Lesson-12: 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, Slideshow, Quiz, Test Generator

Confirming better
I love to play in the park.

Curricular Goals and Objectives (NCF)

To enable the students:

- to develop mathematical reasoning through data collection and interpretation.
- to connect mathematics to daily life experiences and real-world situations.
- to enhance collaboration and communication through group data activities.
- to foster critical thinking and problem-solving using visual data tools.
- to use of mathematical language for expressing ideas clearly.
- to develop skills of observation, ask relevant questions, and draw logical conclusions based on data.
- to develop holistically through integration of numeracy and social awareness.

Methodology

Period 1

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

SHOULD DO — 5 MIN.

Teacher: Today, we are starting a new chapter, Data Handling. You have already studied this topic in the previous classes.

Teacher: Can anyone tell me what the word 'data' means?

Teacher: Good answers. Data means the information we collect about people, objects or events.

Teacher: Suppose we want to know which fruit is liked by most students. What could we do?

Teacher: Yes, we can ask each student and write down their favourite fruit.

Teacher: When we collect such information, we call it data. Why do you think collecting data is important?

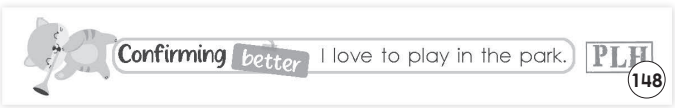
Teacher: Correct. It helps us understand what most people like or what happens most often.

Teacher: Well done. Now, let us move to a short discussion.

Confirming better

Teacher: Let us now look at the 'Confirming better' section on page 148.

SHOULD DO — 5 MIN.



Teacher: The statement here is - love to play in the park. How many of you enjoy playing in the park?
(Let students raise their hands.)

Teacher: That is wonderful. Now, talk to your partner and ask what game they like to play in the park.

Teacher: Did your partner say the same game as you?

Teacher: This is how we collect data by asking and noting answers.

Teacher: Let us keep this thought with us as we continue to explore more about data in the next activity.

Teacher: We will begin 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.

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

MUST DO
10 MIN.

Teacher: Let us begin with a group activity. Open your Main Coursebook to page 148.


Kinaesthetic

Make groups of four. Make columns for different fruits and vegetables on a sheet of paper. Collect and record data about your favourite fruits or vegetables. Which is the most popular fruit or vegetable?

148

Teacher: Form groups of four. Now, on a sheet of paper, make columns for different fruits and vegetables.

Teacher: Now, each one will say their favourite fruit or vegetable. One person will record the data.

Teacher: When all are done, look at your table. Which fruit or vegetable is the most popular?

Teacher: Discuss in your group and write the answer below the table.

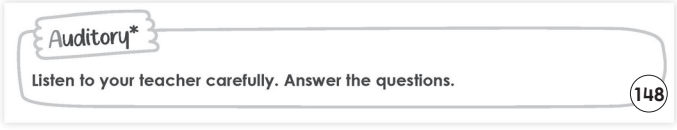
You may show the **eBook** given on the digital platform.

(Use CRM signs to settle down the class.)

Auditory

MUST DO
5 MIN.

Teacher: Now, let us do an auditory activity. Listen carefully to the short story. I will ask questions after that.


Auditory*

Listen to your teacher carefully. Answer the questions.

148

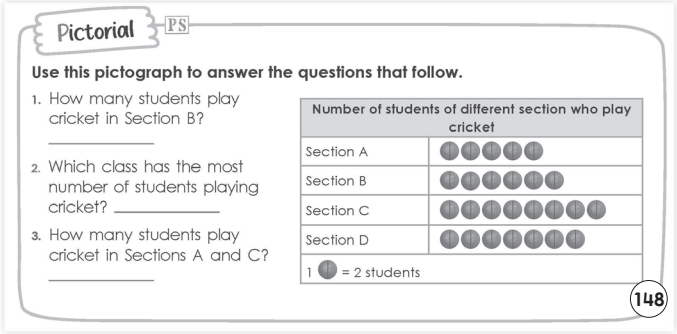
Teacher: Lila wanted to know which ice-cream flavour her friends liked the most. She made a list of flavours and asked each friend for their favourite ice-cream flavours. Then, Lila drew a pictograph to show how many friends liked each flavour. The pictograph showed that chocolate was the most popular choice.

1. What did Lila use to show which ice-cream flavour was the most popular?
2. How did Lila find out her friends' favourite ice-cream flavours?

Pictorial

MUST DO
5 MIN.

Teacher: Now, let us move to the pictorial activity on page 148.


Pictorial PS

Use this pictograph to answer the questions that follow.

1. How many students play cricket in Section B? _____
2. Which class has the most number of students playing cricket? _____
3. How many students play cricket in Sections A and C? _____

Number of students of different section who play cricket	
Section A	●●●●●
Section B	●●●●●●
Section C	●●●●●●●●
Section D	●●●●●●●
1 ● = 2 students	

148

Teacher: Look at the pictograph. It shows how many students play cricket in each section.

Teacher: Each ball in the pictograph stands for 2 students.

Teacher: Use the pictograph to find the answers. Work on it quietly and write your answers in the space provided.

(Use CRM signs to settle down the class.)

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

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

Differentiated Activities

110 km/hr

Ask 10 of your classmates their favourite fruits — apple, banana or mango. Record the responses in a table and then draw a pictograph using one symbol to represent 1 student.

80 km/hr

Ask three classmates their favourite fruit. Make a simple table to record and count how many times each fruit was chosen.

40 km/hr

Ask two friends their favourite fruit. Write their answers and draw one picture of that fruit for each person.

Home Task

Ask five people at home their favourite colour. Record the data in a table and find the most liked colour.

Period 2

SHOULD DO
5 MIN.

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

Teacher: In the last period, we learnt how to collect data using a table and a pictograph.

Teacher: Who can tell me what Lila used to show the most popular ice-cream flavour?

Teacher: Yes, a pictograph. Very good.

Teacher: And how did Lila find out which flavour her friends liked?

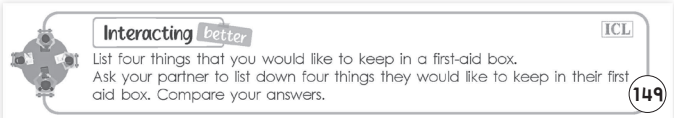
Teacher: Correct. She asked them and recorded their answers.

Teacher: Excellent recall. Let us now move forward.

Interacting better

MUST DO
5 MIN.

Teacher: Let us now turn to the 'Interacting better' section on page 149.


Interacting better ICL

List four things that you would like to keep in a first-aid box. Ask your partner to list down four things they would like to keep in their first aid box. Compare your answers.

149

Teacher: We are going to talk about something very important: first aid.

Teacher: Can anyone tell me what 'first aid' means?

(Let students respond.)

Teacher: Yes, first aid is the help we give someone immediately after they get hurt or feel unwell, before a doctor arrives.

Teacher: Now, look at the task. It asks you to list four things you would like to keep in a first-aid box.

Teacher: Think about things that can help someone who has a small cut, fever or sprain.

Teacher: Now, talk to your partner and ask them to list four things they would like to keep in their first-aid box.

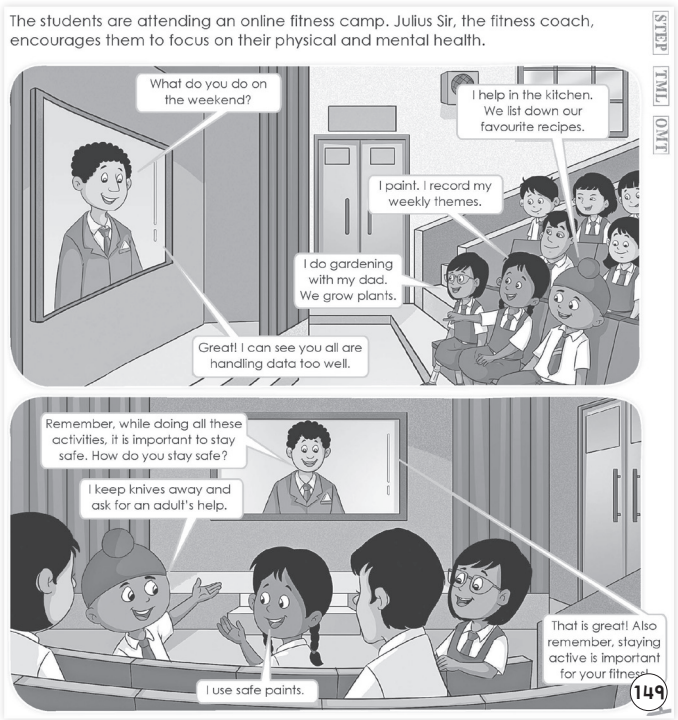
Teacher: Once both of you are done, compare your lists. Do you have similar items or are they different?

Teacher: Let us discuss, why do you think keeping a first-aid box at home or school is important?

Teacher: Very good. It helps us act quickly in emergencies and gives comfort before help arrives.

Teacher: Remember, first aid can be helpful but we should always inform an adult or call for help if needed.

MUST DO 20 MIN.



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

Teacher: Let us begin with a quick question. What do you usually do on weekends?

(Let students respond.)

Teacher: Great. Now, open page 149. Look at the story. Students are sharing their weekend activities during an online fitness camp.

Teacher: Read the dialogues quietly. Then, we will explain it together.

(Let students read.)

Teacher: Who would like to explain the first part of the story?

(Let students respond.)

Teacher: Good. The students are talking about what they do painting, gardening, writing recipes.

Teacher: Julius Sir says they are handling data. Why do you think he said that?

Teacher: Yes, because they collect and record what they do.

Teacher: Now, read the second part.

Teacher: What does Julius Sir talking about there?

Teacher: Yes, staying safe. Students also share how they keep safe.

Teacher: Well done. This story shows how daily life includes collecting data and being careful.

Teacher: Now, take out your notebooks. Write three activities you do on weekends.

COULD DO 10 MIN.

Teacher: For each, write whether it is for physical or mental health.

Teacher: Also write one safety rule you follow during that activity.

Teacher: After writing, discuss your list with a partner. See what is common and what is different.

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

Differentiated Activities

110 km/hr

Ask five classmates what they do on weekends. Make a table and count how many chose physical and how many chose mental activities.

80 km/hr

Write three activities you do every weekend. Tick whether they are physical or mental

40 km/hr

Draw one weekend activity you do. Write if it is for body or mind.

Home Task

Ask two family members what they do on weekends. Write their answers and note if the activity is for physical or mental health.

Period 3

SHOULD DO 5 MIN.

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

Teacher: In the last period, we read how students shared their weekend activities and handled data. We also learnt to compare physical and mental tasks.

Teacher: Today, we will explore a new way to show data by drawing pictographs.

Teacher: Can anyone remind the class what a pictograph is?

Teacher: Yes, it is a way to show information using pictures or symbols.

Teacher: Very well. Let us now learn this in detail.

Pictograph

MUST DO

15 MIN.

Teacher: Turn to page 150. Look at the table and the pictograph below it.

PICTOGRAPH

A pictograph is a way to show information using pictures. Each picture or symbol stands for a number of things. Let us understand the concept with the help of an example.

activity	football	yoga	dance	aerobics
number of students	14	9	11	4

The information in the above table shows the activities chosen by the students in the class. It can also be shown in the form of a pictograph.

Each ☺ stands for 1 student.#

activity	number of students
football	☺☺☺☺☺☺☺☺☺☺☺☺☺☺
yoga	☺☺☺☺☺☺☺☺☺
dance	☺☺☺☺☺☺☺☺☺☺☺
aerobics	☺☺☺☺

Example 1: Look at the pictograph. Let us assume that each student in the class participates in only one activity. Now, answer the questions.

a. What does ☺ stand for?
b. What does the pictograph show?
c. Which activity was chosen by the least number of students?
d. Which activity was chosen by the most number of students?
e. How many students are there in the class?

a. ☺ stands for 1 student.
b. The pictograph shows the activities chosen by the students in the class.
c. Aerobics is chosen by the least number of students.
d. Football is chosen by the most number of students.
e. There are 38 students in the class.

150

Teacher: The table shows how many students chose football, yoga, dance and aerobics. Look below each face symbol stands for 1 student.

Teacher: What do you observe in the pictograph?

Teacher: Let us discuss the questions given.

Teacher: What does the pictograph show? Which activity is the most popular? Which one is the least?

(Let students observe and respond.)

Teacher: Count the symbols and check if they match the numbers from the table.

Teacher: This is how we use pictographs to represent numbers clearly.

MUST DO

10 MIN.

Teacher: Now, let us look at Example 2 on page 151.

Example 2: A chemist sells the following number of bottles of sanitiser during a week.

days	number of sanitiser bottles sold
Monday	60
Tuesday	45
Wednesday	50
Thursday	25
Friday	40

Use the information given above to make a pictograph.

Each ★ = 10 sanitiser bottles Each ½ = 5 sanitiser bottles

days	number of sanitiser bottles sold
Monday	★★★★★★
Tuesday	★★★★½
Wednesday	★★★★★
Thursday	★★½
Friday	★★★★

151

Teacher: The table shows how many bottles of sanitiser were sold on different days.

Teacher: The pictograph uses two symbols : a full star for 10 bottles and a half star for 5 bottles.

Teacher: Why do you think they used one picture to show more than one bottle?

Teacher: Yes, because the numbers are large.

Teacher: That is what we mean when we say, one picture can show more than one object.

MUST DO

10 MIN.

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

1 **Draw a pictograph to show the favourite subjects in the class. (Read the key given at the bottom of the table before drawing the pictograph.)**

favourite subjects	number of students
Maths	20
Science	15
English	35
Social Studies	25
Art and Craft	30

each ☺ stands for 5 students.

favourite subjects of students in the class	
Maths	
Science	
English	
Social Studies	
Art and Craft	

151

a. What does the pictograph show?

b. Which subject is liked by the most number of students?

c. Which subject is liked by the least number of students?

152

Teacher: Now, let us look at Exercise 1 on the same page.

Teacher: You have a table showing the number of students who like each subject.

Teacher: Use the smiley face to draw a pictograph. Each face shows 5 students.

Teacher: Let us try Maths together. 20 students like it, so how many faces will we draw?

Teacher: Yes, four faces. Now complete the rest on your own.

Teacher: After drawing, answer the questions below the table.

Teacher: Do not forget to check which subject was liked most and least.

Processing better

Teacher: Now, look at the 'Processing better' section.

Teacher: It says, when the numbers are large, we use one picture to show more than one object.

Teacher: Why is this helpful?

Teacher: Yes, it makes the pictograph simple and easy to read.

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

Differentiated Activities

110 km/hr

Create a pictograph of any 5 fruits liked by students in the class. Use one picture to show 2 students.

80 km/hr

Record how many of your classmates like 3 different colours. Draw a pictograph using one picture for 1 student.

40 km/hr

Ask 3 friends about their favourite fruit. Use a smiley face to draw a simple pictograph.

Home Task

Look around your home and count 5 different items (like books, bottles, pencils, spoons). Make a pictograph using one picture for each item. Draw it in your notebook.

Period 4

SHOULD DO — 5 MIN.

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

Teacher: In the last class, we learnt how to show information using pictographs.

Teacher: Can anyone tell me what we call the small images or symbols used in a pictograph?

Teacher: Yes, those are called picture symbols and each one represents a number of objects or students.

Teacher: Great. Today, we will learn another way to show data – using tally marks.

Representing Data Using Tally Marks

MUST DO — 15 MIN.

Teacher: Let us now turn to page 152 and look at the section called 'Representing Data Using Tally Marks'.

REPRESENTING DATA USING TALLY MARKS

We can also represent data using tally marks. In this method, the data (number of objects) is represented by a stroke called a tally mark. For every count, a vertical line or stroke is made. The fifth mark crosses the four tally marks (||||) to make a group of 5 (𝍸).

Example 3: A class of 40 students were asked about their favourite sport. The data was put in a tally chart. Study the tally chart carefully and answer the questions.

a. How many students like football?
b. Which is the favourite game of most students?
c. How many students like kabaddi?
d. How many students like volleyball?

a. 7 students like football.
b. Cricket is the favourite game of most students.
c. 9 students like kabaddi.
d. 8 students like volleyball.

game	tally marks	total
cricket	𝍸 𝍸 ||	12
football	𝍸 ||	7
volleyball	𝍸 |||	8
kabaddi	𝍸 ||||	9
kho-kho	||||	4

152

Teacher: In this method, each count is shown using a short line called a tally mark.

Teacher: When we reach five, we cross the four lines to make a group. Let me draw an example on the board.

Teacher: Now, look at the 'Discovering better' box on the page. What does the word stroke mean here?

Teacher: Yes, a short line. In tally marks, a stroke means one count.

Teacher: Let us look at Example 3. A tally chart shows the favourite sports of 40 students.

Teacher: How many tally marks do you see for football? Which game has the highest count?

Teacher: Good. Now look at the totals and read the answers listed below the table.

Teacher: We use tally marks to count and organise data clearly.

MUST DO — 10 MIN.

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

2 **The following are the fruits liked by 27 children. Use tally marks to record the data, as shown. Answer the questions based on the data.**

orange	grapes	apple	orange	banana	appl
orange	banana	apple	orange	banana	grap
grapes	orange	grapes	grapes	banana	appl

fruit	tally marks	number of children
orange	𝍸 ||	7
apple		
banana		
grapes		

152

a. Which fruit is liked by most children?
b. Which fruit is liked by least children?
c. How many children like grapes?
d. How many children like bananas and apples?
e. Which fruit do the children like more – oranges or bananas?

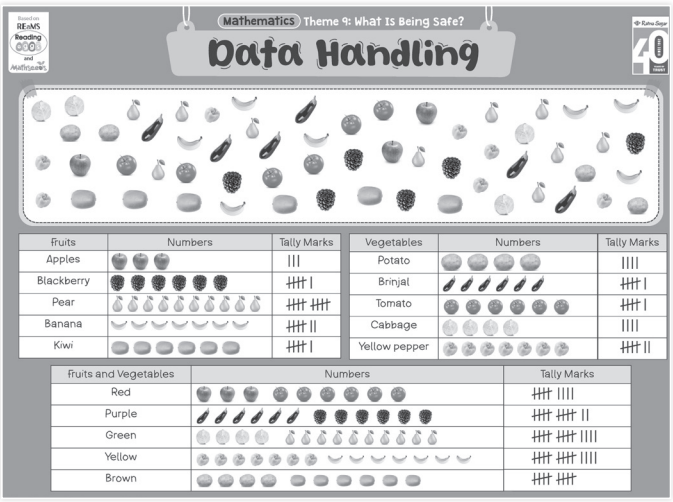
153

Teacher: Let us now solve Exercise 2 on the same page.
Teacher: Read the list of fruits liked by 27 children. Then, look at the tally table.
Teacher: Use tally marks to record the total for each fruit.
Teacher: Let us complete the tally marks for orange together.
Teacher: Count how many times orange appears, then mark the tallies.
Teacher: Now, complete the rest of the tally table and answer the questions below it.
Teacher: Think carefully which fruit is liked most and which is liked least?

Poster

MUST DO
10 MIN.

Teacher: Let us now look at a colourful poster on data handling.



Teacher: This poster shows different fruits and vegetables and how we can record their numbers using tally marks.
Teacher: Open your books and observe the pictures at the top. Can you see how the same items are grouped?
Teacher: Below that, we see a chart. What information does the chart show?
Teacher: Yes, it shows the names of fruits and vegetables, how many of each are there and their tally marks.
Teacher: Now, look at the last table. What does it show?
Teacher: Correct. It groups the items by colour – red, purple, green, yellow and brown.
Teacher: Why do you think the poster uses tally marks instead of writing all the numbers?
Teacher: Yes, it is quick and clear. This is how we organise large amounts of data neatly.
Teacher: I want you to look at the poster and find:

- The fruit or vegetable with the highest count
- The one with the lowest count
- How many red items are there in total

Teacher: Discuss these with your partner. Then we will share our observations with the class.

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

Differentiated Activities

110 km/hr
Collect data from ten classmates about their favourite sport. Create a tally chart and answer which sport is most and least liked.

80 km/hr
Ask five friends their favourite fruit. Draw a tally table using strokes for each fruit

40 km/hr
Write names of three fruits. Ask two friends which one they like. Draw tally marks next to each fruit.

Home Task

Ask your family members their favourite colour. Make a tally chart using short lines and show which colour is liked by most members.

Period 5

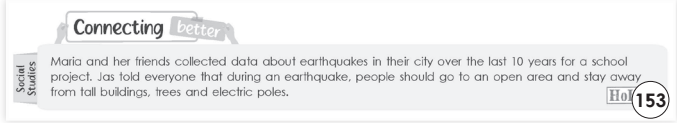
SHOULD DO
5 MIN.

Teacher: Good morning, students. How are you today?
Teacher: In the last class, we used tally marks and pictographs to show data.
Teacher: Can someone remind the class how we make a group of five using tally marks?
Teacher: Yes, we draw four straight lines and cross the fifth one across them.
Teacher: Why do you think we cross the four lines to make a group?
Teacher: Very good. It helps us count faster and stay organised.
Teacher: Which fruit or vegetable from the poster had the highest tally count?
Teacher: And which colour had the most number of items?
Teacher: Excellent. Today, we will connect this learning with real-life uses and revise the full chapter.

Connecting better

MUST DO
5 MIN.

Teacher: Let us begin with the 'Connecting better' section. Read the story about Maria and her friends.



Teacher: What did Maria and her friends collect data about?
Teacher: Yes, they collected data about earthquakes in their city.

Teacher: Jas also gave advice about staying safe. What was his suggestion?

Teacher: Correct. During an earthquake, people should move to an open area and stay away from tall buildings, trees and electric poles.

Teacher: Why do you think collecting data like this is important?

Teacher: Yes, it helps us understand patterns and prepare for future situations. Well done.

Recalling better

Teacher: Now, let us move to the 'Recalling better' box. It tells us what we have learnt in this chapter.

MUST DO
10 MIN.


Recalling better
CING
In this chapter, I have learnt
to make a pictograph.
to represent data using tally marks.
153

Teacher: Let us recall through some questions.

Teacher: What does a pictograph use to show information?

Teacher: Yes, pictures or symbols.

Teacher: What is a tally mark?

Teacher: Correct, it is a short line used to count.

Teacher: How do we show five with tally marks?

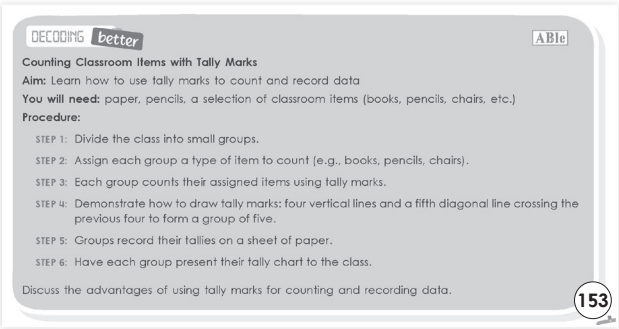
Teacher: Yes, four vertical strokes and one crossing line.

Teacher: Excellent. You have understood both ways of representing data.

Decoding better

Teacher: Let us now apply what we have learnt. We will do the activity from the 'Decoding better' section.

MUST DO
20 MIN.


DECODING better
ABle
Counting Classroom Items with Tally Marks
Aim: Learn how to use tally marks to count and record data
You will need: paper, pencils, a selection of classroom items (books, pencils, chairs, etc.)
Procedure:
STEP 1: Divide the class into small groups.
STEP 2: Assign each group a type of item to count (e.g., books, pencils, chairs).
STEP 3: Each group counts their assigned items using tally marks.
STEP 4: Demonstrate how to draw tally marks: four vertical lines and a fifth diagonal line crossing the previous four to form a group of five.
STEP 5: Groups record their tallies on a sheet of paper.
STEP 6: Have each group present their tally chart to the class.
Discuss the advantages of using tally marks for counting and recording data.
153

Teacher: I will divide you into small groups. Each group will be given one classroom item to count – like books, chairs, pencils or bags.

Teacher: Use tally marks to count and record the number of items.

Teacher: Remember, four lines with the fifth crossing it shows a group of five.

Teacher: Record your tallies on a sheet of paper.

Teacher: Once done, each group will present their tally chart to the class.

Teacher: After all presentations, we will discuss – what are the advantages of using tally marks?

Teacher: Great. Let us begin the activity.

Teacher: Well done, everyone. You worked well in groups and applied your learning in real life. Let us give ourselves a big round of applause for today.

Differentiated Activities

110 km/hr

Make a table with 3 items in your schoolbag. Count how many of each you carry for the week and use tally marks to show it.

80 km/hr

Choose any 2 things around you. Count them and draw tally marks to represent each.

40 km/hr

Look around and draw tally marks for 1 item you see in class.

Home Task

Choose any five things at home, like spoons, books, pillows, or shoes.

Count how many of each item you can find and show the number using tally marks in your notebook.

Period 6

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

SHOULD DO
5 MIN.

Teacher: We will start today with a small rhyme. Listen carefully. I will say a poem where one word repeats many times.

Teacher: You have to listen to that word and draw tally marks in the air for how many times you hear it. Ready?

Teacher: In this first rhyme, observe the word bag.

Teacher:

I carry my lunch in my bag,
I pack my books in my bag,
I run to school with my bag,
I never forget my bag.
Bag, bag, bag.

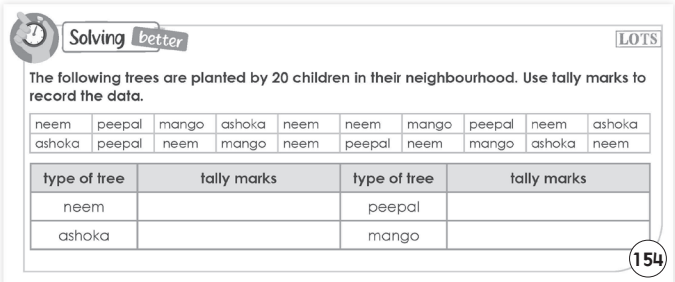
Teacher: How many times did you hear the word bag?

Teacher: Well done. You listened closely and made tally marks right. Open your books to page 154. We will solve questions given in the 'Solving better' section.

Solving better

Teacher: This task shows the names of trees planted by 20 children.

MUST DO
10 MIN.


Solving better
LOTS
The following trees are planted by 20 children in their neighbourhood. Use tally marks to record the data.

neem	peepal	mango	ashoka	neem	neem	mango	peepal	neem	ashoka
ashoka	peepal	neem	mango	neem	peepal	neem	mango	ashoka	neem

type of tree	tally marks	type of tree	tally marks
neem		peepal	
ashoka		mango	

154

Teacher: Read the names carefully. Then, record the data using tally marks in the table below.

Teacher: Let us do one example together. How many times do you see 'neem'?

Teacher: Count it and draw tally marks beside it.

Teacher: Now complete the tally marks for all types of trees.

Teacher: Check your tallies with your partner.

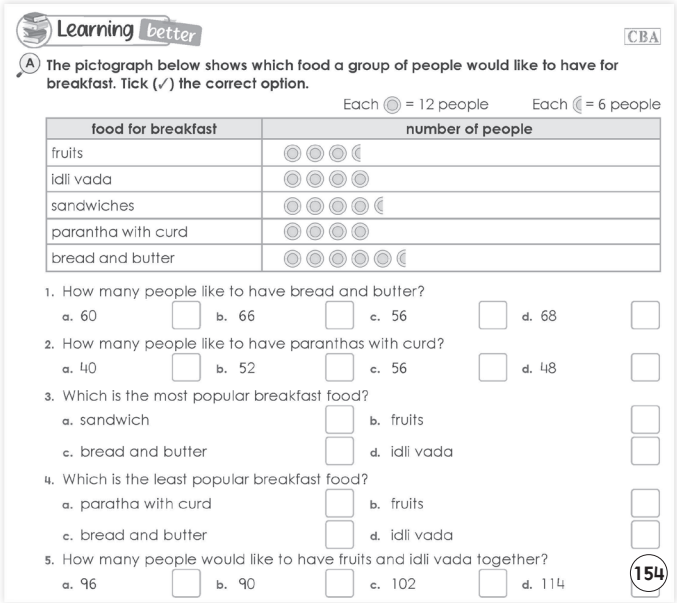
You may show the **Explainer Video** given on the digital platform.

Learning better

MUST DO

10 MIN.

Teacher: Now, let us move to Exercise A in the 'Learning better' section.



Learning better

CBA

A The pictograph below shows which food a group of people would like to have for breakfast. Tick (✓) the correct option.

Each ◎ = 12 people Each ◖ = 6 people

food for breakfast	number of people
fruits	◎◎◎◖
idli vada	◎◎◎◎
sandwiches	◎◎◎◎◖
parantha with curd	◎◎◎◎
bread and butter	◎◎◎◎◎◖

1. How many people like to have bread and butter?
   a. 60 ☐ b. 66 ☐ c. 56 ☐ d. 68 ☐
2. How many people like to have paranthas with curd?
   a. 40 ☐ b. 52 ☐ c. 56 ☐ d. 48 ☐
3. Which is the most popular breakfast food?
   a. sandwich ☐ b. fruits ☐
   c. bread and butter ☐ d. idli vada ☐
4. Which is the least popular breakfast food?
   a. paratha with curd ☐ b. fruits ☐
   c. bread and butter ☐ d. idli vada ☐
5. How many people would like to have fruits and idli vada together?
   a. 96 ☐ b. 90 ☐ c. 102 ☐ d. 114 ☐

154

Teacher: This pictograph shows which food a group of people would like to have for breakfast.

Teacher: Each full circle stands for 12 people and the half-circle stands for 6.

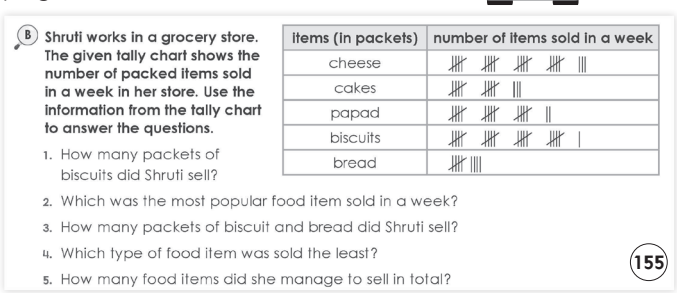
Teacher: Read the pictograph and answer the questions by ticking the correct option.

Teacher: Read carefully, look for which item has the most and which has the least symbols.

Teacher: Now, look at Exercise B on page 155.

MUST DO

15 MIN.



B Shruti works in a grocery store. The given tally chart shows the number of packed items sold in a week in her store. Use the information from the tally chart to answer the questions.

items (in packets)	number of items sold in a week
cheese	𝍸 𝍸 𝍸 𝍸 |||
cakes	𝍸 𝍸 ||
papad	𝍸 𝍸 𝍸 ||
biscuits	𝍸 𝍸 𝍸 𝍸 |
bread	𝍸 |||

1. How many packets of biscuits did Shruti sell?
2. Which was the most popular food item sold in a week?
3. How many packets of biscuit and bread did Shruti sell?
4. Which type of food item was sold the least?
5. How many food items did she manage to sell in total?

155

Teacher: Shruti works in a grocery store. The chart shows how many packets of food items were sold.

Teacher: Use the tally chart to answer the questions below it.

Teacher: Let us read question 1 together - how many packets of biscuits did Shruti sell?

Teacher: Count the tally marks for biscuits and write the number.

Teacher: Now complete the remaining questions.

Teacher: Check your answers once done.

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

Teacher: Well done, everyone. You all did great work reading data and solving questions. Let us give ourselves a big round of applause for today.

Differentiated Activities

110 km/hr

Make a pictograph showing 5 types of stationery your classmates use. Use one symbol to represent 2 students.

80 km/hr

Ask 5 friends their favourite breakfast item. Record the data using tally marks and write which one is most liked.

40 km/hr

Write the name of two fruits. Ask your partner which one they like. Draw tally marks for each.

Home Task

Look at five rooms in your home, like the kitchen, bedroom, bathroom, living room and balcony. Count how many switches you find in each room. Use tally marks to show your count in your notebook.

Period 7

SHOULD DO

5 MIN.

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

Teacher: Today, we will begin with a fun listening challenge. Listen carefully to a sentence and count how many times the name of a bird is mentioned. Then, draw tally marks in the air for that bird.

Teacher: The sentence is –

Anna saw a parrot, then another parrot, then a flamingo and then again a parrot. She waved at the parrot and pointed at the flamingo.

Teacher: Which bird did I mention the most? How many tally marks will you draw for it?

(Let students respond 4 tally marks for parrot, 2 for flamingo)

Teacher: Excellent observation. That is how we listen, count and use tally marks. Let us move to our main activity now.

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

Teacher: Open your Main Coursebook to page 155.

Teacher: Let us solve Exercise C together.

Teacher: This pictograph shows how many students participated in different sports activities.

MUST DO

10 MIN.

C The following pictograph shows the number of students who participated in various sports activities. Answer the questions based on the pictograph.

stands for 8 students

activity	number of students who participated
swimming	★★★★
cycling	★★★
gymnastics	★★
tennis	★★★★★
badminton	★★★★

1. How many students participated in swimming? _____
2. How many students participated in badminton? _____
3. In which activity did the most number of students participate? _____
4. How many students participated in badminton and gymnastics? _____
5. How many more students participated in tennis than in cycling? _____

155

Teacher: Each star stands for 8 students. Count the stars to find the number of students for each activity.

Teacher: Let us begin with question - How many students participated in swimming?

Teacher: Count the stars next to swimming and multiply by 8. Write your answer.

Teacher: Continue with the next questions. Read carefully and use the pictograph to help you.

Teacher: If needed, work in pairs to check your answers.

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

Teacher: Now move to Exercise D on the same page.

Teacher: This chart already shows tally marks and number of birds for some entries.

MUST DO

10 MIN.

D Anna visited a bird sanctuary with her parents. The tally chart below shows the different kinds of birds she saw. Complete this tally chart.

bird	tally marks	number of birds
	𝍸 𝍸	

155

bird	tally marks	number of birds
		10
	𝍸 𝍸 𝍸 ||||	
		12
	𝍸 |||	
	𝍸 𝍸 ||	

156

Teacher: Fill in the missing tally marks or numbers and then answer the questions that follow.

Teacher: Read each row carefully. Use the tally rules we learnt to fill the chart correctly.

Teacher: You may work in pairs if needed.

Teacher: Let us now do a short activity based on today's learning.

SHOULD DO

15 MIN.

Teacher: Form small groups. Each group will choose any five birds or animals they like.

Teacher: Collect data from your group on which one is the most liked.

Teacher: Create a tally chart and a pictograph on a sheet of paper.

Teacher: Once done, exchange your sheet with another group and try to answer questions from their data.

Teacher: This will help you practise both tally marks and pictographs together.

Teacher: Great work, everyone. You understood how to read and create data charts today. Let us give ourselves a big round of applause for our effort.

Differentiated Activities

110 km/hr

Interview five classmates about their favourite outdoor game. Create both a tally chart and pictograph to show the results. Use one picture to represent two students.

80 km/hr

Make a tally chart showing how many times you saw each colour in your classroom (e.g., red, blue, green). Count at least four colours.

40 km/hr

Ask five friends their favourite animal. Draw tally marks to show their answers.

Home Task

At home, count how many shoes, slippers and sandals you find. Use tally marks in your notebook to show how many of each item is there.

Bring large beads of various colours, shapes and sizes, along with beading thread, wire and scissors. Also, bring paper, coloured pencils, small bowls and a large tray to organise your materials for 'Creating better' activity. Bring your 'Little Book' for 'Revising better' activity.

Period 8

SHOULD DO

5 MIN.

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

Teacher: Let us begin with a short discussion. Raise your hand if you like to eat chips, burgers or sugary drinks.

Teacher: Yes, many of us enjoy these foods. These are called junk foods. Do you know why?

Teacher: Junk food usually has too much oil, sugar or salt. It tastes good, but is it good for our health?

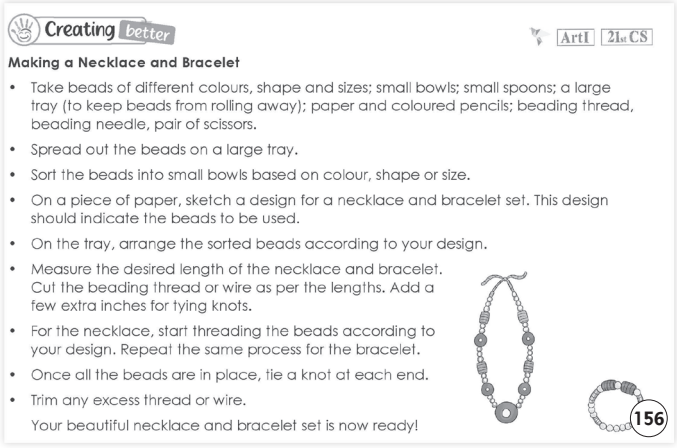
Teacher: Right, eating too much junk food can make us tired, weak or even unwell.

Teacher: Can you name one healthy food that you enjoy eating?
(Let students respond.)
Teacher: Very good. Eating fruits, vegetables and home-cooked meals helps us stay active and strong. Let us now move to today's creative task.

Creating better

MUST DO
15 MIN.

Teacher: Open to the 'Creating better' section on page 156.


Creating better
ArtI 2.1a CS
Making a Necklace and Bracelet
- Take beads of different colours, shape and sizes; small bowls; small spoons; a large tray (to keep beads from rolling away); paper and coloured pencils; beading thread, beading needle, pair of scissors.
- Spread out the beads on a large tray.
- Sort the beads into small bowls based on colour, shape or size.
- On a piece of paper, sketch a design for a necklace and bracelet set. This design should indicate the beads to be used.
- On the tray, arrange the sorted beads according to your design.
- Measure the desired length of the necklace and bracelet. Cut the beading thread or wire as per the lengths. Add a few extra inches for tying knots.
- For the necklace, start threading the beads according to your design. Repeat the same process for the bracelet.
- Once all the beads are in place, tie a knot at each end.
- Trim any excess thread or wire.

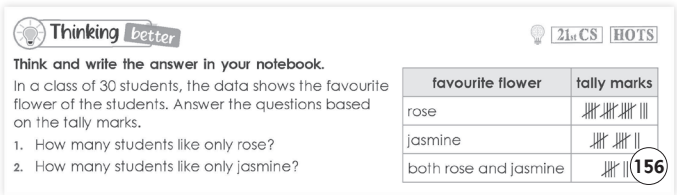
Your beautiful necklace and bracelet set is now ready!
156

Teacher: Today, we are going to explore how we can represent data through a necklace or bracelet.
(Guide the students to complete the activity.)

Thinking better

MUST DO
5 MIN.

Teacher: Now turn to the 'Thinking better' section.
Teacher: The chart shows tally marks for students' favourite flowers.


Thinking better
2.1a CS HOTS
Think and write the answer in your notebook.
In a class of 30 students, the data shows the favourite flower of the students. Answer the questions based on the tally marks.
1. How many students like only rose?
2. How many students like only jasmine?

favourite flower	tally marks
rose	
jasmine	
both rose and jasmine	

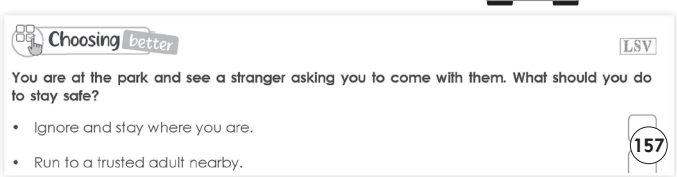
156

Teacher: Use this to answer the questions in your notebook.
Teacher: Think carefully before you write. Which flower was liked more? How many students chose only one flower?

Choosing better

MUST DO
5 MIN.

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


Choosing better
LSV
You are at the park and see a stranger asking you to come with them. What should you do to stay safe?
- Ignore and stay where you are.
- Run to a trusted adult nearby.

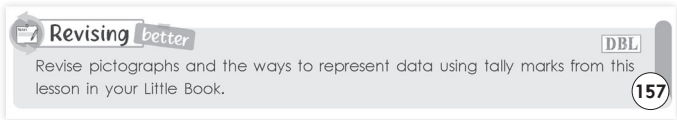
157

Teacher: Imagine you are playing in the park. A stranger comes and asks you to come with them.
Teacher: What should you do?
Teacher: Yes, you must say no and move away. What else?
Teacher: Right, inform a trusted adult immediately. Safety is always first.
Teacher: Would it be okay to accept food from a stranger?
Teacher: No, even if they seem kind, we must be careful.
Teacher: Very good. Making safe choices keeps us healthy and protected.
You may show the **Mental Maths** given on the digital platform.

Revising better

MUST DO
5 MIN.

Teacher: Now let us revise what we have learnt in this chapter. Everyone please open the 'Little book'.


Revising better
DBL
Revise pictographs and the ways to represent data using tally marks from this lesson in your Little Book.
157

Teacher: Can someone tell me two ways to show data?
Teacher: Correct, pictographs and tally marks.
Teacher: How do we show five in tally marks?
Teacher: Yes, with a group of four strokes and one crossing line.
Teacher: Why do we use pictures in pictographs?
Teacher: To help us understand large numbers easily.
Teacher: Excellent. These are all part of handling data in a smart way.

Pledging better

MUST DO
5 MIN.

Teacher: Now let us end with a pledge from the 'Pledging better' section.


Pledging better
SDGs
With my whole heart, I pledge to:
- not eat junk food.
- drink a lot of water.

SDG 3: GOOD HEALTH AND WELL BEING
157

Teacher: Please repeat after me:
With my whole heart, I pledge to not eat junk food and drink a lot of water.
Teacher: This pledge is linked to SDG 3: Good Health and Well-being.
Teacher: What do you think this SDG means?
Teacher: Yes, it means we should take care of our bodies, eat healthy food, drink water, sleep well and stay active.
Teacher: Can you share one healthy habit you follow at home?
(Let students respond.)
Teacher: These small choices make a big difference in our health. Let us promise to follow them every day.
Teacher: Well done, everyone. You all did a fantastic job today. Let us give ourselves a big round of applause for all the hard work and participation. See you in the next class.

Differentiated Activities

110 km/hr

Interview five classmates to find out their favourite healthy food. Record the data and draw a pictograph using one picture to represent one student. Write a title and label clearly.

80 km/hr

Make a tally chart of how many glasses of water you drink in a day for three days. Compare which day you drank the most water.

40 km/hr

Draw two healthy foods you ate this week. Show how many times you ate them by drawing tally marks beside each.

Home Task

Draw or paste pictures of three healthy foods you ate today. Write one sentence for each, like: I ate an apple. It is good for my health.

Period 9

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

Teacher: Let us play a game called Which has more?

SHOULD DO
5 MIN.

Teacher: I will say two things and you have to guess which one you think we might find more of in our classroom.

Teacher: Ready? Listen carefully. If you think the first item, raise your left hand and if you think the second item, raise your right hand.

Teacher: Pencils or shoes?

Teacher: Bags or books?

Teacher: Water bottles or lunch boxes?

Teacher: Great. Now think – how can we find out for sure?

Teacher: Yes, we can collect data by observing and counting and then use tally marks or pictographs to show what we found.

Teacher: Excellent. Let us now move to solving our worksheets.

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

Worksheet 1

Teacher: Open to page 44 in your workbook. We will solve Worksheet 1 together.

MUST DO
15 MIN.

Teacher: In Exercise A, read the tally marks and count how many of each vehicle is shown. Write the correct number in the last column.

Teacher: Let us do the first one - how many tally marks are there for bike?

Worksheet 1

A. Read the table. Count the tally marks and write the number of vehicles of each type to complete the table.

	Types of vehicle		Number
1.	Bike	𝍸	
2.	Motor bike	𝍸 III	
3.	Car	𝍸 𝍸 𝍸 𝍸 II	
4.	Truck	𝍸 II	
5.	Bus	III	

B. Read the table and write the number of girls in each class to complete the table.

	Class	★ 10 girls ½ 5 girls	Number of girls
1.	Class 1	★ ★ ★	
2.	Class 2	★ ★ ★ ½	
3.	Class 3	★ ★	
4.	Class 4	★ ★ ½	
5.	Class 5	★ ★ ★ ★	

C. The table below shows the number of students playing various games in the playground. Fill in the missing columns and complete the table.

	Games	Number of students	Tally marks
1.	Basketball	15	
2.	Cricket		𝍸 𝍸 II
3.	Football	12	
4.	Volleyball		𝍸 IIII
5.	Badminton	8	

44

Teacher: Yes, 4 lines and 1 crossing – that is 5. Another group makes 10. So total?

Teacher: Good. Now complete the rest in the same way.

Teacher: In Exercise B, each star stands for 10 girls and each half star for 5. Count the total for each class.

Teacher: How many girls are there in Class 3? Let us check together.

Teacher: Finally, in Exercise C, read the number of students and complete the tally marks for each game. Watch carefully how the tally marks are grouped.

MUST DO
15 MIN.

Worksheet 2

Worksheet 2

A. Sumit bought different varieties of sweets from a sweet shop. The number of sweets bought in each variety is given in the table below. Read the tally table and fill in the blanks.

1. Number of pieces of *jalebi* = _____
2. Sumit bought _____ *ladoos*.
3. Number of pieces of *barfi* = _____
4. Total number of pieces Sumit bought = _____
5. Number of pieces of *rasgulla* = _____

Sweet	Number of pieces
Ladoo	𝍸 𝍸 I
Barfi	III
Jalebi	𝍸 II
Rasgulla	𝍸 IIII

B. The table below shows the number of bicycles sold by a shopkeeper in 5 weeks. Draw stars to complete the pictograph.

	Week	Bicycles sold	1 ★ = 5 bicycles
1.	Week 1	25	
2.	Week 2	40	
3.	Week 3	35	
4.	Week 4	60	
5.	Week 5	55	

C. The following table shows the favourite sports of students of class 3. Complete the table by filling the missing entries.

Favourite sport of class 3		
Name of the sport	Tally marks	Number of students
Hockey	𝍸 𝍸	
Cricket	𝍸 𝍸 II	
Tennis		20
Football		8
	Total =	

45

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

Teacher: Now let us solve Worksheet 2 on page 45.

Teacher: In Exercise A, read the tally marks in the table and write how many sweets Sumit bought.

Teacher: For example, how many pieces of jalebi are there?

Teacher: Yes, count the tally marks and fill in the blanks.

Teacher: In Exercise B, you need to draw stars to complete the pictograph. Each star stands for 5 bicycles sold.

Teacher: For Week 1, if 25 bicycles were sold, how many stars do we need?

Teacher: Correct, 5 stars. Draw neatly.

Teacher: In Exercise C, complete the number of students and tally marks for each sport. Count carefully and fill the totals.

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

Teacher: Let us end today with a fun game called Data Freeze.

COULD DO
5 MIN.

Teacher: I will say a category. You have to freeze in a pose that shows your choice.

Teacher: Then we will quickly count how many students chose each and represent it on the board using tally marks.

Teacher: Ready? First category – Favourite season:

Stand tall like the sun is shining – Summer.

Hug yourself like it is cold – Winter.

Act like you are jumping in puddles – Rainy.

Teacher: Great. Hold your pose. Now let us count together and draw tally marks for each group on the board.

Teacher: Well done, everyone. You were creative, active and showed great understanding of data handling. Let us give ourselves a big round of applause for our hard work today.

Differentiated Activities

110 km/hr

Collect data from five friends about their favourite fruit. Create a pictograph using one symbol to show one student.

80 km/hr

Draw tally marks to show how many glasses of water you drank in three days.

40 km/hr

Draw pictures of two fruits you like and show how many times you ate each using tally marks.

Home Task

Book of Project Ideas

(For project Ideas, please refer to the book of Project Ideas, page 11 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 birds through this engaging project.)

Period 10

SHOULD DO
5 MIN.

Teacher: Good morning students. How are you?

Teacher: Let us start with a simple discussion.

Teacher: Yesterday, we worked on two worksheets. Can anyone tell me what numbers we used to show in Worksheet 1?

Teacher: Yes, tally marks and symbols like stars.

Teacher: Why do you think we use tally marks instead of just writing numbers?

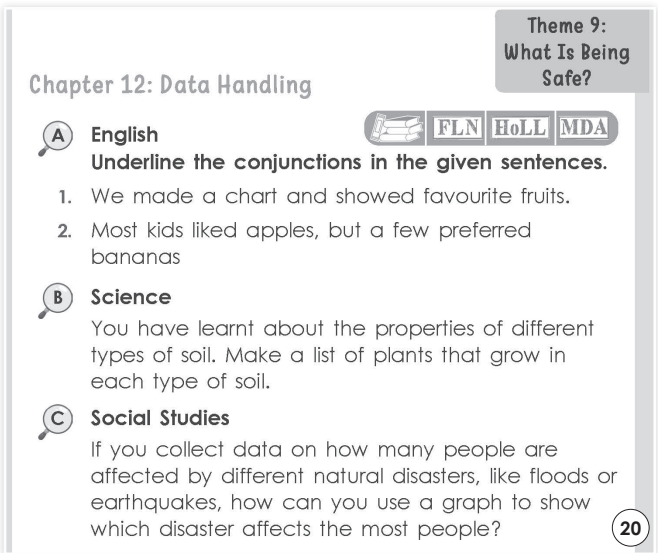
Teacher: Correct, it helps us count quickly and group data neatly.

Teacher: And what did the stars represent in the pictograph?

Teacher: Very good, each star stood for a fixed number of students or items.

Teacher: Let us now use these skills in today's work.

Book of Holistic Teaching



Theme 9: What Is Being Safe?

Chapter 12: Data Handling

FLN HoLL MDA

A English

Underline the conjunctions in the given sentences.

1. We made a chart and showed favourite fruits.
2. Most kids liked apples, but a few preferred bananas

B Science

You have learnt about the properties of different types of soil. Make a list of plants that grow in each type of soil.

C Social Studies

If you collect data on how many people are affected by different natural disasters, like floods or earthquakes, how can you use a graph to show which disaster affects the most people?

20

MUST DO
15 MIN.

(Refer to the Book of Holistic Teaching, page 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: What Is Being Safe?

Chapter 12: Data Handling

PRO 21st CS

Learn to collect data, organise it in a table and use tally marks to count different types of trees.

- Write the title: "Survey of Neighbourhood Trees" at the top of the page.
- Draw a table with three columns and enough rows to list all the types of trees you might find in your neighbourhood.
- Label the columns as follows:
- **Column 1:** tree name; **Column 2:** tally marks; **Column 3:** total number
- Take a walk around your neighbourhood with an adult.
- Look for different types of trees and write down their names in the "tree name" column. Ask the adult to help.
- Record the number of trees.
- Write the total number of each type of tree in the "total number" column. After you have completed your tally marks.
- Check your table to make sure you have counted all the trees correctly.
- Show your table to your parent or teacher to explain what you have found.

11

COULD DO

15 MIN.

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

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 Activities

110 km/hr

Create your own survey question (e.g., favourite fruit, sport or hobby). Ask five classmates and record their answers using both tally marks and a pictograph. Write one sentence about what you observed from your data.

80 km/hr

Choose any three colours you see around you. Count how many times each colour appears and draw a tally chart in your notebook.

40 km/hr

Choose two snacks you like (e.g., banana and cucumber). Ask two friends which one they like more. Use tally marks to record their answers.

Home Task

Practise the questions discussed in this chapter.

Learning Outcomes

The students will:

Domain	Learning Outcome
Physical Development	• draw pictographs and tally charts accurately using appropriate hand movements and tools during group activities.
Socio-Emotional and Ethical Development	• engage in pair and group discussions respectfully, share their choices and respond to peers with empathy and cooperation.
Cognitive Development	• collect and organise data in a table, represent it using tally marks and pictographs and interpret the information to answer related questions.
Language and Literacy Development	• use mathematical terms such as data, tally, pictograph, most, least and total to describe, compare and present data accurately.
Aesthetic and Cultural Development	• create neat and meaningful pictorial data representations using symbols and colours linked to real-life themes like health, food or environment.
Positive Learning Habits	• follow instructions, complete tasks independently or in groups, maintain neatness and submit their data-handling work on time.

Starry Knights

Did learners enjoy survey and collection of data? Which activity did they like doing in the class?

Given yourself a STAR for being an efficacious teacher.