

# ENVIRONMENTAL STUDIES

Class - IV

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## Foreword

The Government of Andhra Pradesh has unleashed a new era in school education by introducing extensive curricular reforms from the academic year 2020-21. The Government has taken up curricular reforms intending to enhance the learning outcomes of the children with focus on building solid foundational learning and to build up an environment conducive for an effective teaching-learning process. To achieve this objective, special care has been taken in designing the textbooks to achieve global standards.

As a part of the curricular reform, in order to ensure quality transaction of textbooks, handbooks are given to teachers with elaborate lesson plans for better pedagogical techniques. For the practice of the students, workbooks are given which will reinforce the learning in the classroom. Parental handbooks are prepared to impart awareness regarding the teaching-learning process to the parent community. QR codes are incorporated in the beginning of each lesson to enable learning outside the classroom.

In this textbook, eleven lessons have been incorporated on various themes like Family, Plants and Animals around us, Our body, Food, Water, Shelter, Travel, Relations, Games and Recreations etc. In order to reinforce the concepts, several projects and activities are given to inculcate scientific temperament. Questions are framed for each lesson to recapitulate the conceptual understanding and to achieve competencies required for project work, drawings and model makings. Each lesson is provided with eye catching illustrations to engage the children. The key concepts of the lessons are included under key words and the salient features of the lessons are given under the title "What we have learnt" for the review of the important concepts. An effort has been made to relate the scientific concepts with the real-life events thereby developing and promoting scientific temperament.

We are grateful to Honourable Chief Minister Sri. Y.S. Jagan Mohan Reddy for being our source of inspiration to carry out this extensive reform in the education department. We extend our gratitude to Dr. Adimulapu Suresh, Honourable Minister of Education for striving towards qualitative education. Our special thanks to Sri. Budithi Rajsekhar, IAS, Principal Secretary, School Education, Sri. Vadrevu Chinaveerabhadrudu, IAS, Commissioner, School Education, Ms. Vetriselvi.K, IAS, Special Officer for their constant motivation and guidance.

We convey our thanks to the textbook writers who studied curriculum from Chicago to Singapore and recommended best practices across the globe to reach global standards. Our heartfelt thanks to NCERT, SCERT of Kerala, Tamilnadu and Karnataka in designing the textbooks. We also thank our textbook writers, editors, artists and layout designers for their contribution in the development of this textbook. We invite constructive feedback from the teachers and parents in further refinement of the textbook.

**Dr. B. Pratap Reddy**  
Director  
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## Instructions to the Teachers

- Children should understand and adjust with their environment. For this, they have to observe and explore their environment. Hence, the text book on Environmental studies at primary level is given the title 'Our World'
- The syllabus and lessons are written according to the context of our Andhra Pradesh State and the themes based on the learning outcomes of the National Council For Educational Research And Training (NCERT)
- The contents of the lessons are prepared on the themes family, plants and animals, food and water, where do we live, communication and transport, our traditions and cultures and our universe.
- There are eleven lessons under seven themes. Each lesson is enriched with colourful pictures to make children understand the concepts better.
- Every lesson starts with either a real life situation or child experiences. It give opportunity to hands on experience.
- Children are encouraged to talk about the concepts and their experiences in the classroom.
- Activities are designed in such a way that the children observe and explore their surroundings, discuss with their friends, family members, elders and collect the information, tabulate the data, do experiments, participate in activities and projects.
- This book contain lot of whole classroom, groups and individual activities, For children to reinforce concepts. The cat - logo poses a question for children to observe their surroundings and the practices to be followed. The bird logo comes up with certain suggestions and practices children can do. The bee logo proposes extended learning/Teaching learning process that has to be carried out with the help of proper teaching learning material.
- Exercises are given not only to ensure what they have learnt, but also to exhibit and express their creativity, experiences and thoughts. So all children should be given a chance to participate in the activities.
- In each lesson there is an activity 'Let us do', to give scope for children to explore. Children should do these activities either individually or in a group.
- There is another activity by the title 'Think and Discuss.' A scope is provided for the children to think and discuss them with teachers or elders. Children should identify them independently. If 80% of the children can do this, then only the next lesson should be taken up .
- 'Key words' are given at the end of each lesson. These are the important concepts of the lesson. Children's conceptual understanding should be evaluated with the key words. Salient features of the lesson are given by the title 'What we have learnt'. Children should be made to read these features. These are given to review the concept.
- In each and every lesson, the activities are incorporated keeping in view the Continuous and Comprehensive Evaluation ( C.C.E).
- Teacher should note down the progress of children based on the competencies achieved.

## Our National Anthem

- Rabindranath Tagore

*Jana-gana-mana-adhinayaka jaya he*

*Bharata-bhagya-vidhata*

*Panjaba-Sindhu-Gujarata-Maratha*

*Dravida-Utkala-Banga*

*Vindhya-Himachala-Yamuna-Ganga*

*uchchala-jaladhi-taranga*

*Tava Subha name jage, tave subha asisa mage,  
gahe tava jaya-gatha.*

*Jana-gana-mangala-dayaka jaya he*

*Bharata-bhagya-vidhata.*

*Jaya he, Jaya he, Jaya he,  
jaya jaya jaya jaya he.*

## Pledge

- Pydimarri Venkata Subba Rao

India is my country. All Indians are my brothers and sisters.

I love my country and I am proud of its rich and varied heritage.

I shall always strive to be worthy of it.

I shall give my parents, teachers and all elders respect,  
and treat everyone with courtesy. I shall be kind to animals.

To my country and my people, I pledge my devotion.

In their well-being and prosperity alone lies my happiness.

## ENVIRONMENTAL STUDIES

### Class - IV

Lesson No.	Lesson Name	No. of Periods	Month	Pages
1.	<b>Family</b>	10	June	1-11
2.	<b>Green World</b>	11	July	12-19
3.	<b>Animals Around Us</b>	9	July	20-27
4.	<b>Sense Organs</b>	9	August	28-39
5.	<b>Eat Together</b>	10	September	40-47
6.	<b>Water</b>	10	October	48-55
7.	<b>Professions and services</b>	9	November	56-64
8.	<b>Transportation</b>	9	December	65-70
9.	<b>Communication</b>	9	January	71-76
10.	<b>Let us Visit</b>	9	February	77-83
11.	<b>Where are we?</b>	9	February	84-94
	<b>Revision</b>		March	
	<b>Revision</b>		April	



Teacher corner



Student corner

## Learning Outcomes - Academic Standards

The Learning outcomes - Academic Standards to be achieved through the Class - V Text book 'Our World' have been given below. These should be achieved by the end of the academic year. The Teaching-Learning process should be carried out with the inclusion of these standards. The following processing skills should be developed among the children.

- 1) **Conceptual Understanding :** Children should understand the different concepts of the 11 lessons of this text book. They should compare these with their real life experiences. They should be able to give examples, say similarities and differences, classify, explain and tell the reasons.
- 2) **Questioning:** Children should be able to question about the surroundings, situations and incidents they have seen and observed.
- 3) **Doing and Explaining:** Children should be able to do smaller and simpler experiments and explain the concepts. They should be able to tell the sequence of the steps of the experiment and the things that are used.
- 4) **Information Skills - Projects :** Children should grasp, note, tabulate and analyze the things by observation, reading and discussing with others. They should be able to infer the analysis and do the generalization. They should participate actively in the projects. Projects should be exhibited and explained by them in the class.
- 5) **Drawing and Colouring:** Children should be able to explain the concepts by drawing and colouring the pictures.
- 6) **Appreciation:** Good attitudes should be developed among the children. They should recognize and appreciate the greatness of animals, birds, plants and people of their society. The values like kindness, co-operation, working together etc; should be inculcated. They should be able to identify and appreciate the diversities of the surroundings and society. They should be able to appreciate different food habits, life styles, cultures and traditions. Personal hygiene, good food habits, doing the personal work by self, helping the elders and special needed people should be practised.
- 7) **Mapping Skills :** Pupils should be able to draw the maps of their class-room, school, street, village etc; they should be able to grasp the information by understanding the symbols given in the map.

Chapter  
1



# Family

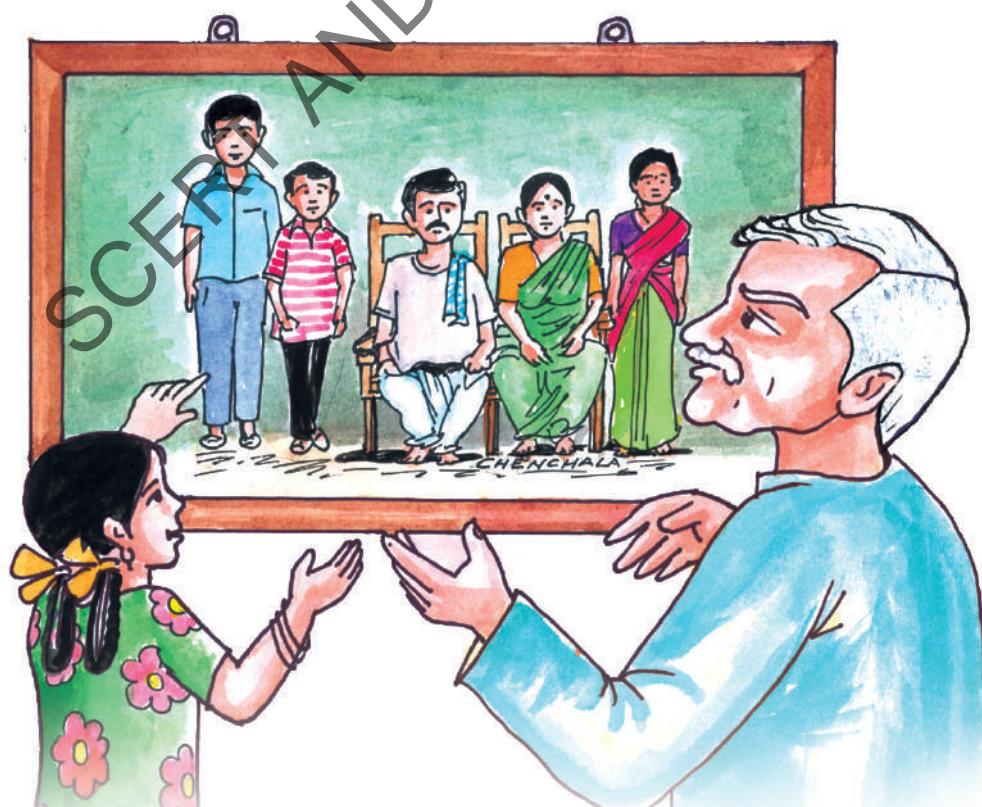


## Learning Outcomes

**Pupils will be able to:**

- understand the relationships among the members of a family.
- understand an extended family and changes in families.
- identify different types of families.
- identify different types of home appliances.

Deepika went to her grandparent's house during summer vacation. She saw an old photo of her family members and wanted to know the persons in the photo. Her grandfather went on to explain:



Deepika : Grandpa! Who is the tall man in the photo?

Grandfather : He is your father,

Deepika : Oh! Then , who is this girl in a half saree?

Grandfather : Don't you recognize her? She is your aunt.

Deepika : Then, this is uncle Rajesh! Am I right?

Grandfather : Yes, you recognized him rightly.

Deepika : Where is he now?

Grandfather : He is in Nellore.

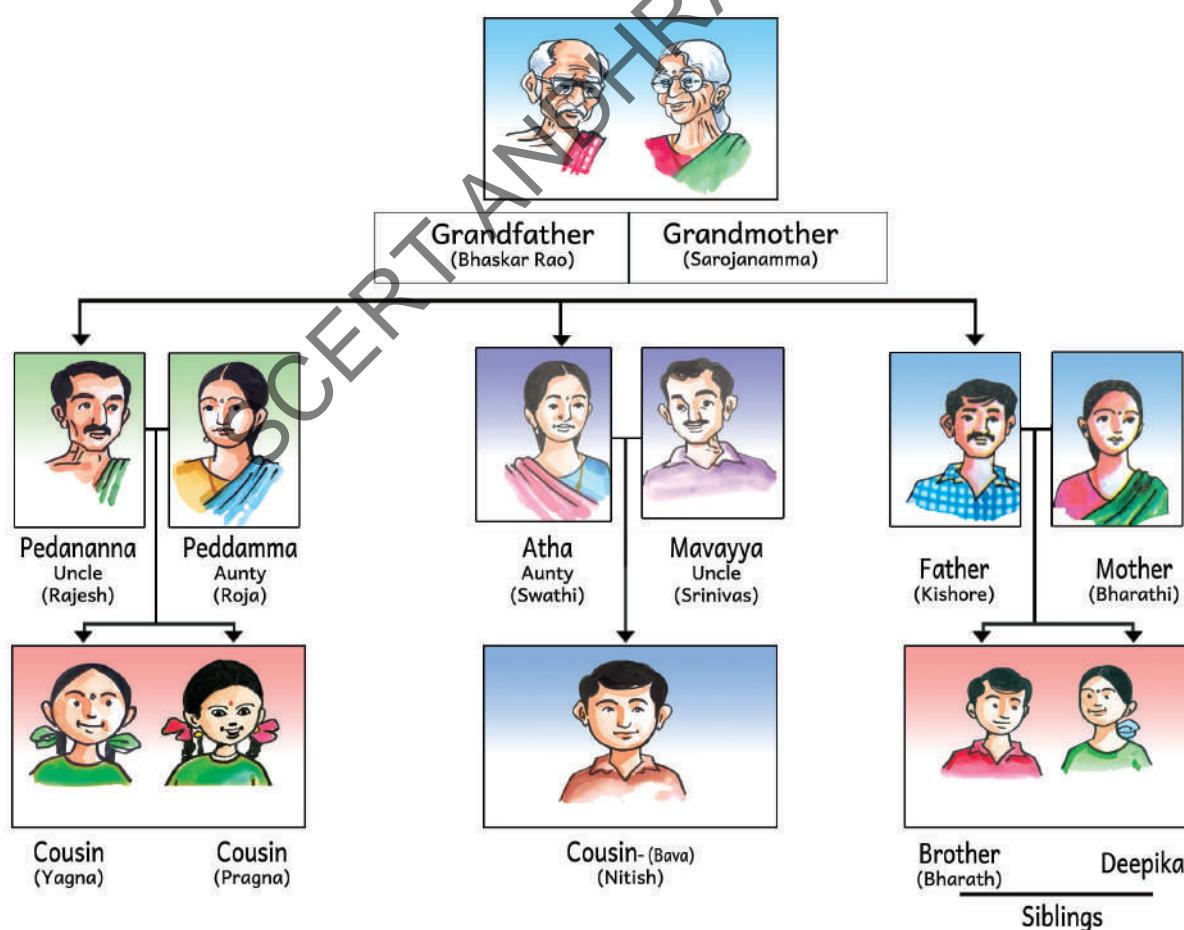
Deepika : Grandpa, why is he in Nellore?

Grandfather : He works there.

### Family Tree

All families are not the same. Some families consists of only father, mother and children. In some families, along with father, mother and children, grandparents like grandfather and grandmother also live together.

Now, let us observe Deepika's Family Tree.



## Deepika's Family

Name of the member	Relation to Deepika	Description
Bhaskar Rao	Grandfather	Father's father
Sarojanamma	Grandmother	Father's mother
Rajesh	Uncle (పెద్దనాన్న)	Father's brother
Roja	Aunty (పెద్దనాన్న)	Uncle's (పెద్దనాన్న) wife
Srinivas	Uncle (మామ)	Aunty (అత్త) husband
Swathi	Aunty (అత్త)	Father's sister
Kishore	Father	-
Bharathi	Mother	-
Yagna	Cousin	Uncle's (పెద్దనాన్న) daughter
Pragna	Cousin	Uncle's (పెద్దనాన్న) daughter
Nitish	Cousin (బావ)	Aunty (అత్త) son
Bharath	Brother	Sibling (తోబుట్టవు)



The members of the family who are related to your mother are your maternal family members. The members of your family who are related to your father are your paternal family members. The parents of your mother are your maternal grandparents. The parents of your father are paternal grandparents.

My mother has one brother. He has two children Revanth and Sanjana. Sanjana is my mother's niece (మేనకోడలు). Revanth is my mother's nephew (మేనల్లడు).

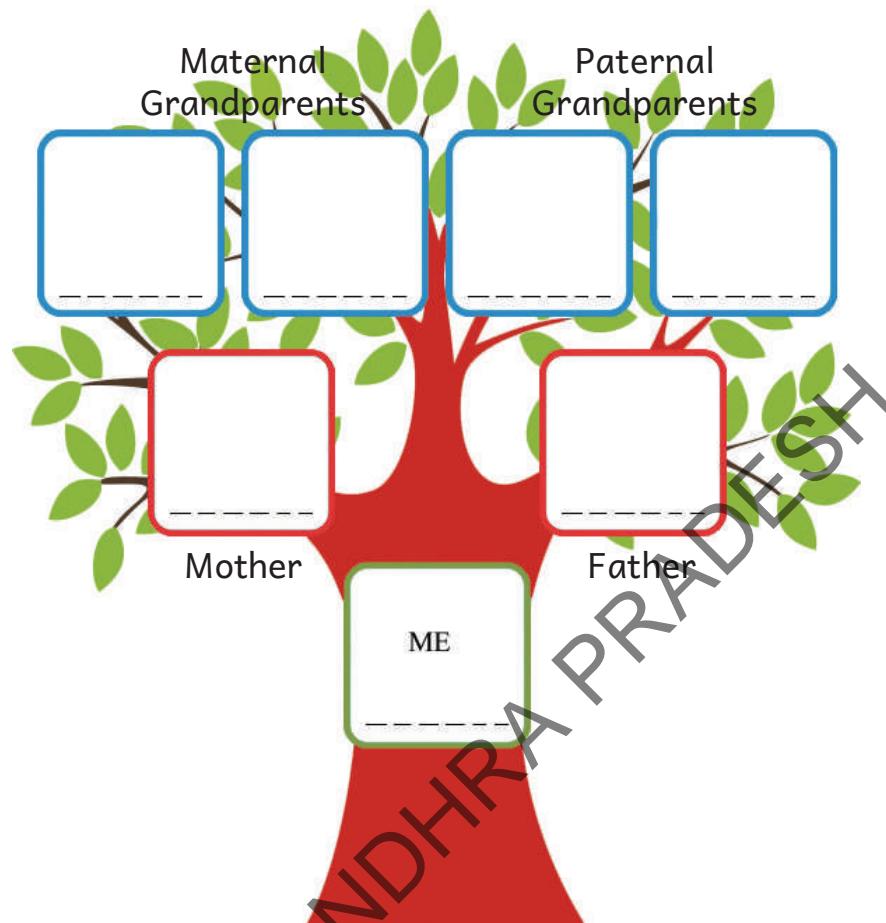
### Let us Do

#### Match the following:

- |                     |          |                |
|---------------------|----------|----------------|
| 1. Father's father  | (      ) | a. Grandmother |
| 2. Father's mother  | (      ) | b. Aunty       |
| 3. Father's brother | (      ) | c. Uncle       |
| 4. Father's sister  | (      ) | d. Grandfather |

### Activity

Write the names of your family members and make your family tree.



Our aunts, uncles and their children are our relatives. They are also a part of our family. We call them our extended family.

Let us see how a change occurred in Anil's family.

### Wedding

Anil's uncle got married last month. Anil likes his new aunt a lot. Yesterday she cooked his favourite recipe. She also helps him with his homework. Our family will change when new relatives join our family.



- Do you think there will be any change in Anil's family after this wedding?

This is Komala's Family. She is more excited to see her newborn sister and has decided to give her a name too.



Who are the new arrivals in Komala's family?  
Write about some exciting things in your family.

One of the reasons for changing the structure may be a wedding or a birth in the family. Some changes took place in the families of Komala and Anil due to different reasons.

### Write down the reasons for these changes

- In Komala's family
- In Anil's family

There can be many reasons for changes in families. Like Anil and Komala, we should also welcome our new relatives with love and affection. This will help them to become a part of the family.



Can you think of some more reasons?

The changes in a family are either due to joining or leaving. This is a very natural change that anyone may experience. Some leave their homes on the purpose of a job, or to study or when someone in the family gets married or when someone expires in the family. We feel happy when someone joins our family and we feel sad when someone leaves us.



### Think and Discuss

Besides these, what other reasons could bring changes in families?

Let us see how certain changes occurred in the families of Peter and Varun.

Peter's family lives in Ongole. Peter's father received a letter from his office. The letter said that he was promoted. He had to leave for Nellore. Peter's family vacated the house and left for the new town. Similarly, Varun's father also got a promotion. He was transferred from Vijayawada to Nuzvid. But Varun's father did not take his family to the new town. He travels to office from home.



Discuss with your friends and speak out the changes that might come in the families of employees.

Peter's Family	Varun's Family
<ul style="list-style-type: none"> <li>Where did they reside before promotion?</li> </ul>	<ul style="list-style-type: none"> <li>Where did they reside before promotion?</li> </ul>
<ul style="list-style-type: none"> <li>Where is the family after promotion?</li> </ul>	<ul style="list-style-type: none"> <li>Where is the family after promotion?</li> </ul>
<ul style="list-style-type: none"> <li>What changes might have come in Peter's family after shifting?</li> </ul>	<ul style="list-style-type: none"> <li>What changes might have come in Varun's family after his father started travelling to the new town from his home daily?</li> </ul>

Families will not be in the same state always. Changes come in the families due to various reasons. You have seen that the changes occur in families due to certain reasons such as marriages, births, transfers to other towns and so on. The changes may occur not only because of these reasons but also due to business, studies, employment or death of a member in the family etc. Besides these, when we compare the present times with the past, we find many changes have taken place in the families. This results in the increase of small families.

Look at these pictures:



What differences do we find in these pictures?

### Types of families

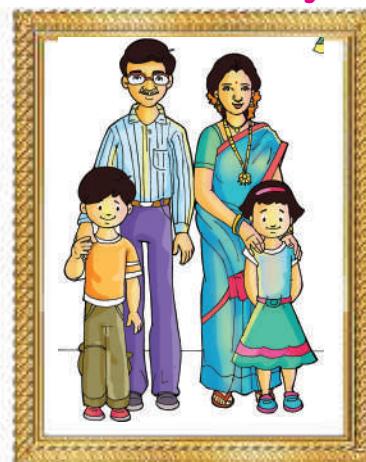
In the above pictures we see two types of families. One is a joint family and the other is a small family.



A family with mother, father and children is called a **nuclear family**. A family with grandparents, parents, uncles, aunts and cousins is called a **joint family**.

Let us know more about the types of families that we find in our society.

### Nuclear Family

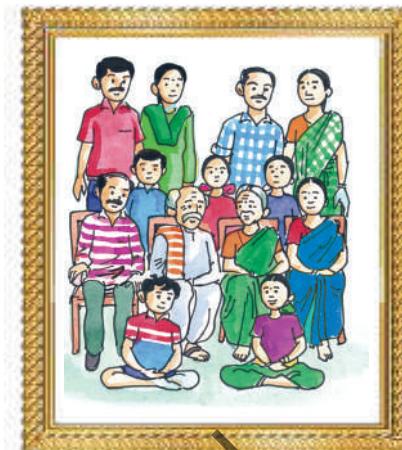


Hello! I'm Kiran, I live with my mother and father. I have a sister. My parents take care of us.

### Joint Family



Hi! I'm Pushpa. I live with my parents. I have a sister, uncle, aunt and cousins. My grandparents also live with us.

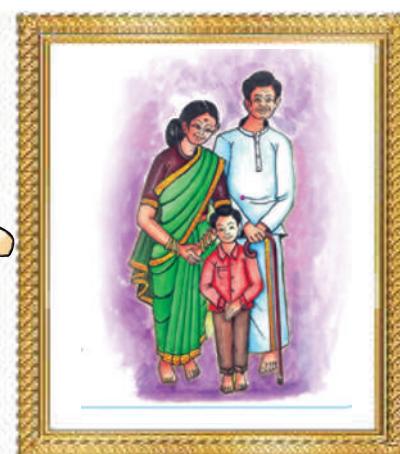


### Single parent Family



I am John. This is my mother, brother and sister. I lost my father in an accident. My mother takes care of us.

### Grandparent Family



Hi! I am Rahul. I live with my grandparents. I lost my parents in an accident. My grandparents look after me.

### Mother Dependent Family



Hi! I'm Srinu. I live with my parents, but my mother takes care of the family because my father is ill.



Which family do you belong to?

Usually, father and mother take care of a family. But, due to some reasons certain families face problems. When parents become sick or get into some bad habits, the children feel that they are ignored. Sometimes they also get into some bad habits and the environment of the family is totally disturbed. Due to this the responsibility of the family lies on the single parent (mother or father). The parent has to work to earn as well do the household chores.



Do you know how hard your mother works?



We see many families becoming victims of alcohol and putting them into troubles. Consumption of alcohol is injurious to health. Therefore, the Government of Andhra Pradesh is taking steps to ban alcohol consumption in a phased manner.

Srinu's father got addicted to alcohol. One day Srinu's father promised him that he would not take alcohol. After that he could spend more time for his family.



### Group Activity

Discuss with your friends and write to which type of a family they belong to:

S.No.	Friend's Name	Type of Family
1		
2		
3		

### Usage of Home appliances

Just as there are changes in families, there are changes in their life styles. Previously people did all the household works manually. But now-a-days, we use different appliances that make our work easier and faster.

Observe the pictures given below.



Have you seen these home appliances?

### Then and Now

**Then** - People slept in verandahs and in courtyards. They enjoyed the fresh air of palm leaves or bamboo fans.

**Now** - Mostly people sleep indoors as it is safer. They sleep under ceiling fans or some use aircoolers in the room. The use of airconditioners and refrigerators has become very common. But do you know the gas used for cooling in such appliances, when leaked out, pollutes the atmosphere? It is dangerous.

### Think and Discuss



- Why do people use these appliances?
- How did people do the different kinds of work, when these appliances were not there?

Electrical home appliances have changed the method of working. Due to this we are consuming more electricity and have reduced physical exercise to the body.



### Key words

**nuclear family, joint family, single parent family, mother dependent family, siblings, transfer, promotion, home appliances, family tree.**



### What we have learnt



- The relationship among the members of a family in a family tree.
- Our relatives are also a part of our family. We call them our extended family.
- A wedding, the arrival of a new born baby and transfers etc. are reasons for changes to the structure of a family.
- A family with mother, father and children is called a nuclear family.
- A family with grandparents, parents, uncles, aunts and cousins is called a joint family.
- In our society there are many types of families like single parent family, grandparent family, mother dependent family.
- To help us in our household work, we use home appliances.



### Improve Your Learning

#### I. Conceptual Understanding.

1. State two reasons for the increase of nuclear families.
2. Write the reasons for changes in a family?
3. Give two reasons how the use of home appliances changed the life style of people.

#### II. Questioning and Hypothesis.

4. A new family moved to your neighbourhood. What questions will you ask to know about their family?

#### III. Experiments and Field Observations.

5. Draw some pictures of home appliances.

#### IV. Information Skills and Projects.

6. Collect names of your family members and draw your family tree.

#### V. Drawing and Model making.

7. Make your family tree with paper carving.

#### VI. Appreciation.

8. Whom do you like most in your family, write a few lines about them ?

Chapter  
2



# Green World



## Learning Outcomes

### Pupils will be able to:

- identify simple observable features of root, flowers and fruits in their immediate surroundings.
- understand how plants prepare food.
- identify the different types of fruits and their benefits.



Hima, with her grandfather went to a garden on a holiday. Hima observed all the plants in the garden.

**Hima** : Thatha, do plants grow everywhere?

**Thatha** : Yes, my dear, plants grow almost everywhere in the world.

**Hima** : Thatha, do all kinds of plants grow everywhere ?

**Thatha** : No Hima, different plants grow in different places.



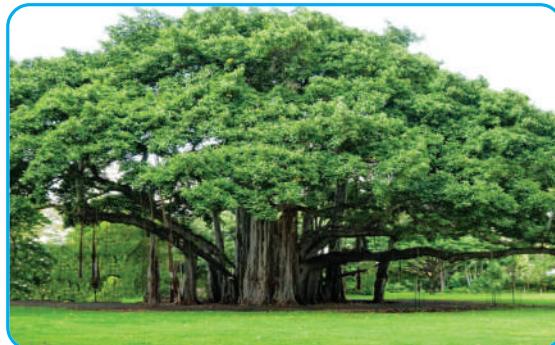
Do you know where plants grow?

We can see different plants and trees around us. They make the world green and colourful. Do the same kinds of plants grow in all regions?

Different plants grow in different regions depending on the soil and climate.

Based on their dwelling places, plants are of two types- Terrestrial and Aquatic.

### Terrestrial plants



Trees like banyan, peepal, mango, tamarind and blackberry grow in



plains.  
Tall trees like pine, oak grow on mountains.

### Desert plants



Cactus plants grow in deserts.

#### Let us Do



Cactus, barrel cactus, golden barrel cactus grow in deserts. They store water in their thick stems and use it.



Have you ever seen plants growing in water?

## Aquatic plants

Plants that grow in water are called Aquatic plants.



Duckweed and water hyacinth float freely on water.



Water lily and lotus have roots that fix the plants to the bottom of the ponds and lakes.



Hydrilla and tape-grass grow under water.



Mangroves grow in marshy or swampy areas.

### Let us Do

Write the names of plants based on their dwelling places

Aquatic Plants	Terrestrial plants

Hima : Thatha, this is a tomato plant. Isn't it ?

Thatha : Yes, please pick one and observe it.

A plant is divided into two systems, the root system and the shoot system. The part of the plant above the soil is called the shoot system and the part that is below the soil is called the root system.

**Hima** : Thatha, that rabbit is digging the carrot in our garden. But why is there a carrot inside the soil instead of a root?

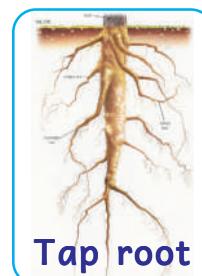
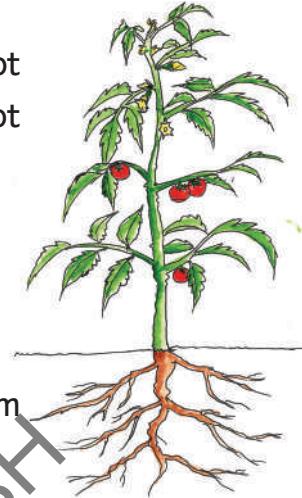
**Thatha** : Yes, Hima some plants store their food in their roots. Carrot is also a root that stores food. So it is inside the soil. Beetroot and radish are also roots growing inside the soil.



Do the roots of all plants grow inside the soil?  
How are roots useful to plants ?

Roots hold the plant firmly to the soil and absorb nutrients from the soil.

### Tomato plant



Tap root

Roots are of two types. The tap root has a thick main root that goes deep into the soil and several thin side roots grow from the main root.  
Example: neem, tamarind etc.



Fibrous roots

Fibrous roots are bushy. A number of tiny roots are attached to the lower end of the stem like a bunch.  
Example: paddy (rice), jowar, maize, grains etc.

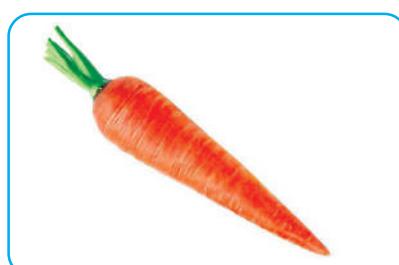


Aquatic roots

For trees like banyan, neem and tamarind the roots grow deep into the soil. For the plants like rose, jasmine etc., the roots do not grow very deep into the soil. The roots of water plants are soft and spongy to help them float. Roots are generally brown in colour.

### Uses of roots

Carrot, beetroot, radish are taken as food.



Carrot



Beetroot



Radish



### Do You Know



Camel grass (vattiverlu) is used as cooling mats during summer and as a freshener in the ward robes.

Lemon grass roots are used in fragrant oils and insect repellents.



### Think and Discuss



Which part of the plant attracts you very much?  
Do you know how we use flowers ?

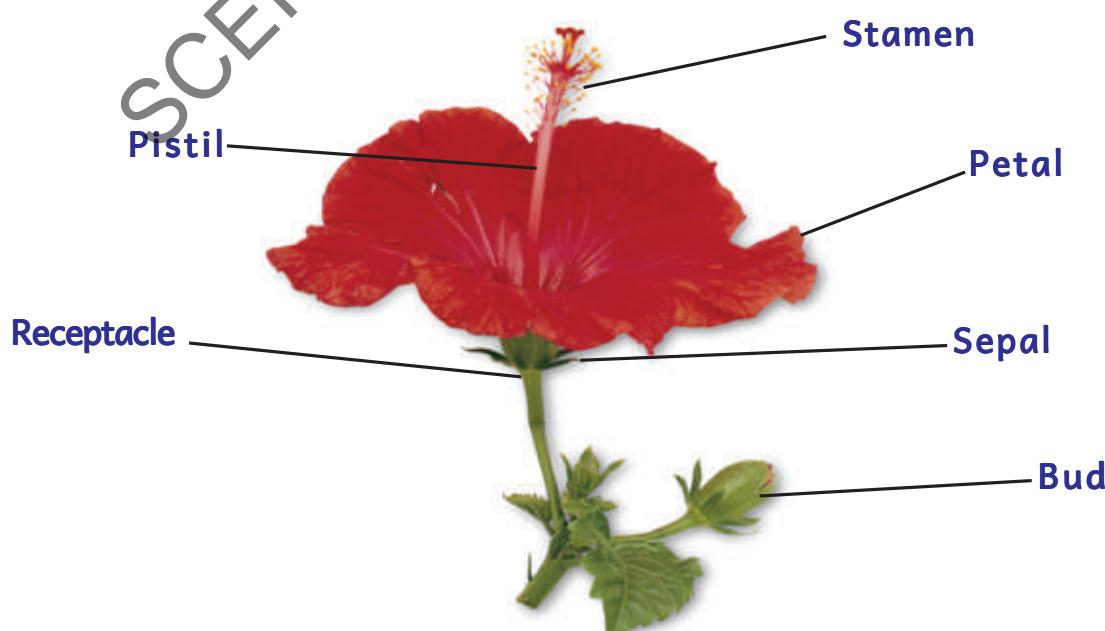
Hima plucked a Hibiscus

**Thatha** : Hima, do you know the parts of a flower?

**Hima** : I do not know, Thatha.

**Thatha** : The colourful part of a flower is called a petal. Apart from that it has a sepal, receptacle, stamen and pistil.

**Let us observe the parts of a hibiscus flower in detail**





Flowers are of different shapes, colours and sizes. Flowers are used for decorations. Hibiscus, Neem and Tulasi are used in making medicines. Rose, Jasmine, Lily and Lavender give pleasant fragrance and are used in making beauty oils and perfumes. Some flowers can also be eaten as food. Example: Cauliflower.

**Thatha :** Hima, do you know that flowers grow into fruits.

**Hima :** Really! Thatha I am feeling hungry, shall we eat some fruits?

Thatha gave her some grapes and sapotas to eat. She ate that grapes and was surprised to find no seeds in them.

**Hima :** Thatha, I know all fruits have seeds. But why are there no seeds in these grapes?

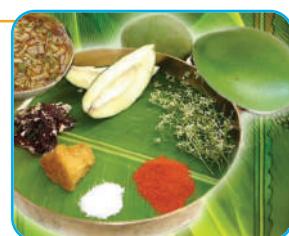
**Thatha :** Recently farmers have started producing seed-less fruits through hybrid technology.

Fruits are an excellent source of vitamins and minerals and they are high in fiber.



### Do You Know

Ugadi pickle is a special festival food item. This is the most popular dish of Ugadi festival in A.P., Telangana and Karnataka. This is a mixture that has six different tastes i.e. sweet (త్యి), sour (పులుపు), salt (ఉప్పు), acrid (పగ్గు), spice (కారం) and bitter (చేడు). This is made of ingredients like raw mango, tamarind, jaggery, neem flowers and raw coconut. Most of the ingredients are obtained from plants. These six tastes symbolically represent the six emotions in life.



Fruits like lemon, neem and amla have medicinal values.

Fruits like soap-nuts (kunkudu), shikakai are used for cleansing hair.



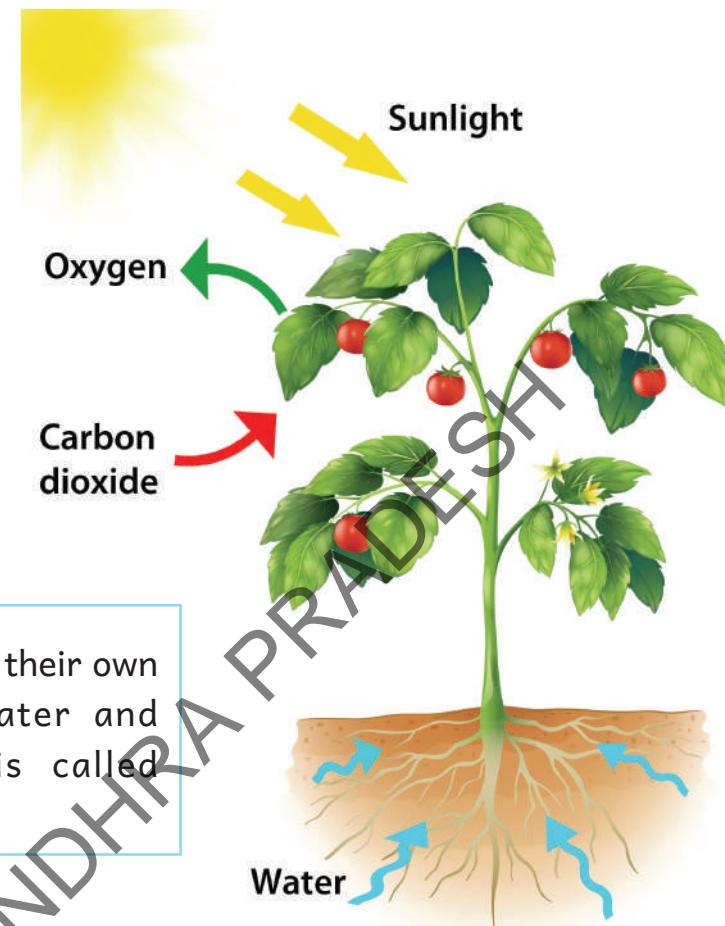
Hima : Thatha, each part of the plant is very useful to us. Is'nt it?

Thatha : Yes Hima, plants are a great gift of nature.



**Do You Know**

Plants prepare their food on their own using carbon dioxide, water and sunlight. This process is called photosynthesis.



Hima : Thatha, I collected some fruits and flowers from our garden.

I made a garland with these flowers. This is my gift for you.

Thatha : Thank you dear, it looks beautiful.

Plants and trees are gift of Mother Nature. There are many uses of plants and trees. In the name of development we are cutting down trees and we are not planting again. This causes a lot of climatic changes. Let us safeguard nature by protecting our environment and planting lot of trees.



**Key words**

**shoot system, root system, tap root, fibrous root, minerals, turmeric, nutrients, garland, aquatic, terrestrial, marshy swampy, climate**



### What we have learnt



C5R8I9

- Plants that grow in plains or mountains are terrestrial and that grow in water are aquatic.
- A plant body has two systems - the shoot system and the root system.
- Roots are of two types - Tap root and Fibrous root.
- Flowers are useful in many ways. They produce fruits. Fruits are rich in vitamins and minerals and high in fiber.
- We must protect our environment.



### Improve Your Learning

#### I. Conceptual Understanding.

1. Write a brief note on the uses of plants.
2. Give examples of land and water plants.
3. Identify and write some desert plants in your surroundings.

#### II. Questioning and Hypothesis.

4. What questions would you like to ask a gardener in your village to know about different types of plants ?

#### III. Experiments and Field Observations.

5. Go to a nearby garden or nursery and write the names of as many flowers and plants as you can identify.

#### IV. Information Skills and Projects.

6. Make a chart on the types of plants based on stems and hang it in your class room.

#### V. Drawing and Model making.

7. Make some flowers using colour papers and decorate your class.

#### VI. Appreciation.

8. Grow a flowering plant at your home.

Record the progress of its growth and discuss with your friends.

Chapter  
3



# Animals Around Us



## Learning Outcomes

### Pupils will be able to:

- identify different features (beak, teeth, claws, ears, hair, nests / shelters) of birds and animals.
- classify carnivores, herbivores and omnivores.
- know about the group behaviour of animals and birds.
- show concern towards animals and birds.

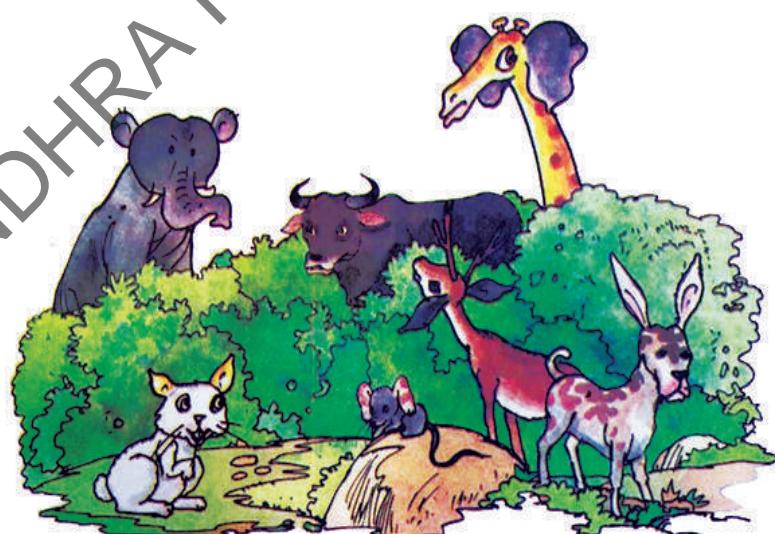
Sarath likes to watch programmes of animals on the T.V. But he wanted to see the animals directly.

During summer vacation Sarath visited a zoo with his family. He saw many animals and birds there. After the vacation he shared his experiences with his friends in the school.

**Sarath:** Sudha! I saw a big elephant in the zoo. It has very big ears.

**Sudha:** Did you see a rabbit there?

**Sarath:** Yes, I saw the rabbit and its ears are quite big. There I bought a book "Animal world". The pictures of the animals are interesting. Do you want to see it? His friends saw the picture and started laughing. Can you guess why? That's because the ears of the animals have been misplaced.



What is your favourite animal?



### Activity

Observe the picture. The elephant has small ears. Its funny. Actually these are not the elephant's ears. These are the rat's ears. Arrange the correct ears to the animals in the space given below



Giraffe



Elephant



Buffalo



Deer



Dog



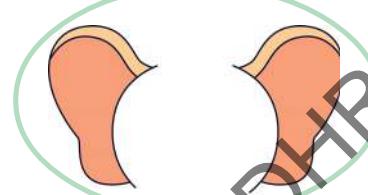
Cat



Rabbit



Mouse



The ears of the animals differ in size and shape. It is also funny to note that we cannot see the ears of some animals.



### Activity

Classify the animals given according to the visibility of their ears.



Ears Visible	Ears Invisible

Closely observe birds in your surroundings. Can you see their ears? They all have ears but we cannot see them.



You know very well that ears help us to hear. A bird has tiny holes on both sides of its head. Generally, these holes are covered with feathers. They help the bird to hear. If you observe carefully, you will see tiny holes on the head of a hen.

**Kiran :** Sarath! Did you see a zebra in the zoo?

**Sarath :** Yes Kiran, I saw it. The black and white stripes of the zebra are so attractive and I also saw the leopard. It has black spots on it.



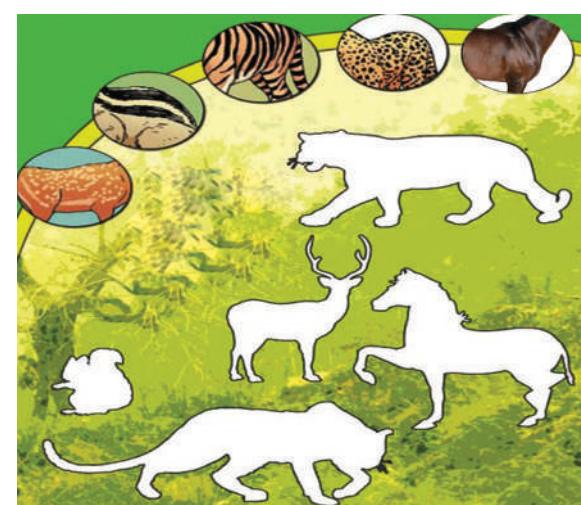
Have you observed the skin of the dog, cat or any other animals around you?

We can recognize the animals by the colour, pattern and texture of the hair present on their skin. Touch a dog, how do you feel? Touch a buffalo, how do you feel? Some animals have thick fur. The skin of some animals are very smooth. The skin of some animals is used to make chappals. The thick fur of the sheep is used to make sweaters and blankets.



### Activity

Match the animals shown here with the picture of their skins.



The animals whose ears can be seen and has fur on their skin give birth to babies. They are called as **Viviparous**. The animals whose ears cannot be seen and does not have hair on the skin lay eggs, incubate and hatch their young ones. They are called as **Oviparous**. Generally mammals are viviparous and give milk to their young ones.



### Do You Know

Dolphins give birth to babies and feed their young ones with milk.



Discuss in groups and fill in the table.

Animals that give birth to babies	Cow, _____
Animals that lay eggs	Hen, _____

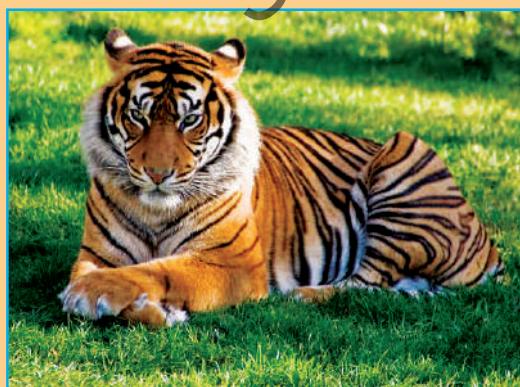
In the zoo, Sarath also saw many animals eating their food.



Have you seen what animals eat?

All animals do not eat the same food. Some eat only plants, some eat meat and some eat both plants and meat. The mouth and limbs of animals are patterned based on the type of food they eat.

**Herbivores** eat only plants or plant products. They have sharp cutting and strong grinding teeth. Some examples for herbivores are Buffalo, Goat, Zebra, Deer and Horse. You might have seen a Caterpillar eating leaves.  
• Can you say that a Caterpillar is a herbivore ?



I am a tiger. I eat the flesh of other animals. I am a **carnivore**.



Hi! Do you know me? I am a cow.  
I eat grass and greens.  
I am a **herbivore**.

**Carnivores** are the animals that eat the meat of other animals. They have long sharp teeth. Some examples are cat, dog, lion.

Birds that are carnivores use their beaks to tear the meat. e.g. eagle, vulture.



I am a bear. I eat both plants and animals. I am an **omnivore**.



who am I ?

Omnivores eat both plants and animals. They have sharp cutting teeth, strong grinding teeth and canines.

Human beings are also Omnivores due to their food habits.

- Can you say why a crow is an omnivore?



### Activity

Identify the animals and classify them in the given table.



Pigeon



Cat



Dog



Kangaroo



Tiger



Rabbit



Lizard



Monkey



Snake



Fish



Squirrel



Frog



Crow

Herbivores	Carnivores	Omnivores

**Sudha** : Sarath, what else have you seen in the zoo?

**Sarath** : I have also seen birds in their nests and observed the way they eat their food.

**Sudha** : Do all the birds eat in the same way as hens eat?

## Let us observe the beaks of the birds. Are they same?

The beaks of the birds are not the same. The shapes of the beaks depend on their food habits. Some have small beaks; some have long and some have curved beaks. They are sharp and strong.



### Do You Know

Beaks are actually jaws of birds.

Birds use their feet for walking, climbing, swimming and perching. Claws are used for holding food and in self-defense. The shape of their claws and feet depends on their food habits. The claws of the bird have long curved nails.



Birds build different nests. They build their nests for laying eggs. Usually the male birds build the nests and the female birds lay eggs in them. Once the young ones develop wings, they fly off from the nest. Birds build very strong nests.

A crow builds its nest with twigs and dried leaves. The weaver bird weaves its nests with grass, leaves, twigs and roots. The tailor bird stitches leaves together into a nest. An eagle builds its nest with large sticks, grass or plant stalks, on the rocky cliffs or on high trees. We have learnt where birds live.



We have learnt where birds live. Do you know where animals live?

Animals live in different shelters. Some animals live with us in our surroundings and some live in the forest. Wild animals live in the forest. Animals like rabbits live in burrows; lions and tigers live in caves or bushes. Monkeys live on trees. Insects like spider weave their own web.



### Activity

List the animals that live with us in our surroundings.

### Group behaviour of animals

Sudha always wondered why the ants move in a line. She came to the classroom and asked her teacher the reason behind it.

Sarath also expressed his doubt about the flock of birds flying in the sky in a V-shape. Then the teacher explained them about the group behaviour of birds and animals.

Regarding the flock of birds, migrating birds need to fly long distances. During their journey they may lose their energy. To avoid this they fly in a V-formation. Each bird flies slightly above the one in front of it, which reduces wind speed. This helps them to save energy.



Ants live together like us. The colony consists of queen-ants, male-ants and the worker-ants. There is discipline and work division in their colonies. Anthill is the home of the ants. Ants release a secretion which help to pass information of food to other ants. Then the ants go in a line in search of food.

Honeybees also live in groups. They build the hive and form colonies. They share food with other bees and feed the bee larvae. Without working as a group they cannot build such an awesome honey-comb.



The elephants in the forest live together in herds. Nearly ten or twelve elephants move in a herd along with their babies. The elderly female elephant leads the herd. She starts the journey in the morning with a trumpet and others will follow. This way of living in groups provides protection.

Animals make the Earth an interesting place to live in. They help to conserve nature and environment. So, we should not destroy the dwelling places or harm them. We should take good care of the domestic as well the wild animals and admire them from a safe distance. Like us they also have a right to live on this Earth. Lets us not harm animals.



### Key words

**viviparous, oviparous, mammals, pattern, colonies, secretion, migration, protection**



### What we have learnt



- Animals adapt themselves to the place where they live.
- Different birds have different beaks and claws.
- Herbivores eat only plants.
- Carnivores eat meat of animals.
- Omnivores eat both plants and meat.
- Some animals have special behaviour to protect themselves.
- Animals that lay eggs are called oviparous and animals that give birth to young ones are called viviparous.
- Birds use beaks and claws to get their prey.
- Birds build their nests to lay eggs.
- Animals live in groups for their survival and defend themselves from enemies.
- We should show concern towards animals.



### Improve Your Learning

#### I. Conceptual Understanding.

1. Give some examples of animals that have fur thick on their skin.
2. Why is a hen called an oviparous?
3. Sarath says that the duck and the crocodile belong to the same group. Do you agree, why or why not?

#### II. Questioning and Hypothesis.

4. What will happen if there are no crows ?

#### III. Experiments and Field Observations.

5. Observe the legs of a dog and a hen and write about them.

#### IV. Information Skills and Projects.

6. Collect the pictures of Herbivores, Carnivores and Omnivores and make a scrapbook.

#### V. Drawing and Model making.

7. Draw the picture of the animal that you like very much and colour it.

#### VI. Appreciation.

8. What activities would you like to do to protect birds?

Chapter  
4



# Sense Organs



## Learning Outcomes

### Pupils will be able to:

- identify the sense organs.
- understand the functions of sense organs.
- understand safe, unsafe and unwanted touch.

It was Swetha's birthday. She arranged a party in her home. She wore a new dress. Her friends greeted him with a birthday song "Happy Birthday to You". She was happy to listen to the song. Swetha gave chocolates to everyone. They all enjoyed the taste of the chocolates. They shook hands and wished her. Raju gave a handmade birthday card. Swetha was happy and when she opened the card it gave out a pleasant smell.



- Which organ helped to taste the chocolate?
- How did Swetha smell the perfume?



## Activity

In class 3 we have learnt that our body is divided into three parts head, trunk and limbs (hands and legs). Now label the parts of the head.



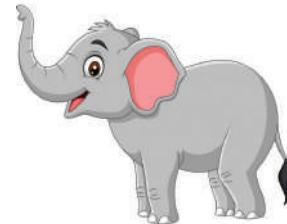
## Our Senses

Have you ever tasted an ice cream? While eating the ice cream you can feel a chillness, and you can taste the sweetness.

Let us see the following. Name the parts of the body that help you to know the senses. Write it in the space provided. One has been done for you.



**Ice is cold**  
skin (touch)



**Elephant is big**



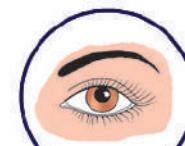
**Phone is ringing**



**Candy is sweet**



**Flower  
smells good**



**Sense of Sight**



**Sense of Sound**



**Sense of Taste**



**Sense of Smell**



**Sense of Touch**

The eyes help us to see. The nose helps us to smell things. The ears help us to listen, the tongue helps us to taste food and the skin helps us to feel the sense of touch, hot or cold. We can see, hear, taste, smell and feel with the help of these five organs. They are called **sense organs**. Sense organs help our body to respond to different stimuli. They are very sensitive. We need to take care of them. The effective functioning of these organs is a symbol of a healthy body.



Can you walk in complete darkness? Why?

## Eyes

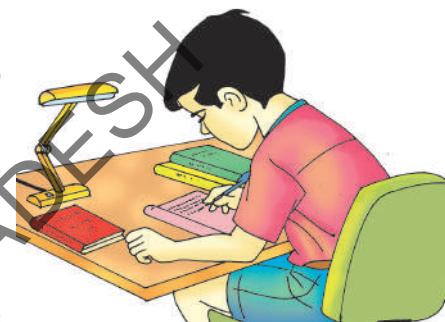
Our eyes help us to see. Eyes are our sense of sight. We enjoy watching this colourful world. The eyelids and eyelashes protect our eyes. We need to take care of our eyes.



What other activities can we do with our eyes ?

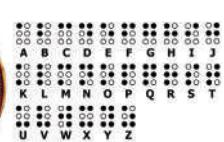
### Care of the eyes

1. Read in an appropriate light only. Too dim or too bright light is harmful to our eyes. While reading keep a distance of 30 centimetres between the eyes and the book.
2. Watch television from a minimum distance of 6 feet.
3. Playing of video games continuously in a cell phone or computer, watching T.V. may stress the eyes and affect our eyesight.
4. When you have an itch, in the eye, do not rub your eyes, gently wash your eyes with clean and cool water.
5. Do not play with sharp and pointed objects. They may accidentally cause damage to eyes which leads to blindness.
6. Do not look at the sun or at bright lights directly. It may damage the eye sight.



### Do You Know

The Braille script is used by blind people to read. People who can't see are blind. But they can walk with the support of a special stick. They can read a special script called Braille. Louis Braille invented this special script for the blind.



The sense of touch helps them to read.



Bees have five eyes, typical from other insects.

Birds like eagle, vultures and hawks have a very good sense of vision.



The owl can see in the dark.

## Let us Play

Blind fold your eyes with a cloth. Try to touch your friends. Can you catch them? Discuss in your class.



What will you do if you see a blind man waiting to cross the road?

### Nose

Raju came home from school. Before entering house itself, he found his mother preparing some delicious food. How did he know? Can you smell a rose when you are affected by cold? Why?

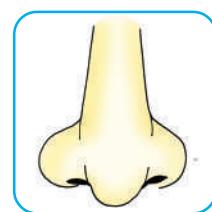
We breathe and smell things with our nose. The hairs in the nose, filter dust particles in the air and help us to breathe clean air.



- Which smells do you like and which you do not like?

### Care of the nose

1. Do not put any objects inside the nose
2. If anything strucks inside the nose, gently blow it out, or consult a doctor immediately.
3. If the nose is blocked due to cold, it's better to inhale vapour. That will help to clear it.
4. Do not put your finger into your nose. It may spread infections.
5. Always breathe with the nose and not with the mouth.





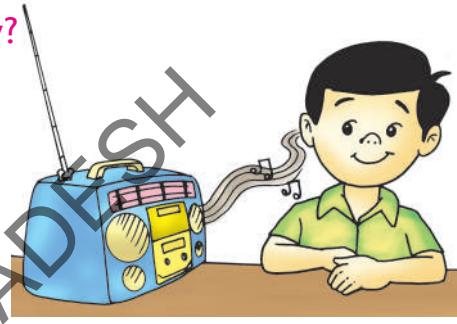
### Do You Know

- Animals like dogs and cats have a very keen sense of smell.
- Sniffer dogs are used by the police for tracking criminals, hidden weapons and bombs. So, police train the dogs.
- Elephants can smell water even from a distance of three kilometres.

## Ears

When there is a very loud noise, you close your ears. Why?

We hear sounds with our ears. Different sounds help us to understand the world around us. The eardrums present in our ears are very sensitive. If you hear loud sounds like thunder, Diwali crackers, loud speakers or music continuously through ear-phones it may damage your sense of hearing. We should keep our ears clean.



### Care of the ears

1. Do not clean the ears with hair pins, match sticks or any other objects. It may harm the ears.
2. Dry the ears after taking a bath with a soft cloth as water may go into the ears and harm you.
3. Do not insert pencils or slate pencils into your ears as they may damage your ears.
4. Do not burst crackers as they frighten animals, disturb babies and old people.
5. Few drops of hydrogen peroxide is used to remove the wax from the ears.



### Do You Know

- Nocturnal animals that are active during night such as owls, bats have a very sharp sense of hearing.
- Cats can hear even low noise.

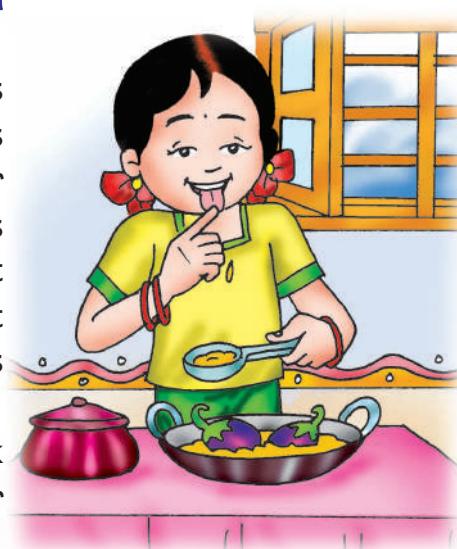


## Tongue

How do you feel when you eat a tasty item?

The tongue senses different tastes such as sweet, bitter and sour through the taste buds present on the tongue. It helps us to taste different food. The tongue helps us to speak.

Can you speak without moving your tongue? Just try.



### Care of the tongue

- Clean your tongue daily with the tongue cleaner after brushing. If you do not clean your tongue, it may cause bad breath.
- Brush your teeth twice a day, after you wake up and before going to bed.
- Do not eat too hot or too cold food. They may damage your taste buds and teeth.
- The people who cannot talk, use sign language to express their feelings.



#### Do You Know

- Frogs, lizards, chameleon use their tongue to catch food.
- Giraffes have long tongue.
- Snakes use their tongue to feel the sense of smell.



### Skin

If you touch a hot tumbler, what will you do immediately? Why?

**How do you feel when you touch sand-paper?**

Our body is covered with skin which helps us to feel the things around us. The skin allows us to know whether the things are hot, cold, rough, smooth, hard or soft. The skin is the most sensitive of all these senses. It responds to touch.



### Care of the skin

1. Have a bath daily. Always use a mild soap.
2. Always keep your skin dry and clean to prevent infections.
3. Take extra care of your skin around fingers, toes, knees, elbows, private parts as they are likely to get infections easily.
4. Take a bath after play. Bathing washes away the dirt and sweat.



While playing games you may get hurt. If we do not bathe properly you may get skin allergies like itching and infections.

**How do you feel, when you get hurt?**

**How can you keep yourself safe?**

Personal hygiene is a good habit to take care for your body. This habit includes bathing, washing hands and brushing teeth. Every day you come into contact with millions of germs and microbes. They settle on your body and make you sick. Cleanliness is very important.



#### Do You Know



- The skin of a snake can sense its enemies even a little distance away.

### To be strong and healthy

- Take a head bath at least twice a week.
- Trim nails regularly. It helps to prevent spreading germs into the body.
- Cover the mouth and nose while sneezing.
- Wash hands before and after eating.
- Wash hands with soap after using the toilet.

Raju won the first prize in the singing competition. He was given the prize on August 15<sup>th</sup>. When his name was called out, he came in a wheel chair to receive the prize. He was cheered by his friends. The headmaster appreciated saying that disability is not a hindrance and does not come in the way to success. We should encourage them.

Have you ever seen such type of persons in your surroundings?



People who cannot walk, see, hear or talk are known as person with disabilities as per the PWD ACT-2016. Some of them are born so, or some may lose their body parts in accidents. Differently-abled people must be encouraged to face life boldly. They are equally talented like us. If they are given equal opportunities, they too will become successful people.

Every person on the earth deserves equal respect. Family members, friends and teachers must support the differently-abled people. You should not tease or bully them. Be friendly with them and do not call them by nicknames.

The Government provide financial support and facilities like ramps, crutches, callipers and wheelchairs etc. to the differently-abled persons. In our country there are many disabled-people who have succeeded in life. Sudha Chandran, Ravindra Jain are living examples.



Sudha Chandran is a dancer. She lost her leg in an accident. But she began dancing with an artificial leg. She has attained success through her hard work and perseverance.

Ravindra Jain was born blind. Though he is blind he achieved success in the movie field due to his talent and hard work.

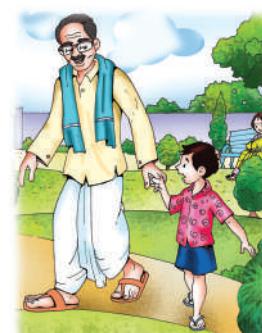


### Good Touch - Bad Touch

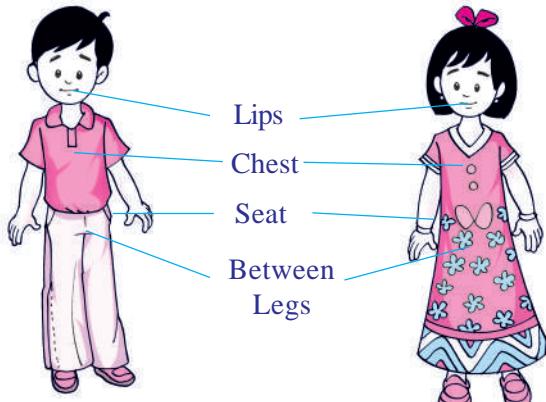
One day Usha's uncle came to her house. Her grandmother asked Usha to bow down and touch her uncle's feet. Usha did so, then uncle hugged Usha. She didn't like his touch. She felt very uncomfortable.

**Let us recall what is good touch and bad touch**

Good touch is physical contact that the child is comfortable with and bad touch is physical contact that make one uncomfortable. Young kids are naturally trusting of the adults around them and will extend friendships towards strangers without any problems.



### Private Parts



It is never right for anyone to look at, touch or talk about your private parts. And it is never right for someone older to you to ask you to look, touch or talk about their private parts.

There are some body parts that no one should see or touch like our chest, between our legs and our bottom. These parts are called private parts.



What do you do when someone touches you in the wrong way?

- Say no! Tell the person that you don't like it and you don't want to be touched.
- Get away fast! Run away from the person.
- Call for help. You can scream.
- Tell someone you trust what has happened.
- Believe in yourself. You did nothing wrong.



Tell elders (like parents or teacher) till you get help



Leave the spot quickly



Say "Don't touch" in a loud voice

Some people may play dirty tricks to abuse children. Some of them are,

- Your mother is admitted in the hospital. So I have come to take you there.
- Could you please accompany me and guide me to reach this address.
- Tempting you with gifts or money.
- Distracting you with the promise of sweets or food.
- Take you to room or place when there is no one.
- Touch your body unnecessarily while talking.
- Show you pictures or videos which you are not comfortable in phone/computer or in books.
- Force you to kiss or kiss you without your permission.
- Offer to dress you or undress you.



### Activity

If a touch makes me feel unsafe, I say

I tell to my



Hi... Papa! Come with me, I will give you a chocolate.

What would you do if a stranger asks you to come with him?



### Activity

Look at the picture and write whether they are good touch or bad touch



### Do You Know

- CHILD LINE is a national, 24x7, free, phone emergency outreach service for children in need of care and protection.



### How to check signs of bad touch in your friends and family ?

- They are always alone and sad.
- They stay away from their friends and try to harm themselves.
- Fear or afraid of a particular person.
- Asking to accompany where ever they go.
- Lack of interest in studies.



#### Key words

sense organs, blindness, infection, eardrum, Braille script, taste-buds, good touch, bad touch



#### What we have learnt

- Sense organs help our body to respond to different things.
- We have to take care of our sense organs.
- The skin is the most sensitive part of the body.
- We should never make fun of people who are differently-abled.
- We should say no if it is a bad touch.



#### Improve Your Learning

##### I. Conceptual Understanding.

1. How many sense organs are there? What are they?
2. Why are sense organs so important to us?

##### II. Questioning and Hypothesis.

3. What questions would you ask a differently-abled person to know how he/she handles his difficulty?

**III. Experiments and Field Observations.**

4. Taste the food items in your kitchen and list them under different tastes.

**IV. Information Skills and Projects.**

5. Collect information about successful people who are differently-abled and fill in the table. One is done for you.

S.No	Name	What is the disability
1	Helen Keller	Blind
2		
3		
4		
5		

**V. Drawing and Model making.**

6. Draw the picture of your face and label the sense organs.

**VI. Appreciation.**

7. What would be the good time to tell your parents or teachers about your problem regarding bad touch?



Chapter  
5



## Eat Together



### Learning Outcomes

#### Pupils will be able to:

- learn the importance of eating together on different occasions.
- know the how food is wasted.
- learn the process of preserving food.

Teja, Kamali and their parents went to their uncle's marriage at Ongole.

They were served a variety of vegetarian and non-vegetarian food. They ate what they liked and enjoyed eating with family and relatives.



- Did all of them eat the same kind of food?
- Are the food habits similar for everyone?

We like to take food with our friends and family members. During picnics and functions, we enjoy eating together.

- Name the other occasions where you will get a chance to eat together.



Do you like to share your food with others?

Eating food is not only fun but it gives us energy to work. If we do not eat we may get sick. So, we need to eat food at timely intervals.

One day, Teja fell down during the school assembly. The teachers and students took him to a shade and gave him some water to drink. The reason is, he did not take his breakfast. Most of the children skip breakfast because they may be late or they do not like what is served at home. Some children may also come to school without eating because of lack of food also. This makes them feel weak and they do not show interest in their studies.

- How many of your classmates take breakfast?
- If yes, what do they eat?
- If no, why have they not eaten?



### Mid-day meal

During the mid-day meal, Teja and his class mates sit together and have their lunch regularly. They are served eggs, rice, sambar, chikki, vegetable rice, lemon rice. The mid-day meal is based on the daily menu. Teja brought lemon pickle and Rafi brought chips from home. They shared with their friends. Eating together is a joyful activity. It develops friendship among them.



Some children like eggs, some do not. Some are vegetarian and some are non-vegetarian. Children have different food habits. Some children do not complete all the food served in the plate. They waste food. This is not a good practice.



Do all the children eat mid-day meal in your school?

What is the menu today in the mid-day meals at your school?

- Some children leave out the vegetables and curry leaves put in the sambar.

Is it a good practice? Why?

Many children in our surroundings do not even get to eat a full meal every day. This is due to their poverty. They go to school on an empty stomach. Our Government has decided to provide healthy food to all the children. A nutritious and tasty mid-day meal scheme has been introduced.

### Activity

List out the food items served during mid-day meals at your school for the last few days.

Day	Name of the food served
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	



What do you do with the leftover of the mid-day meals at school?

We love to eat food, but sometimes we may like, and sometimes we may not. Some of us do not like to eat vegetables. But we should always eat vegetables to stay healthy.

### Wastage of food at home

Observe the picture given below on how food is wasted in a lot at functions. In the same manner food is also wasted at home.



How is food wasted at functions?  
Is food wasted at your home?

## Food is precious

If food is cooked in excess, then it gets wasted. Even at our home the leftover food is thrown away. Some people spill food while eating and some people leave it out in the plate.

During marriages and other functions, huge amounts of food gets wasted. In addition to food, water is also wasted at the functions. People take a glass full of water but they drink a little water and leave out the rest in the glasses.



What kind of plates are used to serve food at functions ?



We use plastic plates, glasses, bowls, spoons to eat food at functions. Using plastic is unsafe to our health. Have you ever seen plates stitched with leaves? If yes, describe how they are made? Prepare plates for eating with banyan or almond or moduga leaves .

### We should say no to plastic

If we preserve food in plastic plates, covers and bottles, plastic particles may enter into the food and finally get into our body causing ill-health. And in case we discard the food it will pollute the soil. Cows and buffaloes may eat plastic covers along with food causing sickness. If we burn the plastic, the air gets polluted. So, what can we do? The only solution is to **say no to plastic**. We should think of alternatives. Instead of plastic glasses and plastic plates what can we use?



**Look at the picture and understand how we can reuse plastic wastes**





## Activity Make a Pen Stand

Take a used water bottle and prepare a penstand.

### Let us Do

#### My flower pot

- Take a plastic bottle. (Any empty water / drink bottle)
- Cut it in the centre. (Ask your teacher or parent to help you)
- You can wrap a colour paper or colour it.
- Pour water in it and put a money plant. (Any plant)
- Your flower pot is ready.
- Change the water every week. Otherwise mosquitoes will breed.



#### Preservation of food

One day Teja's mother opened the pickle jar. A white coloured layer had formed on the pickle. She called Teja to throw the pickle jar into the dustbin. He asked why we should do so. She said fungus had formed on the pickle.



How can we preserve pickles for a long period without getting spoiled?

Teja's mother adds salt and oil to the pickle and dries the fryums in the sunlight. We can preserve pickles, jams and fryums for a long time.

In the same manner, there are many ways of preserving food. Pickles, chutneys, jams, fryums (vadiyalu) etc. are some of the common preserved food. Salt is a preserving agent and oil prevents bacteria and fungus to form in the pickle.

#### Discuss in groups

1. Prepare a list of food items preserved for many days by using extra salt and oil or drying in the sun.
2. Write the process of preparation of salted - vegetables or fryums (orugulu / vadiyalu).
  - Fresh fruits can be preserved with the help of sugar syrup and by making jams.
  - Some vegetables, meat and fish can be preserved for a few days by keeping them in freezers. This method is called freezing.
  - We make pickles of fruits, vegetables and green leaves to preserve them for a long time. By adding excess salt, chilly powder and oil to the vegetables, fruits, meat and milk also are preserved for long periods.



Jams



Freezing



Pickle



- We can keep vegetables, fruits and milk in the refrigerator for a few days at our home because of cooling effect.

### Project work

1. Prepare Bengal gram (Kandi podi) powder. (Required Ingredients:- Bengal gram, salt, red chillies and cumin seeds)

#### Think and Discuss



- How do rats, ants and cockroaches spoil the stored food grains?
  - Have you ever felt bad while throwing away food and spoilt food grains?
- If yes? Why did you feel so?

Food grains like rice, wheat, pulses like grams and oil seeds like ground nuts are infected by insects and fungi, causing spoilage and damage to them. Hence to avoid this, neem leaves are dried and put in the storage bags. The harvested grain is dried well and stored. Large containers of tin, steel, aluminum or bamboo are used to keep grains safe from rats, mice and insects.



#### Field to plate

- Do you know how we get delicious food that is served, in our plate?
- Do you know the persons and activities involved behind the food you eat?

We buy rice from the market. Usually mothers cook our food. Are there any other persons involved in the preparation of food we eat?



Observe the list given below. Discuss with your teacher and add a few more to the list.

1. Blacksmith – Make sickle
2. Carpenter – Make plough
- 3.
- 4.



Every grain is precious because many people like farmers, agriculturalists, agricultural labourers, blacksmiths, carpenters, millers, vendors etc., put in a lot of effort and labour in its preparation. With all the combined effort of different artisans, we get our food. We must thank them and appreciate their valuable services.



### Key words

mid-day meal, food, preservation, nutritious, food wastage, foodgrains



### What we have learnt

- Eating together makes us happy.
- Mid-day meal is a right of children.
- It is improper to waste food and water.
- Eating food without spilling is a good habit.
- Food can be preserved by adding salt and oil or drying in the sun.
- A mouthful of food that we eat is the sweat of lakhs of farmers and labourers behind it.



## Improve Your Learning



### I. Conceptual Understanding.

1. Name some occasions where people eat food together.
2. When does the food get wasted at home?
3. Mention the people whose efforts are behind the process of producing the food we eat.

### II. Questioning and Hypothesis.

4. What questions would you ask a farmer about how they can keep food grains safe from rats, mice and insects?

### III. Experiments and Field Observations.

5. Observe the list of vegetables used at the mid-day meal for a week and write them in your notebook.

### IV. Information Skills and Projects.

6. List out the food items that you preserve at home for long periods.

### V. Drawing and Model making.

7. Make a tree diagram of vegetarian and non-vegetarian food and healthy and junk food.

### VI. Appreciation.

8. You noticed kavya feeding the birds with some grains everyday. How would you appreciate her act?

## Chapter 6



# Water



### Learning Outcomes

#### Pupils will be able to:

- explain the process of producing and procuring water in our daily life.
- understand how we get water from local resources.
- get a basic idea on the process of evaporation and condensation.
- follow the suggested ways to keep water resources hygienic.
- explain how water is essential in our daily life.

Latha went to her Grandmother's house during summer vacation. She went to play along with her friends Ravi and Nikhitha. While they were playing Latha felt thirsty and she drank water which Ravi offered.

**Latha:** Why is this water so salty? Do you drink this water daily?

**Ravi:** Yes, this water is from our borewell. We drink this.

**Latha:** Oh! What about you Nikhitha?

**Nikhitha:** We drink water from the tap. The gram panchayath supplies pure drinking water to our houses. We have a big tank in our village. The water gets purified and is supplied to the houses.



What are the different kinds of water resources available in your village?

Most villages have tanks for water resources. This water is mainly used for agriculture, drinking and other purposes. Let us know about a village tank.

**Our village tank: Yathalavanka cheruvu.**

Hello! I am Venkat of Neetiguntlapalli village of Punganoor mandal in Chittoor district. In our village we have a tank named Yathalavanka cheruvu. Let us know about this tank. The tank was constructed by our villagers. Earlier this was a small pond. During rainy season the rain water is collected and stored in the tank. This tank helps us in irrigating the large areas of land. It is the source of drinking water to the cattle. The tank is holy to all of us.

- Where does water come from, to the tank?
- What are the main uses of the tank?



**Let us Do**

- Collect information from your grand parents or elders about the tank, canal nearby your village.



How is a water tank built?

The construction of a tank is a collective programme. First the villagers identify the source of flood water and a low laying area for the construction of a tank. They dig the tank and construct tankbunds with mud and stone for storage. Then they dig the canals from the regions where the water is flooding to the tank. Outlets from the embankment are built on both the sides.



- Why do tanks have outlets?

**Do You Know**

Some tanks are connected with other tanks with the help of canals. Water flows from one tank to another in the rainy season. Bukkapatnam and Dharmavaram tanks in Ananthapur district are of this type. In the same way canals are dug to fill the tanks with river water. Such tanks are found in Krishna, East and West Godavari Districts.

Before digging the tank, the ground water level was very low in our village. All the bore-wells got dried up during summer. After the construction of the village tank, the water level in the ground increased and the water in the wells and bore wells also increased. Farmers get water from these bore wells for their fields.

### Think and Discuss



- What should be done to increase water level in the ground?
- Why is silt removed from the tank and used in the fields?



Can we drink water directly from the tank? Is it safe?

### Let us Do

Take a water bottle. Collect water from your village tank. Keep the bottle aside for 30 minutes.

#### Observe the bottom of the bottle

- What did you find at the bottom of the bottle?
- What happens if we drink this water?
- What are the pollutants that pollute the water?



We get diseases like typhoid, cholera, and diarrhea by drinking water directly from the tank. It is unsafe for drinking.

#### Tank Pollution

Look at the following picture.



How are tanks being polluted?

Let us see how tanks are being polluted.

The people of the village take bath, wash their cattle, clothes, vehicles etc., in the tanks. Some throw household wastes and dead bodies of animals into the tank.

Some people do not have toilets and use tanks for this purpose. People immerse idols made with chemicals in the tank every year. It pollutes the water due to which the fish and the water plants die. The sewage water from the houses are let into the tank.

Chemical effluents from factories also pollute the tank water as well as the underground water. If the water from such a tank is used for drinking, people will be prone to diseases and ill-health. These days, people are taking up various programmes to control water pollution.

### Think and Discuss



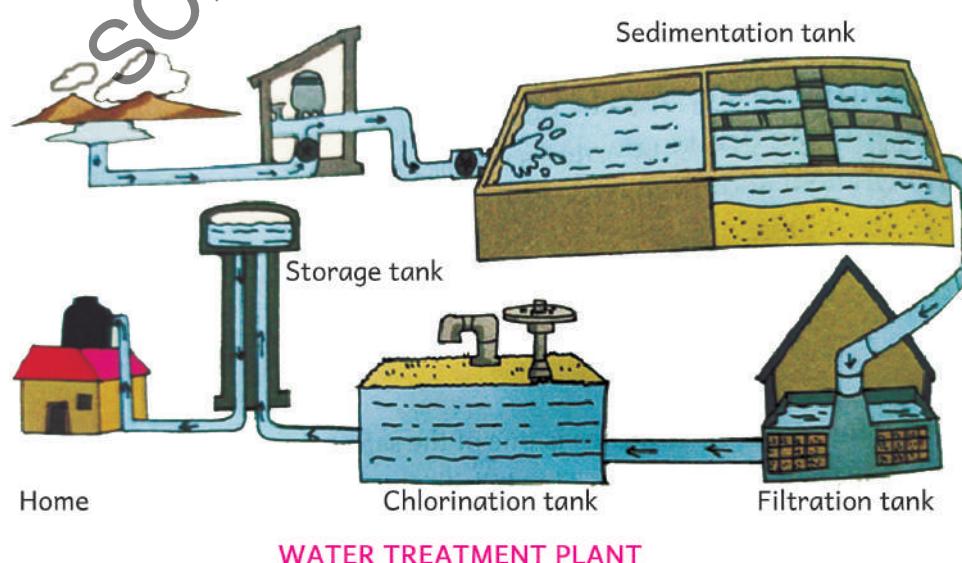
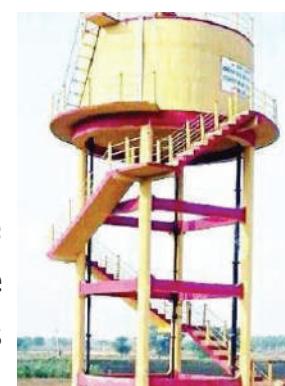
- What will you do to stop pollution of water in tanks?

### Safe drinking water scheme



- How is drinking water supplied in your village?
- Is there a tank of this kind in your village?

The village panchayat is responsible for the supply of pure drinking water to the people in rural areas. Overhead tanks are built under the rural water schemes. The filtered and safe water is supplied through this scheme to the houses.



There are certain stages involved in purification of tank water.

1. Water from a pond or river is pumped into large tanks called sedimentation tanks. The sand particles settle down in the tank. Solid particles like leaves, twigs etc. are removed.
2. Water is sent to the filtration tank. The water is filtered here. Small particles are removed from the water.
3. The filtered water is sent to the chlorination tank. Bleaching powder is added to the water. This is called chlorination. This helps to kill the germs in the water.
4. Chlorinated water is pumped to big overhead tanks.
5. Water from the overhead tanks is supplied through water pipes to our homes.



#### Do You Know

Water without treatment has a lot of harmful micro-organisms. If this water is taken directly it causes ill-health. It is good to boil the water before drinking.



Do you know who is responsible to maintain the cleanliness of the tank?

Let us listen to the sorrowful story of the tank

#### Sorrow of the tank

Hello friends!

Look at me! I am a village tank. I am dried up and have cracks in me. I used to be very beautiful with plenty of water.

When I was full of water, children enjoyed swimming and watching the colourful fish. I used to supply water to the fields. Now, I am dried up and no one comes to me. My heart melts to see the sorrowful faces of the farmers without water supply. I am waiting for the rains.

Some people have occupied my river beds and turned them into farms and built houses. So, the water which has to be channelized into me is closed. Water has stopped flowing into me even during rainy season. Some people's greed is the reason for how I am today! Will you help me?



## Tank management

Look at the picture given. You can see Eichhornia plants (Gurrapudekka) and algae grown in this tank. It is our responsibility in protecting our tanks. The Government has formed a team of farmers as Water User's Society who are responsible for the maintenance of the tanks. They remove the weeds in the tank and its canals. They take the soil deposits from tanks to their fields. With this, the level of the water in the tank increases.



### Think and Discuss



- Low rainfall and closing of water channels are the main cause for drying of tanks. Discuss other possible reasons for the drying up of tanks.

## How does it rain?

### Activity

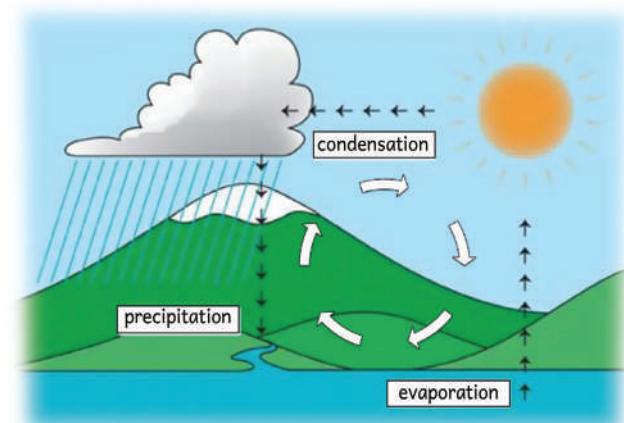
Place a cup full of water under the sun. Mark a line to show the level of water. Note the changes in the water level for three days. You will notice that the level of water has decreased.

### Journey of a rain drop

This is because water goes up as water vapour due to the heat of the sun light. The process of changing of water into water vapour is called evaporation.

Generally, the water in the ponds, tanks, rivers and seas gets evaporated into the air. It condenses and forms the clouds. These clouds cool down due to cool air. Water vapour turns into little droplets. This is called condensation. When water-drops fall from clouds, it is called precipitation or rain.

Water evaporates from the surface of the earth and forms the clouds. The clouds get cooled and fall again to the surface in the form of rain. This continuous cycle is called the water cycle.



### Water magic

We love to drink lemon water, butter milk etc. We add salt or sugar to make such drinks. They dissolve in water.

Water has the property of dissolving substances.



### Activity

Take six glasses and fill them with water. Make sure there is an equal amount of water in all the glasses. Now, put the following things into the water. Stir it with a spoon. Write your observations in the table by Putting (a) mark.

Things	Dissolved (mixed) in water	Did not dissolve in water	Change in colour
Sugar			
Salt			
Milk			
Flour			
Dal			
Oil			

You must have heard people say this water is sweet, this water is salty or this has no taste. This is because some substances in the soil dissolve in the water that gives taste to water.



### Key words

ground water, irrigation, pollution, filtration, effluents, village tank  
evaporation, condensation, water cycle, embankment



### What we have Learnt

- Every village tank has a history.
- Human activities are polluting the tanks.
- The construction of a water tank is a collective work.
- Villagers take the responsibility of maintaining the tank clean.
- Safe drinking water is being supplied to our homes.
- The continuous process of evaporation, condensation, forming rain is called water cycle.



### Improve Your Learning

#### I. Conceptual Understanding.

1. Why do we need tanks?
2. How are tanks being polluted?
3. How should we conserve our tanks?

#### II. Questioning and Hypothesis.

4. Ask your teacher what will happen if all the tanks dry up.

#### III. Experiments and Field Observations.

5. With the help of your teacher, visit a nearby field. Observe how water is supplied to the fields. Draw a block diagram.

#### IV. Information Skills and Projects.

6. Collect information about a tank in your village and write the history of the tank.

#### V. Drawing and Model making.

7. Prepare a chart showing water cycle.

#### VI. Appreciation.

8. Prepare some slogans to stop pollution of water.

Chapter  
7



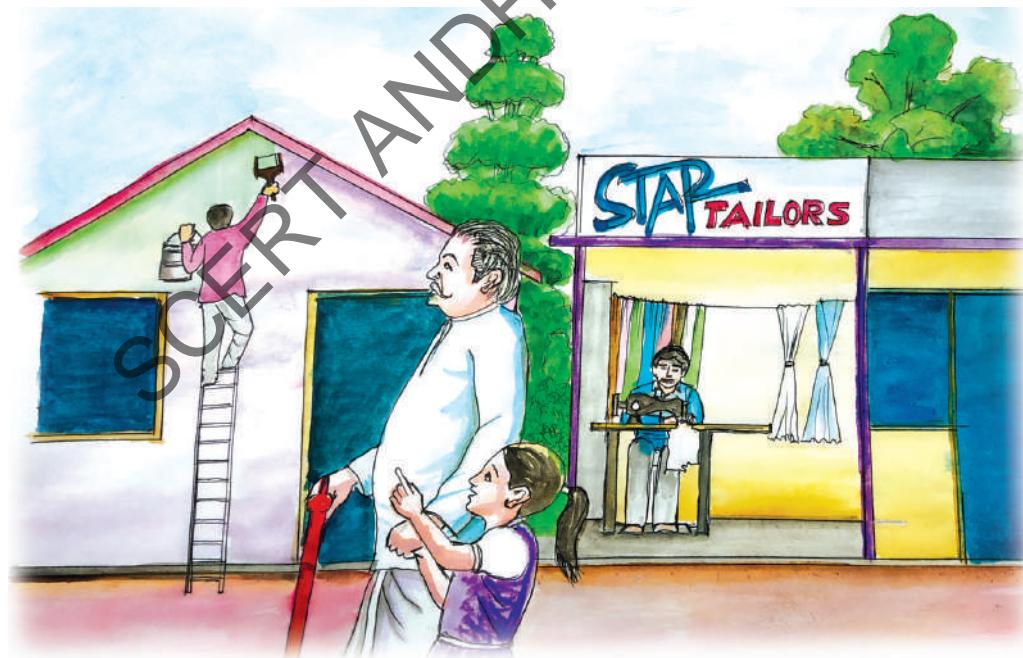
# Professions and Services



## Learning Outcomes

### Pupils will be able to:

- observe the household materials, recognize their relevance to different professions.
- observe, collect data, explain reasons for existence of different professions and appreciate the services available
- record observations/information on services available in rural places in support of farmers and villagers



While Vijaya was going with her grandfather to the market, she noticed a house being painted. Vijaya wishes to know about the work. Here is a conversation between Vijaya and her grandfather.

**Vijaya** : Thatha! Why do people paint their houses?

**Grandfather:** Well, a house looks beautiful and bright. So, we paint our houses. Look there, you see a man painting. He is a painter.

**Vijaya** : What do we use to paint, Thatha?

**Grandfather:** We use a brush and colours to paint the house, dear. The brush is a tool to paint.

**Vijaya** : Thatha! What is a tool?

**Grandfather:** A tool is an instrument to do the work easily. There are different tools for people doing different works. What tool do you use to sharpen your pencil?

**Vijaya** : Sharpener.

**Grandfather:** Yes, we should know the tools and their uses. Let us learn in detail:

**Observe the picture:**



There are different types of brushes used as the tools to do different work. A paint brush is used by painters, and a shaving brush is used by a barber. Who uses a shoe polishing brush?

Discuss with your friends about the brushes shown in the picture and the people who utilize them for their profession.

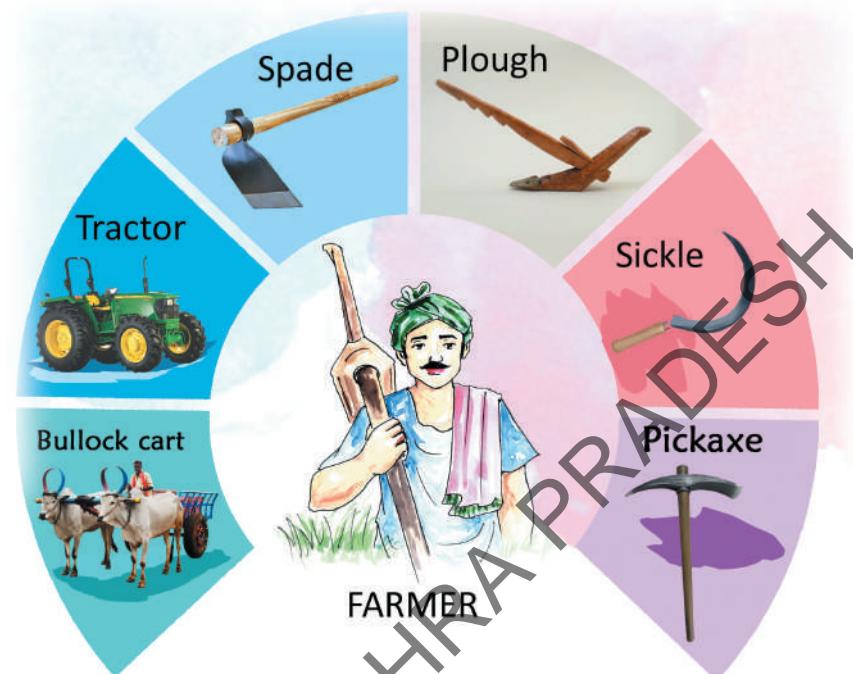


People do different kinds of works for their livelihood. The work that involves any skill to get an income is called a profession.

Let's see different kinds of professions and the tools they use.

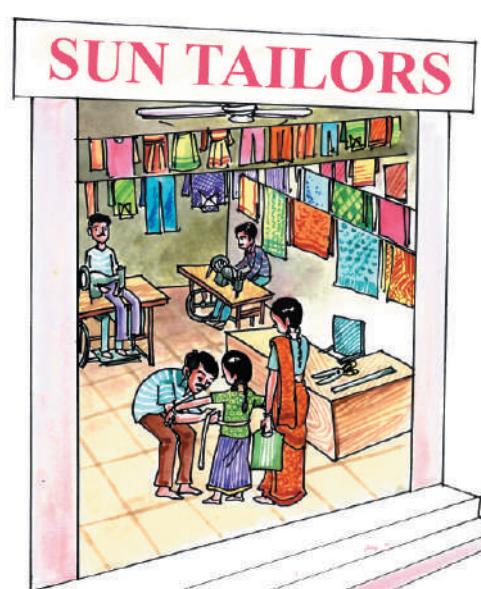
### **Farmer-The food maker**

In India, most of the people depend on agriculture. Farmers cultivate land and grow crops. Farmers use many tools in farming. Let us see the different tools used in farming.



### **Let us see how the tools are used by the farmer**

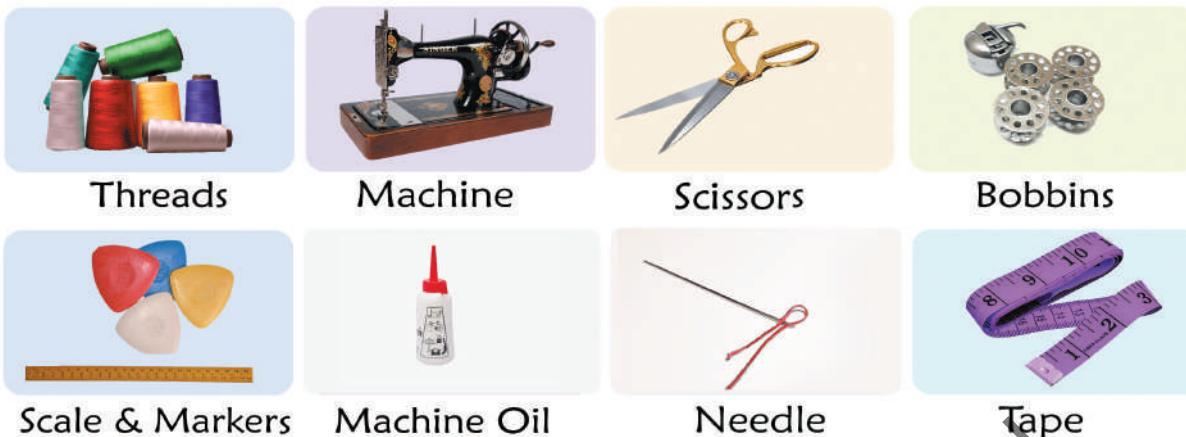
Farmers use different tools to do their work with ease. The level beam is used to level the field. The spade is also used for digging passages for water flow. A sickle is used to harvest the crops. A plough is used to till the land. Bullocks are used to pull the carts and to plough. But, now-a-days tractors are used to level or till the land.



### **Tailor -The Designer**

There are many other professions which help us in our daily life, out of which, tailoring is one. The Tailor stitches pants, shirts, jackets, blouses etc. He takes measurements with a tape, cuts the cloth with a pair of scissors and stitches the cloth with a sewing machine.

## The tools used by the tailor



## Mason - The Constructor

We find various types of constructions around us. Whatever may be the construction it needs some professionals.



## The tools used by the mason



Can you name the tools used to build a wall?

-----

### Different Professionals in our daily life

For different purposes we need different people who can help us. There are several people in our society who belong to different professions. This is Veeraiah. He is a greengrocer. He sells vegetables and fruits.

Farmers bring their vegetables to the whole sale market. The mandi merchants buy the vegetables from the farmers and sell them to the vendors. The vendors segregate the vegetables depending on the size and quality and sell them through the streets carrying them in their baskets or moving them on cart tray.



This is Gopal. He is a milk man.  
He supplies milk.



This is Mounika. She is a florist. She sells flowers.



This is John. He is a chemist.  
He sells medicines.

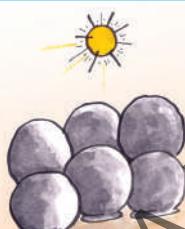


This is Basha. He is a grocer. He sells cereals, pulses, spices and rice.

### Let us watch the making of pots

Rajaiah is a potter. He makes different kinds of pots of different sizes. He sells them at the village market. He learnt the process of making pot from his grandfather.

### Let us watch him making the pots

		
Rajaiah brings clay to make the pots	He soaks the clay in water and kneads it with his legs to make it soft	He takes the soft clay and rolls it on a potter's wheel, and shapes the clay into a pot
		
He taps the pot made on the wheel with a wooden plate to get the correct shape	He dries the pots in the shade first and then under the sun	He bakes the dried pots in a kiln



### Activity

Bring some clay from a nearby field, mix the clay with a little water and make toys which you like and display in your class.



- Who cleans the toilets in your school?
- Who sweeps the streets in your village?
- What happens if there is no one to clean them?

In our society we find many people who help us in many ways. The people who keep our streets and gutters clean are known as sanitation workers. Sanitation workers they protect us from diseases, just as soldiers protect the border from enemies. We should appreciate their importance and respect them.

**Bezawada Wilson** 'Magsaysay award winner' has been fighting one of the worst evils of Indian Society - The practice of manual scavenging by safai karmacharis, those involved in this most undignified of labours manually remove night soil from dry latrines. He fought for liberation and rehabilitation of safai karmacharis. He said "the son of manual scavenger need not take the same profession. If we are not providing that freedom and opportunity we are creating a social divide."



We should keep our environment clean. Toilet is one of the places which has harmful micro organisms. Always flush the toilets. Wash your hands with soap after using or cleaning the bathroom.

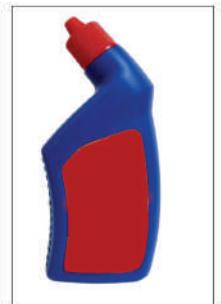
Clean the toilet at home by using the following materials.



Bucket



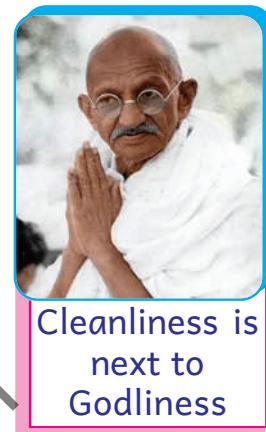
Phenol



Toilet cleaner



Broom



Cleanliness is  
next to  
Godliness

### Let us know about professions

Washerman



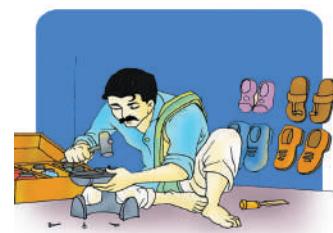
Washes and irons clothes.

Gold smith



Makes ornaments of gold

Cobbler



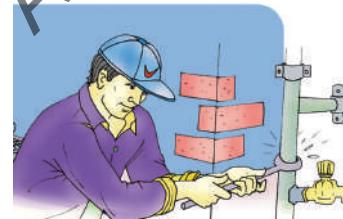
Mends shoes

Electrician



Repairs electrical appliances

Plumber



Fits pipes and taps

Porter



Helps carry our luggage

Fisherman



Catches fish and sells them

Sanitation Worker



Sanitise the surroundings

Soldier



Protects the country

We also find people of many professions who give their services necessary for the welfare of the society.



**Activity**

Name the professions for the given pictures.



**There are many professions which support and help the farmer:**

- The Agricultural Officer provides seeds and tools to the farmer at subsidised rates.
- The Electrical Engineer supports by supplying power to the farmer.
- A Bank Manager gives loans at low interests to help the farmer.
- A Tahsildar issues land rights pass books needed to the farmers.

A plate of served rice in our hands is the farmer's effort and hard work. Thus, we see that there are many offices which extend their services to help farmers.



**Do You Know**

During Covid - 19 the sanitation workers acted as a front line warriors without any fear by constantly sanitising the areas day and night. We should salute and respect their selfless service rendered during such situation.





### Key words

professions, institutions, service, florist, plough, greengrocer, farmer, tailor, mason, cobbler, driver, soldier, goldsmith, plumber



### What we have learnt

- We have different household materials used in different professions.
- We have different professions in our society which help us.
- The government provides different services to the society through different professions.
- All professions are equal, we must respect them.



## Improve Your Learning

### I. Conceptual Understanding.

1. Name any three professions by which people help us in our daily life.
2. Which professions support a farmer in farming?
3. Write how a plumber helps you.



### II. Questioning and Hypothesis.

4. What questions would you like to ask a grocer in your village about his/her profession?

### III. Experiments and Field Observations.

5. Visit a cobbler in your village. Observe how he repairs the shoes.

### IV. Information Skills and Projects.

6. Collect pictures of tools used by different professionals from newspapers and prepare a scrap book.

### V. Drawing and Model making.

7. Draw and colour the picture of a sickle or any tool in your workbook.

### VI. Appreciation.

8. How would you appreciate the services of a scavenger in your village?
9. Look at the pictures and write how you feel about them.



Chapter  
8



# Transport



## Learning Outcomes

**Pupils will be able to:**

- talk about their travel experiences.
- identify different transport systems used in different areas.
- explain the modes of transports in plain areas.
- locate airforce, shipyards on the map of Andhra Pradesh.

Ajith and Manu are friends. Manu lives in Kurnool. She used to write letters to Ajith whenever she goes on a trip. Ajith received a letter from Manu regarding her travel. He was very excited to read the letter written on train journey.

**Let us read the letter written by Manu regarding her trip.**

Hi Ajith! This is Manu. I want to share my exciting journey with you. We started from home and reached the railway station by an auto. The train arrived and I sat by the window and started looking outside. One thing I noticed was that people putting big packages of goods in the luggage vans. We travelled through different places and I got to meet a lot of people.



Is the same means of transportation useful for people and goods?

## What is transportation?

The movement of people and goods from one place to another by land, water or air is called transportation. Generally we use bicycle, bus, car, train, etc to travel from one place to another.

## Let us imagine how our transport system works around us.

Life becomes miserable in the absence of transport system. Isn't it? Transportation keeps us comfortable. It is even more surprising to see how the transportation connects one another.



Is the transport system same in all places?

The transport used in plain areas is different from hilly areas. The means of transport is based on the physical conditions of the place. Thus we see that the means of transport used in the hilly regions, forests, deserts, water or snow is entirely different. The means of transport is also different in urban and rural areas.

### 1. Transport in plain areas

Look at the following pictures.



- Where do these vehicles move?

The vehicles like cycle, bike, car, lorry, bus etc., move on the road.

### Look at the following vehicles



- Where do we find the above kinds of transport?
- Have you ever travelled by these vehicles?

In rural areas, where there is no proper road facilities, villagers use bullock carts, tractors, horse buggies or tangas to travel from their village to the nearest towns.

### 2. Transport in hilly areas

In hilly areas people travel on foot paths only. Animals like donkeys and horses are used to transport goods in these areas. We can see this type of transport at Araku in Visakhapatnam district of Andhra Pradesh. Now-a-days the rope-way is also used as a way of transport in the hilly areas.



### 3. Transport in Forests

There are no permanent roads in the forests too. The Tribal people who live in the Nallamalla forest use footpath to travel from one place to another. They walk a long distance to reach the main road to travel in a bus. People carry particularly the old people or patients in dolies. The persons who are sick, as well as pregnant women find it difficult to reach hospitals in time.



### 4. Transport in deserts

Transport in desert area is limited. Therefore the primary means of transport is the camel. Camel can walk easily on the sand. It can also walk long distances without taking water. Hence the Camel is known as the ship of the desert.



#### Do You Know

The hump of the camel helps it to survive in the hot desert regions without drinking water for weeks.

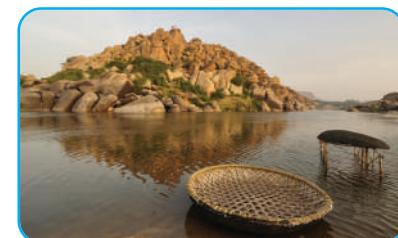
### 5. Transport in snowy areas

The polar regions are covered with snow all through the year. In such regions sledges are the most common means of transport. In our country we find the Himalayas covered with snow. Here people travel on Yak or dolies and sledges.



### 6. Transport in rivers and canals

In Kashmir we see boats moving along the Dal lake. So the boat is the means of transport. In our state we find this kind of transport service on the rivers of Godavari and Krishna. There are many Lanka villages (Islands) in the middle of these rivers. People travel to nearby towns or villages by putti or boats.





### Do You Know

#### Our future transport

- Do you know how we will travel in future?

Scientists are developing high speed bullet trains, water cars, flying drones to make travel easier and faster.



Ajith, this travel helped me to learn that people of different areas develop their way of living based on the environment. The language, clothing, food, means of transport etc., depend on the climatic conditions and availability of sources. India is a beautiful country with diverse elements. Inspite of all the differences everyone helped us wherever we travelled with food and accommodation. My father told me that is called 'Unity in diversity' which means our country is diverse in many ways yet we are united.



#### Activity

Some vehicles like Tonga cart, Bullock cart etc. are pulled by animals.

How do we take care of these animals?

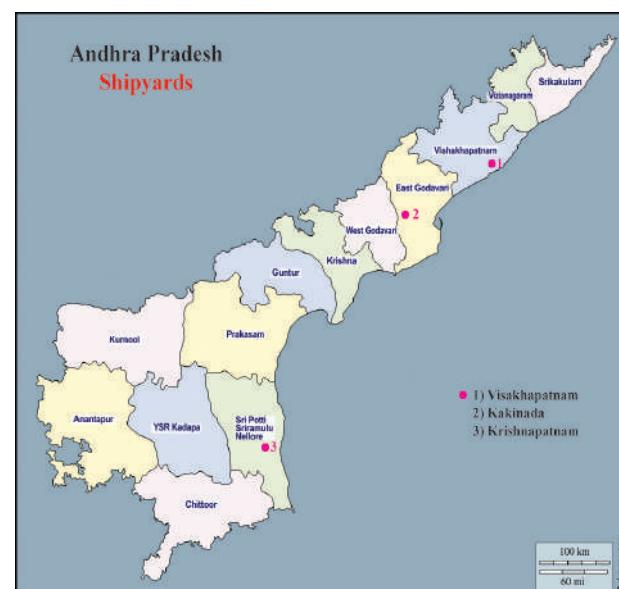
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#### Activity

Look at the map of Andhra Pradesh showing Airports and Shipyards.



Fill in the table given below

Airports in A.P (place)	Shipyards in A.P (place)



### Key words

transport, bullock cart, tractor, tonga cart, rope way, dories, trams, ship of the desert, sledge, water transport, Tribals, Islands, Goods



### What we have learnt

- The movement of people and goods from one place to another by land, water or air is called transportation.
- The means of transport used in different areas like hills, forests, deserts, water, snow etc varies.
- In rural areas there are no proper road facilities. The villagers use bullock carts, tractors, horse buggies or tangas to travel from their village to the nearest towns.
- In hilly areas people use rope way to move from one place to the other.
- The most common use of transport for carrying goods in the forests is bullock carts, elephants etc.
- Camel is the common means of transport in desert.
- Sledge carts are used in snowy areas.
- Boats are the means of water transport.



## Improve Your Learning



### I. Conceptual Understanding.

1. What are the vehicles used for transport in your village or town?
2. Have you ever travelled by bullock cart? When and where?
3. Why is the camel called the "Ship of the desert"?

### II. Questioning and Hypothesis.

4. What questions will you ask to your father about transport facilities to visit your uncles village.

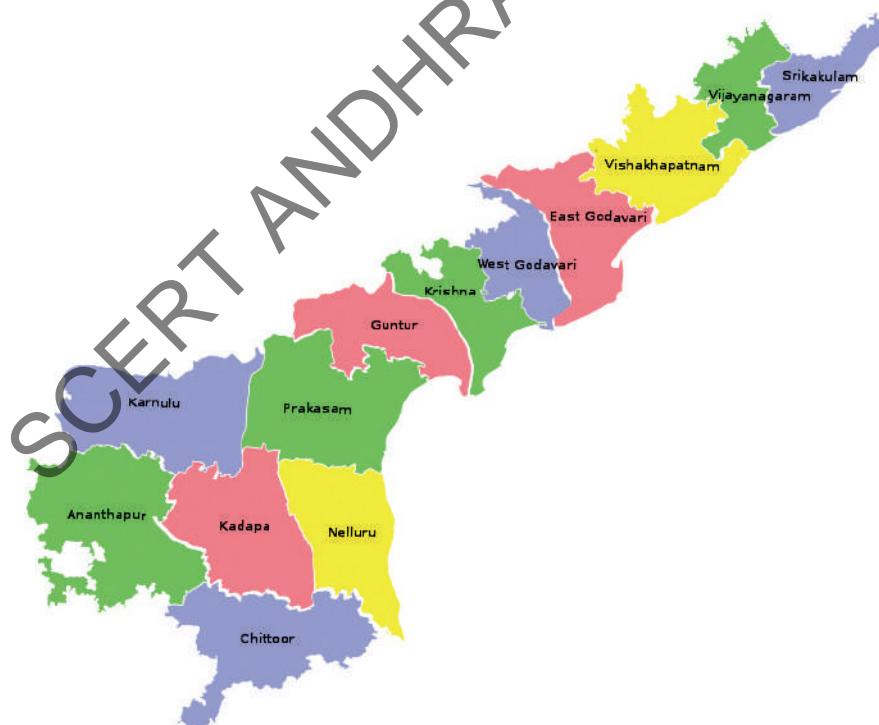
### III. Experiments and Field Observations.

5. Visit a near by bus station of your locality and collect the information about the in the number of buses and timing of their bus departure.

### IV. Information Skills and Projects.

6. Collect the pictures of different modes of transport and prepare a scrapbook.

### V. Drawing and Model making.



7. Identify any two shipyards on the map of Andhra Pradesh.

### VI. Appreciation.

8. How do you feel when you travel in a car and in a bullock cart? Do you find any difference?

Chapter  
9



# Communications



## Learning Outcomes

### Pupils will be able to:

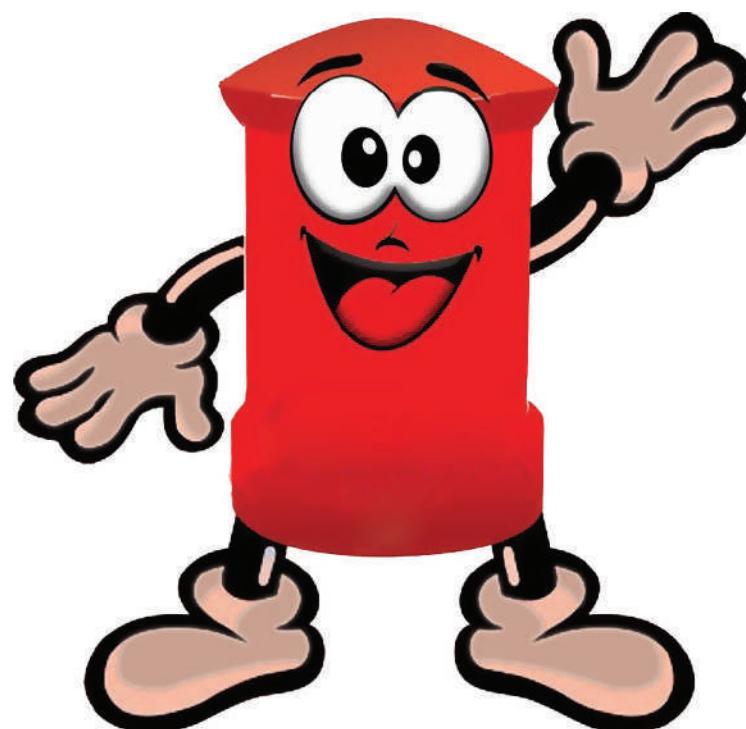
- talk about different modern forms of communication
- differentiate between the ways of communications used in the past and the present.
- understand the advantages of mass communication in the transfer of information at a global level.
- know about communication through post card, cell phone, Internet etc.,

We have learnt in the previous class about how different organisms communicate with each other. Now we will discuss modern systems of communication and their usages.

Communication is the process of expressing ideas and feelings, and the ways in which we send and receive information through messages or news. Communication is of two types.

### One-to-one communication, postal services

We use different ways to carry out one-to-one communication in our daily lives. We use postal services as a means of communication. Post cards and inland letters are some of the common mode of communication around the world.



We should write the address of the receiver on the letter. The address consists of the following information i.e., Name, Door number, Village, Mandal, District and Pincode.



### Activity

Observe the following pictures.



Post card



Inland letter

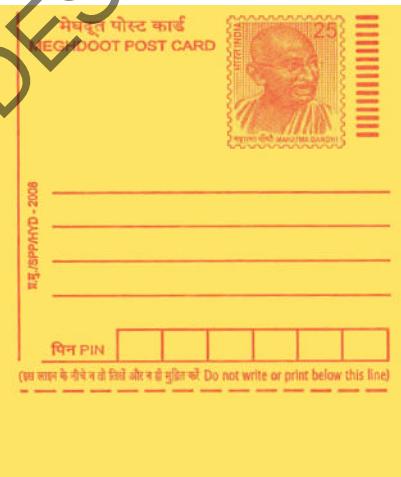


Envelope

### Do this



Write the address of your uncle with pin code.



- We learnt there are three types of letters.
- Have you written a letter to anyone?

### The journey of a letter

Do you know how our letters reach the address?

Let us see



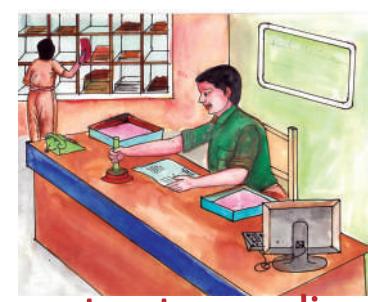
write a letter



post in the post box



post man collects the



sort out according to the address



reaches the place  
in a vehicle



post man brings the  
letter to our home



### Do You Know

#### What is PIN code?

Every post office is given a number Nationwide. This is called PIN code (Postal index number). This PIN code must be written on the address. This helps to identify the location easily.



Know the PIN code of your village.

### Activity

Let us make a toy phone

**Material required:** 2 Cool drink tins, string, iron nail, hammer.

### Method



1. Take a piece of string and the empty cans.
2. Punch a small hole at the bottom of each can with a nail and put the string to fit through.
3. Pass the edges of the string through the holes of the two cans.
4. Tie a knot at the end of the string that is inside the can.
5. Place the open end of one can over your ear and ask your partner to speak at the open end of the other can.

Now-a-days we use mobile phones or e-mails to pass on the information quickly. The different devices we use to communicate are given below.

### Mobile phones

Through mobile phones we can communicate immediately. Video and audio conference calls are also available. There are a lot of apps which render services to us. Games, banking services, booking travel tickets can be done easily through mobile phones using the apps.

- What are the other services that can be availed in a cell phone?



#### Do You Know

##### How to talk with others in a phone?

- Greet with hello or good morning.
- Give your name.
- Say please, to hold on / call back later.
- Hold a handkerchief, if you have to cough or sneeze.
- Say thank you / nice talking to you at the end of a call.
- Say sorry I cannot hear you well. (when the voice is un-clear)

### e-mail - a faster transfer of information

An e-mail is a message sent from one computer to another. E-mails can be used for sending letters, files, photos, videos, documents etc. To send E-mails, we need a computer or a laptop or a smart phone with internet connection.

### Mass Communication

- Are you reading the news paper regularly? What do you find in the news papers?
- Are you watching news on T.V? How is it useful to you?

Mass communication is the process of exchanging information through media to large segments of the population. News papers, T.V and Radio are used in mass communication.



### Let us know about them

**News paper** : It is a printed paper containing news, articles of opinion, features, and advertisements. One can get information of the entire world in the form of print.



**Radio**: It is an audio communication device. We get news, opinions, debates etc in the radio. People get hour to hour information during cyclones and floods.



**Television (T.V)**: It is an audio visual communication device. People can watch news, movies and many programmes.



Which of the above devices are available in your village?

### Advanced communication - social media

You may have seen the following symbols in your father's mobile. The symbols below indicate different social media apps. Social media is another technology of communication which helps us in creating and sharing of information, ideas etc., through internet communication and computer.



Do You Know



You have to take some precautions while using mass media. Continuous watching of mobile phones may damage our eye sight. In the same way continuous listening of music with ear phones may damage our hearing power.

### Activity

Read the given phrases and categorise them into advantages and disadvantages of modern means of communication.

- Lazy ● improves knowledge ● not spending time with parents ● useful for the studies
- improves communication skills ● less interaction with the people ● reduced reading books ● reduces proper communication ● wasting reading hours ● can gather information.

Advantages	Disadvantages



### Key words

communication, mass communication, postal services, post card, inland letter, mobile phone, SMS, e-mailing, internet, newspaper, radio television, social media, smart phone



### What we have learnt

- Communication is the process of transferring ideas and feelings from one person to another.
- Communication is of two types **1. One- to- one communication**  
**2. Mass communication.**
- Mobile phone is a device which is used to communicate quickly with each other.
- e-mailing is one of the fastest means of transfer of information now-a-days.
- Mass communication is the process of exchanging information through mass media to a large segment of the population.
- Newspaper, Radio, Television are the main modes of mass communication.



### Improve Your Learning

#### I. Conceptual Understanding

- What is the means of communication? How many types of communication are there?
- Mention the ways for a speedy communication.
- What are the precautions you should take in the use of mass media?

#### II. Questioning and Hypothesis

- What questions would you ask the post master about the postal services?

#### III. Experiments and Field Observations

- Visit a nearby post office and observe its services in and write a brief note?

#### IV. Information Skills and Projects

- Collect information about the uses of cell phones and display it in your class room.

#### V. Drawing and Model making

- Make a cellphone model using clay or cardboard.

#### VI. Appreciation

- Write a letter to your friend requesting him to attend a function in your house.

Chapter  
10



## Let Us Visit



### Learning Outcomes

**Pupils will be able to:**

- talk about local festivals and jataras.
- identify the historical places of Andhra Pradesh.
- give examples of famous historical and tourism places.
- locate the historical places of Andhra Pradesh in the map.
- appreciate the cultural heritage of Andhra Pradesh.

Mutyalu lives in Bandapalli. She went to Paderu on the occasion of Ugadi to her grandma's house along with her parents. She wore a new dress and ate Ugadi pachadi and sweets which were prepared by her grandmother. She spent the whole day happily with her friends, and relatives. She received blessings from her elders.

Next day she returned to her village. While leaving, her Grandmother invited her to visit again in the month of May, at the time of the Jatara.



What do you do during festival days?  
How do you feel?

We celebrate festivals in our house as well as in schools. Festivals are of different types. They are National festivals and religious festivals.





Republic Day and Independence Day are national festivals. Eruvaka is a harvesting festival. Diwali, Christmas, Ramzan are the religious festivals.



Name some National festivals that you celebrate in your school.

- Name some festivals that are common in your locality.
- Name some religious festivals which are familiar to you.

Hindus celebrate Ramanavami in the month of March or April. It is the birthday of Sri Rama. People offer prayers to Rama and make a jaggery syrup called 'Panakam'.



Christians celebrate Christmas on the 25<sup>th</sup> of December every year. It is the birthday of Jesus Christ. It is believed that Santa Claus gives gifts and sweets to children.

Muslims celebrate Id - ul - Fitar. People assemble at a Mosque to pray. They give gifts and alms to the poor. They greet each other, saying Id Mubarak.



Gurunanak jayanthi is an important festival of the Sikhs. They go to the Gurudwara and pray. It is the birthday of Gurunanak who is popularly known as Guruparab.

Buddha's Jayanthi is an important festival of the Buddhists. It is popularly known as 'Buddha purnima'.



Which is your favourite festival? Why?

People celebrate festivals by serving the poor and the needy. It gives joy and happiness. **“Service to man is service to God.”**

During summer vacation Mutyalu went to her grandmother's house again. They went to 'Modakondamma' Jatara at Madugula village near Paderu. Mutyalu had many doubts about this Jatara. She asked her Mama.



**Mutyalu** : Mama! What is a Jatara?

**Mama** : Jatara means a seasonal local temple festival.

**Mutyalu** : What is the speciality of this jatara?

**Mama** : People pray the goddess of Modakondamma. It is one of the biggest jatara celebrated by the tribal people of North Andhra. It is a three day celebration and devotees visit the temple with family and friends. They cook food in the temple premises itself and offer the deity. People get together in the Jataras for prayers and recreation.



### Activity

Is there any Jatara celebration in your village/ district? Discuss with your friends.  
Fill in the table.

Name of the village	
Name of the Jatara	
Name of the Goddess	
Date of the Jatara	
How jatara is celebrated	

### Our village our culture

Mutyalu asked her uncle why their village was named Bandapalli? He said, that there is a big rock (banda)near the village. People believed that the Deity or Goddess visited the rock during night. They believed that it was a sacred rock and the village is named after the rock (banda) Bandapalli. This rock was their heritage and the festival was a tradition. Mutyalu and her Mama made a trip to visit famous places in our state of Andhra Pradesh. Please come, let us visit along.

## Historical and tourism places in Andhra Pradesh

### Anantapur District - Lepakshi

The Veerabhadra temple is located at Lepakshi in Anantapur district. The temple was built in 1530 by the brothers Virupannand and Veeranna who were Governors of the Vijayanagar Empire. The world famous "Nandi" idol is situated here. The Nandi is called Lepakshi Basavanna.



### YSR Kadapa District - Siddavatam Fort

Siddavatam Fort is located on the banks of the river Penna. The fort was constructed in 1303 AD in 30-acres of land. The two gateways stand for the architectural splendour. The fort is considered as a gateway to Dakshina Kasi.

### Chittoor District- Chandragiri Fort

Chandragiri fort was built by the Yadavanyaks in the 11th century, under the control of the Vijayanagara rulers. Inside the fort there are the Raja Mahal and the Rani Mahal which are well maintained till date, for more than 300 years.



### Kurnool District- Rollapadu

Rollapadu Wild life Sanctuary is a bird sanctuary, It is a habitat for the great Indian bustard (Battameka pitta).

### Sri Potti Sri Ramulu Nellore District - Satish Dhawan space center of Indian Space Research Organisation (I.S.R.O)

This rocket launching centre is located at Sriharikota near Pulicat lake. Artificial satellites are sent into space by using rockets from here.

Nelapattu Flamingo Bird Sanctuary is located at pulicat lake. Flamingo festival is held every year.



### Prakasam District - Motupalli port

Motupalli was a famous sea port during Kakatiya period. Marco Polo was a Portuguese navigator, who visited the port during the 11<sup>th</sup> century. The goods like sandal, ivory, pearls, metals, silk, pepper etc., were exported throughout the world from this port.

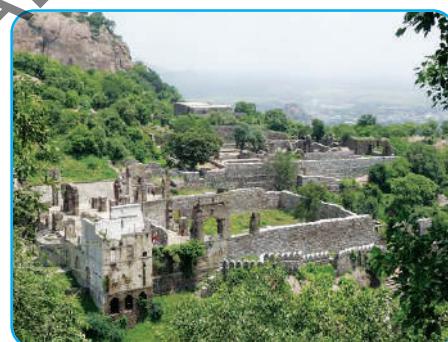


### Guntur District - Amaravati Stupa

The great Amaravati stupa is the ruined Buddhist monument. Amaravathi and Dhranikota both were the capital cities of Andhra Sathavahanas. They followed Buddhism and built Stupas.

### Krishna District - Kondapalli Fort

Kondapalli Fort is located near Vajayawada, Krishna district. This fort was constructed by Musunuri Nayaks. After the fall of the Musunuri Nayaks in 1370, the Reddys of Kondaveedu dynasty occupied the fort. The village is famous for Kondapalli toys.



### West Godavari District - Kolleru lake

The Kolleru lake is one of the largest fresh water lakes in India. It lies between Godavari and Krishna rivers. Atapaka bird sanctuary is located in Kolleru lake. It covers 673 square kilometers. The sanctuary protects many migrated birds such as Pelicans, Siberian cranes, Paintedstorks etc.

### East Godavari District - Coringa

Coringa Wildlife Sanctuary is situated in the East Godavari district. It is the second largest stretch of mangrove forests in India. It has different mangrove tree species and more than 120 bird species. In a mangrove ecosystem the water bodies of the ocean/sea and the river meet together at a point.



www.apteachers.in  
**Visakhapatnam District - Borra caves**



The Borra Caves are located on the East Coast of India, in the Ananthagiri hills of the Araku Valley, Visakhapatnam district. These caves, are one of the largest and deepest caves with an elevation of about 705 m. and depth of 80 m. Borra caves were formed as a result of the Gosthani River on the limestone deposits.

**Vizianagaram District - Bobbili Fort**

The Bobbili Fort is located in the Vizianagaram district. It was built during the middle of the 19th century in Bobbili. It has a historical link to the nearby mud fort of the same name which was destroyed during the Bobbili war in 1757 in a fight between the Rajas of Bobbili and the neighbouring Maharaja of Vizianagaram. The Famous Bobbili Veena is made by Sarwasiddi craftsmen from Gollapalli.



**Srikakulam District - Telineelapuram**

Telineelapuram and Telukunchi Bird Sanctuaries are located in Srikakulam district. Every year, over 3,000 pelicans and painted storks visit from Siberia to these villages during September and stay until March. We feel proud of our glorious culture and heritage.

We must preserve our great culture and appreciate its importance.



Key words

jatara, culture, historical, deity, harvest, festival, port



What we have learnt

- We celebrate National, Regional and Local Festivals.
- Lepakshi is an example of Vizianagara architecture style.
- Siddavatam, Udayagiri, Bobbili, Chandragiri and Kondapalli forts are our historical glorious forts.
- Rollapadu, Telineelapuram, Telukunchi, Kolleru are our bird sanctuaries.
- The Amaravati Stupa is a symbol of our religious culture.



## Improve Your Learning



### I. Conceptual Understanding.

1. Name some festivals that you celebrate in your village.
2. Name the national festivals you celebrate in your school.
3. What places would you like to visit ?

### II. Questioning and Hypothesis.

4. What questions will you ask your teacher to know about the purpose of a bird sanctuary?

### III. Experiments and Field Observations.

5. Visit the holy places in your village. Write your findings.

### IV. Information Skills and Projects.

6. Prepare a list of historical places in your surrounding villages/mandal.  
(Ask your parents for information)

### V. Drawing and Model making.

7. Draw on a chart representing festivals like a lamp for Diwali, a tree for Christmas and a half moon for Ramzan.

### VI. Appreciation.

8. Have you ever seen a Jatara? What makes you happy in the event ?

Chapter  
11



# Where Are We?



## Learning Outcomes

Pupils will be able to:

- locate the address of their house.
- understand the maps of the village, mandal, district, state, country and their boundaries
- identify the continents and oceans on the globe
- understand the geographical structure of the earth and its diversity.

Let us read the phone conversation between Latha and Charitha



ANDHRA PRADESH  
Hello Charitha!  
Please give me  
your address. I want to  
send a gift for your  
birthday?

Sure! Thank you so much Latha.  
This is my address. D.No:18-1-453,  
Pedda veedhi, Donubai (village)  
Seetampeta (mandal), Srikakulam  
District, Andhra Pradesh, INDIA,  
Pin Code:532460





Do you know the postal address of your friend? Let's discuss.

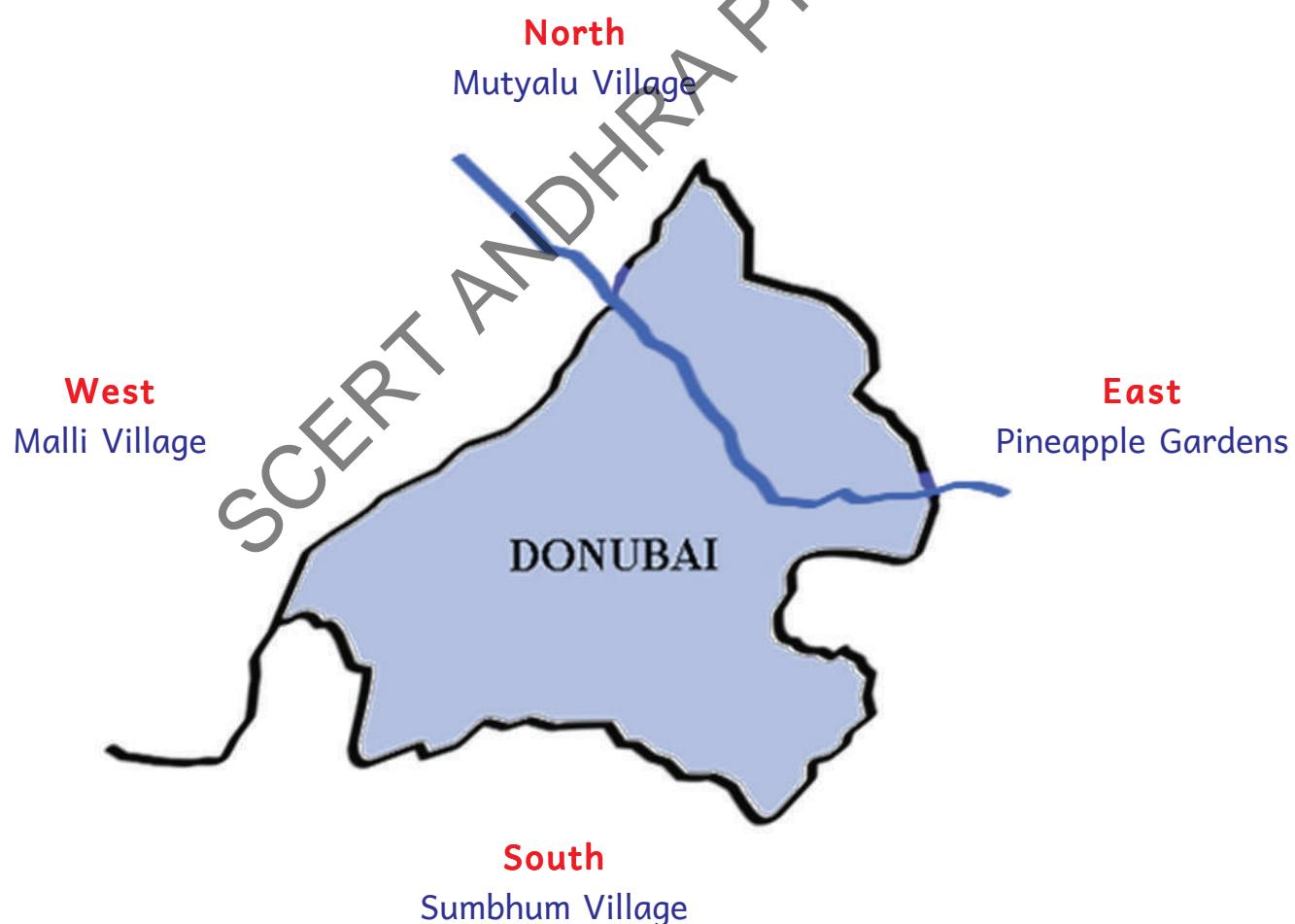
**Let us Do**

Prepare a list of addresses of your classmates with pin code

**Village**

We live in different places depending on our needs and demands. People living together in a particular place is called a village. A village constitutes a group of people settled together in a small area.

**You just remember the boundaries of your village. Now let us see the map of Charita's village Donubai**





I am Charitha. I live in Donubai village of Seethampeta mandal, Srikakulam district. The boundaries of my village are hills and pineapple gardens located to the East, Malli village to the West, and the Muthyalu village to the North and Sambham village to the South.

**Think and Discuss**



What is the name of your village?

What are the boundaries to your village?

East ..... West .....

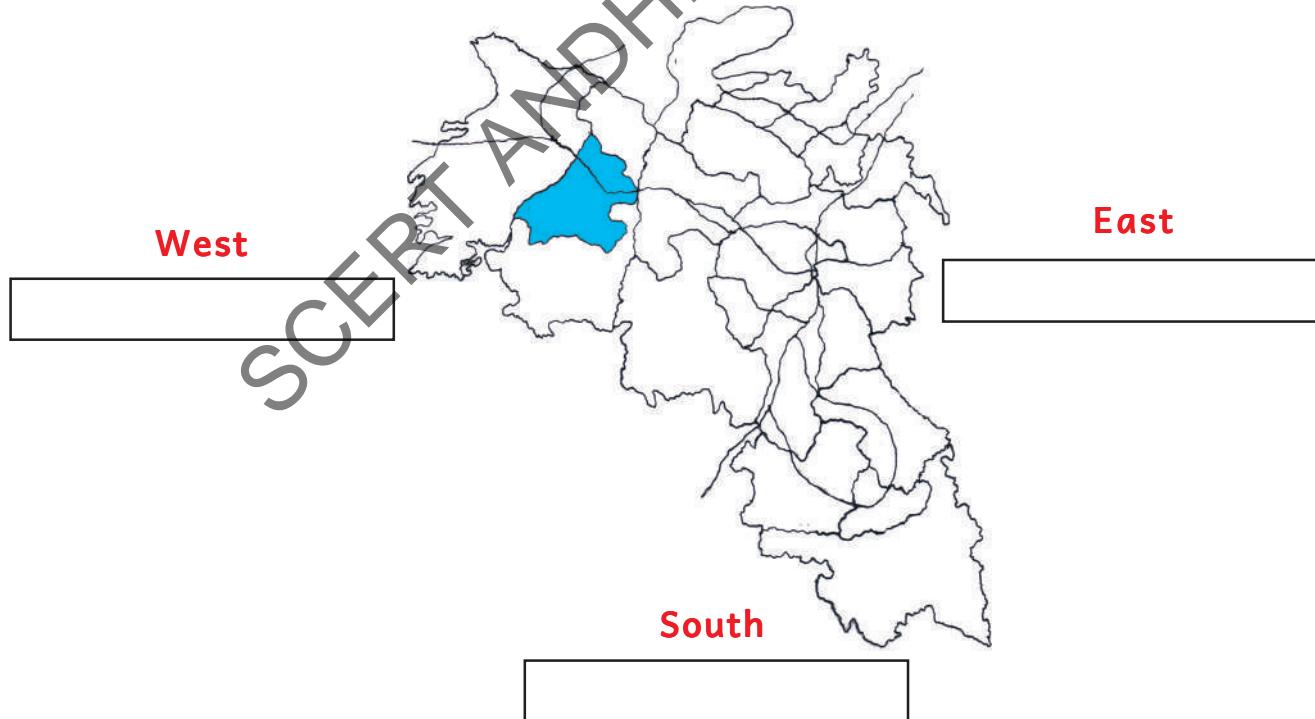
North ..... South .....

Donubai village is located in the Seetampeta mandal. A mandal consists of a group of villages.

North



Seethampeta Mandal Map



The boundaries of Seethampeta mandal are - Kothuru mandal to the East, Palakonda mandal to the West, Bhamini mandal to the North and Burja mandal to the South.

**Think and Discuss**



What is the name of your mandal?

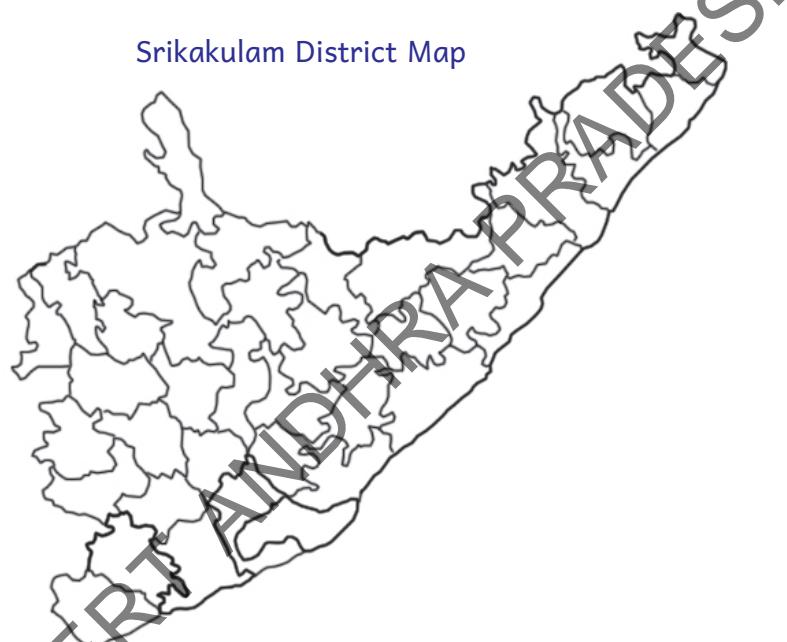
What are the boundaries of your mandal?

East ..... West .....

North ..... South .....

Seetampeta Mandal is in the district of Srikakulam. As we have villages in a mandal, so too there are many mandals in a district.

Srikakulam District Map



The boundaries of Srikakulam district are - Bay of Bengal to the East, Vizianagaram district to the West, Odisha to the North and Vizianagaram district to the South.

**Think and Discuss**



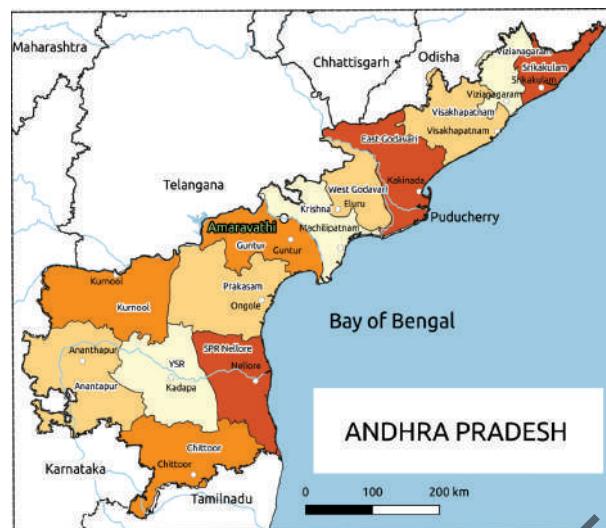
What is the name of your district?

What are the boundaries of your district?

East ..... West .....

North ..... South .....

Srikakulam district is located in the state of Andhra Pradesh.



Andhra Pradesh is our State. Amaravati is the capital city of Andhra Pradesh. The boundaries of Andhra Pradesh are - Bay of Bengal to the East, Karnataka state to the West, Odisha, Telangana and Chhattisgarh states to the North and Tamilnadu to the south of the state. The state of Andhra Pradesh has 13 districts. It occupies the seventh place in the country, in terms of area.

Some villages together form a mandal. Mandals together form a district and some districts together form a State.



**Do You Know**

**Districts in Andhra Pradesh and their Headquarters**

Srikakulam	Srikakulam
Vizianagaram	Vizianagaram
Visakhapatnam	Visakhapatnam
East Godavari	Kakinada
West Godavari	Eluru
Krishna	Machilipatnam
Guntur	Guntur
Prakasam	Ongole
SPSR Nellore	Nellore
Chittoor	Chittoor
YSR Kadapa	Kadapa
Anantapur	Anantapur
Kurnool	Kurnool

Some states together form a country. India is our country. India's capital city is New Delhi. Geographically India is comprised into 28 states and 8 union territories. India occupies the 7th place in terms of area and second place in terms of population in the world.



### Think and Discuss



What is the name of your country?  
What are the boundaries of your country?

East ..... West .....

North ..... South .....

Some Countries together form a continent.

The Earth is covered with three parts of water and one part of land. The land portion on the Earth is divided into seven continents. The earth, together with all of its continents makes the world.



### Do You Know

- |                   |                    |
|-------------------|--------------------|
| Andhra Pradesh    | Amaravati          |
| Arunachal Pradesh | Itanagar           |
| Assam             | Dispur             |
| Bihar             | Patna              |
| Chhattisgarh      | Raipur             |
| Goa               | Panaji             |
| Gujarat           | Gandhinagar        |
| Haryana           | Chandigarh         |
| Himachal Pradesh  | Shimla             |
| Jharkhand         | Ranchi             |
| Karnataka         | Bengaluru          |
| Kerala            | Thiruvananthapuram |
| Madhya Pradesh    | Bhopal             |
| Maharashtra       | Mumbai             |
| Manipur           | Imphal             |
| Meghalaya         | Shillong           |
| Mizoram           | Aizawl             |
| Nagaland          | Kohima             |
| Odisha            | Bhubaneswar        |
| Punjab            | Chandigarh         |
| Rajasthan         | Jaipur             |
| Sikkim            | Gangtok            |
| Tamil Nadu        | Chennai            |
| Telangana         | Hyderabad          |
| Tripura           | Agartala           |
| Uttar Pradesh     | Lucknow            |
| Uttarakhand       | Dehradun           |
| West Bengal       | Kolkata            |



Asia, Africa, Australia, Europe, North America, South America and Antarctica are the seven continents of the Earth.

**Look at the map and observe the sizes. Write the answers with the help of your teacher**

Which is the largest continent? .....

Which is the smallest continent? .....



**Do You Know**

South America is known as the Bird's continent.

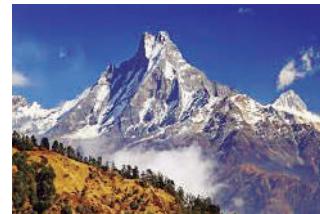


The water portion on the Earth is divided into five oceans. They are Pacific Ocean, Atlantic Ocean, Indian Ocean, Arctic Ocean and Antarctic Ocean. The Pacific Ocean is the deepest ocean.

The Earth is covered with dense forests like the Amazon, huge mountains like the Himalayas, vast deserts like the Sahara and deep oceans like the Pacific.



Amazon forest



Himalayan mountain

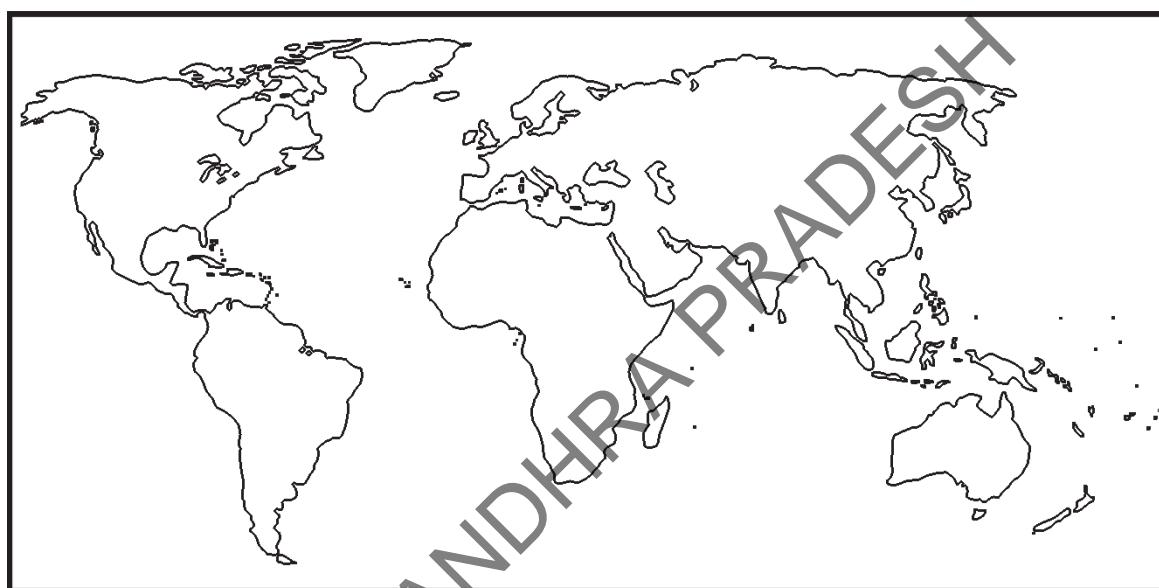


Sahara desert



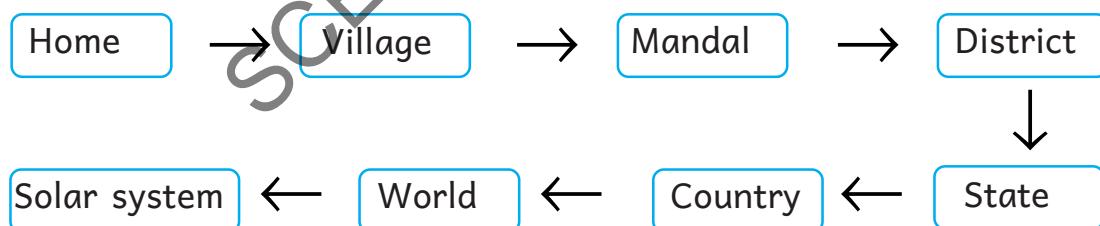
Pacific ocean

Colour and label, the Continents [brown colour] and Oceans [blue colour] in the given map



The livelihood of the people across the world depends on the climatic conditions of the Earth.

**Let us see the geographical structure of the earth in a flow chart**



**Fill in the table given below.**

My Home

.....

My Village

.....

My Mandal

.....

My District

.....

My State

.....

My Country

.....

Charitha made a call to Reshma who lives in America to greet her on her birthday.



Charitha : Hi Reshma ! Happy birthday. What are you doing?

Reshma : Thank you Reshma. We are sitting under the moon light and talking.

Charitha : Moon light ! Is it night for you there?

### Think and Discuss



Why is there a difference in the day and night between India and America?

The Earth revolves around the sun and also rotates on its axis.

The movement of the earth on its axis is called Rotation. It takes twenty four hours to rotate on its axis. The movement of the earth around the sun is called Revolution. It takes  $365\frac{1}{4}$  days to move around the sun. The rotation of the earth causes day and night. The Earth moves around the Sun. While moving, the part of the Earth that faces the Sun has day and the part away from the Sun has night.

So, the place where Charitha lives is day and the place where Reshma lives is night.



While watching the moon Reshma found the shape of the Moon to be like a bowl. She also found that the stars are in groups with different patterns.

She asked her uncle, When will the moon look round?

He suggested her to watch and draw the shape of the moon for 15 days.

Her observations are as follows.



At the time of her observations she also found some patterns of the stars.



### Do You Know

A group of stars that appear to form a pattern or picture is called a constellation.



Reshma sent her drawing to her cousin Charita and asked her to observe the moon. Charita's observations are as follows...

They found that the shape of the moon was changing day by day. These changes of the moon are known as the phases of the moon. If at night the moon is completely round and bright, that is the full moon day (Pournami) and the night where we do not see the moon at all is the no moon day (Amavasya).





### Key words

postal address, pincode,  
boundaries, continent,  
climate



### What we have learnt

- People live in different areas depending on their needs and demands.
- The Earth is covered with three parts of water and one part of land.
- The land portion on the Earth is divided into seven continents.
- Asia, Africa, Australia, Europe, North America, South America and Antarctica are the seven continents of the Earth.
- The water portion on the Earth is divided into five oceans.
- They are Pacific Ocean, Atlantic Ocean, Indian Ocean, Arctic Ocean and Antarctic Ocean.
- The two movements of the Earth are rotation and revolution.



## Improve Your Learning

### I. Conceptual Understanding.

1. How many continents are there on the Earth? What are they?
2. Name the oceans on the Earth?
3. What is rotation? What is revolution?

### II. Questioning and Hypothesis.

4. Aruna wants to visit Vijay's home. What questions should she ask to reach his home?

### III. Experiments and Field Observations.

5. Visit your village gram panchayat office and observe the functions and write a brief note.

### IV. Information Skills and Projects.

6. Draw a map from your home to the school.

### V. Drawing and Model making.

7. Draw the oceans and continents on a chart and colour them.

### VI. Appreciation.

8. Write two slogans to save the Earth.

1. Siblings = brothers and sisters in a family (తోఱుట్టువులు)
2. Nuclear family = Family with mother, father and children (చిన్న కుటుంబం)
3. Joint family = Family with grandparents, parents, uncles, aunts and cousins. (ఉపాంశు కుటుంబం)
4. Single parent family = Family with mother or father and children (అమ్మ లేదా నాన్న మాత్రమే ఉన్న కుటుంబం)
5. Features = characteristics (లక్షణాలు)
6. Swampy place = Wet land or marshy (చిత్తడినేల)
7. Aquatic plants = plants living in water (సీటి మొక్కలు)
8. Ingredients = substances used to make a particular dish (దినుసులు)
9. Photosynthesis = process of preparing food in plants (కిరణజన్య సంచోదక్రియ)
10. Secretion = substances that are produced and discharged from the cell (ప్రాపం)
11. Nocturnal = active at night. (నిశావరులు)
12. Hygiene = cleanliness (పరిషుభ్రత)
13. Disability = a physical or mental condition that limits a persons movement. (శారీరక లేదా మానసిక లోపం)
14. Recipe = directions for cooking (వంటకం తయారీ విధానం)
15. Habits = practice or routine (అలవాట్లు)
16. Process = series of action (విధానం)
17. Sprinkle = Applying water in a controlled manner.  
(చల్లుట)
18. Chlorination = the process of adding chlorine compounds to water to kill germs (సీటిలో సూక్ష్మజీవులను చంపుటకు క్లోరిన్ కలుపు)
19. Ground water = The water present beneath earth's surface.  
(భూగర్భజలాలు)

		<a href="http://www.apteachers.in">www.apteachers.in</a>
20. Filtration	=	a process used to separate solids from liquids or gases. (వడపోయట)
21. Decantation	=	process to separate mixtures from precipitate. (పేరుపరచుట)
22. Chemical	=	a distinct compound or substance (రసాయనం)
23. Evaporation	=	the process of turning from liquid into water. (అవిరవడం)
24. Institution	=	An organization (సంస్థ)
25. Service	=	To offer a work (సేవ)
26. Florist	=	One who sells flowers (పూలు అమ్మేవాడు)
27. Green grocer	=	One who sells vegetables (కూరగాయలు అమ్మేవాడు)
28. Rural transport	=	Transport in villages (గ్రాహల్లో రవాణా)
29. Bullock cart	=	the cart pulled by bullocks (ఎడ్డ బండి)
30. Tonga cart	=	the cart pulled by horse (గుర్రపు బండి)
31. Transportation	=	arrangement to move people for one place to another (రవాణా)
32. Sledges	=	carts pulled by dogs on the snow (మంచు ప్రదేశాల్లో కుక్కలు లాగే బండ్లు)
33. Internet	=	networks of computers around the globe (అంతర్జాలం)
34. Historical place	=	a place represents past culture, tradition, monuments etc. (చారిత్రక ప్రదేశం)
35. Fort	=	a place where a king lives and rules (కోటు)
36. Sacred Place	=	holy place of a particular religion (పవిత్రమైన స్థలం)
37. Port	=	the place where ships load and unload their cargo. (ఖడలు నిలుపు స్థలం)
38. Mangroves	=	shrubs or small trees that grow in coastal saline or brackish water. (మడ అడవులు)
39. Boundaries	=	dividing lines (సరిహద్దులు)
40. Continent	=	one are several land masses on the earth. (భండం)
41. Perseverance	=	continued effort to do (పట్టుదల)
42. Tankbunds	=	enclosure that surrounds a tank (కరక్కు)