mountain rivers, plateau rivers and more.
Teacher: Tube wells are used when the groundwater lies right below the surface.
(Students respond: 'False.')
Teacher: Exactly. Tube wells are used when groundwater is found deep below the surface, not just right below it.

COULD DO
05 MIN.

Teacher: Let us quickly recap what we have learned about dams. I will ask a few questions and I want you to respond.
Teacher: What is the purpose of a dam?
What is hydroelectricity?
Can you name any famous dams in India?

Differentiated Activity

110 km/hr

Imagine you are an engineer. Design your own dam. Draw the dam and write a short report on its purpose. Include what type of benefits it will provide to the community, such as water storage, irrigation and hydroelectricity.

80 km/hr

Write a short paragraph about how a dam can help farmers.
What do you think would happen if there were no dams? Write 1-2 sentences explaining what could be the problem

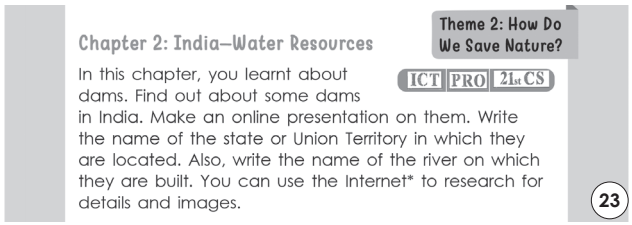
40 km/hr

Draw and label a dam. Write 1 sentence about what the dam does. For example: 'This dam helps to store water for farming.'

Can you think of a reason why a dam might be important for a village or town? Write 1 short sentence to explain.

Home Task

Book of Project ideas (page 23)
Find out about some of the dams in India. Make an online presentation on them. Write the name of the state or Union Territory in which they are located. Also, write the name of the river on which they are built. You can use the Internet* to research for details and images.



Period 7

Laughing better

Teacher: Good morning, everyone. How are you all? Let us begin today's lesson with a fun activity called Laughing better. It is a great way to start our lesson with a smile.

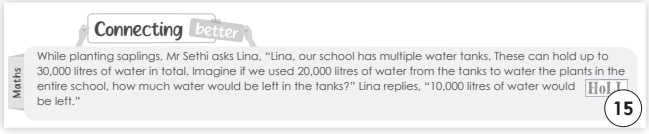
SHOULD DO
05 MIN.

Teacher: Here is the joke:
'Knock, knock.'
(Students respond: 'Who's there?')
Teacher: 'Water.'
(Students respond: 'Water who?')
Teacher: 'Water you doing here?'
(Everyone laughs)
Teacher: Great work. It is always good to start with a smile. Now that we are all feeling good, let us dive into today's lesson.

You may show the **concept map** given on the digital platform.)

MUST DO
10 MIN.

Connecting better



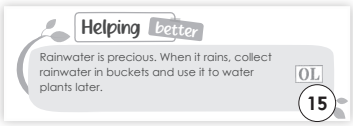
Teacher: Before we start the Connecting better exercise, let us open our books to page 15. Today, we are going to work with some math and connect it to our understanding of water resources.
Teacher: Imagine that our school has multiple water tanks. These tanks can hold up to 20,000 litres of water in total. If we use 10,000 litres of water to water the plants in the school, how much water would be left in the tanks?
Teacher: Yes, exactly. If 10,000 litres of water are used, 10,000 litres will remain in the tanks. This is how we can use math to understand how much water we have and use it wisely.

Teacher: Now, how do you think we can use water more efficiently in real life?

(Students provide answers like: 'By using less water for plants,' 'By not wasting water.')

Teacher: Great ideas. Now, let us move to the next part of the lesson.

Helping better



Teacher: Next, let's talk about Helping better. We have discussed how to conserve water. Now, let's explore how we can actually help conserve it in real life.

MUST DO
10 MIN.

Teacher: When it rains, we can collect rainwater. This is a very simple but effective way to use water wisely. When it rains in your area, do you know how to collect rainwater?

Teacher: Great ideas. By collecting rainwater, we can use it to water plants and gardens instead of using fresh water from the taps. This is a wonderful way to help our environment.

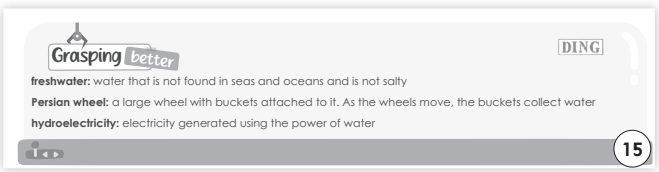
Teacher: Now, let us try an activity. Imagine it is raining outside. What are some ways you can collect the rainwater in your home?

(Students brainstorm: 'Use buckets,' 'Place containers outside' 'Use a rainwater harvesting system.')

Teacher: Perfect. You all have some great ways to collect rainwater. The more we collect, the less we use from our water tanks and taps. This is an excellent way to conserve water.

Grasping better

MUST DO
10 MIN.



Teacher: Now, let us make sure we understand the key ideas we have learned today with a quick review of Grasping better. I will ask you some questions and I want you to answer them.

Teacher: What does freshwater mean? Can anyone explain?

Teacher: Exactly. Freshwater is clean water that we can use for drinking and farming.

Teacher: What is a Persian wheel? Can someone explain how it works?

Teacher: Great. The Persian wheel helps collect water from rivers for irrigation.

Teacher: And what is hydroelectricity?

Teacher: Wonderful. Hydroelectricity is one of the ways we can generate power by using the flow of water.

Teacher: Let us quickly recap everything we've learned today:

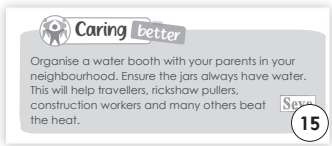
Teacher: Why is it important for us to conserve water and help protect it?

Teacher: Exactly. Water is a valuable resource and we must protect it.

Caring better

MUST DO
05 MIN.

Teacher: For your home task, I want you to think about how you can care for water in your community. Here is your task:



1. **Organize a water booth** with your parents in your neighbourhood.
2. Ensure the jars always have water.
3. This will help travellers, rickshaw pullers, construction workers and many others beat the heat.

Teacher: Make sure to ask your family to help you organize this. I look forward to hearing all about your water booth. Keep up the good work.

Differentiated Activity

110 km/hr

Design a simple plan to save water at school. Write 3 ideas (e.g., use rainwater, turn off taps, etc.).

80 km/hr

I will give you a list of water-related items. Your task is to sort them into two categories: Items that help conserve water and Items that waste water.

Example list:

- Bucket (Save water)
- Hose (Waste water)
- Tap (Waste water)
- Rainwater tank (Save water)
- Leaky faucet (Waste water)
- Watering can (Save water)
- Sprinkler (Waste water)
- Drip irrigation (Save water)

After sorting, explain 1 item from each category and why it helps or wastes water.

40 km/hr

Write 3 sentences on how you can save water at home or school.

Home Task

Caring better

Task:

- Organize a water booth with your parents in your neighbourhood.
- Make sure the water jars are filled and ready to help people.
- Create a poster explaining the importance of water.

Period 8

Teacher: Good morning, everyone. Let us start today lesson with a fun and refreshing activity to get our minds focused and ready.

SHOULD DO
05 MIN.

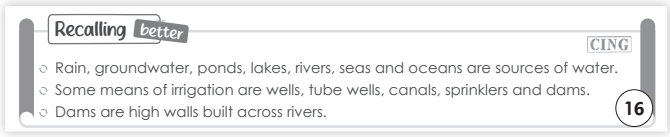
Teacher: Let us play Simon Says. But this time, we will do some stretches. Ready?

Teacher: Simon says touch your toes and hold it for 10 seconds.

Teacher: Simon says stretch your arms wide like an airplane and fly around the room.

Teacher: Nice, everyone. Let us stretch again, but this time we will pretend to be trees. Stand tall and breathe deeply.

Recalling better


Recalling better

CING

- Rain, groundwater, ponds, lakes, rivers, seas and oceans are sources of water.
- Some means of irrigation are wells, tube wells, canals, sprinklers and dams.
- Dams are high walls built across rivers.

16

Teacher: We are all stretched out and feeling good, we are ready to dive into today's lesson. Let us move on to 'Recalling better' to make sure we remember key ideas from past lessons. Let us quickly recap the important concepts we have learned. To make it more fun, we will divide the class into two teams and have a quiz. The team that answers the most questions correctly will win a Golden Star.

MUST DO
10 MIN.

Teacher: I will ask a series of questions and each team will have a chance to answer. Ready? Let us get started.

Questions:

- What are the sources of water?
- What is irrigation?
- What are the different means of irrigation?
- Where are dams typically built?
- What are multi-purpose projects?

Teacher: Great responses, everyone. It seems like you have all been paying attention and remembering what we have learned. Now, we are ready to move on to Learning better about water conservation and the water cycle.

Learning better

You may show the **slideshow** given on the digital platform.

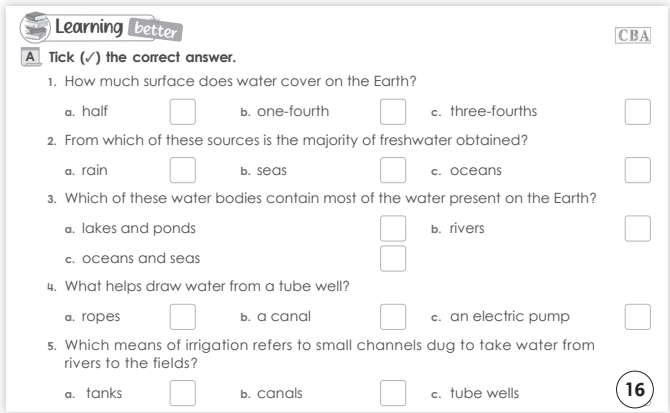
MUST DO
10 MIN.

Exercise A

Teacher: Now, let us move on to Learning Better. Please open your textbooks to page 16. For this activity, I want you to work in pairs. I will read the statements aloud to you and you will work together to choose the correct answer. After that, we will have a whole class discussion about the answers and you will tick the correct answers in your textbooks.

Teacher: Here is the first question:

1. How much surface does water cover on the Earth?
   (a) half
   (b) one-fourth
   (c) three-fourths


Learning better

CBA

A Tick (✓) the correct answer.

1. How much surface does water cover on the Earth?
   a. half ☐ b. one-fourth ☐ c. three-fourths ☐
2. From which of these sources is the majority of freshwater obtained?
   a. rain ☐ b. seas ☐ c. oceans ☐
3. Which of these water bodies contain most of the water present on the Earth?
   a. lakes and ponds ☐ b. rivers ☐
   c. oceans and seas ☐
4. What helps draw water from a tube well?
   a. ropes ☐ b. a canal ☐ c. an electric pump ☐
5. Which means of irrigation refers to small channels dug to take water from rivers to the fields?
   a. tanks ☐ b. canals ☐ c. tube wells ☐

16

Teacher: Take a moment to discuss with your partner and choose the correct answer. Ready? Go.

(Students discuss in pairs for 2 minutes)

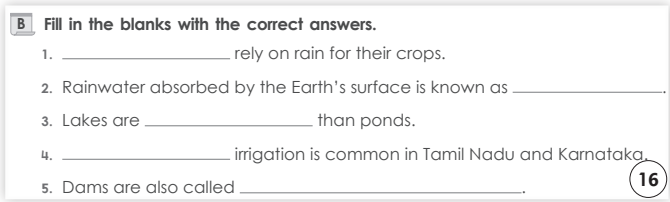
(continue this activity in the same manner for rest of the exercise)

Learning better

MUST DO
10 MIN.

Exercise B

Teacher: Now let's move on to exercise B. This time, I want each of you to read the statements individually and fill in the blanks with the correct answers. Afterward, we will check the answers together as a class.


B Fill in the blanks with the correct answers.

1. _____ rely on rain for their crops.
2. Rainwater absorbed by the Earth's surface is known as _____.
3. Lakes are _____ than ponds.
4. _____ irrigation is common in Tamil Nadu and Karnataka.
5. Dams are also called _____.

16

Teacher: Here is the first statement:

1. Farmers rely on _____ for their crops.

(Students answer individually and write down their answers)

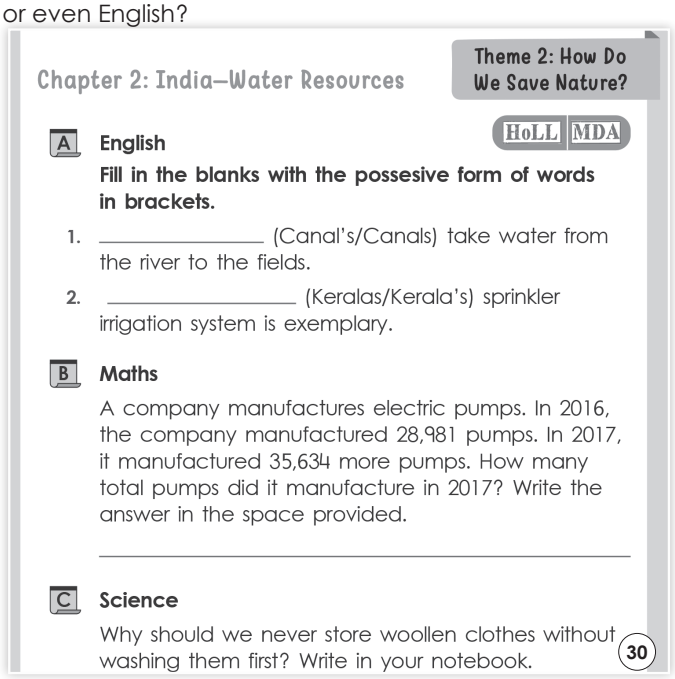
Teacher: Now that everyone has answered, let us check the correct answer. The correct answer is rain. Farmers rely on rain for their crops. Did everyone get it right?

(continue this activity in the same manner for rest of the exercise)

Book of Holistic teaching

COULD DO
05 MIN.

Teacher: Let us take a moment to connect Social Science with other subjects you are learning. Can anyone think of how Social Science relates to other subjects like Math, Science or even English?



Chapter 2: India—Water Resources

Theme 2: How Do We Save Nature?

HoLL MDA

A English

Fill in the blanks with the possesive form of words in brackets.

1. _____ (Canal's/Canals) take water from the river to the fields.
2. _____ (Keralas/Kerala's) sprinkler irrigation system is exemplary.

B Maths

A company manufactures electric pumps. In 2016, the company manufactured 28,981 pumps. In 2017, it manufactured 35,634 more pumps. How many total pumps did it manufacture in 2017? Write the answer in the space provided.

_____

C Science

Why should we never store woollen clothes without washing them first? Write in your notebook.

30

(Discuss this activity with students from the book of holistic teaching, page 30.)

Teacher: Fantastic students. You all did a great work in recalling important concepts, learning about water conservation and understanding the water cycle. Keep practicing at home and remember, water conservation is something we should all think about in our daily lives.

Differentiated Activity

110 km/hr

Ask a question related to water conservation. Discuss and explain in detail using scientific terms. For example, 'How do multipurpose dams help conserve water?' You can include terms like hydroelectric power, water storage and flood control.

80 km/hr

In pairs, you will discuss the question and come up with a clear, concise answer. For example, 'What are the different types of irrigation?' Use terms like sprinklers, canals and drip irrigation.

40 km/hr

Discuss with your group: 'Why do we need water?' Write a short answer.

Home Task

Write 2-3 sentences on why water conservation is important and how you can save water at home. You can discuss things like turning off taps or using rainwater for plants.

Period 9

Teacher: Good morning, everyone. Let's begin today's lesson with a fun activity to get our minds fresh and ready to learn. We will play a quick 'Water Word Chain' game.

SHOULD DO
05 MIN.

Teacher: Here is how it works:

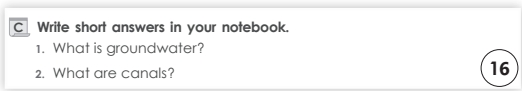
- I will say a word related to water or irrigation.
- You have to quickly say another word that connects to the word I give you.
- For example, if I say 'river,' you could say 'ocean' or 'lake.'
- We will go in a circle and each person must say a new word related to the previous one. Ready?

Teacher: Let's start. The first word is: Water

(Students take turns saying related words like river, rain, ocean, etc.)

Learning better

Exercise C



C Write short answers in your notebook.
1. What is groundwater?
2. What are canals?

16

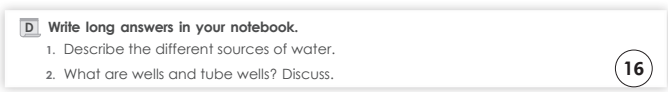
Teacher: Great. Now that we are all energized, let us dive into today's lesson. Everyone, please open page 16 of your book and let us get started with 'short question answers'. You will work in pairs to discuss and write the answers in your notebook and remember, aim for about 40 to 50 words per answer. Afterward, we will have a quick class discussion to confirm the correct answers.

MUST DO
10 MIN.

Teacher: Here is the first question:
What is groundwater?
(Students discuss with their partners and write the answer in their notebooks.)
(Similarly complete all the questions)

Learning better

Exercise D



D Write long answers in your notebook.
1. Describe the different sources of water.
2. What are wells and tube wells? Discuss.

16

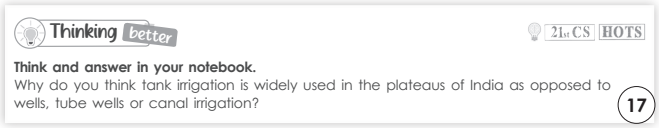
Teacher: Now that we have covered the short answers, let us move on to 'long answers'. For each of the following questions, I want you to write your answer in 100-150 words in your notebook. I will give you some time to write and after that, we will discuss the answers together.

MUST DO
15 MIN.

Teacher: Here is the first long question:

Describe the different sources of water.
(Students write their answers in their notebooks.)
(Similarly complete all the questions)

Thinking better


Thinking better
21st CS HOTS
Think and answer in your notebook.
Why do you think tank irrigation is widely used in the plateaus of India as opposed to wells, tube wells or canal irrigation?
17

Teacher: Alright, everyone. Now, let us move on to a fun 'Thinking better' activity. We will put on our thinking caps and use our imagination to solve a problem. Are you ready?

MUST DO
10 MIN.

Teacher: Here's the question:
Why do you think tank irrigation is widely used in the plateaus of India as opposed to wells, tube wells or canal irrigation?

Teacher: Think about the geography of plateaus. Why do you think tank irrigation works better there than other methods? Write your thoughts in your notebook.

(Allow students 1-2 minutes to think and write down their answers.)

Teacher: Great. Now that you have written your answers, let's hear from some of you. Group 1, what do you think? Why is tank irrigation widely used in the plateaus of India?

(Group 1 responds, then ask group two and so on)

Teacher: Interesting. Yes, you are absolutely right. Tank irrigation is widely used in plateaus because the land is often uneven and does not allow water to flow easily through canals or wells. So, water needs to be stored in tanks to be used during dry seasons when there's not enough rain.

(Allow students to discuss for 1 minute, then ask for a few volunteers to share their thoughts.)

Differentiated Activity

110 km/hr

Describe how dams help in irrigation and flood control.

80 km/hr

In pairs, answer: 'What is groundwater?' in 40-50 words.

40 km/hr

Fill in the blanks: 'We use water for _____, _____ and _____.'

Home Task

Creating better

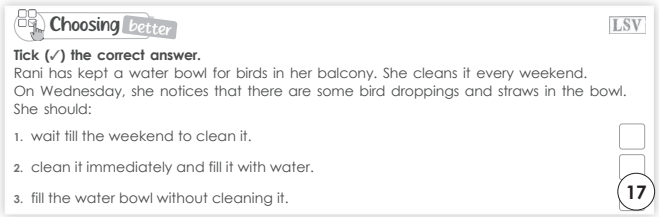
Do exercise creating better –'make your own bottle sprinkler' that is given on page 17.

Period 10

Choosing better

Teacher: Good morning, class. Today, we are going to focus on how we can make better choices when it comes to using water. We will start by learning about a situation and discussing what the best choice is. Let us get started.

MUST DO
10 MIN.


Choosing better
LSV
Tick (✓) the correct answer.
Rani has kept a water bowl for birds in her balcony. She cleans it every weekend. On Wednesday, she notices that there are some bird droppings and straws in the bowl. She should:
1. wait till the weekend to clean it.
2. clean it immediately and fill it with water.
3. fill the water bowl without cleaning it.
17

Teacher: I have a situation for you. Imagine that Rani has a water bowl for birds on her balcony. She usually cleans it every weekend. But today, on Wednesday, she notices that there are bird droppings and straws in the bowl. What should Rani do?

1. Wait till the weekend to clean it.
2. Clean it immediately and fill it with water.
3. Fill the water bowl without cleaning it.

Teacher: Alright, I want you all to think carefully. What do you think is the best choice for Rani? Raise your hand when you know the answer.

(Students raise their hands to answer.)

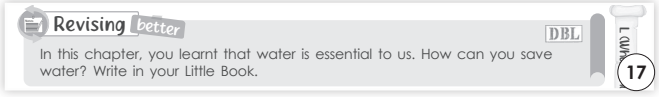
Teacher: I see some hands up. Let us hear from you. What do you think? Should Rani wait till the weekend to clean the bowl?

(Pick a student who answers, then proceeds to the next options.)

Student: No, I think she should clean it right away.

Teacher: Excellent. That's right. It's important to clean the bowl immediately and fill it with fresh water. If we wait, the water could become dirty and unsafe for the birds. So, let us all tick the correct answer together.

Revising better


Revising better
DBL
In this chapter, you learnt that water is essential to us. How can you save water? Write in your Little Book.
17

Teacher: Great work, everyone. You made some fantastic choices when we talked about cleaning the bird's water bowl. Now, let us think about something even more important: WATER.

MUST DO
15 MIN.

Teacher: We have learned that water is essential for all living things. But how can we save it in our daily lives? Let us take a moment to think: What are some simple ways you can save water?

Teacher: Write down your ideas in your Little Book. Think about things like turning off the tap while brushing your

teeth or using less water when washing dishes. Take a minute and write it down.

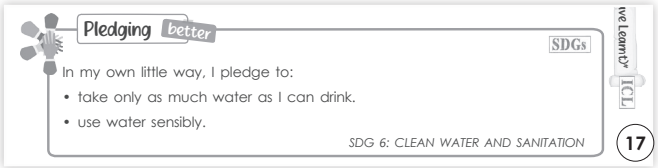
Teacher: Who would like to share one idea on how to save water?

Teacher: Wonderful. Every small action counts. Now, let us keep those great ideas in mind as we move on to our next activity. Letmus make a pledge to save water wisely.

Pledging better

MUST DO

05 MIN.



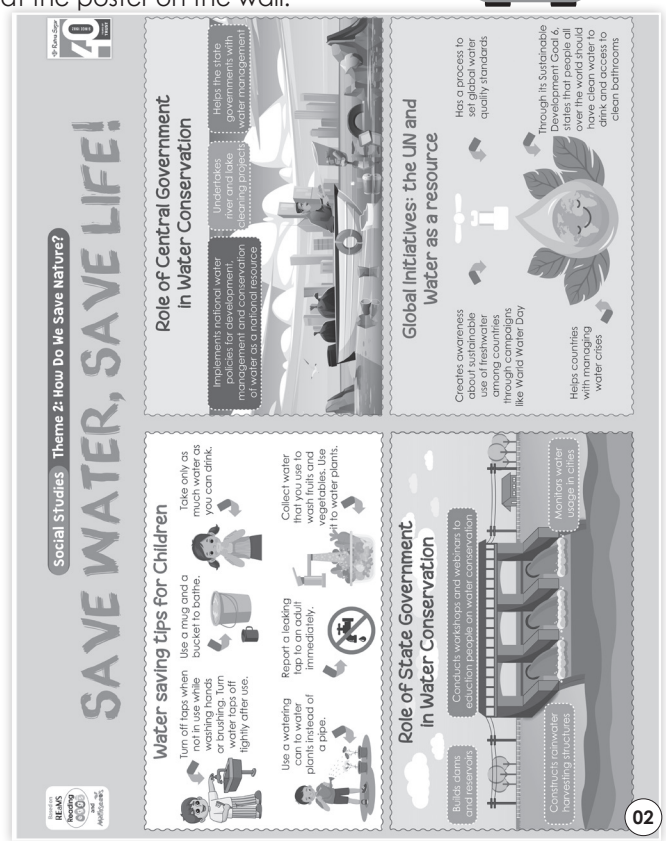
Teacher: I am going to say my pledge first and I want you to repeat after me. In my own little way, I pledge to: Take only as
much water as I can drink and use water sensibly.
(students will repeat after you)

Poster

MUST DO

10 MIN.

Teacher: Let us take a moment to look at the poster on the wall.



(Please display and discuss the posters prominently in the classroom to reinforce the learning about save water. Encourage students to observe the posters and discuss about save water and save life.)

Teacher: Great observation everyone.

Teacher: Great students. Remember, even small changes make a big difference. Let us all stick to our pledges and save water together.

You may show the **Quiz** given on the digital platform.

Differentiated Activity

110 km/hr

Write a letter to a friend or family member explaining why it is important to save water and share 3 ways they can help save water at home.

80 km/hr

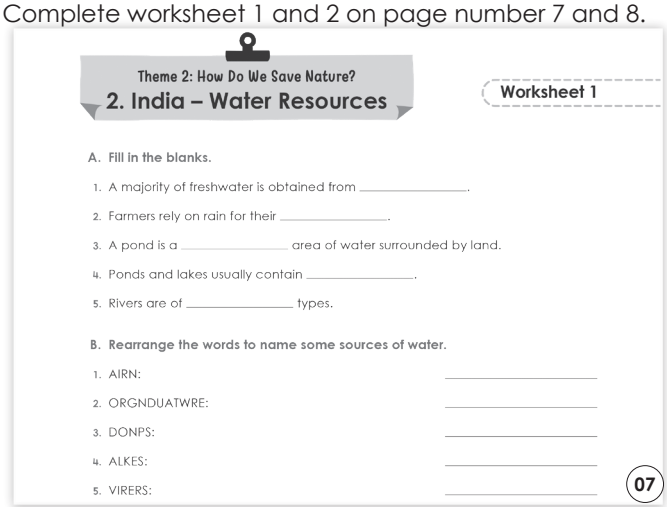
Create a Water Saving Tips poster. Draw images of things you can do to save water (e.g., turning off the tap while brushing, using less water to wash dishes) and write 3 tips to save water.

40 km/hr

Draw a picture of a water faucet with the tap turned off and write a simple sentence like 'Turning off the tap saves water.'

Home Task

Complete worksheet 1 and 2 on page number 7 and 8.


Theme 2: How Do We Save Nature?

2. India – Water Resources

Worksheet 1

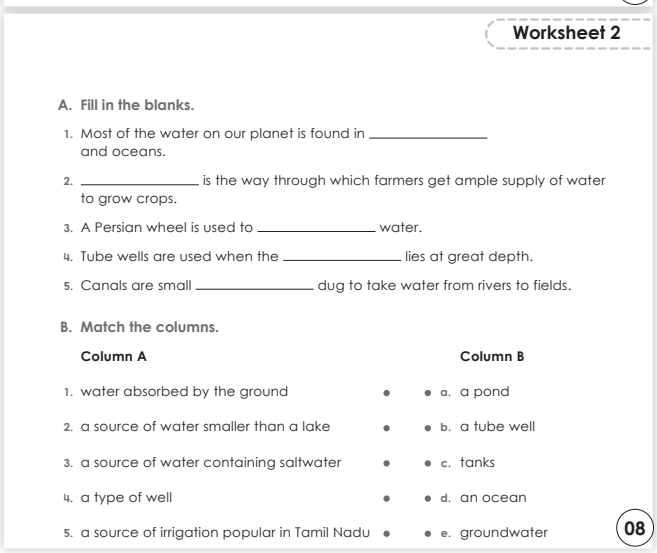
A. Fill in the blanks.

1. A majority of freshwater is obtained from _____.
2. Farmers rely on rain for their _____.
3. A pond is a _____ area of water surrounded by land.
4. Ponds and lakes usually contain _____.
5. Rivers are of _____ types.

B. Rearrange the words to name some sources of water.

1. AIRN: _____
2. ORGNDUATWRE: _____
3. DONPS: _____
4. ALKES: _____
5. VIRERS: _____

07


Worksheet 2

A. Fill in the blanks.

1. Most of the water on our planet is found in _____ and oceans.
2. _____ is the way through which farmers get ample supply of water to grow crops.
3. A Persian wheel is used to _____ water.
4. Tube wells are used when the _____ lies at great depth.
5. Canals are small _____ dug to take water from rivers to fields.

B. Match the columns.

Column A		Column B
1. water absorbed by the ground	•	• a. a pond
2. a source of water smaller than a lake	•	• b. a tube well
3. a source of water containing saltwater	•	• c. tanks
4. a type of well	•	• d. an ocean
5. a source of irrigation popular in Tamil Nadu	•	• e. groundwater

08

Period 11

Teacher: Good morning students. How are you all? Let us start today's lesson with a refreshing activity to get our minds warmed up. We are going to collect ideas from your group about the uses of freshwater.

SHOULD DO
05 MIN.

Teacher: You will form groups of 4-5 students. As a group, you will brainstorm and write down all the different ways freshwater is used in our daily lives. For example, we use freshwater for drinking, cooking and watering plants.

Teacher: You have 5 minutes to share your ideas within your group. Ready? Go.

(Students discuss in groups.)

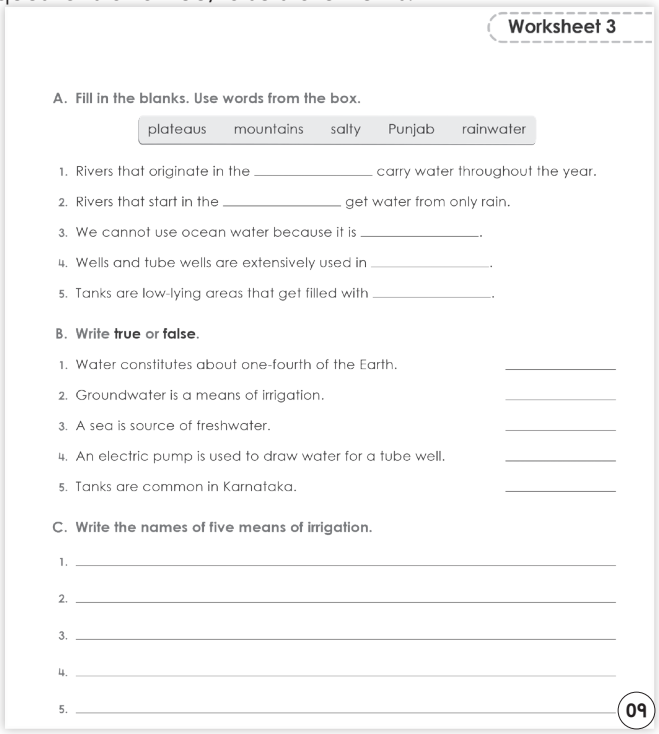
Teacher: Fantastic. Now that we have some great ideas about the uses of freshwater, let us move on to today's lesson.

Worksheet 3

MUST DO
15 MIN.

Teacher: I would like everyone to take out your workbooks and open page 9 and 10. We are going to work on Worksheet 3 and Worksheet 4, where we will practise what we have learned about water resources, rivers, irrigation and conservation.

Teacher (guides students): First, let's start with Worksheet 3. I will give you some time to complete the fill-in-the-blank questions and true/false statements.



Worksheet 3

A. Fill in the blanks. Use words from the box.

plateaus | mountains | salty | Punjab | rainwater

1. Rivers that originate in the _____ carry water throughout the year.
2. Rivers that start in the _____ get water from only rain.
3. We cannot use ocean water because it is _____.
4. Wells and tube wells are extensively used in _____.
5. Tanks are low-lying areas that get filled with _____.

B. Write **true** or **false**.

1. Water constitutes about one-fourth of the Earth. _____
2. Groundwater is a means of irrigation. _____
3. A sea is source of freshwater. _____
4. An electric pump is used to draw water for a tube well. _____
5. Tanks are common in Karnataka. _____

C. Write the names of five means of irrigation.

1. _____
2. _____
3. _____
4. _____
5. _____

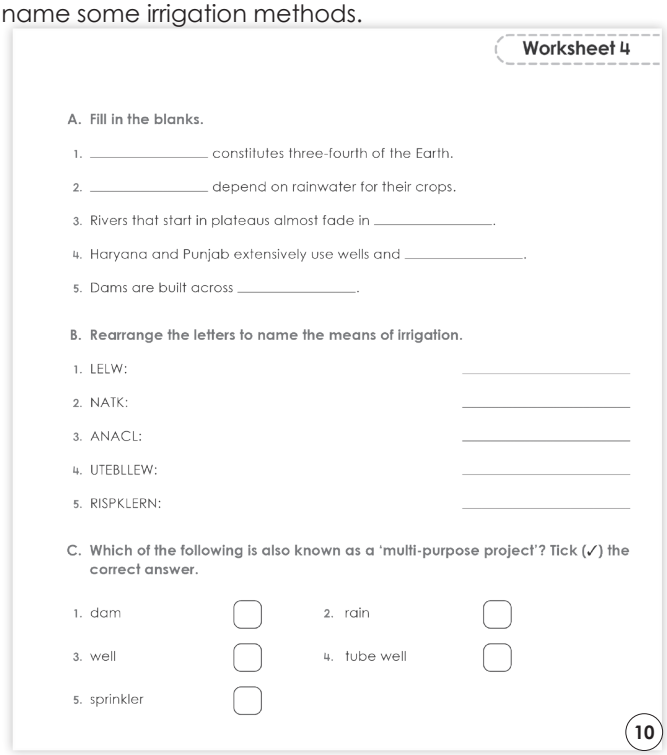
09

(Discuss the worksheet with students. Guide them as required.)

Worksheet 4

MUST DO
15 MIN.

Teacher: Great. Now, let us move on to Worksheet 4. Here, you will fill in the blanks and rearrange the letters to name some irrigation methods.



Worksheet 4

A. Fill in the blanks.

1. _____ constitutes three-fourth of the Earth.
2. _____ depend on rainwater for their crops.
3. Rivers that start in plateaus almost fade in _____.
4. Haryana and Punjab extensively use wells and _____.
5. Dams are built across _____.

B. Rearrange the letters to name the means of irrigation.

1. LELW: _____
2. NATK: _____
3. ANACL: _____
4. UTEBLLEW: _____
5. RISPKLERN: _____

C. Which of the following is also known as a 'multi-purpose project'? Tick (✓) the correct answer.

1. dam ☐ 2. rain ☐
3. well ☐ 4. tube well ☐
5. sprinkler ☐

10

(Discuss the worksheet with students. Guide them as required.)

Teacher: Now that you have completed the worksheet, it is time for peer assessment. You will exchange your worksheet with a partner. Discuss the answers together and help each other. I will write the correct answers on the board, so you can check them after your discussion.

(Walk around and support students as needed.)

Teacher: Alright, everyone. Let us quickly wrap up today's lesson.

COULD DO
05 MIN.

Teacher: We have learned a lot about water resources, irrigation and conservation today. Can someone share one new thing you learned about irrigation methods?

(Allow students to share their thoughts.)

Teacher: Awesome. You all did an excellent work working through the worksheets and helping each other. Keep thinking about how we can take better care of our water resources.

Teacher: Give yourselves a big round of applause. You have done a great work today. I will see you all in the next lesson.

Differentiated Activity

110 km/hr

Write a short essay on how irrigation helps farmers use water more effectively. Include at least two types of irrigation methods and explain how they work.

80 km/hr

Draw a simple irrigation system and label its parts.

40 km/hr

Colour a picture of plants being watered and write one sentence about how irrigation helps crops grow.

Home Task

Think about a place where water is wasted. Write 2 sentences explaining how you could stop the waste.

Learning Outcomes

The students will:

Physical Development	• develop fine motor skills through hands-on activities such as planting saplings and simulating irrigation methods (e.g., using a bottle to create a sprinkler).
Socio-Emotional and Ethical Development	• cultivate a sense of responsibility and care for the environment by pledging to conserve water and take care of plants.
Cognitive Development	• enhance critical thinking and problem-solving skills by discussing real-world scenarios (e.g., choosing the best way to use water in each situation).
Language and Literacy Development	• improve vocabulary related to water resources, irrigation and conservation by learning and using key terms (e.g., groundwater, irrigation, canals).
Aesthetic and Cultural Development	• foster creativity and aesthetic awareness through activities such as drawing and colouring water-related illustrations, creating water-saving posters and naming saplings.
Positive Learning Habits	• promote positive learning behaviours such as listening attentively during discussions, taking turns in group activities and following instructions for hands-on tasks.

Starry Knights

According to you, how does studying about ancient rulers help learners of today?

Reward yourself with a STAR.

Lesson-3: Mineral Resources

Theme 2: How do we save nature?

11 Periods (40 minutes each)

Learn Better (Main Coursebook), Stay Ahead (Workbook), Book of Holistic Teaching, Book of Project Ideas, CRM signs, Poster, Blackboard, Gratitude sheet

Animation, Animated activities, Dictionary, eBook, Infographic, Quiz, Concept Map, Slideshow

Affirming better

I love cycling.

Curricular Goals and Objectives (NCF)

To enable the students:

- to identify and classify minerals and understand their uses in daily life, recognizing their significance in various industries.
- to understand the process of mining and extraction, including key terms such as ores, mines, and mineral extraction, and their impact on resource utilization.
- to explore the geographical distribution of minerals and understand the economic and social significance of major mining regions.
- to differentiate between metals and non-metals, focusing on their properties, uses, and importance in daily life and industries.
- to recognize the role of minerals in the production of essential products like tools, machinery and appliances.
- to develop an understanding of the importance of conserving mineral and fuel resources, promoting sustainable practices to ensure their availability for future generations.
- to define key terms related to mineral resources and encourage the adoption of sustainable practices such as recycling and reducing fuel consumption.
- to promote eco-friendly practices, encouraging responsibility towards the environment and the community for a sustainable future.

Methodology

Period 1

SHOULD DO

05 MIN.

Teacher: Good morning, class. How is everyone today?

Students: Good morning, teacher. We are doing great.

Teacher: Fantastic. Let us get our bodies moving and have some fun with the Animal Movements game. I will call out the name of an animal and you need to act like that animal. Ready to get started?

Teacher: First animal: Elephant.

Teacher: Wonderful. Next, let us try being a Penguin.

Teacher: Excellent. Now, let us see who can act like a Tiger.

Teacher: Amazing. You all did a fantastic job acting like animals. Now, that we are all warmed up, let us jump into today's lesson.

(Students take turns playing the game. Encourage excitement and participation.)

Affirming Better

MUST DO

05 MIN.

Teacher: Class, today's positive thought is: 'I love cycling.' Let us say it together.

Students: I love cycling.

Teacher: Now, Take out your notebooks and draw a KWL chart with three columns:

- K: What I Know
- W: What I Want to Know
- L: What I (Learned)

K	W	L

Teacher: Let us start with the K column. What do you already know about minerals and mineral resources? Raise your hand and share.

(Students share their ideas and the teacher writes them in the K column.)

Teacher: Great responses. Write these down in your K column.

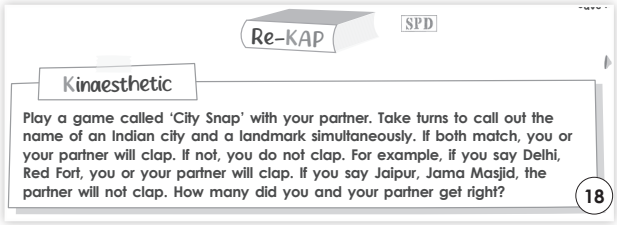
Teacher: Now, for the W column: What would you like to know about minerals and their uses?

(Students share their questions, which the teacher writes in the W column.)

Teacher: Excellent. Let us explore those questions throughout the lesson. We will come back to the L column at the end of the lesson. Are you ready to learn more about Mineral Resources?

Students: Yes.

Kinaesthetic


Re-KAP

SPD

Kinaesthetic

Play a game called 'City Snap' with your partner. Take turns to call out the name of an Indian city and a landmark simultaneously. If both match, you or your partner will clap. If not, you do not clap. For example, if you say Delhi, Red Fort, you or your partner will clap. If you say Jaipur, Jama Masjid, the partner will not clap. How many did you and your partner get right?

18

Teacher: Let us get active and play a game called 'City Snap' with your partner.

MUST DO

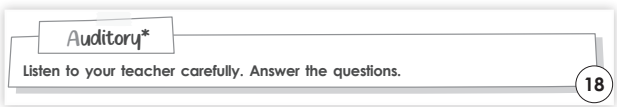
10 MIN.

Teacher: Here is how it works: You and your partner will take turns calling out the name of an Indian city and a landmark at the same time. If both match, you or your partner will clap. If they do not match, you don't clap. For example, if I say 'Delhi' and 'Red Fort,' we both clap. If I say 'Jaipur' and 'Jama Masjid,' we will not clap.

Teacher: Ready? Let us begin. How many matches did you and your partner get right?

(Students play the game in pairs, clapping when the city and landmark match. Teacher monitors and encourages participation.)

Auditory


Auditory*

Listen to your teacher carefully. Answer the questions.

18

Teacher: Now, let us move on to the Auditory Activity. I will read the names of some Indian cities aloud. Your task is to work with your group and write down the names of the states these cities belong to.

MUST DO

10 MIN.

Teacher: Here are the cities:

Kolkata, Mumbai, Hyderabad, Jaipur, Patna, Vizag, Kohima, Chandigarh, Lucknow

Teacher: Work in your groups, listen carefully and write down the name of the state for each city. I will give you 5 minutes to complete the task. Ready? Go.

(Students work in groups, writing down their answers. Teacher walks around to monitor and assist.)

Teacher: Excellent work, everyone. Now let us review the answers together. Which state does Kolkata belong to?

(Students share their answers and the teacher provides feedback.)

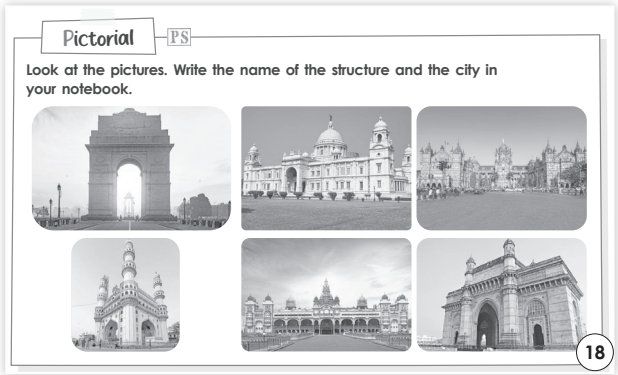
Teacher: Great job. Let us keep moving on with the next activities.

Teacher: Well done, class. You did a great job identifying the states of those cities. Now that we have learned a bit about where cities are located, let us focus on the landmarks and structures that are significant to these regions.

Pictorial

MUST DO

10 MIN.


Pictorial

PS

Look at the pictures. Write the name of the structure and the city in your notebook.

18

Teacher: Now, let us move on to a Pictorial Activity. Look at the pictures I have shown on the board. Your task is to write the name of the structure and the city it belongs to.

(Show images of various landmarks from the cities mentioned in the auditory activity.)

Teacher: After you have written the names of the landmarks and cities in your notebook, turn to your partner and discuss why these landmarks are important.

(Students work individually first, then discuss with a partner.)

Teacher: Great work, everyone. These landmarks are not just historical; they also play a big role in the economy and culture of each region. Let us continue learning about Mineral Resources and how they relate to these cities.

Differentiated Activity

110 km/hr

Pick one landmark from the pictorial activity. Prepare a 2-minute presentation on it.

80 km/hr

During the Auditory Activity, write the state for each city

40 km/hr

In the Pictorial Activity, identify three landmarks from the pictures and write the city they belong to.

Home Task

Write down the state for each city and identify one major mineral resource from that state.

Period 2

SHOULD DO 05 MIN.

Teacher: Good morning, students. How is everyone today?

Students: Good morning, teacher. We are doing great.

(show CMR sign to settle the students)

MUST DO 10 MIN.

Interacting better

You may show the **e-Book** given on digital platform.

Teacher: Fantastic. Let us get started with a fun and energizing warm-up. Today, we are going to talk about materials around us. I will give you some clues and I want you to guess what I am describing. Ready?

(Give simple examples of metals and their uses in everyday life.)

Teacher: I am shiny, hard and used to make coins, tools and cars. What am I?

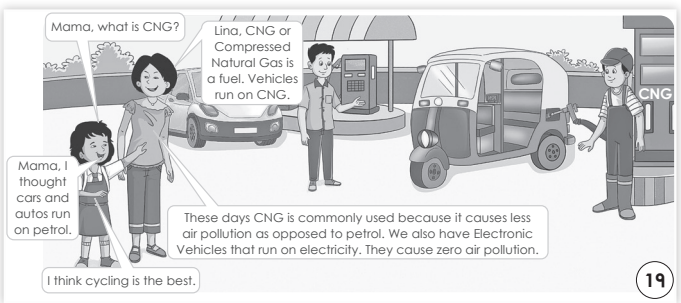
Teacher: Yes. Metal is used to make so many things. Let us try another one.

Teacher: I am used to make jewellery, wires and electronics. What am I?

Students: Gold.

Teacher: Exactly. Metals are a type of material that are shiny, hard and very useful. Today, we will explore how metals and minerals are important for us and how we use them every day. Let us dive in.

(explanation and discussion on picture story on page 19)



MUST DO 15 MIN.

Teacher: Alright, students. Let us turn to Page 19 in your books and look at the picture. What do you see in this picture?

(Students look at the picture of Lina and her mother at the fuel station.)

Teacher: What do you think Lina and her mother are talking about?

(Wait for students to share their observations.)

Teacher: that is right. They are at a fuel station and Lina is asking her mom about CNG. Can anyone tell me what CNG stands for?

(Encourage students to respond based on what they know from the picture.)

Teacher: CNG stands for Compressed Natural gas and it is used in vehicles as a cleaner fuel option compared to petrol. Have you ever heard about CNG or seen cars running on it?

(Encourage students to share any experiences or knowledge about CNG.)

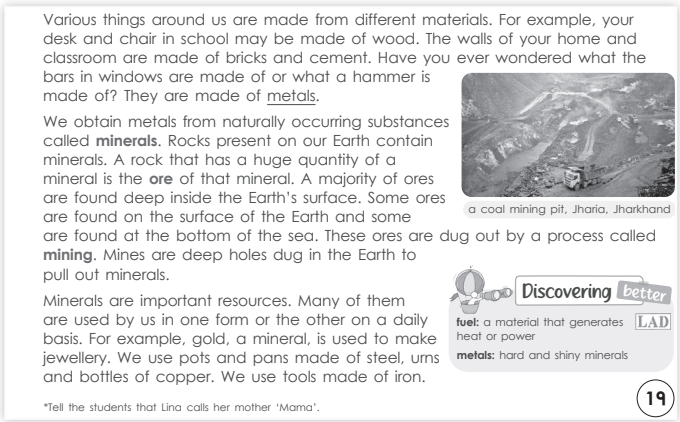
Teacher: Now, let us think about the fuel station and what is inside the auto rickshaw and the car. What materials do you think these vehicles and machines are made of?

(Students discuss and share ideas.)

Teacher: Yes, metals. Metals like iron, steel and aluminium are used to make many things, including vehicles. These metals come from minerals.

Teacher: How do you think we get metals from the Earth? Let us look at the next step. We get metals from minerals through a process called mining, where minerals are dug up from the Earth.

You may show the **Animation** of the story from digital platform.


Various things around us are made from different materials. For example, your desk and chair in school may be made of wood. The walls of your home and classroom are made of bricks and cement. Have you ever wondered what the bars in windows are made of or what a hammer is made of? They are made of metals.

We obtain metals from naturally occurring substances called **minerals**. Rocks present on our Earth contain minerals. A rock that has a huge quantity of a mineral is the **ore** of that mineral. A majority of ores are found deep inside the Earth's surface. Some ores are found on the surface of the Earth and some are found at the bottom of the sea. These ores are dug out by a process called **mining**. Mines are deep holes dug in the Earth to pull out minerals.

a coal mining pit, Jharia, Jharkhand

Minerals are important resources. Many of them are used by us in one form or the other on a daily basis. For example, gold, a mineral, is used to make jewellery. We use pots and pans made of steel, urns and bottles of copper. We use tools made of iron.

Discovering better
LAD
fuel: a material that generates heat or power
metals: hard and shiny minerals

*Tell the students that Lina calls her mother 'Mama'.

19

(Explanation and discussion of the topic about metal, minerals ore and mining on page 19)

MUST DO 10 MIN.

Teacher: Now, let us dive into mining. Mining is the process of digging deep into the Earth to extract minerals. These minerals help us make important items like tools, gold jewellery, steel and much more.

Teacher: Can anyone think of an everyday object made from iron or copper? Raise your hand.

(Students respond with items like tools, pans etc.)

Teacher: Great answers. Let us do a quick activity: I will show you a few items. When I show them, tell me which one you think is made from metal and which one is not. Ready?

(Show images or hold up objects like a key, plastic bottle, spoon, plastic cup.)

Teacher: What about this key? Is it made from metal?

(Students answer: Yes.)

Teacher: Exactly. A key is made of metal. How about this plastic cup?

(Students answer: No.)

Teacher: Right. Metals are hard and shiny minerals. They are used in many everyday things we might not even think about. Let us explore more about the minerals that help us create these objects.

Teacher: Great job today, everyone. Let us quickly wrap up everything we have learned.

Teacher: We talked about metals and minerals and how they are used in everyday items like tools, cars, coins and even jewellery.

Teacher: Can anyone remind me how we get metals from the Earth?

(Students respond: Mining.)

Teacher: Exactly. We mine metals from the Earth. Mining is a process where we dig up minerals to create things we use every day.

Teacher: Now, let us think back to the fuel station and CNG that Lina and her mom talked about. CNG is a cleaner fuel and the cars and auto-rickshaws are made of metals. For next time, we will learn more about minerals and their types.

Differentiated Activity

110 km/hr

Write a paragraph explaining how metals like iron and copper are obtained through mining. Mention at least two everyday items made from these metals and how they impact our daily lives.

80 km/hr

Create a simple mind map with 5 key metals and the objects they are used in (e.g., Iron → Tools, Buildings, Copper → Wires, Coins).

40 km/hr

List 3 metals and name one item made from each (e.g., Gold → Jewellery, Steel → Pans, Copper → Wires).

Home Task

Draw pictures of the metallic things that are found in your homes.

Period 3

Teacher: Good morning, students. How is everyone today?

Students: Good morning, teacher. We are doing great.

SHOULD DO — 03 MIN.

Discovering better

Teacher: Awesome. Let us start with a quick refreshing activity to get our minds focused and ready to learn.

MUST DO — 05 MIN.

Teacher: I am going to ask you about two key words that we have already seen in the last class. Let us see if you can guess them. Ready?

Teacher: First one: I am something that you burn to make cars, buses and even stoves work. What am I?

Teacher: Yes. I am fuel. Fuel is what powers vehicles and makes many things run.

Teacher: Now, for the second one: I am a shiny and strong material that is used to make coins, tools and cars. What am I?

Teacher: Exactly. Metals are used to make so many things in our world.

Teacher: Now, that we know about fuel and metals, let us dive deeper into how they are used.

India mining centres

Teacher: Now, that we have discussed fuel and metals, let us open your books to Page 20 and look at the map of mining centres in India.

MUST DO — 15 MIN.

Teacher: Everyone, look at the map on Page 20. Can you see all the mining centres in India marked with different symbols? What do you notice about the locations?

Map 3.1 Mining centres of India

Teacher: I see many important mining centres. Let us start by discussing what each symbol represents. Can someone tell me what the red circle represents?

(Discuss each symbol and its colour)

Purple Circle: Represents Iron Ore.

Red Circle: Represents Copper.

Pink Triangle: Represents Manganese.

Triangle: Represents Bauxite.

Yellow Square: Represents Gold.

Coal Symbol (Truck icon): Represents Coal.

Petroleum Symbol (Oil barrel icon): Represents Petroleum.

Teacher: Great job, everyone. So, what do you think—how do you think these minerals help the people living near these mining areas?

(Students share thoughts on the impact of mining on local communities.)

Teacher: Exactly. Mining provides jobs and helps local economies, but it can also affect the environment. It's important for us to think about how we balance mining with protecting nature.

You may show the **concept map** given on digital platform.

Teacher: Now, that we have explored the mining centres on the map, let us move on to understanding the types of minerals.

MUST DO
12 MIN.

Minerals and Their Types

(make flow chart on board on the topic types of minerals)

Teacher: Minerals are of two types:

1. Metallic minerals - These minerals give us metals. Examples include iron ore, copper and gold.
2. Non-metallic minerals - These minerals do not provide metals. Examples include bauxite and salt.

Teacher: Alright, everyone. Let us finish with a super fun game to test what we learned today. Get ready to shout out the answers as fast as you can. I want to hear some energy.

COULD DO
05 MIN.

Teacher: What do we burn to make cars and buses run?

Teacher: Yes. Fuel makes things go VROOM.

Teacher: What shiny material is used for making coins and tools?

Teacher: Right. Metals are shiny like treasure.

Teacher: What type of mineral gives us metals?

Teacher: Absolutely. Metallic minerals give us the power to build.

Teacher: Wow. You all did an amazing job. Everyone give yourselves a big round of applause.

Teacher: Great work today and I can't wait to see you all in the next class. Have a wonderful day.

Differentiated Activity

110 km/hr

Write 3 sentences about how metallic minerals are used in everyday life (e.g., iron for tools, gold for jewellery).

80 km/hr

Draw and label 2 metallic and 2 non-metallic minerals (e.g., iron ore, salt) and write 1 use for each.

40 km/hr

Circle metallic minerals from the following list: gold, salt, copper, iron ore, bauxite, clay.

Home Task

Choose one mining centre from the map and research the mineral that is found there. Write 3 facts about that mineral and where it is used.

Period 4

Teacher: Good morning, students. How is everyone today?

SHOULD DO
05 MIN.

Students: Good morning, teacher. We are great.

Teacher: Awesome. Let us begin with a quick meditation to help us relax and focus.

Teacher: Sit comfortably in your chair. Close your eyes.

Teacher: Take a deep breath in... and out...

Teacher: Imagine you are sitting in a peaceful forest, surrounded by trees and fresh air. Let your mind relax.

Teacher: Inhale deeply... and exhale slowly...

Teacher: Now, open your eyes and let us start our exciting lesson.

Metallic minerals

Name of the mineral		States where mined	Usage
Bauxite		Jharkhand, Odisha, Chhattisgarh, Madhya Pradesh, Goa	aluminium, taken out from bauxite, is used to make aeroplanes, utensils and other household items
Copper		Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh	to make tools, electrical wires and utensils
Gold		Karnataka, Andhra Pradesh	to make jewellery
Iron Ore		Jharkhand, Odisha, Chhattisgarh, Karnataka, Goa	to make machines, bridges, railway engines and tools
Manganese		Karnataka, Odisha, Madhya Pradesh, Maharashtra, Goa	to make steel and other alloys*

Table 3.1 distribution of metallic minerals in India

20

Teacher: Today, we are going to learn about metallic minerals. Can anyone tell me what metallic minerals are?

MUST DO
25 MIN.

(Wait for a few responses.)

Teacher: Exactly. Metallic minerals are minerals that give us metals, like iron, copper and gold. These metals are very useful in our everyday life.

Teacher: Now, let us look at Table 3.1 in your books (Page 20), which shows the distribution of metallic minerals in India.

Teacher: Can anyone tell me what the red circle in the map represents?

(Wait for a few responses.)

Teacher: Right. It represents Copper. And what about the purple circle?

Students: Iron ore.

Teacher: Yes, iron ore is one of the most important metallic minerals used to make machines, bridges and tools.

(Discuss and explain the table on metallic minerals and their distribution in India (Table 3.1). Ask interactive questions to engage students. Encourage participation and help them understand the mineral locations and uses. After the discussion, instruct students to create a similar table in their notebooks, listing the mineral names, states where they are mined and their uses. Allow time for students to complete the table and assist as needed.)

Teacher: As we discussed about metallic minerals, let us quickly recall what we have learned. I will divide you into 5 groups. Here are the questions for each group:

COULD DO
10 MIN.

Group 1 (Iron Ore): Where is Iron Ore found in India? What is it used for?

Group 2 (Copper): Where is Copper mined? How is Copper used in everyday life?

Group 3 (Gold): Where is Gold mined? What are its main uses?

Group 4 (Manganese): Why is Manganese important for making steel? Where is it found in India?

Group 5 (Bauxite): Where is bauxite found? What is it used for?

Teacher: After you discuss, I want each group to share their answers.

Teacher: amazing students, see you in the next class.

You may show the **Infographic** to recapitulate the concept.

Differentiated Activity

110 km/hr

Create a word search puzzle with terms related to metallic minerals (e.g., Copper, Iron Ore, Gold, Bauxite, Manganese). Students find the words in the puzzle and match them with the corresponding uses and locations.

80 km/hr

Create a colourful mind map linking the metallic minerals to their uses and locations. Show connections between the minerals, states and industries.

40 km/hr

Write 1-2 sentences for each mineral (Iron ore, Copper, Gold, Manganese, Bauxite) on where it is found and what it's used for.

Home Task

On a map of India, mark the states where different metallic minerals (e.g., copper, gold, iron ore) are found.

Period 5

Teacher: Good morning, class. Before we dive into today's lesson, let us take a moment to refresh ourselves. Everyone, please drink some water. Hydrating helps us stay focused and energized.

SHOULD DO

05 MIN.

(Allow students a minute to drink water.)

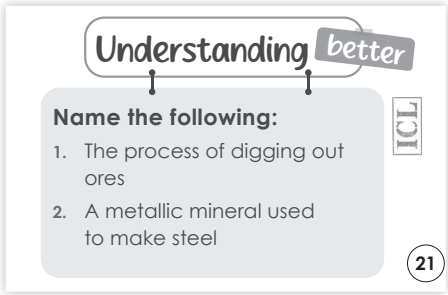
Understanding Better

MUST DO

05 MIN.

Teacher: Now, let us challenge our minds with a quick 'Understanding Better' activity. I will ask you to name the following based on what we have learned today.

1. The process of digging out ores.
2. A metallic mineral used to make steel.



Teacher: I will give you one minute to think about the answers and write them down. Ready?

(Students write their answers).

Teacher: Time is up. Let us go over the answers. Who would like to share the first answer: the process of digging out ores?

(Students share answers).

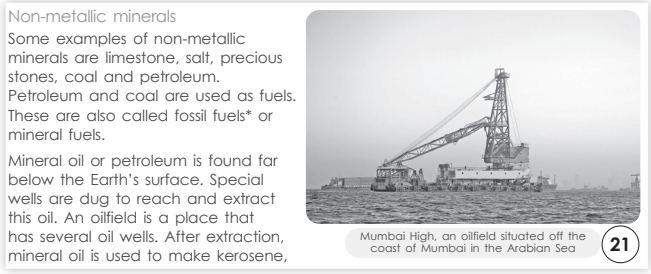
Teacher: Correct. It is 'mining.' And the second one: a metallic mineral used to make steel?

(Students share answers).

Teacher: That is right. It is 'iron ore.' Well done, everyone

Teacher: let us get started with today is given on page 21.

Non-Metallic Minerals



Teacher: We have learned about metals like iron, copper and gold. But did you know there are minerals that do not give us metals? These are called non-metallic minerals. Let us explore some of them today.

MUST DO

25 MIN.

(Show pictures of coal, petroleum, salt and limestone)

Teacher: Here are some non-metallic minerals:

1. Limestone
2. Salt
3. Precious Stones
4. Coal
5. Petroleum

Can anyone guess which of these are used as fuels?

(Students respond)

Teacher: that is right. Coal and Petroleum are fossil fuels, which means they are energy sources we get from the Earth.

(Explain and discuss about Fossil Fuels and Oil Extraction from the subtopic- non-metallic minerals given on page number 21.)

Teacher: Now, let us think about how petroleum and coal help us.

(Ask students to share ideas)

Teacher: They give us energy to run vehicles and machines. But do you know the problem with these fossil fuels? They do not last forever. They are in limited supply, so we need to use them wisely.

Teacher: These days, many buses, cars and scooters use electricity instead. Can you think of any benefits of using electricity over petroleum or diesel?

(Allow students to share)

Teacher: Great answers. Electric vehicles are eco-friendly and cause zero pollution.

Name of the mineral	States where mined	Usage
Coal	Jharkhand, West Bengal, Madhya Pradesh, Chhattisgarh, Tamil Nadu	as a fuel
Limestone	Madhya Pradesh, Jharkhand, Chhattisgarh, Telangana, Odisha	to prepare cement
Petroleum and natural gas	Assam, Gujarat, Maharashtra (off the coast of Mumbai)	as a fuel

Table 3.2 distribution of non-metallic minerals in India

21

Teacher: Now, let us take a look at Table 3.2 in your books, on Page 21. We will focus on the distribution of non-metallic minerals in India.

Teacher: You will see three columns in the table: Name of Mineral, States Where Mined and Usage.

(Discuss and explain the table to the students and ask them to draw in their notebooks.)

COULD DO 05 MIN.

Difference between metallic and non- metallic minerals

Teacher: Alright, class, it is time to wrap up today's lesson in a fun way. Let us break into pairs and see what we have learned about metallic and non-metallic minerals.

Teacher: I will give each pair a challenge. In your pairs, you will need to compare metallic and non-metallic minerals. Can you come up with at least three key differences between them? You write them down on board. Ready, go.

(Allow students a few moments to discuss and write.)

Teacher: Time is up. Now, let us see what your groups came up with. Who can share one difference between metallic and non-metallic minerals?

Teacher: Great. Now, let us switch it up. Pair up with a new partner. This time, I want you to think about how coal and petroleum help us in daily life. What do we use them for? You have two minutes to come up with your answers.

(Allow students time to discuss.)

Teacher: Fantastic, Before we finish, let us do a quick challenge. list one thing that metallic minerals are used for and one thing non-metallic minerals are used for. The fastest pair to finish wins.

Teacher: Well done, everyone. You worked great in pairs today. Remember, metallic minerals are used for making things that last a long time, like machine sand non-metallic minerals are used for fuel and energy.

Teacher: Excellent work today, class. You can give yourselves a big round of applause. See you all in the next class.

Differentiated Activity

110 km/hr

Write a short paragraph comparing metallic and non-metallic minerals. Include at least two examples of each type and explain their uses in everyday life.

80 km/hr

Create a mind map showing the difference between metallic and non-metallic minerals. Include at least 3 examples of each and their uses.

40 km/hr

List 3 examples of metallic minerals and 3 examples of non-metallic minerals. Write one use for each mineral.

Home Task

Research one non-metallic mineral (e.g., coal, petroleum, salt or limestone). Write down where it is mined, how it is used and any important facts about it.

Period 6

Teacher: Good morning, class. Before we dive into today's lesson, let us take a moment to refresh ourselves. Everyone, please drink some water to stay hydrated and energized.

SHOULD DO 05 MIN.

(Allow students a minute to drink water.)

Teacher: Now that we are refreshed, let us quickly go over the homework that was assigned in the last class. Who remembers the homework?

Teacher: Yes, your homework was to research one non-metallic mineral (e.g., coal, petroleum, salt or limestone). Write down where it is mined, how it is used and any important facts about it.

(Allow a few students to share their findings.)

Connecting better

Connecting better

Maths

Imagine a mining company is calculating the total amount of iron ore they have extracted. They have mined 1,312 tons of ore from one site. Additionally, they have extracted 1,596 tons of ore from another site. How much ore have they mined in total? Well, 1,312 + 1,596 = 2,908. So, they have mined a total of 2,908 tons of ore.

HoLL

21

Teacher: Now that we are all warmed up, let us get started with today is topic. Today, we will focus on 'Connecting Better,' 'Caring Better' and 'Grasping Better.' Let us start with 'Connecting Better.' please open your books to Page 21. You will find the problem about a mining company calculating the total amount of iron ore they have extracted. The problem is:

MUST DO 10 MIN.

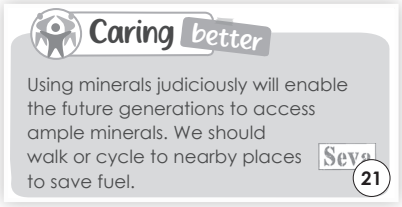
Imagine a mining company is calculating the total amount of iron ore they have extracted. They have mined 1,312 tons of ore from one site. Additionally, they have extracted 1,596 tons of ore from another site. How much ore have they mined in total?

Teacher: Let us make this more fun. I will give you 3 minutes to solve the problem in your notebooks. Work with a partner to help each other if needed. Remember, it is all about teamwork.

Teacher: Time is up. Now, let us discuss the answer together. How much ore have they mined in total? Yes, the total is 2,908 tons of ore.

Teacher: Students do this question in your notebook. Write down the problem and solve it.

Caring better



Teacher: Great work on the 'Connecting Better' exercise, everyone. Now, let us move to 'Caring Better.'

MUST DO
10 MIN.

Teacher: Imagine if we keep using minerals carelessly future generations might not have enough left. To help, we can use minerals wisely. One simple way is by walking or cycling instead of driving short distances, saving both fuel and minerals.

Teacher: Let us make this interactive. In groups of three, think about three ways we can reduce our use of fossil fuels and minerals. Discuss how we can make small changes in our everyday lives. You have 3 minutes—ready? Go.

(Allow students time to discuss in their groups.)

Teacher: Time is up. Each group, share one idea you came up with to save fuel or use minerals wisely.

(Encourage students to share their ideas, such as using electric vehicles, recycling, reducing energy consumption, etc.)

Teacher: Fantastic. Every small step count and together, we can make a big difference in using minerals more wisely.

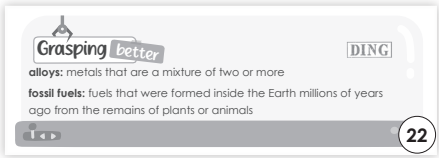
You may show the **Dictionary** to introduce the students to some new words given on digital platform.

MUST DO
10 MIN.

Grasping Better

Teacher: Now, let us dive into 'Grasping Better.' We have two key terms to focus on:

Teacher: First, we have Alloys: Can anyone guess what an alloy is?



(Allow students to share their guesses.)

Teacher: Great guesses. Alloys are metals that are made by mixing two or more metals together. For example, steel is an alloy made from iron carbon.

Teacher: Next, we have Fossil Fuels. Can anyone think of an example of a fossil fuel?

(Wait for student responses. Encourage answers like coal, petroleum or natural gas.)

Teacher: Excellent. Fossil fuels are energy sources formed over millions of years from the remains of plants and animals. Coal and petroleum are both fossil fuels.

Teacher: Now, I want you to pair up with a partner. Discuss for a minute and come up with one example of an alloy and one example of a fossil fuel. After that, we will share with the class.

(Allow time for students to discuss in pairs.)

Teacher: Time's up. Who can share their examples of alloys and fossil fuels?

(Encourage a few pairs to share their answers.)

Teacher: Fantastic. Let us all write these definitions and examples in our notebooks so we can remember them.

Teacher: Before we finish, let us talk about 'Helping Better' from Page 22. This is about reusing materials around the home. You may have empty tin cans lying around at home. Instead of throwing them away, you can reuse them.

COULD DO
05 MIN.

Teacher: For example, you can reuse empty tin cans as pencil stands, cutlery stands or even to store your paintbrushes. It is a great way to help reduce waste and make the most out of what we already have.

Teacher: Now, for your homework: Think of three creative ways you can reuse everyday items at home, like tin cans, to help reduce waste. Write down your ideas and explain how you would use them in your daily life. Remember, every small effort counts when it comes to helping the environment. Well done today, everyone. See you in the next class.

Differentiated Activity

110 km/hr

Hold a quick debate with a partner on the advantages and disadvantages of using fossil fuels vs alloys. Share your findings with the class.

80 km/hr

Work in small groups to create a mind map on alloys and fossil fuels, listing examples and uses. Share your mind map with the class.

40 km/hr

Draw one example of an alloy and one fossil fuel. Label them and write down one use for each.

Home Task

Complete helping better exercise, given on page 22-reuse empty tin cans at your home as pencil stands, cutlery stands or to store your paintbrushes.

Period 7

Teacher: Good morning, class. Before we dive into today's lesson, let us take a moment to refresh ourselves. We will start with a quick eye exercise to help us focus and relax. Follow along with me.

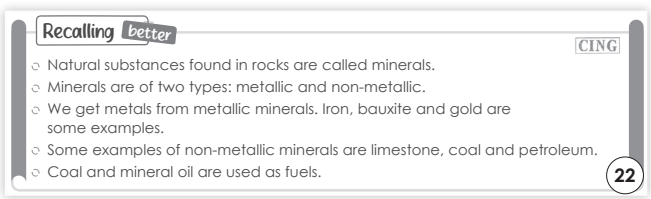
SHOULD DO
05 MIN.

Teacher: Sit comfortably in your chairs. Keep your back straight and your feet flat on the floor. Ready?

1. Look at a distant object: Find something far away in the room and focus on it for 5 seconds.
2. Look at something close: Now, find something close to you (like your book or a pencil) and focus on it for 5 seconds.
3. Up and Down: Look up at the ceiling, hold for 5 seconds, then look down at the floor for 5 seconds.
4. Side to Side: Now, slowly look to the left for 5 seconds, then to the right for 5 seconds.
5. Circle: Finally, slowly roll your eyes in a circle, first clockwise for 5 seconds, then counterclockwise for 5 seconds.

Teacher: Well done, everyone. These exercises help reduce eye strain and get us ready to focus. Now, that we are refreshed, let us dive into today's lesson.

Recalling better


Recalling better

CING

- Natural substances found in rocks are called minerals.
- Minerals are of two types: metallic and non-metallic.
- We get metals from metallic minerals. Iron, bauxite and gold are some examples.
- Some examples of non-metallic minerals are limestone, coal and petroleum.
- Coal and mineral oil are used as fuels.

22

Teacher: Now, let us do a Quick Recap to refresh our memories. I will divide the class into two teams. I will ask a few questions and the team that answers correctly gets a point. Ready? Let us begin.

MUST DO
10 MIN.

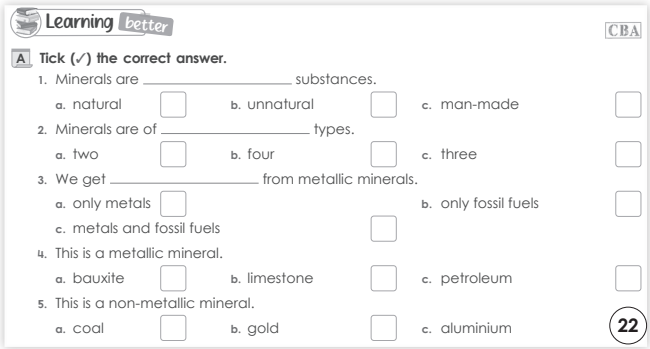
Teacher: Here are the questions:

1. What are minerals?
2. Name two types of minerals.
3. From where do we get minerals?
4. Give some examples of non-metallic minerals.
5. Name two oils that are used as fuels.

(Allow students to answer. Keep score and announce the winner.)

Learning better

Exercise A


Learning better

CBA

A Tick (✓) the correct answer.

1. Minerals are _____ substances.
   a. natural ☐ b. unnatural ☐ c. man-made ☐
2. Minerals are of _____ types.
   a. two ☐ b. four ☐ c. three ☐
3. We get _____ from metallic minerals.
   a. only metals ☐ b. only fossil fuels ☐
   c. metals and fossil fuels ☐
4. This is a metallic mineral.
   a. bauxite ☐ b. limestone ☐ c. petroleum ☐
5. This is a non-metallic mineral.
   a. coal ☐ b. gold ☐ c. aluminium ☐

22

Teacher: Great job on the recap. Now, let us get into Learning better. On Page 22, we will focus on some key concepts. Let us start with exercise A. I will ask a few questions and we will answer them together. You can raise your hand if you are ready to share your answer.

MUST DO
15 MIN.

Teacher: First question: Minerals are _____ substances.

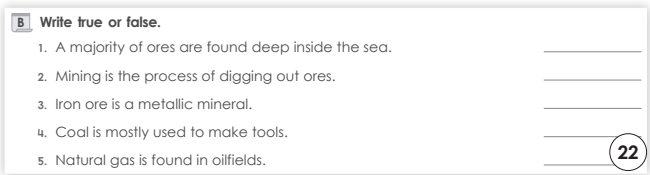
(Allow students to answer. Discuss why each option is correct or incorrect.)

Teacher: Excellent. Let us move on to the next one: Minerals are of _____ types.

(Continue discussing answers and provide explanations. Ask students to tick the correct answer in their notebook.)

Learning better

Exercise B


B Write true or false.

1. A majority of ores are found deep inside the sea. _____
2. Mining is the process of digging out ores. _____
3. Iron ore is a metallic mineral. _____
4. Coal is mostly used to make tools. _____
5. Natural gas is found in oilfields. _____

22

Teacher: Fantastic, class. Now that we have tackled Part A, let us keep going with exercise B. This time, I will read some statements and you will write True or False in your book. Afterward, we will go over the answers together.

MUST DO
10 MIN.

(Allow students time to write down their answers with pencil only first then review answers later.)

Teacher: Ready? Here is the first statement: A majority of ores are found deep inside the sea. True or False?

(Review answers as a class.)

Teacher: Great work, everyone. Now that we have reviewed some important facts about minerals and ores, let us finish up with a fun homework

110 km/hr

Quick Quiz:

Answer these questions:

1. What is an alloy?
2. Name two metallic minerals.

3. Can you give an example of a non-metallic mineral used as fuel?

(Answer the questions in your notebooks.)

80 km/hr

Matching Exercise:

Match these minerals with their uses:

1. Iron ore → _____
2. Coal → _____
3. Copper → _____

(Write down the answers in your notebooks and share with the class.)

40 km/hr

Fill in the Blanks:

1. We get metals from _____ minerals.
2. An example of a non-metallic mineral is _____.
3. Coal is used to make _____.

(Write down your answers in your notebooks.)

Home Task

Revise recalling better exercise.

Period 8

SHOULD DO — 10 MIN.

Teacher: Good morning, class. Before we start today's lesson, let us take a moment to refresh ourselves with a quick standing asana (yoga pose) to get our bodies and minds ready for learning.

Teacher: Please stand up, keep your feet together and your arms by your sides. Ready?

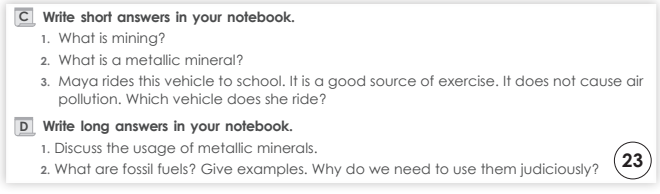
Mountain Pose (Tadasana): Stand tall, raise your arms overhead and stretch upwards, focusing on your breathing for 30 seconds. Feel the energy building up.

Tree Pose (Vrikshasana): Now, raise one leg and place the sole of your foot on the opposite inner thigh, balance and stretch your arms overhead. Hold for 30 seconds.

Teacher: Great work. You are all now ready to focus. Let us dive into today's lesson with some quick questions.

Learning better

Exercise C and D



C **Write short answers in your notebook.**

1. What is mining?
2. What is a metallic mineral?
3. Maya rides this vehicle to school. It is a good source of exercise. It does not cause air pollution. Which vehicle does she ride?

D **Write long answers in your notebook.**

1. Discuss the usage of metallic minerals.
2. What are fossil fuels? Give examples. Why do we need to use them judiciously?

23

(Tell the students to open Page 23 and look at exercises C and D of the section 'Learning better'. Ask them to read the questions carefully and answer. Discuss every question and the correct answer once done and tell them to write down in their notebooks.)

MUST DO — 25 MIN.

Teacher: Now, that we are refreshed, let us move on to the short question answers. That is given on page 23. I will ask you a few questions and I want you to write your answers in your notebooks. Afterward, we will discuss them as a class. Ready?

Teacher: Excellent responses, class. You have all done a great work by thinking critically about these topics. Let us now wrap up with a quick review.

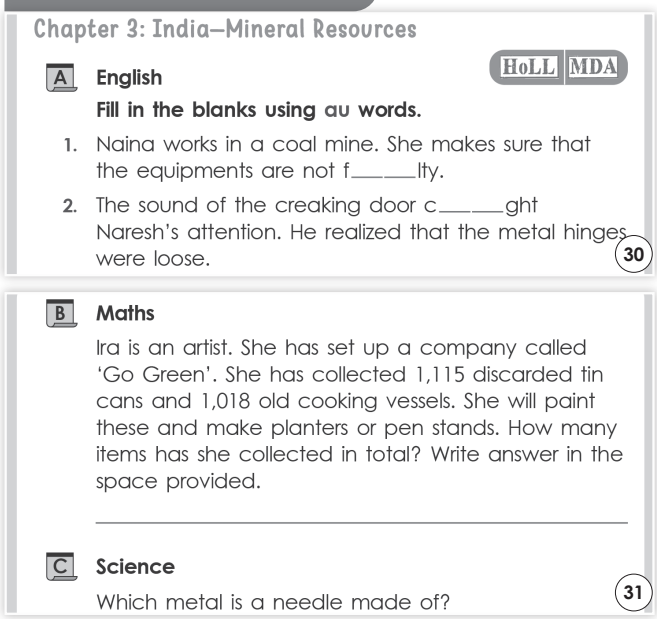
Teacher: Let us quickly recap what we have learned today. We have discussed minerals, mining and fossil fuels and why it is important to use them wisely.

COULD DO — 05 MIN.

Teacher: Now, take a moment to think of one way you can use minerals or fossil fuels more responsibly at home or school. It could be cycling, recycling or saving energy. Share your idea with your partner.

Teacher: Great ideas, everyone. Keep thinking about how we can make small changes to help the planet. See you in the next class.

Book of Holistic Teaching



Chapter 3: India–Mineral Resources

HoLL MDA

A **English**

Fill in the blanks using au words.

1. Naina works in a coal mine. She makes sure that the equipments are not f____lty.
2. The sound of the creaking door c____ght Naresh's attention. He realized that the metal hinges were loose.

30

B **Maths**

Ira is an artist. She has set up a company called 'Go Green'. She has collected 1,115 discarded tin cans and 1,018 old cooking vessels. She will paint these and make planters or pen stands. How many items has she collected in total? Write answer in the space provided.

C **Science**

Which metal is a needle made of?

31

Additional activity- (Refer to the **Book of Holistic Teaching**, page number 30 and 31 under the title 'India-Mineral Resources.' Complete the activities mentioned in this section and ensure that the students complete them. These activities are designed to enhance their holistic understanding and engagement with the topic. Provide any necessary support and materials to help the students successfully finish the activities.)

show **slideshow** to recapitulate the concepts.

Differentiated Activity

110 km/hr

What is the meaning of 'mineral'?

What does 'metallic' mean?

Can you explain the word 'fossil fuel'?

80 km/hr

How do we use coal in our daily lives?

40 km/hr

Name one non-metallic mineral and its use.

Home Task

Browse the Internet and learn about the process of extracting mineral from ores. Write in your notebook.

Period 9

Teacher: Good morning, class. Let us start today with a fun activity to get our energy flowing. Everyone, please come one by one to the board and grab a piece of chalk. We are going to do a quick drawing challenge.

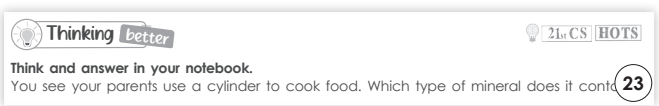
SHOULD DO
10 MIN.

1. Draw your favourite object made of metal on the board. It can be anything from a spoon to a car or even a building.
2. Once you finish, step back and look at everyone's drawings. Let us talk about how metals are used in daily life.

Thinking better

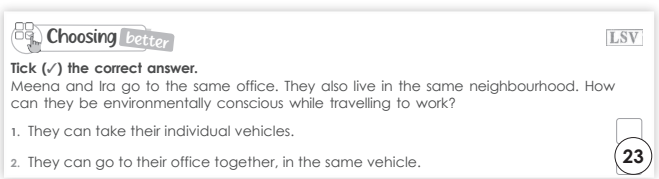
Teacher: Great. Now, that we have warmed up our minds and bodies, let us dive into today's lesson with Thinking better.

MUST DO
05 MIN.



(Open Page 23 and read the question in the section 'Thinking better' and think about it. Write your answer in the notebook. Once done, I will discuss the answer.)

Choosing better



Teacher: Let us now consider a situation where we can make a better choice for the environment. Here's a scenario:

MUST DO
10 MIN.

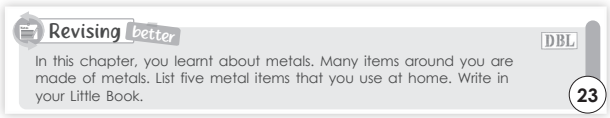
Meena and Ira go to the same office and live in the same neighbourhood. They both drive cars to work, but how can they be more environmentally conscious while traveling? Let us vote. Which option is better for the environment?

1. They can take their individual vehicles.
2. They can go together in the same vehicle.

(Ask students to raise their hands for the option they think is best. Discuss why choosing the same vehicle can reduce pollution and save energy.)

Teacher: Excellent. Carpooling is a great way to help the environment. This ties back to what we learned about using minerals and resources wisely. When we make conscious choices like sharing a ride, we can reduce the amount of energy used and help protect the planet.

Revising Better



Teacher: Now that we have thought about better choices for the environment, let us revise what we have learned about metals. We have talked about their uses in everyday life, so let us explore more about how they are used around us.

MUST DO
10 MIN.

Teacher: Take out your notebooks and list five metal items you use at home. Think about things like utensils, tools, appliances and even jewellery.

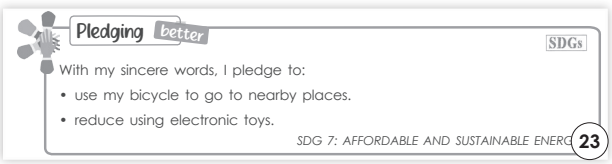
(Allow students time to write their answers.)

Teacher: Now, turn to your partner and share your list. Discuss with them why you think these items are made of metal. What are the advantages of using metal for these objects?

(After a couple of minutes, ask a few students to share their lists and reasons with the class.)

Teacher: Wonderful responses, everyone. Metals are essential in many things we use daily. They help make things strong, durable and efficient.

Pledging Better



Teacher: Now, let us think about how we can make small changes to help the planet. Please repeat after me: 'With my sincere words, I pledge to:

COULD DO
05 MIN.

- Use my bicycle to go to nearby places.
- Reduce using electronic toys.'

Teacher: Well, done. These little changes can add up and make a big difference. By using less energy and reducing waste, we help protect the environment for the future.

Teacher: Now let us fill in the last KWL chart. Think about the topics, we have learned and write them neatly in the 'L' column of the chart.

(Wait for students to fill in the chart.)

Teacher: Let us all give a huge round of applause to everyone for their hard work and creativity. Great job, everyone. See you in the next class. Have a wonderful day ahead.

You may show the **Quiz** to test the concepts taught.

Differentiated Activity

110 km/hr

Describe the environmental benefits of reducing the use of fossil fuels.

80 km/hr

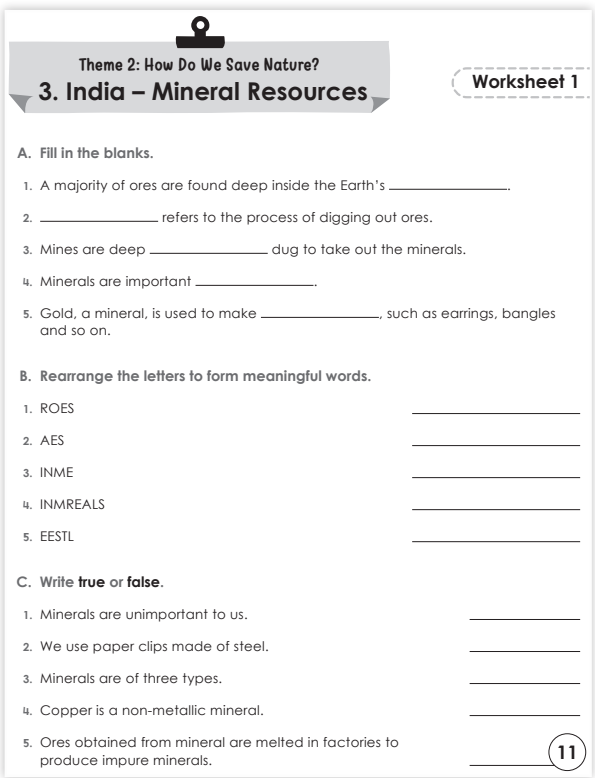
Discuss in pairs how you can use fewer fossil fuels in your daily life (for example, by using public transport or cycling instead of driving). Present your ideas to the class.

40 km/hr

Draw one example of a metallic mineral (e.g., iron) and one non-metallic mineral (e.g., salt). Label them and show what they are used for.

Home Task

Do Worksheet 1 on Page 11 in your workbook. It will help you practise what we have learned about minerals and metal resources. Make sure you complete the worksheet and be ready to discuss it in the next class and bring workbook also.



Theme 2: How Do We Save Nature?

3. India – Mineral Resources

Worksheet 1

A. Fill in the blanks.

1. A majority of ores are found deep inside the Earth's _____.
2. _____ refers to the process of digging out ores.
3. Mines are deep _____ dug to take out the minerals.
4. Minerals are important _____.
5. Gold, a mineral, is used to make _____, such as earrings, bangles and so on.

B. Rearrange the letters to form meaningful words.

1. ROES _____
2. AES _____
3. INME _____
4. INMREALS _____
5. EESTL _____

C. Write true or false.

1. Minerals are unimportant to us. _____
2. We use paper clips made of steel. _____
3. Minerals are of three types. _____
4. Copper is a non-metallic mineral. _____
5. Ores obtained from mineral are melted in factories to produce impure minerals. _____

11

Period 10

Teacher: Good morning, class. Before we dive into today's lesson, let us start with a quick refreshing activity to get our bodies moving and our minds alert.

SHOULD DO

10 MIN.

Let us do a simple stretching exercise:

1. Stand tall and reach both arms up towards the sky. Stretch for 10 seconds.
2. Now, twist your upper body gently to the left and then to the right. Hold each for 5 seconds.
3. Relax and take a deep breath in... and out...

Teacher: Well done. Now that we're all stretched out, let us quickly go over your homework.

Teacher: I hope everyone completed Worksheet 1 on Page 11 for homework. Let us take a few minutes to go over it.

MUST DO

25 MIN.

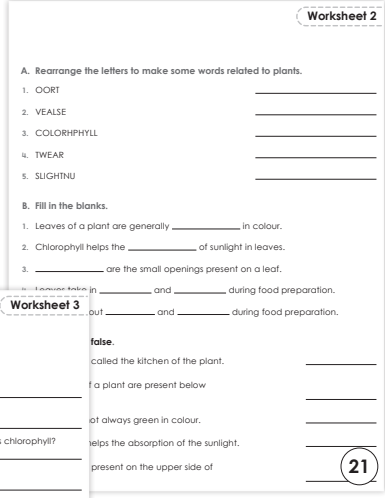
Teacher: What did you find interesting in Worksheet 1? Can anyone share one of the questions and their answers with the class?

(Allow students to share their answers and discuss key points.)

Teacher: Great job, everyone. Now, let us move on to today's activity. Please take out your workbooks and open them to Worksheet 2 and Worksheet 3 on page 12 and 13.

(Discuss the worksheet with students. Guide them as required.)

Teacher: Now that you have completed Worksheet 2 and Worksheet 3, let us take a few minutes to review what we have learned.



Worksheet 2

A. Rearrange the letters to make some words related to plants.

1. OORT _____
2. VEALSE _____
3. COLORHPHYLL _____
4. TWEAR _____
5. SLIGHTNU _____

B. Fill in the blanks.

1. Leaves of a plant are generally _____ in colour.
2. Chlorophyll helps the _____ of sunlight in leaves.
3. _____ are the small openings present on a leaf.
4. Leaves take in _____ and _____ during food preparation.
5. ...out _____ and _____ during food preparation.

...false.

...called the kitchen of the plant. _____

...f a plant are present below _____

...ot always green in colour. _____

...helps the absorption of the sunlight. _____

...present on the upper side of _____

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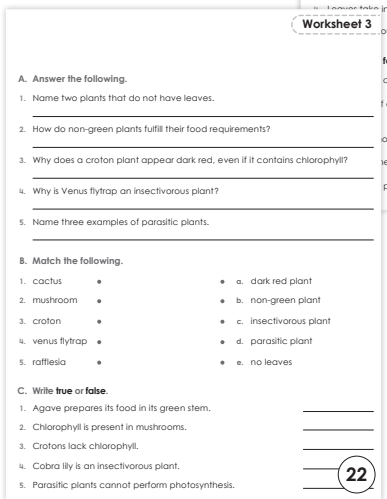

Worksheet 3

A. Answer the following.

1. Name two plants that do not have leaves.
2. How do non-green plants fulfill their food requirements?
3. Why does a croton plant appear dark red, even if it contains chlorophyll?
4. Why is Venus flytrap an insectivorous plant?
5. Name three examples of parasitic plants.

B. Match the following.

1. cactus	a. dark red plant
2. mushroom	b. non-green plant
3. croton	c. insectivorous plant
4. venus flytrap	d. parasitic plant
5. rafflesia	e. no leaves

C. Write true or false.

1. Agave prepares its food in its green stem. _____
2. Chlorophyll is present in mushrooms. _____
3. Crotons lack chlorophyll. _____
4. Cobra lily is an insectivorous plant. _____
5. Parasitic plants cannot perform photosynthesis. _____

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Teacher: Turn to your partner and share one interesting thing you learned about minerals and how they are used in daily life.

(Allow students a few minutes to discuss with their partner.)

Teacher: Great work, everyone. Keep thinking about the importance of minerals and sustainable use in your daily lives.

Show the **Animated Activities** for quick.

Teacher: For your homework, please complete Worksheet 4 on Page 14 in your workbook. We will review it together in the next class, so make sure to bring it in.

COULD DO
05 MIN.

Differentiated Activity

110 km/hr

In small groups, discuss and list five metal items that you use daily. Explain why metals are used for these items. Share with the class.

80 km/hr

Draw a chart with two columns: Metallic Minerals and Non-Metallic Minerals. Write examples of each and their common uses (e.g., Copper → Wires, Coal → Fuel).

40 km/hr

Write a short paragraph explaining how using minerals wisely can help the environment. Include at least two examples of how we can reduce our use of minerals.

Home Task

Complete Worksheet 4 on Page 12 in your workbook. We will review it in the next class, so make sure to bring it with you.

Think about one new way to reuse an old metal item at home, like a tin can. Write down your idea and be ready to share it with the class tomorrow.

Period 11

Teacher: Good morning, class. I hope you have all brought your materials for the Tin Can Planter activity. Let us get ready to create something amazing.

MUST DO
15 MIN.

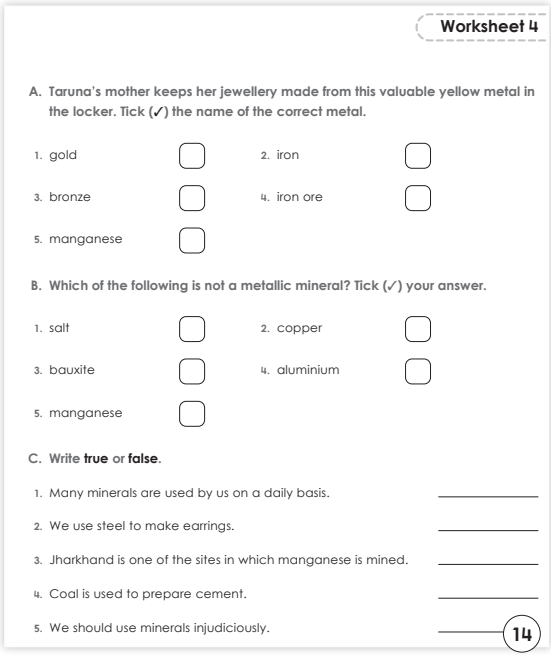
Teacher: You will be working in pairs today. Are you ready to be creative and make something amazing?

Students: Yes.

Teacher: Great. Let us get started with the steps:

1. Step 1: Take your tin can and start wrapping it with the colourful yarn. Have fun mixing and matching colours—let your creativity flow. Think of patterns or make it look like a rainbow.
2. Step 2: Once you have wrapped the yarn, it is time for the fun part—paste the googly eyes on your can. Make the eyes big or small. You can even give your planter a face.
3. Step 3: After your planter is ready, you can gift it to someone to say thank you and ask them to plant a sapling in it. It is a great way to help the environment while showing kindness.

Teacher: Are you excited to show your finished planters to the class? I am sure they will look amazing. Now, let us begin. Remember, if you need any help or extra supplies, just raise your hand—I will be here to help.



Worksheet 4

A. Taruna's mother keeps her jewellery made from this valuable yellow metal in the locker. Tick (✓) the name of the correct metal.

1. gold ☐ 2. iron ☐
3. bronze ☐ 4. iron ore ☐
5. manganese ☐

B. Which of the following is not a metallic mineral? Tick (✓) your answer.

1. salt ☐ 2. copper ☐
3. bauxite ☐ 4. aluminium ☐
5. manganese ☐

C. Write **true** or **false**.

1. Many minerals are used by us on a daily basis. _____
2. We use steel to make earrings. _____
3. Jharkhand is one of the sites in which manganese is mined. _____
4. Coal is used to prepare cement. _____
5. We should use minerals injudiciously. _____

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Teacher: That was a fantastic discussion, everyone. Now that we have talked about appreciation, let us move on to Worksheet 4 in your workbooks. Please take out your workbooks and open to Page 14.

MUST DO
15 MIN.

Teacher: Let us go through Worksheet 4 together. I will read each question out loud and I want you to follow along and think about the answers.

(Discuss the worksheet with students. Guide them as required.)

Teacher: Great job today, class. You have worked really hard through this chapter on Mineral Resources. Let us quickly review what we have learned.

Teacher: So, what are minerals? (Wait for responses.)

Teacher: Yes, minerals are natural substances we use to make things like tools, jewellery appliances. Can anyone name one metallic mineral and one non-metallic mineral?

(Encourage a few students to share their examples.)

Teacher: Awesome. And how do we get these minerals? (Wait for answers.)

Teacher: Exactly. We mine them. But why is it important to use these minerals wisely?

(Allow a few responses.)

Teacher: Perfect. Now, think of one small change you can make to help use minerals more responsibly—it could be something like recycling or saving energy. Share your idea with your partner.

(Allow students to share ideas with a partner.)

Teacher: Well done, everyone. You have completed the chapter on Mineral Resources. Keep using the knowledge you have learned to make smart and sustainable choices in your daily lives.

Gratitude sheet

Teacher: Now that we have completed today's chapter, we are going to do something special to show gratitude! You each have your own Gratitude Chart with 12 different thank-you cards.

Teacher: Here's what we will do:

1. Cut out one card from your Gratitude Chart.
2. Write a short note on the card. The note can be a thank you message for someone who has helped you recently or someone you are grateful to. This could be a classmate, a teacher, a family member or anyone who made your day better.

Teacher: Think about a time someone did something nice for you. Maybe they helped you with your homework or made you feel happy. Write your message and do not forget to include the "To" and "From" section on the card to make it personal.

Teacher: Once you are done writing your note, give the card to the person you are grateful for! It will make their day special and remind them how much they are appreciated.

Teacher: Remember, expressing gratitude can make both you and the person receiving your thanks feel wonderful

Differentiated Activity

110 km/hr

Write a short report (4-5 sentences) on sustainable mining practises and how they help protect natural resources. Discuss how reducing mining impacts the environment.

80 km/hr

Discuss with your partner how we can reduce the impact of mining on the environment. Share one simple idea that can help.

40 km/hr

Read the statements and decide if they are true or false:

a) Copper is used in electronics. (True / False)

b) Coal is a metallic mineral. (True / False)

c) Gold is used to make tools. (True / False)

Home Task

Project Idea

Chapter 3: India—Mineral Resources

ICT PRO 21st CS

Make a poster titled 'Metals and Non-Metals We Use'. Give pictures and write the names of the objects made of metals or non-metals. You can use the Internet* to find out about more such objects. For example, hammer and nails are made of iron. Cutlery is made of aluminium or steel.

Teacher's Note: *Guide the students to refer only to .edu or .org websites to gather information.

PRO – Project Work

ICT – Information and Computer Technology

30

1. Please refer to the book of Project Ideas, page number 23 under the title 'Mineral Resources.' This project should be assigned to the students to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need. Encourage them to explore and learn about minerals through this engaging project.)
2. Revise the lesson at home.

Learning Outcomes

The students will:

Physical Development	• develop the ability to create eco-friendly planters and pen stands using old tin cans, promoting fine motor skills and hands-on creativity.
Socio-Emotional and Ethical Development	• understand and practise the importance of saving fuel and using resources responsibly in daily life.
Cognitive Development	• identify and differentiate between metals and non-metals, understand their uses and explain how they are found and extracted in India.
Language and Literacy Development	• develop critical thinking and reading comprehension skills by inferring from the text and answering questions based on the lesson.
Aesthetic and Cultural Development	• explore the creative use of recycled materials like tin cans to make useful items, developing an awareness of environmental conservation and artistic creation.
Positive Learning Habits	• foster a sense of personal responsibility and sustainability by actively engaging in tasks like reducing waste and helping community welfare.

Starry Knights

How do you you rate your teaching this lesson? Could you use any new activity in addition to thoese mentioned here? Please share.

Reward yourself with a STAR.