12 Smart Charts



0527CH12

Chi-Chi, Meow-Meow

Yamini did a project 'Animals and Birds'. She asked each child of her class about one favourite pet animal.

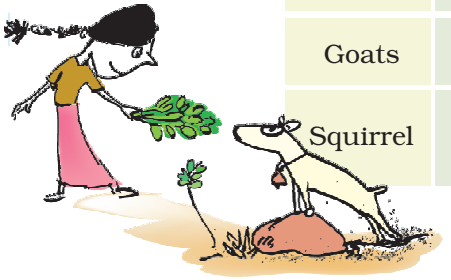
She used **tally marks** to record each answer. For example if someone said 'cat' she put one line | in front of 'cats'. When someone said 'cat' again, she added a line. So ⌐ means two cats and 𝍸 means 5 cats. In all 24 children said 'cat' was their favourite animal. Help Yamini complete the table.





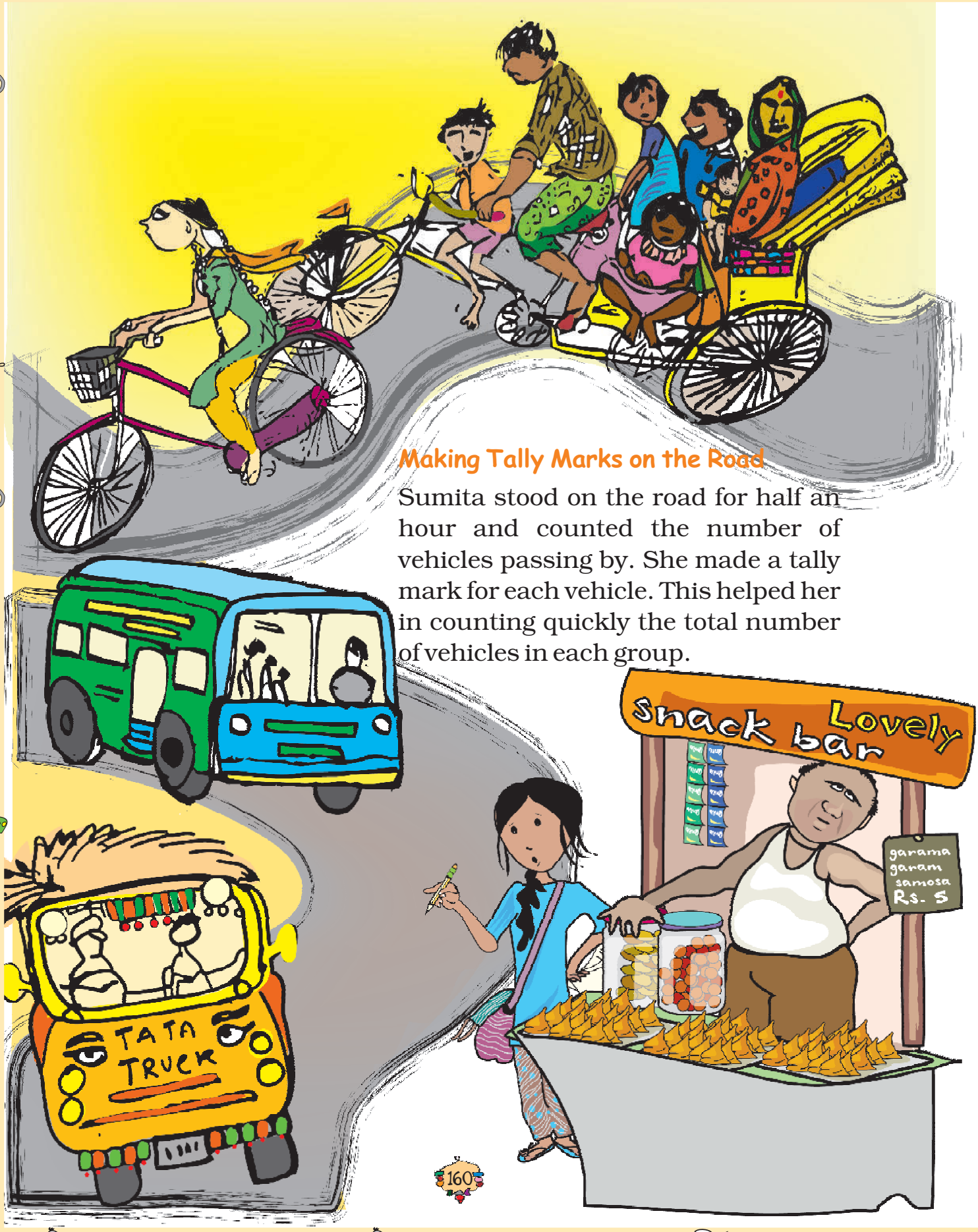
Animal	*Tally Marks*	*Number*
Cats	𝍸 𝍸 𝍸 𝍸	24
Dogs	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ⌐	
Rabbits	𝍸 𝍸	
Cows	𝍸 𝍸 𝍸 𝍸 ⌐	
Parrots	𝍸 ⌐	
Goats	𝍸 𝍸 𝍸 𝍸	
Squirrel	𝍸 𝍸 𝍸	







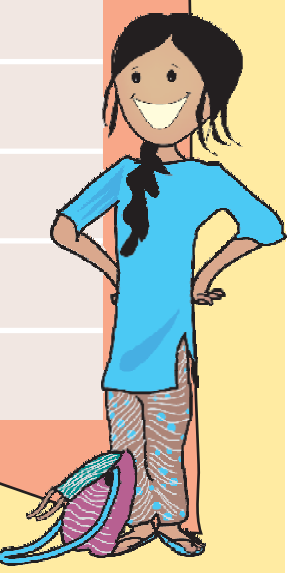
- Look at the tally marks and write the number for each animal in the table. How many children in all did Yamini talk to?
- Which is the most favourite pet animal in this table?
- Which pet will you like to have? What will you name it? Which other animals can be kept at home? Discuss.



Making Tally Marks on the Road

Sumita stood on the road for half an hour and counted the number of vehicles passing by. She made a tally mark for each vehicle. This helped her in counting quickly the total number of vehicles in each group.

	Tally Marks	Number
Cycle	𝍸	
Car	𝍷	
Auto rickshaw	𝍹	
Bus	𝍺	
Cycle rickshaw	𝍻	
Truck	𝍼	



- Write the number of each vehicle in the table.
- How many vehicles in all did Sumita see on the road in half an hour?
- Auto rickshaws are thrice the number of trucks — true/false?
- Make tally marks for 7 more buses, and 2 more trucks.

Try yourself

- Take a round in your colony. Find out how many types of trees you can see there. Do you know their names? You can make drawings. Use tally marks to note the number of different trees.

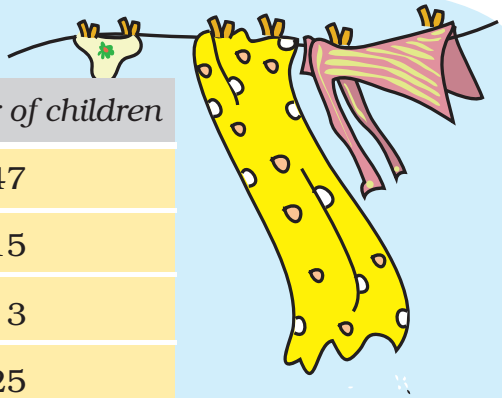
Children should be encouraged to use tally marks to simultaneously record data of a variety of things with larger numbers.

Helping Hands

In the EVS period, the teacher asked children whether they help their parents at home. There were different answers. Children named the work in which they help their parents the most. The teacher collected their answers and made a table.



Help most in house work	*Number of children*
Going to the market	47
Washing utensils	15
Washing clothes	3
Making, serving food	25
Cleaning the house	10
Total children who said they help their parents	







Now you can fill the chapati chart to show the numbers given in the table.

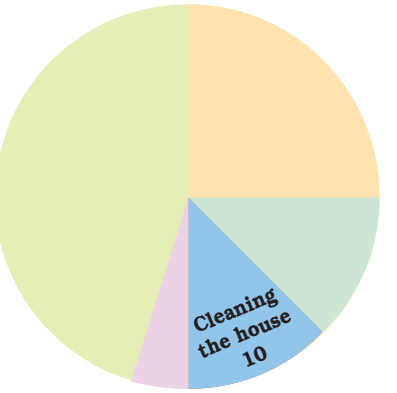
1) Look and find out

Children who help in making or serving food are

a) One-third of the total children

b) Half of the total children

c) One-fourth of the total children



2) Practice time: After school

Ask 10 of your friends about what they like to do most after school.

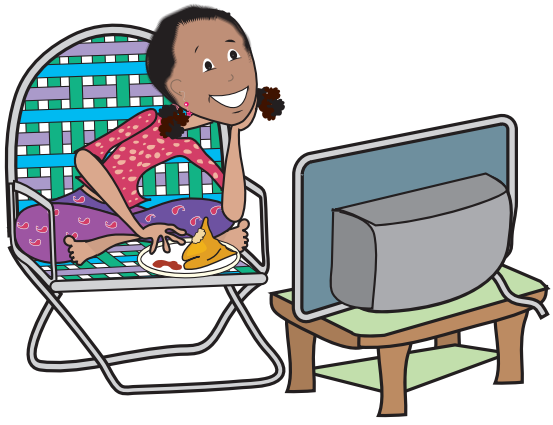
What they like to do after school	*Number of children*
Watching TV	
Playing football	
Reading story books	





Ad Mad!!

Ragini loves to watch cartoons on television. One day she thought of counting the number of ads during the breaks. She found that in each break there were 14 advertisements. In 10 of those ads there were children as actors.

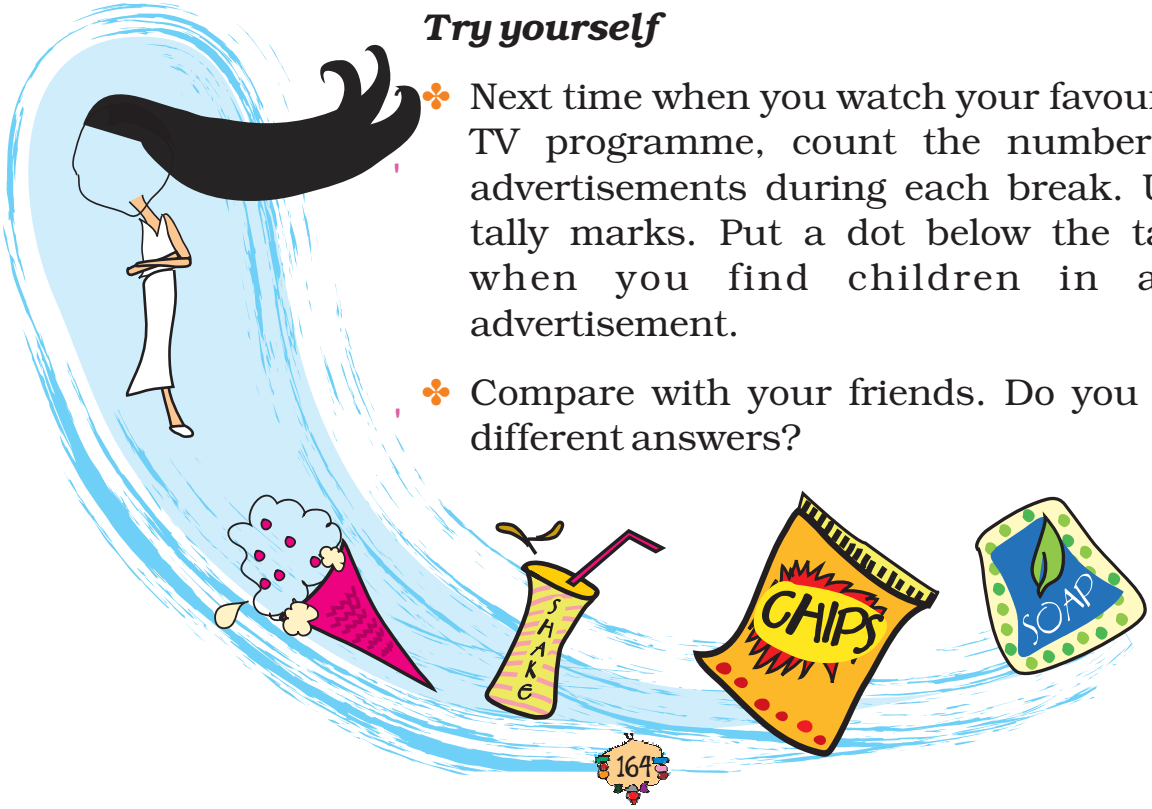


- Why do you think that children are used in so many ads?
- Use tally marks to count the number of ads during a short break in a programme.

Were there ads during the news programme?

Try yourself

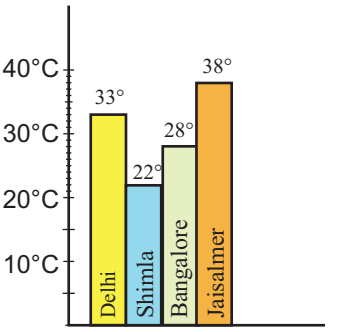
- Next time when you watch your favourite TV programme, count the number of advertisements during each break. Use tally marks. Put a dot below the tally when you find children in any advertisement.
- Compare with your friends. Do you get different answers?



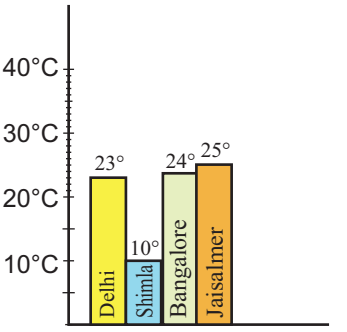
Hot and Cold

Have you seen the weather report on TV or in a newspaper? These are two bar charts. These show the highest temperature (in degrees Celsius) in four cities, on two different days. The cities are Delhi, Shimla, Bangalore and Jaisalmer.





1 June



1 December

Find out from the bar chart —

- Which city is the hottest on 1 June?
- Which city is the coldest on 1 December?
- Which city shows little change in temperature on the two days — 1 June and 1 December.



Try yourself

On any one day, choose any three cities and record their temperature from the TV or newspaper.

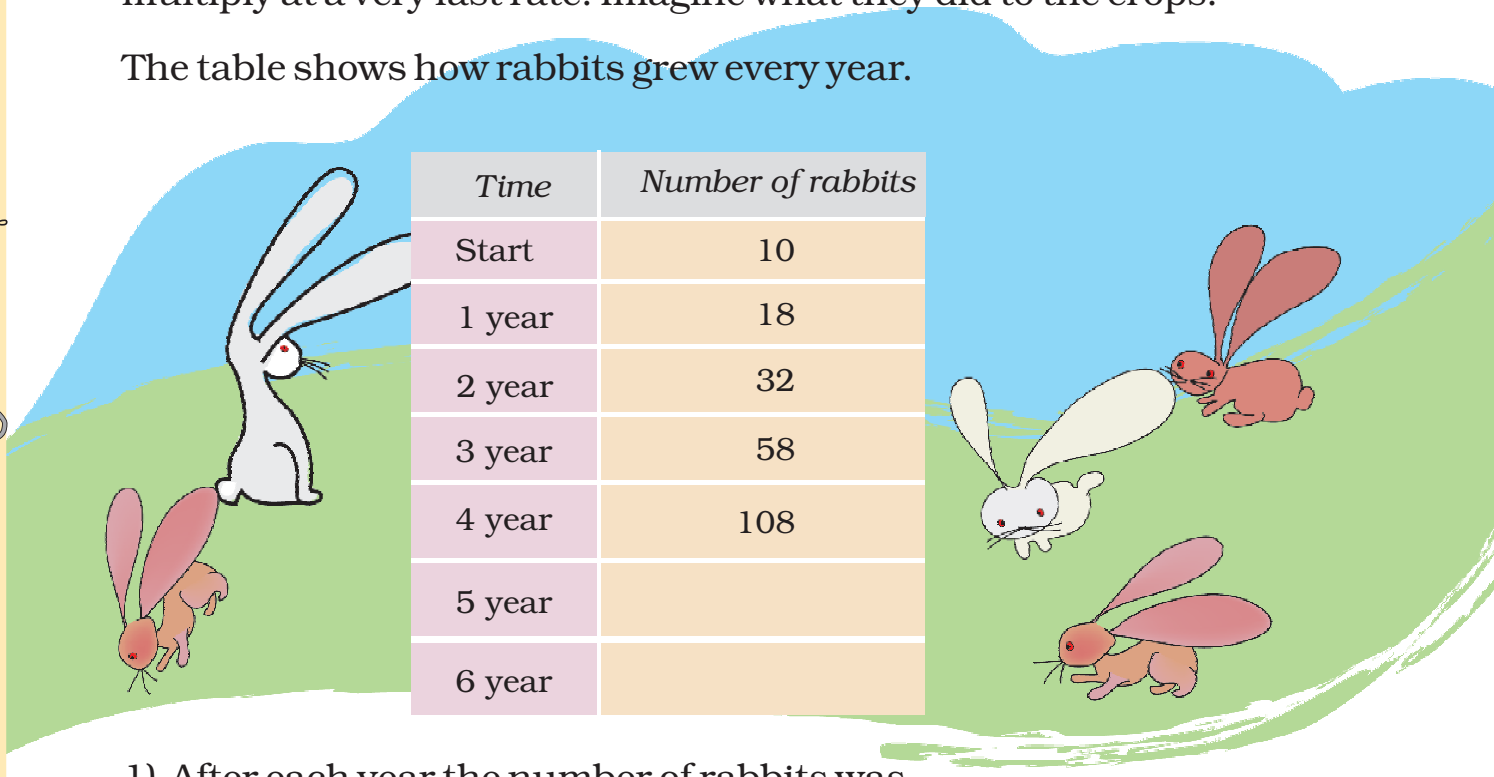
- Make a bar chart in your notebook and ask your friends a few questions about it. See if they understand your chart!

Encourage children to look at the map of India to locate different cities. They can try to relate the temperature variations in a city to get an idea of the climate there.

Rabbits in Australia

Earlier there were no rabbits in Australia. Rabbits were brought to Australia around the year 1780. At that time there were no animals in Australia which ate rabbits. So the rabbits began to multiply at a very fast rate. Imagine what they did to the crops!

The table shows how rabbits grew every year.



Time	*Number of rabbits*
Start	10
1 year	18
2 year	32
3 year	58
4 year	108
5 year	
6 year	

1) After each year the number of rabbits was —

   a) a little less than double the number of rabbits in the last year.

   b) double the number in the last year.

   c) 8 more than the number in the last year.

   d) more than double the number of rabbits in the last year.

2) At the end of year 6, the number of rabbits was close to

   ☐ 400 ☐ 600 ☐ 800

3) After which year did the number of rabbits cross 1000?

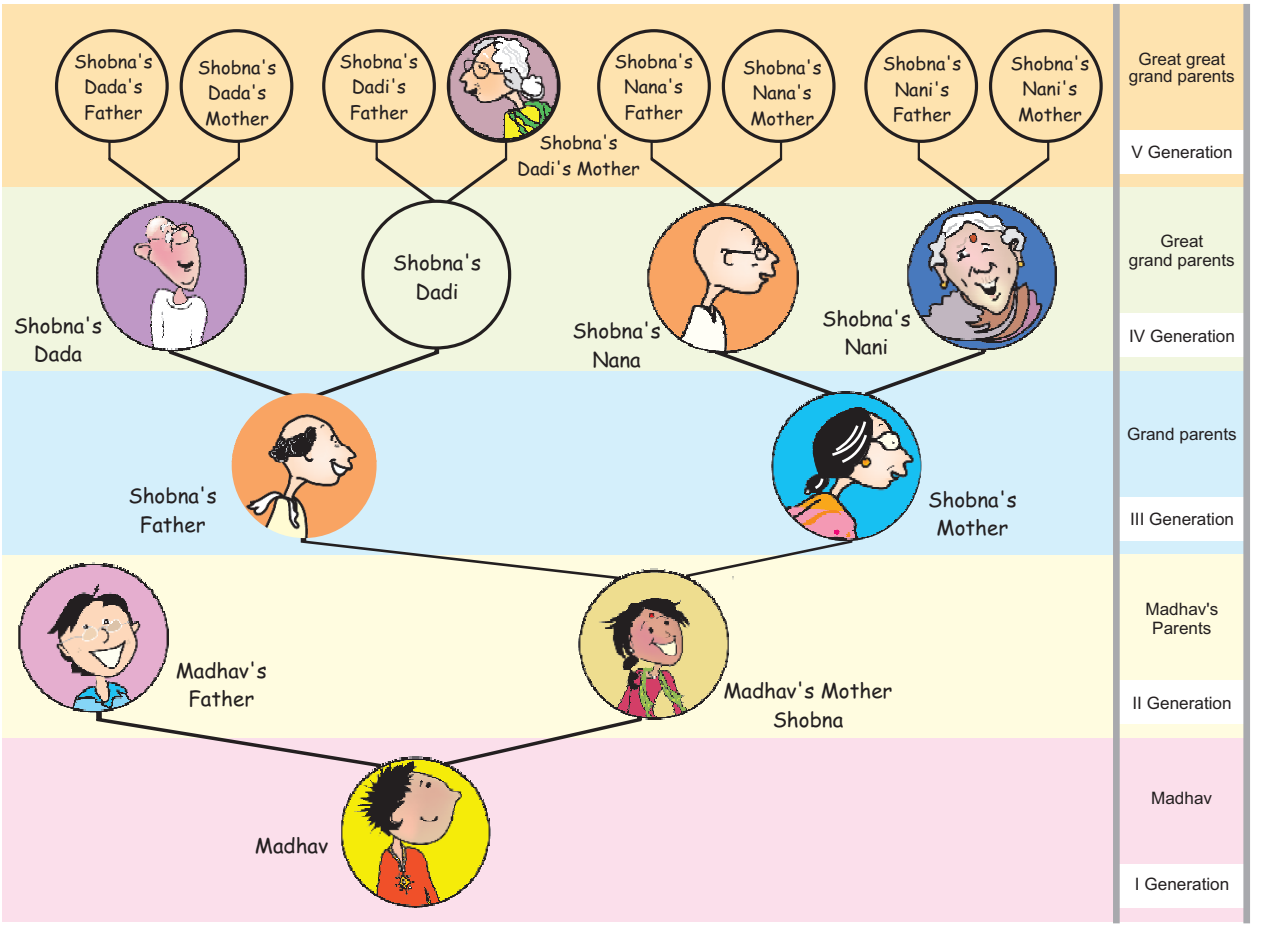
More such examples should be done in class. It is important for children to get a sense of approximation.

Family Tree



Madhav went to a wedding along with his parents. He met many relatives there. But he didn't know everyone. He met his mother's grandfather, but found that her grandmother is not alive. He also found that her *Dadi's* mother (grandmother's mother) is still alive, and is more than a hundred years old.

Madhav got confused. He couldn't imagine his mother's grandmother's mother! So, Madhav's mother made a family tree for him —





Madhav's mother helped him understand her family with the help of this drawing. You can also find out about your older generations using such a family tree.

Answer these questions:

1) How many grand parents in all does Shobna have?

2) How many great, great grand parents in all does Madhav have?

3) How many elders will be in the VII generation of his family?

4) If he takes his family tree forward in which generation will he find 128 elders?

Growth Chart of a Plant

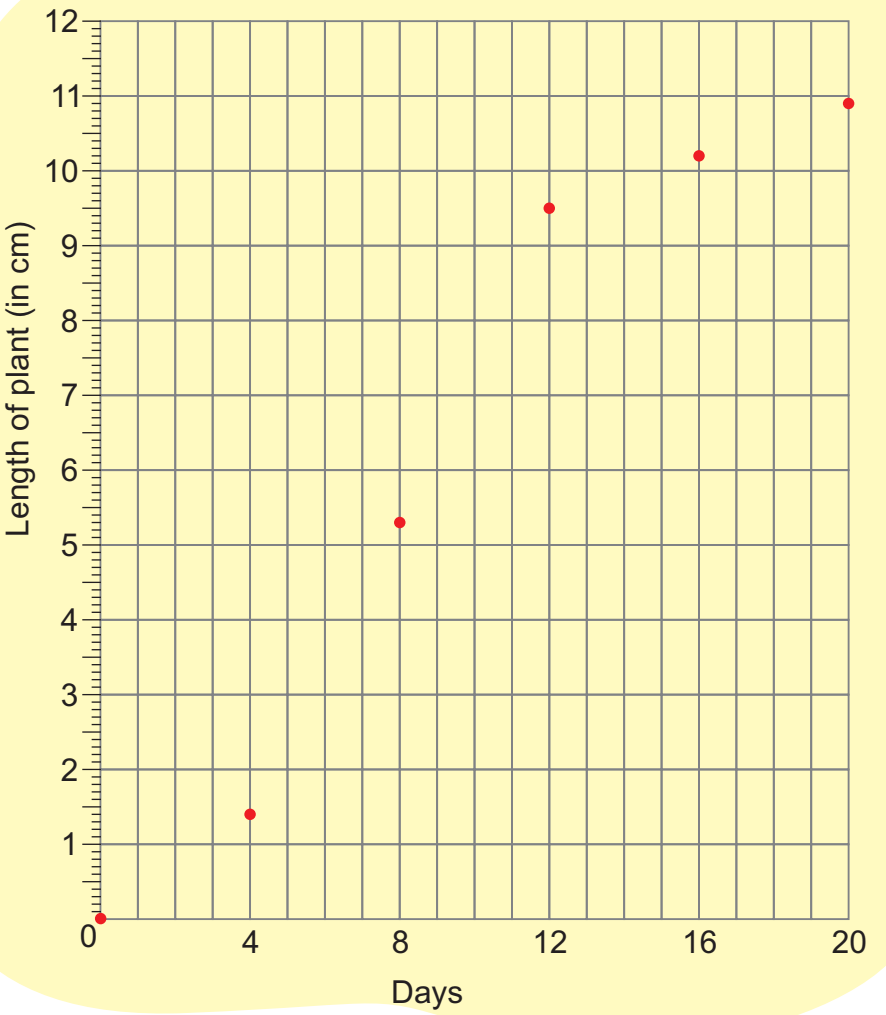
Amit sowed a few seeds of *moong dal* in the ground. The height of the plant grew to 1.4 cm in the first four days. After that it started growing faster.

Amit measured the height of the plant after every four days and put a dot on the chart. For example if you look at the dot marked on the fourth day, you can see on the left side scale that it is 1.4 cm high.

Now look at the height of each dot in cm and check from the table if he has marked the dots correctly.

Day	*Length of the plant (in cm)*
0	0
4	1.4
8	5.3
12	9.5
16	10.2
20	10.9





Find out from the growth chart

a) Between which days did the length of the plant change the most?

i) 0-4 ii) 4-8 iii) 8-12 iv) 12-16 v) 16-20

b) What could be the length of this plant on the 14th day? Guess.

i) 8.7 cm ii) 9.9 cm iii) 10.2 cm iv) 10.5 cm

c) Will the plant keep growing all the time? What will be its length on the 100th day? Make a guess!

There should be some discussion on the last question. Children should be encouraged to observe growth patterns of many other plants and animals.