

Introduction



The main aim of this information processing is to enable the learners to count, compare and assume information such as invitees coming to attend a birthday party, sort out the class library books, food production, the number of pupils taking food in the mid-day meal scheme and the various occupations of their parents.

Example

A fifth standard teacher asked a student named Dinu to collect the pictures of favourite sports articles of his clasmates and Dinu collected the same and handed it over to the teacher in a short span of time. Let us see how is it possible for him to do it quickly.



The teacher asked few questions about his collection and Dinu was able to answer those questions quickly. Let us find what Dinu did to answer the questions quickly.



Dinu tabulate the data he collected as given above and answered the following questions.

1.	How many	students	like the	cricket bo	at? 7
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- 2. How many students like football?
- 3. How many students like the Carrom board? 8
- 4. How many students like hockey stick? 10
- 5. Find the total number of sports articles. 35



Systematic Listing

Number puzzle is considered to be one of the unique games in mathematics. These types of games create more interest and involvement to learn mathematics in a very easy manner.

It is very happy to note that most of the number puzzles can be solved with basic knowledge of mathematics.

Here is a number puzzle with a systematic rule to solve it.

- i. Choose any one number
- ii. Add the next number to it.
- iii. Then add 9 to the sum.
- iv. Divide it by 2.
- v. And then subtract the number chosen from it.
- vi. Can you guess the answer?

Try with other numbers you could observe the answer is same for all the numbers.



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The above diagram (grid) shows rows and columns, horizontal squares are called **Rows** vertical square called **Columns**.





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Let us see the way they arranged the articles in a proper way

Shapes

Numbers

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Ite	ems	Pencil box	Pen	Eraser	Pencil	Scale	Water bottle	
Nu	Imbers	2	3	3	3	1	2	
.	Activity 2							
To	ital stoc	k of hous	ehold art	icles at th Mowing au	ne end of	the mont	h in a mart	
Qu	<image/>							
1.	How m	any chair:	s were th	ere in the	stock lis [.]	t?		
2.	Name the articles that are lesser in count than the count of cots.							
3.	What is the total number of things in the stock?							
4.	How many tri footed stools are there?							
5.	5. Mention the article which is 3 numbers greater than tri footed stool?							
			Do it y	your self	÷	-		
	List & tabulate the furniture in your school. (If it is a big school let it be in class room/house)							

6.3

Pictograph

Information can be easily understood when it is represented in pictures.

A **pictograph** is the representation of data using pictures. Pictographs represent the frequency of data using symbols or images that are relevant to the data. This is one of the simplest ways to represent data.

Example

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Information collected from 150 students about their favourite subjects are given below. Make a pictograph based on it:

Sul	bject Number of students		- 5 students
Tamil		25	= 5 students
English	20		
Maths		55	
Science		35	
Social sc	iences	15	
Subject		Number of stud	lents
Tamil			
English			
Maths			
Science			
Social science			

Education	Numbers
Up to Fifth standard	10
Up to Eigth standard	20
Up to Tenth standard	50
Up to Twelveth standard	70
Under Graduate	10
Post Graduate	10
Illiterates	30
	Education Up to Fifth standard Up to Eigth standard Up to Tenth standard Up to Twelveth standard Under Graduate Post Graduate Illiterates

Exercise 6.3

1. The following table shows the weight of paddy cultivated in a particular village during the years 2010 to 2015

Year	Paddy production
2010	AAAAA
2011	AAAA
2012	AAA
2013	AA
2014	AAA
2015	XX

= 100 kg

Observe the pictograph and answer the following questions.

- a) In which year paddy production was maximum?
- b) In which year paddy production were equal?
- c) Find the quantity of paddy production in 2015.
- d) Find the total quantity of paddy production particularly 2013, 2014, and 2015.
- 2. The total number of pupil studying in 5 school in a particular are as follows

GHSS: 1000	PUPS: 200	BH55: 400

PUMS: 400 Private nursery School: 800

Prepare a pictograph using the symbol $\underbrace{\bullet}$ to represent 100 Pupil and answer the following question:

- 1. Which school has the maximum number of pupil?
- 2. Which school has the least number of pupil?

Representation of Data by Tally Marks

Any collection of information in the form of numerical figures giving the required information is called Data.

In olden days primitive man used to count and verfy his livestock using stones. This is the first data gathering method. Nowadays we use many methods to collect information. The most efficient method is to keep a "tally marks".

Example 1

An information collected about the number of vehicles which crossed a school on a particular time are shown below.

'1' is called a 'tally mark'. It is difficult to count if there are more number of tally marks.

Therefore to make it easier to count, we change it as follows.

	- 2		- 7
	- 3		- 8
	- 4		- 9
	- 5		- 10
ШТ	1-6		- 11

111111111
111111
11111111111
1111111111

Note: We can use tallymark to record data of a variety of things with large numbers.

Solution

Vehicles	Tally mark	No. of vehicles
Car	1111 1111 1	11
Van		7
lorry	1111 1111 111	13
Two wheelers	1111 1111 11	12
Bus		4

Answer the following questions:

- Which vehicle crossed the school maximum in numbers? Answer: lorry
- Find the total number of vehicles which crossed on a particular time? Answer: 47

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Example 2

Information was collected by Balu from 20 students of class five regarding their favourite snacks are given.

S.No. of Students	Favourite snacks	S.No. of Students	Favourite snacks
1	Chocolate	11	Apple
2	Cake	12	Chocolate
3	Biscuit	13	Cake
4	Chocolate	14	Chocolate
5	Chocolate	15	Chocolate
6	Banana	16	Cake
7	Biscuit	17	Banana
8	Biscuit	18	Chocolate
9	Biscuit	19	Apple
10	Chocolate	20	Chocolate

Tabulate the above information by using Tallymark. Here, all the students have chosen any one of the snacks we can tabulate it as follows.

Name of the snack	Tallymark	No. of students
Chocolate	JHT IIII	9
Cake		3
Biscuit		4
Apple	II	2
Banana		2

The number of Two Wheeler sold in a week in a showroom is given below. Represent the data using tally marks.

Sunday-6 Monday-11 Tuesday-3

Activity 1

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Wednesday-5 Thursday-16 Friday-16

Saturday-4

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Try this

Collect information based on the points given below and prepare a table using tally marks

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(a) Types of storybooks liked by your classmates.

Clue [Fairy tales, Moral stories, Comics, picture stories, fictions and animal stories]

(b) Ambition of your classmates.

Clue [Doctor, Farmer, Engineer, Pilot, Politician]

Bargraph

A Bar graph is a chart that uses bars to show comparisons between categories of data. The bars can be either horizontal or vertical.

Example 1

The number of things sold in a month of January in a particular shop is shown below. Draw a bargraph.

Home appliances	No. of things sold	
Refrigerator	75	Radio
Television	45	Cooler
Washing machine	30	Washing machine Television
Cooler	60	Refrigerator
Radio	30	0 10 20 30 40 50 60 70 80

Activity 1

- Take a survey among your friends and family on their 1. favourite pet. Use the information to draw a bargraph.
- Take a survey among your school friends on their favorite 2. colour. (key: Purple, Green, Red, Brown, Blue)
 - Draw a bargraph to represent your data.





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