Lesson-13: Bridges: Then and Now

12 Periods (40 minutes each)

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

Animation, Animated activities, Concept Map, Dictionary, eBook, Infographic, Quiz, Test Generator

Confirming better: 'Bridges connect us'

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand the importance of bridges in connecting different places and supporting the growth of communities.
- to identify different types of bridges, their construction materials and their uses.
- to appreciate how technological advancements have improved bridge construction over time.
- to recognise the importance of environmental conservation while constructing modern structures.
- to develop observation skills by analysing maps and identifying world-famous bridges.
- strengthen socio-emotional values like teamwork, responsibility and gratitude.

Methodology

Period 1

SHOULD DO – 10 MIN.

Teacher: Good morning, students. How are you all today?

Teacher: Today we begin a new chapter. Can anyone guess what the word 'bridge' means?

(Let the students respond.)

Confirming better

Teacher: Great. Now repeat after me – 'Bridges connect us.'

Teacher: We will begin a new chapter 'Bridges: Then and Now'. We are going to use a KWL chart to help us organise our thoughts and learning. Please take out your notebooks and draw the KWL format.

K	W	L

Teacher: The KWL chart has three columns. The first column is labelled 'K,' in which you will write what you already know about the topic. In the second column 'W,' you will write what you want to know and the third column is labelled 'L' where you will write what you have learnt, which you will fill at the end of the chapter.

Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: You all did an amazing job in this activity. Let us move to Re-KAP activities. We will use Kinaesthetic, Auditory and Pictorial activities today to make our learning exciting. Let us start with the Kinaesthetic activity.

Kinaesthetic

Kinaesthetic

How many bridges do you have in your city? Discuss with your partner. Make a bridge with your hands. 80

MUST DO – 10 MIN.

Teacher: Now let us do something with our hands. Please sit with your partner.

Teacher: Talk to your partner – how many bridges are there in your city? Have you ever crossed any bridge?

(Let the students discuss in pairs.)

Teacher: Now, using your hands, make a bridge shape together. Can two of you show us your hand bridge?

(Appreciate the volunteers and ensure participation.)

Teacher: That was fun. Now let us learn more with our ears.

Auditory

Auditory*

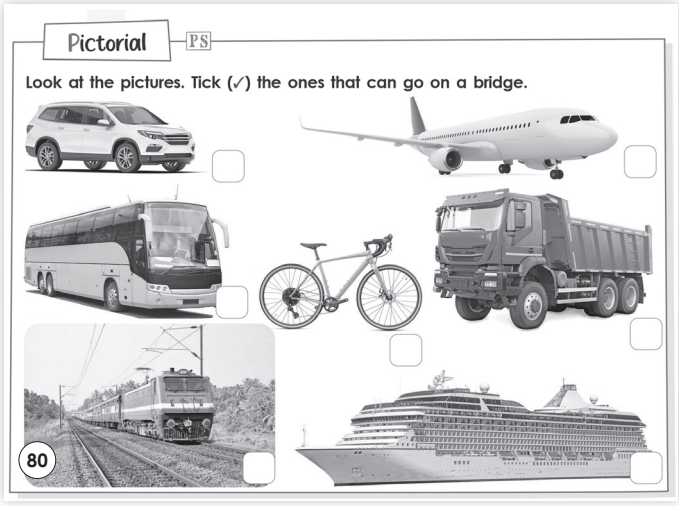
Listen to your teacher carefully. Answer the questions. 80

MUST DO – 10 MIN.

Teacher: Now we will play a listening and writing game. I will read aloud the

names of some famous places. Listen carefully and write down the name of the city where each place is located.
Teacher: Ready? Let us begin.
Teacher: Rabindra Setu
Golghar
India Gate
Aerospace Museum
Rock Garden
Jantar Mantar
Teacher: Write down your answer in your notebook.
(Pause and let the students write.)
Teacher: Brilliant answers, everyone. Give yourselves a clap. Now let us move on to a fun picture-based activity.

Pictorial



Teacher: Open your Main Coursebook to the pictorial section on page 80.
MUST DO 10 MIN.
Teacher: Look at the pictures. You need to tick (✓) the ones that can go on a bridge.
Teacher: Let us take each image one by one. Can this car go on a bridge?
Students: Yes.
Teacher: Good. What about the ship?
Students: No.
(Continue this way for all pictures. Allow discussion and ensure that they observe carefully.)
Teacher: Excellent observations. Now let us do something different.
You may show the **eBook** given on the digital platform.

Differentiated Activities

110 km/hr
Name one bridge you have seen or heard of. What is it used for?
80 km/hr
Write the name of any vehicle that can move on a bridge.
40 km/hr
Draw or name one thing you saw in the pictorial activity.

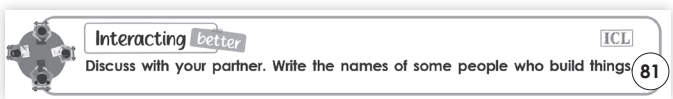
Home Task

Write one sentence about a bridge you have seen. If you have not seen one, write what you think a bridge is used for.

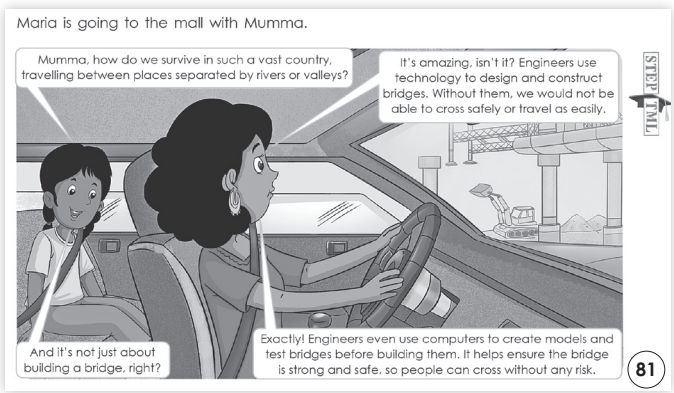
Period 2

SHOULD DO 5 MIN.
Teacher: Good morning, students. Welcome back.
Teacher: Today, we will dive deeper into our new chapter 'Bridges: Then and Now.'
Teacher: Tell me, why do you think we need bridges? Can you think of any place where you saw a bridge?
(Let the students respond.)
Teacher: Wonderful answers. Bridges are very important for connecting places. Let us now move on to our next activity.

Interacting better



Teacher: Everyone, please open your Main Coursebook to the 'Interacting better' section.
MUST DO 10 MIN.
Teacher: Discuss with your partner – who are some people who build things like bridges?
(Let the students discuss in pairs.)
Teacher: Now, who would like to share your answer?
(Randomly call a few students.)
Student A: Engineers.
Teacher: Great. Any other?
Student B: Construction workers.
Teacher: Excellent thinking. Architects, designers and even planners help in building things.
Teacher: Good teamwork, everyone. Let us move ahead now.

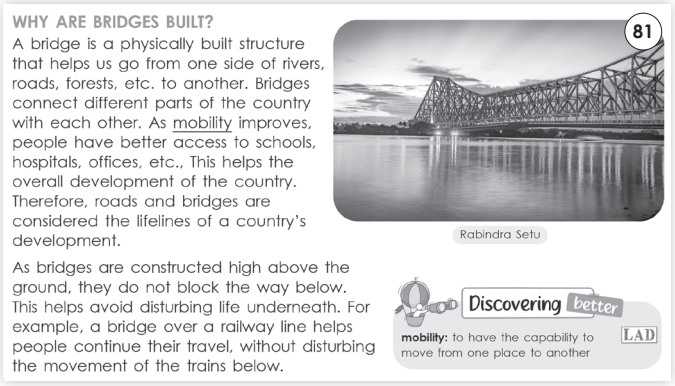


Teacher: Now, please look at the picture where Maria is going to the mall with her Mumma. Let us observe it carefully.

MUST DO
10 MIN.

Teacher: What is Maria asking her mother? (Let the students respond.)
Teacher: Why does Mumma say that engineers are important?
(Let the students respond with hints.)
Teacher: Very good. Engineers use technology to design and build bridges, making travel safe and easy.
Teacher: Can you find one object in the picture that shows a bridge? (Hint: Look outside the car window.)
Teacher: Fantastic observation. Let us move to the next important part of our chapter.
You may show the **Animation** given on the digital platform.

Why Are Bridges Built?


WHY ARE BRIDGES BUILT?
A bridge is a physically built structure that helps us go from one side of rivers, roads, forests, etc. to another. Bridges connect different parts of the country with each other. As mobility improves, people have better access to schools, hospitals, offices, etc., This helps the overall development of the country. Therefore, roads and bridges are considered the lifelines of a country's development.
81
Rabindra Setu
As bridges are constructed high above the ground, they do not block the way below. This helps avoid disturbing life underneath. For example, a bridge over a railway line helps people continue their travel, without disturbing the movement of the trains below.
Discovering better
mobility: to have the capability to move from one place to another
LAD

Teacher: Everyone, please open your Main Coursebook to the page 81 showing 'Why Are Bridges Built?'

MUST DO
15 MIN.

Teacher: Let us start by observing the beautiful picture of Rabindra Setu. Who can tell me what they notice in the picture?
(Let the students observe and respond.)
Teacher: Good. Now, I will read aloud the first paragraph. Please listen carefully.
Teacher: Can anyone tell me, what bridge is?
Teacher: Very well said. A structure that helps us go from one side to another. Now, why do you think bridges are important for a country?
Teacher: Excellent. They help in the overall development of the country.
Teacher: Now, can anyone explain why bridges are important for people?
Student: They help us cross rivers, forests and roads.
Teacher: Absolutely correct.
Teacher: What happens when bridges are built above the ground? (Give the students some hints.)
Student: It does not disturb the path below.
Teacher: Exactly. For example, a bridge over a railway track helps trains and cars move without disturbing each other.

Differentiated Activities

110 km/hr
Name one reason why bridges are important for a country.
80 km/hr
Write the name of one thing that moves under a bridge.
40 km/hr
Circle the word 'mobility' in your textbook and read its meaning.

Home Task

Draw a bridge you have seen or imagine one. Colour it and write one sentence about its use.

Period 3

Teacher: Good morning, students. Let us begin with a quick revision game.

SHOULD DO
5 MIN.

Teacher: Who can name one reason why bridges are important?
(Let 2–3a few students respond.)
Teacher: Good. Now tell me, which bridge is shown on the last page we read?
Student: Rabindra Setu.
Teacher: Well done. Let us now explore new ideas.

Discovering better

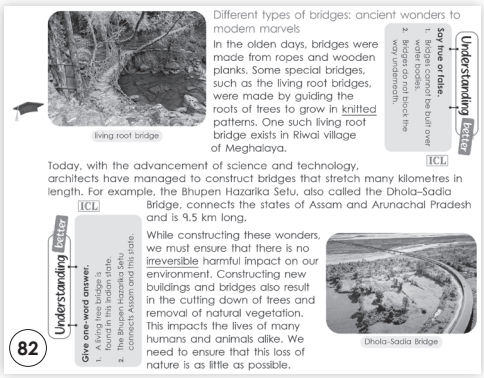

Discovering better
mobility: to have the capability to move from one place to another
LAD
81

Teacher: Please open your Main Coursebook to the 'Discovering better' box on the same page as 'Why Are Bridges Built?'

MUST DO
10 MIN.

Teacher: Look at the word 'mobility.' Who can read the meaning for us?
(Randomly choose a student to read aloud.)
Teacher: What does mobility help us do?
Student: Move from one place to another.
Teacher: Excellent. Now tell me one place you travel to every day.
Student: School.
Teacher: Right. So bridges help us reach such places easily. Let us now look at the types of bridges from past to present.
Different types of bridges: ancient wonders to modern marvels

Different types of bridges: ancient wonders to modern marvels


Different types of bridges: ancient wonders to modern marvels

In the olden days, bridges were made from ropes and wooden planks. Some special bridges, such as the living root bridges, were made by guiding the roots of trees to grow in knitted patterns. One such living root bridge exists in Riwai village of Meghalaya.

living root bridge

Understanding better

Say true or false.
1. Bridges cannot be built over water bodies.
2. Bridges do not block the way underneath.

ICL

Today, with the advancement of science and technology, architects have managed to construct bridges that stretch many kilometres in length. For example, the Bhupen Hazarika Setu, also called the Dhola–Sadia Bridge, connects the states of Assam and Arunachal Pradesh and is 9.5 km long.

ICL

Understanding better

Give one-word answer.
1. A living tree bridge is found in this Indian state.
2. The Bhupen Hazarika Setu connects Assam and this state.

While constructing these wonders, we must ensure that there is no irreversible harmful impact on our environment. Constructing new buildings and bridges also result in the cutting down of trees and removal of natural vegetation. This impacts the lives of many humans and animals alike. We need to ensure that this loss of nature is as little as possible.

Dhola-Sadia Bridge

82

Teacher: Everyone, please open your Main Coursebook to the section 'Different types of bridges: ancient wonders to modern marvels' given on page 82.

MUST DO
20 MIN.

Teacher: Look at the first image – the living root bridge. What do you see?

(Let the students observe and describe.)

Teacher: These bridges were made using roots. Where are such bridges found?

Student: In Meghalaya.

Teacher: Wonderful. These are called ancient bridges. Now, look at the modern bridge shown below – the Dhola-Sadia Bridge.

Teacher: What is it made of?

Student: Cement and steel.

Teacher: Right. Can someone tell me the name of the bridge and where it is located?

Student: Bhupen Hazarika Setu. It connects Assam and Arunachal Pradesh.

Teacher: Great answer. Let us read the next paragraph about environmental care. (Read the paragraph aloud.)

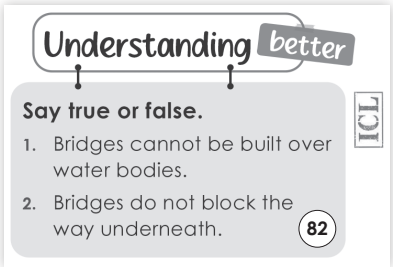
Teacher: What should we keep in mind while building bridges?

Student: We should not harm nature.

Teacher: Correct. Cutting trees and removing plants can affect animals too. Let us be kind to our environment while creating new things.

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

Understanding better


Understanding better

Say true or false.
1. Bridges cannot be built over water bodies.
2. Bridges do not block the way underneath.

82

ICL

Teacher: Now let us move to the 'Understanding better' box on the same page.

MUST DO
5 MIN.

Teacher: I will read the first statement. You say true or false.

Teacher: 'Bridges cannot be built over water bodies.'

Students: False.

Teacher: Correct. Now the second one – 'Bridges do not block the way underneath.'

Students: True.

Teacher: Excellent. This is one of the main benefits of bridges. The movement below is not disturbed.

Teacher: Well done, everyone. Your understanding is getting stronger with each session.

Differentiated Activities

110 km/hr

Name one ancient and one modern bridge mentioned in the lesson.

80 km/hr

Write the state where the Dhola-Sadia Bridge is located.

40 km/hr

Circle the word 'irreversible' in your textbook and read it aloud.

Home Task

Write two differences between ancient and modern bridges in your notebook.

Period 4

Teacher: Good morning, students. Let us begin today with a quick question.

SHOULD DO
5 MIN.

Teacher: Who remembers the name of the modern bridge that connects Assam and Arunachal Pradesh?

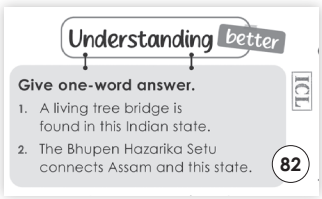
Student: Bhupen Hazarika Setu.

Teacher: Excellent. Now who remembers what 'mobility' means?

Student: The ability to move from one place to another.

Teacher: Wonderful. Let us now move ahead to revise and learn something new.

Understanding better


Understanding better

Give one-word answer.
1. A living tree bridge is found in this Indian state.
2. The Bhupen Hazarika Setu connects Assam and this state.

82

ICL

Teacher: Open your Main Coursebook and look at the pink box under 'Understanding better'.

MUST DO
10 MIN.

Teacher: I will ask you two one-word questions. You will answer one word only.
Teacher: Question 1 – A living tree bridge is found in which Indian state?
Students: Meghalaya.
Teacher: Very good. Question 2 – The Bhupen Hazarika Setu connects Assam and which other state?
Students: Arunachal Pradesh.
Teacher: Excellent. You are all doing well. Let us now learn what bridges are made of.

Materials Used in Construction

Materials used in construction (82)

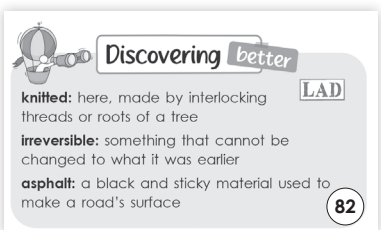
Modern-day bridges need to manage a lot of weight. Therefore, they are constructed with materials that help them stand strong. The materials are steel, cement, stone, brick and asphalt. Other materials, such as iron, wood, rubber, aluminium, etc., are also used.

Teacher: Please open your Main Coursebook to the section titled 'Materials used in construction.'

MUST DO
15 MIN.

Teacher: I will now call a few of you to read one line each. After reading, you will also explain what it means in your own words. Ready?
Teacher: [Student A], please read the first line.
Teacher: Can you explain what that means?
(after reading and explaining)
Teacher: Now tell me, why do bridges need strong materials?
Student: To manage a lot of weight.
Teacher: Correct. Can you name any two materials used?
Student: Steel and cement.
Teacher: Good. Any others?
Student: Asphalt, stone, bricks.
Teacher: Right. All these help make bridges strong. Let us look at the meanings of some of these words now.

Discovering better



Teacher: Now let us open the 'Discovering better' box on the same page.

MUST DO
10 MIN.

Teacher: We will play a word guessing game. I will give you clues and you will try to guess the word from the box. Then, one of you will read its meaning and explain it. Ready?
Teacher: First clue – This word describes how the roots of trees grow to form a bridge. It starts with the letter 'k'.
Students: Knitted.
Teacher: Very good. [Student A], please read the meaning of 'knitted' from the box.
Student A: 'Here, made by interlocking threads or roots of a tree.'
Teacher: Can you explain it in your own words?
Student A: It means the roots twist and join together like thread.
Teacher: Excellent. Now the second clue.
Teacher: This word means something that cannot be changed back. It starts with the letter 'i'.
Students: Irreversible.
Teacher: Good guess. [Student B], can you read the meaning?
Student B: 'Something that cannot be changed to what it was earlier.'
Teacher: Can you give an example?
Student B: Like cutting down a tree. It cannot be brought back.
Teacher: Very thoughtful answer. Let us try one more.
Teacher: Clue three – This word describes a sticky material used to make roads. It starts with 'a'.
Students: Asphalt.
Teacher: Well done. [Student C], please read its meaning.
Student C: 'A black and sticky material used to make a road's surface.'
Teacher: What do we see in the streets that is made of asphalt?
Student C: The road outside our school.
Teacher: Wonderful.

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

Differentiated Activities

110 km/hr

Name two materials used to build bridges and explain why they are used.

80 km/hr

Write the name of one bridge-building material.

40 km/hr

Circle the word 'asphalt' in your textbook and read its meaning aloud.

Home Task

Paste a picture of a bridge. Label any two materials used to build it.

Period 5

SHOULD DO
5 MIN.

Teacher: Good morning, students. Let us start with a small game called Quick Connections.

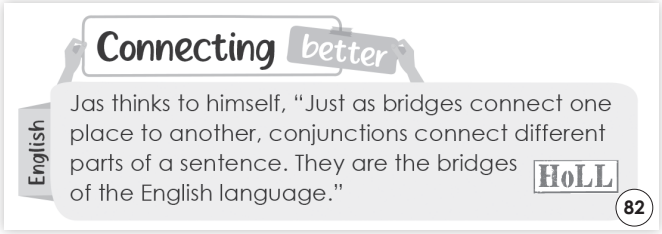
Teacher: I will say two words. If you think they can be connected somehow, clap once. If not, stay silent.

Teacher: Ready?

- Tree and bridge. (Clap)
- Car and orange. (Silent)
- River and bridge. (Clap)
- Book and shoes. (Silent)
- Road and bridge. (Clap)

Teacher: Well done. Today we are going to learn how different things – even in language and life – can be connected just like bridges connect places.

Connecting better



MUST DO
10 MIN.

Teacher: Open your Main Coursebook to the 'Connecting better' box given on page 82.

Teacher: Please read aloud the thought written by Jas.

Student: 'Just as bridges connect one place to another, conjunctions connect different parts of a sentence. They are the bridges of the English language.'

Teacher: That is a very clever connection. What do you think Jas means by this?

Student: He means that just like bridges link places, conjunctions link words or ideas in a sentence.

Teacher: Exactly. Can anyone give me an example of a sentence with a conjunction?

Student: I like apples and mangoes.

Teacher: Great. What is the conjunction here?

Student: 'And'.

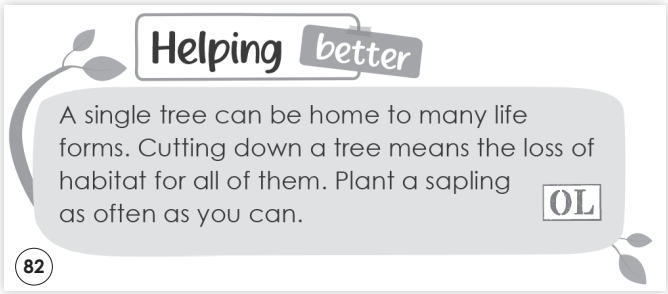
Teacher: Right. Now imagine if we did not have conjunctions like 'and', 'but' or 'because'. Would our sentences sound complete?

Students: No.

Teacher: Just like roads would not connect well without bridges, our language would not flow smoothly without conjunctions. Very well thought, everyone.

Teacher: Now, let us move to something about how we can help our planet.

Helping better



MUST DO
5 MIN.

Teacher: Turn to the 'Helping better' box in your Main Coursebook given on page 82.

Teacher: Please read aloud the Helping better box.

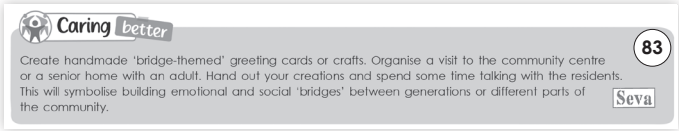
Teacher: Why do you think planting trees is important?

Student: Trees give shelter to birds and animals.

Teacher: Correct. Cutting down trees for bridges and buildings can harm many lives. What can we do?

Teacher: Well said. Small steps make a big difference. Now let us see how we can connect with people too.

Caring better



MUST DO
10 MIN.

Teacher: Turn to the 'Caring better' box in your Main Coursebook.

Teacher: It talks about creating handmade, bridge-themed greeting cards and visiting a community centre or senior home. Why do you think this is called 'Caring better'?

Teacher: Think about it – how can a greeting card become a 'bridge'? Is it possible to connect two hearts through a simple act of kindness?

Teacher: Now imagine – if you visited an elderly person who feels lonely, how would your card or conversation make them feel?

Teacher: Do you think emotional connections are as strong as physical bridges? How can we build more of these 'human bridges' in our lives?

Teacher: Let us take this idea seriously and start planning how we can care better for those around us.

Recalling better

MUST DO
10 MIN.

Teacher: Now let us go to the 'Recalling better' box in your book.

Teacher: Look at the first point – it says a bridge is a structure that helps us cross rivers, roads, forests and railway lines. Can you picture one such bridge you have seen?

Teacher: The second point says a living root bridge exists in Riwai village of Meghalaya. Why do you think this bridge is special?

Teacher: The last point tells us about modern-day materials like steel, cement and asphalt. Why is it important to use strong materials for building bridges?

Teacher: Think carefully – what would happen if weak materials were used?

Teacher: Keep these ideas fresh in your mind. These are the building blocks of our understanding.

You may show the **Concept Map** given on the digital platform.

Differentiated Activities

110 km/hr

How is a bridge in real life similar to a conjunction in a sentence? Give one point.

80 km/hr

Write one reason why planting a tree is important.

40 km/hr

What can you do to help animals that lose their homes when trees are cut down?

Home Task

Make a bridge-themed greeting card and write one positive message on it.

Period 6

SHOULD DO

10 MIN.

Teacher: Good morning, students.

Let us refresh ourselves with a quick eye exercise.

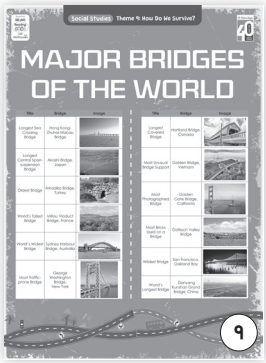
Teacher: Look up, look down, look left and look right slowly.

Teacher: Now, roll your eyes gently in a circle once clockwise and once anticlockwise.

Teacher: Close your eyes, take a deep breath and open them with a smile.

Teacher: Well done. We are ready to begin today's lesson.

Poster



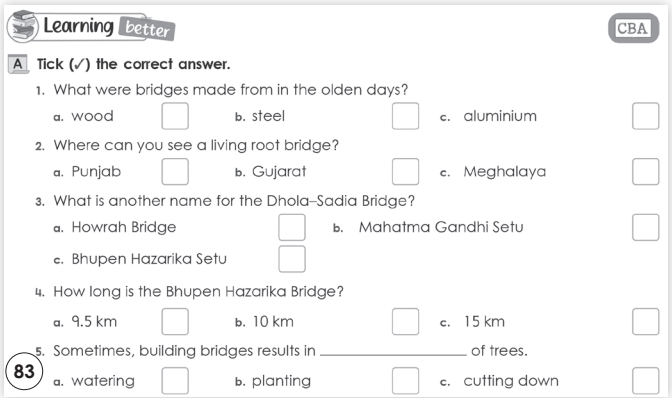
Teacher: Let us take a moment to look at the poster on the wall.

(Please display and discuss the poster prominently in the classroom to reinforce the learning about Major Bridges of the World. Encourage the students to observe the poster and discuss the different Major Bridges of the World)

Teacher: Great observation everyone.

Learning better

Exercise A


Learning better CBA

A Tick (✓) the correct answer.

1. What were bridges made from in the olden days?
   a. wood ☐ b. steel ☐ c. aluminium ☐
2. Where can you see a living root bridge?
   a. Punjab ☐ b. Gujarat ☐ c. Meghalaya ☐
3. What is another name for the Dhola–Sadia Bridge?
   a. Howrah Bridge ☐ b. Mahatma Gandhi Setu ☐
   c. Bhupen Hazarika Setu ☐
4. How long is the Bhupen Hazarika Bridge?
   a. 9.5 km ☐ b. 10 km ☐ c. 15 km ☐
5. Sometimes, building bridges results in _____ of trees.
   a. watering ☐ b. planting ☐ c. cutting down ☐

83

MUST DO

15 MIN.

Teacher: Everyone, please open your Main Coursebook to page 84. Look at Exercise A.

Teacher: Today we will play a 'Quick Think and Write' game.

Teacher: I will ask a question and you have just one minute to think and then write the answer in your notebook. Ready?

Teacher: First question – What is a bridge?

(Wait for the students to think.)

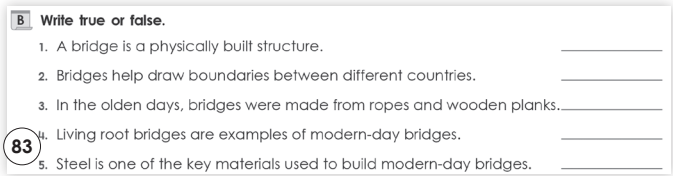
Teacher: Quickly write your answer neatly in your notebook.

(Give them one minute.)

Teacher: Time is up. Great. Now the next question.

(Follow the same pattern for the rest of the questions. Ask each question, allow thinking time and then ask the students to write their answers in their notebooks within one minute.)

Exercise B


B Write true or false.

1. A bridge is a physically built structure. _____
2. Bridges help draw boundaries between different countries. _____
3. In the olden days, bridges were made from ropes and wooden planks. _____
4. Living root bridges are examples of modern-day bridges. _____
5. Steel is one of the key materials used to build modern-day bridges. _____

83

MUST DO

15 MIN.

Teacher: Now let us open to Exercise D on page 84.

Teacher: Today, you are going to become 'Answer Detectives.'

Teacher: I will read one question aloud. You will search for clues in your Main Coursebook, find the answer like a

treasure hunter and then write the answer neatly in your notebook. Ready?

Teacher: First question – What are the advantages of building a bridge?

Teacher: Start searching for where the book talks about how bridges help people. Find two or three points.

(Give time for the students to search.)

Teacher: Once you find it, write the answer neatly in your notebook.

(Follow the same 'open book treasure hunt' style for the remaining questions. After each question, give the students time to search, then ask them to write their answer in their notebook)

Differentiated Activities

110 km/hr

Write two advantages of building a bridge in your notebook.

80 km/hr

Write one advantage of building a bridge in your notebook.

40 km/hr

Write the name of one material used to build a bridge in your notebook.for 70 to 79.

Home Task

Bring ice cream sticks and glue to the class for the 'Creating better' activity.

Period 7

SHOULD DO

5 MIN.

Teacher: Good morning, students. Let us start today's lesson with a fun movement game related to bridges.

Teacher: When I say 'Bridge Up', stretch your arms up and make an arch like a high bridge.

Teacher: When I say 'Bridge Down', bend your arms low like a small bridge over a stream.

Teacher: When I say 'Strong Bridge', stand tall and firm like a strong bridge made of stone.

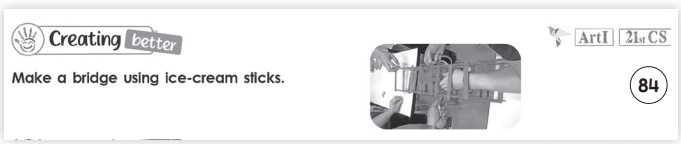
Teacher: When I say 'Wobbly Bridge', gently sway side to side like a weak bridge moving in the wind.

Teacher: Let us practice together. Listen carefully and move like different types of bridges.

(Call out the bridge commands for 2–3 minutes.)

Teacher: Well done, bridge builders. Your minds and bodies are ready to start creating real bridges now.

Creating better



MUST DO

25 MIN.

Teacher: Today, we are going to be bridge engineers.

Teacher: Look at the ice-cream sticks and glue you have brought. What shapes do you think will make your bridge stronger — straight lines or triangles?

Teacher: Discuss quickly with your group and plan your design before you start.

Teacher: Think – Should your bridge be tall, wide or flat? What will make it the strongest?

Teacher: Now start building your bridge carefully. You have 25 minutes.

(Move around and encourage the students.)

Teacher: Remember, your bridge should be strong enough to hold a small notebook or pencil. Test it gently after you finish.

Teacher: Try to use your materials wisely. Are you placing the sticks close enough for good support?

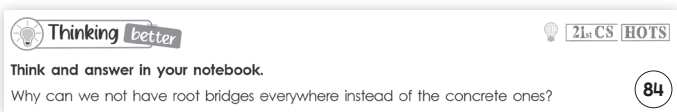
Teacher: Keep checking – Is your bridge standing straight? Is it balanced?

Teacher: After the time is up: Look at all the wonderful bridges you have created.

Teacher: Which bridge looks the strongest? Which bridge is the longest? We will have a small display after everyone completes.

Teacher: Now, let us clap for ourselves for building such wonderful bridges today.

Thinking better



MUST DO

10 MIN.

Teacher: Now let us think about an interesting question together.

Teacher: Think – how long does it take for a root bridge to grow? Can we wait that long in busy cities?

Teacher: Also think – can root bridges carry heavy vehicles like cars, buses and trains?

Teacher: Now open your notebooks. Write your thoughts in 3–4 lines to answer this question:

'Why can we not have root bridges everywhere instead of concrete ones?'

Teacher: Take two minutes to think and write. Look back at what we have learnt if you need hints.

(Allow time for the students to complete.)

Teacher: Great thinking today. We will share some answers in tomorrow's class.

Differentiated Activities

110 km/hr

List two reasons why modern bridges are better than root bridges.

80 km/hr

Write one reason why root bridges cannot be built everywhere.

40 km/hr

Name one material used to build a modern bridge.

Home Task

Book of Project Ideas

Chapter 13: Bridges: Then and Now — **Theme 9: How Do We Survive?**

Make a poster on the famous bridges of the world. Some examples are mentioned in the chapter too. Read magazines, encyclopedias or articles on the Internet* to find out about the same. (27)

PRO | 21st CS

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

(For project Ideas, please refer to the book of Project Ideas, page number 27 under the title 'Bridges: Then and Now.' 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 bridges through this engaging project.)

Period 8

Gratitude sheet

MUST DO — 10 MIN.

Teacher: Good morning, everyone. Today, let us begin by focusing on something truly meaningful—gratitude.

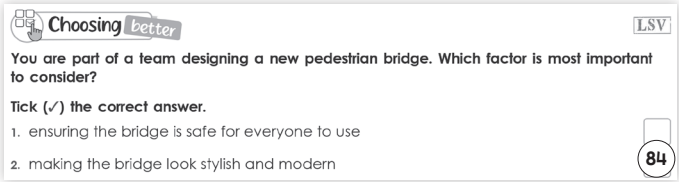
Teacher: I want you to think about one person who has made a positive difference in your life. It could be a family member, a neighbour, a teacher or anyone who has truly helped you.

Teacher: Now, take your gratitude sheet and cut out a space where you can write a short note to the person you are grateful for.

Teacher: Write one or two sentences thanking them for what they have done or how they have made a difference in your life.

Teacher: Once you are done writing, we will share our notes with the class.

Choosing better


Choosing better — LSV

You are part of a team designing a new pedestrian bridge. Which factor is most important to consider?

Tick (✓) the correct answer.

1. ensuring the bridge is safe for everyone to use
2. making the bridge look stylish and modern

84

MUST DO — 15 MIN.

Teacher: Open your Main Coursebook to the 'Choosing better' section given on page 84.

Teacher: Read the question carefully – you are designing a new pedestrian bridge. Which factor is more important to consider?

Teacher: Is it ensuring the bridge is safe for everyone to use or making the bridge look stylish and modern?

Teacher: Let us play a quick decision-making game.

Teacher: Imagine you are a bridge designer today. Your team has two choices.

Teacher: Choice 1: Build a bridge that is super stylish but may not be very safe.

Teacher: Choice 2: Build a bridge that is strong, safe and easy for everyone to use.

Teacher: Now, stand up if you choose safety first. Stay seated if you choose style first.

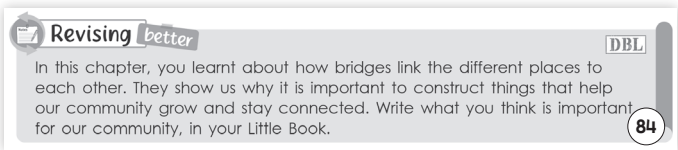
(Allow the students to react.)

Teacher: Look around. Most smart bridge builders care about safety first. Well done.

Teacher: Now, open your Main Coursebook to the 'Choosing better' section and tick (✓) the correct answer.

Teacher: Remember – a stylish bridge may look nice, but a safe bridge saves lives. You are true engineers now.

Revising better


Revising better — DBL

In this chapter, you learnt about how bridges link the different places to each other. They show us why it is important to construct things that help our community grow and stay connected. Write what you think is important for our community, in your Little Book. (84)

Teacher: Open your Main Coursebook to the 'Revising better' section given on page 84.

MUST DO
15 MIN.

Teacher: Let me read it aloud:
'In this chapter, you learnt about how bridges link different places to each other. They show us why it is important to construct things that help our community grow and stay connected.'
Teacher: Think for a moment – what things do you think are important for our community? Is it only buildings or also parks, hospitals, roads, schools?
Teacher: Let us do a quick flash-think.
Teacher: When I say 'Community Need', think of one thing important for a community.
Teacher: Ready? Community Need.
Teacher: Great, now open your Little Book.
Teacher: Write what you think is important for our community.
Write in two or three lines, neatly.
Teacher: You have five minutes to complete it. Let us begin.
(Allow the students to write.)
Teacher: Well done, everyone. You have thought deeply and shared wonderful ideas.
Give yourselves a big round of applause for completing today's work so thoughtfully.
You may show the **Quiz** given on the digital platform.

Differentiated Activities

110 km/hr
Write two ways bridges help a community.
80 km/hr
Write one way bridges help people.
40 km/hr
Name one thing that bridges connect.

Home Task

Find a picture of any famous bridge and stick it in your notebook. Write its name and the country it is in.

Period 9

Teacher: Good morning, students. Today is a special day — we will go outdoors for a bridge challenge.

SHOULD DO
10 MIN.

Teacher: Before that, let us warm up our thinking.
Teacher: Look around the classroom quickly. Can you spot anything that connects two parts, just like a bridge connects two places?
Teacher: Think — it could be a shelf between two walls or a bench connecting two legs.
Teacher: Now let us go outside for a real bridge-building experience.
Teacher: We are going to create 'Human Bridges' today in the playground.

COULD DO
30 MIN.

Teacher: I will divide you into small teams of 5–6 students each.
Teacher: Each team will make a 'bridge' by standing side by side, connecting your hands overhead like an arch.
Teacher: Then, one by one, your classmates will walk under your human bridge carefully.
Teacher: After one round, you will switch teams so that everyone gets to form different types of bridges — tall bridges, low bridges, wide bridges.
Teacher: Think: Is it easier to walk under a wide bridge or a low bridge?
Is it easier to build a bridge with many hands or just a few?
Teacher: You will experience how real bridges are designed to make movement easy and safe.
(The teacher supervises teams, encourages cooperation and ensures safety.)
Teacher: Well done, engineers. You have become real bridge makers today, using teamwork and planning.
Teacher: Let us give ourselves a big clap for building bridges — not just with hands, but with hearts too.

Differentiated Activities

110 km/hr
Write two ways teamwork helped you build a strong human bridge.
80 km/hr
Write one thing that made your human bridge strong.
40 km/hr
Name one body part you used to make the human bridge.

Home Task

Draw a simple sketch of your human bridge group. Label two things that made your bridge strong.

Period 10

Teacher: Good morning, students. Let us start today with a quick talk about the world.

SHOULD DO
10 MIN.

Teacher: Close your eyes for a second and imagine you are flying high above the Earth. What do you see? Land, water, different countries, farms.
Teacher: Today we will explore how different parts of the world grow different crops.
Teacher: Let us open our Main Coursebook to the page 'Through My Eyes' and look carefully at the world

map given.

Through My Eyes

MUST DO
30 MIN.

Teacher: Today, we are going on a world adventure — through maps.

Teacher: Imagine you are a world explorer traveling across different continents. Your job is to discover where a particular crop grows.

Teacher: Open your Main Coursebook to the 'Through My Eyes' page and look at the world map.

Teacher: Look closely:

- Where do you see big green patches?
- Where are red triangles shining like tiny flags?
- Where are pink blankets covering land?

Teacher: Your explorer's eyes need to be sharp. Look for the clues — colours and symbols.

Teacher: We will read each question aloud, explore the map together, discuss quickly and then write the answers in our main coursebook.

Teacher: Which crop is mainly grown in Asia?

Teacher: Look carefully at Asia. What colour or symbol do you see the most?

(The students observe. The teacher guides.)

Teacher: Yes, rice is mainly grown in Asia.

Teacher: Now, everyone write 'Rice' for Question 1 in your book.

(Follow the same pattern for the rest of the questions — read aloud, explore the map together, discuss quickly and then guide the students to write the answers in their main coursebook.)

Differentiated Activities

110 km/hr

Imagine you are a traveler in Africa. Name one crop you discover there and write one line about how people use it.

80 km/hr

Pretend you are visiting a tea garden in Asia. Name the crop you find there and describe its colour.

40 km/hr

Imagine you are standing in a rice field in Asia. What is the name of the crop you see?

Home Task

Write two lines about why different continents grow different crops (for example, weather, land or temperature).

Period 11

SHOULD DO
10 MIN.

Teacher: Good morning, students. Let us wake up our minds with a few fun riddles about bridges.

Teacher: I will say a riddle and you think of the answer. Ready?

Teacher: Riddle 1: I connect two sides of a river, but I am not a boat. What am I? (Bridge)

Teacher: Riddle 2: I am a special bridge made by trees, not by people. What am I? (Living root bridge)

Teacher: Riddle 3: I am needed first when building a bridge — safety or decoration? (Safety)

Teacher: Riddle 4: I help cars, trains and even people move from one place to another. What am I? (Bridge)

Teacher: Well done, everyone. You are thinking like real engineers already. Now let us move to complete our worksheets together.

Worksheet 1

Theme 9: How Do We Survive?

13. Bridges: Then and Now

Worksheet 1

A. Fill in the blanks with the correct words.

1. A bridge is a _____ built structure. (physically/naturally)
2. A bridge helps us _____ obstacles. (make/cross)
3. We can cross obstacles using bridges _____. (easily/with much difficulty)
4. Bridges help in the overall _____ of the country. (development/deterioration)
5. Some bridges are constructed _____ the ground, and do not disturb the life below. (high above/under)

B. Rearrange the letters to name some construction materials used in bridges.

1. EESTL _____
2. ONSTE _____
3. IRBCK _____
4. EECMNT _____
5. PHALTSA _____

C. Write true or false.

1. A bridge is an imaginary structure that helps us cross roads with ease. _____
2. A bridge does not improve mobility. _____
3. Roads and bridges are considered the lifelines of a country's development. _____
4. Most modern bridges are made using ropes and wooden planks. _____
5. A living root bridge exists in Meghalaya. _____

50

MUST DO
15 MIN.

Teacher: Please open your Main Coursebook to page 50 – Worksheet 1.

Teacher: We will solve this worksheet together. I will guide you step-by-step.

Teacher: Look at Exercise A. Fill in the blanks using the correct word given in brackets.

Let us read the first sentence aloud and think together before writing.

Teacher: A bridge is a _____ built structure. (physically/naturally)

(The students think and the teacher confirms the answer.)

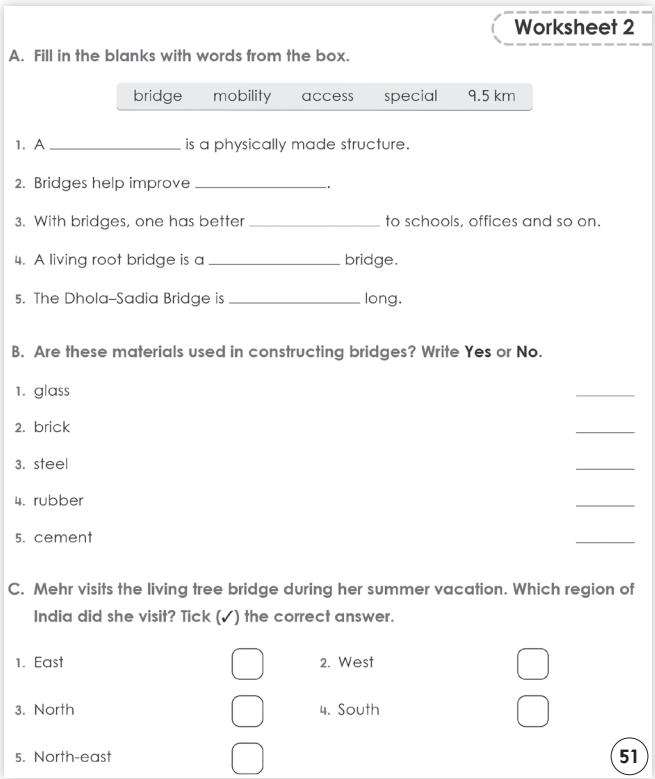
Teacher: Write 'physically' in the blank.

(Follow the same pattern for the remaining blanks — read aloud, think together and guide the students to write.)

Teacher: Now, move to Exercise B. Rearranging letters to form construction material names. Let us solve the first one together.

Teacher: 'EESTL' becomes 'STEEL'.
Write it neatly.
(Follow the same pattern for the rest — discuss and write.)
Teacher: Now, Exercise C. Write True or False after reading each sentence carefully. First statement — Is a bridge an imaginary structure? (No.)
So, write False.
(Continue this way for all statements.)

Worksheet 2



Worksheet 2

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

bridge mobility access special 9.5 km

1. A _____ is a physically made structure.
2. Bridges help improve _____.
3. With bridges, one has better _____ to schools, offices and so on.
4. A living root bridge is a _____ bridge.
5. The Dhola–Sadia Bridge is _____ long.

B. Are these materials used in constructing bridges? Write **Yes** or **No**.

1. glass _____
2. brick _____
3. steel _____
4. rubber _____
5. cement _____

C. Mehr visits the living tree bridge during her summer vacation. Which region of India did she visit? Tick (✓) the correct answer.

1. East ☐ 2. West ☐
3. North ☐ 4. South ☐
5. North-east ☐

51

Teacher: Turn to page 51 – Worksheet 2. Let us solve this worksheet also together.

MUST DO
15 MIN.

Teacher: Look at Exercise A. Fill in the blanks using words from the given box.
Teacher: First one — A _____ is a physically made structure. (bridge)
(The students find and fill in.)
(Follow the same pattern — read, discuss and guide the students to write answers.)
Teacher: Now, Exercise B. Are these materials used in constructing bridges? Write Yes or No.
Teacher: First one — Glass. (No.)
(Continue similarly for the rest.)
Teacher: Now, Exercise C. Mehr visits the living root bridge. Which region of India did she visit?
Teacher: (Hint: Meghalaya is in North-east.)
Teacher: Tick (✓) 'North-east.'

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

Differentiated Activities

110 km/hr

Write two materials that are mainly used in modern bridge construction.

80 km/hr

Write one thing bridges help people to do.

40 km/hr

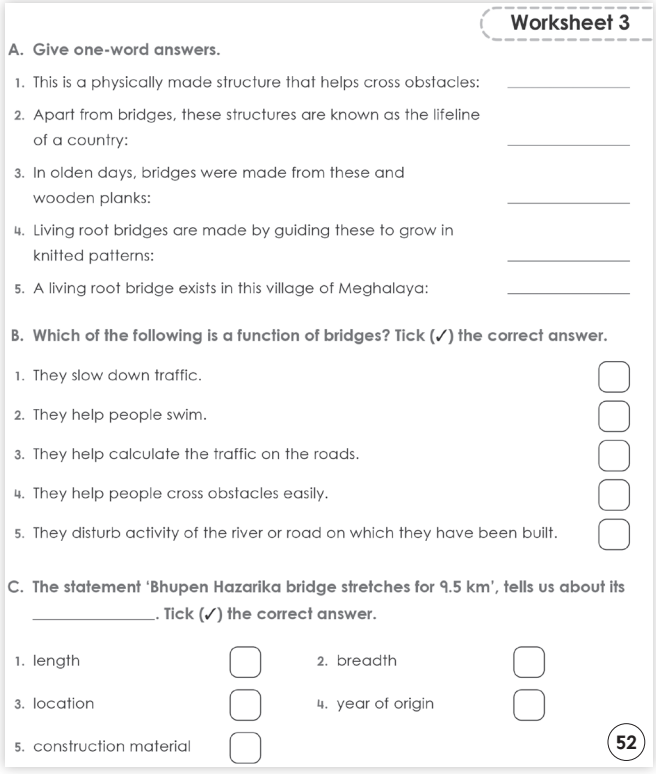
Name one bridge mentioned in the lesson.

Home Task

Find and write the name of a bridge in your city or country and one special fact about it.

Period 12

Worksheet 3



Worksheet 3

A. Give one-word answers.

1. This is a physically made structure that helps cross obstacles: _____
2. Apart from bridges, these structures are known as the lifeline of a country: _____
3. In olden days, bridges were made from these and wooden planks: _____
4. Living root bridges are made by guiding these to grow in knitted patterns: _____
5. A living root bridge exists in this village of Meghalaya: _____

B. Which of the following is a function of bridges? Tick (✓) the correct answer.

1. They slow down traffic. ☐
2. They help people swim. ☐
3. They help calculate the traffic on the roads. ☐
4. They help people cross obstacles easily. ☐
5. They disturb activity of the river or road on which they have been built. ☐

C. The statement 'Bhupen Hazarika bridge stretches for 9.5 km', tells us about its _____. Tick (✓) the correct answer.

1. length ☐ 2. breadth ☐
3. location ☐ 4. year of origin ☐
5. construction material ☐

52

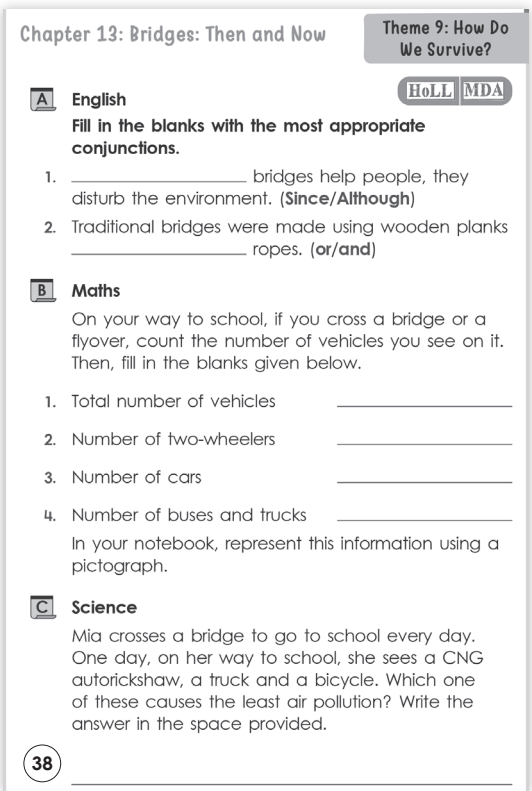
Teacher: Open your Main Coursebook to page 52 – Worksheet 3.

MUST DO
15 MIN.

Teacher: We will solve this worksheet together, just like detectives finding the right answers.
Teacher: Look at Part A: One-word answers. I will read one question at a time. We will think together and then write the answer.
Teacher: This is a physically made structure that helps cross obstacles.
Teacher: Write it down neatly.
(Follow the same pattern for the rest of the questions — read aloud, think and guide writing.)

Teacher: Now, move to Part B. Tick (✓) the correct function of bridges.
Teacher: Let us think carefully — They slow down traffic.
Teacher: Think — do bridges slow down traffic or help it move faster?
(No, they help traffic move faster.)
Teacher: Tick (✓) the correct answer together.
(Follow the same pattern for the rest of the questions.)
Teacher: Now, Part C. Read the statement about Bhupen Hazarika Bridge carefully.
Teacher: It stretches for 9.5 km — what does this tell us about? (Length.)
Teacher: Tick (✓) 'Length'.
Teacher: Great teamwork, everyone.
You may generate additional practice worksheets using the **Test Generator** given on the Digital Platform.

Book of Holistic Teaching



Chapter 13: Bridges: Then and Now

Theme 9: How Do We Survive?

HoLL MDA

A **English**

Fill in the blanks with the most appropriate conjunctions.

1. _____ bridges help people, they disturb the environment. (**Since/Although**)
2. Traditional bridges were made using wooden planks _____ ropes. (**or/and**)

B **Maths**

On your way to school, if you cross a bridge or a flyover, count the number of vehicles you see on it. Then, fill in the blanks given below.

1. Total number of vehicles _____
2. Number of two-wheelers _____
3. Number of cars _____
4. Number of buses and trucks _____

In your notebook, represent this information using a pictograph.

C **Science**

Mia crosses a bridge to go to school every day. One day, on her way to school, she sees a CNG autorickshaw, a truck and a bicycle. Which one of these causes the least air pollution? Write the answer in the space provided.

38

_____

COULD DO 15 MIN.

(Refer to the Book of Holistic Teaching, page number 38 under the title 'Book of Holistic Teaching.' 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.)

SHOULD DO 10 MIN.

Teacher: Now, let us fill in the last column of the KWL chart.
Teacher: In this column we will write what we have learnt in this chapter.
Teacher: Think about the topics, we have learnt and write them neatly in the 'L' column of the chart.
(Wait for the 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.

Differentiated Activities

110 km/hr

Write two different materials used to build bridges in modern times.

80 km/hr

Name one purpose of building bridges.

40 km/hr

Name one bridge you learnt about in this chapter.

Home Task

Revise the chapter 'Bridges: Then and Now' and complete any pending worksheets.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• participate actively in hands-on activities like building bridge models and outdoor bridge games.
Socio-Emotional and Ethical Development	• work collaboratively in groups, show appreciation for others' contributions and understand the importance of building connections in communities.
Cognitive Development	• observe, analyse and identify different types of bridges, their functions and construction materials using real-world examples and maps.
Language and Literacy Development	• read maps and comprehension passages related to bridges, answer structured questions and express ideas clearly through writing activities.
Aesthetic and Cultural Development	• design and create artistic representations of bridges, appreciating the beauty and functionality of structures across different cultures.
Positive Learning Habits	• demonstrate responsibility by completing worksheets, revising lessons regularly and showing curiosity towards real-world structures and engineering marvels.

Starry Knights

Was there any moment when students showed extra curiosity or excitement? Describe it briefly.

Reward yourself with a STAR.