Lesson-9: Profit and Loss

Theme 6: Why Is Change Important?

12 Periods (40 minutes each)

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

Animation, Animated Activities, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Mental Maths, Quick Maths, Quiz, Slideshow, Test Generator

Confirming better: I grow stronger with change.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand the concepts of profit, loss, cost price and selling price in real-life situations.
- to develop basic financial literacy for everyday decision-making.
- to use simple formulas to calculate profit, loss and percentage.
- to show values of empathy, sharing and responsible spending.
- to think critically and solve real-life money-related problems.
- to express mathematical ideas clearly through discussion and writing.
- to connect mathematics with language, environment and daily life.

Methodology

Period 1

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Today we will start new chapter 'Profit and Loss', but before we start the chapter, let me ask you something fun. Have you ever gone shopping with your family?

Teacher: Who usually goes with you when you go shopping?

Teacher: That sounds lovely. What kinds of things do you or your family buy when you go shopping?

Teacher: Yes, groceries, clothes, toys, these are all common things.

Teacher: Do you remember using money or seeing someone pay? How did that happen?

Teacher: Wonderful. Sometimes we give cash, sometimes we use a card.

Teacher: Has anyone ever compared prices of two items before buying?

Teacher: That is a smart thing to do. It helps us decide what is better and what saves money.

Teacher: Great. This is what our new chapter will help us understand – how we use money, what we gain and what we lose while shopping. Are you excited?

Affirming better

SHOULD DO 5 MIN.

Teacher: Everyone, please open page 102 in the Main Coursebook.

Teacher: Let us start with the 'Affirming better' section. Today's affirmation is 'I grow stronger with change'. Can anyone tell me how changes help us grow stronger?

Teacher: Yes, change can be hard but it helps us learn new things and become better.

Teacher: Think of a time when something changed in your life. How did it make you stronger?

Teacher: That is a lovely example. Let us carry this positive thought with us as we begin the chapter.

Teacher: We will begin a new chapter, Profit and Loss. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

SHOULD DO 10 MIN.

K	W	L

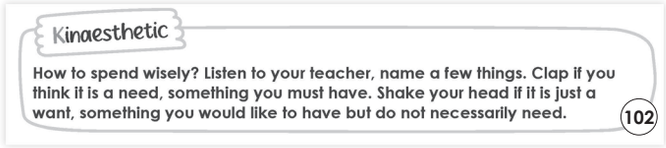
Teacher: Take a few minutes to think and write. If you have any questions, feel free to ask.

Teacher: You all did an amazing work 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

Teacher: Everybody, please open page 102 in your Main Coursebook. Who will read and explain the activity?

MUST DO
10 MIN.



(Scaffold the students to complete the activity.)

Teacher: Excellent. This helped us learn to choose between needs and wants.

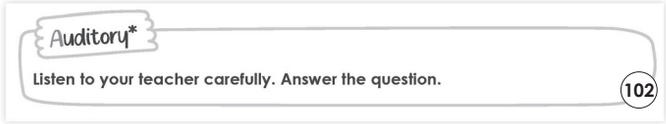
You may show the **eBook** given on the digital platform.

Auditory

Teacher: Now, listen carefully as I read out the question.

Teacher: Lata and her friend saved ₹100 together. They used ₹60 to buy a game and shared the remaining money equally between them. How much money did each girl get after buying the game?

MUST DO
5 MIN.

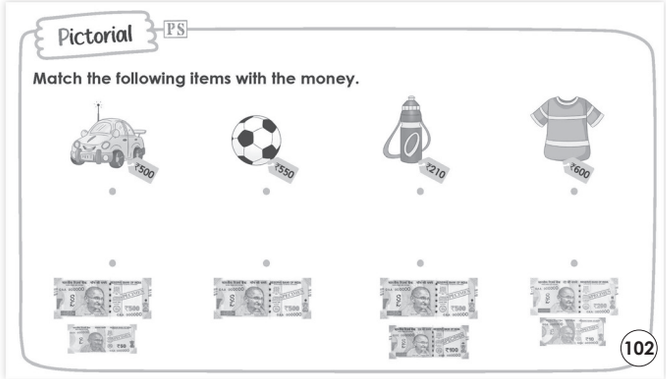


You may show the **Dictionary** given on the digital platform.

Pictorial

Teacher: Now, open your books to page 102 and look at the pictures.

MUST DO
5 MIN.



Teacher: There are four items – a car toy, a football, a water bottle and a t-shirt. Each has a price tag.

Teacher: Match each item with the correct set of notes shown below.

Teacher: Well done, everyone. Let us give ourselves a huge round of applause for your hard work. See you in the next class.

Differentiated Activities

110 km/hr

Why do people compare prices before buying something? Give one reason with an example. You can discuss with your partner.

80 km/hr

If you want to buy something, what are two things you should check before paying for it?

40 km/hr

Name one item you need for school and one item you like to have but do not need.

Home Task

Make a list of any three things you saw being bought at home or in a shop recently. Write if it was a need or a want and why.

Period 2

Teacher: Good morning students. How are you?

Teacher: Before we begin today's lesson, let us quickly recall our previous discussion.

SHOULD DO
5 MIN.

Teacher: What is the difference between a need and a want?

Teacher: Very good. A need is something important for daily life, like food or school books. A want is something we like to have but can live without, like a toy.

Teacher: Can someone share one need and one want from their shopping experience?

Teacher: Excellent. You all remember the discussion very well.

Interacting better

Teacher: Everyone, please open page 103 and look at the 'Interacting better' section.

MUST DO
5 MIN.

Teacher: Who will read and explain it?

Teacher: Talk to your partner about different ways you could save more money for the book.

Teacher: Think about what you can do daily or weekly to save money.

Teacher: I will give you a few minutes to discuss.

Teacher: Who would like to share what they discussed with their partner?

Teacher: Wonderful suggestions. Saving little by little can help us reach our goals.

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

MUST DO
15 MIN.

Teacher: Everyone, open your books to page 103. Before we read the story, let us think about something.

Teacher: Have you ever gone to a place like a fair or amusement park? What did you see there?

Teacher: Who usually buys the tickets for you?

Teacher: Have you ever handled money to buy something on your own? How did it feel?

Teacher: Wonderful. Now let us read the story given on this page. You will take turns reading in pairs. Try to understand what is happening in each picture.

(Students read the story in pairs)

Teacher: Great reading, everyone. Now, let us discuss what happened in the story.

Teacher: Why did Athai give Ryan the money?

Teacher: Correct, she trusted him to be responsible.

Teacher: What was the man in the second picture talking about?

Teacher: Yes, he talked about making more money this year by selling more tickets.

Teacher: What did Ryan ask about in the third part?

Teacher: Right, he was curious about the words 'profit' and 'loss'.

Teacher: What did Athai say about these terms?

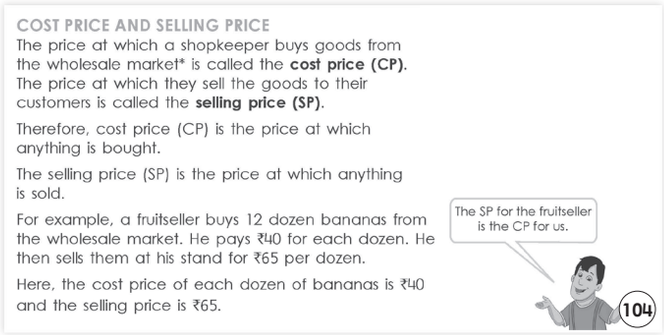
Teacher: She said that profit is when something is sold for more than its cost and loss is when it is sold for less.

Teacher: Excellent. The story helped us to understand how money is used in real life. We will learn more about these terms later.

Cost Price and Selling Price

Teacher: Now, look at the 'Cost Price and Selling Price' section on the next page.

MUST DO
10 MIN.



Teacher: What is the cost price?

Teacher: Yes, it is the price at which we buy something.

Teacher: And what is the selling price?

Teacher: Correct, it is the price at which we sell something.

Teacher: In the example, how much did the fruit seller pay for one dozen bananas?

Teacher: ₹40. What was the selling price?

Teacher: ₹65. Well done.

Teacher: Keep this in mind as we will use these terms later when we discuss profit and loss.

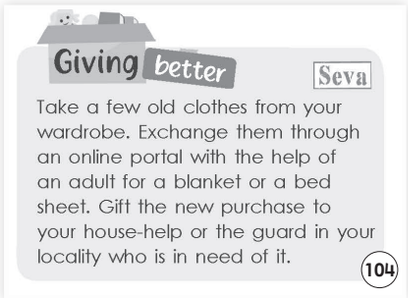
(Use CRM signs to settle the class.)

You may show the **Explainer Video** given on the digital platform.

Giving better

Teacher: Now, everyone please look at the 'Giving better' section on the page. Let us read it together.

MUST DO
5 MIN.



Teacher: It says to take old clothes from your wardrobe and exchange them with the help of an adult for something useful like a blanket or a bed sheet.

Teacher: Then, gift the new item to someone who needs it, like your house-help or a guard in your area.

Teacher: Why do you think this activity is important?

Teacher: Yes, it helps someone in need and also teaches us to care for others.

Teacher: How do you feel when you help someone without expecting anything in return?

Teacher: Wonderful thoughts. Helping others gives us happiness and builds kindness in our hearts.

Teacher: Can we all try this with our parents at home? Raise your hand if you will talk to your parents about it tonight.

Teacher: If you have done this activity, you can share your experience with your friends in the next following classes.

Differentiated Activities

110 km/hr

Why do shopkeepers sell products for a higher price than they buy them? Give one reason.

80 km/hr

What is the meaning of cost price and selling price? Write one sentence for each.

40 km/hr

Name one thing you have at home that was bought from a shop. What do you use it for?

Home Task

With the help of your parents, exchange a few old clothes through an online portal or at a local shop for a blanket or a bed sheet. Gift the new item to someone in your locality who needs it.

Period 3

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a quick recall of the previous period.

SHOULD DO — 5 MIN.

Teacher: What is cost price?

Teacher: Yes, it is the amount paid to buy something.

Teacher: And what is selling price?

Teacher: Correct, the price at which something is sold.

Teacher: Imagine your mother bought a packet of pencils for ₹20 and your cousin offered to buy them from you for ₹30. What is happening here?

Teacher: Yes, you are selling it for more than the cost. That is what we will understand today. Let us move ahead.

Profit and Loss

Teacher: Open your Main Coursebook to page 104. Let us read the explanation under 'Profit and Loss'.

MUST DO — 10 MIN.

PROFIT AND LOSS

If the selling price is greater than the cost price, the shopkeeper earns a **profit** or **gain**.

Profit = Selling price (SP) − Cost price (CP)

If the selling price is less than the cost price, the shopkeeper incurs* a **loss**.

Loss = Cost price (CP) − Selling price (SP)

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If CP = SP, there is neither a profit nor a loss.

Example 1: The cost price of a bag is ₹525. If the shopkeeper sold it at ₹615, find the profit or loss.

The cost price of the bag = ₹525

The selling price of the bag = ₹615

Since CP < SP, there will be profit.

Profit = SP − CP = ₹615 − ₹525 = ₹90

Example 2: Vinni bought a wall clock for ₹247. She sold the clock to her neighbour at the cost of ₹210. Find the profit or loss earned.

Cost price of the wall clock = ₹247

Selling price of the wall clock = ₹210

Since SP < CP, there is a loss.

Loss = CP − SP = ₹247 − ₹210 = ₹37

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Teacher: If the selling price is more than the cost price, it is a profit.

Teacher: If the selling price is less, then it is a loss.

Teacher: Let us look at Example 1. Who will read it for us?

(A student reads the example)

Teacher: The cost price of the bag is ₹525 and the selling price is ₹615. How do we calculate profit?

Teacher: Yes, we subtract ₹525 from ₹615. So, the profit is ₹90.

Teacher: Now look at Example 2. The cost of the clock is ₹247 and it was sold at ₹210. What do we do?

Teacher: Yes, subtract ₹210 from ₹247. The result is ₹37. That is the loss.

Teacher: Let us also read the 'Grasping better' section give on page 108.

Teacher: What is a wholesale market?

Teacher: It is a place where things are sold in large quantities at cheaper rates.

Teacher: What does the word 'incurs' mean?

Teacher: It means to experience something, like a shopkeeper incurs a loss.

Teacher: Think about this: your parents buy vegetables in bulk from a local market and resell them at your home shop. If they pay ₹100 and sell for ₹150, Is it profit or loss? How did you find?

Teacher: Yes, it is a profit. We got profit by subtracting SP from CP.

Understanding better

Teacher: Now, everyone look at the 'Understanding better' section. It has two questions. We will read and discuss them together.

MUST DO — 5 MIN.

Understanding better

Say Yes or No.

1. Is the selling price greater than the cost price when there is a profit?
2. Is ₹200 less than ten 10-rupee notes?

ICL

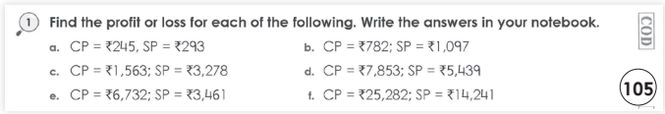
104

Teacher: First question – Is the selling price greater than the cost price when there is a profit?

Teacher: Think about the examples we discussed today. In Example 1, the cost price was ₹525 and the selling price was ₹615.

Teacher: Yes, that is correct. The selling price is more than the cost price when we make a profit. So, the answer is 'Yes'.

(Guide the students to complete the questions.)


1 Find the profit or loss for each of the following. Write the answers in your notebook.

a. CP = ₹245, SP = ₹293
b. CP = ₹782; SP = ₹1,097
c. CP = ₹1,563; SP = ₹3,278
d. CP = ₹7,853; SP = ₹5,439
e. CP = ₹6,732; SP = ₹3,461
f. CP = ₹25,282; SP = ₹14,241

COB 105

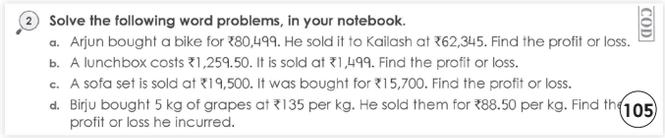
Teacher: Let us now solve Exercise 1 with your partner. Everyone please open page 105.

MUST DO
10 MIN.

Teacher: Each pair will solve one question at a time. Start with question (a) read the CP and SP and find the profit or loss.

Teacher: I will come around to guide you. Write your answers neatly in your notebook.

(Use CRM signs to settle the class.)


2 Solve the following word problems, in your notebook.

a. Arjun bought a bike for ₹80,499. He sold it to Kailash at ₹62,345. Find the profit or loss.
b. A lunchbox costs ₹1,259.50. It is sold at ₹1,499. Find the profit or loss.
c. A sofa set is sold at ₹19,500. It was bought for ₹15,700. Find the profit or loss.
d. Birju bought 5 kg of grapes at ₹135 per kg. He sold them for ₹88.50 per kg. Find the profit or loss he incurred.

COB 105

Teacher: Each group will solve all three questions. Make sure everyone in the group understands how to solve each one. Help one another.

MUST DO
10 MIN.

Teacher: First, read the question carefully. Identify the cost price and selling price. Then decide if it is a profit or a loss.

Teacher: After you solve, discuss your answers within your group. Make sure every group member can explain how they got the answer.

Teacher: After seven minutes, I will ask one student from each group to explain one question aloud. Be ready to share.

Teacher: I will support you if any group needs help during the activity.

Teacher: Well done, everyone. Let us give ourselves a huge round of applause for your hard work. See you in the next class.

Differentiated Activities

110 km/hr

Explain with your own example how to find out whether there is a profit or loss using cost price and selling price

80 km/hr

Your friend bought a school bag for ₹300 and sold it to you for ₹350. Identify the cost price and selling price in this example.

40 km/hr

Look at any item in your bag or on your desk that has a label or tag. Write the name of the item, its MRP and the use-by or expiry date if given.

Home Task

Solve question (d) of Exercise 2 given on page 105 in the Main Coursebook.

Period 4

Teacher: Good morning students. How are you today?

Teacher: Let us start with a quick review of the previous period.

SHOULD DO
5 MIN.

Teacher: When do we say there is a profit?

Teacher: Yes, when the selling price is more than the cost price.

Teacher: And when do we say there is a loss?

Teacher: Correct, when the selling price is less than the cost price.

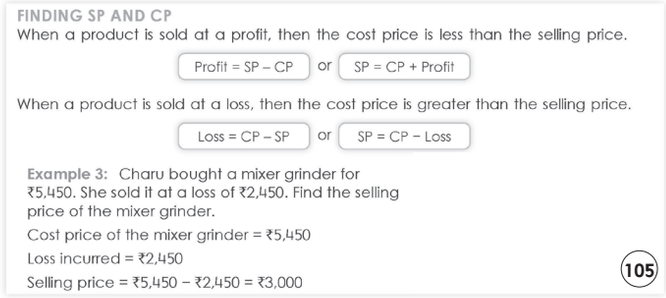
Teacher: Can someone tell me what we subtract to find profit or loss?

Teacher: Excellent. Let us now go deeper and learn how to find the cost price or selling price when the profit or loss is given.

Finding SP and CP

Teacher: Open your Main Coursebook to page 105. Look at the blue boxes.

MUST DO
10 MIN.


FINDING SP AND CP

When a product is sold at a profit, then the cost price is less than the selling price.

Profit = SP – CP or SP = CP + Profit

When a product is sold at a loss, then the cost price is greater than the selling price.

Loss = CP – SP or SP = CP – Loss

Example 3: Charu bought a mixer grinder for ₹5,450. She sold it at a loss of ₹2,450. Find the selling price of the mixer grinder.

Cost price of the mixer grinder = ₹5,450

Loss incurred = ₹2,450

Selling price = ₹5,450 – ₹2,450 = ₹3,000

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Teacher: Now read these formulas with me:

SP = CP + Profit: this means when you gain something, add that gain to what you paid.

CP = SP – Profit: here you already know how much you earned and sold it for, so you find out what you paid for it.

SP = CP – Loss: this means if you lose money while selling, subtract that from what you paid.

CP = SP + Loss : if you know how much you lost, add that to what you sold it for to know your original price.

Teacher: Now, let us read Example 3 about Charu and the mixer grinder.

Teacher: The cost was ₹5,450 and she sold it at a loss of ₹2,450.

Teacher: How do we find the selling price?

Teacher: Yes, we subtract ₹2,450 from ₹5,450. What do we get?

Teacher: Correct, ₹3,000.

Teacher: Let us try to remember – to find SP when loss is given, subtract loss from CP. To find SP when profit is given, add profit to CP.

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

Laughing better

SHOULD DO 5 MIN.

Teacher: Let us now read the 'Laughing better' section.

Teacher: Roli says, 'Humans buy everything with a price.'

Teacher: Hopper replies, 'But the important things are all priceless.'

Teacher: Can someone give an example of something priceless?

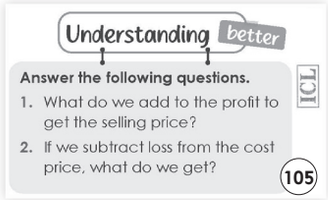
Teacher: Yes, a smile, a hug, a friend. Beautiful answers.

Teacher: This reminds us that while we are learning about money, kindness and love are more valuable than any price tag.

Understanding better

MUST DO 5 MIN.

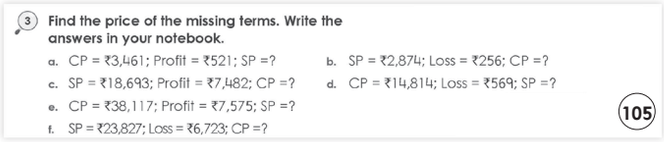
Teacher: Let us now discuss the 'Understanding better' section, questions.



Teacher: First question: What do we add to the profit to get the selling price?

Teacher: Yes, we add the cost price.

(Discuss the questions in a similar manner.)



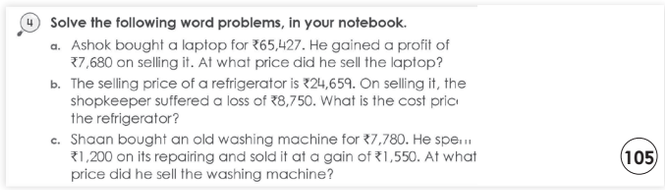
MUST DO 10 MIN.

Teacher: Now, let us solve Exercise 3. You will do this in pairs.

Teacher: Each pair will take turns reading the values and applying the correct formula to find the missing term.

Teacher: Start with question (a) and continue. I will guide you where needed.

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



MUST DO 5 MIN.

Teacher: Now let us solve question (a) of Exercise 4 together.

Teacher: Read the question carefully. What do we know?

Teacher: Yes, the cost price is ₹65,427 and the profit is ₹7,680.

Teacher: What do we add to find the selling price?

Teacher: Correct, we add them together. The answer is ₹73,107.

Teacher: Great. Now complete the remaining questions at your home.

Teacher: Well done, everyone. You all participated with great focus today. Let us have a huge round of applause for our hard work. See you in the next class.

Differentiated Activities

110 km/hr

Create your own word problem using the formula: SP = CP + Profit. Solve it and show the steps.

80 km/hr

If a shopkeeper bought a toy at ₹350 and sold it at ₹410, what is the profit? Write the formula used.

40 km/hr

If something is sold at a loss, do we add or subtract the loss from cost price to get the selling price? Write your answer with an example.

Home Task

Solve questions(b) and (c) of Exercise 4 given on page 105 in the Main Coursebook.

Period 5

Teacher: Good morning students. How are you today?

SHOULD DO 5 MIN.

Teacher: Let us begin with a quick game of true or false. I will read a sentence. If you think it is true, say 'true'. If you think it is false, say 'false'. Ready?

Teacher: Statement 1 : If the selling price is more than the cost price, it is a loss.

Teacher: Statement 2 :We add profit to cost price to find selling price.

Teacher: Statement 3 : Cost price is the price at which something is sold.

Teacher: Statement 4: Loss means we spent more than we got back.

Teacher: Statement 5 : The formula for profit percent is (Profit ÷ Cost Price) × 100.

Teacher: Well done. These ideas will help us understand today's topic, profit and loss per cent.

Profit And Loss Per Cent

MUST DO 10 MIN.

Teacher: Open your Main Coursebook to page 106.

Teacher: Let us discuss the given formulas.

PROFIT AND LOSS PER CENT

When profit and loss are expressed as percentage, we write profit per cent (profit %) and loss per cent (loss %) respectively. Profit and loss percent is always calculated on the cost price of the article purchased.

$\text{Profit \%} = \frac{\text{Profit}}{\text{Cost Price}} \times 100\%$ $\quad$ $\text{Loss \%} = \frac{\text{Loss}}{\text{Cost Price}} \times 100$

Example 4: Sheela bought a school bag for ₹500 and sold it for ₹750. Find her profit or loss per cent.

Cost price of the school bag = ₹500; Selling price of the school bag = ₹750

Here, selling price is greater than cost price. There is profit.

Profit = ₹750 – ₹500 = ₹250

We know, $\text{Profit \%} = \frac{\text{Profit}}{\text{Cost Price}} \times 100\%$

$\text{Profit \%} = \frac{250}{500} \times 100\% = 50\%$

Therefore, Sheela sold the school bag at 50% profit.

Example 5: John bought a chair for his study room at ₹2,400. He sold the chair for ₹1,800. Find the loss per cent.

Cost price of the chair = ₹2,400; Selling price of the chair = ₹1,800

Loss = ₹2,400 – ₹1,800 = ₹600

$\text{Loss \%} = \frac{\text{Loss}}{\text{Cost Price}} \times 100\% = \frac{600}{2400} \times 100\% = 25\%$

∴ John sold his chair at a loss of 25%.

Example 6: Find the selling price of a blanket if the cost price is ₹2,800 and the profit per cent is 7%.

Cost price of the blanket = ₹2,800

Profit = 7% of CP = 7% of ₹2,800 = $\frac{7}{100} \times 2{,}800 = ₹196$

We know, SP = CP + Profit = ₹(2,800 + 196) = ₹2,996

∴ The selling price of the blanket is ₹2,996.

Example 7: The cost price of a video game is ₹650. It is sold at a loss of 4%. Find the selling price of the video game.

Cost price of the video game = ₹650

Loss = 4% of CP = $\frac{4}{100} \times 650 = ₹26$

SP = CP – Loss = ₹(650 – 26) = ₹624

∴ The selling price of the video game is ₹624.

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Example 8: Find the cost price of a water bottle if the selling price is ₹210 and the profit per cent is 5%.

Let the cost price of the water bottle be ₹100.

STEP 1: Find the SP for the assumed CP.

Profit = 5% of CP = 5% of ₹100 = $\frac{5}{100} \times 100 = ₹5$ (For a loss, SP = CP – Loss)

STEP 2: Find the actual SP.

SP = CP + Profit = ₹(100 + 5) = ₹105; When SP is ₹105 and cost price = ₹100

When SP is ₹1, CP = $\frac{100}{105}$; When SP is ₹210, CP = $\frac{100}{105} \times 210 = ₹200$

Therefore, the cost price of the water bottle is ₹200.

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Teacher: Let us take Example 4. Sheela sold a bag bought for ₹500 at ₹750. What is the profit?

Teacher: Yes, ₹750 – ₹500 = ₹250

Teacher: Now, using the formula, Profit % = 250 ÷ 500 × 100 = 50%.

Teacher: Excellent. That is 50 percent profit.

(Discuss other examples with the students.)

Teacher: Profit and loss percent help us compare, especially in sales and discounts. Have you seen 10% discount tags in shops? This is what it means.

SHOULD DO 5 MIN.

Teacher: Now take out any product label you have, like from a water bottle, snack packet or notebook.

Teacher: Observe the MRP and see if there is any discount written.

Teacher: Imagine it was sold at a lower price in a sale. Can you guess how much percent less it might be?

Teacher: Write your guess and the new price in your notebook.

5 **Find the selling price. Write the answers in your notebook.**

a. CP = ₹550, profit = 10% b. CP = ₹832, profit = 16% c. CP = ₹1,236, loss = 12%

107

MUST DO 10 MIN.

Teacher: Let us solve Exercise 5 in pairs. Each pair will take a question and calculate SP using the given CP and percentage.

Teacher: Discuss the working with your partner and check each other's calculations.

6 **Find the cost price. Write the answers in your notebook.**

a. SP = ₹285, loss = 5% b. SP = ₹558, loss = 7% c. SP = ₹1,540, profit = 10%

107

Teacher: Now solve Exercise 6 using the reverse formula.

MUST DO 10 MIN.

Teacher: Do this individually in your notebooks, but if you are unsure, you may quietly check with your desk partner.

Teacher: I will walk around to assist you.

Teacher: Well done, everyone. You all showed great thinking and teamwork today. Let us have a huge round of applause for our hard work. See you in the next class.

Differentiated Activities

110 km/hr

A toy was bought at ₹500 and sold at 15% profit. Find the selling price and explain your steps.

80 km/hr

If a pencil box is sold at `150 with a loss of 10%, find the cost price using the formula.

40 km/hr

Write what profit per cent means in your own words and give one shop example where you have seen a discount written on items.

Home Task

Choose any household item with an MRP tag. Ask your parents if they bought it on discount. Write the MRP, discount percentage (if known) and the final price paid.

Period 6

Teacher: Good morning students. How are you today?

Teacher: Let us begin by recalling what we did in the previous period.

SHOULD DO
5 MIN.

Teacher: If I tell you that a person bought something for ₹100 and sold it for ₹130, what is the profit?

Teacher: Yes, ₹30.

Teacher: And how do we calculate profit percent?

Teacher: That is right: Profit ÷ Cost Price × 100.

Teacher: Now let us apply this idea through a few more examples.

7 **Solve the following word problems, in your notebook.**

a. A grocery owner buys muffins for ₹25 each and sells them at ₹35 each. Find his profit per cent.

b. The cost of an almirah is ₹3,400. It was sold at ₹1,700. Find the loss per cent.

c. Shikhar bought two kilograms of pomegranates for ₹540 and sold them at ₹480. Find the loss per cent.

107

Teacher: Now open your Main Coursebook to page 107 and look at Exercise 7.

MUST DO
10 MIN.

Teacher: You will solve all three questions individually, but discuss your reasoning in pairs if you feel stuck.

Teacher: Remember, use the formula for profit percent or loss percent based on the values given.

Teacher: If you are done early, check your answer with your partner.

Preparing Bills

Teacher: Have you seen a grocery bill at home? What details do you find in it?

MUST DO
10 MIN.

PREPARING BILLS

When we visit a grocery shop, the shopkeeper lists all the items on a piece of paper and writes the rate for each item against its name. The piece of paper is called a **bill**.

Example 9: Sarita bought the following items from the grocery shop. Fill in the last column. Then, find out how much Sarita will have to pay to the shopkeeper.

Bill No. 345 — Smart Supermarket
Date: 02/04/2022 — 100 Feet Road, Chennai

ITEM	QUANTITY (QTY)	RATE (IN ₹)	AMOUNT (QTY × RATE)
Biscuit	6 packets	24	
Mustard oil	2 L	178	
Wheat flour	5 kg	40	
Rice	5 kg	90	
Dalia	3 kg	56.50	
Total			

107

Sarita counted the amount received in the following manner.

Bill No. 345 — Smart Supermarket
Date: 02/04/2022 — 100 Feet Road, Chennai

ITEM	QUANTITY (QTY)	RATE (IN ₹)	AMOUNT (QTY × RATE)
Biscuit	6 packets	24	6 × 24 = ₹144
Mustard oil	2 L	178	2 × 178 = ₹356
Wheat flour	5 kg	40	5 × 40 = ₹200
Rice	5 kg	90	5 × 90 = ₹450
Dalia	3 kg	56.50	3 × 56.50 = ₹169.50
Total			₹1319.50

Sarita has to pay ₹1319.50 to the shopkeeper.

108

Teacher: Quantity, rate and amount, correct.

Teacher: Look at Sarita's bill on page 107. What should we do to find the total amount she has to pay?

Teacher: Yes, we multiply quantity by rate for each item.

Teacher: Now let us discosunt the amount she calculated. (Discuss the bill with the students.)

8 **Vinita bought the following items from the bakery. Calculate the amount for each item and the total amount to be paid. How much money would be returned if ₹2,000 is paid to the bakery owner?**

Bill No. 55 — ABC Bakery
Date: 22/02/2022 — CST, Mumbai

ITEM	QUANTITY (QTY)	RATE (IN ₹)	AMOUNT (QTY × RATE)
Pastries	5	110	
Breads	2	40	
Buns	5	35	
Cookies	10	62.50	
Cupcakes	2	24	
Total			

108

Teacher: Now look at the bill from the bakery. You will solve this as a group task.

MUST DO
10 MIN.

Teacher: Each group will fill the last column (Amount) for each item and then calculate the total.

Teacher: Once you find the total, also find how much money will be returned if ₹2,000 was paid.

Teacher: Every group will solve the entire question. Make sure everyone in your group understands the calculations.

Teacher: Imagine you opened a small toy shop.

Teacher: Make a mini price list of 3 toys with made-up quantities and rates.

SHOULD DO
5 MIN.

Teacher: Write down the bill format on a paper and calculate the total.

Teacher: After you finish, exchange your bill with a partner and check if the totals are correct.

Teacher: This is just like real life , it is always important to check the bill before paying.

Teacher: Why do you think checking a bill is important?

Teacher: Yes, it helps us avoid mistakes, wrong charges and makes us responsible buyers.

Teacher: Well done, everyone. Let us have a huge round of applause for our hard work. See you in the next class.

Differentiated Activities

110 km/hr

Create a bill for any 5 items in your pencil box or school bag. Write the rate, quantity and calculate total amount.

80 km/hr

Write any 3 items you bought recently with prices. Multiply each by quantity and find the total.

40 km/hr

You bought 2 pencils for ₹5 each and 1 eraser for `4. What is the total amount you paid? Create the bill for it.

Home Task

Interview a nearby vendor. Ask if they ever sold something at a loss and why. Write their answer in your notebook.

Period 7

Teacher: Good morning students. How are you today?

Teacher: Let us do a quick recall from the previous period.

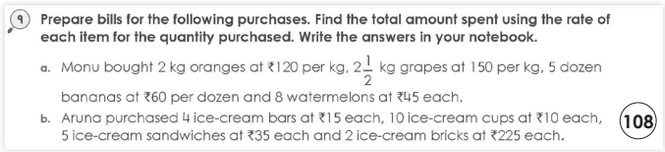
SHOULD DO — 5 MIN.

Teacher: If a pencil costs ₹10 and is sold for ₹12, what is the profit?

Teacher: What would be the profit percent?

Teacher: Great. Now if something is sold at a loss of ₹5 and its cost price was ₹25, what is the loss percent?

Teacher: Excellent responses. Let us begin today's tasks.



9 **Prepare bills for the following purchases. Find the total amount spent using the rate of each item for the quantity purchased. Write the answers in your notebook.**

a. Monu bought 2 kg oranges at ₹120 per kg, $2\frac{1}{2}$ kg grapes at 150 per kg, 5 dozen bananas at ₹60 per dozen and 8 watermelons at ₹45 each.

b. Aruna purchased 4 ice-cream bars at ₹15 each, 10 ice-cream cups at ₹10 each, 5 ice-cream sandwiches at ₹35 each and 2 ice-cream bricks at ₹225 each.

108

Teacher: Open your Main Coursebook to page 108. Let us solve Exercise 9.

MUST DO — 10 MIN.

Teacher: You will solve this in pairs. Discuss the rate, quantity and how to find the total for each item.

Teacher: Each pair should prepare the full bill as shown in the earlier example.

Teacher: Remember, always check your final amount. It helps to avoid mistakes just like in real shopping.

(Scaffold the students to complete the Exercise.)

Connecting better

Teacher: Let us now open the 'Connecting better' section. Look at what Ryan says to Athai.

MUST DO — 5 MIN.

Connecting better

English

Athai buys gifts for Ryan. Ryan says, "Athai, thank you for buying a puzzle and an hour glass for me from the gift shop." Athai smiles and asks, "Can you tell me what a, an and the are called?" Ryan replies, "I know, these are called articles."

HoLL

108

Teacher: He says – Athai, thank you for buying a puzzle and an hour glass. Can anyone tell me the common words used here?

Teacher: Yes, 'a' and 'an'. What do we call them in English?

Teacher: Correct, they are called articles.

Teacher: Can anyone tell when we use 'a' and when we use 'an'?

Teacher: Very good. We use 'a' before consonant sounds, like 'a puzzle' and 'an' before vowel sounds, like 'an hourglass'.

Teacher: Now tell me, how is this connected to our chapter on buying and selling?

Teacher: Yes, even while shopping or writing a bill, we use language carefully, for example: a pen, an eraser, a gift.

Grasping better

Teacher: Let us revise two useful words:

Teacher: What is a wholesale market?

Grasping better

DING

wholesale market: a place where goods are sold in large quantities at lower prices

incurs: makes

108

Teacher: Yes, a place where goods are sold in large quantities at lower prices.

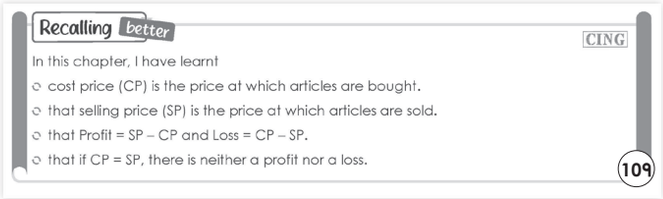
Teacher: And what does the word 'incur' mean?

Teacher: Correct, it means to make or suffer, like we incur a loss.

Recalling better

Teacher: Now, look at the 'Recalling better' section. I will ask you some questions one by one. Think and answer carefully.

MUST DO — 10 MIN.



Recalling better

CING

In this chapter, I have learnt

- cost price (CP) is the price at which articles are bought.
- that selling price (SP) is the price at which articles are sold.
- that Profit = SP – CP and Loss = CP – SP.
- that if CP = SP, there is neither a profit nor a loss.

109

Teacher: What is the price at which we buy things from a shopkeeper?

Teacher: Yes, you are right. That is called the cost price.

Teacher: What is the price at which we sell things to someone else?

Teacher: Correct. That is the selling price.

Teacher: Suppose I buy a toy for ₹100 and sell it for ₹120. What will be my profit?

Teacher: ₹20. Good. And which formula did you use to get that?

Teacher: Yes, Profit = Selling Price – Cost Price.

Teacher: Now, if I buy a notebook for ₹40 and sell it for ₹35, what happens?

Teacher: That is right. It is a loss of ₹5. And the formula is Loss = Cost Price – Selling Price.

Teacher: If I buy something for ₹50 and sell it for ₹50, what will be the result?

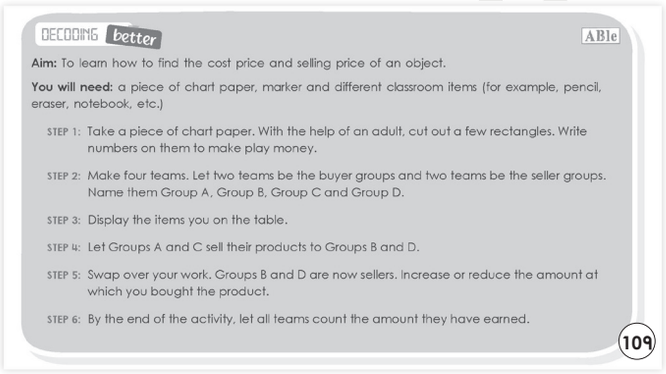
Teacher: Yes, there is no profit and no loss. That means cost price equals selling price.

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

Decoding better

MUST DO 10 MIN.

Teacher: Now we will do an activity given in 'Decoding better. section.



DECODING better — ABle

Aim: To learn how to find the cost price and selling price of an object.

You will need: a piece of chart paper, marker and different classroom items (for example, pencil, eraser, notebook, etc.)

STEP 1: Take a piece of chart paper. With the help of an adult, cut out a few rectangles. Write numbers on them to make play money.

STEP 2: Make four teams. Let two teams be the buyer groups and two teams be the seller groups. Name them Group A, Group B, Group C and Group D.

STEP 3: Display the items you on the table.

STEP 4: Let Groups A and C sell their products to Groups B and D.

STEP 5: Swap over your work. Groups B and D are now sellers. Increase or reduce the amount at which you bought the product.

STEP 6: By the end of the activity, let all teams count the amount they have earned.

109

(Scaffold the students to complete the activity.)

Teacher: Well done, everyone. Let us give ourselves a huge round of applause for your hard work. See you in the next class.

Differentiated Activities

110 km/hr

Prepare a bill for a birthday party. Choose 4 items (like balloons, cake, caps, plates), write quantity, rate and total.

80 km/hr

Write any 3 items you have seen being sold in a market. Write a possible cost, selling price for each and find the profit or loss.

40 km/hr

Monu buys 1 notebook for ₹30 and sells it for `40. What is the profit and profit percent?

Home Task

Ask your parents for a real bill from a restaurant, shop or online order. Paste it in your notebook. Circle the item names and underline the prices. Bring it to class for discussion.

Period 8

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

SHOULD DO 5 MIN.

Teacher: Today we will begin our class by discussing the bill you pasted in your notebook. Who would like to share what kind of bill it was?

Teacher: Very good. What were the items listed on the bill?

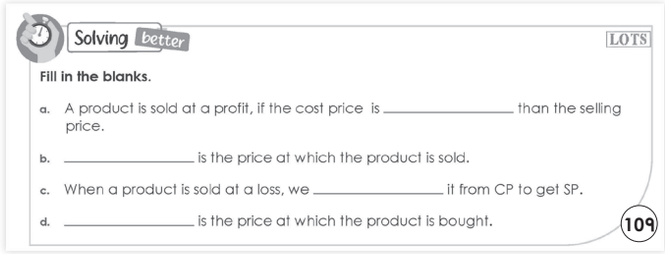
Teacher: Excellent. Did anyone check the total amount and match it with the prices?

Teacher: Well done. It is always good to check the bill before paying. This helps us avoid mistakes and keeps us aware of how money is spent.

Solving better

MUST DO 5 MIN.

Teacher: Everyone, please look at the 'Solving better' section on page 109.



Solving better — LOTS

Fill in the blanks.

a. A product is sold at a profit, if the cost price is _____ than the selling price.

b. _____ is the price at which the product is sold.

c. When a product is sold at a loss, we _____ it from CP to get SP.

d. _____ is the price at which the product is bought.

109

Teacher: Let us solve these blanks together. I will read each one aloud and you can think of the answer.

Teacher: (a) A product is sold at a profit if the cost price is …?

Teacher: Yes, less than the selling price.

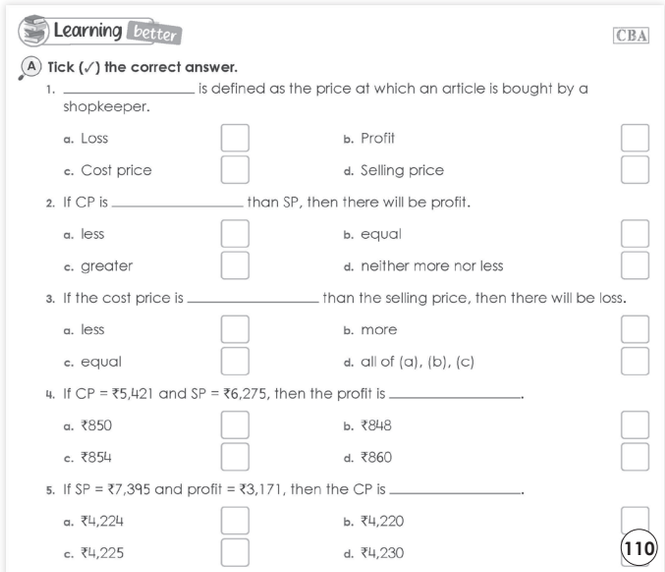
(Scaffold the students to complete the activity.)

You may show the **Mental Maths** given on the digital platform.

Learning better

MUST DO 10 MIN.

Teacher: Turn to Exercise A on the page 110. Let us read the first question together.



Learning better — CBA

A **Tick (✓) the correct answer.**

1. _____ is defined as the price at which an article is bought by a shopkeeper.
   a. Loss ☐ b. Profit ☐
   c. Cost price ☐ d. Selling price ☐
2. If CP is _____ than SP, then there will be profit.
   a. less ☐ b. equal ☐
   c. greater ☐ d. neither more nor less ☐
3. If the cost price is _____ than the selling price, then there will be loss.
   a. less ☐ b. more ☐
   c. equal ☐ d. all of (a), (b), (c) ☐
4. If CP = ₹5,421 and SP = ₹6,275, then the profit is _____.
   a. ₹850 ☐ b. ₹848 ☐
   c. ₹854 ☐ d. ₹860 ☐
5. If SP = ₹7,395 and profit = ₹3,171, then the CP is _____.
   a. ₹4,224 ☐ b. ₹4,220 ☐
   c. ₹4,225 ☐ d. ₹4,230 ☐

110

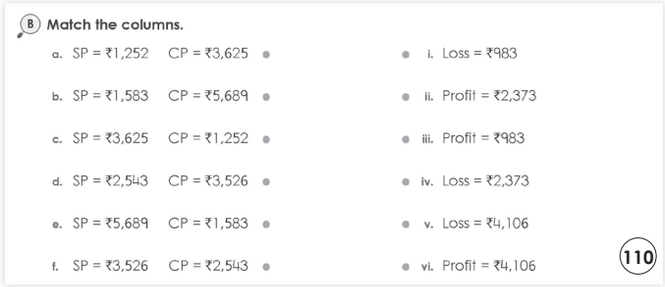
Teacher: Everyone, if a shopkeeper buys something, what do we call the price he paid?

Teacher: Good, cost price.

Teacher: Now, let us solve each question. You can use tick marks as we go.

Teacher: Discuss the answers in pairs and tell me your choices. I will help you if you are unsure.

(Use CRM signs to settle the class.)



B Match the columns.

a. SP = ₹1,252 CP = ₹3,625		i. Loss = ₹983
b. SP = ₹1,583 CP = ₹5,689		ii. Profit = ₹2,373
c. SP = ₹3,625 CP = ₹1,252		iii. Profit = ₹983
d. SP = ₹2,543 CP = ₹3,526		iv. Loss = ₹2,373
e. SP = ₹5,689 CP = ₹1,583		v. Loss = ₹4,106
f. SP = ₹3,526 CP = ₹2,543		vi. Profit = ₹4,106

110

Teacher: Now we will do Exercise B , Match the columns. You can work in groups of four.

MUST DO
10 MIN.

Teacher: Each group must match all the cost prices and selling prices to the correct profit or loss.

Teacher: Please make sure every member understands how you arrived at the answer. Use subtraction carefully.

Teacher: After five minutes, each group will explain one matched pair.

Doubt Session

Teacher: If anyone still has doubts about profit, loss, CP or SP, now is the time to ask.

COULD DO
10 MIN.

Teacher: I will also ask some quick questions to check your understanding.

Teacher: Suppose you sell something at ₹700 and you bought it at ₹650. What is the profit?

Teacher: Very good. You all worked with great focus and enthusiasm today. Let us give ourselves a huge round of applause for our hard work. See you in the next class.

You may show the **Quick Maths** given on the digital platform.

Differentiated Activities

110 km/hr

Solve this: A book was bought for ₹240 and sold for ₹300. Find the profit and profit per cent.

80 km/hr

Write the difference between cost price and selling price with one example.

40 km/hr

Fill in the blank: If SP is more than CP, there is a _____.

Home Task

Interview one adult at home and ask:

1. What is the most expensive thing they bought last month?
2. Did they compare its price with other shops or websites before buying?
3. Why did they choose that particular shop or item?

Write their answers in 3-4 lines in your notebook.

Period 9

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

Teacher: Let us begin with a quick thinking game. Imagine you have ₹500.

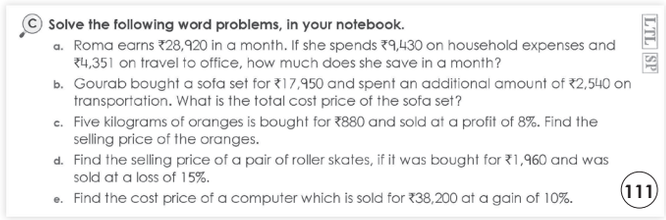
SHOULD DO
5 MIN.

Teacher: What three things would you buy with it? Think carefully before answering.

Teacher: Would you spend all of it or would you save some amount?

Teacher: Good. This tells us that we all make choices when we spend money.

Teacher: Spending wisely and saving a part of it is a smart habit. Let us keep that in mind while we move into today's lesson.



C Solve the following word problems, in your notebook. LTL SP

a. Roma earns ₹28,920 in a month. If she spends ₹9,430 on household expenses and ₹4,351 on travel to office, how much does she save in a month?
b. Gourab bought a sofa set for ₹17,950 and spent an additional amount of ₹2,540 on transportation. What is the total cost price of the sofa set?
c. Five kilograms of oranges is bought for ₹880 and sold at a profit of 8%. Find the selling price of the oranges.
d. Find the selling price of a pair of roller skates, if it was bought for ₹1,960 and was sold at a loss of 15%.
e. Find the cost price of a computer which is sold for ₹38,200 at a gain of 10%.

111

Teacher: Please open your Main Coursebook to page 111 and look at Exercise C.

MUST DO
15 MIN.

Teacher: Let us read question (a). What is Roma's monthly income? What are her expenses?

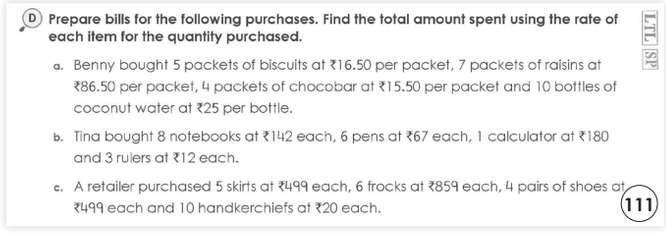
Teacher: Very good. We add the expenses and subtract them from the income to find the savings.

Teacher: Now read question (b). What is the cost of the sofa set? What additional amount is added?

Teacher: That is right. Add both to get the total cost.

Teacher: For questions (c), (d) and (e), you will work in pairs. Talk to your partner and help each other solve them.

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



D Prepare bills for the following purchases. Find the total amount spent using the rate of each item for the quantity purchased. LTL SP

a. Benny bought 5 packets of biscuits at ₹16.50 per packet, 7 packets of raisins at ₹86.50 per packet, 4 packets of chocobar at ₹15.50 per packet and 10 bottles of coconut water at ₹25 per bottle.
b. Tina bought 8 notebooks at ₹142 each, 6 pens at ₹67 each, 1 calculator at ₹180 and 3 rulers at ₹12 each.
c. A retailer purchased 5 skirts at ₹499 each, 6 frocks at ₹859 each, 4 pairs of shoes at ₹499 each and 10 handkerchiefs at ₹20 each.

111

Teacher: Let us now solve Exercise D. Look at question (a).

MUST DO
15 MIN.

Teacher: What do we need to do to prepare the bill?

Teacher: Exactly. Multiply the quantity by the rate for each item and then add all totals to get the final amount.

Teacher: We will do this as a group activity. Make the group of 4 and solve the questions, together.

Teacher: Make sure all group members understand how you solved it. Each group will share their answer with the class.

Teacher: Now sit comfortably and close your eyes.

Teacher: Take a deep breath in and slowly breathe out. Think of one time you helped your parents calculate money while shopping.

SHOULD DO
5 MIN.

Teacher: Slowly open your eyes. Let us carry this peaceful energy into the rest of our day. We will meet in the next period.

Differentiated Activities

110 km/hr

Create an advertisement for an item you are selling. Mention the cost price, selling price and how much profit you will make. Make it colourful and convincing.

80 km/hr

Design a profit-loss quiz with 3 questions. Include one on selling price, one on cost price and one on profit percentage.

40 km/hr

Identify: If you buy a pencil for ₹8 and sell it for ₹10, is it a profit or loss? Write the correct word and the amount.

Home Task

Create one word problem using the concepts of cost price, selling price, profit or loss. Make sure to include all values clearly. Write the question in your notebook and solve it too.

For the 'Creating better' activity, please bring a clean plastic bottle, chart paper, two toilet paper rolls, cardboard, glue, scissors, marker and colours in a labelled bag. We will be making an airplane money bank in the next period.

Period 10

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

Teacher: Let us start today's class with a few quick questions to refresh what we learnt in the previous period.

SHOULD DO
5 MIN.

Teacher: I will ask questions and you will answer only if the statement is true. If it is not, stay silent.

Teacher: The cost price is always more than the selling price in case of profit.

Teacher: A bill always shows the date of purchase and the name of the shop.

Teacher: Selling price is the amount we pay to buy an item.

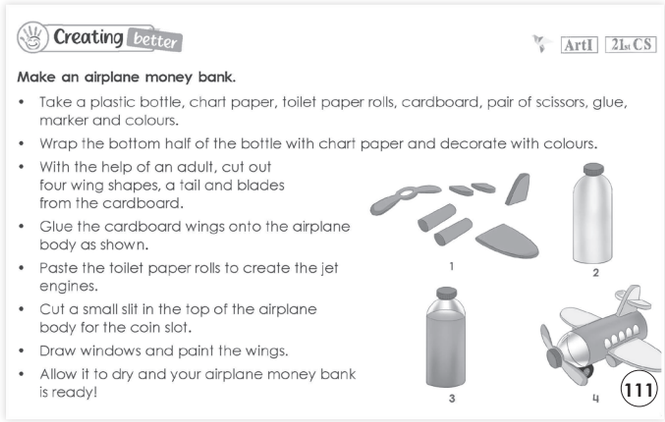
Teacher: If you find an error in the bill total, you should always ignore it.

Teacher: Wonderful. Those who answered correctly, well done. Let us now begin our lesson for today.

Creating better

Teacher: Everyone please open page 111. We will do 'creating better' activity.

MUST DO
15 MIN.


Creating better

ArtI 21st CS

Make an airplane money bank.

- Take a plastic bottle, chart paper, toilet paper rolls, cardboard, pair of scissors, glue, marker and colours.
- Wrap the bottom half of the bottle with chart paper and decorate with colours.
- With the help of an adult, cut out four wing shapes, a tail and blades from the cardboard.
- Glue the cardboard wings onto the airplane body as shown.
- Paste the toilet paper rolls to create the jet engines.
- Cut a small slit in the top of the airplane body for the coin slot.
- Draw windows and paint the wings.
- Allow it to dry and your airplane money bank is ready!

1 2 3 4

111

Teacher: We are making an aeroplane money bank. Why do you think it is called a money bank?

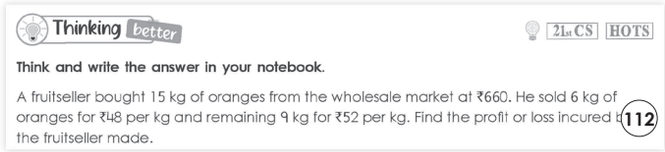
Teacher: Yes, it helps us collect and save money. That is how we learn the value of saving and spending wisely. (Guide the students to complete the activity.)

Thinking better

Teacher: Now turn to the 'Thinking better' section.

MUST DO
5 MIN.

Teacher: Let us read the problem together.


Thinking better

21st CS HOTS

Think and write the answer in your notebook.

A fruitseller bought 15 kg of oranges from the wholesale market at ₹660. He sold 6 kg of oranges for ₹48 per kg and remaining 9 kg for ₹52 per kg. Find the profit or loss incured by the fruitseller made.

112

Teacher: What do we need to find? Yes, total profit or loss.

Teacher: Think carefully and solve step-by-step. I am here if you need help.

Choosing better

Teacher: Let us look at Priya's situation. Why do you think she is unsure about joining the park clean-up?

MUST DO
5 MIN.


Choosing better

LSV

In Priya's town, there is a proposal to start a new initiative where everyone gathers once a month to clean up the local park. Priya is unsure about participating because it means spending her Sunday mornings picking up trash instead of relaxing at home. Why should Priya embrace this change?

- It keeps the park clean and beautiful for everyone's enjoyment.
- It disrupts her weekend routine and reduces her leisure time.

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Teacher: Discuss with your partner and decide why it is important.

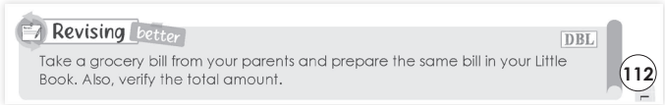
Teacher: Yes, helping in the park keeps it clean and beautiful. Even if it takes time, it helps the whole community.

Teacher: Always try to choose what helps others and improves the environment.

Revising better

MUST DO
5 MIN.

Teacher: Everyone please look at the 'Revising better' section.



Teacher: Tell me, have you ever seen your parents checking a grocery bill after shopping?

Teacher: Yes, that is because it helps to check if we have been charged correctly.

Teacher: When you make the same bill yourself, you practise multiplication and also learn how to handle money wisely.

Teacher: You may find small mistakes or maybe even learn about new items and their rates.

Teacher: So, when you go home today, politely ask your parents to show you a bill. Copy it neatly, calculate each item and check the total.

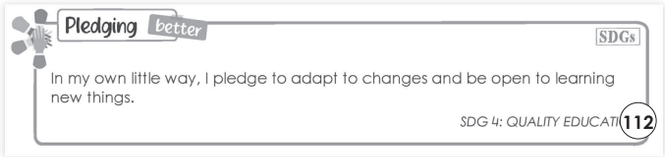
You may show the **Infographic** given on the digital platform.

Pledging better

MUST DO
5 MIN.

Teacher: Now let us read the pledge together.

Teacher: I pledge to adapt to changes and be open to learning new things.



Teacher: What does this mean to you?

Teacher: Share how you adapted or learnt something new recently.

Teacher: This connects to SDG 4 : Quality Education, which means learning is not just about books but becoming better citizens.

Teacher: Well done, everyone. You all participated with great energy and shared thoughtful answers. I am very proud of you. Give yourselves a big round of applause for today's effort.

Differentiated Activities

110 km/hr

Create a board game idea where players earn profit or face loss. Briefly describe how the game works.

80 km/hr

Imagine you are selling lemonade. Choose the cost of one glass and a selling price. Show your gain or loss.

40 km/hr

Write P for Profit and L for Loss:

a. CP ₹45, SP ₹60 – __

b. CP ₹70, SP ₹65 – _

Home Task

Take a grocery bill from your parents and prepare the same bill in your Little Book. Also, verify the total amount.

Period 11

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

Teacher: Let's begin with a quick question-and-answer game from the previous period.

SHOULD DO
5 MIN.

Teacher: What is the selling price if the cost price is ₹1,800 and the profit is ₹200?

Teacher: Very good, it is ₹2,000.

Teacher: If a person sells a bag for ₹1,500 and incurs a loss of ₹300, what was the cost price?

Teacher: Correct, it was ₹1,800.

Teacher: Which formula do we use to calculate loss when we know CP and SP?

Teacher: Yes, Loss = CP – SP.

Teacher: What does overhead charge mean in simple words?

Teacher: Right, extra expenses like delivery or packing.

Teacher: Great effort. Let us now start today's work.

MUST DO
15 MIN.

Worksheet 1

Worksheet 1

A. Fill in the blanks.

1. _____ is the price at which an article is bought.
2. Selling price is the _____ at which an article is sold.
3. Overhead charges are the _____ expenses over and above the cost price.
4. When the cost price is less than the selling price, then there is a _____.
5. When there is no profit no loss, then the _____ is equal to the selling price.

B. Complete the following table.

	Cost price (CP)	Selling price (SP)	Profit	Loss
1.	₹2,432		₹126	
2.	₹3,211			₹439
3.	₹10,635		₹4,461	
4.	₹12,224		₹0	₹0
5.	₹23,246			₹5,632

C. Complete the following table. Tick (✓) the correct columns, profit or loss, for each one. Also, write the amount in each case.

	Cost price (CP)	Selling price (SP)	Profit	Loss
1.	₹315	₹563		
2.	₹1744	₹856		
3.	₹2457	₹2547		
4.	₹5632.50	₹1250.50		
5.	₹25,335	₹29,657		

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Teacher: Open Worksheet 1. We will begin with Exercise A.

Teacher: Question 1: What is the price at which an article is bought? Let us write that.

Teacher: Continue till Question 5. Read each carefully and fill it.

Teacher: Now, look at Exercise B. Let us solve Question 1 together.

Teacher: The cost price is ₹2,432 and profit is ₹126. What will the selling price be?

Teacher: Yes, we will add the profit to the cost price. So, SP = ₹2,432 + ₹126 = ₹2,558.

Teacher: Solve the rest in pairs.

Teacher: Now, let us look at Exercise C. You need to tick profit or loss and write the amount.

Teacher: Question 1: CP is ₹315, SP is ₹563. Which is more?

Teacher: The selling price is more, so it is a profit. How much profit? Yes, ₹248.

Teacher: Continue with the remaining questions.

You may generate additional practice worksheets using the **Test Generator** given on the digital platform.

Worksheet 2

Worksheet 2

A. If SP = CP + profit or SP = CP – loss, then find the SP of the following in your notebook.

1. CP = ₹547; loss = ₹46
2. CP = ₹4,818; loss = ₹511
3. CP = ₹8,427; profit = ₹1,834
4. CP = ₹17,919; profit = ₹4,178
5. CP = ₹37,482; loss = ₹7,911
6. CP = ₹68,901; profit = ₹8,934

B. If CP = SP – profit or CP = SP + loss, then find the CP of the following in your notebook.

1. SP = ₹312; loss = ₹62
2. SP = ₹1,849; profit = ₹843
3. SP = ₹4,719; loss = ₹3,181
4. SP = ₹14,928; profit = ₹4,792
5. SP = ₹27,482; profit = ₹8,234
6. SP = ₹59,653; loss = ₹5,247

C. Complete the following table.

	Cost price (CP)	Selling price (SP)	Profit	Loss
1.	₹472		₹245	
2.	₹1,553	₹1,642		
3.		₹6,582		0
4.	₹15,347			₹6,582
5.	₹21,011	₹34,211		

38

Teacher: Now turn to Worksheet 2. Start with Exercise A.

MUST DO — 15 MIN.

Teacher: Question 1: CP is ₹547, loss is ₹46. What is the SP?

Teacher: Yes, we subtract loss from CP. SP = ₹547 - ₹46 = ₹501.

Teacher: Complete the remaining in groups of three. Discuss and support each other.

Teacher: Next, Exercise B.

Teacher: Question 1: SP is ₹312, loss is ₹62. What is the CP?

Teacher: Yes, CP = SP + loss = ₹312 + ₹62 = ₹374.

Teacher: Continue solving. Do not forget to check your answers.

Teacher: Now go to Exercise C. This is a table you have to complete.

Teacher: I will help you with the first one. CP = ₹472, Profit = ₹245, what is SP?

Teacher: Yes, SP = CP + Profit = ₹717. Complete the rest now.

Doubt Session

Teacher: Anyone who faced any difficulty in the worksheets can raise their hand.

COULD DO — 5 MIN.

Teacher: Let us quickly clarify before we end today's lesson. Well done.

Teacher: Anyone who faced any difficulty in the worksheets can raise their hand.

Teacher: Let us quickly clarify a few points before we end today's lesson. Well done.

Differentiated Activities

110 km/hr

Create a price list of 5 items in your imaginary shop. Decide CP and SP and write the profit or loss for each.

80 km/hr

Write one real-life example where you or your family experienced profit or loss.

40 km/hr

Write the meaning of profit and loss. Give one example each using simple numbers.

Home Task

Book of Project ideas

Complete the project given by following the instructions and bring it in the next period for class discussion.

- Write down all the groceries needed for a week with your parents.
- Ask your parents for the price of each item.
- Open a computer sheet and make a list: write each item in one column.
- In the next column, write down the price of each item.
- Use the sum formula to find the total cost.

	Items	Price of each item
1		
2		
3		
4		
5		
6		
7		
8		
9		
10	= Sum (select the number of columns)	

Period 12

Teacher: Good morning students. How are you?

Teacher: Let us start with a quick recap. Tell me, if the cost price is ₹100 and the profit is ₹25, what will be the selling price?

SHOULD DO
5 MIN.

Teacher: Yes, correct, it will be ₹125. Very well done.

Teacher: Now one more. If the selling price is ₹360 and the loss is ₹60, what will be the cost price?

Teacher: Right, it will be ₹420. You are getting better each day.

MUST DO
15 MIN.

Worksheet 3

Worksheet 3

A. Identify the profit or loss incurred in the following questions.

1. Shanti bought a pencil for ₹5 and sold it at ₹5.50. _____
2. A hand fan costs ₹128.50 and the shopkeeper sold it for ₹144. _____
3. Manju bought a box of marbles for ₹180 and sold it to Rahul at ₹134.50. _____
4. Benny bought a packet of 3 handkerchiefs for ₹229 and sold it at ₹205. _____
5. The cost price of a wall clock is ₹259.50 and the selling price is ₹299. _____

B. Solve the following in your notebook.

1. Selling price = ₹622; loss = ₹64; cost price = ?
2. Selling price = ?; profit = ₹455; cost price = ₹890
3. Selling price = ₹5,478; loss = ?; cost price = ₹7,038
4. Selling price = ₹12,549; profit = ₹3,250; cost price = ?
5. Selling price = ?; loss = ₹8,750; cost price = ₹36,189

C. Solve the following in your notebook.

1. Cost price = ₹254; profit = ?; selling price = ₹374
2. Cost price = ₹1,950; loss = ₹350; selling price = ?
3. Cost price = ?; profit = ₹2,679; selling price = ₹7,059
4. Cost price = ₹21,639; loss = ?; selling price = ₹16,109
5. Cost price = ?; profit = ₹7,399; selling price = ₹55,721

39

Teacher: Open your worksheets to page 39. Let us start with Exercise A. Read the first question.

Teacher: Yes, it is a profit. SP is more than CP. Continue doing the next questions.

Teacher: Let us move to Exercise B.

Teacher: In question 1, the selling price is ₹622 and the loss is ₹64.

Teacher: To find the cost price, we will add the loss to the selling price.

Teacher: ₹622 + ₹64 = ₹686. So, the cost price is ₹686.

Teacher: Now complete questions 2 to 5.

Teacher: Now turn to Exercise C.

Teacher: Question 1 says the cost price is ₹254 and profit is not given. The selling price is ₹374.

Teacher: To find profit, subtract CP from SP: ₹374 – ₹254 = ₹120.

Teacher: So, the profit is ₹120. Now solve the remaining questions.

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

Book of Holistic Teaching

Theme 6: Why Is Change Important?

Chapter 9: Profit and Loss

HoLL MDA

A English

Fill in the blanks with suitable articles.

Ritu sold _____ old bicycle at _____ profit of ₹500.

Last year, the company reported _____ loss of ₹10,000 due to _____ unexpected decline in sales.

B Science

Mahi makes a profit of ₹150 by selling lemonade. He uses lemon juice, water, sugar and salt to make the lemonade. Identify the solid items mentioned.

C Social Studies

Which historical event in the early 20th century caused widespread unemployment, factory closures and economic losses, leading to the rise of leaders like Benito Mussolini and Adolf Hitler?

16

(Refer to the Book of Holistic Teaching, page 16 under the title 'Profit and Loss.' 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.)

COULD DO
10 MIN.

Book of Project Ideas

Chapter 9: Profit and Loss

Theme 6: Why Is Change Important?

ICT PRO 21st CS

- Write down all the groceries needed for a week with your parents.
- Ask your parents for the price of each item.
- Open computer sheet and make a list: write each item in one column.
- In the next column, write down the price of each item.
- Use the sum formula to find the total cost.

	Items	Price for each item
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.	= Sum (select the number of columns)	

9

(Discuss the project assigned in the previous period, focusing on helping students understand the objectives and addressing any challenges they faced.)

COULD DO

5 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.

SHOULD DO

5 MIN.

Teacher: Think about the topics, have we learnt and write them 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 work, everyone. See you in the next class. Have a wonderful day ahead.

Differentiated Activities

110 km/hr

Write a short story (5–6 lines) where a shopkeeper incurs both profit and loss in different situations.

80 km/hr

Paste or draw any 2 cut-outs from newspapers with prices. Assume you bought them and sold at a higher price. Write profit earned.

40 km/hr

Create a simple word problem for your friend.

Home Task

Practise the questions discussed in this chapter.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• use fine motor skills to prepare price tags, create posters, draw tables and fill bills during kinaesthetic tasks like preparing grocery lists and making money banks.
Socio-Emotional and Ethical Development	• express empathy by contributing items for donation activities, participate respectfully in pair and group work and make responsible choices when discussing needs and wants.
Cognitive Development	• calculate profit, loss, selling price and cost price accurately using given formulas in word problems and real-life situations and interpret percentage-based profit and loss.
Language and Literacy Development	• read and comprehend story-based scenarios on buying and selling, use appropriate vocabulary like 'cost price', 'selling price', 'profit' and 'loss' and communicate mathematical ideas clearly in oral and written form.
Aesthetic and Cultural Development	• design and decorate creative tools such as advertisements, money banks and price lists using drawings or collage techniques that reflect cultural relevance.
Positive Learning Habits	• show regular participation in discussions and activities, complete tasks with focus, collaborate well with peers and demonstrate responsibility during independent work.

Starry Knights

Do you think this lesson will encourage the learners to spend or save money? Share your opinion on teaching young learners about profit and loss in monetary terms.

Award yourself a STAR for being an achiever.

Lesson-10: Mapping Skills

9 Periods (40 minutes each)

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

Animation, Animated Activities, Dictionary, eBook, Explainer Video, HOTS, I Explain, Infographic, Mental Maths, Quiz, Slideshow, Test Generator

Confirming better
I discover new hobbies.

Curricular Goals and Objectives (NCF)

To enable the students:

- to understand and use directions in real-life and map-based contexts.
- to read, interpret and create maps using keys, symbols and scales.
- to develop spatial reasoning through kinaesthetic, visual and collaborative activities.
- to apply mathematical concepts like measurement and ratio through map scales.
- to explore digital and physical maps to enhance geographical understanding.
- to engage in peer learning, critical thinking and project-based exploration.
- to reflect on their learning through observation, discussion and creative expression.

Methodology

Period 1

SHOULD DO 5 MIN.

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

Teacher: We will begin a new chapter Mapping Skills today.

Teacher: Let us start with a quick warm-up using directions.

Teacher: In which direction Sun appears to rise in the morning?

Teacher: Yes, that is East. The Sun appears to rise in the East because the Earth rotates from west to east.

Teacher: What is the direction exactly opposite to East?

Teacher: Correct, that is West.

Teacher: If you are facing East, which direction is on your left?

Teacher: Yes, it is North.

Teacher: And what is on your right when you face East?

Teacher: That is South. Well done.

Teacher: Great answers. These directions help us read and understand maps better. Let us move on to our affirmation now.

Affirming better

Affirming better I discover new hobbies. 113

Teacher: Everyone please open page 113 in the Main Coursebook. Let us begin with Confirming better. Who will read and explain?

SHOULD DO 5 MIN.

Teacher: Who would like to share one new hobby you have discovered recently?

Teacher: Yes, learning origami, gardening or sketching are wonderful hobbies.

Teacher: Exploring hobbies makes us creative and helps us enjoy learning more. Now, let us begin with our activity for today.

Teacher: We will begin a new chapter, Mapping Skills. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

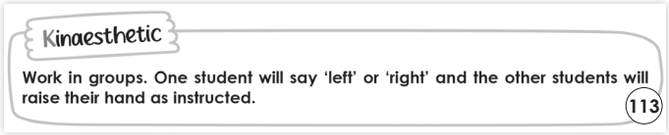
SHOULD DO 10 MIN.

K	W	L

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



Teacher: Everybody, please open page 113 in your Main Coursebook. Who will read and explain the activity?

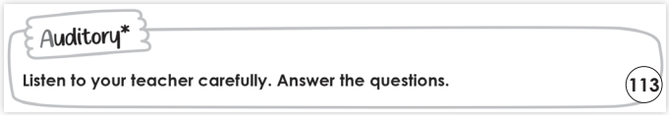
MUST DO
10 MIN.

(Scaffold the students to complete the activity.)

Teacher: Excellent. This helps us understand directions, which is very important for using and reading maps.

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

Auditory



Teacher: Now, listen carefully as I read out a set of questions.

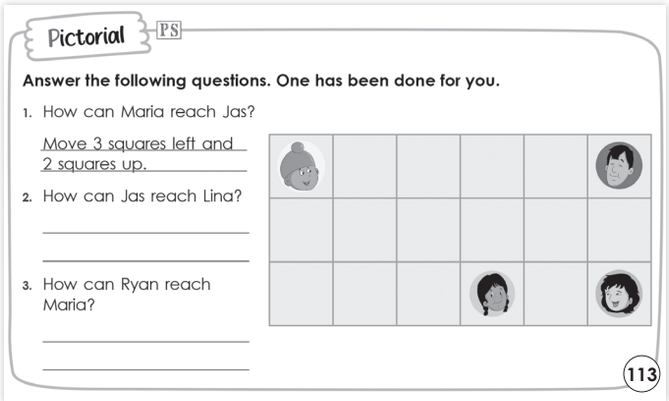
MUST DO
5 MIN.

Teacher: Once upon a time, in a village to the east, there stood a cosy house where a little mouse lived. To the north of the house, there stretched a vast forest with tall trees and chirping birds. To the south, a winding river flowed, where colourful fishes swam. And to the west, beyond the fields, the sunset in a blaze of orange and red every evening.

1. Where does the little mouse live?
2. What lies to the north of the cosy house?
3. Which direction does the river flow?

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

Pictorial



Teacher: Now, open your books to page 113 and look at the grid.

MUST DO
5 MIN.

Teacher: The first question is done for you: How can Maria reach Jas?

Teacher: Yes, the answer is: move 3 squares left and 2 squares up.

Teacher: Question 2: How can Jas reach Lina?

Teacher: Question 3: How can Ryan reach Maria?

(Scaffold the students to complete the activity.)

Teacher: Well done, everyone. Let us give ourselves a huge round of applause for your hard work. See you in the next class.

Differentiated Activity

110 km/hr

Imagine you are a robot moving in a maze. Draw a 5×5 grid. Mark the start and end points. Write clear instructions to reach the end using left, right, up and down steps.

80 km/hr

Draw a simple room map. Mark the positions of the bed, table and cupboard. Write two lines describing how to go from the bed to the cupboard using directions.

40 km/hr

Draw a square divided into 4 equal parts. Place a star in one part. Use simple phrases like 'move right' or 'move up' to describe how to reach the star from each side.

Home Task

Create a direction wheel using a paper plate or a circle on paper. Divide it into four parts and label them as North, South, East and West. Draw one object in each direction based on your surroundings.

Period 2

SHOULD DO
5 MIN.

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

Teacher: Let us begin with a quick warm-up based on our previous class. I will ask some questions and you will answer them. Ready?

Teacher: What does a map help us find?

Teacher: Yes, it helps us find roads, rivers and places.

Teacher: On most maps, which direction is always at the top?

Teacher: Yes, it is North.

Teacher: What is opposite to East on a map?

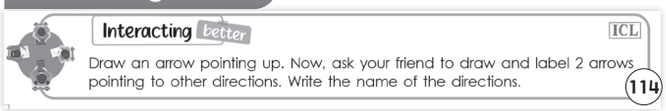
Teacher: That is West.

Teacher: If you are facing North, which direction is to your right?

Teacher: Right, it is East.

Teacher: Excellent. Let us now do an interesting partner activity.

Interacting better



MUST DO

5 MIN.

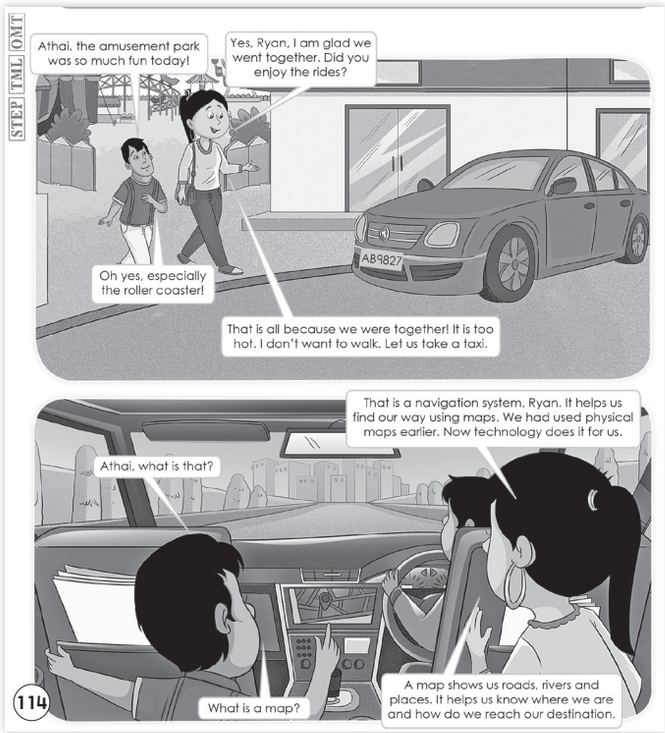
Teacher: Everyone, please open the 'Interacting better' section on the page 114.

Teacher: Draw an arrow pointing up in your notebook. This arrow shows one direction.

Teacher: Now, ask your friend to draw and label two more arrows pointing to other directions.

Teacher: Write the names of the directions clearly next to each arrow.

Teacher: Very nice. This helps us understand directions better through partner work.



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

MUST DO

20 MIN.

Teacher: Look at the story pictures on page 114. Who would like to describe what Ryan and Athai are talking about?

Teacher: Yes, they are returning from the amusement park and decide to take a taxi.

Teacher: What do they see in the car while travelling?

Teacher: That is a navigation system. It uses maps to help find directions.

Teacher: What is the difference between maps used earlier and now?

Teacher: Earlier, we used paper maps. Now, technology shows us maps through digital screens.

Teacher: What question does Ryan ask when he sees the screen?

Teacher: He asks, what is a map? Good listening.

Teacher: And what does Athai explain about maps?

Teacher: She says that a map shows roads, rivers and places and helps us find our destination.

COULD DO

10 MIN.

Teacher: Let us now do a fun map symbol-matching activity.

Teacher: On the board, I have drawn different symbols like a tree, a house, a river and a road.

Teacher: I will call out the name of the place and you will point to the correct symbol.

Teacher: Ready?

Teacher: Tree – which one is it?

Teacher: House – point to it.

Teacher: River – show it on the board.

Teacher: Road – correct, it is the long line.

Teacher: Great. Maps use simple symbols to show things clearly. Keep practising these.

Teacher: Well done, everyone. Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activity

110 km/hr

Imagine you are using a map to find a treasure. Draw a simple grid and mark your house, a tree, a pond and a treasure box. Write directions to go from your house to the treasure.

80 km/hr

Draw a road map from your house to your school. Show at least three turns using arrows. Label each direction (left, right, straight)

40 km/hr

Draw a compass rose and label the four main directions. Colour each arrow in a different colour.

Home Task

Write four sentences using the words left, right, forward and backward to describe any movement you do at home.

Period 3

SHOULD DO

5 MIN.

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

Teacher: Let us quickly revise what we learnt in the previous period.

Teacher: What tool in the car helped Athai and Ryan find the way?

Teacher: Yes, the navigation system.

Teacher: What question did Ryan ask when he saw the screen?

Teacher: He asked, what is a map?

Teacher: What does a map help us with?

Teacher: It helps us know where we are and how to reach a place.

Teacher: What activity did we do with arrows and directions?

Teacher: We drew arrows and labelled directions like North and East.

Teacher: Well done. Now we are ready to learn more about maps today. Everyone please open page 115 in the Main Coursebook.

Maps

MAPS

A **map** is a visual representation of places on a flat surface. A map cannot be the same size as the actual area. So, the measurements are scaled down. Maps show the world, countries, states, cities and information related to them. Maps have scales, keys and so on that gives us useful information.

115

MUST DO

5 MIN.

Teacher: What do you think a map looks like?

Teacher: Yes, it is like a picture of a place from above.

Teacher: Do you think the size of places on a map is the same as in real life?

Teacher: No, maps are smaller because they are scaled down.

Teacher: Why do we use maps?

Teacher: Maps show roads, cities, rivers and other features of the world, all on a flat surface.

Components of A Map

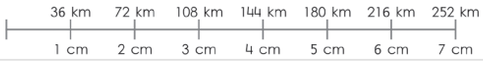
Scale

COMPONENTS OF A MAP

Scale

Scale helps us represent the picture of anything, but in a smaller size, without affecting its shape.

The ground distance between Delhi and Chandigarh is about 252 km. It is not possible to represent this actual distance on a map. Therefore, this distance is represented by a smaller unit, say 1 cm, on the map, for every 36 km on the ground.



115

MUST DO

10 MIN.

Teacher: What is a scale used for in a map?

Teacher: Good thinking, it shows large distances in smaller sizes.

Teacher: If 1 cm on a map equals 36 km on the ground and the distance between two cities is 252 km, how many centimetres would that be on the map?

Teacher: Let us solve it. 252 divided by 36 is 7. So, we draw 7 cm.

Teacher: Yes, very good. That means we can show long distances in small measurements. That is how scale works on a map.

You may show the **Explainer Video** given on the digital platform.

Keys

Keys

A key is sometimes also called a legend. Map keys use symbols, colours, lines and signs to represent various features on a map. They are usually located at the bottom left or right of a map.

115

MUST DO

10 MIN.

Teacher: Now, let us talk about keys. Everyone please open page 115. Have you seen symbols like a tree or a hut on a map?

Teacher: Yes, those are part of the key or legend.

Teacher: What does a key tell us?

Teacher: Correct, it explains what each symbol or colour means on the map.

Teacher: Where is the key usually found on a map?

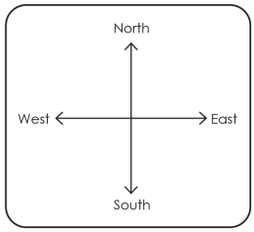
Teacher: Good observation. It is usually at the bottom left or right corner.

Teacher: The key helps us understand the symbols used, so we can read the map better.

Directions

Directions

Direction plays a very important role in reading maps. The four main directions are North (N), South (S), East (E) and West (W).



Example 1: Read the given camp map and answer the following questions.

a. Label N, S, E and W on the camp map.

b. Write the directions to fill in the blanks.

i. The cabins are **West** of the tents.

ii. The rowboats are **East** of the campfire.

iii. The camping trailers are **North** of the tents.

115

MUST DO

10 MIN.

Teacher: Let us look at directions section now. What are the four main directions on a map?

Teacher: Yes, North, South, East and West.

Teacher: If you face North, what direction is on your right?

Teacher: Yes, East.

Teacher: What direction is opposite to North?

Teacher: Good, South.

Teacher: These directions help us find places and describe positions. Very good thinking.

Teacher: Open your book and look at the camp map given in Example 1.

Teacher: First, label North, South, East and West on the map. Done? Great.

Teacher: Let us answer the questions together.

Teacher: The cabins are _____ of the tents. Who will try?

Teacher: Yes, they are to the West. Good job.

Teacher: The rowboats are _____ of the campfire.

Teacher: Correct, they are to the East.

Teacher: The camping trailers are _____ of the tents.

Teacher: Yes, North of the tents. You are reading the map really well. Great teamwork.

Map not to scale

Teacher: Now let us look at the map of India in your book. Everyone, please open it and observe carefully.

Teacher: What do you see on this map?

Teacher: Yes, you can see states, capitals and boundaries. Good observation.

Teacher: What do the red squares represent?

Teacher: Yes, these show the capitals of states and Union Territories.

Teacher: What do the blue and black lines represent?

Teacher: The blue lines show water boundaries like seas or oceans. The black lines show land boundaries between states or countries. Well done.

Teacher: What is shown at the top right corner of the map?

Teacher: Correct, that is a compass. It shows North, South, East and West, which helps us understand the direction on the map.

Teacher: If you look at Gujarat and Maharashtra, are they on the eastern or western side of India?

Teacher: Yes, they are in the west.

Teacher: What about West Bengal and Assam?

Teacher: Good, they are in the east. This is how directions help us read large maps too.

Teacher: Well done, everyone. Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activity

110 km/hr

Draw a simple map of a school picnic ground. Mark four spots: gate, tree, swings and hall, etc. Use directions and symbols. Create a key.

80 km/hr

Make a drawing of four places near your home. Draw arrows and label directions (e.g., the shop is to the East). Use a compass symbol too.

40 km/hr

Draw a plus sign. In the centre, write 'My House'. Use arrows pointing up, down, left and right. Write North, South, East and West.

Home Task

Find any printed or digital map at home. List any two symbols you see and write what each one means.

Period 4

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

SHOULD DO
5 MIN.

Teacher: Let us begin with a quick revision of what we learnt in the last class.

Teacher: What is a scale used for on a map?

Teacher: Yes, it helps us show real distances in smaller sizes.

Teacher: What is a key or legend on a map?

Teacher: Good, it explains the meaning of symbols or colours.

Teacher: What are the four main directions on a map?

Teacher: Correct, North, South, East and West. Great. Now we are ready for today's tasks. Everyone, please open page 116 in the Main Coursebook.

1 The distance between Building A and Building B on a map is 4.5 cm. The scale of the map is 1 cm = 15 km. Find the actual distance on ground. Write the answer in your notebook. 116

MUST DO
5 MIN.

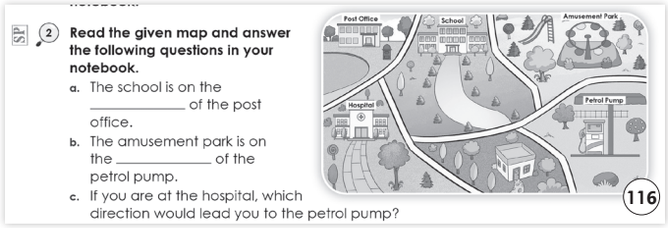
Teacher: Let us look at the Exercise 1: The distance between Building A and Building B is 4.5 cm. The scale is 1 cm = 15 km.

Teacher: How do we find the actual distance on the ground?

Teacher: Yes, we multiply the map distance by the scale value.

Teacher: So, 4.5 × 15 = 67.5 km.

Teacher: Good work. Write this neatly in your notebook.



Teacher: Now look at the map showing the school, post office, hospital, petrol pump and amusement park in Exercise B.

MUST DO
5 MIN.

Teacher: a. The school is on the _____ of the post office.

Teacher: Yes, it is on the North.

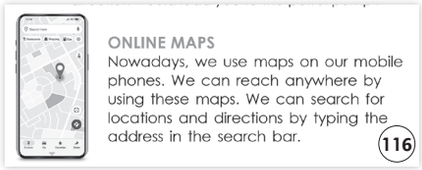
Teacher: b. The amusement park is on the _____ of the petrol pump.

Teacher: Correct, it is on the North.

Teacher: c. If you are at the hospital, which direction would you move to reach the petrol pump?

Teacher: Yes, move East. Very good observation

Online Maps



Teacher: Have you ever used a map on your phone or seen someone use it?

MUST DO
10 MIN.

Teacher: Yes, online maps help us reach places using technology.

Teacher: What do we type in the search bar?

Teacher: Good, we type the name or address of the place.

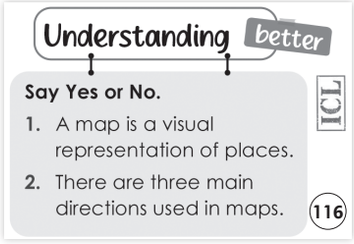
Teacher: How is this different from a paper map?

Teacher: Yes, a paper map does not give real-time directions, while an online map can guide us step by step.

Teacher: Well said. Both are useful in different ways.

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

Understanding better



Teacher: Let us move to the 'Understanding better' section given on page 116.

MUST DO
5 MIN.

Teacher: This is a Yes or No activity. Let us read the statements together.

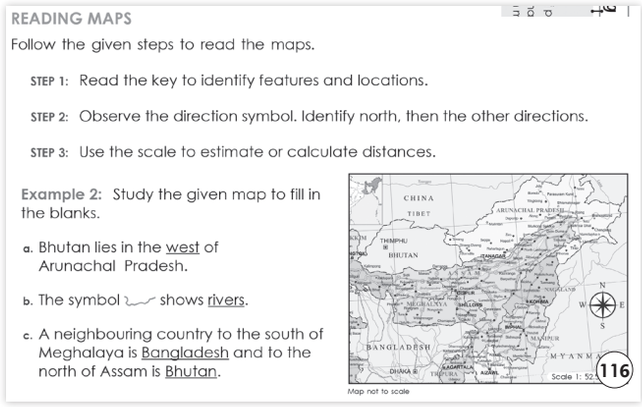
Teacher: 1. A map is a visual representation of places. Yes or No?

Teacher: Yes. Good

(Guide students to complete the activity.)

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

Reading Maps



Teacher: Now let us learn how to read maps using steps given on page 116.

MUST DO
10 MIN.

Teacher: What does the key help us identify?

Teacher: Yes, symbols and features.

Teacher: Why do we check the direction symbol first?

Teacher: To find North and understand where other directions are. Excellent.

Teacher: What do we use to calculate real distances?

Teacher: The scale. Good work.

(Discuss the steps with the students.)

Teacher: Let us answer Example 2 questions:

Teacher: a. Bhutan lies in the _____ of Arunachal Pradesh.

Teacher: West. Well done.

(Discuss the example with the students.)

Teacher: Well done, everyone. Let us have a huge round of applause for our hard work today. See you in the next class.

Differentiated Activity

110 km/hr

Draw a map of your local area. Add any three places and use arrows to show directions from your house.

80 km/hr

Create a treasure map with a key, scale and compass. Write two direction clues to reach the treasure.

40 km/hr

Draw a simple grid map with a house at the centre. Place one object in each direction and label them.

Home Task

Discuss with a family member how they use maps to find places. Or write about your own experience using a map. Describe how it helped and why it was useful.

Period 5

SHOULD DO 5 MIN.

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

Teacher: Let us quickly recall what we did in previous period.

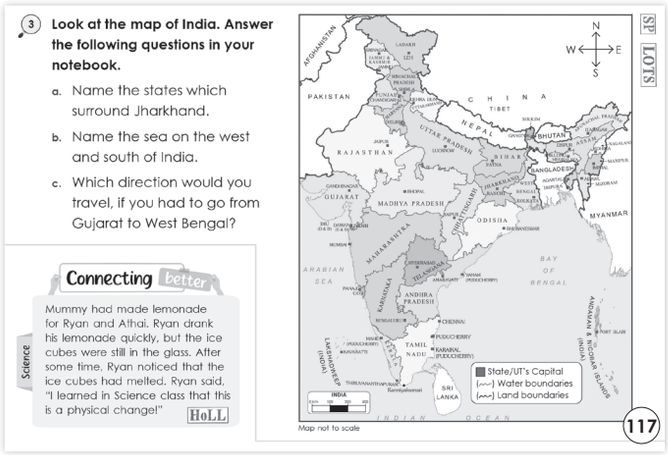
Teacher: What is the difference between printed maps and online maps?

Teacher: Yes, printed maps are static, but online maps give real-time directions. Good.

Teacher: What three steps do we follow to read a map?

Teacher: Read the key, observe the direction symbol and use the scale. Well remembered.

Teacher: Great. Let us now move ahead and apply these skills today.



3 **Look at the map of India. Answer the following questions in your notebook.**

a. Name the states which surround Jharkhand.

b. Name the sea on the west and south of India.

c. Which direction would you travel, if you had to go from Gujarat to West Bengal?

Connecting better

Mummy had made lemonade for Ryan and Athai. Ryan drank his lemonade quickly, but the ice cubes were still in the glass. After some time, Ryan noticed that the ice cubes had melted. Ryan said, "I learned in Science class that this is a physical change!"

Science

HoLL

SP LOTS

State/UT's Capital
Water boundaries
Land boundaries

Map not to scale

117

MUST DO 5 MIN.

Teacher: Let us now solve Exercise 3 from the book. Open to the map of India given on page 117.

Teacher: a. Name the states that surround Jharkhand.

Teacher: Look at the borders and tell me. Yes, Bihar, West Bengal, Odisha, Chhattisgarh and Uttar Pradesh.

Teacher: b. What sea lies to the west and south of India?

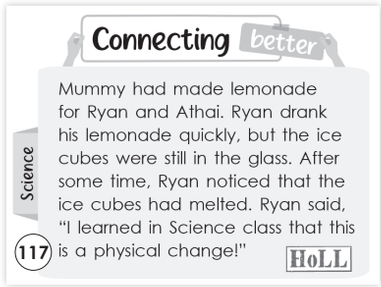
Teacher: Correct, the Arabian Sea is to the west and the Indian Ocean is to the south.

Teacher: c. If you travel from Gujarat to West Bengal, which direction would you go?

Teacher: Towards the east. Yes, that is right.

Teacher: These questions show how map reading helps us understand where states and countries are located in real life.

Connecting better



Connecting better

Mummy had made lemonade for Ryan and Athai. Ryan drank his lemonade quickly, but the ice cubes were still in the glass. After some time, Ryan noticed that the ice cubes had melted. Ryan said, "I learned in Science class that this is a physical change!"

Science

117

HoLL

MUST DO 5 MIN.

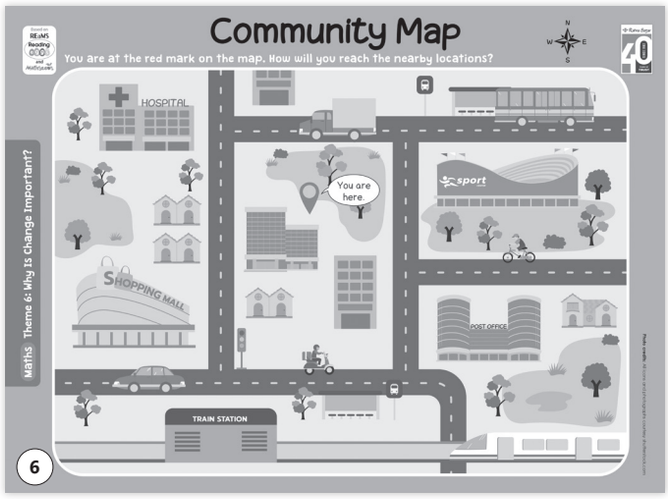
Teacher: Let us look at the 'Connecting better' section. Who will read and explain it?

Teacher: What happens to ice cubes when left out for some time?

Teacher: They melt. Yes and that is called a physical change. Very good.

Teacher: In the same way, we use science and observation when reading maps. We look carefully, make sense of symbols and draw conclusions.

Poster



MUST DO 10 MIN.

Teacher: Look at the Community Map on the screen. Imagine you are at the red mark.

Teacher: How will you reach the nearest hospital?

Teacher: Good, move straight and take a left.

Teacher: Can someone tell me how to get to the shopping mall?

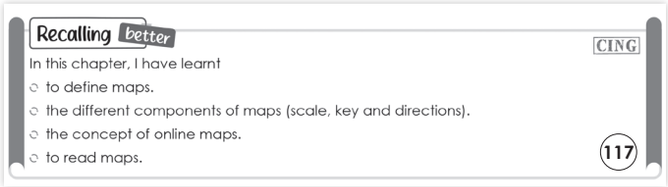
Teacher: Yes, turn right from the red mark and then go straight.

(Discuss more questions in the same way.)

Teacher: Now in pairs, prepare a small poster showing directions from the red mark to any two places. Use arrows and symbols.

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

Recalling better


Recalling better

CING

In this chapter, I have learnt

- to define maps.
- the different components of maps (scale, key and directions).
- the concept of online maps.
- to read maps.

117

Teacher: Let us move to the 'Recalling better' section.

MUST DO

10 MIN.

Teacher: What is a map and how is it useful?

Teacher: Yes, it is a picture of a place and helps us find directions.

Teacher: What are the components of a map?

Teacher: Scale, key and directions. Great.

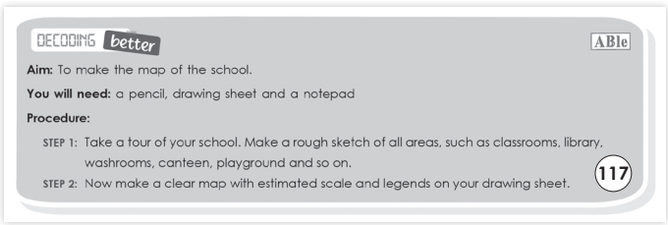
Teacher: How do online maps make our life easy?

Teacher: They give step-by-step directions to reach a location. Excellent.

Teacher: Can you name one place where you used a map recently?

(Discuss more questions with the students.)

Decoding better


DECODING better

ABIe

Aim: To make the map of the school.

You will need: a pencil, drawing sheet and a notepad

Procedure:

STEP 1: Take a tour of your school. Make a rough sketch of all areas, such as classrooms, library, washrooms, canteen, playground and so on.

STEP 2: Now make a clear map with estimated scale and legends on your drawing sheet.

117

Teacher: Let us move to 'Decoding better' on page 117.

MUST DO

5 MIN.

Teacher: Today you will begin sketching a map of your school. Start by thinking of places like classrooms, library, playground and canteen.

(Guide the students to complete the activity.)

Differentiated Activity

110 km/hr

Create a floor map of your home using symbols for kitchen, bedroom, etc. Add a compass and use scale to show distance between two rooms.

80 km/hr

Make a drawing of the route from your house to the school. Use 3 arrows to show turns and label directions.

40 km/hr

Draw a simple layout of your classroom. Use arrows to mark the teacher's desk, blackboard and door with direction labels.

Home Task

Draw a simple map of your neighbourhood. Include any four places like your house, a shop, a park or a school. Use arrows to show directions and add symbols with a key.

Period 6

SHOULD DO

5 MIN.

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

Teacher: Let us begin with a quick game. I will say a location and you tell me which direction it lies in on a map of India.

Teacher: In which direction is Tamil Nadu from Delhi?

Teacher: Yes, South.

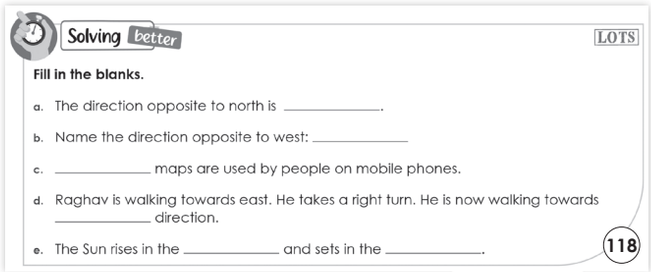
Teacher: Which side is the Arabian Sea on the map of India?

Teacher: West. Good.

Teacher: Which state lies between Jharkhand and Chhattisgarh?

Teacher: Odisha. Well done. Let us move to solve questions. Everyone please open page 118 in the Main Coursebook.

Solving better


Solving better

LOTS

Fill in the blanks.

a. The direction opposite to north is _____.

b. Name the direction opposite to west: _____

c. _____ maps are used by people on mobile phones.

d. Raghav is walking towards east. He takes a right turn. He is now walking towards _____ direction.

e. The Sun rises in the _____ and sets in the _____.

118

Teacher: Open to the 'Solving better' section. Let us solve the blanks together.

MUST DO

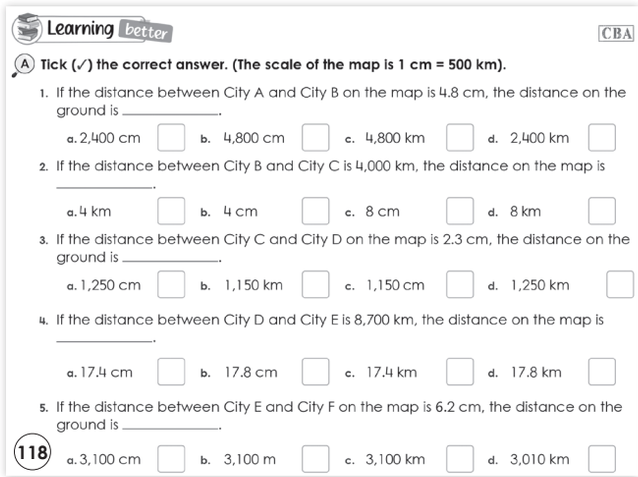
5 MIN.

Teacher: a. The direction opposite to North is?

Teacher: South. Correct.

(Guide the students to complete the questions.)

Learning better


Learning better

CBA

A Tick (✓) the correct answer. (The scale of the map is 1 cm = 500 km).

1. If the distance between City A and City B on the map is 4.8 cm, the distance on the ground is _____.
   a. 2,400 cm ☐ b. 4,800 cm ☐ c. 4,800 km ☐ d. 2,400 km ☐
2. If the distance between City B and City C is 4,000 km, the distance on the map is _____.
   a. 4 km ☐ b. 4 cm ☐ c. 8 cm ☐ d. 8 km ☐
3. If the distance between City C and City D on the map is 2.3 cm, the distance on the ground is _____.
   a. 1,250 cm ☐ b. 1,150 km ☐ c. 1,150 cm ☐ d. 1,250 km ☐
4. If the distance between City D and City E is 8,700 km, the distance on the map is _____.
   a. 17.4 cm ☐ b. 17.8 cm ☐ c. 17.4 km ☐ d. 17.8 km ☐
5. If the distance between City E and City F on the map is 6.2 cm, the distance on the ground is _____.
   a. 3,100 cm ☐ b. 3,100 m ☐ c. 3,100 km ☐ d. 3,010 km ☐

118

Teacher: Let us now solve one question from Exercise A with your partner.

MUST DO
5 MIN.

Teacher: Read question 1: If the distance between City A and B is 4.8 cm and the scale is 1 cm = 500 km, what is the distance on the ground?

Teacher: Multiply 4.8 by 500. Yes, the answer is 2400 km.

Teacher: Good. Now solve the rest of the questions with your partner.

B **Answer the following questions. Write the answers in your notebook.**

1. What is a key? How can you use a key to improve your map reading skills?
2. Write five benefits of a map.

118

Teacher: Now form groups of four. Open to Exercise B. Let us read the first question together.

MUST DO
10 MIN.

Teacher: What is the key? How can it improve your map reading skills?

Teacher: A key tells us what the symbols on a map mean. If you see a triangle or circle, the key tells you if it means a mountain, temple or something else. Yes, well done.

Teacher: Each group will now discuss and write the answers to both questions.

MUST DO
5 MIN.

C **Study the map of India given below, showing the climate of each place and its key. Then, fill in the blanks.**

1. Lucknow has _____ climate.
2. Chennai has _____ climate.
3. Bhopal has _____ climate.
4. _____ region with a sub-tropical wet and dry.
5. _____ and _____ are located in a region with a tropical wet climate.

119

Teacher: Open to page 119 and look at the map.

Teacher: Look at the first question: What climate does Lucknow have?

Teacher: Yes, Sub-tropical Wet and Dry. Very good.

Teacher: Now complete the rest of the questions on your own in your books.

COULD DO
10 MIN.

Teacher: Take out your notebooks and a pencil.

Teacher: Draw a simple plus-shaped compass. Label North, South, East and West.

Teacher: Now, think of any four places around your home or school. Write one place in each direction.

Teacher: For example, if your school is to the east of your house, write 'School' in the east direction.

Teacher: Wonderful effort today. Let us all clap for ourselves and give a big round of applause for learning to draw, read and understand maps with clarity and confidence. See you in the next class.

Differentiated Activity

110 km/hr

Draw a map of India. Mark five cities. From each city, write which direction you would go to reach the next one. Use a compass arrow and key.

80 km/hr

Draw two cities on a rough India map and show their climate using symbols. Mention the direction between them.

40 km/hr

Draw a simple plus sign and label the four directions. Think of one nearby place and write it next to the correct direction.

Home Task

Draw a simple map of your home or school. Mark three areas using symbols and write directions from one place to another. Add a key.

Bring your 'Little Book' in the next class for 'Revising better' activity.

Period 7

SHOULD DO
5 MIN.

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

Teacher: Let us revise with a quick question round. I will ask questions and you will answer together.

Teacher: What is the direction opposite to east?

Teacher: Yes, west. Well done.

Teacher: If you move from your school to your house and it is towards the north, what direction would the school be from your house?

Teacher: South. Good thinking.

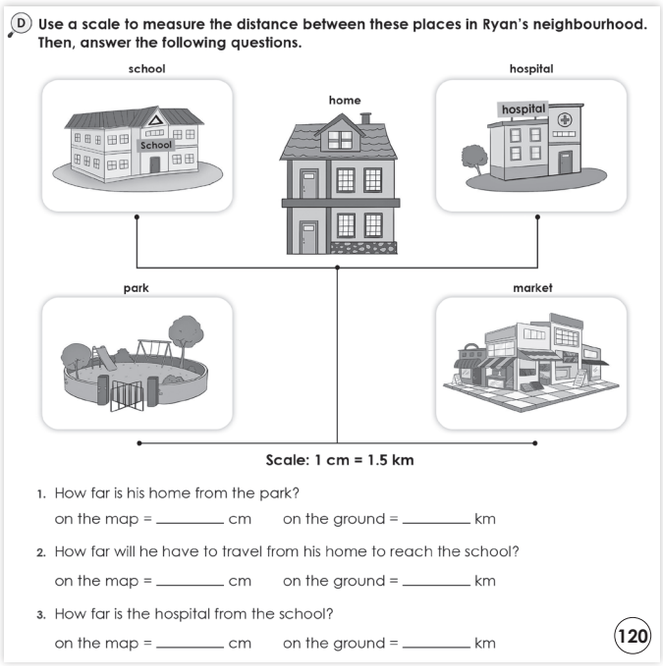
Teacher: What do we call the symbols and signs on a map that help us understand places?

Teacher: Yes, a key. Very good.

Teacher: What does a scale on a map help us do?

Teacher: It helps us measure actual distances. Great.

Teacher: Excellent answers. Let us now move ahead with today's activities.



Teacher: Everyone open to page 120. We will solve Exercise D.

MUST DO
10 MIN.

Teacher: Read question 1. How far is his home from the park?

Teacher: Check the scale :1 cm = 1.5 km. Measure the distance and multiply.

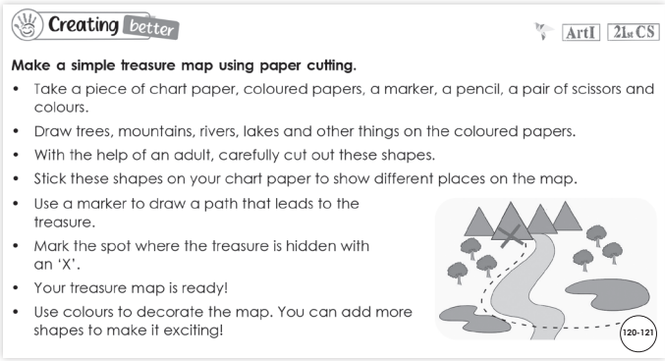
Teacher: If it is 4 cm on the map, what is the real distance?

Teacher: Yes, 4 × 1.5 = 6 km. Good job.

Teacher: Solve the remaining questions with your partner.

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

Creating better



Teacher: Now look at the 'Creating better' section on page 120. (Guide the students to complete the activity.)

MUST DO
15 MIN.

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

Thinking better

Teacher: Let us move to 'Thinking better' activity.

MUST DO
5 MIN.

Teacher: Vaibhav's shadow was along the east direction. It was evening. Which direction was he facing?

Teacher: Yes, shadows fall in the opposite direction of the sun. In the evening, the sun is in the west, so shadow falls east.

(Guide the students to complete the activity.)

Choosing better

Teacher: Let us discuss this story of Arjun and the neighbourhood gathering.

Teacher: If you were Arjun, would you join the gathering? Why or why not?

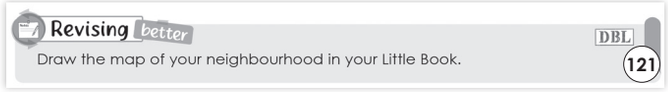
Teacher: Discuss your answer with your partner for two minutes.

Teacher: Now raise your hands and share your opinion with the class.

Teacher: Great, some of you said yes because you like meeting people and others said no because it makes you nervous. That is okay. Everyone is different.

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

Revising better



Teacher: Let us move to the 'Revising better' section. Open your 'Little book' to complete the activity.

MUST DO
5 MIN.

Teacher: Draw a simple map of your neighbourhood in your notebook. Mark three places around your house and label them with directions.

Teacher: Use a plus symbol to show directions. Take your time and finish this neatly.

Teacher: Well done, everyone. You have worked hard today and used your imagination, knowledge and discussion skills. Let us all clap for ourselves. See you in the next class.

Differentiated Activity

110 km/hr

Imagine you are planning a fun fair in your colony. Draw a map of where stalls, games and entry points would be, using directions and keys.

80 km/hr

Think of three places around your home. Draw arrows to show their directions from your house using a compass.

40 km/hr

Draw a simple map of your classroom. Show the position of the door, windows, teacher's table and your seat using directions like north, south, east and west.

Home Task

Discuss with a family member how you travel to three nearby places. Then, draw a small map to show the route and write one direction for each.

Period 8

SHOULD DO — 5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us think about directions in a new way today. I will describe some places and you will tell me which direction they are in.

Teacher: If you are standing at the bus stop and the bakery is to your left, which direction is the bakery from the bus stop?

Teacher: Yes, that would be West.

Teacher: Now, imagine you are in your classroom and the playground is in front of you. Which direction is the playground from your classroom?

Teacher: Correct, the playground is in the North.

Teacher: Let us move on to the worksheets. Everyone please open page 40 in the Workbook.

Worksheet 1

Theme 6: Why Is Change Important?

10. Mapping Skills

Worksheet 1

A. Define the following terms.

1. keys _____
2. maps _____
3. scale _____
4. directions _____
5. online maps _____

B. The scale on the map is 4 cm = 1 km. Calculate the actual distance, if the distance shown on the map is

1. 12 cm _____
2. 24 cm _____
3. 32 cm _____
4. 48 cm _____
5. 144 cm _____

C. Write true or false.

1. There are ten main directions. _____
2. Key is also called legend. _____
3. Online maps help to search for locations. _____
4. A map is always shown in the same size as the actual area. _____
5. Scale is used to represent the picture of anything but in a smaller size. _____

40

MUST DO — 15 MIN.

Teacher: Let us begin with Exercise A in Worksheet 1.

Teacher: The first question asks you to define **keys**. Who can tell me what a 'key' in a map is?

Teacher: Now, let us move on to Exercise B.

Teacher: Here, we are asked to calculate the actual distance based on the map's scale. The scale on the map is 4 cm = 1 km. So, if the distance on the map is 12 cm, what will the actual distance be?

Teacher: Now, let us go to Exercise C in Worksheet 1.

Teacher: This exercise asks us to write true or false. The first statement says, "There are ten main directions." What do you think? Is it true or false?

Teacher: Yes, this statement is false. There are only four main directions – North, South, East and West.

(Guide students to complete the worksheet 1.)

You may show the **Mental Maths** given on the digital platform.

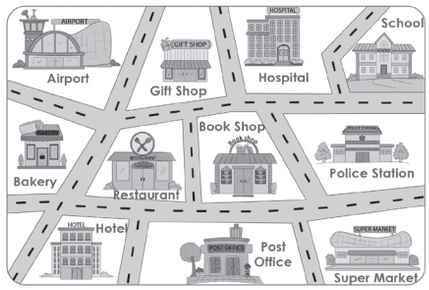
Worksheet 2

Worksheet 2

A. Write the names of the four main directions.

_____ _____ _____ _____

B. On the basis of the given map, answer the following questions.



1. Circle the correct answer.

a.	What is in the north of the restaurant?	gift shop	hotel
b.	What is in the east of the hospital?	school	airport
c.	What is in the west of the school?	super market	airport
d.	What is in the east of the gift shop?	hospital	bakery
e.	What is in the west of the police station?	school	restaurant

2. Write true or false.

a. School is in the south of the airport. _____
b. Bakery is in the east of the book shop. _____
c. Gift shop is in the east of the hospital. _____
d. Book shop is in the east of the restaurant. _____
e. Restaurant is in the north of the hotel. _____

41

MUST DO — 20 MIN.

Teacher: Let us start with Exercise A in Worksheet 2.

Teacher: The first question asks you to write the names of the four main directions. Can anyone tell me the names of these directions?

Teacher: Yes, the four main directions are North, South, East and West. Great job, everyone.

Teacher: Now, let us move to Exercise B.

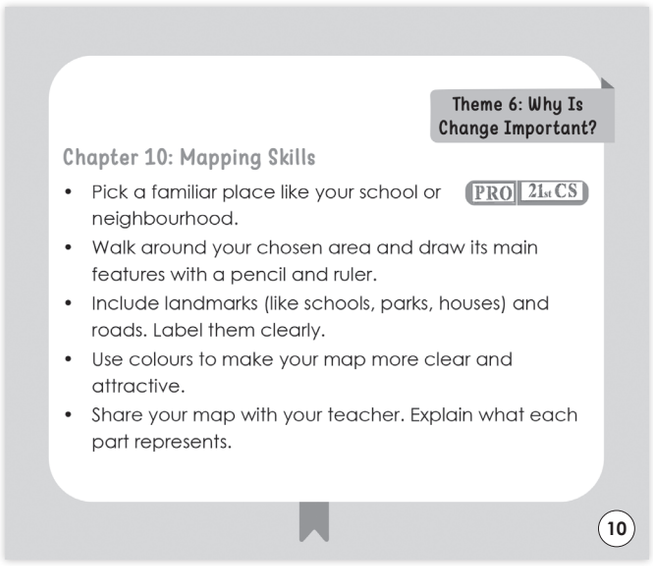
Teacher: This question asks you to answer based on the map. Look at question 1 What is in the north of the restaurant? What do you think?

Teacher: Yes, the answer is gift shop. The gift shop is in the north of the restaurant. Well done.
Teacher: Now, let us look at question (b) What is in the east of the hospital? What do you think is in the east?
(Guide students to complete the worksheet 2.)
You may generate additional practice worksheets using the **Test Generator** given on the digital platform
Teacher: Well, done today, everyone. Let us all give ourselves a round of applause. You did an excellent job. See you in the next class.

Differentiated Activity

110 km/hr
Can you make a detailed map of a place you visit regularly, like a market or amusement park? Label all the shops, entrances and important spots.
80 km/hr
Draw a map of your home or school and mark the important places like the kitchen, classroom or playground. Make sure you use directions on the map.
40 km/hr
Draw a simple map of your room or the area around your home. You can use shapes to represent things like furniture or the road.

Home Task

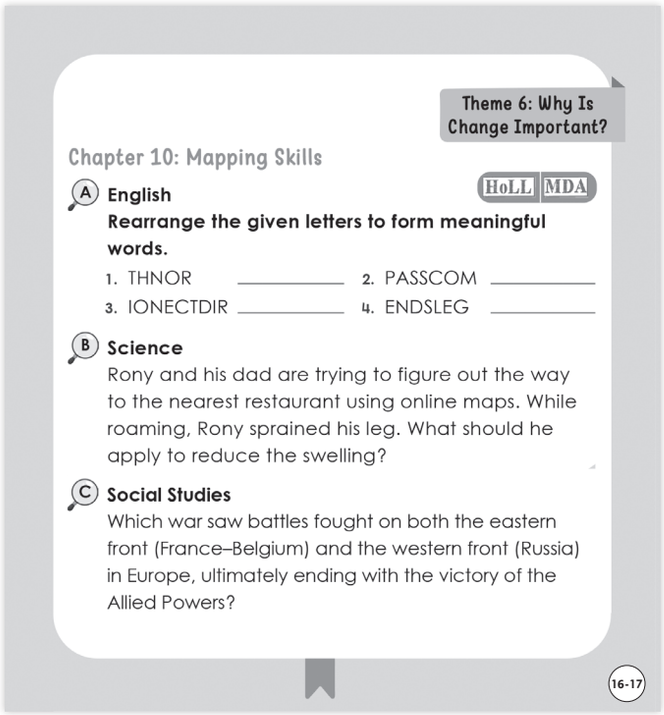


Complete the project by following the given instructions:
- Pick a familiar place like your school or neighbourhood.
- Walk around your chosen area and draw its main features with a pencil and ruler.
- Include landmarks (like schools, parks, houses) and roads. Label them clearly.
- Use colours to make your map more clear and attractive.
- Discuss the map in the classroom . Explain what each part represents.

Period 9

Teacher: Good morning students. How are you today?
SHOULD DO 5 MIN.
Teacher: Let us start today's class with an interactive game called "Direction Detective."
Teacher: I will describe a place or object in the room and you will tell me which direction it is in from where I am standing. Ready?
Teacher: The first one: I am standing at the front of the class and the board is in front of me. What direction is the board in from my position?
Teacher: Yes, the board is in front of me, which is North.
Teacher: Now, here is another one: If I am facing the window and the door is on my right, which direction is the door in?
Teacher: Correct. The door is to the East.
Teacher: Great. Now that we have warmed up, let us jump into today's lesson.
(Modify the questions as needed.)
SHOULD DO 10 MIN.
Teacher: Now, we will do an exciting activity where you will create your own adventure map.
Teacher: Imagine you are going on a treasure hunt in your school or neighbourhood. Your task is to draw a map that shows the way to the treasure.
Teacher: Start by drawing a rough outline of the area (it could be your school, park or even a street near your home).
Teacher: Label important landmarks like the school gate, garden, playground or any other features. Use North, South, East and West to show directions clearly.
Teacher: You can make the map fun and creative by adding symbols like trees, roads or houses. Do not forget to include a key or legend to explain your symbols.
Teacher: Once you have finished, share your map with a partner. Discuss the directions you used and how you would find the treasure based on the map.

Book of Holistic Teaching


Theme 6: Why Is Change Important?

Chapter 10: Mapping Skills

HoLL MDA

A **English**

Rearrange the given letters to form meaningful words.

1. THNOR _____ 2. PASSCOM _____
3. IONECTDIR _____ 4. ENDSLEG _____

B **Science**

Rony and his dad are trying to figure out the way to the nearest restaurant using online maps. While roaming, Rony sprained his leg. What should he apply to reduce the swelling?

C **Social Studies**

Which war saw battles fought on both the eastern front (France–Belgium) and the western front (Russia) in Europe, ultimately ending with the victory of the Allied Powers?

16-17

(Refer to the Book of Holistic Teaching, page 16, 17 under the title 'Mapping Skills.' 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.)

COULD DO

10 MIN.

Book of Project Ideas

(Discuss the project assigned in the previous period, focusing on helping students understand the objectives and addressing any challenges they faced.)

COULD 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 learned in this chapter.

SHOULD DO

5 MIN.

Teacher: Think about the topics, have we learnt and write them 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.

Differentiated Activity

110 km/hr

Create a detailed map of your local area or a place you are familiar with. Include roads, landmarks and use a scale. Label all the important locations and directions. Make sure your map is clear, with a key or legend to explain the symbols used. You can even include a route that leads to a specific destination using directions like North, South, East, and West.

80 km/hr

Draw a map of your school or neighbourhood. Include at least four landmarks like your school, park, home or any place you visit regularly. Mark the directions using North, South, East and West. Add a key to explain the symbols used on your map.

40 km/hr

Draw a simple map of your classroom or home. Use basic shapes like squares for rooms or circles for tables and chairs. Label the main directions—North, South, East and West. This will help you understand how to use directions in your own environment.

Home Task

Practise the questions discussed in the next class.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• draw and label maps using correct directions.
Socio-Emotional and Ethical Development	• work in pairs and groups to complete mapping tasks with cooperation and respect.
Cognitive Development	• calculate actual distances using map scales and identify locations using map components.
Language and Literacy Development	• describe routes and explain map symbols using appropriate directional vocabulary.
Aesthetic and Cultural Development	• create neat and colourful maps using keys, symbols and compass directions
Positive Learning Habits	• complete KWL charts, participate in discussions and submit projects with • attention to detail.

Starry Knights

Do you use online maps to reach your destination? Is it convenient or confusing? Please share your view here.

Award your self the STAR you deserve. ☺