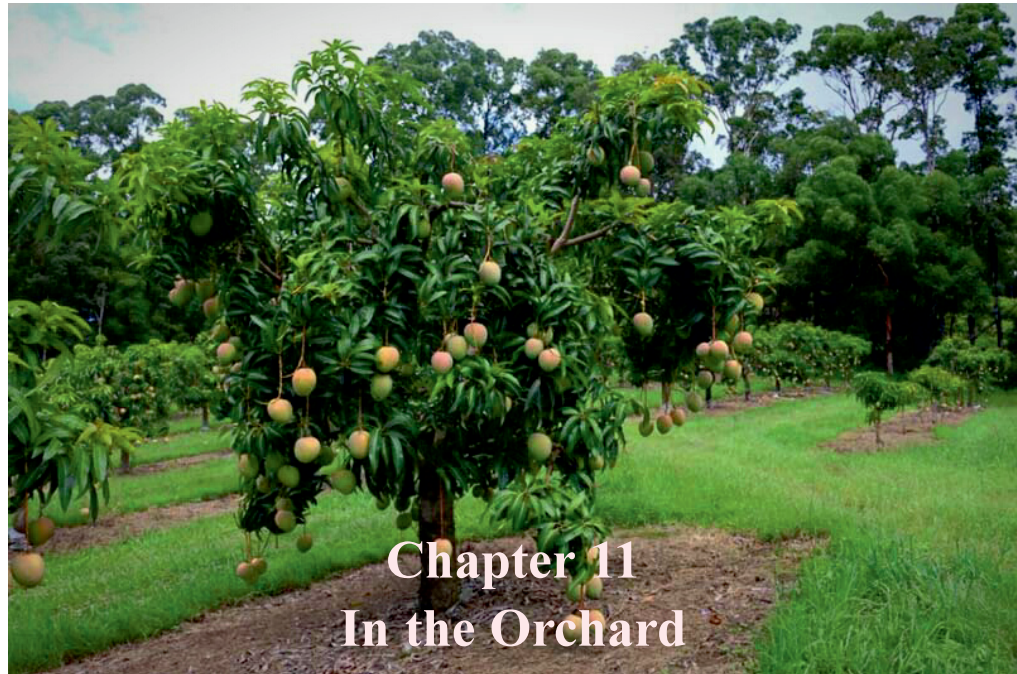




Chapter 11 In the Orchard

Ratan is studying in class IV. She went to village with her grandfather during holidays. One morning grandfather took her to an orchard. When grandfather was giving grass to cow, buffalo and ox at that time, Ratan ran and went inside the orchard.

She saw different flowers, saplings of vegetables and climbers in the orchard. She also saw plants of grains and pulses and also tall trees.

How beautiful were the roses in the pot ! Do you know ? They are red, yellow, pink and white. However, in one of the pots, there was a very little banyan tree like span.

She was very much surprised by seeing all these.

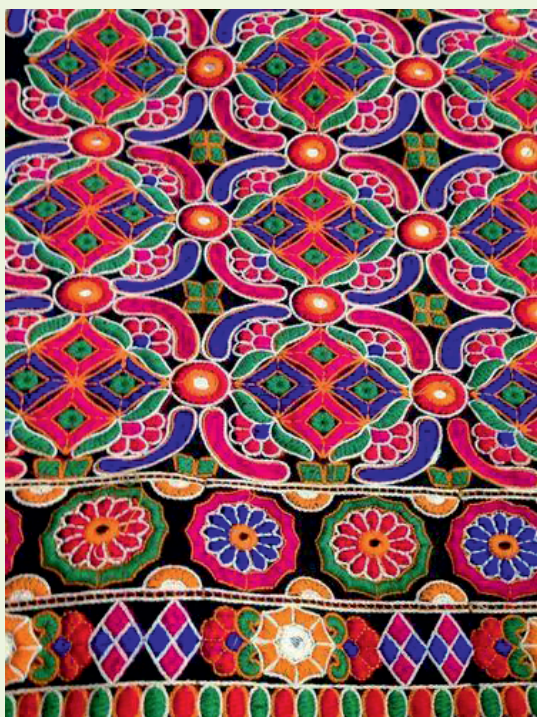
Now close your eyes and imagine that you are at the same place like this. How do you feel ? Which kind of song would you like to sing there ?

Have you ever seen so many flowers grow together anywhere ? Where ?

In the Orchard

- How many differently coloured flowers have you seen ? Write their names.

Are there things in your house which have designs of flowers made on them - like clothes, sheets, vases, etc ? Here you can see the design.



This is a picture of 'Tapestry' made by the people of Kutchh by using embroidery. This design of flowers is done very skilfully. Such designs are done on cushion cover, wallet, purse, bags etc.

Draw design like this in your notebook and colour it.





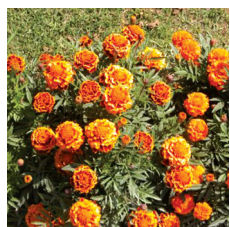
Looking Around

Ratan has seen different flowers, you may have seen them. Here are some pictures of flowers. Mark a (✓) on the flower which you recognize. Write their names too if you know.

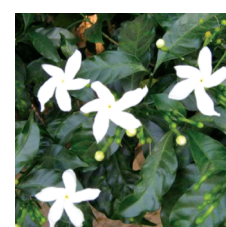
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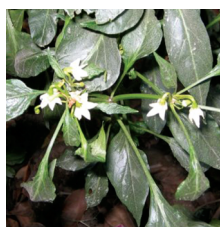

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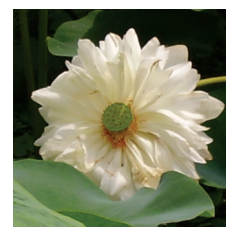

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Wow ! You also recognize so many flowers. Now except the pictures given above, give other two names of flowers in the table given on page 81.

In the Orchard

No.	Detail	Name of the Flower	Name of the Flower
1.	Grow on trees		
2	Grow on bushes		
3.	Grow on climber plants		
4.	Grow on aquatic plant		
5.	Bloom only at night		
6.	Bloom in the day and close at night		
7.	Flowers recognised by their scent		
8.	Bloom round year		
9.	Bloom only during certain months		

Hmm... you have so much information. Now tell that, are there any trees or plants which never have any flowers ? Find out and write.

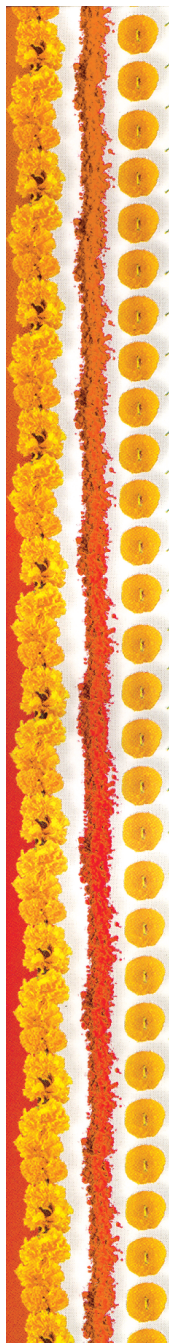
Why this ?

- Have you ever seen a board like this put up anywhere ?
- Do people pluck flowers even when this board is there ?
- Why did people do this ? Think.
- What would happen if everybody plucked flowers ?
- Should they do this ?



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Let us look closely

Go to the garden. Collect flower which have fallen down. Look at the flower carefully and tell.

● What is the colour of the flower ?	
● What kind of fragrance does it have ?	
● What does it look like (a bell, a bowl, a brush or anything else) ?	
● Do these flowers grow in bunches ?	
● How many petals does it have ?	
● Are all the petals joined together or separate ?	
● Is there any green leafy structure outside the petals ?	
● Can you see some thin structure in the middle of the flower, inside the petals ? Write its colour.	
● When you touch these, do you find a powdery thing on your hands ?	

Blooming buds

You must have seen buds on the plants. Observe the buds on plants which grow near your surroundings.



- What differences do you find between a flower and a bud ?

- Can you tell how many days will a bud take to bloom into a flower ?

Let us try and find out.

In the Orchard

- Choose a bud that is growing on a plant and look at it everyday. Write the name of the plant.

- When did you first see this bud ? The date was _____
When the bud has bloomed into a flower, the date is _____
How many days did the bud take to become a flower ? _____
- Ask your friends the names of the flowers that they have seen. How many days did it take their buds to bloom into flower ? _____
- Also observe how many days the same flower took to dry.
- Draw the picture of a bud and its flower in your notebook.

Uses of Flowers !

No.	Use of flower	Example	Write other example
1.	As a food	Gulkand	
2.	As a medicine	Rose water	
3.	To make colour	Butea Monosperma (Kesdudo/ Palash)	
4.	In Songs	Flowers, flowers, every where In the garden, in my hair	
5.	For decoration	Rose	
6.	Pooja		
7.	For Perfumes		

Now you know how useful the flowers are ! Nowadays, at many places flowers are grown in the fields. Flowers are grown at so many places. Imagine fields of flowers spread out upto miles. How beautiful it is !



Let us know some more

Have you ever seen anyone selling flower anywhere ? If there are any florist nearby ask them these questions and write.

- What are the flowers that they sell ?

- From where do they bring these flowers ?

- Why do people buy flowers ?

- In what forms do florist sell their flowers ? Look at these pictures. Mark (✓) against those forms of flowers that you have seen.


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In the Orchard

- Have you seen any other form of flowers than this ?

- Some flowers are used in different forms - like rose and marigold are used in garlands and as loose petals too.

- Find out the prices of these different forms of flowers.

One flower _____

One garland _____

One bouquet _____

- Has the florist learnt to make bouquets or a net of flowers from anybody ? From whom ?

- Would they like the other members of their family to do this work ? Why ?

Let us do this activity :

- Do this activity in groups of four or five friends.
- Collect flowers that have fallen from trees or plants and bring them to the class.
- Spread these flowers between the sheets of an old newspaper in such a way that they do not touch each other.
- Now, put a heavy object on the newspaper.



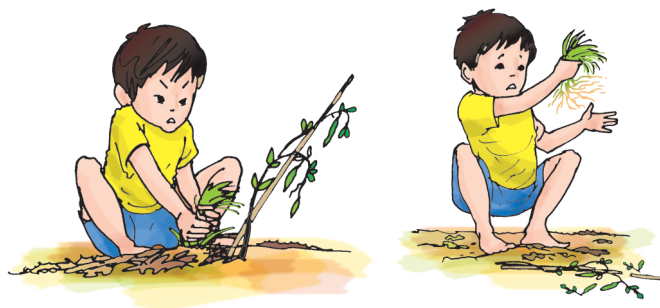


- Leave it pressed till the flowers get dried.
- After this, take out all the flowers very carefully and prepare a scrap book.
- You can also use these dried flowers to make pretty cards.

Ratan was walking ahead in the orchard. She saw some persons were cleaning grass in one corner of the field. She went there and started pulling the grass.

Do you know what happened ? Her soft hands became red because of pulling of grass. While pulling grass, many roots also came out.

- Can you tell that every plant has roots ?
- Look at some trees and plants near you.



How deep and wide its roots are ? Imagine.

There Ratan saw that, Ramjibhai was pulling Raddish. Ratan asked Ramjibhai, so he told, “Beta, these are Raddish and it is also roots.” Suddenly rain started. It was raining heavily with storm, however the trees were stood still.

- Why the tree did not fall despite of heavy winds ? Imagine.
- Why do the withered leaves of growing plants become fresh when they are watered ?

In the Orchard

- Which plants around you need regular watering ?

Ratan also came to know that she had not given water to the neem tree which was grown near her house. She thought, how the neem will get water then.

- Which plants nearby you did not require water regularly. How do they get water ?

- Look at the pictures of vegetables given below and find out which ones are roots from them.



Ratan would have many questions about plants now.



She saw the plant growing out from the wall of school. She was surprised. She thought ...

- How deep the roots of these plants would go ?
- How will the roots get water ?





Looking Around

- How big will these plants be ?
- What would happen to this wall ?
- Can you tell the name of plant in the picture ?

Have you seen a plant growing out from the crack of the wall like this ? Where ? Which questions arise in your mind ? Know the answers from your elders and note down.

Ratan had seen a huge tree fallen down at the edge of a field. She recalled the neem tree of her school. She can see the damaged roots of that tree. She thought -



- Has somebody pulled out this tree or it fell down itself ?
- How old would this tree be ?
- How will the tree get water from between the rocks at the edge of the field ?

Let us Talk :

- Which are the old trees in your area ? How old are they ? Know from your elders.
- Write the names of the animals living on this tree.

- Have you seen any huge tree fallen down ? What did you think when you saw it ?

In the Orchard

Freaky Root

- Have you ever swung on banyan tree ?
- What did you hold to swing ?
- How do the hanging branches look like ?



- It is the root of banyan tree. It is called prop (aerial) roots.
- It grows from the branches and touches the ground.

'Kabirvad' situated in the Bharuch is very big. Its prop (aerial) roots are giving strength to the banyan tree like pillars now.

Remember one thing that banyan tree has the roots inside the soil like other trees.

Have you seen prop (aerial) roots growing from other trees like banyan tree?



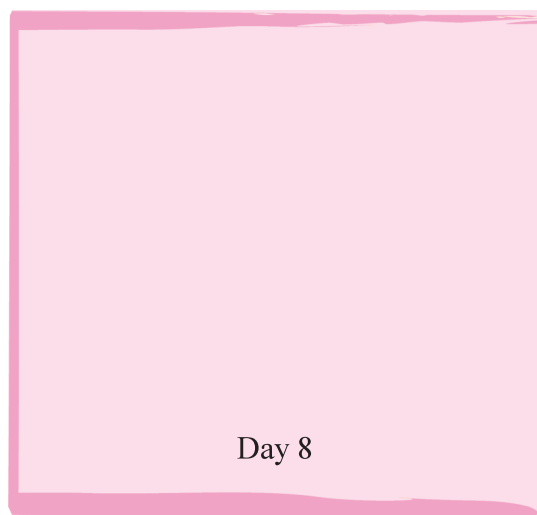
Let us do Activity :

Gather in group of three-four. Tell who will bring what from the list given below.

Greengram (*Moong*), wheat, *Bajara*, mustard, gram or kidney beans(*Rajma*) and cotton.

Every group will work with only one kind of seed. Soak some seeds the whole night in a bowl filled with water. Take cotton and wet it. Put the cotton on the mouth of glass. Tie it with rubber band or thread tightly. Take out soaked seeds from water and put it on the cotton. Take care that cotton will not dry. Observe the changes in the next ten to twelve days. Have you seen sprouts coming out from the seed ? How are the germinated seeds are look on the fourth and eighth day, draw their pictures.





Write in your notebook :

- Have you observed the changes in the soaked seeds ? Compare them with dried seeds and write.
- What would happen, if the cotton got dried ? _____
- In which direction the root and the stem grow ? _____
- How much will be the growth of the plant in the piece of cotton ? _____
- Has the saplings come out from every seed ? _____
- What is the colour of the root ? _____
- Have you seen any root hairs on the root ? _____
- Try to pull a small plant from cotton. Are you able to pull it ? Why ?

- Do you see how firmly the roots hold the cotton ? Think that roots are holding the land also firmly like this. Look at the plant which your friend has grown.

In the Orchard

What is grown ?

Aarifa and Rupali did the above activity. When asked, they saw the grown grass. What did they grow ? They have different idea for the grown things.

- Aarifa made this list. Leaves, neem seed, bud, puppy, nails, fish.
- Moon, tree, I, hair, water melon, mosquito, crow, etc are there in Rupali's list.
- What do you think ? Which things will grow from the list of Arifa and Rupali ?
- Why don't you create your own list of the things which can grow ?

You can add the things from Aarifa and Rupali's list in your list.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Think of yourself. How many changes come with time in you also ? Have you grown in any way ? For example,

- Does your height increase ? How tall are you in the last one year ?
- Imagine that you had never cut your nails. Draw a picture of your fingers in your notebook showing what it looks like.



For the teacher : Encourage children to plant tree on National Environment Day or on any occasion. Tell them to take care of their tree.

