Lesson-15: Data Handling

10 Periods (40 minutes each)

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

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

Confirming better: I exercise to keep my body fit.

Curricular Goals and Objectives (NCF)

To enable the students:

- to represent data using pictographs, bar graphs and tables.
- to collect and organise data using simple methods such as tally marks.
- to read and interpret information from bar graphs and pictographs.
- to draw conclusions and answer questions based on the data presented.
- to compare quantities and identify trends or patterns from given data.
- to use data to make predictions and solve real-life problems.
- to understand the purpose of collecting and displaying data in everyday situations.

Methodology

Period 1

SHOULD DO 5 MIN.

Teacher: Good morning students. How are you?

Teacher: Today we will start a new chapter, 'Data Handling'. Can anyone know what it means?

(Encourage students to share their ideas.)

Teacher: Yes, data handling is about collecting, organising and interpreting information. For example, when we keep track of how many students are absent in class or how much time we spend on activities, we are handling data!

Teacher: Why do you think it is important to handle data correctly?

Teacher: Correct! Handling data helps us make better decisions, whether it is about how much we exercise or how we organise our daily tasks.

Teacher: Does anyone know some ways we can collect data?

(Encourage responses like surveys, counting, etc.)

Teacher: Well done! We will learn how to organise and use data in different ways. Let us move on and get started.

Confirming better

SHOULD DO 5 MIN.

Teacher: Everyone please open page 157 in the Main Coursebook. We will start with the 'Confirming better' section. Let us take a moment for an affirmation.

Teacher: Repeat after me: I exercise to keep my body fit.

Teacher: Why do you think exercise is important for our body?

(Allow students to share their thoughts.)

Teacher: Yes, exercise keeps us healthy and strong and it is just like handling data. When we practise it regularly, we become better at it!

Teacher: Now, let us move forward and explore how data can help us in our everyday life.

Confirming better I exercise to keep my body fit. PLH 157

SHOULD DO 10 MIN.

Teacher: We have begun a new chapter, Data Handling. I have made a KWL format on the blackboard. Please take out your notebooks and draw the same format in your notebooks.

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

Kinaesthetic

Form groups of five. Each student will choose a shape (for example, circle, square, triangle or rectangle) and represent it using their hands. Count how many students chose the same shapes. Discuss which shape was chosen the most and the least in your group. 157

MUST DO

10 MIN.

Teacher: Everybody, please open page 157 in your Main course book. You will form groups of five. Each student will choose a shape (for example, circle, square, triangle or rectangle) and represent it using their hands.

Teacher: Count how many students choose the same shapes. Discuss which shape was chosen the most and the least in your group.

Teacher: Let us start the activity!

(Allow students to participate and discuss.)

Teacher: Well done! Now, we can understand how to collect and analyse data in a fun way!

(Scaffold the students to complete the activity.)

Auditory

Auditory*

Listen to your teacher carefully. Answer the questions. 157

MUST DO

5 MIN.

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

Teacher: In a class, 5 students like apples, 8 students like bananas and 6 students like oranges.

1. Which fruit do most students like?
2. How many students like apples?
3. How many students like oranges?
4. What is the total number of students?

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

Pictorial

Pictorial PS 157

Archit visited a garden. He counted the number of fruit trees in the garden and recorded the information in a tabular form. (= 5 trees)

Answer the following questions.

1. Which tree grows the most in number?
2. Which tree grows the least in number?
3. How many mango and orange trees are there altogether?
4. How many trees are there in total?

fruits	no. of plants
apple	
mango	
guava	
pears	
orange	

MUST DO

5 MIN.

Teacher: Look at the picture of fruit trees in the garden.

Teacher: Archit counted the number of fruit trees and recorded them in the table.

Teacher: Which tree grows the most in number?

Teacher: How can we figure that out? What should we look at in the table?

Teacher: Yes, we compare the numbers. Which tree has the most?

(Wait for responses.)

Teacher: Good. Now, which tree grows the least in number?

Teacher: Yes, complete the rest of the questions. You may raise your hands if you find any difficulty?

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

Teacher: Well done, everyone. You all did a fantastic work today. Keep observing shapes around you. See you in the next class. Let us give ourselves a big round of applause.

(Use CRM signs to settle the class.)

Differentiated Activities

110 km/hr

Count how many circles, squares and triangles you have in your classroom. Create a pictograph to represent the number of shapes. Which shape is the most common?

80 km/hr

Count the number of books, pencils, erasers and sharpeners in your classroom. Make a neat tally table.

40 km/hr

Write the number of sides each shape has (e.g., a circle has 0 sides, a square has 4 sides, a triangle has 3 sides). Represent this data using tally marks.

Home Task

Ask four family members what their favourite fruit is (apple, banana or orange). Write down the number of people who like each fruit in a table. Then, answer these questions:

1. Which fruit is the most liked?
2. How many people like apples?
3. How many people like oranges?

Period 2

SHOULD DO

5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a fun activity to warm up our minds.

Teacher: I want you to think of a few things that are counted in your everyday life. For example, how many books you have, how many hours you spend playing a game or how many pets you have.

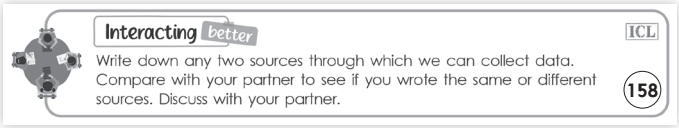
Teacher: Now, pair up with your partner and share your list

of things. Can you guess what is the most common thing that both of you count every day?

(Allow students to share ideas.)

Teacher: Great. As we start today's lesson, we will learn how data is collected organised and used to answer questions like the one we just asked.

Interacting better



Teacher: Let us start with the 'Interacting better' section given on page 158.

MUST DO
5 MIN.

Teacher: Write down two different sources from which we can collect data.

(Allow students to think and write.)

Teacher: Share your answers with your partner. Do you have the same or different sources?

Teacher: Discuss with your partner how these sources can be helpful in collecting data.

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

MUST DO
15 MIN.

Teacher: It is time to read a story. Let us begin by looking at the pictures in the story. What do you think it will be about?

Teacher: Yes, it seems to be about sorting and organising things. Why do you think sorting is important in our daily lives?

Teacher: Let us read the story now and see how sorting helps in the characters' lives.

Teacher: Please read the story quietly. I will give you a few minutes.

Teacher: Now that everyone has finished reading, let us talk about it together.

Teacher: What did Maria learnt in the story?

Teacher: Yes, sorting items made it easier to find them. Can anyone think of other times when sorting is helpful in your life?

Teacher: Good! Now, let us think about the other topic in the story. Can anyone tell me what kind of pollution Maria and her mother were facing in the story?

Teacher: Yes, air pollution is a big issue and they are taking care of their health by wearing masks. Why do you think it is important to protect ourselves from air pollution?

Teacher: Exactly. Just like we sort items to stay organised, we need to sort out ways to keep our environment safe and healthy.

Teacher: Now, let us practise data handling with an engaging activity.

COULD DO
15 MIN.

Teacher: In this activity, we will find out what students in the class like to do during their free time.

Teacher: I want each of you to ask five of your classmates what their favourite activity is. It could be reading, playing a sport, drawing, listening to music or any other activity. Write down their answers in a table.

(Provide students with a table template: Name | Activity)

Teacher: Once you have collected the data, we will discuss how to organise it. Can we group similar activities together? Which activity is the most liked? Which activity is the least liked?

Teacher: Now, let us organise the data. You can make a tally chart or group the responses into categories.

Teacher: After we finish, we will discuss the data. What patterns do you see in the answers?

(Allow students to organise their data and discuss their findings.)

Teacher: Great work. Sorting and organising data help us make sense of the information we collect. This is how we use data to answer questions in real life. Well done students, let us meet in the next period.

Differentiated Activities

110 km/hr

Draw a pictograph to show the number of family members in your house (adults, children, pets). 1 symbol = 2 members.

80 km/hr

Solve: 'You have 4 red marbles and your friend gives you 2 more. How many marbles do you have now?' Represent the numbers with tally marks and add.

40 km/hr

Solve this problem: '5 apples + 3apples. How many total apples are there? Represent the numbers with tally marks and add.

Home Task

Ask your family members about their favourite healthy food (e.g., fruits, vegetables or nuts). Write down the number of people who like each type of food in a table. Then, answer these questions:

1. Which food is the most liked?
2. How many people like fruits?
3. How many people like vegetables?

Period 3

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us start with a quick warm-up related to things we see and experience every day.

Teacher: I will ask you a few questions. Think about them carefully and raise your hand if you want to share your answers.

Teacher: How many of you use a phone to call someone every day?

Teacher: Now, how many of you count the number of books or toys you have?

Teacher: How many of you watch TV or use the internet daily?

Teacher: These are all examples of things we can count and sort into categories. Today, we will learn how to organize and interpret data by looking at different types of information.

Reading and Interpreting Data

READING AND INTERPRETING DATA

Lots of information circulates around the world every day and it is difficult to remember everything. We can collect the information and store it in the form of data. Data handling is the process of collecting, organising and representing data in a readable form.

To keep track of the information that is collected, we can use tally marks*. The following steps will help us represent data using tally marks. It is represented in bundles of five.

STEP 1: The first four counts are represented by 4 vertical lines. ||||

STEP 2: The last count or the fifth count of the group is represented by diagonally cutting the four vertical lines in step 1. 𝍸

For example: 21 can be represented using these tally marks

𝍸 𝍸 𝍸 𝍸 |

Example 1: A cycle manufacturing company launched a new model. They conducted a survey in few cities to find the number of cycles sold in a week. The given table shows the result of the survey.

Cities	Chennai	Bhopal	Kolkata	Prayagraj	Bengaluru
Number of cycles sold	60	53	57	35	40

Represent the data using tally marks.

Cities	Number of cycles sold	Tally marks
Chennai	60	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
Bhopal	53	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 |||
Kolkata	57	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||
Prayagraj	35	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
Bengaluru	40	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸

*Check the 'Grasping Better' section to learn the meaning of the word.

159

MUST DO
20 MIN.

Teacher: Today we will learn about tally marks. Everyone please open page 159 in the Main Coursebook.

Teacher: Has anyone heard of tally marks before?

Teacher: Very good. Tally marks are a simple way to count and record data. Every fifth mark crosses the previous four, making it easy to count by fives.

Teacher: Can anyone suggest why tally marks are helpful when we count?

Teacher: Correct. Tally marks help us quickly count numbers and keep track easily. We use tally marks when we want to count items like fruits, trees or people.

Teacher: To show you clearly, let me demonstrate. If we count 7 apples, we draw four straight lines and the fifth line crosses them. This makes five. Then we draw two more straight lines next to this group. This shows us easily there are 7 apples.

Teacher: Let us discuss Example 1 together.

Teacher: A company did a survey to find out how many cycles were sold in five cities. The cities are Chennai, Bhopal, Kolkata, Prayagraj and Bengaluru.

Teacher: First, let us read the data from the table. Chennai sold 60 cycles, Bhopal 53, Kolkata 57, Prayagraj 35 and Bengaluru 40.

Teacher: Now, we will represent this data using tally marks. Who remembers how tally marks are grouped?

Teacher: Yes, we make four vertical lines and then cross them with the fifth line. This makes a group of five.

Teacher: Let us check Chennai. It has 60 cycles. How many tally mark groups of five will that be?

Teacher: Good. For Bhopal, we have 53. That will be 10 groups of five and 3 more marks.

Teacher: For Kolkata, it is 57. That will be 11 groups of five and 2 extra marks.

Teacher: Prayagraj shows 35 cycles, which is 7 groups. Bengaluru has 40 cycles, so that will be 8 groups.

Teacher: Can you tell me which city sold the most cycles?

Teacher: And which city sold the least?

Teacher: Very good. This is how tally marks help us understand and compare data easily. Let us now apply this understanding in our next activity.

COULD DO
15 MIN.

Teacher: Now let us do a short activity to apply what we have learned.

Teacher: I want you to observe how many students in your row wear glasses, have black shoes or have blue water bottles.

Teacher: Collect the data and make three tally charts in your notebook for each item.

Teacher: Once done, compare with a classmate from another row.

Teacher: Well done, everyone. You all did a fantastic work today. I am so proud of how well you understood

and used tally marks. Let us give ourselves a big round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Create a tally chart of the number of books in different categories in your class library (story books, science books, picture books and language books). Write one sentence on which category has the most.

80 km/hr

Observe your classmates' school bags in your row. Count how many are black, blue, red or other colours. Make a tally chart and write which colour is seen most often.

40 km/hr

Count the number of different coloured notebooks you have. Draw a tally chart and write how many of each colour you see.

Home Task

At home, observe your kitchen and count the number of spoons, forks and bowls. Record the data using tally marks in your notebook. Write which item is the most in number.

Period 4

SHOULD DO — 5 MIN.

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

Teacher: Let us play a quick game called 'Guess My Category'. I will describe items and you tell me what category they belong to. Ready?

Teacher: Apples, bananas, grapes. What category do they belong to?

Teacher: Correct, they belong to fruits.

Teacher: Now, pencils, erasers, sharpeners. Which category is this?

Teacher: Good, they are stationery items.

Teacher: Lastly, dogs, cats, cows. What category are these?

Teacher: Right, they are animals.

Teacher: Great work, everyone. Sorting things into categories is an important skill in data handling. Let us learn to read and interpret bar graphs.

Read and Interpret Bar Graph

READ AND INTERPRET BAR GRAPH

A bar graph is the graphical representation of data in the form of rectangular bars. The bars can be horizontal or vertical. The rectangular bars should be of equal width and equidistant* from each other. (160)

MUST DO — 5 MIN.

Teacher: A bar graph is a way to show data using rectangular bars. These bars can be horizontal or vertical.

Teacher: The bars should have equal width and equal distance between them. The length of the bar shows the value.

Teacher: Let us learn how to read and draw bar graphs using the data given in your Main Coursebook.

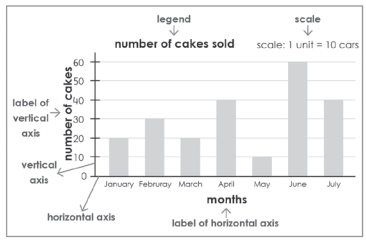
Components of a bar graph

Components of a bar graph

Vertical and horizontal axes: Bar graphs are represented between a horizontal line and a vertical line, called axes. The horizontal axis is called the *x*-axis and the vertical axis is called the *y*-axis.

Labels of horizontal and vertical axis: It shows which axis represents what.

Title of the graph: It gives a brief idea of what the graph represents.



Scale of graph: The scale is placed at the top right corner and it is adjusted based on the highest and lowest number shown in the data.

Legends: It tells what each bar represents. (160)

MUST DO — 5 MIN.

Teacher: Open your Main Coursebook to the 'Components of a bar graph' page 160.

Teacher: A bar graph has a horizontal axis (x-axis) and a vertical axis (y-axis).

Teacher: It has labels for both axes, a title to tell us what the graph is about, a scale to show the unit used and sometimes a legend.

Teacher: Why do you think we need equal gaps between bars?

Teacher: Correct. It helps us read the graph clearly and avoid confusion.

Example 2: The given table shows the data collected by a car manufacturing company to find the number of cars sold in six months. Draw a bar graph with a proper scale using the given information.

month	number of cars sold
July	450
August	600
September	550
October	800
November	750
December	850

To draw a bar graph to represent the above data, follow these steps.

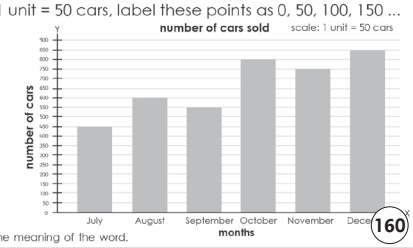
STEP 1: Draw a horizontal ray OX and a vertical ray OY, intersecting at O.

STEP 2: Choose a suitable scale, for example, 1 unit = 50 cars.

STEP 3: Along the ray OY, mark points at uniform intervals to represent the number of cars. As the scale is 1 unit = 50 cars, label these points as 0, 50, 100, 150 ...

STEP 4: Along the ray OX, draw bars of uniform width to represent the different months. The height of the bars should be equal to the corresponding numbers.

STEP 5: Leave equal gaps between the bars.



*Check the 'Grasping Better' section to learn the meaning of the word. (160)

STEP 6: Colour the bars neatly with coloured pencils.

STEP 7: Write the title of the graph on top.

STEP 8: Write the scale used to represent the numbers. (161)

MUST DO — 10 MIN.

Teacher: Let us read Example 2 on page 160. It shows the number of cars sold over six months.

(Discuss the steps for making bar graph in detail.)

Teacher: What are the months shown in the table?

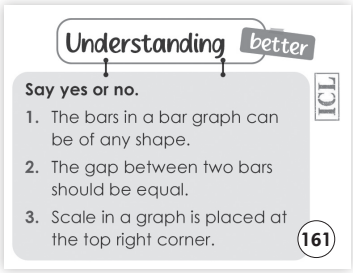
Teacher: The numbers of cars sold are different in each month.

Teacher: Look at the height of the bars. Which month had the highest sales?

Teacher: Very good. The graph helps us compare data quickly.

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

Understanding better



Teacher: Now, let us move to the 'Understanding better' section given on page 161.

MUST DO
5 MIN.

Teacher: I will read each statement. You will answer 'Yes' or 'No' and also explain why.

Teacher: Statement 1: The bars in a bar graph can be of any shape. What do you think?

(Students respond: No)

Teacher: That is correct. Bars in a bar graph must be rectangular and of the same width so that we can compare them properly. Different shapes can confuse the reader.

Teacher: Statement 2: The gap between two bars should be equal.

(Students respond: Yes)

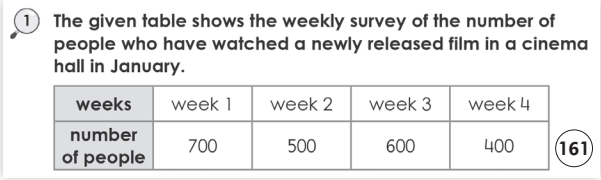
Teacher: Well done. Equal gaps help in keeping the graph neat and making it easy to compare the bars. If the gaps are unequal, the graph may look unbalanced or misleading.

Teacher: Statement 3: Scale in a graph is placed at the top right corner.

(Students respond: Yes)

Teacher: That is right. The scale tells us the value of each unit on the vertical axis. It is usually placed on the top right so that we can understand the value each bar represents before reading the graph.

Teacher: Excellent work. These points help us draw bar graphs correctly and understand them clearly. Let us keep these rules in mind as we move ahead.


1. **The given table shows the weekly survey of the number of people who have watched a newly released film in a cinema hall in January.**

weeks	week 1	week 2	week 3	week 4
number of people	700	500	600	400

161

Teacher: Let us look at the table shown here. It gives us the number of people who watched a newly released film in a cinema hall during each week of January.

MUST DO
10 MIN.

Teacher: Week 1 shows 700 people, Week 2 shows 500, Week 3 shows 600 and Week 4 shows 400.

Teacher: We will now represent this data on a bar graph. To do that, we need to follow the steps which we have discussed earlier. Who will tell the steps?

(Scaffold the students to complete the question.)

Teacher: Well done, everyone. You all did a fantastic work today. I am so proud of how well you understood and used bar graphs. Let us give ourselves a big round of applause. See you in the next class.

Differentiated Activities

110 km/hr

Conduct a survey to find out how many books your classmates have read in the last month. Organise the data in a table and then represent it on a bar graph. The x-axis will represent each student and the y-axis will represent the number of books read. Use a scale of 1 unit = 1 book.

80 km/hr

Ask four students in your class about their favourite types of fruits (e.g., apple, banana, mango). Write down the data in the table. Then, create a bar graph showing how many students like each type of fruit. Use a scale of 1 unit = 1 student.

40 km/hr

Colour half of the circle for 'Play' and the other half for 'Study'. Write the fraction for each part as $\frac{1}{2}$.

Home Task

Solve Exercise 2 from your Main Coursebook. Write the answers neatly and draw the bar graph based on the given data using a proper scale.

Period 5

Teacher: Good morning students. How are you today?

SHOULD DO
5 MIN.

Teacher: Let us start with an activity to help us understand how we can divide things into parts. This is the first step in understanding how to represent data.

Teacher: Imagine a fruit salad. If I divide the salad into four equal parts, how many parts do we have in total?

Teacher: Yes, there are four parts in total. Now, if I take one part of the fruit salad, what part of the whole fruit salad do I have?

(Wait for responses.)

Teacher: Correct. You have one out of the four parts, which is one-fourth of the fruit salad.

Teacher: Now, let us think about another healthy food, like a vegetable platter. If the platter is divided into eight equal pieces and I take three pieces, how much of the vegetable platter do I have?

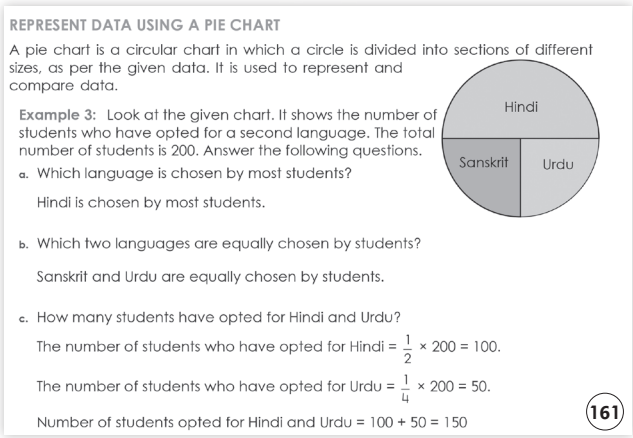
Teacher: Yes, you have three out of eight pieces, which is

three-eighths of the vegetable platter.

Teacher: Understanding how to divide things into parts helps us represent data. Today, we will learn how to use these parts to create visual representations that make it easier to understand and compare data.

Teacher: Everybody please open page 161 in the Main Coursebook, we will discuss Pie Chart.

Represent Data Using a Pie Chart



REPRESENT DATA USING A PIE CHART

A pie chart is a circular chart in which a circle is divided into sections of different sizes, as per the given data. It is used to represent and compare data.

Example 3: Look at the given chart. It shows the number of students who have opted for a second language. The total number of students is 200. Answer the following questions.

a. Which language is chosen by most students?

Hindi is chosen by most students.

b. Which two languages are equally chosen by students?

Sanskrit and Urdu are equally chosen by students.

c. How many students have opted for Hindi and Urdu?

The number of students who have opted for Hindi = $\frac{1}{2} \times 200 = 100$.

The number of students who have opted for Urdu = $\frac{1}{4} \times 200 = 50$.

Number of students opted for Hindi and Urdu = 100 + 50 = 150

161

Teacher: A pie chart is a way to represent data using a circle. The circle is divided into sections and each section represents a part of the total.

MUST DO

15 MIN.

Teacher: We can use pie charts to show the number of students who like different fruits, for example.

Teacher: Let us look at Example 3. It shows the number of students who chose Hindi, Sanskrit and Urdu as their second language.

Teacher: The total number of students is 200.

Teacher: First, let us answer this question together:

Teacher: Which language is chosen by most students?

Teacher: Yes, Hindi is chosen by most students. If you look at the pie chart, you can see that Hindi takes up the largest section.

Teacher: Now, which two languages are equally chosen by students?

Teacher: Yes, Sanskrit and Urdu are equally chosen by students. You can tell because both sections of the pie chart are the same size.

Teacher: Let us move on to the next question:

Teacher: How many students have opted for Hindi and Urdu?

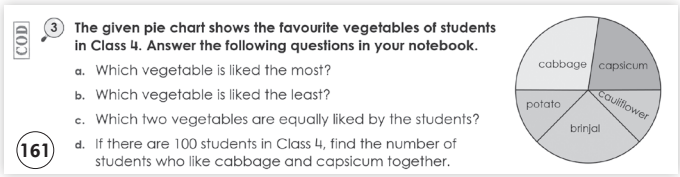
Teacher: To find this, we look at the chart. Hindi is half of the total students, so 1/2 × 200 = 100 students.

Teacher: Urdu is 1/4 of the students, so 1/4 × 200 = 50 students.

Teacher: When we add the students who chose Hindi and Urdu, we get:

Teacher: 100 + 50 = 150 students.

Teacher: Great work! This is how we can use a pie chart to easily interpret data.



COD

3 **The given pie chart shows the favourite vegetables of students in Class 4. Answer the following questions in your notebook.**

a. Which vegetable is liked the most?

b. Which vegetable is liked the least?

c. Which two vegetables are equally liked by the students?

d. If there are 100 students in Class 4, find the number of students who like cabbage and capsicum together.

161

Teacher: Now, let us look at Exercise 3, the pie chart showing the favourite vegetables of students in Class 4.

MUST DO

10 MIN.

The chart divides the whole class into sections based on what vegetables they like.

Teacher: Let us answer the first question:

Teacher: Which vegetable is liked the most?

Teacher: Yes, cabbage is liked the most. You can see that the section for cabbage is the largest in the pie chart.

Teacher: Now, let us move on to the next question:

Teacher: Which vegetable is liked the least?

(Guide students to complete the questions in the similar manner.)

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

Teacher: Now, we will do an activity to practise data collection.

COULD DO

10 MIN.

Teacher: I want each of you to ask five classmates about their favourite fruit (e.g., apple, banana or orange). Write down the answers in a table.

Teacher: I will create the pie chart based on the data you collected. Please be sure to write down the exact numbers so we can create a pie chart together.

Teacher: Once I draw the pie chart, we will answer the following questions:

1. Which fruit is the most popular?
2. Which fruit is the least popular?
3. How many students like each fruit?

Teacher: After collecting the data, I will represent it visually using a pie chart. You will then answer the questions based on the chart. Are you ready?

(Guide the students to complete the activity.)

Teacher: Well done, everyone. You all did a fantastic work today. Let us give ourselves a big round of applause. See you in the next class!

Differentiated Activities

110 km/hr

Imagine you are planning your Sunday. Create a pie chart dividing your time into four activities: study, play, family time, rest. Label parts with fractions.

80 km/hr

How many squares, triangles and circles do you have in your surroundings? Use tally marks. Which shape has the fewest sides?

40 km/hr

Count how many triangles you have in your surrounding and represent the total with tally marks.

Home Task

Ask your family members about their favourite types of drinks (e.g., water, tea, coffee, juice). Write down the number of people who like each type of drink in a table. Once you have collected the data, sort the drinks in order from the most liked to the least liked. Analyse the data by answering the following questions:

1. Which drink is the most liked?
2. Which drink is the least liked?
3. What is the total number of people surveyed?

Period 6

SHOULD DO

5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Today, we will start with a quick revision of what we have learned so far in this chapter.

Teacher: I want you to think about a few things that we have done in this chapter. I will give you some clues and you will guess what we have learned. Ready?

Teacher: Clue 1: I am used to show how different pieces of data compare to each other using sections of a circle. What am I?

Teacher: Yes, you are right! We learned about pie charts.

Teacher: Clue 2: I am a way of counting and recording data using vertical lines in groups of five. What am I?

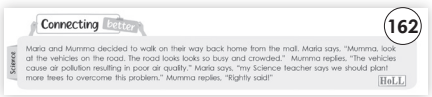
Teacher: Exactly! We have also learned about tally marks.

Teacher: Clue 3: I am used to show information visually in rectangular bars. What am I?

Teacher: Correct, we have also learned about bar graphs.

Teacher: Great work, everyone! We have covered a lot of interesting topics in this chapter, like data collection, tally marks, pie charts and bar graphs. Today, we will revise all of these concepts and make sure we understand them clearly.

Connecting better


Connecting better 162

Maria and Mumma decided to walk on their way back home from the mall. Maria says, "Mumma, look at the vehicles on the road. The road looks looks so busy and crowded." Mumma replies, "The vehicles cause air pollution resulting in poor air quality." Maria says, "my Science teacher says we should plant more trees to overcome this problem." Mumma replies, "Rightly said!"

MUST DO

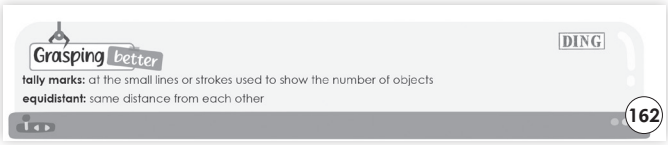
5 MIN.

Teacher: Now, let us start with the 'Connecting better' section, given on page 162. Who will read and explain it?

Teacher: Maria and her mother were discussing air pollution in the story. What can we do to help improve the air around us?

Teacher: Yes, planting more trees is one way to reduce air pollution. Just like sorting and organising data, we need to sort our actions to improve the environment.

Grasping better


Grasping better DING

tally marks: at the small lines or strokes used to show the number of objects

equidistant: same distance from each other

162

MUST DO

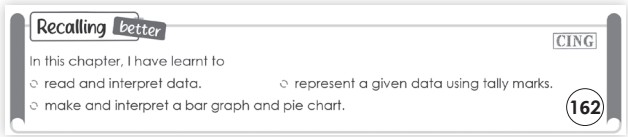
5 MIN.

Teacher: Let us now look at the 'Grasping better' section. We have already learnt about tally marks and equidistant. Who will help me to recall them?

Teacher: We have learned about tally marks, bar graphs and pie charts. Can anyone

Teacher: Yes, tally marks help us count and record information in an organised way and they make counting easier.

Recalling better


Recalling better CING

In this chapter, I have learnt to

- read and interpret data.
- represent a given data using tally marks.
- make and interpret a bar graph and pie chart.

162

MUST DO

5 MIN.

Teacher: Now, let us move to the 'Recalling better' section.

Teacher: I will ask a few questions based on what we have learned so far.

Teacher: First, what is a tally mark used for?

Teacher: Yes, tally marks are used to count and record data in an organised way.

Teacher: Next, what do we use a bar graph for?

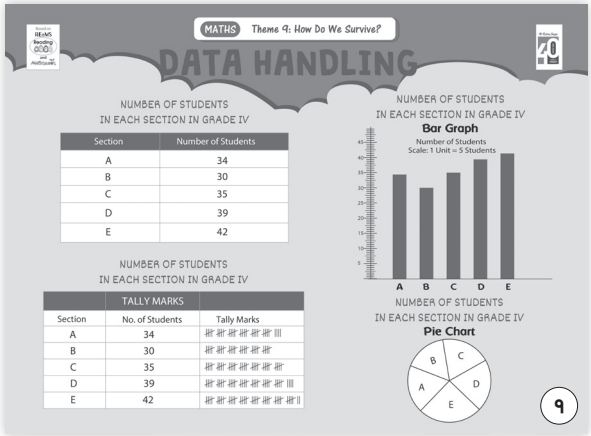
Teacher: Correct, bar graphs are used to compare different categories of data.

Teacher: What about a pie chart? What does it help us with?

Teacher: Yes, pie charts help us show parts of a whole. Each slice represents a part of the total data.

Teacher: Good work, everyone! You have a solid understanding of how to represent and interpret data with tally marks, bar graphs and pie charts.

Poster


MATHS Theme 4: How Do We Survive?

DATA HANDLING

NUMBER OF STUDENTS IN EACH SECTION IN GRADE IV

Section	Number of Students
A	34
B	30
C	35
D	39
E	42

NUMBER OF STUDENTS IN EACH SECTION IN GRADE IV

Bar Graph

Number of Students
Scale: 1 Unit = 5 Students

A B C D E

NUMBER OF STUDENTS IN EACH SECTION IN GRADE IV

Section	No. of Students	TALLY MARKS Tally Marks
A	34	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII
B	30	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
C	35	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
D	39	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 III
E	42	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 II

NUMBER OF STUDENTS IN EACH SECTION IN GRADE IV

Pie Chart

A B C D E

9

Teacher: Let us take a moment to revise what we have learned so far. Look at the poster in front of you.

MUST DO
10 MIN.

Teacher: This poster shows us how to represent the number of students in each section of Grade IV using tally marks, bar graphs and a pie chart.

Teacher: First, we see a table that shows the number of students in Sections A, B, C, D and E.

Teacher: Now, let us look at the tally marks. Can anyone remind me how we represent numbers using tally marks?

Teacher: Yes, each group of 5 tallies represents 5 students. For example, in Section A, there are 34 students, which we represent by 6 groups of 5 tallies and 4 additional tallies.

Teacher: Next, look at the bar graph. The bar graph visually represents the same data. The height of each bar shows the number of students in each section. The scale here is 1 unit = 5 students.

Teacher: You can see that Section E has the tallest bar, which means it has the most students. Section B has the shortest bar, indicating it has the least number of students.

Teacher: Finally, let us look at the pie chart. The pie chart also represents the data in a circular format, with each section having a proportionate slice based on the number of students.

Teacher: Who can tell me which section has the largest slice in the pie chart?

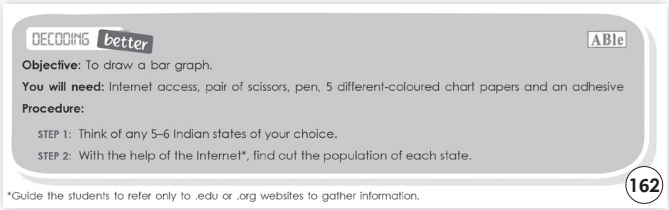
Teacher: Yes, Section E has the largest slice because it has the most students.

Teacher: This visual representation helps us understand the data in different ways – as numbers in a table, as tallies and visually in graphs.

Teacher: Now that we have reviewed the content, let us proceed with solving exercises based on this data. Are you ready to begin?

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

Decoding better



DECODING better — ABle

Objective: To draw a bar graph.

You will need: Internet access, pair of scissors, pen, 5 different-coloured chart papers and an adhesive

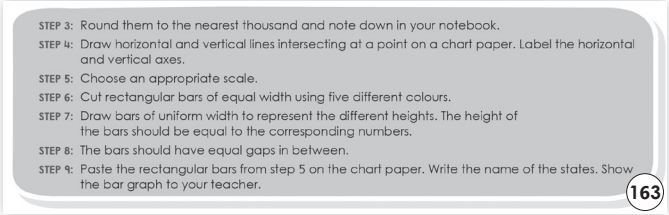
Procedure:

STEP 1: Think of any 5–6 Indian states of your choice.

STEP 2: With the help of the Internet*, find out the population of each state.

*Guide the students to refer only to .edu or .org websites to gather information.

162



STEP 3: Round them to the nearest thousand and note down in your notebook.

STEP 4: Draw horizontal and vertical lines intersecting at a point on a chart paper. Label the horizontal and vertical axes.

STEP 5: Choose an appropriate scale.

STEP 6: Cut rectangular bars of equal width using five different colours.

STEP 7: Draw bars of uniform width to represent the different heights. The height of the bars should be equal to the corresponding numbers.

STEP 8: The bars should have equal gaps in between.

STEP 9: Paste the rectangular bars from step 5 on the chart paper. Write the name of the states. Show the bar graph to your teacher.

163

Teacher: Now, let us move to the 'Decoding better' section.

SHOULD DO
10 MIN.

(Guide the students to draw bar graph with the help of steps given on page 162 and 163 in the Main Coursebook.)

Differentiated Activities

110 km/hr

Conduct a survey asking five classmates about their favourite holiday destination (e.g., beach, mountains, city, countryside). Record the data in a table. Then, answer these questions based on the data:

1. Which holiday destination is the most popular?
2. How many students prefer the beach?
3. What percentage of students like the mountains?

80 km/hr

Ask four students in your class about their favourite pets (e.g., dogs, cats, rabbits). Record the responses and then answer these questions after collecting the data:

1. Which pet is the most liked?
2. How many students prefer cats?
3. What is the percentage of students who like dogs?

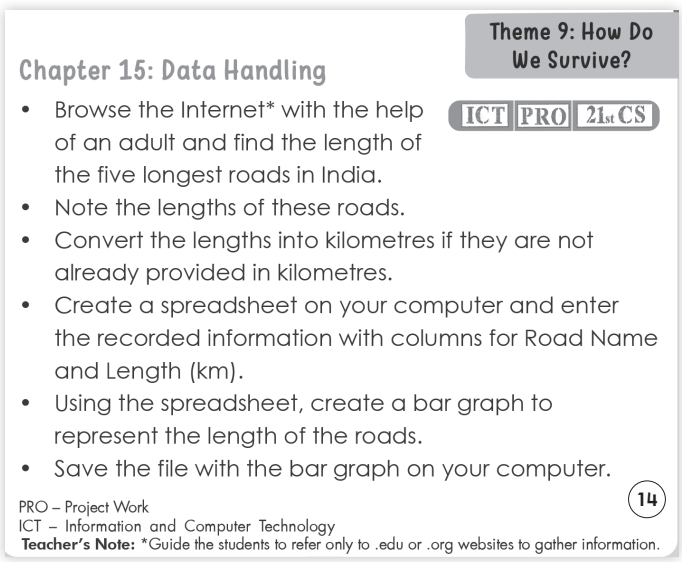
40 km/hr

Survey three students about their favourite colours (e.g., red, blue, yellow). Write down the number of students who prefer each colour and then answer these questions:

1. Which colour is the most liked?
2. How many students prefer blue?

Home Task

Book of Project Ideas



Theme 9: How Do We Survive?

Chapter 15: Data Handling

ICT PRO 21st CS

- Browse the Internet* with the help of an adult and find the length of the five longest roads in India.
- Note the lengths of these roads.
- Convert the lengths into kilometres if they are not already provided in kilometres.
- Create a spreadsheet on your computer and enter the recorded information with columns for Road Name and Length (km).
- Using the spreadsheet, create a bar graph to represent the length of the roads.
- Save the file with the bar graph on your computer.

PRO – Project Work
ICT – Information and Computer Technology
Teacher's Note: *Guide the students to refer only to .edu or .org websites to gather information.

14

(Refer to the book of Project Ideas, page 14 under the title 'Data Handling.' This project should be assigned

to the students to work on. Ensure that the students understand the project requirements and provide any necessary guidance or materials they might need. Encourage them to explore and learn about data Handling through this engaging project.)

Period 7

COULD DO

5 MIN.

Teacher: Good morning students. How are you today?

Teacher: Let us begin with a fun data collection activity.

Teacher: I will ask you a few questions and you will collect data based on the answers. Ready?

Teacher: First, I will ask you, 'What is your favourite type of fruit?' Please think of your answer and raise your hand when I call on you.

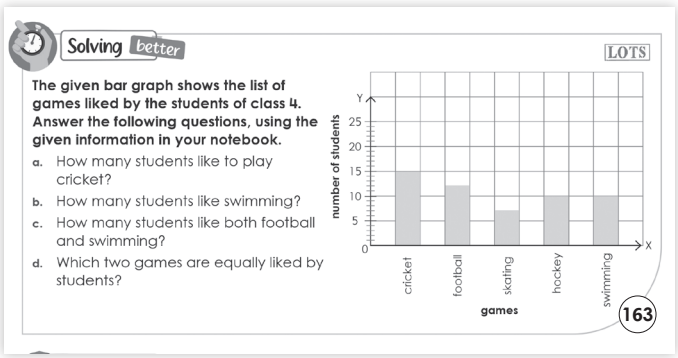
(Wait for students to raise their hands and collect their responses.)

Teacher: Now, I will collect the answers and record them in a table. (Draw the table on the board or use a chart paper to write the responses.)

Teacher: Now that we have collected the data, let us answer a few questions:

1. Which fruit is the most popular?
2. Which fruit is the least popular?
3. How many students prefer apple?
4. How many students prefer mango and orange combined?

Solving better


Solving better

LOTS

The given bar graph shows the list of games liked by the students of class 4. Answer the following questions, using the given information in your notebook.

a. How many students like to play cricket?
b. How many students like swimming?
c. How many students like both football and swimming?
d. Which two games are equally liked by students?

163

MUST DO

10 MIN.

Teacher: Let us move to the 'Solving better' section now. Everyone please open page 163.

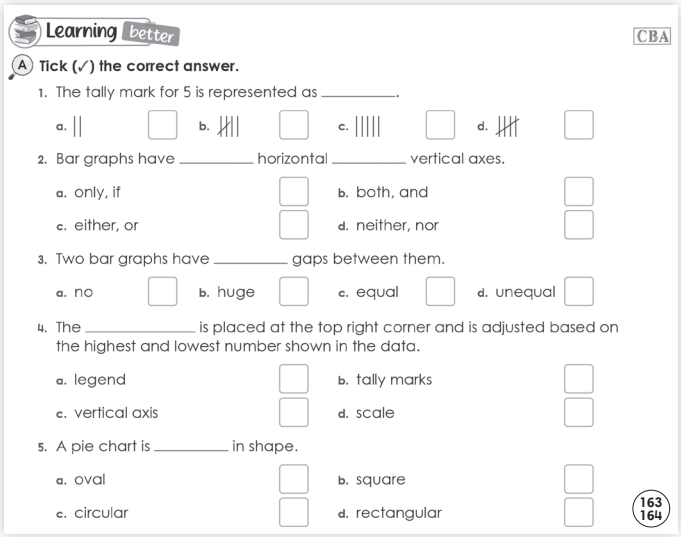
Teacher: Look at the first question. How many students like cricket?

Teacher: Yes, 15 students like cricket, as shown in the bar graph. Now try to solve other questions with your partner.

Teacher: Solve all the questions. You may raise your hands if you find any difficulty.

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

Learning better


Learning better

CBA

A Tick (✓) the correct answer.

1. The tally mark for 5 is represented as _____.
   a. || b. 𝍸 c. 𝍸| d. 𝍸𝍸
2. Bar graphs have _____ horizontal _____ vertical axes.
   a. only, if b. both, and
   c. either, or d. neither, nor
3. Two bar graphs have _____ gaps between them.
   a. no b. huge c. equal d. unequal
4. The _____ is placed at the top right corner and is adjusted based on the highest and lowest number shown in the data.
   a. legend b. tally marks
   c. vertical axis d. scale
5. A pie chart is _____ in shape.
   a. oval b. square
   c. circular d. rectangular

163 164

MUST DO

10 MIN.

Teacher: Let us now move to 'Learning better' section, Exercise A.

Teacher: I will read the first question together. The tally mark for 5 is represented as:

Teacher: Is it 5 vertical lines? Or is it different?

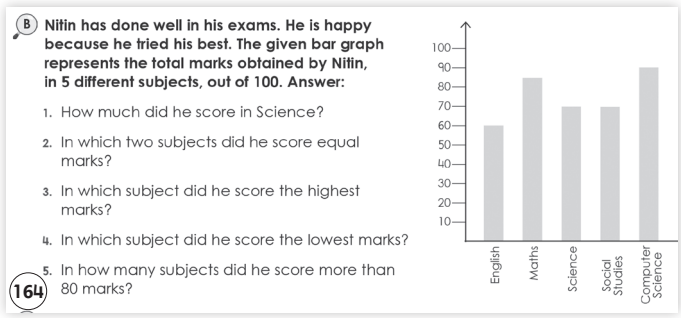
Teacher: Yes, it is represented by 4 vertical lines and the 5th line crossing through them. This helps us count quickly.

Teacher: Now, let us move on to the next few questions.

Teacher: You will work individually to solve the next questions.

Teacher: You may raise your hand if you need help with these questions.

Teacher: Once you are done, we will discuss the answers together.


B Nitin has done well in his exams. He is happy because he tried his best. The given bar graph represents the total marks obtained by Nitin, in 5 different subjects, out of 100. Answer:

1. How much did he score in Science?
2. In which two subjects did he score equal marks?
3. In which subject did he score the highest marks?
4. In which subject did he score the lowest marks?
5. In how many subjects did he score more than 80 marks?

164

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

MUST DO

10 MIN.

Teacher: Let us now move to Exercise B.

Teacher: Take a look at the bar graph showing Nitin's marks in different subjects. I will ask you a few questions based on the graph and I want you to answer them using what you see in the graph.

Teacher: First, let us discuss the first question:

Teacher: How much did Nitin score in Science?

Teacher: Yes, the bar is near the 70 marks, so Nitin scored around 70 in Science.

Teacher: Now, I want you to answer the other questions in pairs. Talk to your partner and discuss your answers for the next questions.

Teacher: If you find any difficulty, you may raise your hand and I will help you.

Teacher: Great! I want everyone to try answering these questions on their own after discussing them with your partner.

(Allow time for students to answer, then guide as needed.)

Teacher: Wonderful, everyone! Now that we have completed these questions, let us move on to Doubt session.

Doubt Class

COULD DO
5 MIN.

Teacher: If anyone has any doubts or is unsure about how to answer the questions in the exercises, please raise your hand.

Teacher: I will guide you through any difficulties you may have.

Teacher: Let us take a moment to clear up any confusion about how to interpret bar graphs or answer questions based on them.

Teacher: Well done, everyone. You have all done a fantastic work today. Let us give ourselves a big round of applause. See you in the next class!

Differentiated Activities

110 km/hr

Make a list of 5 games played on the playground. How many students play each game. Create a tally chart.

80 km/hr

Collect data from 5 students on their hobbies and represent the data using tally marks.

40 km/hr

Collect data from 3 students on their hobbies and represent it in tabular form.

Home Task

Solve Exercise C given on page 164 in the Main Coursebook.

Bring a reflective tape for the "Creating Better" activity to be done in the next class.

Period 8

SHOULD DO
5 MIN.

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

Teacher: Think about your daily routine. How many of you use a phone or tablet every day?

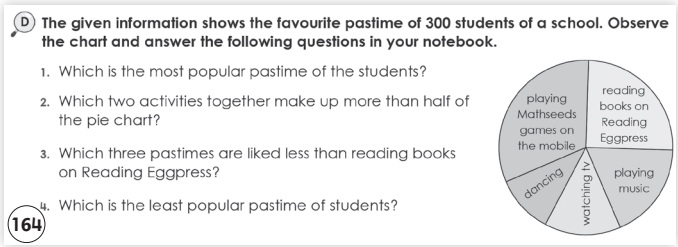
Teacher: Now think about the apps or games you use the most. Do you spend more time on games, reading or chatting with friends?

Teacher: Raise your hand if you spend more time on games.

Teacher: Now raise your hand if you spend more time on reading or studying.

Teacher: We all have different habits. If you wanted to track your time, how could you organise the data?

Teacher: Yes, you could use tally marks or a bar graph to show how much time you spend on each activity.


D **The given information shows the favourite pastime of 300 students of a school. Observe the chart and answer the following questions in your notebook.**

1. Which is the most popular pastime of the students?
2. Which two activities together make up more than half of the pie chart?
3. Which three pastimes are liked less than reading books on Reading Eggpress?
4. Which is the least popular pastime of students?

164

MUST DO
10 MIN.

Teacher: Open your book to page 164 and look at the pie chart in front of you. This chart shows the favourite pastimes of 300 students.

Teacher: Let us begin with question 1: 'Which is the most popular pastime for the students?'

Teacher: Now, look at the chart carefully. Which part of the pie is the biggest? What activity takes up the most space?

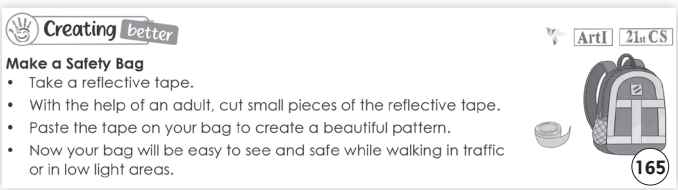
Teacher: Think about the size of each section. What does the largest section represent?

Teacher: Yes, playing Mathseeds games on the mobile. is the most popular pastime because it covers the largest part of the chart.

Teacher: Now, I would like you to try answering the next question on your own. Take a moment and check the chart again.

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

Creating better


Creating better

ArtI 21stCS

Make a Safety Bag

- Take a reflective tape.
- With the help of an adult, cut small pieces of the reflective tape.
- Paste the tape on your bag to create a beautiful pattern.
- Now your bag will be easy to see and safe while walking in traffic or in low light areas.

165

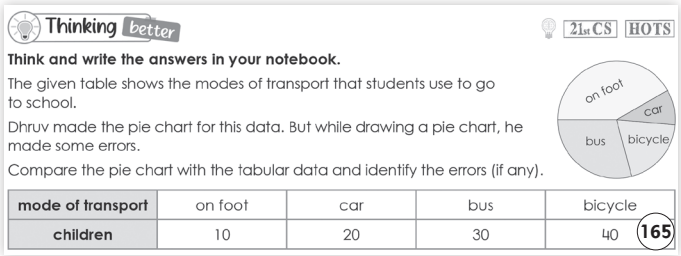
MUST DO
15 MIN.

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

Teacher: In this activity, we will make a safety bag. You will need a reflective tape to create a beautiful pattern on your bag.

(Guide the students to complete the activity.)

Thinking better


Thinking better

21st CS HOTS

Think and write the answers in your notebook.

The given table shows the modes of transport that students use to go to school.

Dhruv made the pie chart for this data. But while drawing a pie chart, he made some errors.

Compare the pie chart with the tabular data and identify the errors (if any).

mode of transport	on foot	car	bus	bicycle
children	10	20	30	40

165

MUST DO

5 MIN.

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

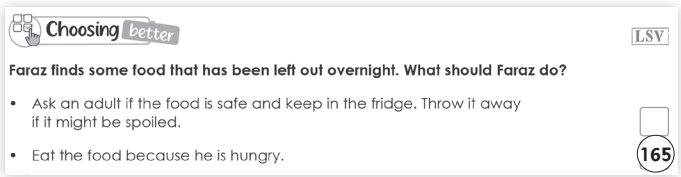
Teacher: You can see the table that shows the modes of transport used by 100 students to go to school. The table provides the number of students who use each mode of transport: walking, car, bus and bicycle.

Teacher: Dhruv has drawn a pie chart based on this data, but he made some errors in the chart.

Teacher: Take a moment to compare the pie chart with the data in the table. Look at the number of students for each mode of transport and how they are represented in the chart.

Teacher: Write down any errors you find in the pie chart. Are the sections in the pie chart proportional to the numbers given in the table?

Choosing better


Choosing better

LSV

Faraz finds some food that has been left out overnight. What should Faraz do?

- Ask an adult if the food is safe and keep in the fridge. Throw it away if it might be spoiled.
- Eat the food because he is hungry.

165

MUST DO

5 MIN.

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

Teacher: Faraz finds some food that has been left out overnight. What should he do?

Teacher: Now, look at the two options in front of you.

Teacher: Option 1: 'Ask an adult if the food is safe and keep it in the fridge. Throw it away if it might be spoiled.'

Teacher: Option 2: 'Eat the food because he is hungry.'

Teacher: Think about these two options. Which one seems like the safer choice?

Teacher: Yes, it is better to ask an adult about the safety of the food and throw it away if there is any doubt about it being spoiled.

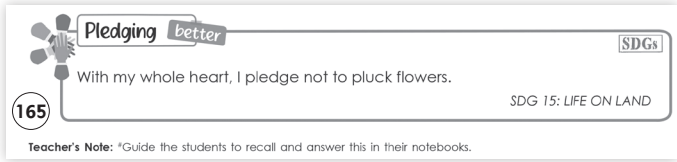
Teacher: Why do you think this is the better choice?

Student: It is safer to avoid eating spoiled food because it can make you sick.

Teacher: Exactly! Always think about your health and safety when making choices. Well done.

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

Pledging better


Pledging better

SDGs

With my whole heart, I pledge not to pluck flowers.

SDG 15: LIFE ON LAND

165

Teacher's Note: *Guide the students to recall and answer this in their notebooks.

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

Teacher: Today, we are going to make a pledge to help protect our environment and the earth's resources.

Teacher: The pledge reads: 'With my whole heart, I pledge not to pluck flowers.'

Teacher: Let us all say this together: 'With my whole heart, I pledge not to pluck flowers.'

Teacher: Why do you think it is important not to pluck flowers?

Student: Because flowers are important for nature and they help pollinate other plants.

Teacher: Yes, flowers are vital to the environment. When we leave them in their place, they help sustain life on land. By protecting flowers and plants, we also protect many creatures that depend on them.

Teacher: Now, I want you to think of one more way you can protect life on land. Write it down in your notebooks.

Teacher: Wonderful! Every small effort counts. Let us have a huge round of applause for our hard work today. See you in the next class!

Differentiated Activities

110 km/hr

Count how many red, blue and yellow objects you can find. Use tally marks to represent the data. Create a bar graph to represent the comparison of each colour.

80 km/hr

Find some red, blue and yellow objects and count how many of each you have. Use tally marks to represent the counts.

40 km/hr

Count how many red objects you have and represent the total using tally marks.

Home Task

Revising better

Look around your home and count the different types of clothing items you have, such as shirts, trousers, sarees, etc. Represent the data using tally marks in your Little Book.

Period 9

SHOULD DO

5 MIN.

Teacher: Good morning, students! How are you today?

Teacher: Yesterday, your homework was to count

the different types of clothing items at home, such as shirts, trousers, sarees, etc. and represent the data using tally marks.

Teacher: Let us start by sharing what you counted. Who would like to tell us how many shirts, trousers and other items they counted and how they used tally marks?

Teacher: Wonderful! Now, let us think about how we can use this data. If I wanted to know which clothing item, I have the most of, what could I do with this data?

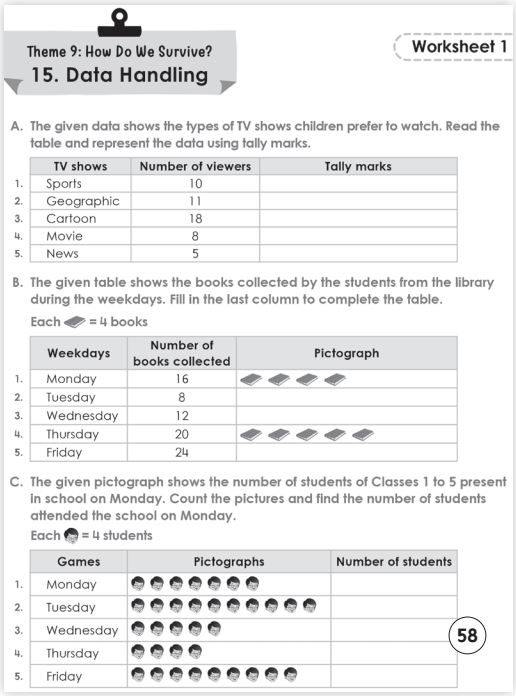
Student: You could count the tally marks for each clothing item.

Teacher: Exactly! Counting the tally marks will help us see which item is the most and which is the least.

Teacher: Great work, everyone! Let us move on to the next part of our lesson.

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

Worksheet 1



Theme 9: How Do We Survive?

15. Data Handling

Worksheet 1

A. The given data shows the types of TV shows children prefer to watch. Read the table and represent the data using tally marks.

	TV shows	Number of viewers	Tally marks
1.	Sports	10	
2.	Geographic	11	
3.	Cartoon	18	
4.	Movie	8	
5.	News	5	

B. The given table shows the books collected by the students from the library during the weekdays. Fill in the last column to complete the table.

Each = 4 books

	Weekdays	Number of books collected	Pictograph
1.	Monday	16	
2.	Tuesday	8	
3.	Wednesday	12	
4.	Thursday	20	
5.	Friday	24	

C. The given pictograph shows the number of students of Classes 1 to 5 present in school on Monday. Count the pictures and find the number of students attended the school on Monday.

Each = 4 students

	Games	Pictographs	Number of students
1.	Monday		
2.	Tuesday		
3.	Wednesday		
4.	Thursday		
5.	Friday		

58

Teacher: Let us open your workbooks to page 58 and start with Exercise A.

MUST DO

15 MIN.

Teacher: In this table, we have the types of TV shows children prefer to watch and the number of viewers for each type. You need to represent the data using tally marks.

Teacher: Let us solve the first one together. For Sports, the number of viewers is 10.

Teacher: How can we represent 10 viewers using tally marks?

Student: We draw 5 tallies for the first 5 viewers, then 5 more for the remaining viewers.

Teacher: Exactly! Now, I want you to complete the tally marks for Geographic, Cartoon, Movie and News by yourselves. Remember, each tally mark represents one viewer.

Teacher: Let us now move to Exercise B.

Teacher: This table shows how many books were collected by the students from the library during the weekdays. We need to complete the pictograph.

Teacher: In the pictograph, each picture of a book represents 4 books. Let us look at Monday. The number of books collected on Monday is 16.

Teacher: How many pictures of books will we need for 16 books?

Student: We will need 4 pictures, because each picture represents 4 books.

Teacher: Correct! Now, I want you to complete the pictographs for Tuesday, Wednesday, Thursday and Friday. Use the same method we just discussed.

Teacher: Now, let us look at Exercise C.

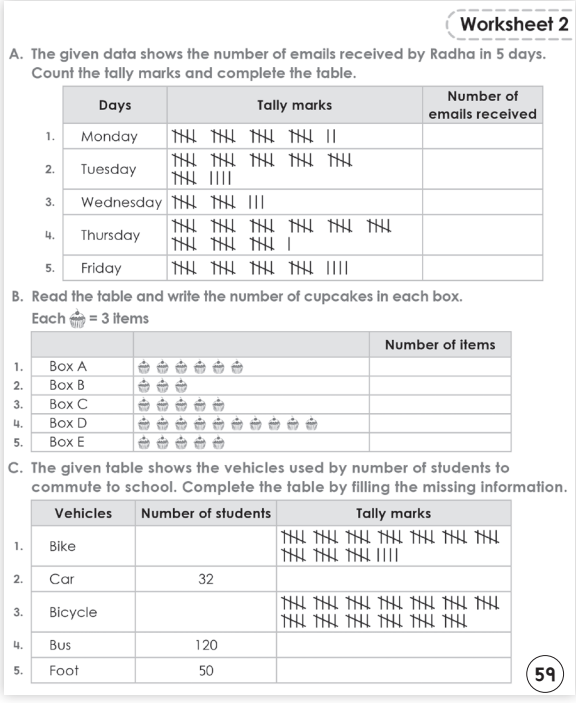
Teacher: Here, we have a pictograph showing the number of students present in school on different days of the week. Each picture represents 4 students.

Teacher: Let us look at Monday. There are 7 pictures. How many students attended school on Monday?

Student: Total 28 students attended school on Monday, because there are 7 pictures given for Monday and each picture is equal to 4 students. So, 7 × 4 = 28 students.

Teacher: Excellent! Now, you will use the same method to count the number of students for Tuesday, Wednesday, Thursday and Friday.

Worksheet 2



Worksheet 2

A. The given data shows the number of emails received by Radha in 5 days. Count the tally marks and complete the table.

	Days	Tally marks	Number of emails received
1.	Monday	𝍸 𝍸 𝍸 𝍸 II	
2.	Tuesday	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII	
3.	Wednesday	𝍸 𝍸 III	
4.	Thursday	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 I	
5.	Friday	𝍸 𝍸 𝍸 𝍸 IIII	

B. Read the table and write the number of cupcakes in each box.

Each = 3 items

			Number of items
1.	Box A		
2.	Box B		
3.	Box C		
4.	Box D		
5.	Box E		

C. The given table shows the vehicles used by number of students to commute to school. Complete the table by filling the missing information.

	Vehicles	Number of students	Tally marks
1.	Bike		𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 IIII
2.	Car	32	
3.	Bicycle		𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
4.	Bus	120	
5.	Foot	50	

59

Teacher: Open your workbooks to page 59 and look at Exercise A of worksheet 2.

MUST DO

15 MIN.

Teacher: This table shows the number of emails received by Radha. Count the tally marks and fill in the number of emails.

Teacher: Let us solve question 1 together. On Monday, there are 17 tally marks. How many emails?

Teacher: Correct. Now, fill in the number of emails for Tuesday, Wednesday, Thursday and Friday.

Teacher: Now, let us move to Exercise B.

Teacher: Each cupcake picture represents 3 items. Let us look at Box A. How many cupcakes?

Teacher: Good. There are 6 cupcakes. There will be 18 items, Now, fill in the number of cupcakes for Box B, C, D and E.

Teacher: Now, let us look at Exercise C.

Teacher: Count the tally marks for each vehicle and write the number of students.

Teacher: For Bike, we have 54 tally marks. How many students?

Teacher: Great. Now, fill in the number of students for Car, Bicycle, Bus and Foot.

Meditation

COULD DO

5 MIN.

Teacher: To end today's class, let us take a few minutes to relax and focus.

Teacher: Please sit comfortably, close your eyes and take a deep breath in... and out.

Teacher: Let us focus on our breathing for a moment. Inhale slowly through your nose... and exhale gently through your mouth.

Teacher: As you breathe, think about one thing you learned today and how it can help you in the future.

Teacher: Continue breathing calmly. Let your body relax with every breath.

Teacher: When you are ready, slowly open your eyes and bring your focus back to the room.

Teacher: Well done, everyone. Let us give ourselves a big round of applause for today's hard work. See you in the next class!

Differentiated Activities

110 km/hr

List all months of the year. Ask at least 10 classmates their birthday months. Create a pictograph to show the number of birthdays in each month.

80 km/hr

Ask 5 classmates about their birthday months. Make tallies based on the answers for the two months.

40 km/hr

Ask your partner their birthday month.

Draw a cake for your birthday month and your partner's birthday month.

Home Task

Solve worksheet 3 of Chapter 15, given on page 60 in the Workbook.

Period 10

SHOULD DO

5 MIN.

Teacher: Good morning students. How are you?

Teacher: In the previous period, your homework was to solve Worksheet 3. Let us take a moment to discuss any doubts or confusion you may have had.

Teacher: If you have any trouble with the questions, feel free to ask now. Let us clear up those doubts together.

Teacher: Once we finish discussing, let us move on to the next worksheet for more practise. This will help us strengthen our understanding of data handling.

Worksheet 4

Worksheet 4

A. The table below shows the number of bananas Bindu consumed in a month. Show the number of bananas she ate in a month using tally marks and complete the table.

	Months	Number of bananas eaten	Tally marks
1.	January	31	
2.	February	28	
3.	March	31	
4.	April	30	
5.	May	31	

B. The given table shows the number of glasses of water Rahul, Sourav, Bela, Assema and Radha drink in a day. Fill in the missing entries.

	Name	Number of glasses	Tally marks
1.	Rahul	5	
2.	Sourav	7	
3.	Bela		𝍸 𝍸
4.	Assema	12	
5.	Radha		𝍸 |||

C. The pie chart represents the favourite past time of the students of class IV. Observe the pie chart and fill in the blanks.

1. More students prefer dancing than _____.
2. _____ is mostly preferred by students.
3. Singing is _____ preferred by students.
4. Playing guitar is _____ preferred than dancing.
5. Dancing is _____ preferred than painting.

61

MUST DO

15 MIN.

Teacher: Open your workbooks to page 61 and let us start with Exercise A.

Teacher: This table shows how many bananas Bindu ate in a month. We need to use tally marks.

Teacher: For January, Bindu ate 31 bananas. To represent this using tally marks, we draw 6 groups of 5 tallies and 1 additional tally mark.

Teacher: Now, complete the tally marks for February, March, April and May on your own by following the same method.

Teacher: Now, let us move to Exercise B.

Teacher: This table shows how many glasses of water Rahul, Sourav, Bela, Assema and Radha drink each day. We need to fill in the tally marks.

Teacher: For Rahul, we are told he drinks 5 glasses of water. To represent this with tally marks, we draw 5 tally marks.

Teacher: Now, complete the tally marks for Sourav, Bela, Assema and Radha by counting the glasses they drink.

Teacher: Let us look at Exercise C.

Teacher: The pie chart shows the favourite pastimes of students. We need to complete the sentences based on the chart.

Teacher: More students prefer dancing than singing.

Teacher: Singing is least preferred by students. Complete the remaining questions.

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

Book of Holistic Teaching

Theme 9: How Do We Survive?

Chapter 15: Data Handling

HoLL MDA

A English

Ryan listed some words which can be rearranged to form new words.

1. stop
2. listen
3. race
4. loop
5. act
6. net

Rearrange the letters in each word to find the new word.

B Science

Jas listed the names of some natural resources. Sort the resources into renewable and non-renewable categories.

1. air
2. petrol
3. water
4. diesel
5. natural gas
6. sunlight
7. coal

C Social Studies

The top 5 longest bridges in India are:

1. Dhola Sadia Bridge
2. Dibang River Bridge
3. The Mahatma Gandhi Setu
4. The Bandra Worli Sea Link
5. Bogibeel Bridge

List 3 characteristics of a bridge.

19 20

COULD DO

10 MIN.

(Refer to the Book of Holistic Teaching, page 19,20 under the title 'Data Handling.' 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.)

Book of Project ideas

Theme 9: How Do We Survive?

Chapter 15: Data Handling

ICT PRO 21st CS

- Browse the Internet* with the help of an adult and find the length of the five longest roads in India.
- Note the lengths of these roads.
- Convert the lengths into kilometres if they are not already provided in kilometres.
- Create a spreadsheet on your computer and enter the recorded information with columns for Road Name and Length (km).
- Using the spreadsheet, create a bar graph to represent the length of the roads.
- Save the file with the bar graph on your computer.

PRO – Project Work
ICT – Information and Computer Technology
Teacher's Note: *Guide the students to refer only to .edu or .org websites to gather information.

14

Teacher: In the previous period, I assigned a project where you had to research and find the length of the five longest roads in India.

COULD DO

5 MIN.

Teacher: Let us take a few minutes to discuss how you found the data. Did anyone face any challenges while browsing the internet for information?

Teacher: What websites did you use to find the data? Do you remember the importance of using reliable sources like .edu or .org websites for this research?

Teacher: Once you gathered the data, how did you convert the measurements into kilometres? Was it difficult to find this information?

Teacher: After you found the data, the next step was creating a spreadsheet. Were you able to organise the data properly with columns for the Road Name and Length (km)?

Teacher: Finally, did anyone have trouble creating a bar graph? How did you visualise the data? Was the process of creating a bar graph clear to you?

Teacher: If anyone faces any challenges with these steps, now is the time to ask questions. Let us clarify anything that might be unclear.

Teacher: Great work on completing the project! I will now give you a moment to finalise your bar graphs and make sure you have saved the file correctly.

Teacher: Now, let us fill in the last column of the KWL chart.

SHOULD DO

5 MIN.

Teacher: In this column we will write what we have learned in this chapter.

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

Count how many of each of the following objects you have in your classroom: Pencils, Chairs, Books. Record the data using tally marks.

Use the tally data to create a bar graph and compare the quantities of each object.

80 km/hr

Count how many pencils, chairs and books there are. Record the numbers using tally marks.

40 km/hr

Count the pencils and use tally marks to represent how many pencils you counted.
How many pencils are there in total?

Home Task

Practise the questions discussed in this chapter.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• accurately draw and count tally marks and will represent data visually using • bar graphs.
Socio-Emotional and Ethical Development	• work collaboratively in groups, contributing to data collection and sharing findings with peers in group activities.
Cognitive Development	• be able to interpret and analyse data from tables, bar graphs and pie charts and answer related questions.
Language and Literacy Development	• correctly use mathematical vocabulary (e.g., total, most, least) to describe data in both oral discussions and written responses.
Aesthetic and Cultural Development	• interpret pie charts and bar graphs accurately, answering questions based on the data they represent.
Positive Learning Habits	• consistently demonstrate critical thinking skills by solving data-related problems independently and reflecting on their findings.

Starry Knights
Did the learners enjoy the activities for Data Handling? Which activity is your favourite too?

Give yourself a STAR.