12 Data Handling

We'll cover the following key points:

→ About Lists

→ Pictograph

→ Bar Graph
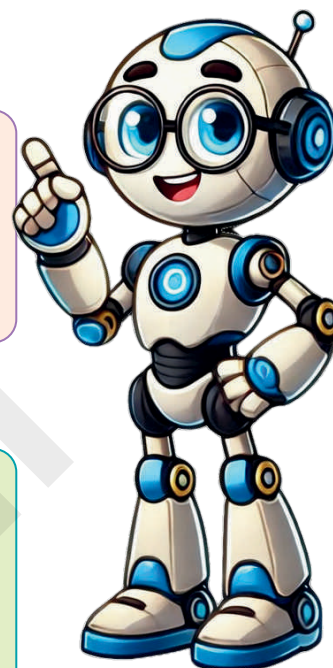
Do you Remember fundamental concept in previous class.
In class 2ⁿᵈ we learnt

→ Pictograph

In class 1ˢᵗ we learnt

→ Data Handling

Hi, I'm EeeBee

Still curious?
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Learning Outcomes

By the end of this chapter, students will be able to:

- Understand the concept of data and its importance in daily life.

- Collect, organize, and represent data using simple methods like tally marks.

- Create and interpret pictographs with appropriate scales and symbols.

- Represent and read data using bar graphs with basic units.

- Compare and analyze data to draw simple conclusions.

- Identify patterns or trends in data representation.

- Solve simple real-life problems using data representation techniques.

- Develop observational skills by interpreting data from surroundings.

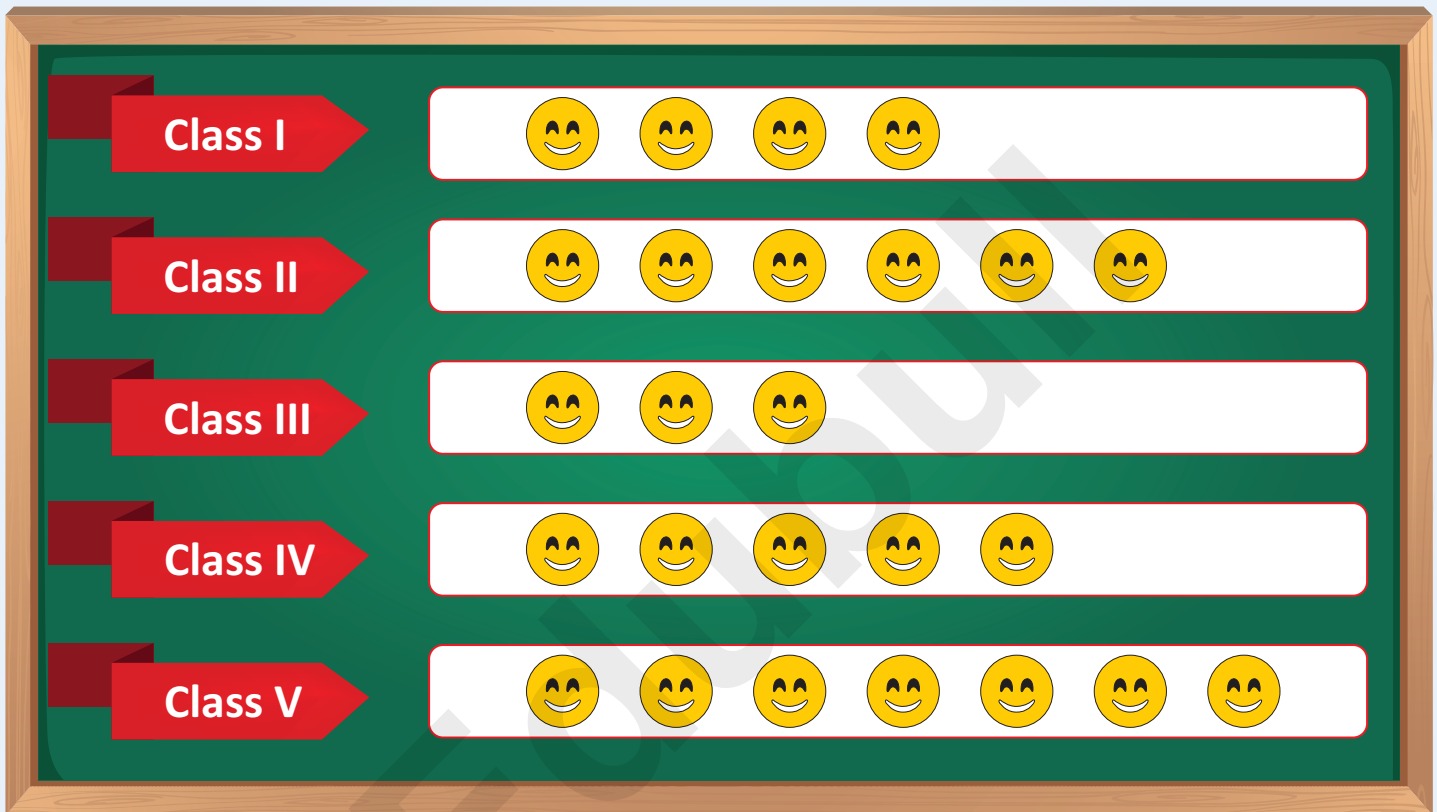- Understand the terms like "maximum," "minimum," "more," "less," and "equal" in the context of data.

Observe the pictograph given below and answer to the questions:

😊 **Represents 5 students.**

Class I	😊 😊 😊 😊
Class II	😊 😊 😊 😊 😊 😊
Class III	😊 😊 😊
Class IV	😊 😊 😊 😊 😊
Class V	😊 😊 😊 😊 😊 😊 😊

Circle (✓) the correct answer:

a. Which class has the highest number of students ?

    i.   Class 2 ☐   ii.   Class 4 ☐   iii.   Class 5 ☐

b. Which class has the least number of students ?

    i.   Class 3 ☐   ii   Class 1 ☐   iii.   Class 5 ☐

c. How many students are there in all ?

    i.   80 ☐   ii.   78 ☐   iii.   125 ☐

The parents of Shalu are shopping for Shalu's birthday. They need lot of things like balloons, candles, cake, caps, ice-creams, sandwich, patties and juices. They make a list so that they don't forget anything!

Item	Number
Balloons	3 packets
Caps	15
Candles	10
Ice-creams	25
Cake	1

Item	Number
Sandwiches	35
Gulab jamuns	35
Return gifts	18
Patties	35
Juices	35

- A list helps us to organise information about things.
- The information in a list can be in the form of names and numbers.
- Such information is called data.

More About Lists

Sometimes, we can make a list with more than two columns to show more information.

Example 1 : The list shows the number of students present and absent in each class on a certain day.

Class	Class I	Class II	Class III	Class IV	Class V	Total
Number of students	45	38	42	60	44	....
Students present	40	35	41	57	42	....
Students absent	5	3	....	....	....	....

Fill in the blanks in the previous list. Then answer the following questions:

(a) How many students were absent in all on that day? ....

(b) In which class were all students present? ....

(c) If the school consists of these five classes, how many students are there in the school? ....

(d) Which class has the most number of students? ....

(e) Which class has the least number of students? ....

Pictograph
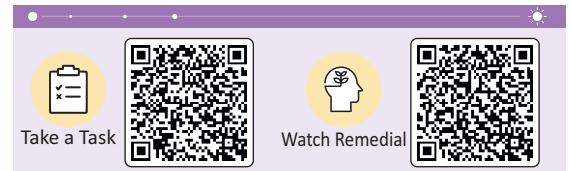
Data can be shown with the help of pictures. The pictorial representation of data is called a **pictograph**.

Example 2 : In a school, the students of Class 3 A were asked to name their favourite food. Use the information to make a pictograph.

Favourite Food	Sandwich	Rajma-rice	Burger	Dosa	Noodles
Number of students	12	9	14	5	6

The above information can be shown in the form of a pictograph.

REMEMBER

A pictograph will always have a title. It may also have a note explaining the pictures.

FAVOURITE FOOD OF STUDENTS OF CLASS 3A

Each 😊 stands for 1 student.

Answer these questions with the help of the above pictograph:

(a)   What does 🧒 stand for ?   ....1 student.......

(b)   Which food is liked by the least number of students ?   ....

©   Which food is liked by the most of the students ?   ....

(d)   How many students are there in Class 3 A ?   ....

(e)   What does the pictograph show ?   ....

When we use pictures or any other symbols to represent some data or information, it is called pictograph or pictorial representation of data.

Exercise 12.1

1.   Use this pictograph to answer the questions that follow:

Apples sold in May	
1st week	🍎🍎🍎🍎🍎
2nd week	🍎🍎🍎🍎🍎🍎🍎🍎
3rd week	🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎🍎
4th week	🍎🍎🍎🍎🍎🍎🍎
One 🍎 represents 1 kg of apple	
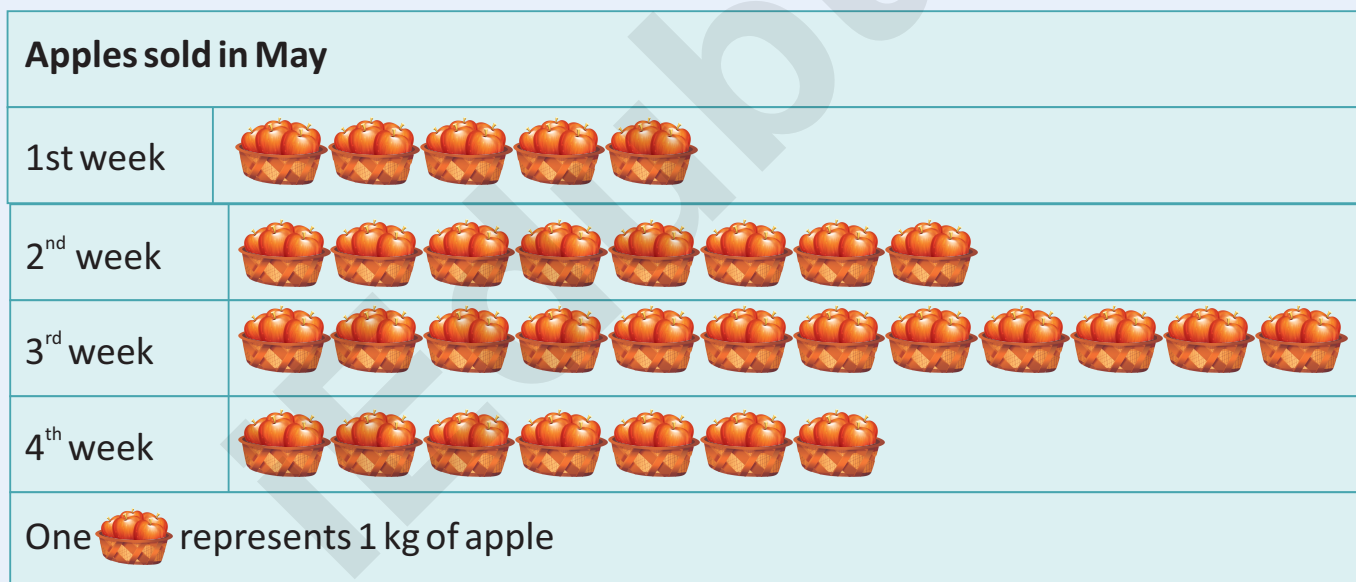
(a)   In which week were the maximum number of apples sold?   ....

(b)   How many more apples were sold in the 3rd week than   ....
      in the 1st week ?

(c)   How many kg of apples were sold in the month of May?   ....

2. **Use this pictograph to answer the questions that follow:**

Number of books issued from the library during the week	
Monday	📘 📘 📘 📘 📘 📘 📘
Tuesday	📘 📘 📘 📘 📘
Wednesday	📘 📘 📘 📘
Thursday	📘 📘 📘 📘 📘 📘
Friday	📘 📘 📘 📘 📘 📘 📘 📘
Saturday	📘 📘 📘
Each 📘 represents 10 books.	

(a)   What does 📘 represent ?   ....

(b)   What information does the pictograph give ?   ....

(c)   What was the total number of books issued during the week ?   ....

(d)   On which day were the least number of books issued ?   ....

(e)   On which day were the most number of books issued ?   ....

Bar Graph

Information can also be shown in bar graphs. A bar graph has bars of different height.

Example 3:   The following is a list of some activities chosen by some students. Show this information with the help of a bar graph.

Activities	Dance	Music	Art	Yoga	Karate
Number of students	10	8	6	9	5

Study the bar graph and fill in the blanks:

(a) .... students have chosen Art and Yoga.

(b) Most students have chosen ....

(c) The least students have chosen ....

Exercise 12.2

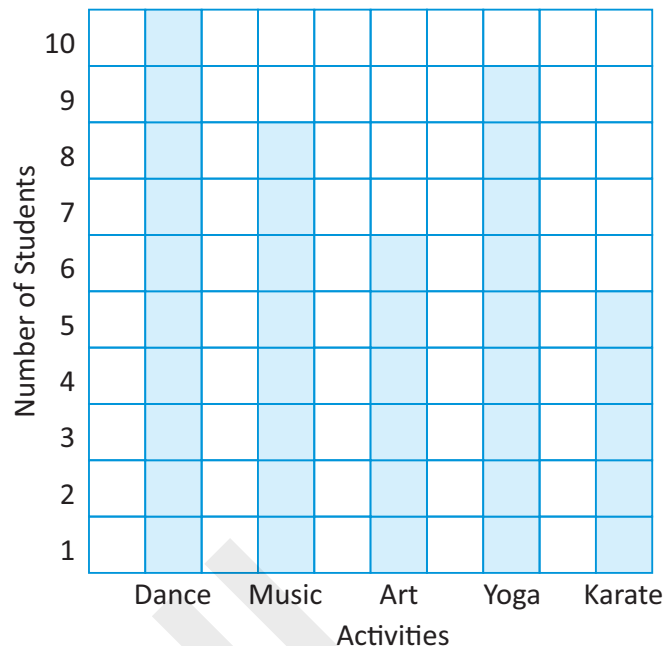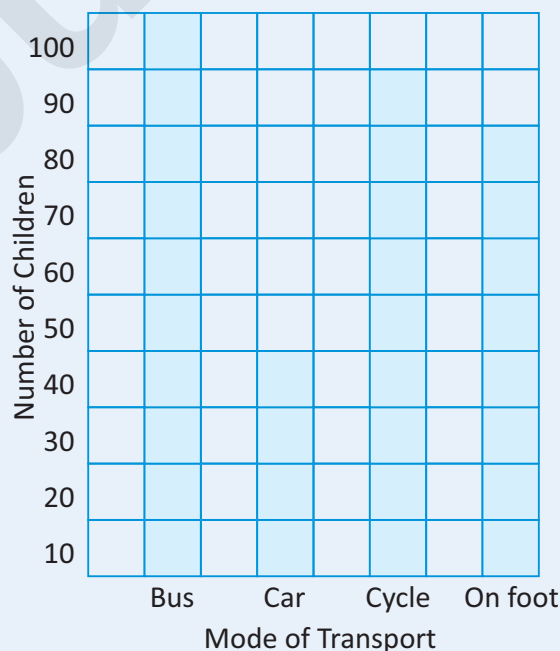1. **Study this bar graph which shows the mode of transport used by children to go to school.**

   Answer the questions that follow.

(a) Which is the most popular mode of transport ? ....

(b) How many students walk to go to school ? ....

(c) Which mode of transport is the least used ? ....

(d) How many students use cycle to go to school ? ....

2. **This bar graph shows the number of children who have visited various monuments. Study the bar graph and answer the questions that follow:**

(a) How many children visited the Taj Mahal ? ....

(b) How many children visited the Taj Mahal and the Victoria Memorial ? ....

(c) Which monument is visited by the most number of children ? ....

(d) How many children visited Meenakshi Temple ? ....

(e) Which monument is visited by the least number of children ? ....
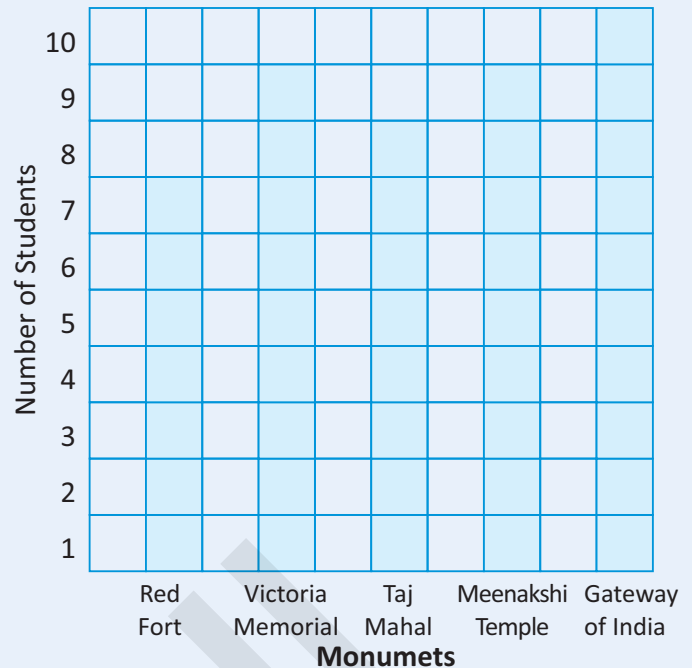
Number of Students vs Monuments (Red Fort, Victoria Memorial, Taj Mahal, Meenakshi Temple, Gateway of India)

Think Tank

1. **Tick (✓) the correct option:**

(a) In bar graph, which month has least production ?

(i) Jan ☐ (ii) Feb ☐

(iii) Mar ☐ (iv) Apr ☐

(b) Which month has maximum production ?

(i) Apr ☐ (ii) Mar ☐

(iii) Feb ☐ (iv) Jan ☐

Production (in Tonne) vs Year (Jan, Feb, Mar, Apr)

(c) In which month, production was 600 Tonnes ?

(i) Feb ☐ (ii) Jan ☐ (iii) Mar ☐ (iv) Apr ☐

(d) In which month, production was 300 Tonnes ?

(i) Jan ☐ (ii) Feb ☐ (iii) Mar ☐ (iv) Apr ☐

(e) How much production was in month of Jan and Feb ?

(i) 300 Tonnes ☐ (ii) 400 Tonnes ☐

(iii) 700 Tonnes ☐ (iv) 800 Tonnes ☐