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THE GOVERNMENT OF ANDHRA PRADESH, HYDERABAD



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WE - OUR ENVIRONMENT

CLASS - IV

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HYDERABAD

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## Children! use this book in the following way

- ◆ This Book is written for you. Read all the lessons by your own.
- ◆ Do the things as told by your teacher.
- ◆ You have to work together with your friends to understand the concepts of the lessons. For this, discuss and work in groups.
- ◆ The lessons contain pictures. Observe them carefully. Read the questions given below the pictures. Discuss with your friends / teachers and know the answers.
- ◆ 'Discuss in Groups' is present in all the lessons. Wherever you find this, form groups of four or five students, discuss and find out the answers.
- ◆ When you find 'Collect', visit the persons and places and collect the required information. Take the help of your teacher if required.
- ◆ You find 'Do This' in some lessons. They are experiments. You should do these. Note down the results. Discuss in the class. Ask your teacher and clarify your doubts.
- ◆ You require the maps of Andhra Pradesh and its Districts and Mandals. Collect these from your teacher. Use the bigger maps available at your school.
- ◆ Answer the questions given under the title 'What have we learnt' on your own. Do not refer the guides. Show the answers to your teachers. Do not purchase or use guides. You can never think on your own when you use the guides.
- ◆ Read all the sentences under the title 'Can I do this?' If you can do, put a '✓' mark. If you cannot do ask your teacher and get it taught again.
- ◆ During the class while you are working in groups or participating in any activity, if you feel you have not understood, ask your teachers and clarify your doubts.

## We - Our Environment - Our Health

- ◆ *Let us all plant a tree on the day we like the most and grow it.*
- ◆ *Let us protect it and provide fence around it.*
- ◆ *Water it every day. Let us remove all the dust and trash once in a week. Observe the height of the tree, how it is growing and Tabulate the information.*
- ◆ *After one year, Let us celebrate its birthday.*
- ◆ *Let us reduce the usage of plastics in our house, street and village.*
- ◆ *Instead of plastic, let us use the plates, glasses, bowls made up of metals.*
- ◆ *Let us not throw the garbage on the roads. Separate the wet and dry waste and dump it in the dustbins provided by the Municipality.*
- ◆ *Let us do not waste water. Let us wash our hands and legs near the plants.*
- ◆ *Store the water in the buckets and use it.*
- ◆ *Let us save the Electricity. Saving Electricity is generating Electricity.*
- ◆ *Let us not keep open the doors of Refrigerators for more time. Do not use the fans unnecessarily, use the lifts to climb the stairs, switch on lights when going out, switch on T.V. when it is not being watched etc., Due to these activities the Electricity would be wasted.*
- ◆ *Let us time, inform the Gram Panchayat or Municipality, when the street lights are switched on during the day.*
- ◆ *Let us wash our hands and legs compulsorily after playing and before & after meals.*
- ◆ *Let us reduce the eating of Burgers, Pizzas, Ice-creams and Chocolates.*
- ◆ *Let us compulsorily eat fruits, eggs, leafy vegetables, Vegetables, pulses and drink milk.*
- ◆ *Let us eat Mid-day-meals together. If it is found less in quality, talk to the Headmaster.*
- ◆ *Let us play compulsorily from 4 O'Clock to 6 O'Clock in the evening, after the school hours.*

# ENVIRONMENTAL STUDIES

## CLASS - IV

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*ALL FOR ONE  
AND ONE FOR ALL*

*LESS POLLUTION  
IS THE BEST SOLUTION*

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## FOREWORD

All children should have an understanding of their society and environment. For this, they have to critically examine the surroundings. They should be able to understand and question the incidents that happen in their society. They should be able to mould themselves by understanding their near and distant surroundings. This would become possible by learning from the environment for the environment. Nowadays the most important thing is to develop an attitude to protect and give equal importance to plants, birds, animals etc, with Human beings. The aim of Environmental studies is to achieve these required skills, abilities and attitudes. The State Council for Educational Research and Training is developing Text Books on Environmental Studies by the title "We-Our Environment" at Primary level. The Class-III text book has been implemented from the academic year 2012-13. As an extension to this, the class 4 and 5 text books will come into practice from the Academic year 2013-14.

According to the needs of our state, the syllabus and text books are prepared by considering the syllabus and textual themes of National Council for Educational Research and Training (N.C.E.R.T.). The new textbooks are prepared according to the academic standards that have to be achieved as prescribed by the Right to Compulsory and free Education Act, 2009. (R.T.E.-2009). The lessons are written on the themes - family, games, animals, plants, society, shelters, food, travel and history. Each lesson is written with interesting situations, incidents of daily life, thought provoking and reflecting activities and explorations. Without giving direct information in the lessons to the children, more importance is given to make children collect information, do the things by themselves, observe pictures and understand different issues. To extend the knowledge of certain things, additional information is given under the caption. 'Do you know?' For children's better learning, individual, group and whole class activities projects and Experiments are incorporated. For the children, to estimate their learning, Exercises are included at the end of each lesson under the heading 'What have we learnt?' These are given according to the academic standards. The exercise 'Can I do this?' is given at the end of each lesson for the self-evaluation of children. All lessons contain photos and pictures which make the children to feel the real experiences of the concepts.

Instead of providing direct knowledge to the children, the text book has given emphasis to construction of knowledge. Keeping in view this the teachers have to construct knowledge by conducting activities. The exercises in the text book make the children interact with the peer group, society and material. So, conducting exercises is a must. To meet this, teachers have to prepare the required Teaching - Learning material and strategies. The text book has to be considered as a helping guide. Teachers have to make the teaching meaningful by adding modern technology to the experiences of the children and use the local environment as an important resource. Great effort has to be done to develop processing skills and positive attitude towards the nature among the children.

Congratulations to the teachers, lecturers, subject experts, artists, D.T.P. designers and members of text book development committee on preparing this text book. Special thanks to the subject experts and editorial board for their guidance in bringing out the book beautiful and attractive. We hope that this text book will definitely inculcate values, scientific temper, required attitudes, awareness towards Biodiversity and interest among the children.

Date : 30-11-2012  
Place : Hyderabad

**Director,**  
S.C.E.R.T,  
A.P., Hyderabad

## OUR NATIONAL ANTHEM

- Rabindranath Tagore

Jana gana mana adhinayaka Jaya he  
Bharatha bhagya-vidhata  
Punjab Sindhu Gujaratha Maratha  
Dravida Utkala Banga.  
Vindhya Himachala Jamuna Ganga  
Uchchala Jaladhi taranga,  
Tava shubha name jage  
Tava shubha asisha mage  
Gahe tava jaya gatha  
Jana gana mangala-dayaka jaya he,  
Bharatha bhagya –vidhatha,  
Jaya he, jaya he, jaya he,  
Jaya jaya jaya jaya he

### PLEDGE

“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.”

## Suggestions to the Teachers

- ◆ Read the expected academic standards, foreword and index compulsorily before using the text book.
- ◆ 6 periods a week and 220 periods in an year will be allotted to the teaching of environmental studies.
- ◆ There are 12 lessons on the Whole. Lessons are framed in such a way that, they can be taught in 165 periods conveniently.
- ◆ Each lesson requires 14 periods on an average. Divide the periods into 10 to 18 periods per lesson.
- ◆ As activities, project works, collections are part of the lessons, allot more time to these activities when compared to the explanation of concepts. Giving suggestions to children, involving them in the group activities, making them to exhibit their preparations, correcting the mistakes should be done during the class hours. Suggest the children to take up the project works, collection, explorations after the school hours.
- ◆ Children should be given a clear understanding of exercises. They should be encouraged to write the answers on their own. Do not allow the students to write the answers from the guides.
- ◆ Put thought provoking questions to the children on situations, real life experiences and pictures. Additional questions related to the concepts also should be asked. This activity should be conducted whole class involving
- ◆ The activity 'Discuss in Groups' is given in between the lessons. Suggestions should be given to the children before the commencement of activity. Teachers should see that the children discuss the questions among themselves and write the answers. The required reference books should be supplied to the children. Make the children exhibit their answers in groups. Mistakes should be corrected.
- ◆ The activity 'Do This' is included in the lessons. These are experiments. Inform them, how to carry out the experiment and what material is required. Supervise the children and ask them to explain their experiment.
- ◆ The activity 'Collect' is given in the lessons. Children have to go to the society and their surroundings and collect the information. Teacher has to guide them in what questions to be asked and how to collect the information. Make them to prepare the required information tables in the class itself. Ask them to exhibit the information collected in the class.
- ◆ 'Key words' are given after every lesson. Allot a separate period and test the understanding of each word by all students.
- ◆ At the end of each lesson Exercises are given under the title 'What have we learnt?' See that, the children do all the competency based activities and questions on their own. Allot 6 periods for the 6 academic standards at an average of 1 period for one standard.
- ◆ The exercise 'Can I do this?' at the end of each lesson is meant for self evaluation. Try to know whether all the children are able to do each and every item. Go to the next lesson after 80% of the children are able to do these items.

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## Academic Standards that have to be achieved by the children through this text book

### 1. Conceptual understanding

- Children understand the reasons for the changes in the families, profits and losses using domestic appliances, rules and their necessity, sports man spirit, life styles of animals - their classification, food, healthy habits, construction of house, need for sanitation, construction material, Different Public Institutions and their uses, Right to Information, History of Nation, Culture etc., Children give reasons, examples, Identify the similarities and differences and do the classification.

### 2. Questioning - hypothesis

- Children will be able to ask questions about collection of information, imagine the process of doing experiments. For Ex: questioning sportsmen, guessing the changes in the games, food wastage, information on animals. They think and identify the facts by reasoning the unknown things and different problems.

### 3. Experiments - field observations

- Children will be able to do the experiments on plants and food material. Collect the required materials for the experiment. After doing the experiments, children compare their hypothesis and analyses the reasons.
- Children will be able to explain the process of experiment. They understand playing games, about agricultural fields, observing facilities of the houses, food habits of birds etc., by field observations. They tabulate and explain the observed information.

### 4. Information skills, projects

- Children collect the information about domestic appliances, sports men, details of animals, garbage and trash collected at the houses, government officers and their duties etc.,
- Tabulate the collected information. Analyses and explain the collected information. Come to conclusions.

### 5. Communication through mapping skills, drawing pictures, making models

- Children will be able to draw the maps of their village, mandal, district and state. Point out the mandals on district map and district on state map.
- Point out the asked region on the maps and tell about the boundaries. Mark out the Routes on the basis of Maps.
- Children will be able to explain their understanding of different concepts by drawing pictures and making models. Ex: Models of house, train, bus etc.,

### 6. Appreciation - Values, Creating awareness towards Bio-diversity

- Children show kindness towards birds and animals. Develop awareness towards environment and bio-diversity. Understand the preventive measures to protect water, plants and trees. Develop good habits related to bio-diversity.
- Understand and implement the measures to control the pollution. Implement the Rules and Regulations.
- Practise sports man spirit. Develop appreciable attitudes like working together, honouring other's views, questioning freely and helping the needy.
- Identify the goodness of others and appreciate them.

# 1



## CHANGING FAMILY STRUCTURE

Generally Indian families comprise of mother, father, grandfather, grandmother and children. Some families called joint families comprise of father's younger brother, his wife (aunt), his elder brother and wife (aunt) along with mother, father, grandparents and children. But nowadays, the structure of such families is changing. How were the families of your grandparents in their childhood can you guess? How are the present day families? Do all the family members always stay together? Do new members join the family? Think... when and why changes take place in a family?

### 1.1. A new arrival

Vandana is very excited. Her mother gave birth to a baby girl. She has a new baby sister.





### Observe the picture and say:

- ◆ Who were the members of Vandana's family before the arrival of her baby sister?
- ◆ Well! A new born baby has come to Vandana's home; what changes might have occurred in their home after the birth of the baby? Many changes occur when new members join the family. Discuss with your friends and write in your note book the changes that have take place.

### Discuss in groups



- ◆ How will Vandana spend her day now?
- ◆ What kind of work her mother might have done before?
- ◆ What new work will her mother do now?
- ◆ What changes will come in the work of family members on the arrival of a new born?

Changes certainly occur in the life of family members on the birth of babies. New duties such as giving bath to the baby, cooking special food, taking care of baby, carrying the baby often, handling a crying baby and calming down etc., have to be done. All the family members have to help the mother in doing these things. These activities would not be there before the birth of a baby.

## 1.2. Marriage - changes in the family

Rani's brother Srinivas is getting married. The house is decorated beautifully. Relatives came. The people of the house are very busy. Have you ever attended any marriage? Say, what you have seen there?

The bride came to Rani's house after the marriage. With this, new members joined Rani's family also. Where did Rani's sister-in-law live before the marriage? Where will she reside after the marriage? Discuss the following questions with your friends in groups. Write the answers in your note book.

### Discuss in groups :



- ◆ What changes might have come in the bride's family due to the marriage?
- ◆ Who all were there in Rani's family before her brother's marriage?
- ◆ What changes might have come in Rani's family after the marriage?
- ◆ What changes may come in future in Rani's family?
- ◆ Living together in a family makes family members happy - why?
- ◆ Ravi Kiran says that living with grand father, grand mother makes him feel good why? Write down?

Additions take place in families with marriage and birth of a new born. Similarly, if any family member leaves the family for any reason, this also brings in changes. This means, the changes come in the family when either a member joins or leaves.



### Think...

Besides these what other reasons bring changes in the families?

### 1.3. New place or transfer

Aditya's family lives in Rangapuram. Aditya's father received a letter from his office. The letter said that he was being promoted and would have to move to Sultanabad.

Aditya's family is a joint family. In his family, in addition to his mother, father and sister his grandfather, grandmother, uncle (father's younger brother), aunt (younger brother's wife) and their children live together.



### Think...

When Aditya's father showed the letter to his family, how do you think the different members would have felt?

Aditya's family vacated the house and left for the new town. Similarly, the father of Aditya's friend Ramesh also got promoted. He was transferred to another town. But, Ramesh's father didn't take his family to the new town. He started travelling to and fro. Discuss with your friends and write down, what changes might come in the families of employees.

Aditya's family	Ramesh's family
<ul style="list-style-type: none"> <li>• Where did they reside before promotion?</li> <li>• Where is the family after promotion?</li> <li>• What changes might have come in Aditya's family after shifting.</li> <li>• Will there be any changes in the work (duties) done by Aditya in the past and in the present?</li> </ul>	<ul style="list-style-type: none"> <li>• Where did they reside before promotion?</li> <li>• Where is the family after promotion?</li> <li>• What changes might have come in Ramesh's family after his father started travelling to and fro daily to the new town.</li> <li>• Will there be changes in the work (duties) of Ramesh also?</li> </ul>

- Has any new student joined your class or school? Talk to them. Know and tell about the changes that took place in their families and the kind of work they did?
- Where did he / she come from?
- How was his / her old school?
- What new things he / she observed here?
- Did he / she like the present atmosphere? why?



Families will not be in the same state always. Changes have to come in the families due to various reasons. You have known that the changes occur in the families due to reasons such as marriages, births, transfer to other towns and so on. The changes occur not only because of these reasons but also business, studies, migration for employment, occurrence of earthquakes, floods, death of important family members etc; Besides these, when we compare the present times with the past we find that many changes have taken place in the families. How do we know about these things?

### Do this ...

Form groups of three. Each group should visit any three families living nearby and talk to the old aged persons or..... grand parents. Talk to them, collect and note down the following details in the table.

Information to be collected	Details
• Since how many years your family has been staying here?	
• Where did your family live before coming here?	
• Why did you come here?	
• What changes have come in your family before and after coming here?	
• How many members were there in your family 10 years ago?	
• How many members are there in your family today?	
• What were the reasons for the change in the number of family members?	
• How do you feel about the changes in the family?	

## 1.4. Families - yesterday, today, tomorrow.....

You have understood that all families change in some way or the other but for different reasons. Has your family changed too?

Most of the families in the past were joint families. In joint families, different members like grandparents, aunts, uncles, their children..... every one lived together as a single family. All members helped each other performed did various kinds of jobs together. They used to share the sorrows as well as the happy moments. Nowadays the number of members in a family are decreasing day by day.

Now, it is the parents and their children which are seen in most of the families. These are called nuclear families. They are not taking proper care of grandparents and other old members. Some people are leaving their old parents in old age homes, and keeping their children in the hostels for education. Discuss these changes with the friends in your group and write down the conclusions.

### Discuss in groups



- ◆ How were the families in the past?
- ◆ What were the benefits of joint families?
- ◆ What are the reasons for the decrease in the number of members and formation of nuclear families?
- ◆ Old age homes are increasing day by day - why?
- ◆ Do you feel it is a good change? Discuss.
- ◆ What other changes may come in the families in the future?
- ◆ Living together is happy. Living apart is sad. Why?

You know that all the family members lived together in joint families. Now, let us know what other advantages joint families had. The old people used to be with the children and helped them in many ways. Children were told stories, unknown things were clarified by the old people. Meals were taken together. Every one helped each other and lived together. Many changes came in the families as the days passed. The joint families have separated into nuclear families due to people leaving the villages for employment, division of properties, insufficient housing etc;

Now think and tell:

How was your family in the past? How is it now? What type of family is yours- a joint family or a nuclear family? Which one you feel is better? why?

## 1.5. Family life - usage of home appliances:

With changes in the families, the method of doing work also changed. Earlier people did their work themselves or took the help of others and did them together. But now, who is doing the work? some families started engaging servants to do the house hold work. Similarly, usage of electricity in the house hold work has increased.

Observe the pictures given below. Do you know these?



- Why do people use these appliances?
- Why the usage of electricity increasing day by day?
- How did the people do their different kinds of work, when these appliances were not there?
- Is the use of these appliances advantageous? Why? Why not?

### Collect :



Go and talk to your grand parents. Ask them whether they had these appliances in their childhood? Have they used them? How they did their work, when these were not there? What do they feel about the appliances that are used today? Ask and know.....

Home appliances have changed the method of working. Nowadays, most of the work is not done being done manually. They are depending on the appliances. They use appliances for washing clothes, grinding flour, cleaning the house, cooking etc; We should do work with our hands as far as possible. Usage of home appliances should be reduced. We consume more electricity while using washing machines, mixie, grinder etc, If we do the work manually, we can not only reduce the consumption of electricity but also give maintain our body and become healthy. In addition to this, one also realizes the value of work.

### Key words :

1. Family members
2. Changes in the family
3. Promotion
4. Joint families
5. Nuclear families
6. Home Appliances

### What have we learnt?

#### 1. Conceptual understanding

- a) Are all the families similar? why?
- b) Write the reasons for the changes in the families?
- c) Which appliances are used in homes? why?
- d) "Changes come in the families due to marriages", why? Write three reasons.
- e) Engaging children in work is a crime. Why?

#### 2. Questioning - hypothesis

- ◆ A new family has come to your village. What questions would you ask to know about the changes that occurred in their family after moving?

### 3. Experiments - field observations

- ◆ The kinds of work done by boys and girls are not different at home. All should do every type of work. observe the families in your surroundings. Are there any differences in the type of work done by boys and girls? Write down.

### 4. Information skills, projects

- a) Visit the homes of any five of your friends. Collect information on the home appliances used in their houses and write in the table below.

Sl.No	Name of the friend	Home appliances used at the home
1		
2		
3		
4		
5		

- b) Paste the photos of your family before and after your birth. Write down what changes came in the family.

### 5. Communication through mapping skills, drawing pictures and making models

- ◆ Draw or paste the pictures of your family members on a chart. Say and write what work they do.

### 6. Appreciation, values and awareness towards bio-diversity

- ◆ If a new family becomes our neighbour, how can we help them?
- ◆ Describe your feelings when you meet the members of a joint family, who help each other.
- ◆ We can reduce the difficulties of others by doing work ourselves. Explain this.

#### Can I do this?

- |   |        |
|---|--------|
| 1. I can explain the reasons for changes in a family  | Yes/No |
| 2. I can ask questions to know about the changes in a family  | Yes/No |
| 3. I can collect, tabulate and explain the information on the usage of home appliances in the families. | Yes/No |
| 4. I can draw the pictures of family members, and explain the kinds of work they do.                    | Yes/No |
| 5. I can help the new families who come into our neighbourhood.   | Yes/No |

## 2



# DIFFERENT GAMES AND RULES

We all love to play games. We play inside and outside of our houses or wherever we like. People have been playing games for centuries. But, changes have occurred in the way we play the games. Nowadays, we play certain new games. We also play some games which are played in foreign countries. Observe the picture given below:



### Discuss in groups



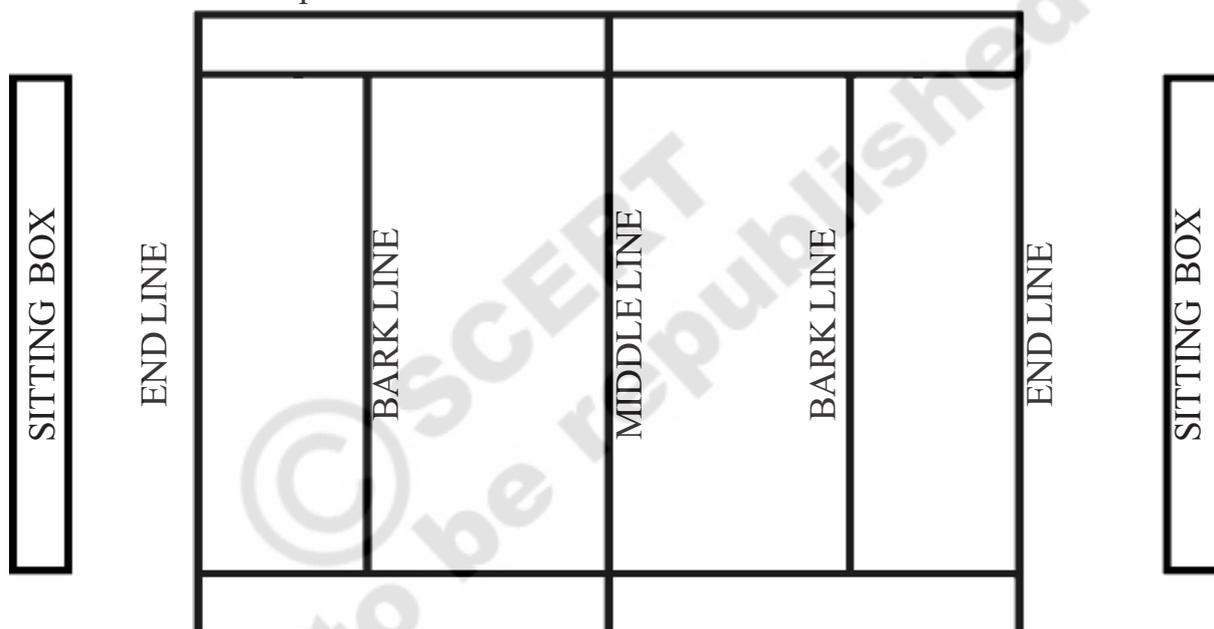
- ◆ What games are the children playing in the above picture ?
- ◆ What games do you play?
- ◆ Who do you play the games with? And when?
- ◆ Why do you play games?
- ◆ Who can play games?
- ◆ How do you feel while playing games?

## 2.1. Rules of the Games:

You play different games. Don't you? Before the commencement of the game, the players divide themselves into groups and discuss the method of playing. They also collect the required materials and make all necessary preparations.

Do you know kabaddi? Let us see, how children play it.

Rahim the physical training teacher took all the children to the playground to play kabaddi. He divided them into two groups of seven players each. He explained to them the 'Rules of Kabaddi' and how to play the game. Rahim sir drew the kabaddi court with the help of the children. Figure shows the lines drawn on the court. Observe the picture.



The teams of Supraja and Pinki are playing kabaddi. Supraja started the game with the 'cant' - 'Kabaddi'. Four players of the opposite team surrounded her and caught her. But, Supraja escaped from them and touched the middle line. On seeing this Supraja's team members screamed, and clapped happily and shouted "four points..... we scored four points". Then one girl from Pinki's team started an argument saying Supraja stopped her cant in between. Both teams argued with each other. At last Parveen from Pinki's team came forward and persuaded others saying Supraja did not stop saying cant. The game started again.



You have seen, how the teams of Pinky and Supraja are playing kabaddi. Discuss with the members of your group the rules of this game.

### Discuss in groups



- ◆ Why do disputes arise in the games?
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- ◆ What are the rules in kabaddi?
- ◆ Who should be appreciated in games? why?

### Rules of the game 'Kabaddi' :

- ◆ The player who says the cant (kootha) - Kabaddi Kabaddi, should touch the 'bark line' before he comes back, otherwise he would be considered as 'out'.
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- ◆ The players who are 'out' can join the team in order whenever the team scores a point.
- ◆ The players should not grow nails.
- ◆ One should not apply oil to the body while playing.
- ◆ While playing especially girls, they should not drag each other by holding hair / plaits.

## 2.2. Rules of other games:

You have read how to play kabaddi. Every game has certain rules. We play the games by following rules. Do you play games by following the rules? Write down the names of the games you play. Write the rules of each game.

### Discuss in groups



- ◆ Write the name of the game you like.
- ◆ Write how that game is played.
- ◆ What are the rules to be followed in it?

Name of the game	Method of Playing	Rules of the game

### 2.3. Why rules?

You have understood the rules of the games.

#### Think...

- Are rules meant for games only? Say, on what other occasions do we follow rules?
- What rules you follow in school?

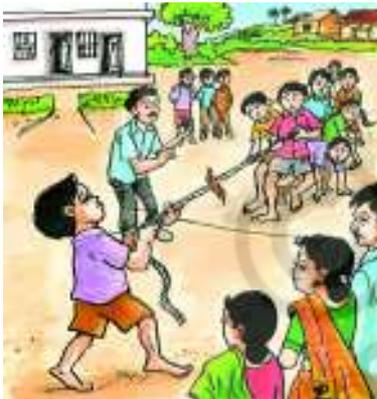
The rules help us to play the games properly. The rules control the game. As in games, our home, school and all other places also have certain rules and regulations.

Eg: Traffic rules are intended to avoid accidents on the roads. We stop when red light glows, move forward when green light glows, keep left as per the direction. We find these traffic signals at cross roads in order to avoid traffic jams and accidents.





Look at the above picture. People are crossing the road at the zebra crossing where white stripes are drawn. It help us to avoid accidents.



Like the roads, the schools also have certain rules and regulations. For example, as per rules the students, teachers and the headmaster should attend the school (at prayer time) assembly. Classes should be conducted according to time-table, children should play during games period, mid-day-meals should be provided properly and parents meeting should be conducted once in a month. Such rules if observed truly help the schools to develop. Similarly, to govern and develop our country, we have framed certain rules in our constitution. You will read more about our constitution in your 5<sup>th</sup> Class.

## 2.4. Can everybody play games?

Everybody likes to play games. But, do all the people play games? In Rangapuram girls play games like ashta chemma, thokkudu billa, tennikoit, vamana gunta only. The boys play games like cricket, volley ball, football.

### Think...

- Do you think the boys and girls playing different games is right?
- Can every one play all the games? How do you feel about it? Give some examples.

Observe the people in the pictures given below. Do you know who they are? What games do they play? What is special about them?



**Saina Nehwal**



**Vishwanathan Anand**



**Mithali Raj**



**Mary Kom**



**Koneru Hampi**



**Karanam  
Malleswari**



**Gagan Narang**



**Saniya Mirza**

These sportsmen / women made our country proud with their achievements. How did they achieve it? If they had not played games every day, they would not have succeeded as sports persons.

Anyone can play games. There are many sports women in our country. Many women players won medals in not only National level events but also in Asian games, Common Wealth games, Olympic Games etc. women are competing with men in all the fields.

## **2.5. Games - victory and defeat in games :**

Humans love to play. Winning and losing is quite natural in games. In any game only one team or one person can win. Who ever wins is called 'winner'. Some people get worried when they lose the game. Winning and losing are not important. Importance should be given to the development of good skills. One must learn good sporting skills, patience, winning temperament following rules etc. from others. The players congratulate each other after the competition. Considering victory and defeat to be equal is called 'sportsmen spirit'. You all should play games during the holidays. Where would you play? Do the girls go to the ground and play? Boy and girls are equal. Girls also should go to the playground, so that they too can become healthy and remain active.

### Think...

- Have you ever won any games? How it became possible?
- How do you appreciate the winners?
- How should we behave with the losers?

### Playing games is children's right :

All children, boys and girls should play every day. This is children's right. Evening 4 - 6 p.m is children's play time. One should not go to tuitions or do the home work during this time. When we play games we become active and our blood circulates better. All impurities present in our body come out in the form of sweat. During play time, we talk, laugh, solve simple disputes, discuss and, follow the rules. It relieves us from stress and strain and keeps our body healthy and active. It also help us in maintaining good relations with others.

We must play in the sports period of our class time table. You should play along with your teachers. We should use the play material available in the school. We must participate in the sports competitions, we must acquire the skills of the games. We should take bath after playing games in the evening. After playing we must study and do the household work. By doing this, we become active and it also enhances our grasping power we can understand lessons easily.

### Think...

- Some schools and some families are keeping the children away from games because they think children who play games become backward in studies. How far is this correct? What is your opinion on this?

## 2.6. Games - results

Have you ever seen the people who play regularly? They are healthy and active. When we play games, we become healthy and active. People co-operate with each other during the play. It inculcates the values of team spirit, playing together and become part of a group. We will be recognised by all when we play games. We can bring name and fame to our family, school, village..... district and state. Our Indian team won the gold medal in kabaddi. Similarly our Cricket team won the World Cup in the year 2010. Our players and athlets like Karanam





Malleswari, Saina Nehwal, Marykom, Leander Paes, Gagan Narang and Vijendra Singh participated in olympics and won medals. The popularity of our country has increased due to them. Eveyone, including players, their family, state and country got a good name. Everyone respects the sportsmen and sportswomen. When we play games we become ready to face challenges of our life. We start helping



others on all occassions. Working together with others also becomes a habit. We get sportman spirit and learn to appreciate the winners and encourage the losers. We learn to treat both victory and defeat as equal. You have read about the advantages of playing games. Now, what games do you want to play from today? Hope, you all play games everyday!

### Key words :

- |                     |                 |                   |
|---------------------|-----------------|-------------------|
| 1. Rules            | 4. Road rules   | 7. National level |
| 2. Victory & defeat | 5. Constitution | 8. Olympic games  |
| 3. Sportive spirit  | 6. Sportsmen    | 9. Republic Day   |

### What have we learnt?

#### 1. Conceptual understanding

- Why should we play games? What would happen if we play without rules?
- Where do we find rules? Why should we follow rules?
- Playing is children's right-why? Give reasons.
- Write 5 important rules of kabaddi.

#### 2. Questioning - hypothesis

- Latha saw the photo of Marykom in the newspaper. She wanted to know, how Marykom won the medal. What questions she might have asked?
- What changes do you think have come in the games when compared with the past? why?

#### 3. Experiments - field observations

- ◆ Observe any game played at your street or school which you do not know. Write the procedure of the game in order.

**4. Information skills, projects**

- ◆ Collect information on any five prominent sportsmen of our state or the country.

Sl.No.	Name of the player	game played	Competitions participated

- Players of which game are more in number in the above? Does it include women?

**5. Communication through mapping skills, drawing pictures and making models**

- Draw the court of any game you play out side on a chart. Mark the measurements. Write the names. Describe.

**6. Appreciation values and awareness towards bio-diversity**

- What should we learn from the winners of the game? How should we behave with losers of the game?
- Playing is children's right. Play every day of a week. Write your experiences

**Can I do this?**

- |  |          |
|--|----------|
| 1. I can explain the rules of the various games and necessity of the rules.                        | Yes / No |
| 2. I can ask questions on how the sportsmen won the medals.  | Yes / No |
| 3. I can observe a game and write down the sequential order of playing it.                         | Yes / No |
| 4. I can collect and tabulate the information of sportsmen who brought a good name to our country. | Yes / No |
| 5. I understood the proper method of appreciating winners and behaving with losers.                | Yes / No |



### 3. Experiments - field observations

- ◆ The kinds of work done by boys and girls are not different at home. All should do every type of work. observe the families in your surroundings. Are there any differences in the type of work done by boys and girls? Write down.

### 4. Information skills, projects

- a) Visit the homes of any five of your friends. Collect information on the home appliances used in their houses and write in the table below.

Sl.No	Name of the friend	Home appliances used at the home
1		
2		
3		
4		
5		

- b) Paste the photos of your family before and after your birth. Write down what changes came in the family.

### 5. Communication through mapping skills, drawing pictures and making models

- ◆ Draw or paste the pictures of your family members on a chart. Say and write what work they do.

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- ◆ If a new family becomes our neighbour, how can we help them?
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## 2



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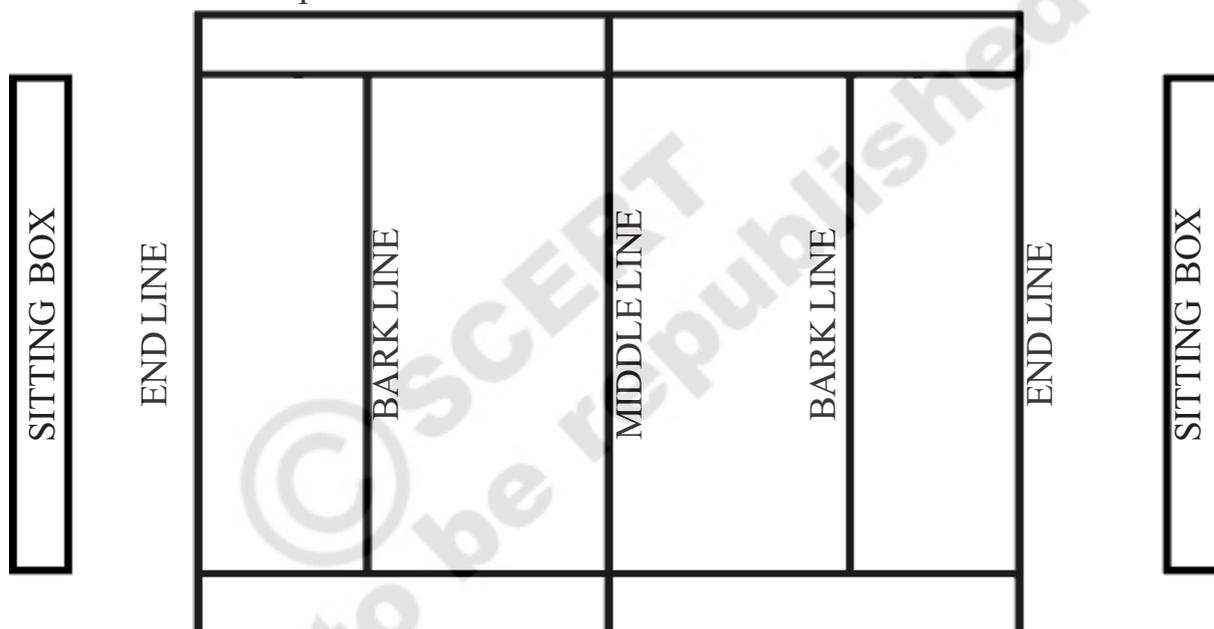
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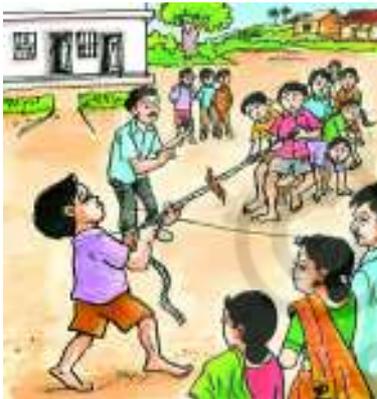
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### What have we learnt?

#### 1. Conceptual understanding

- Why should we play games? What would happen if we play without rules?
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- Write 5 important rules of kabaddi.

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- a) What should we learn from the winners of the game? How should we behave with losers of the game?
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#### Can I do this?

- |  |          |
|--|----------|
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| 5. I understood the proper method of appreciating winners and behaving with losers.                | Yes / No |



## VARIOUS TYPES OF ANIMALS

Different types of animals live around us. Some live in forests and others live with us at our homes. Do all the animals look alike?

Some animals are bigger than us and some others are smaller. Many differences are seen in the structure of eyes, ears, nose, tail etc. We can describe the animals based on the structure of their organs. Here are some simple questions for you, 1) How can you differentiate an elephant from other animals? 2) What is its speciality? 3) What do its parts look like?

### 3.1. Who has got my ears?

We can identify the animals by looking at the parts of their body. Observe the picture given below:



Are the animals in the above picture funny? The animals have exchanged their ears with other animals in the picture. Look carefully and identify the original owners. e.g. The giraffe has borrowed the ears of the elephant. Complete the table.

	Animal	Ears
1.	Elephant	Mouse
2.	Rabbit	_____
3.	Mouse	_____
4.	Giraffe	_____
5.	Dog	_____
6.	Buffalo	_____
7.	Deer	_____

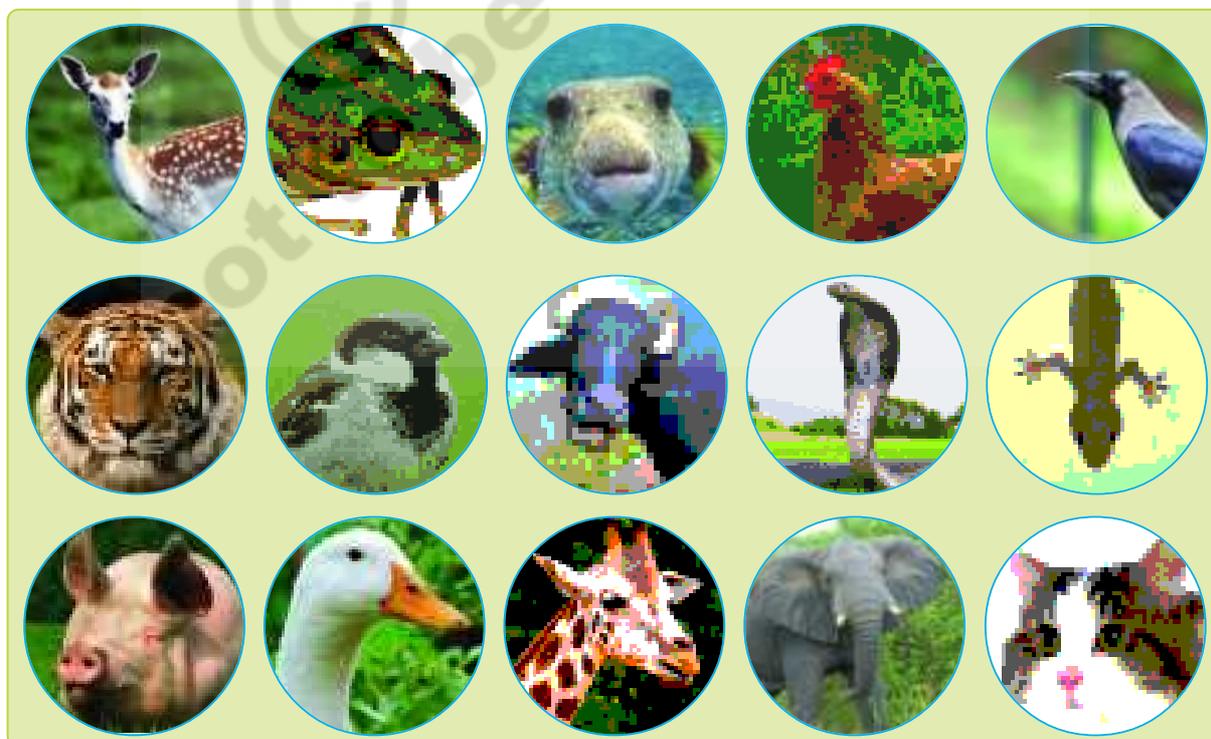
### 3.2. Animal's whose ears are visible externally?

Ears of some animals can be seen (visible). But, ears of some other animals cannot be seen. Observe the pictures given below. Discuss with the friends in your group and write down the details.

#### Discuss in groups



- ◆ Do all the animals have ears? Can we see the ears of all animals? Name animals whose ears we can see and also those whose ears we can not see? In which animal we cannot see the ears?



Animals whose ears are visible	Animals whose ears are not visible

What did you understand from the above table?

### 3.3. Animals with invisible ears

Some animals have ears, but are not visible. Do you think that animals whose ears we cannot see, really do not have ears? Think..... Observe the pictures given below. Discuss with your friends in groups



#### Discuss in groups



- ◆ Name the animals in the picture
- ◆ Can you see their ears?
- ◆ Find some other animals, whose ears we cannot see. Write their names.

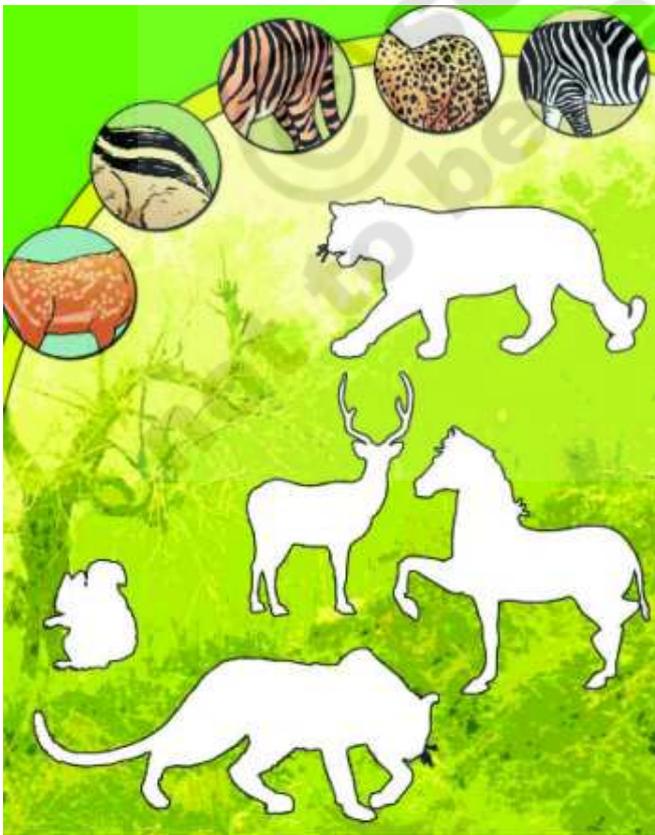
Like we have ears, some animals also have ears. Though some others have ears, we cannot see them.



You know very well that ears help us to hear. Bird's ears are not visible externally. A bird has tiny holes on both sides of its head. Generally, the holes are covered with feathers. They help the bird to hear. If you look carefully, you will see tiny holes on a lizard's head. These are its ears. A crocodile also has ears like this, but we cannot see them easily. Snake has no ears. Its skin perform the function of ears. Snake recognises the sounds by its skin.

### 3.4. Whose skin is this?

You have learnt that different animals have different kinds of ears. We can recognise the animals by their ears. Similarly, can you recognise animals by their skin? observe the picture. Here are different kinds of animals and their skins separately.



#### Think...

**Match the animals shown here with the pictures of their skin. Make the correct pattern of the skin on the picture of each animal.**

Skin protects all the organs of the body. It gives a shape to the creature. We can recognise the animals by the colour and pattern of hair present on their skin.

Have you ever seen animals without hair on their skin? Have you ever seen an animal whose hair has been removed? Imagine how the animals would look if they did not have any hair on their skin. What are the uses of hair?

### 3.5. Classification of animals on the basis of ears and skin:

Observe the animals in the picture given below.



The ears and skin of all animals are not the same. Some animals have hair on their skin where as, others have feathers and some others have scales on their body. The ears of some animals can be seen and the ears of some other animals cannot be seen. You have observed the pictures on the previous page. Discuss in groups about the kinds of ears and skin of the animals. Fill in the table with the particulars.

Ears Cannot be seen	Has feathers on skin
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
Ears can be seen	Has hair on skin
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

**Discuss in groups**



- ◆ Which animals have feathers and whose ears are not seen?
- ◆ Which animals have hair on their skin and whose ears are seen?
- ◆ Which animals possess scales on their body?

The animals whose ears are seen and have hair on the skin, give birth to 'babies'. The animals whose ears are not seen and have no hair on the skin, lay 'eggs'. In this way, we can say how the animals give birth to babies on the basis of their skin and the structure of their ears. The animals which lay eggs, incubate and bring up the babies are called oviparous. The animals which give birth to babies are called 'viviparous' (or mammals).

### Collect the information



Observe your pet animals and that of your friend's from a distance. Go near to the animal and observe whether it has hair on the body. If your town has a zoo, visit it. Observe the animals to find out whether they have hair on their body.

### 3.6. Uses of animals:

The hair and skin of animals protect them from cold and heat. Hair and skin are useful to the human beings too. We also use the hair of animals. Look at the picture given. What are your feelings about this picture? Why? Draw the pictures of animals along with their young ones.



The skin of animals is also useful to us. Animal skin is used to make foot-wear, musical instruments like drums etc. Animals give us food also. They are also used in agriculture and transporting goods. Discuss with your friends and write down the names of some animals and their uses.

### Discuss in groups



- ◆ Which animals give us food?
- ◆ Which animals are used for agriculture?
- ◆ What are the other uses of animals?

Animals that give food	Animals that are used for agriculture	Animals used for other purposes

### Collect the information



Have you ever had a pet animal? Does any one you know keep a pet? Visit their houses and collect the following details.



Things observed	Details
• Pet animal at home	
• Did they name it?	
• What is the name of the pet?	
• Does it lay eggs?	
• Does it give birth to babies?	
• Does it have babies?	
• What does it eat? How many times?	
• Does it have hair or feathers?	
• What are the uses of that animal?	
• Why are they keeping that animal?	
• Can we see its ears?	
• What care they take of the animal?	
• Does it get angry?	
• What does it do when it gets angry?	
• Who likes that animal in their home? Why?	

### Do you know?

Look at the picture. Can you tell us its name? Can you tell something about it?

It is called dinosaur. It lived on earth millions of years ago. It is now extinct. We can see it only in the movies, photos and books. etc.

Have you seen any animal which is similar to dinosaurs. Can you name it?

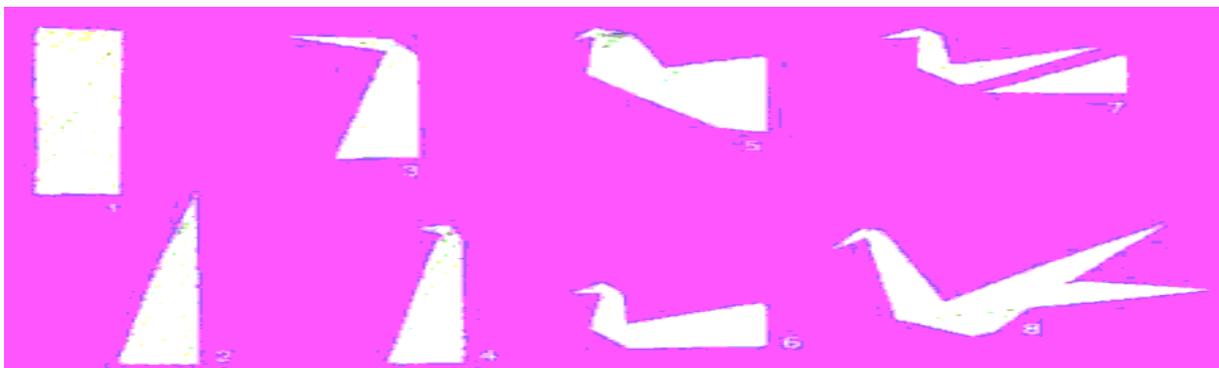


Look at the animal in the picture.

Do you know its name? This is a tiger. It is our national animal. They are under threat of extinction. Why they are facing extinction? Discuss.

### 3.7. Shall we make our own bird?

We all like birds and animals. Shall we make their models? For this, take some papers or pieces of card-board. Make different shapes as shown in the picture. We can make different birds with them. Make them in groups with your friends and exhibit in the class.



## Key words :

1. Skin
2. ears are seen
3. ears are not seen
4. egg laying animals
5. Animals giving birth to babies
6. Oviparous
7. Viviparous
8. Zoo

## What have we learnt?

### 1. Conceptual understanding

- a) Give ten examples of the animals whose ears are seen externally.
- b) Write any two similarities and differences between the oviparous and viviparous animals.
- c) Some animals lay eggs. They do not possess feathers. Write their names.
- d) Write the uses of animals and birds.

### 2. Questioning - hypothesis

- ◆ Rajani, Rahim, Manojna, Samhitha and their friends went to the zoo on a Sunday. They saw the animals given below. They asked many questions to know about them. You also write the questions they might have asked.



### 3. Experiments - field observations

- a) Which animals are found more in your region oviparous or viviparous, observe and write.
- b) How do the animals that lay egg and those which give birth to babies, feed their babies. Observe and write what they do?

#### 4. Information skills, projects

- ◆ Prepare the information tables by observing any two animals

Name of animal	Does it have hair?	Does it lay eggs?	What does it eat?	Where does it live?

- ◆ What did you learn by observing the above table?
- ◆ Write two lines about egg laying animals.

#### 5. Communication through mapping skills, drawing pictures and making models

- ◆ Draw any animal you like that give birth to babies and colour it

#### 6. Appreciation - values and awareness towards bio-diversity

- a) We need food, water and shelter to live. How do you help the birds and animals that live in your surroundings?
- b) The animals and birds also have the right to live like us. Write a few slogans on how to protect them.
- c) How do you feel when you see the birds and animals and their young ones? Write.

#### Can I do this?

1. I can write the similarities and differences between the animals. Yes / No
2. I can ask questions about animals. Yes / No
3. I can collect and tabulate the information about animals. Yes / No
4. I can draw and colour the pictures of animals and explain about them. Yes / No
5. I can explain the uses of animals. Yes / No

# 4



## DISCOVER THE LIFE STYLES OF THE WILD - BIO DIVERSITY

Man is a social animal. He can't live in isolation. For his various needs he is dependent on others. We acquire food to eat, clothes to wear, houses to live in and vehicles to travel. What about the animals? How do they live? What do they do for their living? Do you know their life style?

See the picture below:



### Discuss in groups



- ◆ Have you ever seen the animal in the picture above?
- ◆ How many elephants are there in the herd? What are they doing?
- ◆ Why do they move in herds? What could be the benefits of moving in herds?

### 4.1. The life styles of the animals

The elephants in the forest live in herds. There may be 10-12 elephants in each herd along with their babies. Female elephants are more in number. Male elephants

leave the herd at the age of 15. Usually, an old female elephant leads the herd. She starts her journey in the morning, with a trumpet. Others follow her. The journey halts where rich vegetation is seen. Everyone feeds on the leaves and the tender branches. By afternoon, they enter into the water body and play, splashing the water. The babies are taught to swim. This way of living in groups gives protection to the elephants.

That's the life style of an elephant. We all know about the life styles of our pets. Do we know the life styles of wild animals, stray animals or domestic animals? What do they eat? Where do they live? What do they do? Discuss these issues with your friends or ask your elders or read from the library books on animals. Watch the National Geographic Channel or the Discovery Channel on T.V. Next day, and discuss what you saw with your friends of your group. Then write a small note covering your discussion.

### Discuss in groups



- ◆ Which other animals live in herds?
- ◆ Did you see the herd of monkeys, anytime? Why do they live in herds?
- ◆ Describe the life styles of different animals?
- ◆ What are the reasons for living together?

### Do you know?



Tigers are hunting animals. Their cubs can not hunt when they are small. They learn by observing the elders. Slowly, the cubs learn everything.

You have known about the life styles of some animals. Here are some questions. Where do the birds live? What do they do? Do you know anything more about them? Do the birds also live in groups? Did you see, anytime, the birds flying in the sky in a group? In which season do you see this happen? Look at the picture on the next page.



### Discuss in groups



- ◆ During what time do the birds fly in groups?
- ◆ Did you notice any particular form during their flight?
- ◆ What do you feel when you see a flock of birds in the sky?
- ◆ Do you know that the crows live in groups? Why?
- ◆ If one crow dies, what would the remaining do?

### Do This



Make a paper bird with a waste paper and fly it.

Birds and animals live in groups. In a group they are protected from enemies. Young ones observe the elders and learn hunting, escaping from the enemies, searching for food and identifying the water bodies.

The birds too migrate in flocks. Even from great heights they can spot crops and they stop to feed. They travel thousands of kilometers in search of food and shelter. Fields and gardens are their areas of food source. Some birds eat insects, fish and other small living organisms. For this, they go to near by lake, pond, canal, river, reservoir etc. They do so, in groups.

### Do you know?



**Dr. A.P.J. Abdul Kalam**

The former-president of India - Dr. A.P.J. Abdul Kalam used to observe the flying of birds at the seacoast everyday. He used to wonder, how they could fly? This observation helped him a lot in his future researches and experiments on rockets. Observing, acquiring knowledge, setting goals and working hard towards the goal, made him a great man.

Lets us too observe the birds & animals around us and discover new things.

## 4.2. Birds - their nests

You have learnt about the homes of the animals in class-3. Where do the birds live? What do their homes look like? See the pictures below and try to match the birds with their correct homes.



How beautiful are the nests like the birds themselves! Have you seen any of these nests, before? We build our houses, so do the birds. How are they able to build their nests? What do they use for it? Discuss these with your friends.

### Discuss in groups



- ◆ Did you like the nests? Why?
- ◆ What did they use to build the nest?
- ◆ Did you see the tailor bird? How could a tiny bird weave a big nest, so perfectly?
- ◆ Some birds make holes on the tree trunks and live. Name them.

Look at this nest, the tailor bird is busy weaving its nest.

### Do this

1. Observe a nest of any bird in your surrounding. Don't disturb it. Write in your note book about the materials used and how they made it.
2. Collect leaves, small twigs, dry hay, yarn, pieces of cloth, thread etc. Weave a bird's nest with them and display.



Oh! Its not easy to weave a nest! Its difficult! It needs skill, which the birds have.

Birds use straws, twigs, threads, thin wires, paper, jute, cloth, leaves etc. to build their nests.

The birds are different, so are their nests. Among Tailor bird, the male bird builds the nest. Female bird lays the eggs in them. They build their nests during egg laying season. They leave the nest, once the young ones develop wings and fly off. Again they build the new nest and lay eggs. They weave their nests constantly.

### Discuss in groups



- ◆ What do birds feed their young ones? How?
- ◆ Have you ever seen birds feeding their young ones? How did you feel?

Some children try to disturb the birds and spoil their nests by throwing stones etc. This should be stopped. Do you like your house being damaged? Is it right to damage the nests.

### Think...

- Do all the birds lay eggs in their nest, alone?
- Where does a hen lay the eggs?

### Do you Know

Dr. Salim Ali, the ornithologist of India, has done many researches and written a lot on birds. His work is recognised and renowned globally. He received many international awards. He belongs to our country.



It is our responsibility to protect birds. The number of birds is reducing with the cutting down of trees, spraying fertilizers on the crops etc. The recent studies say that the radiation from the cell phone towers has affected the population of the sparrows. What are the consequences of bird extinction.

### 4.3. Insects and their colonial life

Vijaya has observed a mound of mud on her Varanda. Just then, she heard, "buz.....z.....z.....z....." Its an insect and it flew into that mound. After a few minutes it came out of it and flew off. Vijaya is curious to see inside the mud. She went near and observed some insects in it.



### Discuss in groups



- ◆ How do the birds feed their young ones? What do they feed?
- ◆ Did you see them feeding any time? How did you feel?

Vijaya's father removed the mound of mud with a stick. Then she noticed that it had partitions. What is it? Have you seen it anytime? It is a bee hive. Hives are of many types. They build their hives depending on the area they are living in. Female bees build the hives.

There is a huge tree at the backyard of Ramu's house. There is a honey beehive on its branch. Did you observe the hive of honey bee? How does the bee hive with many rooms look. How do they make honey? Each bee lives in one compartment. Hundreds of bees live together in the hive. Honey is made from their mouth secretions.



### Think...

- **Ramu, a naughty boy, threw a stone on the honey beehive. What might have happened then? Think. Is it safe to do so? If not why?**

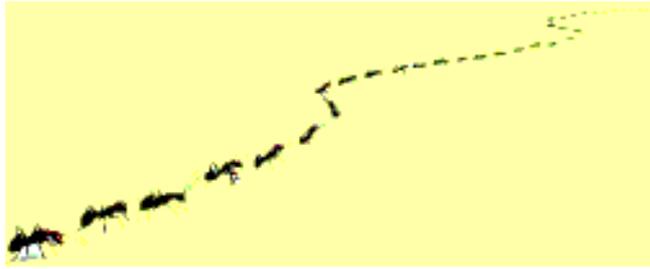
When we disturb the bee hives, the bees attack the houses. They inject poison like fluid into our body. Sometimes this may lead to death. So, we should not go near them.

Ants also live in groups of hundreds. Though they are very small, we can learn a lot from them.

### Do this

- ◆ Keep a cube of jaggery or sugar at one place either at your school or home. Observe after sometime.
- ◆ You will notice a line of ants. Now, without disturbing them, try to observe the ants under a magnifying glass.
- ◆ Notice their body parts & movements? Where are the ants carrying food particles?

Ants are the ideals, for social living. There is discipline and division of labour in their colonies. The colony consists of queen ants, male ants and the worker ants. Female ants lay the eggs. Protection of the eggs, procuring the food, building and repairing the ant hill are the duties of the worker ants. They build the ant hill with mud. They divide the hill into different compartments for different work. They cut the food into pieces with their jaws.



A few ants release a secretion, which gives a specific smell. This smell helps the ants to follow their colony and find their way. When two ants come from opposite direction they touch each other with their heads. Hope, you all have observed this. Why, they do so?

They pass information on food source and the route through it.

### Do you know?

An ant can lift a weight 50 times more than its weight. All the insects have six legs. Ants have two antenna like feelers on the head. These are useful in finding the sources of food and passing the information to one another.



Like ants, honey bees also live in a colony. There is a division of labour too.

You have seen that wild animals like elephants, tigers, monkeys and birds live in groups. It is needed, that human beings should also live in communal harmony with love and peace.

#### 4.4. Empathy to birds and animals



#### Think...

- What do you see in the above pictures?
- Like them, did you feed birds and animals anytime?
- How do you feel when you do so?

Did you ever medically treat any animals? (cat, dog, ox, cow etc) How did you feel?

Animals are also living things like us. We should not hurt them. We should provide food and water to them. We should identify their needs and help them every day.

How do you feel when you find dogs, cats, cattle and other animals hungry? We should

not hunt / capture animals. We should feed grains to the birds. We should take care of the animals and their babies.



## 4.5. Biodiversity

Various types of animals, birds, insects, plants and trees existing in one place, is called Bio-diversity. Nothing is useless and harmful in the nature Bio-diversity exist more in the forest. Every organism has relationship with the other organism. Every organism has the right to live. All the organisms living on earth directly or indirectly depend on each other. So, it



### Think...

- What are the various birds and animals seen in the picture?
- Which animals are there in the lake?
- Have you seen, these species of animals anytime? If so, where?
- Write an instance when you saw all these animals in your place?
- Do we have these many species of animals now? If not what happened to them?



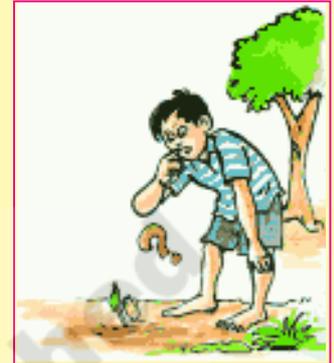
is our duty to protect each and every organism. Due his ignorance, man is culting down the forests, hunting animals which is leading to imbalance of nature and destruction of bio-diversity.

When you visit a field as you get the chance to see the crops, plants, insects and birds and you would be delighted. It's a joy to see the water canals and lakes with the fishes in it. Everything around us, including the huge mountains and deep oceans are a part of Biodiversity.

Man is a part of the living things on earth. He is surrounded by plants and animals. Every organism has a specific body structure, food habit and life style. This speciality indicates diversity.

### Do this

- Select any place in your village. Observe the natural resources like water bodies, hills, plants, birds and animals.
- Write, what do you mean by bio-diversity.
- Did you notice, any plants or animals in your village which were present in the past but not now?



In this type of living, the organisms influence one another. This bio-diversity is useful for our daily life. We all are interdependent on one another for water, air, food and shelter. Gases like carbon monoxide released from man-made things are degrading the resources and polluting the atmosphere. This is affecting bio-diversity. This is affecting the air, water, temperature, sea level and the marine life. Due to the drastic changes some organisms are extinct and some are endangered.

This life on earth evolved some million years ago. It is providing us with required food, medicines, wood, fruits, crops, aquatic life, microbes and many other resources.

### Discuss in groups



- ◆ What are harmful effects of deforestation? How is the marine life affected?
- ◆ What steps do you take to protect the bio-diversity.
- ◆ How is the deforestation affecting the bio-diversity?

Bio-diversity is being constantly affected by civilisation, urbanisation, industrial revolution, human selfishness etc. with this some species of plants and animals are becoming extinct and leading to imbalance of bio-diversity.

Planet Earth belongs to all the living organisms on it. Living things are dependent on the non-living things like the hills, lakes, rivers and the oceans around it. But man is disturbing the natural balance resulting in the extinction of some species.

Avoid the wastage of natural resources by conserving them understanding the importance of bio-diversity and protecting it. Maintaining the environmental balance, can only sustain man's life on this earth, other-wise, he will be on the verge of extinction.

#### 4.5.1. Endangered Species

Did you hear about Dinosaurs? They don't live now. Like them many other plants, birds, animals and insects are not seen now. We lost them! Once the Indian forests had thousands of tigers and lions. Now they have come down to a few hundreds. Cutting down the forests led to their less numbers. Now, its time to save the few left.

#### Do this

Ask the elders in your village about the animals, birds and insects which lived in the past but are not seen in the present.

Endangered Animals	Birds	Insects

The animal shown in this picture are on the verge of becoming extinct on earth. Man's greed is the cause. To save them, the government is maintaining reserved forest areas for tiger. Wild life sanctuaries, protected lake areas for the birds. Lets protect them. They are our wealth!



## Key Words :

- |                          |                                     |                    |
|--------------------------|-------------------------------------|--------------------|
| 1. Living styles         | 5. Living shelters-nest, hive, hill | 9. Micro organisms |
| 2. Bio-diversity         | 6. Social living                    | 10. Extinction     |
| 3. Herd / flock / colony | 7. Nests of birds                   | 11. Research       |
| 4. Being protected       | 8. Insects                          | 12. Endangered     |

### What have we learnt?

#### 1. Conceptual understanding

- Write about the life style of two animals.
- Differentiate between spider's web and the bird's nest.
- List the materials used in building the nest.
- Why do the birds and animals build their homes?
- Write the similarities and the differences in the living styles of birds and animals.
- What is bio-diversity? How do you support the right to live for birds and animals



#### 2. Questioning - hypothesis

- One day, Ramu saw a honey bee hive on the tree in his field. He wants to know more about it. What questions Ramu, might have asked his father?

#### 3. Experiments - field observations

- Observe a bird building its nest. Describe it.
- Observe a bird while feeding its young ones. Write the observations.



#### 4. Information skills, projects

- Collect the pictures of different birds nests and make a scrap book.
- Tabulate the different animals / birds living in your place with respect to its shelter and the material used to build it.

Sl.No.	Name of the bird/animal	Shelter	Materials used

### 5. Communication through mapping skills, drawing pictures and making models

- Prepare a model of your favourite bird's nest and speak about it.
- Draw the picture of any bird. Colour it. speak about it.

### 6. Appreciation - values and awareness towards bio-diversity

- Navya has kept a parrot in a cage. She is feeding it with fruits. Is it proper to keep a bird in a cage? Why? What would you do, if you were in her place.
- "Right to Live" is meant for all the beings. Its our duty to respect and protect this right. Write slogans conveying the same.



#### Can I do this?

- |   |          |
|---|----------|
| 1. I can explain, why birds and animals live in groups.                         | Yes / No |
| 2. I can tell about the living style of birds and animals.                      | Yes / No |
| 3. I can draw the shelters of animals and prepare the models of bird's shelter. | Yes / No |
| 4. I can prepare a scrap book of photos on bird's nests.                        | Yes / No |
| 5. I will love the birds and animals.   | Yes / No |

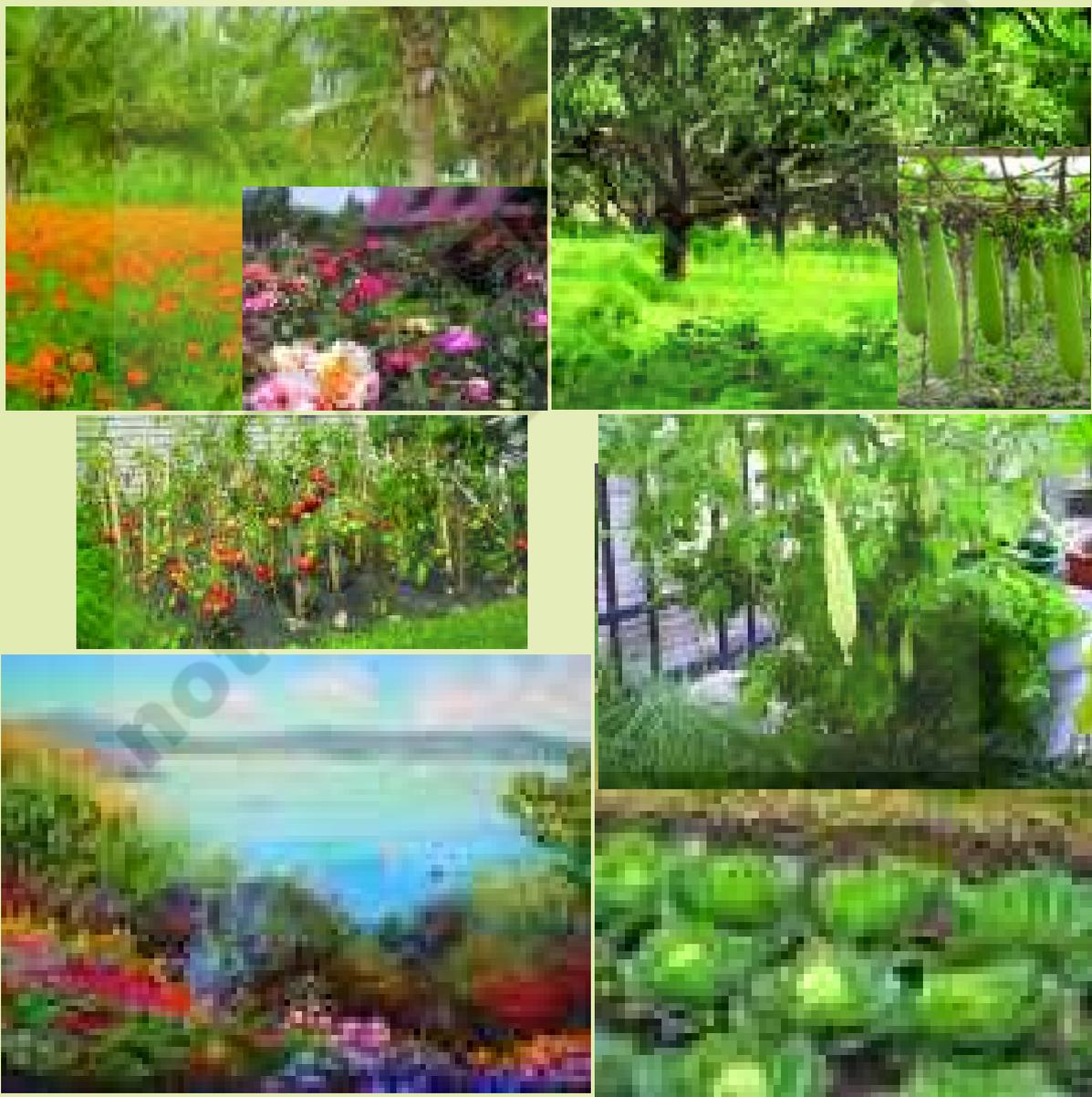
5



## PLANTS AROUND US

We see many plants and trees around us. We are delighted at their sight. Plants and animals co-exist on earth with human beings. Some of the plants are small, while some are big. Some others are very big. There are different types of plants and trees just like different species of animals.

See the pictures given below. Name the trees.



Have you seen the pictures given in the previous page? Some plants have grown very big while the others look like a bush. Some are creepers with very tender stems. Discuss with your friends and classify the plants given in the picture and make a note of them in the table given below. Like wise, include those also, which you see in your surroundings.

### Discuss in groups



- ◆ Which plants / trees are there? Are they all alike?
- ◆ What differences did you observe?
- ◆ Which plants are creepers? Which plants are bushy? Which plants are growing densely? Do you know what they are known as?

## 5.1. Herbs (climbers / creepers), shrubs and trees

Plants like ridge gourd, bitter gourd and Jasmine have very weak stems. So, they take the support of the nearby trees and grow / climb on them. These are known as climbers / creepers (herbs). Plants like chrysanthemum, chilly and roses grow in bushes.



Many branches grow from the base of the stem. Such plants are known as Shrubs tamarind, peepal and mango are very big. Their branch is tall and strong.

We get necessary timber from such plants. They also give us shade. They are called trees. We have learned about climbers, shrubs and trees. Write two or three examples for each in the table given below.



Climbers	Shrubs	Trees

## 5.2. Parts of a plant

We have seen that there are climbers, shrubs and trees around us. Some of them give us flowers, some give timber while others give us fruits. Do you know about their parts?



Observe the plant given below:



Generally plants have roots, stem, leaves, flowers and fruits. Roots grow below the ground (Soil).

Now you have identified the parts of a plant. Let's learn as to how each part is useful to the plant.

### 5.2.1. Roots

You have already learnt that plants have roots. Do you know how the roots are useful to the plant? Each one of you collect the roots of paddy, jowar, capsicum and cotton. Observe them and draw diagrams. Did you notice the differences in their roots? What are they?

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Have you seen the plant given in the adjacent picture? Which parts of the plant do you see? Which parts of the plant grow above the soil and which part below the soil? Label them.

#### Do this

Observe and collect a flowering plant from your school.

Compare this plant with the plant given in the picture. Does your plant have the same parts as the one given in the picture? Is every part similar to this plant. Your friends might have also observed like you. Discuss about the parts of a plant with your friends.

Hemanth was wondering how the roots of the neem tree in his back yard reached the wall of his house, which was quite far? Some doubts were troubling him. Can you guess what those doubts were? Discuss about them with your friends.



### Discuss in groups



- ◆ How did the roots reach so far?
- ◆ From where did the tree get water?
- ◆ From where does the road side trees and the trees growing in the forests receive water?

Do you know about the uses of roots? As the foundation gives support to a house, the roots also being inside the soil, help the plant to stand erect. Plants absorb water and nutrients through the roots.

### 5.2.2. Stem

The part of the plant above the ground is called stem. The stem gives rise to the branches and other parts. Is the stem similar in all the plants?

#### Do this

Observe the plants in your surroundings. How are their stems? Record your observations in the given table. Mark '✓' in the appropriate column.

S.No.	Name of the plant	Thin	Soft	Hard	With bark	Climber	With thorns	Colour of the stem
1.								
2.								
3.								
4.								
5.								

Thus, you have observed four-five plants in your surroundings. What did you learn about them? Your friends might have also collected information about them. Discuss in groups.

### Discuss in groups



- ◆ In the table given above which plants have dark stems? What is its colour?
- ◆ Which climbers have tender stems?
- ◆ Which plants have strong, thorny stem?
- ◆ Which plants have soft and tender stem?
- ◆ Which plants have soft and creeping stem?
- ◆ How is the stem useful to the plant?

Stems of all the plants are not similar. Stems of some plants have thorns. In some, the stems are soft. Others have rough stems. Some others have a thick bark. The stem gives the necessary strength to the plant to stand straight (maintain erect position). The stem transports (conducts) water and nutrients absorbed by the roots to all the parts of the plant. You will learn more about this in your higher classes.

#### 5.2.3. Leaves, flowers and fruits.

You have already learnt that besides roots and stem, a plant has leaves and flowers. Do all the leaves have same shape, colour and size? How do they help the plant?

#### Collect

- Visit your surroundings. Collect four - five different kinds of leaves. Draw their picture observe, whether all the leaves are similar. Tell the differences if any.

Leaves prepare food for the plant. Leaves are green in colour due to the presence of a green colour pigment called, 'Chlorophyll'. The plants which have more leaves prepare more food. Hence, we should not pluck leaves. A plant does not grow well if we pluck its leaves.

Sun gives heat and light energy. This energy is absorbed by the leaves and they make use of it in the preparation of food material. The energy that we get from tubers, seeds, vegetables produced from plants is the energy received from the sun. Man and other animals get the necessary energy by consuming these food products produced by the plants.

#### Think...

- What is the source of primary energy which is received by man and other animals?
- What is the source of energy. What should we do to make use of this energy?

You have learnt about the leaves of a plant. Let's learn about the fruits and vegetables. Look at the picture given below.



### Discuss in groups



- ◆ What vegetables and fruits are there in the above picture?
- ◆ From Where do we get fruits and vegetable?
- ◆ From where do we get the plants?
- ◆ Do all the plants grow from seeds?
- ◆ From where do we get the seeds?

We obtain the necessary fruits and vegetable from the plants. These plants grow from seeds. Seed is obtained from flower. Let's learn about the different types of flowers and the occasions on which they are used.



You have seen the flowers. How were they before blossoming? How are these flowers useful to us? What is the relationship between a flower and a bud? How many days does a bud take to change itself into a flower? In order to know about it, do as given below.

### Do this

- Observe the flowers that grow near your school and home. Observe their buds.
- Note the number of days taken by these buds to grow into a flower.
- Name the flowering plants which you have observed, and the colour of their flowers?
- Some grow as a single flower, where as others grow in clusters (groups). Have you noticed such flowers?
- Have you noticed any flower with a long stalk?
- Do all the flowers blossom only in the morning?
- You might have noticed some flowers that grow on the climbers. Name them.
- Do any flowering plants have thorns? If so, name them?

We have learned many aspects (things) about flowers. Usually, in which season do you see abundant flowers? They have a variety of colours and odours (smell). We have seen that some flowers are small while some are big. We get necessary fruits and vegetables from these flowers which have undergone due changes. Flowers bestow us with beauty and joy. We are happy to see flowers near our home, school and along the road. The mood gets a lift on seeing colourful flowers. Flowers are used for decorative purposes and also while praying.

### Do you know?

The largest flower in the world is Rafflesia. Its diameter is 1 metre and it weighs about 4 kgs. When the flower decays, it emits smell of rotten meat upto 2 kms.



### 5.3. Flowers - livelihood

Some people depend upon flowers to earn their livelihood. People do business with flowers. Flowering plants are not found in every body's house. Such people buy flowers. You too might have purchased them. Where are flowers sold. From where do they get the flowers? Find answers for these questions from a florist. Collect information about the following aspects:



#### Collection



- ◆ May I know your name?
- ◆ Since when have you been doing this business?
- ◆ Which flowers do you sell?
- ◆ Who buys the flowers and when? Why do they buy them?
- ◆ How much do you earn by this?
- ◆ When do you earn more?
- ◆ Which flowers are more profitable?
- ◆ Are all the flowers sold by you, available locally?
- ◆ Do you bring flowers from other states and sell?
- ◆ How do you preserve such flowers?
- ◆ Do any of your family members help you in the business?

You can ask many more questions.

#### Do you know these are also flowers!



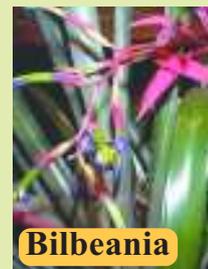
Faciflora



Ponshitia



Bottle Brush



Bilbeania

## 5.4. Flowers to fruits

Flowers change (transform) into fruits. Did you notice this transformation? The transformation of a flower into a fruit can be observed in the pictures given below. Look at them and arrange them in sequence (serial order).



You have noticed the transformation of pomegranate fruit from its flower. You can observe the transformation of flowers in - guava, ridge gourd, bitter gourd, beans etc. Draw their figures and show them in your class.

Are the flowers useful only to us? Did you observe the flowers in the garden? Do butterflies, honeybees and other insects sit on the flowers? Did you ever think, why they rest on flowers?

Look at the picture given below, what do you see? Say what is happening?



You have observed the pictures. Honeybees, butterflies and beetles rest on the flowers and suck their nectar. Thus, they are taking their food from the flowers. In the same way, plants also benefit by them. These insects help the flower to transform itself into fruit. You will learn more about this in your higher classes.

## 5.5. Fruits - seeds

Seeds germinate into new plants. Do you know from where we get these seeds? Do you know, how the seeds germinate and how they look? Look at the pictures given below. Form groups and discuss with your friends.



### Discuss in groups



- ◆ Observe the fruits & vegetables in the above picture.
- ◆ Which fruits have seeds inside them? Why?
- ◆ Do the seeds of all fruits resemble each other?
- ◆ Do you know how many seeds are found in each fruit?
- ◆ Do all the fruits have the same number of seeds?
- ◆ Name the fruits and vegetables which have only one seed.
- ◆ Name the fruits and vegetables which have many seeds.
- ◆ Name the seedless (without seed) fruits and vegetables.

## 5.6. Do all the seeds look alike?

Are all the seeds alike? Is there any link between the size of the seed and that of the plant? Do all the plants grow only from seeds? Do you know about the plants that germinate without a seed? Do huge trees bear huge (big) seeds? Let's think.



The size of a tree does not correspond to the size of the seed. Seeds are small (pulses Banyan) some are big in size (Coconut). Some round gram seeds have hard shells, while others seeds are soft. Palm, coconut, soapnut, cashew nut have only one seed inside them. Palmtree, chikoo have 2 to 3 seeds. How many seeds do you see inside a bean? Capsicum and pumpkin have many seeds. In millets like jowar, maize and ragi seeds are borne on the spike. Many seeds are found in custard apple and pomegranate. Thus, we can call the spike of a maize as a fruit, like pomegranate! Think over it.

## 5.7. Germination of the seed

We have learnt about seeds. How do seeds germinate? Do you know about it. Did you ever sow a seed in the soil? What happens? How many days does it take to germinate? Has germination taken place in all the seeds sown? In order to know about these aspects let's do as given below.

### Do this

Please form groups. Put ten green gram seeds in a tin box filled completely with water, other ten green gram seeds in a tinbox containing a wet cloth and another ten green gram seeds in an empty tin box. Observe for two days. Write your observation in the table given below. Each group can repeat with bengal gram and leguminous seeds.

	Box - 1	Box - 2	Box - 3
Availability of air to the seed (Green gram)			
Did you water these seeds			
Change Observed			
Germination of the seed			

- The seeds in which of the boxes germinated? What differences (changes) did you observe in the box containing - germinating seeds and the other boxes.

**Air, water and sun light are essential for the germination of seed.**

You have learnt about the germination of seeds. Rice is our staple food. We get rice from paddy. We eat the cooked rice. Do you know how paddy seeds germinate? Ask your elders / farmers about it.

### Collect



- What do we do in order to make a paddy seed germinate?
- In how many days do they germinate?
- What do we do after the germination of the seed?

## 5.8. Do all the seeds germinate?

One day Raheem sowed some tamarind seeds and some coriander seeds in their backyard. The seed coat of tamarind is very hard. Where as coriander's seed-coat is soft. He watered them every day. He was carefully observing the seeds every day and wanted to see them germinate. Every day he was noting the changes in a book. After some days, new plants sprouted. But all the seeds did not germinate. Some seeds grew into new plant and leaves where as others did not germinate. What may be the reason behind some seeds not germinating? Think over it. Let's think - what leads to seed germination? You too try to find the answer. Talk about it in your class. Which seed germinates faster? Bittergourd or soapnut? Why? Let's think.

## Germination of Seed



Seeds germinate when they are sown in a fertile soil. Do you know how the soil becomes fertile? Dead bodies of the animals, leaves shed by different trees and excreta of animals, are decomposed by the micro - organisms (decomposers) which make the soil fertile. Some animals dig burrows in the soil and live in them. They make the soil porous and fertile. Earth worm is known as the 'farmer's friend'. Why are they called so?

### Do you know?

When the wheat grains were imported to our country from Australia, the seeds of the weed parthium came along with it. Now-a-days many people in our country are suffering from lung diseases, eye diseases and skin diseases, caused by the pollen grains of this notorious weed.



## 5.9. Dispersat of seeds

Once a plant is planted, it remains stationary in one place. But its seeds reach far off places. Do you know how it is possible? Did you observe any seed flying in the air? Does any seed collected by you, fly in the air? The baby plant grows in a distant place. The seeds are carried by the wind to distant

places and the seeds germinate there into a new plant. Example : Asclepaediaceae plant family.

When the cattle - goats and sheep graze, the seeds get stuck in their hair and are carried and dropped by them in different places. There, they grow into new plants. Example - observe the seeds of palleru, telu kondi kaya. When we sit on the grass, its seeds stick to our clothes. When we move about, they fall on the ground and grow. Have you ever seen the seeds and fruits stuck to the hair of the animals. When the fruits of some plants get dried, they break open and disperse their seeds. What will happen if the seeds do not get dispersed by wind, water, animals and also human being and remain in the same place? Hence, we see a variety of plants in different regions. In some places, fruits and seeds are carried away by water. While floating in water, they break open and settle in the soil where they are being left off by the water. There, they grow into new plants.

### 5.10. Nurseries

Suppose you want to grow flowering plants or fruit bearing plants in your house. From where do you bring them? Look at the picture given below.



A nursery is a place where a wide variety of plants are grown. Plants are grown and sold in a nursery. The officials of the forest department also grow the plants like neem, teak, daris (Kanuga), in the nursery. They supply these plants for the social welfare of people.

It is significant to note that Kadium nurseries of our state located at East Godavari near Rajahmundry supply a variety of plants all over the country. These nurseries are spread in nearly 5 thousands acres of land with 700 of them growing various flowers, plants of fruits, decorative plants and medicinal plants. We can see thousands of varieties of plants in these nurseries. Desert plants like cactus or bonsai grown in a tinypot are also available here. Plants are grown by sprinkling seeds. Plants are grown in controlled climatic conditions using shed nets and polyhouses. Growing diverse varieties of plants found in deserts, polar regions and moist regions together in one place it self, proves to be a model of Bio-diversity. Hence, Kadium nurseries of our State are known as the largest bio-diversity region. It is necessary to plant the trees as the pollution is increasing day by day. Thus Kadium nurseries are playing a vital role in protecting the environment. We should visit such nurseries without fail.

### Key words:

- |                    |                     |                              |
|--------------------|---------------------|------------------------------|
| 1. Climbers        | 3. Trees            | 5. Roots                     |
| 2. Shrubs (Bushes) | 4. Parts of a plant | 6. Stem                      |
| 7. Chlorophyll     | 8. Seeds            | 9. Livelihood                |
| 10. Germinate      | 11. Nursery         | 12. Environmental Protection |

### What have we Learnt?

#### 1. Conceptual understanding

- Write the similarities and differences between climbers, bushes and trees.
- Which parts of a plant are useful to us? Give two examples.
- How can you say that flowers are means of livelihood?
- What are the uses of nurseries?
- When do the seeds germinate?

## 2. Questioning - hypothesis

- ◆ Raju planted a rose plant. It did not grow well. It dried up, imagine what may be the reasons, for this.

## 3. Experiments - field observations

- Write about the different stages in the germination of a seed.
- Sow any seed in the soil. Sow some of them in a box containing sand. Water both of them, every day. Tabulate the results after five days.

## 4. Information skills, projects

- ◆ Meet a farmer. Ask him what all they do to grow vegetables and fruits. Write about it in a sequence.

## 5. Communication through mapping skills, drawing pictures and making models

- Draw figures showing how the flower changes into a fruit.
- Draw your favourite flower. Colour it and write about it.
- Prepare a 'bouquet' with flowers and leaves available in your surroundings. Explain how you prepared it in your classroom.

## 6. Appreciation, values and awareness towards bio-diversity

- Your friend is growing some plants carefully in the school premises. After a year she celebrated the birthday of the plants too. What did you feel when you observed her love for plants.
- Why should we take care of plants and trees? Write a few slogans in support of this.

### Can I do this?

- |  |          |
|--|----------|
| 1. I can give examples of climbers, bushes and trees. Tell their similarities and differences. | Yes / No |
| 2. I can explain about the different parts of a plant and their uses.                          | Yes / No |
| 3. I can do experiments to show the germination of a seed and explain it.                      | Yes / No |
| 4. I can collect information from farmers about growing vegetables.                            | Yes / No |
| 5. I can write slogans appreciating, planing and protecing plants.                             | Yes / No |

06



## FIND THE WAY / DIRECTIONS

You have already learnt about your village in the previous year. When children and adults live together in one place it is called a family. Many families, living together in one place form a village. Look at the picture below. This is Ramya's village. Lets find the things in her village.



### Discuss in groups

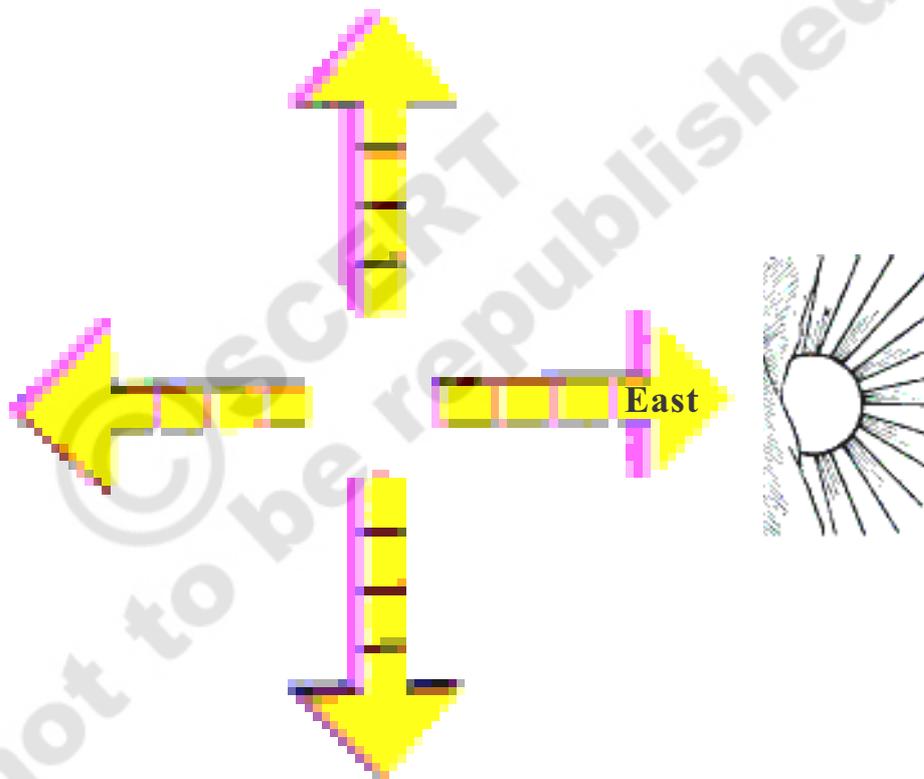


- ◆ Differentiate between your village and Ramya's.
- ◆ In which direction are the mountains located?
- ◆ In which direction is the lake?
- ◆ In which direction are the fields?
- ◆ From which direction do we enter the village?

## 6.1. Can we find the directions?

Kasturi wants to go to her friend, Kamala's house. She asked Ramya to guide her. Ramya said its to the south of the post office. "The south! What's that?" asked Kasturi. Ramya stood facing the sun, stretched her hands on the either sides and said, "The direction facing the sun is the east, to the back is west, right hand side is south and the left hand side is north. These are the four directions".

*See the picture given below. Identify the four directions and name them.*



### Do this

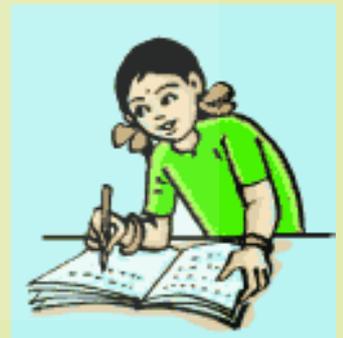
- Stand in your place in the class room. Face the rising sun and stretch your hands. Identify the four directions and also notice how they correspond to your class room.

Observe the picture given below. Kasturi is standing in the middle facing the north.



*Write in which direction are the following to kasturi.*

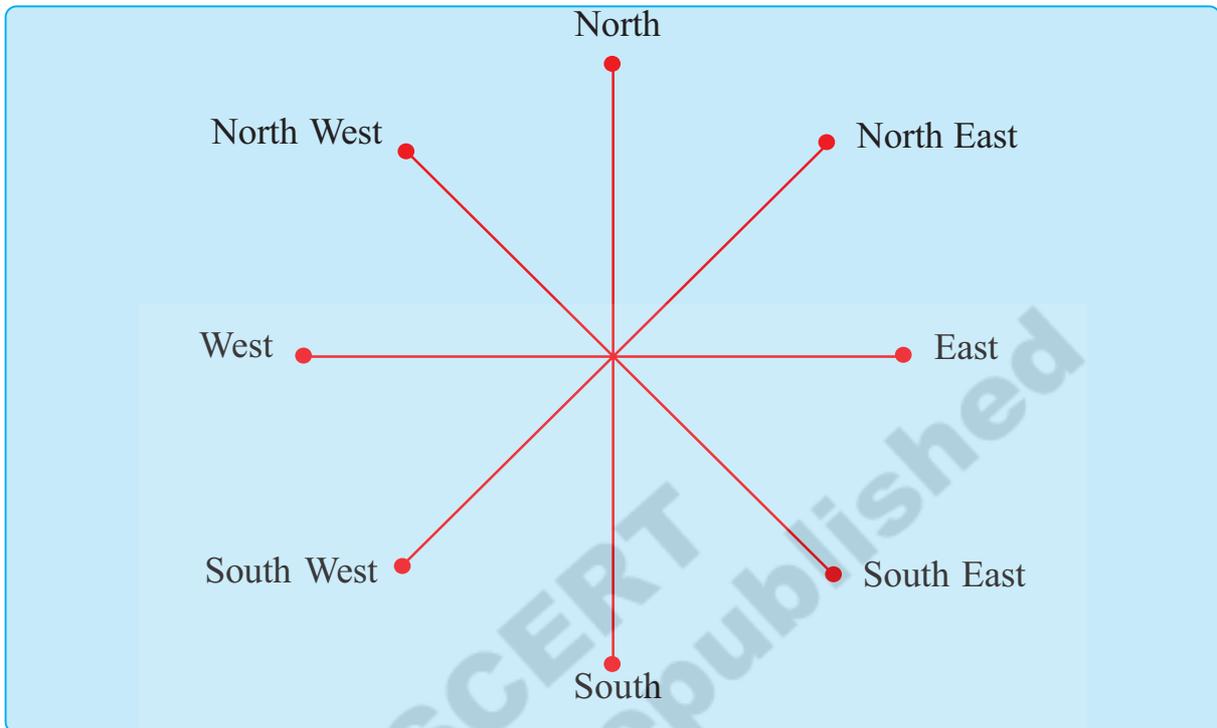
- ◆ The well is on the \_\_\_\_\_ .
- ◆ The bus-stop is on the \_\_\_\_\_ .
- ◆ The school is on the \_\_\_\_\_ .
- ◆ The mango tree is on the \_\_\_\_\_ .
- ◆ Like Kasturi, you too stand in any one place in your village and find the directions of the things around you.



You have read about the north, the south, the east and the west. With this, we can know in which direction, our house, street and village are located. Like wise stand in an open area. When we identify the directions of any area, or building or village, we call them boundaries. With the help of boundaries we can identify any area or a place or an architecture. To know this, you also have to know something else?

## 6.2. Directions, corners

You have learnt about the directions. Lets observe the following picture.



Notice the directions.

### Discuss in groups



- ◆ What do you see along with the four directions?
- ◆ We call the place/side between any two direction as corner. Observe the corners in your house and classroom.
- ◆ How many corners are there? Fill in the table below.
- ◆ Draw the directions and corners on a chart and hang it in your class room. Draw your village and name the things/ places present in all the directions.

In between	Corner
The east & the south	
The south & the west	
The west & the north	
The north & the east	

## 6.3. How to draw a map?

One day the teacher showed some maps in the class. On seeing them Kasturi asked, "How the maps are drawn? How is it possible to show vast places on a small paper?" "To know that, let's draw the map of our class room. Bring meter scale and some match sticks," said the teacher.

### 6.3.1. Measurements of the classroom

Teacher asked them to measure the length and the breadth of the room. Kasturi and her friends measured the wall on the north. Its length was six meters.

*Scale - 1 meter = 1 match stick*

To show the northern wall, the teacher asked them to take match sticks equal to its length. Then Kasturi arranged six match sticks on the floor, to the north. Like wise, they measured the wall on the east to be nine meters. Now they arranged the nine match sticks on the floor, attaching in to the earlier line of nine sticks.



*Usually when we draw maps on the paper the north faces upward (N↑)*

The rest is measured as six meters on the south and nine meters on the west. The pupil placed the match sticks similarly. Then, they drew a line, along the match sticks, with a chalk. Now, they removed the match sticks. The classroom map is ready!

Like this we draw the maps of large areas, on the paper. You have seen, how the pupil have drawn the map of their classroom with match sticks. Now, you discuss with your friends and draw the map of your classroom. Instead of a meter you take it as a centimeter and draw the lines directly without using match sticks on a chart. Hang it in your classroom.

### Discuss in groups



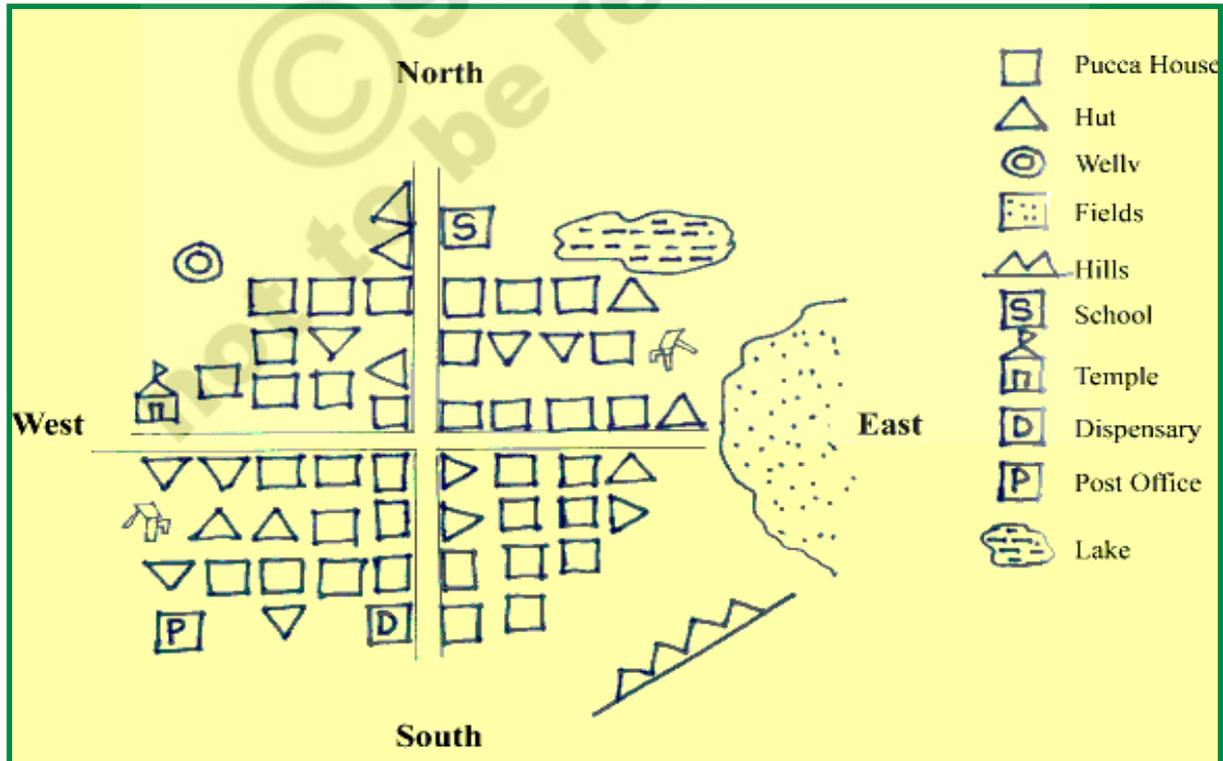
- ◆ What's the use of taking equivalent match sticks while mapping the classroom?
- ◆ Map your classroom and also show the corners.
- ◆ Mention the things and their directions in the room.

## 6.4. Village

Do you know what the boundaries are, to a village? Have you ever noticed to which side is the road, the school, the post office, the bus-stop, the houses and the fields in the village? How to identify a particular place in the village? How will you guide yourself, when you have to visit anyone for the first time?

Of course, you can! with the help of the eight directions you have learnt.

See the map given below. Identify the things and their direction.



After observing the village map discuss in your group and then write in the blanks given below :

### Discuss in groups



- ◆ To the north is \_\_\_\_\_.
- ◆ To the south is \_\_\_\_\_.
- ◆ To the east is \_\_\_\_\_.
- ◆ To the west is \_\_\_\_\_.
- ◆ To the north east is \_\_\_\_\_.
- ◆ To the south east is \_\_\_\_\_.
- ◆ To the south west is \_\_\_\_\_.
- ◆ To the north west is \_\_\_\_\_.

### Do this

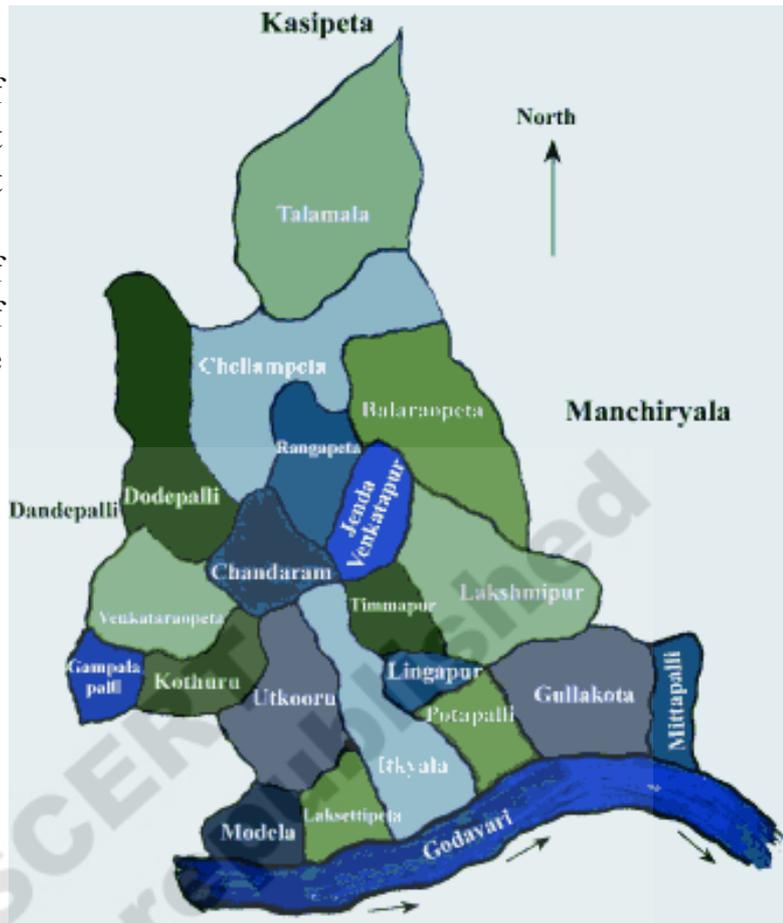
Take your teacher's help and draw the map of your village on the floor. List the following :

- The places and the things in your village.
- To which direction they are?
- Draw the main road of the village, with a chalk on the floor.
- With respect to the road, mark the things present in all directions.
- Like this draw the complete map.
- Observe the maps of other groups and say whether they could draw well or not.

## 6.5. Mandal

Mandal constitutes a group of villages. The number of villages may be upto 50. Population will be around thirty five thousand. In every mandal there will be offices of Mandal Praja Parishad, revenue department, department of agriculture & electricity, and also a primary health centre and a police station. People of all villages visit the mandal regularly for various work. What is the name of your mandal? How many villages are included in it? Try to know. You have learnt about classroom map and a village map. Likewise there will be a map for the mandals showing all the villages in it.

Let us see the map of a mandal. Adilabad district has 52 mandals. Look at the map given at the side. This is the map of Luksettipet mandal of Adilabad district. Observe the villages in the map.



### Discuss in groups



- ◆ Name the villages situated on the four sides of the village, Ranga Peta?
- ◆ On which side of Dandepally mandal is Laksettipet mandal situated?
- ◆ Which village is situated on the southern side of Thimmapur?
- ◆ Name the villages that are situated beside River Godavari?
- ◆ Mention the direction of the flow of river Godavari.
- ◆ On which side of Thimmapur is the village chandapur situated?
- ◆ On which side of Laksettipet mandal is the river Godavari situated?

### Do this

- Collect the map of your mandal. Point out your village and write the borders.

## 6.6. District

As we have villages in mandal, many mandals are included in a district. In every district there will be a Collectorate Office, Zilla Parishad Office and a District Hospital. People from the villages of all the mandals in the district visit the district head quarters for various work. There are 23 districts in our state. Every district has its map. In that the important places, offices and the institutions of the district are indicated. Below is the map of a district. Observe!



**Map of Kurnool District**

### Discuss in groups



- ◆ Define the boundary of the district & their direction.
- ◆ In which direction is Srisailam.
- ◆ Write the names of some of the mandals in Kurnool.
- ◆ Define the boundaries of Banaganapalli Mandal.
- ◆ In which direction is Kurnool to Karnataka?

### Do this

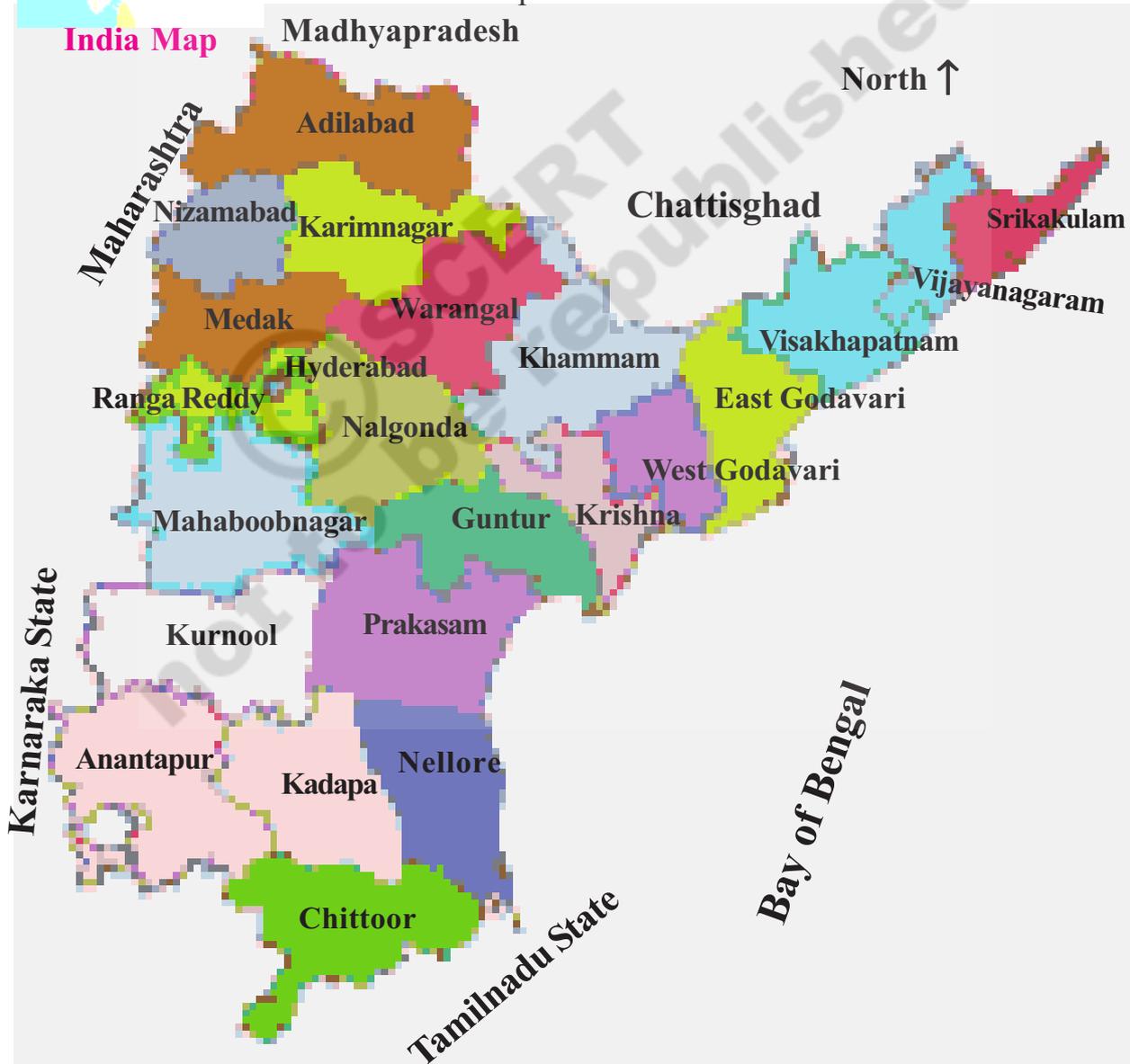
- Trace your mandal on your district map and mention the boundaries.

## 6.7. Our state

Andhra Pradesh (A.P.) is our State. Some villages together form a mandal, mandals together form a district and some districts together form a State. It has 23 districts. Hyderabad is the capital city. Our state occupies the fourth place in area, in the country. Geographically, A.P. is divided into three regions. Namely, Telengana, Rayalaseema and Coastal Andhra. People here celebrate various festivals and practice different cultures and traditions. The rivers like Godavari, Krishna, Tungabhadra, Penna flow through the state. The forests spread through the districts of Adilabad, Karimnagar, Warangal, Khammam, East Godavari, West Godavari, Visakhapatnam, Srikakulam and Vijayanagaram. We grow crops like paddy, jowar, corn, sugarcane etc. Now shall we look at the map of our State.



India Map



Like our state, every other state has its own map. Locate our state in the map of India. Find the states which are surrounding our state. Find the boundaries to

### Discuss in groups



- ◆ What do we have on the four sides of our state?
- ◆ Trace your district on the map of our state.
- ◆ Tell the limits of your district.
- ◆ Name the districts which are adjacent to the Tamilnadu.
- ◆ Name the districts that surround the Hyderabad.
- ◆ Take the Atlas. It is a book showing different maps and roadways, important places, rivers, mountains, crops, wild life sanctuaries etc. Observe our state map in the atlas and find the districts through which the river Godavari flows.
- ◆ Also find the important places in our state and the crops grown.
- ◆ Name the districts of our state which are on the coastal line.

### Do this

- Trace the boundaries of our state on the India map.
- Point out the places and their directions.

our state and their directions. Discuss with your friends and write.

In this unit you have learnt about the maps of a village, the mandal, the district and the state. Use these maps when needed. When we visit a new place, we can locate it on the map. Foreigners who visit India take the help of these maps in locating the places to be visited and their route. Usually maps are displayed at the railway station and the places of tourism.

Maps also tells us about the climate, temperature, rainfall etc. related to weather. You will learn this in detail in your higher classes. Whenever possible you do observe the maps of A.P. & India in your classroom and learn new things.

### Key words :

- |            |             |                        |
|------------|-------------|------------------------|
| 1. Map     | 4. District | 7. Boundaries (limits) |
| 2. Village | 5. State    | 8. Directions (sides)  |
| 3. Mandal  | 6. Country  | 9. Corners             |

### What have we learnt?

#### 1. Conceptual understanding

- a) What do you see on the four sides of your house?  
b) What do you have around your school?

- |               |                    |
|---------------|--------------------|
| • East _____  | • North West _____ |
| • West _____  | • South East _____ |
| • North _____ | • North East _____ |
| • South _____ | • South West _____ |

c)



What are there on all the four sides of Chandu?

- a) What are boundaries? Name the boundaries of your village?  
b) Write the differences between a mandal and a district.  
c) What is the relationship between the villages and the mandals.

## 2. Questioning - hypothesis

- ◆ Look at the map of A.P. and list down the questions you would like to ask.

## 3. Experiments - field observations

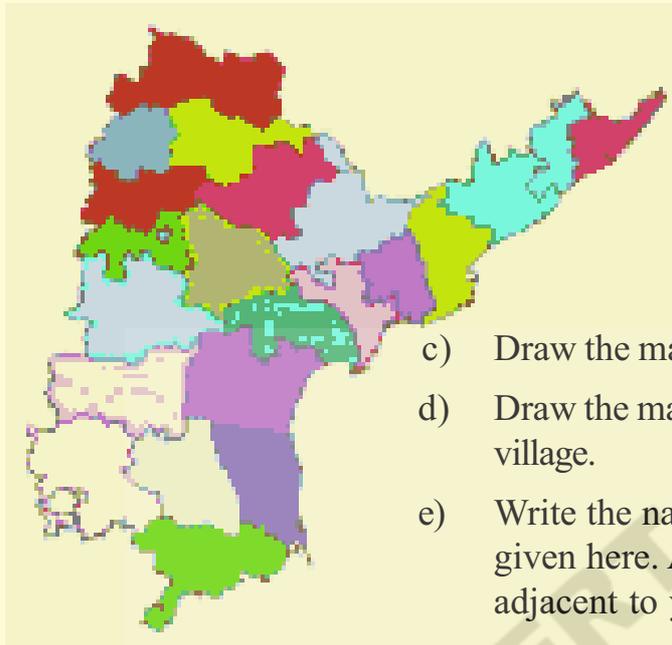
- a) Draw the map of your classroom with the match sticks and display it in class.
- b) Using mapping skills draw an important place to be visited in your village. Show it to your friend. Check whether he is able to locate the place or not. In the same way, you try with your friend's map.

## 4. Information skills, projects

- ◆ Visit the houses near by. Fill the table given below after your visit with the observation made.

Observations	Items to be tabulated		
	House-1	House-2	House-3
• To which side is the main door?			
• To which side / corner is the tap / well / bore-well / hand pump / water tank?			
• To which corner is the kitchen?			
• In which direction do you have open space at your home?			
• In which direction are the windows & the doors of the house			
• On which side is the road to the house?			
◆ Are all the houses arranged in the same way?			
◆ Usually to which side / corner will be the water storage tanks and kitchen in most of the houses?			
◆ Did you notice any relation between these arrangements and the directions in which they are?			

## 5. Communication through mapping skills, drawing pictures and making models



- a) Prepare a model of your school with cardboard along with your friends. Show the things and their directions in the model.
- b) Draw the map of your house. Show the rooms in it.
- c) Draw the map of your village.
- d) Draw the map of your mandal and identify your village.
- e) Write the name of your district in the A.P. map given here. Also write the names of the district adjacent to yours.
- f) With the help of A.P. map identify and write the names of the districts which have the coast line.
- g) Draw the map of your district and state in your note book. Write the boundaries of our state and name the districts.
- h) Draw the map of your district and identify your mandal.

## 6. Appreciation, values and awareness towards bio-diversity

- a) Under what situations do you use maps?
- b) What information do you get from maps?
- c) What are the uses of maps? why?

### Can I do this?

1. I can speak about the directions and the things and their directions Yes / No with respect to my house, school & village.
2. I can ask doubts about A.P.map Yes / No
3. I can prepare a model of the school with card board. Yes / No
4. I can use the maps to get the required information. Yes / No

# 7



## PUBLIC INSTITUTIONS

Rangapur is a small village surrounded by hills. The village is situated beside a river. Due to heavy rains and floods in the river the streets were covered with mud water, the electric wires were dislocated, the water pipes were damaged. There was no water supply. Nobody came to their rescue or to solve the problems due to heavy rains. Who will solve these problems? Who will be held responsible for this state of affair? What other problems would arise due to floods? Discuss these issues with your friends and note down the points.

### Discuss in groups



- ◆ Who has to clear the mud on the streets of Rangapuram?
- ◆ Who has to repair the electric lines?
- ◆ Who will repair the water pipelines?
- ◆ Who should we complain to in case of public inconvenience.

In every village they have a gram panchayat which provides the required facilities to the public and solve the problems if any. In every village, in addition to grampanchayat there will be other public institutions like school, veterinary hospital, Anganwadi Centre etc., The institutions which work for public welfare are called public institutions.



### 7.1. Public institutions - Grampanchayat

Mohan wants to apply for a ration card, so that he can get household items from the rationshop. He can also get bank loans. He decided to apply for a ration card. He went to meet the village the revenue secretary along with his daughter Aruna.

Mohan approached the revenue secretary and informed him about their family. (Son, daughter and wife) and requested for a ration card.

The village revenue secretary advised Mohan to apply at the ‘mee seva’ office with a proof of residence.

Meanwhile the village secretary called upon all the people who came to record the details of their crops. Village secretary looked into the records with the help of his revenue assistant and gave the receipts to all.

The kinds of work done by different officers at village level are given below in the table. Discuss with your teacher and know about the officers who are responsible for different work and fill the table.

Sl.No.	Details of the functions	Public servant/officer responsible
1.	Recording crop details	Village Revenue Officer(VRO)
2.	Collecting house tax	
3.	Providing street lights	
4.	Maintenance of land records	
5.	Registration of births and deaths	
6.	Responsible for work related to revenue	
7.	Responsible for the works related to Mandal Praja Parishad	
8.	Collection of water charges	
9.	Distribution of letters	
10.	School maintenance	
11.	Cleaning the drains	
12.	Vaccination and medication	

### Collection



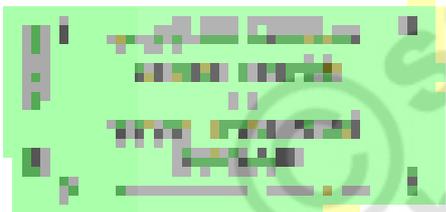
- ◆ If you live in a city, collect the details of the person who is incharge for the above duties in the table with help of your parents / teachers. Write them in your note book.
- ◆ Has review meeting held in your village? If yes what were the issues discussed. Collect information from your village sarpanch and village secretary regarding the development of village and activities taken up during the review meeting?



Mohan along with his daughter went to "Mee Seva Centre". They have taken an application form. Aruna filled the application form as per the details given by her father. Mohan attached a copy of his land pass book and submitted the form. The officer at 'Mee seva' centre recorded the details online and gave a receipt to Mohan. They asked Mohan to meet the mandal revenue officer after a month.

Mohan met the Tahasildar and came to know that his application has been sent to

the district civil supply officer.



In due course the district civil supply officer accepted Mohan's application and allotted ration coupons to him. Mohan also received the same information from the district civil supply officer.

Mohan and Aruna met the Tahasildar and received the ration coupons. Tahasildar sent the details of the coupons and Mohan's family photograph to district civil supply officer for issuing a ration card.

After some days, Mohan received a temporary ration card from the tahasildar.

It took 45 days for Mohan to receive a ration Card. Now, Mohan is getting ration from public distribution system. He also took a loan from the bank with that ration card.



### Do you know?

While issuing ration cards, the government is using iris camera to take the photographs. The centre part of the eye is called Iris. The Iris camera will capture the Iris part of the eye which can save a photo without fading. Mimizo invented the iris camera. This iris image will detect the individual if he comes for the second time.

### Taking photograph through Iris camera



### Do this

- Observe the ration card at your home. Notedown the details given in the ration card in your note book.

Ration card is useful in many ways. It can be used as an identity proof for all family members. It is useful as an identity proof to submit the applications in the banks and government offices to avail different welfare schemes. It can be used as an address proof. There are two types of ration cards, white and pink. The White card is allotted to poor families. The white card holder can utilise many public services and hospital facilities in government and recognised private hospitals in addition to ration with nominal rates. The ration commodities will be sold at the rates prescribed by the government.

### Collect this



Visit a fair price shop in your village/town and collect the following information.

Sl.No.	Details	Available/ not available
1.	Notice board	
2.	Working time	
3.	Availability of the commodities	
4.	Price list	
5.	Do we get provisions next month, if we don't take this month.	

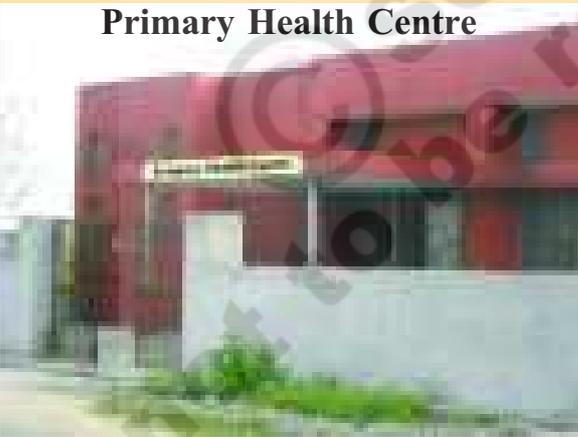
The government will provide the required provisions for the poor, through fair price shops, if the distribution of provisions is improper in the ration shops. Do you know what should be done? They should be provided provisions regularly, other wise they can complaint to the tahasildar.

## 7.2. Public institution - mandal head quarters

You have learnt that there will be a mandal revenue office in every mandal which is headed by tahasildar. It discharges various functions like distribution of ration cards to the families who come under its perview and collection of land reveue (tax on the cultivated land). Do you know who will the government func-tions in every village? In addition to mandal revenue offices some other Officer also extend their services to the people of that mandal.

Do you know the different public institutions that work in every mandal? Read them in the table given below.

Mandal level institutions	Activities
<p><b>Mandal Parishad Office</b></p> 	<ul style="list-style-type: none"> <li>◆ It is headed by the Mandal Development Officer.</li> <li>◆ Providing primary education.</li> <li>◆ Agriculture, cattle rearing, fish farming, poultry breeding &amp; development.</li> <li>◆ Construction and repairs of roads and also irrigation.</li> <li>◆ Providing safe drinking water, health, women and child welfare, sanitation etc.</li> </ul>
<p><b>Police Station</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by sub-inspector of police.</li> <li>◆ Maintains the law and order.</li> <li>◆ Reducing crime rate.</li> <li>◆ Maintaining good relations with public.</li> <li>◆ Receiving complaints from the people, recording them and responding immediately.</li> <li>◆ Conducting enquiry on the complaints and recording them.</li> </ul>

Mandal level institutions	Activities
<p style="text-align: center;"><b>Mandal Revenue Office</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by tahasildar, supervises the activities of the village secretaries and activities of the employees of mandal revenue office.</li> <li>◆ Receiving complaints from public and enquiring about them.</li> <li>◆ Ensures that all the welfare programmes reach the needy people.</li> <li>◆ Issuing caste and income certificates.</li> <li>◆ Relieving the people from bonded labour.</li> <li>◆ Issuing of pass books to farmers.</li> <li>◆ To resolve the cases related to land issues/disputes.</li> </ul>
<p style="text-align: center;"><b>Primary Health Centre</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by health officer, treating patients with common diseases everyday.</li> <li>◆ Maintaining the sub-health centres and supervising its activities.</li> <li>◆ To implement national health programmes in the mandal.</li> <li>◆ Ensure safe delivery under mother-child welfare scheme.</li> <li>◆ Refer the needy cases to the district hospital for further treatment.</li> </ul>
<p style="text-align: center;"><b>Bank</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by the manager. Collecting deposits from people.</li> <li>◆ Distribution of loans to farmers.</li> <li>◆ Collecting daily deposits.</li> <li>◆ Distribution of loans to women self help groups.</li> </ul>

Mandal level institutions	Activities
<p data-bbox="288 376 703 412"><b>Mandal Resource Centre</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by mandal education officer (MEO). Enrolment of all school age children in schools.</li> <li>◆ Monitoring schools to provide quality education to all the enrolled children.</li> <li>◆ Inspecting the schools.</li> <li>◆ To take action on irregular teachers.</li> <li>◆ Effective implementation of mid-day-meal programme in all schools.</li> </ul>
<p data-bbox="336 936 655 972"><b>Veterinary Hospital</b></p> 	<ul style="list-style-type: none"> <li>◆ Headed by veterinary Doctor.</li> <li>◆ Look after the health of all animals.</li> <li>◆ Provide treatment to wounded animals.</li> <li>◆ Preventing diseases.</li> <li>◆ Identify the diseases which transmit from animals to human beings and take preventive measures.</li> <li>◆ To educate the farmers on how to take care and give nutritious food to animals.</li> </ul>

Now, you have learnt about the different government institutions working at mandal level to serve the people in the mandal. Once in every three months a meeting will be organised to review all the development activities. This meeting will be conducted under the chairmanship of Mandal president. As Sarpanch is elected in every panchayat, Mandal president is also elected by all the people of that Mandal.

### Do this

- What is the name of your mandal?
- Who is your mandal president?
- To which village does he / she belong?
- When are the mandal development meetings held in your mandal.
- Who represents the mandal development meetings from your village?
- What would be the agenda of the meeting?
- Discuss on the activities taken up by village panchayat and other public institutions of in your class.

Mandal president will send the invitations in advance to all the members to attend the mandal development meetings. Look at an invitation letter sent by Kothur mandal president of Mahaboobnagar.

#### **Mandal Development Officer, Kothur Mandal, Mahaboobnagar District.**

Letter No : 2/B/2011.

Date : 02-01-2011

#### **Invitation for General Body Meeting**

**Sub :** Invitation to attend a meeting to be held on Date:28-01-2011.

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The Mandal Development Officer, Kothur here by informs all members of Mandal Parishad Territorial Constituency (MPTC), to the Zilla Parishad Territorial Constituency (ZPTC) members, Coopted members and all Sarpanches, there is a meeting convened on 28-01-2011 at 10.30 am at mandal Development Officer, Kothur. Hence all the members are requested to attend the Meeting.

President  
Mandal Parishad, Kothuru Mandal,  
Mahaboobnagar District.

Now you have seen the invitation for general body meeting. Do you know what would they discuss during the meeting? The points they discuss are called 'agenda'. Read the 'agenda' points identified for Kothuru mandal general body meeting.

### Agenda Items

- Agriculture
- Working of animal husbandary
- Panchayat raj and rural development
- Pensions
- Drinking water
- Horticulture
- Primary education
- Women and child welfare
- Water harvesting
- Activity of primary health centre
- Electricity
- Indiramma Avasa Yyojana / construction of houses
- Roads and Buildings
- Industries and prevention of pollution
- Other points with the permission of chairperson

You have read the agenda! Discuss with your friends in groups about how the members would discuss these points.

### Discuss in Groups



- ◆ Who will attend the Mandal development meeting?
- ◆ What would be the discussion points?
- ◆ Suppose if you were a sarpanch of your village and attending mandal development meeting. What points of your village you would like to focus on?
- ◆ Who are the officials that attend the Mandal development meeting?

Sarpanches and MPTC members belonging to different villages discuss the problems of their villages in the meeting. The Mandal level officials answer the questions asked by the elected representatives. The Mandal Development Officer will conduct the proceedings of the meetings. Tahsildar, Agricultural Officer, Veterinary Officer, Mandal Educational Officer and Health Officer attend the meeting and reply to the questions asked by the members.

### Discuss in groups



- ◆ Some of the questions asked by the members during the meeting are given below. Read them and think and discuss in groups about how the different officials would have answered those questions.

Sl.No.	Questions	Officer who gives the answer
1.	When do they supply seeds to the farmers?	
2.	The roads are damaged and it is becoming a problem for transport, when will the roads be repaired?	
3.	When will the Mid-day-meal agency get paid?	
4.	In our school there is no toilet facility for girls, when will you construct toilets?	
5.	Our school children require library books. When will you supply them?	
6.	The farmers need loans to purchase fertilisers. When and how much money will be released for them?	
7.	Some of the villagers have no houses. When will you sanction houses for such people?	

### 7.3. Public institutions - district level - collectorate

Mohan and Kiran are neighbours. Kiran is frequently facing some health problems. One day Kiran fell on the ground and became unconscious. On seeing the anxiety of Kiran's wife, Mohan, immediately called '108' and Kiran was admitted to a government hospital.

Doctors examined Kiran and diagnosed him with a heart problem. They treated him and advised him to undergo a heart surgery within a month.



The doctors advised Jyothi, Kiran's wife to bring Arogyasree card for free medical treatment of her husband. Jyothi decided to apply for Arogyasree card as they had white ration card. She wrote an application to the District Collector for Arogyasree Card.

### Application

Date: 01.01.2013

The District Collector,  
Ranga Reddy District,  
Andhra Pradesh,

Respected Sir,

**Sub :** Allotment of Arogyasree card under Medical Insurance Scheme - Reg.

I would like to bring the following to your kind notice. I have been suffering from ill health for a long time. I had a heart stroke recently and doctors advised me to under go a surgery. I don't have enough of money to meet the medical bills. I have a white ration card.

Hence I request you to kindly grant me Arogyasree card so that I can get free medical aid.

Thanking you.

Yours faithfully

Kiran

Patloor,

Marpally Mandal

Ranga Reddy District.

Enclosures:

- 1) Original copy of white ration card
- 2) Copy of medical reports

Kiran's family went to the collector's office and submitted the application to the collector and explained their problem. The collector sent the application to the concerend health insurance officer. Kiran received the Arogyasree card within a week. With the help of the Arogyasree card Kiran under went surgery. He returned home cheerfully.

In addition to mandal office, there will be many government departments at district level to serve the people in the villages. They release the funds to mandals and panchayats to take up different welfare activities.

### Collect



- ◆ In addition to district collectorate what are the other offices function at district level? Collect the information with the help of your teacher / parents and prepare a table.

Sl.No	Name of district level office	Designation of the officer	Nature of the duties

Different types of public institutions are functioning from village level to district level to meet the needs of the people. All the officers perform the duties allotted to them.

#### 7.4. Public institutions - Public property

All the government institutions are fulfilling the primary needs of the people. In order to run all these institutions a lot of money is required to pay the salaries to the employees and to meet other expenses.

##### Discuss in groups



- ◆ During strikes and rastroko (where in protestors do not allow any movement on the roads), people damage public property, government offices and RTC buses. They feel that they are damaging government property? Whose properties are these?
- ◆ To run the government institutions who pays the money? What are the sources of income for government?
- ◆ What should we do to prevent the damage caused to public property?

Public institutions are being run by our money. We pay the money to the government in the form of different taxes. The same money is being used to meet the primary needs of the people. It's our property and we are responsible to protect these public properties for our future citizens. If we don't protect them there will be no progress.

We are getting services in the form of street lights, water pipelines, roads, hospitals and schools. Don't you think these are for us only? What will be achieved if we damage the doors and windows of government offices? We are witnessing the street lights being lit during day time also, the water being wasted through the taps? Don't you think that these are our properties and we have the responsibility to protect these resources?

## 7.5. Right to information

- Mother : Well! Ravi, Why are you playing in front of the house without going to the play ground?
- Ravi : Oh! foul smell due to the overflow of drainage on the ground is stopping us from going to play ground.
- Mother : Then, you have to complain about it in the Municipal Panchayat Office. You are not supposed to play in front of the houses.
- Raju : Aunty! my brother has already complained about it five days back.
- Aruna : Aunty! do they care, if we complain?
- Mother : Don't you know? The Right to Information Act has been implemented on 12<sup>th</sup> October, 2005. From that day the government officials started taking care of complaints of public.
- Aruna : What is 'Right to Information Act?'
- Mother : The right to get information from public institutions is called 'Right to Information Act.' As part of this we can know the information about the activities taken up by the government, different documents, reports etc., we can get photo stat copy of the documents also.

### Right to Information Act - 2005

The Right to Information Act is the Right to get the required information from Public Institutions (Govt. Offices). We have a right to know the details of the records, documents, memos, orders, reports of government offices etc. For this, we have to submit the duplicate copies or required application to the concerned offices. We can collect the details in written from the concerned offices.

We can write the application on a white paper also. We have to pay a nominal fee. There is no fee at the village level. The people who are below poverty line need not pay the fee. The concerned officer should give the information within 30 days. If the application is about Right to live, freedom of individual, then the information should be given within 48 hours.

Commission for information functions as an autonomous body at state and centre level. Public information officer is present in every government office.

People are part of the government. Everyone has a right to get the information about the working of an office and other required information.

The main aim of the act is to give the information voluntarily by the government.

- Ravi : Mummy! do all the offices of our village keep the required information.
- Mother : Yes, they have to! It is the duty of the officers to make the information available. Our Right is to ask and know.
- Aruna : Aunty? You say, ask and know. Then, who should we ask?
- Mother : Good question. We should ask the public relations officer and know the information in the form of documents also.

### Application for Information

Dt : \_\_\_\_\_

Public Relations Officers (Village Secretary),  
Name of the Gram Panchayat :  
Bijwaram Village,  
Maldakal Mandal.,  
Mahaboobnagar District.  
Sir,

### Request for Information

With reference to the Right to Information Act-2005, section 6(1), I request you to kindly give every page of the following information in Telugu / Hindi / English under section 4(4).

Particulars of funds sanctioned to the Gram Panchayat in the year 2012-13

Total funds received in the year 2012-13 Rs. \_\_\_\_\_ .

Money spent on different kinds of work Rs. \_\_\_\_\_

Any amount left after the expenditure? \_\_\_\_\_

How much money is left? Rs. \_\_\_\_\_

I here by pay Rs.10/- through challan for the application. Kindly give the receipt.

Signature of the applicant

Name : Venkat

### Address :

Village : Bijwaram

Mandal : Maldakal \_\_\_\_\_

Distirct : Mahaboobnagar \_\_\_\_\_

- Raju : Aunty! my brother complained in the panchayat office regarding the over flow of drainage five days back. Can we know the position of the complaint now?
- Mother : Yes, you can. They should give the information within 30 days.
- Aruna : If they don't give information within 30 days, then?
- Mother : Then we have to apply to the higher official. Bring a white paper. I will tell you how to write application. (The children write the application and meet the village secretary along with their mother).
- Raju,Ravi,Aruna,Mummy: Namaste Sir! We came to meet you.
- Village Secretary : Namaste! Children! What do you want?
- Mother : Sir! the play ground where these children play every day is smelling due to the over flow of drainage. Raju's brother gave a compliant regarding this 5 days back.
- Village Secretary : Do the workers clean the drainage every day?
- Raju : No sir! No one has cleaned the drainage for so many days.
- Aruna : Sir! let me know, who would clean the drainage? Once in how many days the drainage has to be cleaned?
- Village Secretary : Why do you ask all these particulars?
- Mother : Sir, don't say like that! Every one has a right to get information according to R.T.I. Act. Children, submit the application.
- Village Secretary : (Receiving Application) OK! You can go now!
- Children : Sir, What about receipt?
- Village Secretary : Good God! Ok, (After writing receipt) take this. I will order people to clean the drainage now itself. Children, you asked for the information. Panchayat workers have to clean the drainage every day. I will send this information in a written form to you.

### Discuss in groups



- ◆ On what occasions we can use the Right to information?
- ◆ What information you would like to get in context of the problems of your village? Write an application.

## Key words :

- |                       |                                    |                           |
|-----------------------|------------------------------------|---------------------------|
| 1. Public institution | 6. Gram-panchayat                  | 11. Ration card           |
| 2. goods/provisions   | 7. Mandal Parishad                 | 12. Arogyasree card       |
| 3. Complaint          | 8. Collector's office/collectorate | 13. Public property       |
| 4. Reports            | 9. General body meeting            | 14. Primary health centre |
| 5. Loan               | 10. Mandal parishad President      | 15. Veterinary hospital   |

## What have we learnt?

### 1. Conceptual understanding

- What are public institutions? Give some examples.
- What are the functions of a Grampanchayat?
- What are the problems of your village? Does the Gram Panchayat solve them?
- Which mandal do you belong to? What are the different mandal level offices?
- What is your district name? where is it located? What are the different offices located there?
- Can you find the differences between the functions of mandal development officer (MDO) and revenue officer?
- Do you know why we get only one ration card per family?
- What are the advantages of Right to Information? What information you would like to know?
- Which problems of your village, would you like to utilise right to information?

### 2. Questioning - hypothesis

- Write the name of any district level office. Frame questions to know what are the services people get through that office.

### 3. Experiments - field observations

- Visit a public institution in your village. Write down which functions it is attending to and which functions it is not attending?

#### 4. Information skills, projects

- ◆ Visit a Grampanchayat or a Mandal level office. Find out who are working there and what are their functions. How are the people benefiting through that office. Collect the details and present in your class.

#### 5. Communication through mapping skills, drawing pictures and making models

- Draw your Mandal map. Mark the different institutions of your mandal.
- Identify your Mandal in your district map. Identify the surrounding mandals. Mark the public institution with the following given symbols.

Ex: School	△	Hospital	+
Temple	□	Post Office	P
Bank	○	Bus Station	⊗

#### 6. Appreciation, values and awareness towards bio-diversity

- What measures can we take to prevent the damages caused to public institutions, government offices and public property.
- Your school is a public institutions. Write the do's and dont's in your school?
- Parents must attend parent-teacher meeting in schools. Similary people should attend Gramasabha, then only they will come to know what is happening there. How can you encourage your parents to attend such meetings?

#### Can I do this?

- |  |          |
|--|----------|
| 1. I can say about the different institutions functioning from grampanchayat to district level.                | Yes / No |
| 2. I can explain how they are serving us   | Yes / No |
| 3. I can locate / identify the offices in a mandal or district map.  | Yes / No |
| 4. I can also question to get information from any office.   | Yes / No |
| 5. I can mark out the different institution on the map of Mandal   | Yes / No |
| 6. Government institutions are public property. I can explain what should we do to protect these institutions. | Yes / No |



## HOUSES - CONSTRUCTION - SANITATION

We need house to live in. Villages and towns have different kinds of houses. Look at the houses in the picture given below.



### Discuss in groups



- ◆ What are the different kinds of houses in the picture?
- ◆ What are the different kinds of houses in your village?
- ◆ What are the reasons for the existence of different kinds of houses?

### 8.1. Houses - yesterday and to day

The present day houses have been subjected to many changes compared to the houses in the past. Where did the people live in the past? Do you know, what kind of houses they lived in?

Yadagiri is a mason. He has been constructing houses for the last 20 years. He constructed different kinds of houses in villages and towns. Let us observe some of the houses constructed by Yadagiri. We know that Yadagiri has been constructing hundred of houses for the past 20 years. Let us see what he says about the changes in construction style.

"My parents constructed our house during my childhood. Our house is constructed with mud. My mother and I also helped in constructing the house. We brought the mud, mixed it with water and made plumps. My parents arranged these plumps one on top of the other in rows and constructed the wall. After raising four walls to 6 feet height we made a frame of bamboo sticks on black wooden logs. We covered the frame with palm leaves. Doors and windows were made with neem log by Satyam. They were fixed to the walls. My mother coated the walls and floor with dung and put rangoli. We would white wash the walls during festivals. My mother used to cook on fire wood. These days, the materials used for construction of houses are available locally. Our house used to be very cool.



### Discuss in groups



- ◆ Which materials were used by Yadagiri to construct the house? Of these, which materials would they have purchased?
- ◆ What are the differences between the mud houses in the past and those in the present?
- ◆ Do people construct houses with mud now a days also? Why?

## 8.2. Mud roofs:

"I became a mason at the age of 18 years. I constructed roofs with mud in the beginning. Do you know? we constructed the walls also with mud. We used to mix sand and lime in the mortar and then used the mix to build the walls. The walls of the ancient forts were also built with stones and lime."

"I build so many buildings with baked bricks and lime these days. These buildings contain kitchen and storeroom for grains. We did the plastering of walls with the mix of sand and lime. The roof was built with teak logs and covered with Bangalore tiles. For flooring stones of Tandur, Betamcharla, Macharla were used. We left more empty space around the house. Every house grew neem tree. All the houses would have sitouts in the front. Many people slept outside the houses on cots."

What is the use of sit outs in front of the houses?

The rich people used to construct buildings with slabs and brick walls. Plastering is done by cement. The roof is laid with cement concrete which contains steel, cement and sand. Many changes have taken place in the construction of houses in the present.



### Discuss in groups



- ◆ How are the bricks laid while constructing the walls?
- ◆ What material were used to build the slabs? Where are these materials available?
- ◆ Who might have helped in construction?

“I constructed a duplex house recently. The owner is Chakrapani. The area of the site is (length) 36 feet by (breadth) 30 feet. The plan was drawn by an engineer”.



### Think..

Observe the plan of Chakrapani's house. What is there on the first floor? Say and write.

“We made bed with cement concrete and constructed pillars with steel and concrete. Walls were built using cement bricks. Interesting thing is that the cement bricks floated on water. We used lifts and vibrators to construct the slab. We did cement plastering to the walls and smoothend them with wall care putty. The ceiling of the rooms were done using sheets of plaster of paris this keeps the rooms cool. Flooring was laid using marble stones brought from Rajasthan and Uttar Pradesh. Ceramic tiles were laid in the kitchen and bathrooms.”

“I didn't have the skill to do all the work alone. Workers with different skills were called for various work like laying of tiles and stones, ceiling painting, fitting pipes etc., the current was generated with solar panels arranged on the roof of the house. Water gets heated using solar panels. The whole plot was used to construct the building. The roof was filled with mud to grow vegetables and flowers. The whole roof was covered with plastic sheets. This is called 'Roof Garden'.”

### Think...

- What are the differences between a duplex house and a building?
- What is the aim of growing a roof garden?

### 8.3. Let us know, how a house is constructed!

Visit any house that is being constructed near you. Collect the information and write.

#### Collect the information



- ◆ What type of house is being constructed?
- ◆ How many people are working? What are the various types of work and who are involved is doing them.
- ◆ What are the daily wages? (Ask any three)
- ◆ What different types of material and tools are used for construction?
- ◆ How did they bring the materials? (tractor / lorry / auto / bullock-cart/ rikshaw etc.,)
- ◆ How many bricks and bags of cement is required to construct a room?
- ◆ How much money is spent on the construction of one room?

## 8.4. Making of bricks

In construction, bricks made with mud are used widely. The bricks which are light, strong and red in colour will have more demand. Do you know how the bricks are made? Let us know the different stages of making bricks.



### Bricks are made in the following stages



- ◆ Collecting clay
- ◆ Mixing clay with ash
- ◆ Adding water to the mixture and making it into a smooth paste by making cattle to walk / tramp on it.
- ◆ Filling the moulds with mud plums, drying the bricks for two days under the sun.
- ◆ Arranging the dried bricks in a kiln in layers and blocking them with firewood and husk for 30 days.
- ◆ When the bricks burn and turn red in colour, they will be sold to people.

### Discuss in groups



You have learnt how the bricks are made. Observe the pictures given below. Write the different stages of making bricks in the pictures given below.



1. \_\_\_\_\_



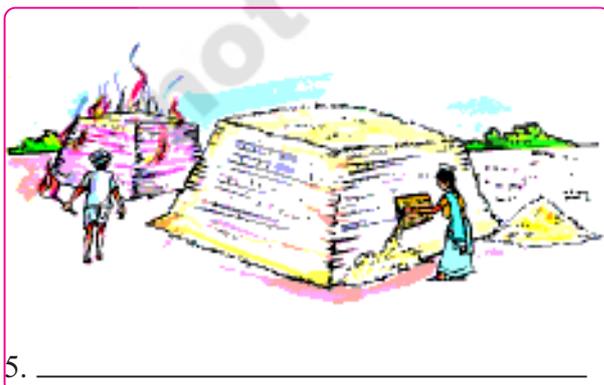
2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_

In addition to bricks we need stones, teak, cement, concrete, kankar (pieces of Granite), steel, tiles etc: to construct a house. Let us know about them.

## 8.5. Construction of house - Other materials

To construct a house, besides bricks, materials like foundation stones, flooring stones eg: Tandur, Betamcharla, Khammam are available in different colours in our state.



**Tandur stones**



**Betamcharla stones**



**Shabad stones**



**Khammam granite**

Kankar stones are required to prepare concrete mix. For this, crushers are used. Huge rocks will be put in machines and cut into smaller pieces. Workers who do this work live at the place of work. Their children also live with them.



### Think...

- Do the children of workers go to school? What would happen if they don't study?
- What facilities are needed by the workers of kilns and construction labourers? How are the facilities provided.

## 8.6. Construction of apartments.

The cost of land in towns is very high. So, apartments with many flats are constructed on smaller sites. Apartments are constructed to accommodate 25 to 30 families. The residence of each family is called a flat. Nowadays, apartments are constructed to accommodate more than 50 families. Do you know what tools and machines are used to construct apartments? Observe the pictures given below.



### Discuss in groups



- ◆ Why do we use them?
- ◆ How are the top floors constructed?
- ◆ How do they transport the material to top floors?

### Think...

**Differentiate between apartments and independent houses.**

Generally marbles or tiles are laid on the floors of apartments. These are available in your region. Find out how that material has reached your place? And from where?

The important parts of a house are doors, windows and frames. Usually, people use wood. Nowadays, some are using doors made with iron. In apartments, they make doors with plywood. Glass is used for windows.

### Think...

**Why people started using other materials instead of wood for doors and windows?**

## 8.7. Houses - different regions:

Houses are constructed keeping in mind heat, rainfall and the materials available. Let us learn about the different types of houses in various regions of our country.

Rain-fall is more in the north-east regions, such as Assam, Meghalaya, Nagaland etc., wet weather prevails always. The Britishers started constructing houses here in the year 1826. We find more wooden houses here. Bamboo sticks are used as walls. They are coated with clay mixed with cow dung. The roofs of the houses are slanting, made with sheets. The lower part is constructed on stilts. The passage that allow the rain water to drian off is called stilt.



### Think...

**Why the sheets covering the roof is laid slantingly?**

Kashmir has a cooler climate place. Sometimes the temperatures fall to 0 degree centigrade. Here houses are constructed on mountains. In Srinagar, tourists live in boat houses called 'Donga' on the river Jhelum.



### Do you know?

Coloured stones are available at Tandur in our state. Stones are very cheap here. So, people construct the walls, slab, flooring every thing with stones only. Stone roof! Is it not amazing? Similarly coconut leaves in coastal regions, bamboo in Nallamala Manyam forests are widely used for the construction of houses.



## 8.8. Houses - problems

We all need house to live in. But most of the people do not have their own houses. There are many poor people in our state. These people live in rent houses or in temporary houses.

### Discuss in groups



- ◆ Do you all have own houses? Why every body does not have own houses?
- ◆ What problems people face when they don't have a own house?
- ◆ What facilities do you have in your houses?
- ◆ What are the reasons for the differences in housing facilities?

Poor people live in huts, beside streams, river banks and in open places in towns. Observe a slum area in Hyderabad. Why do people live in slums?



**Think...**

**Why slums look dirty?**

### 8.9. Excretion in open places



Many rural villages don't have toilet facilities. Some people, though they have toilets go to open places for excretion. This is a bad habit. Many problems arise due to this. The house flies that sit on the stools, spread harmful bacteria and diseases. When the faeces (stools) is excreted near lakes and streams it mixes with water when it rains. When we drink this water cholera and typhoid attack us. Worms spread due to open excretion. Anaemia is caused due to worms in the stomach. The food taken is absorbed by the worms and the person remains weak. De-worming tablets should be taken yearly twice.

## 8.10. Complete sanitation to be provided

The government is trying to provide toilet facilities to all. It is providing an economic help of Rs. 7500 to all weaker sections.



### Anitabai demanded toilet to stay at her husband's house :`

The woman in the photo is Anitabai. She belongs to Chichowli village in Betul district of Madhya Pradesh. She was married to Sivaram of Ratanpur village in the year 2011. She was embarrassed to enter the house of her husband, because, there was no toilet in it. She returned to her village. When questioned, she told, she would enter the house if a toilet is constructed. Discussion started on this matter in the family and in the village. Every one accepted Anitabai's opinion. Then a toilet was constructed in her mother-in-law's house. On seeing this, all the families in the village constructed toilets in their houses. In this way, Anitabai became the reason for the sanitation movement. The whole country took interest in it. The rural development minister Mr. Jai Ram Ramesh honoured Anitabai with 'Sulabh Sanitation Award' and presented a cheque of Rs. 5,00,000. The then president Mrs. Pratibha Patil and Prime Minister Dr. Manmohan Singh also appreciated her.



Anitabai receiving cash award from the Central Minister Sri Jai Ram Ramesh

### Do you know?

The villages that have 100 percent sanitation facilities and toilet in all the houses will get Nirmal Puraskar. The president of India will present this award. Find & say how many villages in your mandal / district has been awarded Nirmal Puraskars.



Receiving Nirmal Puraskar from the President of India

## 8.11. Sanitation - a compulsory requirement



Health is wealth. Most of the diseases spread through unhygienic conditions. Dirty surroundings is the main enemy of our health. Observe the picture given. What is happening in the picture. What harm results due to this?

### Discuss in groups



- ◆ Is it right to throw / dispose the garbage in this manner? Think...
- ◆ How is it harmful?
- ◆ What do you do with the trash at your home and the school?
- ◆ Is all the trash / garbage use-less?
- ◆ Can we re-use it?

## 8.12. How is garbage collected at our homes?

Observe the garbage collected at your house. What does it comprise of? There is left over food, leaves, peel of fruits, wet garbage, covers, papers etc., Wet trash decays quickly and mixes with mud. We should throw this into compost pit. We can recycle the dry trash. We should give away this to the rag pickers. The municipality in the towns collect wet and dry garbage separately. You should collect the wet and dry trash separately and give them to municipal people when they bring the collecting van.

We should not burn the garbage in heaps. Air gets polluted due to this. Iron sheets, glasses remain unburnt. This is harmful to the environment.

### Think...

**What types of trash would be there in your house? What is the reason behind the dirt in your house. What do you do to the garbage? What is wet trash and what is dry trash?**

### Do you know?

Lekh Chand of Chandigarh collected garbage and used it to construct a beautiful 'ROCK Garden'.



Making environment clean by removing away garbage is very important. Think how can we reduce garbage. We should practise the following three principles to protect the environment.

- 1. Reducing garbage :** We should purchase the goods according to requirement and reduce wastage. We should not use plastic glasses, plates, bags and spoons. When we use and throw them away, they become strewn every where. They pollute the atmosphere, and when thrown into water it also get polluted. Due to this fishes and plants die. Instead of plastic, we should use crockery / cutlery made of steel. We can use them for a long time and permanently. No need to throw them away.
- 2. Re-use :** Using the repaired goods and re-filled goods reduce the usage of plastic.
- 3. Re-cycling :** New things are prepared by re-cycling iron, plastic, glasses paper and electronic goods. We can reduce the garbage by re-cycling.

### Think...

**Prepare a compost pit in your school. Throw the garbage and leaves into it. Cover it with mud. After one month take out the compost and use it as a fertilizer for the plants.**

### 8.13. Requirements of a good house.

A house looks beautiful when it has plants, is clean and has light and free air. What are the characteristics of a good house? Observe the house in the picture.



### Key words:

- |                          |                    |                   |
|--------------------------|--------------------|-------------------|
| 1. Mason                 | 6. Apartment       | 11. Brick klin    |
| 2. Construction of house | 7. Mud slab        | 12. Stone crusher |
| 3. Tiled house           | 8. House plan      | 13. Slums         |
| 4. Building              | 9. Cement concrete | 14. Garbage       |
| 5. Duplex house          | 10. Roof garden    | 15. Sanitation    |

### What have we learnt?

#### 1. Conceptual understanding

- List our different houses present in your village or region?
- List the construction materials available locally and those brought from out side in a table.
- Who all participate in constructing a house? What are they called?
- Why do many people don't have own houses?
- Why do people construct apartments? What are the uses of apartments?
- What do you do to keep your house clean?
- Can we judge a person to be rich or poor by seeing his residence? How?

#### 2. Questioning - hypothesis

- Sridhar toured India recently on his motor bike. What questions would you ask to know about the different types of houses in our country?
- Bilal wants to construct a house. What questions he might have asked the mason?

#### 3. Experiments - field observations

Observe any one 'Indiramma Illu' and fill the table with the particulars..

- Height of basement \_\_\_\_\_ feet.
  - No.of Rooms \_\_\_\_\_
  - Water facility Available / Not available
  - Toilet Available / Not available
  - Compound wall Available / Not available
- If available, length \_\_\_\_\_ feet

#### 4. Information skills, projects

- ◆ Visit any five houses in your surrounding. Collect the information and fill the table with the particulars.

Sl.No.	Name of the head of the family	Where is the garbage dumped?			
		Garbage heap	Dustbin	Near the wall	On the street

#### 5. Communication through mapping skills, drawing pictures and making models

- Draw the plan of your house. Mark the different rooms. Describe your house
- Imagine a beautiful house. Draw its picture on a chart, colour it. Write five lines about it. Exhibit it in class.

#### 6. Appreciation, values and awareness towards bio-diversity

- How do you appreciate the work of construction workers?
- Whose house in your village is good. Why? Write the reasons.
- How do you make your house beautiful with plants, birds and animals.

#### Can I do this?

- |   |          |
|---|----------|
| 1. I can explain about the construction of a house, materials required and types of houses.   | Yes / No |
| 2. I can ask a mason questions about the construction of houses.                              | Yes / No |
| 3. I can collect, tabulate and explain the information on houses.                             | Yes / No |
| 4. I can draw and explain the plan of our house. I can draw the picture of a beautiful house. | Yes / No |
| 5. I can appreciate the hard work of workers. I can work for bio- diversity.                  | Yes / No |



## OUR VILLAGE - OUR TANKS

"My name is Varalakshmi. We belong to an agricultural family. We practice agriculture since the time of our ancestors. Nagulacheruvu a tank is the main source of water for our agriculture. Since two years Nagulacheruvu didn't possess enough water, hence, we had to go for rainfed crops."

**Discuss with your friends and write.**

Crops grown when the tank has plenty of water	Crops grown when the tank has less water

"This year the rainfall has been very low. Since two years the growth of paddy has been low. So, instead of paddy we grew jowar, ground nut, horse gram and raagi. But these crops also failed because of less rainfall."

**Think...**

**What happens when there is scanty (less) rainfall?**

"This year also the rainfall was not enough in the beginning. But for the last three days there was heavy rainfall which is favourable for sowing."

"I want to go to Nagulacheruvu when the rain stops. But on the way to Nagulacheruvu there is a small pond called Laddhamadugu which is overflowing, making it difficult to cross."

"Children! in rainy season the flow of water in small canals is very rapid. You should never get into such canals, otherwise you will be carried away by the rushing water."

"In the afternoon the rainfall was not heavy. It was only drizzling and we were able to see the sun. We saw a rainbow in the sky."

"Hurriedly I reached Nagalacheruvu. As soon as I reached there, I saw Hanmaiah, Satyappa, Ramgopal, Nayak, Pullappa, and Mannepu Reddy. Just then Gouri and Annapurna also reached there. Flood water was flowing into the tanks. The tanks became full and were overflowing."



What is meant by overflowing?

---

"We all discussed about the tanks being filled with water and overflowing. The seeds to be sown, strength of the embankments etc. We were all happy because we could harvest two crops this year."

"While I was getting down the embankment I saw Narahari. Narahari knows not only about our village but also villages near by. He has information about all the families, Tanks, crops, temples etc., in our surrounding villages. He always talks about the history of tanks."

**Collect :**

Which tanks are there near you? Advantages of having Tanks.



Name of the village where tank is loacted	Name of the tank	Uses

## 9.1. History of Nagulacheruvu

"My name is Narahari. We have some land near Nagulacheruvu. We practice agriculture, but our main occupation is to narrate the history of Nagulacheruvu. This is being practiced since the time of our ancestors. I know very well about Nagulacheruvu. My father and grand father also told many stories about this tank. I remember a lot of things about the tank when I see it with full of water."

"Prior to Nagulacheruvu there used to be a small pond in that place. That pond used to get filled up even during small rains. The water from this pond was used by the farmers who have land near the pond. A farmer named Mallikarjun met the tahsildar to take necessary action, so that the water could be used by all farmers. Engineer Abdulbari surveyed the region near the pond and planned to convert the pond into tank.

**Think...**

**What is the difference between a pond and a tank?**

## 9.2. Construction of a tank

Construction of the tank has started. Everybody in the village was involved. It was a collective programme.

First they identified the source of the flood water.

What is flood water?

---

They dug canals from the regions from where the water was flooding. Then they started constructing bunds. They carried mud in bullock-carts from near by villages. They build the bund with stones from the inside. They brought stones from the nearby hills. They built two outlets from the embankment, on both the sides.

**Think...**

**What is an outlet?**

**Why do tanks have outlets?**



The outlet was constructed by Abdulbari. A scale in white paint was drawn to know the level of water. It helps to drain the excess water by letting it out. In the beginning people used to be surprised when the water was released. When a gate is opened water flows out into the fields. When it is closed water stops flowing.

### Do you know?

Some tanks are connected with other tanks with the help of canals. Water flows from one tank to another in rainy season. Bukkapatnam, Dharamavaram 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, west and east Godavari Districts.

After completion of building the outlets, care was taken to prevent soil erosion. Soil erosion takes place when the water flows from the outlets. For this, large stones were layed in the path of the water. This work was taken up by the masons in our village. At the time of construction everybody ate their lunch sitting together. They discussed about the division of labour. They dug canals and built, them with cement and sand. These canals helps the water to flow into the fields.

### Discuss in groups



- ◆ What is the necessity of canals, outlets and embankments in the construction of a tank?

"There was sufficient rainfall in the year in which we constructed the tank. Farmers sowed paddy crop. The harvest was very good. There was a drastic change in the lives of the farmers. Our family also came out of economic problems."

### Collect :



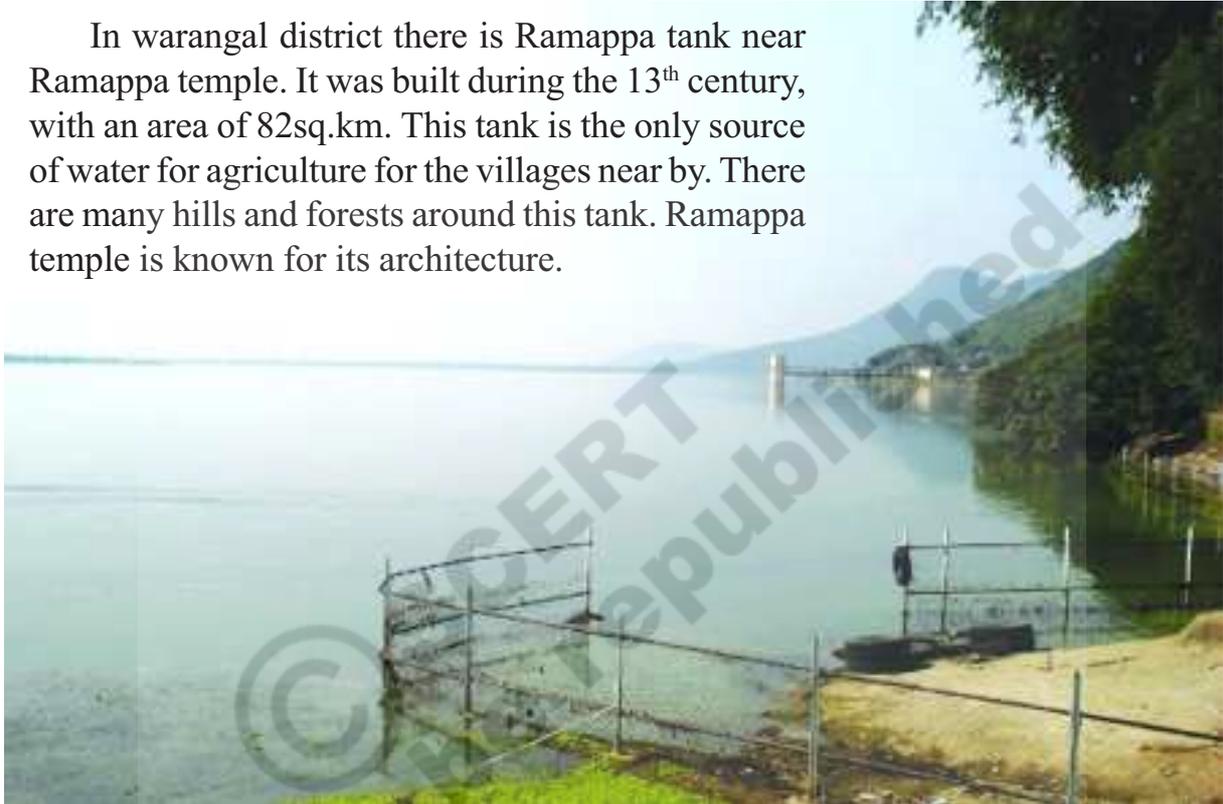
- ◆ Collect information about how a tank is constructed.
- ◆ Visit the tanks located in your surroundings and estimate the area covered by the tanks.

### 9.3. Big tanks of our state

Like Nagulacheruvu we have many tanks in the state. Let us know about our state.

#### 9.3.1. Ramappa tank:

In warangal district there is Ramappa tank near Ramappa temple. It was built during the 13<sup>th</sup> century, with an area of 82sq.km. This tank is the only source of water for agriculture for the villages near by. There are many hills and forests around this tank. Ramappa temple is known for its architecture.



#### 9.3.2. Kambham tank:



Kambham tank is in Prakasham district. It is one of the oldest man made tank in the whole Asian sub continent. It is located in Nallamala hills. This tank was constructed by Orissa Gajapati Rajulu in the 15<sup>th</sup> century. It is 7km in length and 3.5km in width. This tank is giving water to about 10,300 acres of agricultural land.

### 9.3.3. Hussain Sagar tank:



Hussainsagar is located in Hyderabad. It is one of the biggest tanks. This was built by Hazrath Hussain in 1562. The bund of this tank was made into a road in 1946. This bund joins the twin cities of Hyderabad and Secunderabad. The area of this tank was 5.7sq.km but has decreased now. Filled with Eichhornia plants, waste thrown by visitors, inflow of drainage water, industrial effluents etc., Another important and major cause of pollution of this tank is immersion of 'Ganesha idols'. The depth of the tank was 32 feet but it got silted to a large extent.

Another tank in Hyderabad is ' Usman Sagar'. It was built on the sub river of Musi. It is also known as ' Gandipet tank'. To this day the water of this tank is being used for drinking by the people of Hyderabad.



### Discuss in groups



- ◆ What is the need of tanks?
- ◆ Do you have such tanks in your districts? Where are they located?
- ◆ Write about big tanks located in our state and locate them in Andhrapradesh map.

## 9.4. Relation between the farmers and the tanks

We know that the tanks have many advantages. Chennaiah had a close attachment with Nagalacheruvu. Let us know what he say about the tank.

"My name is Chennaiah. I had a great attachment to Nagalacheruvu. My father taught me swimming in this tank. I used to wash my clothes near the tank along with my friends

I used to catch fish, crabs etc., with my friends. I was scared to see big frogs and water snakes. Some times we find tortoises. We used to bring them home and leave them in small tubs and took care of them. We enjoyed seeing the birds flying on the water. My son prepared Ganesh idols with mud brought from the tank. He did this on his teacher's advice. I also prepared some idols using mud.

### Think...

How do the people of your village make use of the tank water?

## 9.5. Advantages of tanks

Our field is near to the tank - every day I used to go to Nagulacheruvu and open the outlet. This was my daily routine. Every person in our village has a special attachment with Nagulacheruvu. Everyone is dependent on that tank one way or the other. Many people have farms near Nagulacheruvu. This is the only source of water for agriculture. When the tank is full it is like a feast to farmers and agricultural labourers. Children of our village learn to swim in this tank. People wash clothes and take up fishing. Now-a-days small fishes are let in to the tank for breeding. Fibre plants like Amaranthus, Jute, flax etc., are soaked in water to make ropes.

Three years ago borewells were drilled and water tanks were constructed to supply water to every house. To this day Nagulacheruvu is the only source of drinking water for birds and animals.

When the tank is full the level of water in the wells, tubewells, check dams rise.

When the level of water in the tank decreases people take up fishing, some farmers grow water melon, musk melon and cucumbers. Farmers take up desiltation during summer. This mud is used in their fields because it is very fertile. Desilting helps in increasing the capacity of the tank.

### Discuss in groups



- ◆ What is the use of rope to farmers?
- ◆ Why are borewells drilled?
- ◆ What is the use of silt from the tanks?

## 9.6. Tanks-pollution

You have learnt the advantages of tanks! Look at the following picture.



### Think...

- How are tanks being polluted?
- What are the affects of tank pollution?

Tank is getting polluted in different ways. The people of the village wash their clothes in the tanks. Many people don't have toilets and use tanks for the purpose, they wash cattle etc. People immerse Ganesha idols in the tank every year. The colours used are very poisonous chemicals which pollute water in the tank due to which fishes are dying. The sewage water from the houses are let into the tank. The people who visit tank in the evenings for relaxation throw eatables and empty covers into the tank. Such activities make the water polluted. Chemical effluents from medicine manufacturing factories make the underground water and tank water polluted. Once the water of this tank was used for drinking, but now it is fully polluted. Now-a-days some programmes are being taken up to control water pollution.

Last year some people planned to establish an industry near the tank but the people of the village stood against the decision and won.

There used to be a tank in our uncle's village. In which I used to swim in my childhood. But we cannot see that tank today, it is occupied by new houses, nobody can imagine that there used to be a tank in that place earlier.

### Discuss in groups



- ◆ What will you do to prevent pollution of water in tanks?
- ◆ Why were the people against the establishment of an industry?
- ◆ Why people are building houses in the tanks? What are the consequences?
- ◆ In olden days kings used to construct tanks. Discuss about this in your classroom.

## 9.7. Tanks - we

I sleep on tank bund at nights during harvest season. To eat my food under the shade of trees on the bund has become a habit for me. When the tank is full people perform 'Pochamma' festival and let the water out to fields. For this celebration all the people of our village donate rice, money etc., Everybody dines on the bund and releases the water to the fields.

During 'Bathukamma' festival they leave Bathukamma's into the tank, it is very beautiful to look at. I always like to watch sunrise and sunset standing on the bund. The weather is cool near the tanks. Farmers rest under the shade of trees. Birds flying on the bunds from the fields at night and fragrance from the gardens make the village life very beautiful. Blooming lotus, insects flying on water, fish eating insects, cranes hunting for fish are the scenes worth watching.

### Drying of tanks - Drought

Look at the following picture:-



### Discuss in groups



- ◆ What happens when there is no water in the tanks?
- ◆ What problems do the people face when the water in the tanks dry up? Mainly the people who depend on it.

Due to environmental pollution, felling of trees, de-forestation day-by-day there is reduction in greenary. Heat from the sun is falling on the earth directly rather than on trees. This is leading to warming of earth's atmosphere. This leads to decrease in rainfall, ultimately leading to drought in some areas. Due to failure of rains farmers are drilling borewells and drawing underground water from very deep layers. This act is causing great damage to the environment. Many people who live in villages are travelling long distances to fetch water. Most of them are depending on the tankers supplied by the government. Why this situation arises? Is this one not an important problem? for this who has to take, what action?

### Think...

**If the same situation continues in future what consequences we will have to face? What should we do to stop this?**

## 9.8. Tank management / Management of tanks



Look at the picture given. This is a picture of a tank. You can see Eichhornia plants, and Algae in this tank. Why this tank is becoming polluted? Who should take care of them? What happens if they are not taken care of? Our future is in protecting of our tanks. What is Yakub saying about the management of tanks?

"My name is Yakub. We have our fields near Nagulacheruvu. Government has formed ' agricultural water management societies' for the development of tanks. In our village our farmers elected me as the president. Every year our society takes up repairs of canals, embankments, outlets etc. De-siltation is taken up in summer and that mud is spread in fields. Check the pollution in bunds, because the tank is the only source of our livelihood.

### Collect :



Collect information on nearby tanks, agricultural water management societies, and the programmes they take up.

Do you know ?

## Udaipur - city of lakes



Udaipur - which is in the state of Rajasthan is called the city of lakes. Udaipur has many lakes, hence the name. In ancient period these lakes were constructed to use the water for drinking and agricultural purposes. Among all the lakes in Udaipur 'Pichola' lake was an important one. It was built in 1362 by Banjaras. Later on, it was developed by king Udai Singh. All the places in Udaipur were built on the banks of these lakes. Among them 'Jagnivas' and 'City palace' are important.

### Key words:

1. Agriculture
2. Canal
3. Tanks
4. Pond
5. Overflow
6. Flood water
7. Out lets
8. Tank construction
9. Embankment of the tanks
10. Agricultural lands
11. Eichhornia tanks.
12. Tank pollution
13. Uses of a tanks
14. Tank management
15. Breach in the embankment

## What have we learnt?

### 1. Conceptual understanding

- a) Why do we need tanks?
- b) For what purposes do we use tank water?
- c) What are the stages of tank construction?
- d) Why we need agricultural water societies?
- e) What crops are grown using less water in your village?
- f) What are the uses of having outlets for tanks?
- g) Who depends on tanks? Especially how do the farmers depend on tanks?
- h) How should we conserve our tanks?

### 2. Questioning - hypothesis

- a) Kavitha along with her grand father, went to a check dam. She asked many questions regarding the check dam. What would you ask?

### 3. Experiments - field observations

- a) Visit a near by tank and write your observations (on the bund, near the tank, uses of tank etc.,)
- b) With the help of your teacher visit a near by crop field. observe how water is supplied to the fields. Draw a block diagram.

### 4. Information skills, projects

- ◆ Write about a famous tank you know in your district or state. Know its history. Draw a diagram of the tank. For this information refer to books, magazines, newspapers, internet etc.

### 5. Communication through mapping skills, drawing pictures and making models

- a) Collect the names of rivers and identify Ramappa, Pakala, Salakam, Kambham, Hussainsagar in the Andhra Pradesh map. Where are they located, in which districts?

## 6. Appreciation, values and awareness towards bio-diversity

- a) There was a breach in the embankment, this was repaired by the whole village collectively. How do you appreciate each person's effort? Convey it to your friend.
- b) A tank is an elixir of life for not only human beings but also birds, animals and other insects. To protect a tank you are participating in a procession, for this write some slogans on prevention of pollution. Also suggest some measures to conserve tanks and protect them from pollution.
- c) Now-a-days people are building houses on the tanks. How is it going to effect us and animals? What should we do to stop this?

### Can I do this?

- |  |          |
|--|----------|
| 1. I can explain the uses of constructing a tank and advantages of it. | Yes / No |
| 2. I can ask questions to know about check dams.                       | Yes / No |
| 3. I can identify important tanks in the map                           | Yes / No |
| 4. I can exhibit the history of tanks after knowing                    | Yes / No |
| 5. I can write slogans to protect tanks                                | Yes / No |





## OUR FOOD - OUR HEALTH

We need food to live. Do all of us eat the same type of food? Do all of us eat food at the same time? Are the food habits same for everyone? We get food from plants and animals. Let us know more about our food in this lesson. Look at the picture given below. What is the activity going on?



### Think...

- What are the various activities seen in the picture?
- Why did they gather there?

### 10.1. Picnic

Naveed, Vipin, Neeli and Deepthi are studying in fifth class. Their families went out for picnic one day. They opted for an open space with trees on the banks of their village tank, as the picnic spot. The children and the elders enjoyed the picnic. They spoke to each other and played different games. They fetched dry grass and fire wood for cooking. They helped each other and shared things. They cooked a variety of food items.

All of them sat along the circumference of a large a circle for lunch as it was lunch time. Children arranged the leaf plates. Some people used freshly picked leaves as plate. Hot cooked food was served along with the different items brought from their houses. Naveed brought Jowar roti's, Neeli brought chakki and sweets, Vipin got parboiled horse gram, red gram and bengal grams, Deepthi shared the porridge she brought. All of them shared their food items and ate heartily. They spent the day happily. For picnics, there is really no need of occasion at all. People just decide and go on a picnic for fun.

### Discuss in groups



- ◆ Do you like to share your food with others and eat? why?
- ◆ Why do you like to go out for picnics?
- ◆ Differentiate between the food cooked at home and those cooked in a picnic?
- ◆ On what occasions do we eat food together?

## 10.2. Mid day meals:



Lunch bell rang in the school. All the children started washing their hands and plates at the tap. They stood in a queue for taking mid day meals. Some children got lunch from home and all of them sat in a line and had their meals. Today they served khichdi and sambar in mid day meals. There is a different menu every day for the mid day meals. Eating together helps the children to develop friendship with other students. They share their food with each other and know the different food habits of each other apart from likes and dislikes of others. Some children eat rice and pickle only. Some children do not eat properly. This is not a good practice. Some children do not get enough food at their home and they come to school without eating. As a result, they do not show enough interest in studies. For children like these serving mid day meals has become a must.

Many children in our country do not get enough food to eat. There are still many others who do not get to schools. The children who do not get sufficient food are not healthy, they even do not show interest in studies. Hence Supreme Court of India has ordered that nutritional food be served to all children in schools. From then onwards Govt of India has been serving midday meals to all children in government schools.

### Think...

- Who serves mid day meals to you at school?
- Do you eat midday meals served at school or food brought from home? why?
- At what time do you have mid day meals?
- What is today's menu in midday meals at your school?
- Is sufficient food served in your school?
- Do your teachers eat with you? why?
- Do all children like to eat pieces of vegetables in food or do they discard them?
- Some children throw away the pieces of vegetables from sambar. Is it a good practice?
- What food do you like to have for mid-day meals.

### Information skills - project work



List out the food items served during midday meals at your school for the past few days. Which items you think will be better if served as part of midday meals? Tabulate them.

Day	Food served in midday meals	Do you like it or not?	Food you would like to have in mid day meals
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			

- On what days did you like the food? why?
- On what days you didn't like the food? why?
- Do all the children like mid day meals?
- What do you do with the left overs of mid day meals at school?

### 10.3. Healthy food habits

There are many disadvantages of wasting food. What happens if we eat stale food? Why does the food get stale? How does the food gets contaminated / spoiled? Food gives us energy and helps us to stay healthy. Hence we should take proper care and measures to keep food safe. Do you know what happens if we neglect to eat good food? Observe the picture given.



Observe the picture and say.

### Think...

- Have you seen house flies on the food we eat? what are the other harmful insects seen on food?
- What are the different food items sold on the road side? What happens if the food items are not covered properly?

The food items sold on the road side are not covered properly. Dust, germs, flies and other harmful insects sit on the food and contaminate them. The harmful germs and micro organisms stick to the body of the flies. They sit on dirt and discharge the same on the food. This contaminates the food we eat and is harmful to our health. Some hotels and road side food vendors use the same oil again and again which is not good for health. If oil is heated repeatedly it leads to cancer. So, we should not eat this food. We should not reuse the oil which is already used. We should always eat fresh and hot food. We should always prefer to eat the food prepared at home.

We should eat clean food. If we eat clean food with dirty hands we may fall sick. Hence good food habits are must for every one. Let us find out what good food habits you have? Read the following and tick (✓) against the one if you follow it.

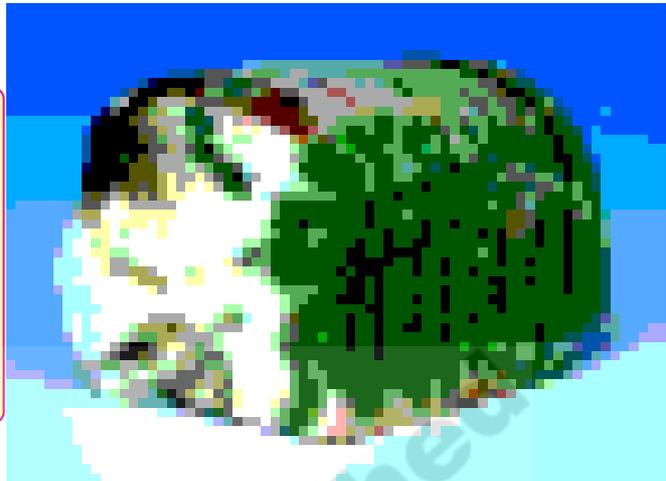
### Do you follow these?

- Do you always eat fresh food?
- Do you wash your hands before eating with soap?
- Do you wash your plates clean after eating?
- Do you cover the food items with a lid?
- Do you prefer to eat food made at home and not road side food?
- Do you eat seasonally available fresh and cheap fruits, vegetables and leafy vegetables?
- Do you always use dustbins to throw away garbage and not litter every where?
- Do you wash your hands thoroughly with soap and water after using toilets?
- Do you brush your teeth every morning and before going to bed? Do you massage your gums with fingers?
- Do you rinse your mouth after every meal?
- Do you clean your tongue frequently?

Every one should follow the good food habits as listed above. If you are not following them everyday, then follow them compulsorily from today, without fail.

### Do this

- Take a piece of bread and sprinkle some water on it. Keep it aside in a dark place for three to four days. Observe the changes.



### Discuss in groups



- ◆ Did you observe any spots on the piece of bread? What is the colour of the spots?
- ◆ Did you notice any change in the odour of the bread? Is it good to eat this?
- ◆ It is not good to eat this piece of bread? why?
- ◆ Have you noticed moulds and fungus on pickles, rotten vegetables and coconut? Why do they form? Think and say?

### Do this

- Keep the left over food in a vessel and observe after two days. What changes do you notice in the colour, odour and taste of the food?

### Discuss in groups



- ◆ What are the changes seen in rice?
- ◆ What are the changes seen in sambar and curries?
- ◆ What changes did you observe in raw fruits and vegetables.
- ◆ What are the changes noticed in preserved food items?
- ◆ What changes are observed in milk and curd?
- ◆ Which food gets spoiled quickly, cooked or uncooked - Think. Why?

Microorganisms and germs grow on the food items and spoil them. These harmful germs make the food poisonous. If we eat this type of poisonous food, we fall sick. Care must be taken to keep food safe from dust and harmful germs. We should always eat fresh food while it is hot. We should not buy or cook excess food and waste. Cook wisely, sufficient food needed and do not waste and spoil the food.

#### 10.4. Preservation of food:

Are all the food items available to us throughout the year? Name them. How can we preserve them for a long period without them getting spailt?

Pickles, chutneys, jams, vadiyalu etc are preserved for many days. Using extra salt and drying them before storing helps in preserving them. Vegetables, meat, fish are mixed with salt and then dried in hot sun. These are used as food whenever we want to eat. They are called as "orugulu". However pickels are not good for health.

#### Information skills - project work



- ◆ Papads and vadiyalu are preserved year long. How are they prepared? Write the process of preparation.
- ◆ How are pickles made at home? Write the steps involved in it.
- ◆ List out the food items used at your home which have been perserved for a long time.
- ◆ Learn from your parents how fruits and vegetables can be kept fresh for two to three days..

#### Do this

- Wrap the fruits, vegetables and leafy vegetables in a wet cotton cloth. Sprinkle water 4 to 5 times a day. Observe and say for how many days we can keep them fresh.

#### 10.5. Let us prepare the Janata fridge:

Take two different sizes of earthen or cement flower pots. See that one pot get's fixed to another. Care must be taken to have space of three to four centi meters between them. Fill the large earthen pot with a thick layer of sand for about two to three centimeters. Fix the small earthen pot into it. Now fill the empty space between the pots with sand, sprinkle water on the sand in order to make it wet. Keep the fruits and vegetables in the inner pot.

Cover it with wet gunny bag or a thick cotton cloth. Sprinkle water for 3-4 times per day. Fruits and vegetables remain fresh and unspoil. This is called "Janata Fridge" or "Poor man's fridge" as poor people cannot afford to buy expensive Refrigerators. They can prepare this at low cost as it is very useful for them.



Observe the above picture.

### Discuss in groups



- ◆ How do the vegetables remain fresh in Janata Fridge?
- ◆ What other items can be preserved in Janata Fridge?
- ◆ Which is a natural fridge, Janata fridge or an electronic fridge?
- ◆ What are the difficulties faced in our house due to the usage of electronic fridge?
- ◆ Which is cheaper, Janata fridge or refrigerator?
- ◆ Which is available to many people, a Janata fridge or refrigerator?

Food material are stored in different ways. Generally, we preserve food items in cool places or refrigerators (fridge). Storing in a fridge is expensive. It consumes electricity. Care should be taken to save electricity while using refrigerators. We should not open the fridge often as shown in the figure. we should close the door immediatily after use.

While buying a fridge, see that a 5 star power saving symbol is marked on it. This 5 star fridge will consume less electricity and thus save power.

### 10.6. Wastage of food.



As shown in the picture food is wasted a lot on occasions like weddings, parties and function. Read the questions given below and discuss with your friends.

#### Discuss in groups



- ◆ What are the various dishes prepared and served during wedding and functions?
- ◆ Is food wasted in parties? Why? What are the disadvantages of it?
- ◆ What plastic items are used for eating in parties?
- ◆ What can be done to avoid the wastage of food?
- ◆ In olden days people used to eat food in banana and lotus leaves. Nowadays their usage is reduced. Why?
- ◆ What are the disadvantages of wasting food, using plastic plates and tumblers?

On occasions like weddings, festival and fairs eating food together is common. The benefits of eating together are that new relationships develops among the people. As people meet after a long time they share their feelings and happy moments with each other, the bond of love becomes stronger between them.

On occasion like marriages and parties many special dishes are cooked and served. Some hosts prepare and serve a large number of dishes and this is much more than required for all the guests. So, we can see a lot of left over food and wastage of food on these occasion. While washing hands drinking water is also wasted. Plastic plates and tumblers are being used for picnics and functions. Though in minute quantity, some plastic enters into our body, which is very harmful for us. The plastic takes some lakhs of years to mix up with soil and thus adds to soil pollution. They even block the micro organisms which make soil fertile. The plastic glasses and plates when burnt release harmful gases into the atmosphere and thus cause air pollution.

### Think...

- What can be used instead of plastic tumblers and plates?
- What can be done to avoid wastage of food and water during marriages and parties?



Leaves of Butea(moduga) and banyan tree are used as plates. Since ancient times we have been using leaf plates for eating. They mix up with soil in less time and easily. Thus they protect our environment. Plastic plates are harmful to health and also lead to soil pollution.

### Think...

- Have you ever seen leaf plates, if yes, where?
- Describe how they are made?

## 10.7. Wastage of food at home:

You have learnt how food is wasted in functions. Is food wasted at home? Let us know how?

If excess food is cooked then it gets wasted. Left over food is thrown as waste. Some people spill the food while eating and some waste the food without eating completely.

Food grains like rice, wheat, pulses like grams and oilseeds like ground nut are attacked by insects and fungi, causing decay and damage to them. Hence to avoid this, neem leaves are placed in the storage bags and huge bins. Rats also spoil the stored food grains. Ants make the sugar and jaggery unusable.

Have you ever felt bad while throwing away food and spoiled food grains? If yes? why did you feel so?

Do you know how do we get the food we eat?

### Discuss in groups



- ◆ From where do we buy groceries like rice, dal and other items?
- ◆ From where do we buy vegetables? Who cultivate them?
- ◆ From where do we get fruits, vegetables and food grains to the market?
- ◆ Name the different people who help us in growing the different food grains?

Observe the pictures given below. We get rice from paddy. Observe the people who work for us in obtaining rice from paddy.



**Making the agricultural tools and implements**



**Watering the crops**



**Harvesting the crop and storing in bags**



**Selling the crop at the market**



**Buying the food grains at a grocery shop**



**Eating the food obtained with lot of efforts and labour of different people**

The food we eat is produced (obtained) with lot of efforts and labour of different people(artisans) like farmers, agriculturalists, agricultural labourers, blacksmiths, carpenters etc. With all the combined effort of different artisans we get fruits, vegetables and other food materials to our houses. Farmers till the soil, sow the seeds, harvest the crops and transport them to the market. From the market to the shops and from the shops to our home. After knowing the hard work and labour behind the process of producing food one should not waste the food. Use the food wisely and completely. Care must be taken in storing the grains as insects and ants may spoil them. We must follow safe and protective practices to protect food from rats and rodents. Cooking excess food, throwing left over food, should be avoided.

### Key words :

- |                    |                            |                 |
|--------------------|----------------------------|-----------------|
| 1. Eating together | 5. Artisans                | 9. Farmers      |
| 2. Wastage         | 6. Agriculturalists        | 10. Food grains |
| 3. Harmful insects | 7. Agricultural labourers  | 11. Effort      |
| 4. Micro organisms | 8. Agricultural implements |                 |

### What have we learnt?

#### 1. Conceptual understanding

- Name some occasions where people eat food together.
- Why should we not use plastic plates and glasses?
- What are the good eating habits? write them.
- List the healthy habits you have and those you don't have.
- When does the food get wasted?
- How is the food wasted? Why we should not waste food?
- Name the people whose efforts are behind the process of producing the food we eat.

#### 2. Questioning - hypothesis

- Kavitha questions the principal of the school on how to improve the quality of midday meals served at school. If you were Kavitha what questions would you like to ask the principal?
- What are the reasons for food getting spoilt? What are the measures to be taken for keeping the food safe and clean?

### 3. Experiments - field observations

- a) What are the steps involved in making the leaf plates. List them in order.
- b) Some vegetables are to be wrapped in a wet cloth, some are kept outside in open and some are to be stored in Janata fridge. Observe them after three days. What happened? List your observations. Which vegetables remain fresh?

### 4. Information skills, projects

- a) Visit a place where a function or party is being celebrated? Write how the food is wasted and what type of garbage is produced from there. Tabulate the rules to be followed to avoid the wastage and garbage.

### 5. Communication through mapping skills, drawing pictures and making models

- a) Prepare Janata fridge with earthen pots. Display it in your class room.
- b) Collect different types of leaves used in preparation of leaf plates. Prepare the leaf plates and display in the class room.
- c) Draw the Janata fridge

### 6. Appreciation, values and awareness towards bio-diversity

- a) There is a lot of effort by different people in producing the food we eat. Write few lines appreciating their labour and efforts.
- b) Why should we eat together? Write how did you feel while eating together?
- c) What are the measures taken to prevent raving of food and wastage of food at your home?
- d) List the good food habits followed by you daily.

#### Can I do this?

1. I can explain the wastage of food, measures taken for preventing wastage of food and good food habits. Yes / No
2. I can question the principal on the quality of midday meals served. Yes / No
3. I can explain the process of preservation of fruits and vegetables with experiment. Yes / No
4. I can list the places and the crops grown in our state in plenty in a tabular form and explain the details. Yes / No



## FROM VILLAGE TO DELHI

Ravi Prakash was very happy. His drawing titled "Villagers on a bullock cart" won a prize. He was going to Delhi with his uncle Venugopal to receive the prize in a programme to be held on children's day. He was to leave his village Tandoor for Delhi on the 10<sup>th</sup> of November.

### 11.1. Travelling by bus:

It was Ravi Prakash's first visit to Hyderabad. A bus leaving for Hyderabad was at the bus stand. "Shall we go in that bus uncle" asked Ravi Prakash. Venugopal said "This is an ordinary bus. This is also called



"Palle velugu". We will go in an Express bus. "Why not in this bus?" asked Ravi Prakash. Why did Venugopal say they'll go in an Express bus?

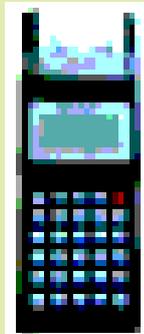
#### Discuss in groups



- ◆ Differentiate between an ordinary bus and an Express bus.
- ◆ Find out and write about the other types of buses.
- ◆ The bus left for Hyderabad. The conductor asked for ticket. Venugopal gave money and said Hyderabad. The conductor punched the tickets and gave. What are the details seen on a bus ticket?

#### Do you know?

Now a days bus tickets are issued by machines. This is called 'TIMS' (Ticket Issuing Machine). There is no tearing and punching of tickets in this method.



### 11.1.1. Problem of change

The bus stopped at a station. Many people alighted (got down) and some people boarded the bus. A person in coat and tie gave Rs.500 to the conductor for ticket. Conductor wanted change, he said that he didn't have any change. Ravi Prakash read the notice written in the bus about change. You too read that notice.

**Tender exact change for the ticket and cooperate with the conductor**

#### Think...

- Why should we carry exact change with us?
- What are the other messages written in the bus? See and write in your note book

#### Do you know?

APSRTC buses run in our state. Different types of buses like "Palle Velugu", express, deluxe, luxury, aemi luxury, super luxury, garuda and Indra are run by APSRTC. Reservation facility is available to book the tickets in advance. To travel in buses, online booking facility is also available. 10% concession is given to the people who have a CAT card. Physically handicapped persons too get a concession.

The bus started to move. It was fun to see out of the window. When the bus was moving, even the seats seemed to vibrate. At the next stop, two officials checked the tickets of all the people on the bus.

#### Think...

- Did checking take place anytime while you were travelling?
- What happens if you travel without a ticket?
- What are the precautions to be taken while travelling by bus?

#### Do you know?

Travelling without a ticket is a crime. A fine of Rs. 500 or six months imprisonment or both may be levied.

The officials got down after checking for tickets, the bus started again. Ravi Prakash put his hands out of the window. The conductor saw this and asked Ravi not put his hands out.

### 11.1.2. Traffic signals



The bus stopped at Hyderabad bus depot. Ravi Prakash and Venugopal took an auto to Secunderabad railway station. Ravi Prakash observed that the auto stopped at a red light, started at yellow light and moved forward at green light. He also observed that people crossed the road only on the white lines drawn on the

road. These lines are called zebra crossing. He noticed that a police man in white uniform helped the people. Auto slowed down at certain places due to speed breakers.



#### Discuss in groups



- ◆ What happens if there are no traffic signals?
- ◆ Why there are no traffic signals in villages?
- ◆ Why does the traffic jams occur?
- ◆ What rules should you follow while on the road ?



Observe the pictures. Should you travel like this? Think what will happen if you travel like this. What rules should you follow?



### Rules to be followed while driving vehicles.

- Do not use mobile / cell phone while driving.
- Wear helmet while riding two wheeler.
- While travelling in vehicles like car, the people sitting in the front seat & drivers should wear seat belts.
- We should not listen to music through ear phones while driving a vehicle
- The number of passengers should not exceed the vehicle's capacity.
- Do not overtake without indicating or signaling to the vehicle in front.
- Do not turn left or right without indicating to the vehicles behind.
- Follow road rules, according to the signals. We should drive the vehicle with speed limit to avoid accidents.

### Think...

Imagine and write the situation at city junctions without traffic signals.

Vehicles will be under control if we limit the speed. Thus accidents can be avoided. The people who use vehicles or pedestrians should necessarily follow road rules. This way we can avoid accidents. School going children or small children should hold the hands of elders while crossing the road. When vehicles are moving on the road we should not cross the road. We should cross the road only at a zebra crossing. If necessary, we should take the help of traffic police.

## 11.2. Train Journey



They reached Secunderabad railway station to go to Delhi. Ravi Prakash was travelling by train for the first time so, he observed the surroundings of the railway station curiously. An announcement was heard that after half an hour that the train to Delhi was arriving on to the platform.



Ravi Prakash observed his co-passengers. They wore different types of dresses. He had never seen some of those dresses. They were speaking various languages. People in the train were more different in terms of dressing and language than the people in the bus.

Ravi Prakash heard the announcement in different languages at different stations. He saw that the name of the railway station was also written in different languages. Even on the train, he saw different languages written.

### Think...

**In which languages are the announcements made in a railway station? why?**

**Why the messages on trains are written in different languages?**

### 11.2.2. Food on train

A Rajasthani family which was travelling along in the same coach opened a teakwood box. There were different food items in it. An old lady was serving chapati, curry etc., in plates to all. Ravi had never seen such food. Ravi was very hungry.



Food was supplied after the train crossed Nagpur in Maharashtra. Ravi could not eat properly as there was little rice and salt and chilly in the were not sufficient in the curry. But he felt that most people liked it. As the food was not tasty Ravi bought fruits, samosas and groundnuts. He observed that a variety of foods were being sold on the platform and in the train. He put the garbage in a cover and placed it in the dustbin on the platform.

### Discuss in groups



- ◆ Why didn't Ravi Prakash like the food?
- ◆ Why was the food served on the train different from what Ravi Prakash ate at home?
- ◆ What did you eat while travelling?
- ◆ Do you take your own food while travelling. Why?

Trains run through different states, we meet different people, who speak different languages. Thus trains reflect National Integration.

### 11.2.3. Cleanliness in trains

The train was moving, some people in the train were eating groundnuts and some others were eating bananas and sweet limes. They were throwing the peels of the fruits in the train. Ravi did not like it. "They could throw them out of the window" he thought.

#### Discuss in groups



- ◆ What should we do with fruit peels and garbage in the train. Where should we throw them?
- ◆ What happens if you wash your hands out of the window while travelling in the train?
- ◆ What happens if you don't flush the toilet properly after use?
- ◆ It is said that we should not use toilets when the train is not moving? Why?

### 11.2.4. Railway signals



Next day, in the morning Vinod introduced the girl sitting next to them. Her name was Anita. He said that she was also going to the same programme in Delhi. The train stopped at a place for a long time. "Why has the train stopped" asked Ravi Prakash. "The red light is on" said Anita. "Even the trains have signals" thought Ravi Prakash.

"When a train passes through a level crossing the gates are closed on both sides" said Anita.

#### Think..

- Why do trains have signals?
- Why do they close the railway gate?

### Discuss in Groups



- ◆ Why should we not cross when the railway gate is closed? What care should we take?
- ◆ Why shouldn't we stand at the door of the train?
- ◆ What other precautions should we take in a train journey?
- ◆ Why should we carry less luggage in a journey?
- ◆ What facility is there to stop the train in emergency?

Gates are opened and vehicles are allowed only after the train has left. Standing near the door causes inconvenience to the passengers who get down and get in. If you slip you may fall on the railway track. The train travelled through different places throughout the day. Hills, forests rivers, crop fields, bridges, tunnels, barren fields and sandy soils were seen through the window.

Another day was spent in the journey. "We reached Delhi" said Venugopal. Ravi received the prize in the children's day celebrations. They were permitted to travel on a plane while returning. They were happy to travel by plane.



*What did Ravi Prakash say about the plane journey?*

#### Key words :

- |                                      |                         |                          |
|--------------------------------------|-------------------------|--------------------------|
| 1. Bus journey                       | 4. Train journey        | 7. Cleanliness in trains |
| 2. Issue of tickets by the conductor | 5. Railway platform     | 8. Railway signals       |
| 3. Traffic signals                   | 6. Train boogie, berths | 9. Railway gate          |

## What have we learnt?

### 1. Conceptual understanding

- What precautions should we take in a journey?
- What are the messages written on a bus?
- Why should we not cross the road when the railway gate is closed?
- What are the rules to be followed while driving vehicles?
- Differentiate between a bus journey and a train journey
- Why do people travel by trains to go to far off places?
- What happens if there is no signal system?

### 2. Questioning - hypothesis

- There are enquiry counters in railway station and bus depots. We can know details of a journey from them. What questions would you ask to know about a train journey to Delhi.

### 3. Experiments - field observations

- Visit a nearby bus stand / railway station and observe. Write down your observations-like-name of the station, whether toilets and urinals are there? Whether facilities to passengers are adequate? Whether boards with details of arrivals and departures are there?

### 4. Information skills, projects

- From a newspaper, collect the details like the names of trains, destination, time of arrival and time of departure and also the place to which you can travel to from the railway station nearest to you.

Names of Trains	Departing place	Destination place	Time of arrival	Time of departure

- Take a Railway Reservation form, fill up and show it to your teacher.

## 5. Communication through mapping skills, drawing pictures and making models

- Point out the important railway stations of our state in an Andhra Pradesh map.
- Make models of trains / bus with paper and card board and display.
- Look at the map and say, Which cities you would have to cross if you travel in bus or train from your village to Delhi.



## 6. Appreciation, values and awareness towards bio-diversity

- What precautions should be taken while travelling by bus?
- You have travelled in a train what precautions would you suggest to your friends based on your experience?
- We should behave as responsible passengers in a train and maintain cleanliness. What would you do in this regard?
- How should we behave with co-passengers while travelling? How do you help senior citizens, woman and children younger to you?

### Can I do this?

- I can explain the details and precautions of bus and train journey. Yes / No
- I can ask questions to know the details of a journey. Yes / No
- I can observe and write down the details of facilities in bus / railway station. Yes / No
- I can make a table with the details of trains, their arrivals and departure. Yes / No
- I can point out railway stations in the state map. Yes / No
- I can behave responsibly and help co-passengers. Yes / No



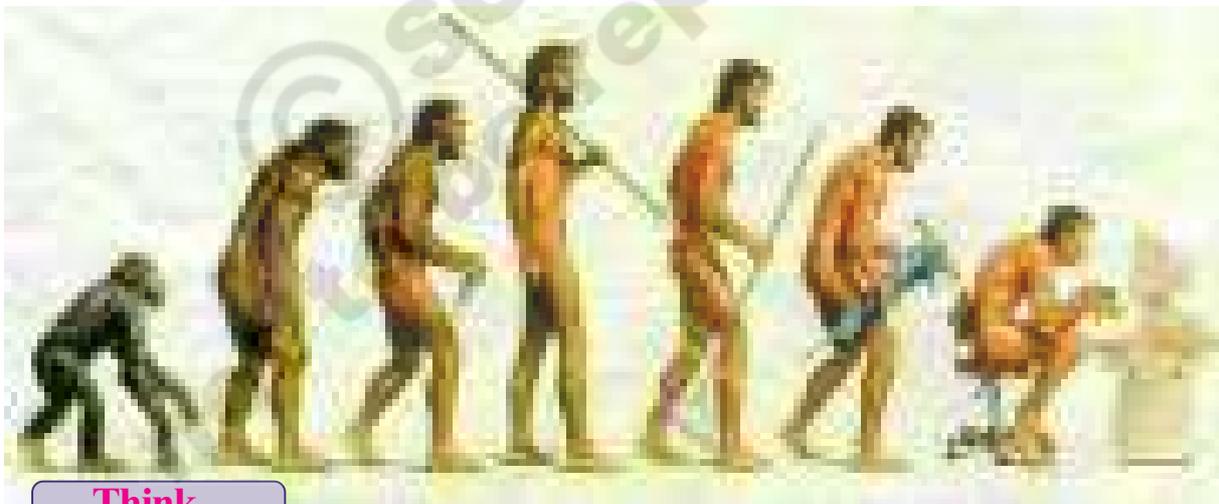
You have learnt about family history in class III. How do we know about grandfather and great grandfather in a family. We come to know about our family history from the elders in our family. Family history includes the members in the family, reputation of the family, place of their living, types of houses they lived in, types of clothes used, type of food they eat and many other things.

In a similar way, every village has a history. How did the village get its name? What are the special features of that village? How was the village in the past? We come to know about such things from our elders.

The History tells you about the things that happened in the past.

## 12.1. Ancient history

Ancient history tells how the primitive man evolved (changed gradually). Observe in the picture how man evolved.



### Think...

- What do you feel looking at the picture?
- What are the differences between the ancient man and today's man (primitive and modern man)

Primitive man led the life of a wanderer. They used to live in caves and on trees. They hunted animals and ate raw flesh. They gradually started cooking food after the discovery of fire. They began agriculture and reared animals. They prepared

earthen bowls and cooked food. They used it to store things, and also decorated them beautifully. They reached the stage of producing food from the stage of collecting food. They discovered wheel which led to many changes in the human life.

## 12.2. Indian history

Just like a family and a village, India has its own history. The events which led to the changes in the lifestyle of people can be known from history. Then, think how to discover history?.

Archeology department carries out excavations to know about our past. Sir John Marshall who belonged to Britain carried out excavations near river Indus in 1922. Due to this, Harappan civilization came to light. Indus valley civilization was an urban civilization, cities were built in a planned manner. There was an organised construction of big buildings and streets. Agriculture was the main occupation of the Harappan people. Wheat, paddy and barley were the important crops. They used to make different articles using metals like copper, bronze lead and aluminium. They traded with West Asia and Egypt. Their important port was "Lothal". They worshipped Lord Shiva and Mother Earth. They had a pictorial script.

### Think...

- **Why did the civilizations flourish on the banks of the rivers? Discuss and write.**
- **Compare Indus valley civilization with the present day civilization.**

Constructed buildings, museums, books also help us to know about the Indian history besides excavations. Places where remains of ancient period are preserved are called historical museums. Salarjung Museum is one of them. There is a tribal exhibition in SriSailam which helps you to know about tribal traditions and culture. Thus museums are sources of information of our traditions, culture and also our heritage. We can also know about our past through books, old manuscripts etc.,



**Salarjung Musium**

### Discuss in groups



- ◆ What are the features of a museum?
- ◆ Which features help us in knowing the history?
- ◆ What is history? How can we know the life styles of our ancestors?

### 12.3. Monuments reflecting Indian history.

There are many ancient scriptures, temples, monuments, stupas, forts which reflect our country's history. We can understand our history by visiting and collecting the details. Let us look at some of the monuments related to our country's history.

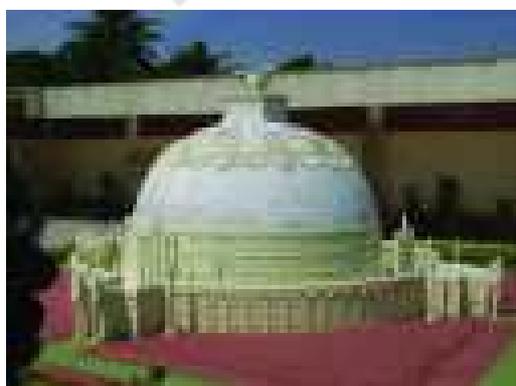


#### Saranath Stupa

Saranath stupa was built by king Ashoka. Dome shaped construction made of bricks and stones is called a Stupa. One such Stupa is in Saranath near Varanasi in Uttarpradesh. This is a very ancient monument.

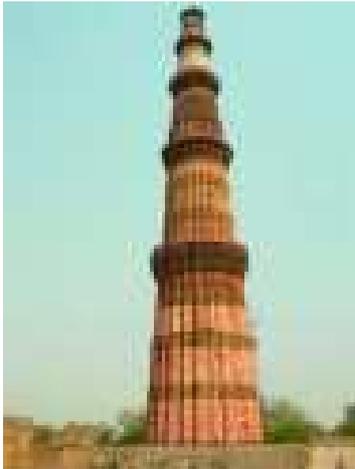
#### Askoka's Pillar

It is made up of sand stone. The stone pillars were excavated from 'Chunar' near Varanasi. It is a standing stone pillar, four lions are engraved on this. The four lions represent our national emblem. Indian currency has the national emblem on it.



#### Amaravathi Stupa

This is a Buddhist Stupa and is made of marble stone. It is in Guntur district of Andhra Pradesh. It is built by Satavahanas.



### Qutub Minar

Qutub Minar is 225 meters high. It is situated in our country's capital city, Delhi. Its construction was started by Qutubuddin Aibak and completed by Iltutmish.

### Red Fort

Red fort is in our country's capital Delhi. National flag is hoisted on it on days of national importance. It is built by Red stone. Its architecture is of Persian and Indian style.



### Charminar

Charminar is in the city of Hyderabad in Andhra Pradesh. It is 58 meters high, there are four minarets on it. It was constructed in the year 1591.

### Thousand pillar temple

This is in Warangal city of our state. This belongs to the Kakatiya period.



### Discuss in groups



- ◆ What can we learn through the important monuments?
- ◆ Collect more details about them from books and discuss.

## 12.4. Some important personalities in Indian history.

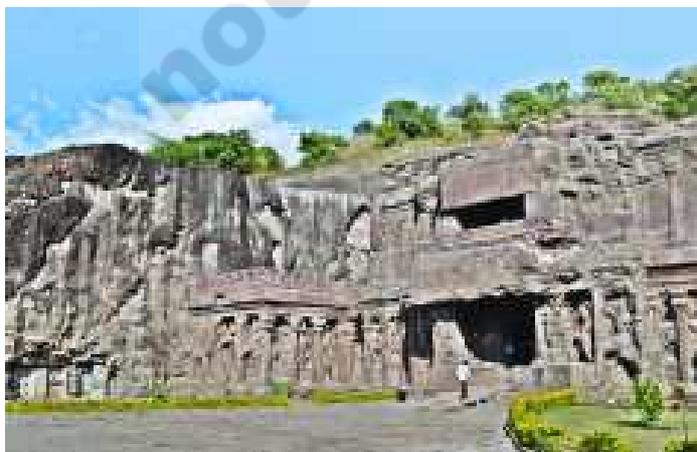
### Mauryas - Ashoka

Chandragupta founded the Mauryan empire. Ashoka was his grandson. Ashoka was one of the great rulers. He took to Buddhism after the Kalinga war. He preached non violence and worked for the spread of Buddhism. Dharmachakra in the centre of our national flag is taken from the Saranath stupa built by Ashoka.



### Satavahanas

Srimukha was the founder of Satavahana dynasty. Satavahanas ruled Andhra Pradesh and Maharashtra for 450 years. Hala, one of the Satavahana kings wrote Gathasaptashati. Gautamiputra Satakarni was the greatest among the Satavahana kings. There was a university near Nagarjuna konda during his reign.



### Guptas..

Chandragupta established Gupta empire in 320B.c. Chandragupta Vikramaditya was the most popular in the Gupta dynasty. There were nine poets called Navaratnas in his court. Kalidasa was the greatest among them. World famous Ellora caves belong to Gupta period. Sculptures and paintings were developed during their period.



### Vijayanagara Kings - Sri Krishna Devaraya

Sri Krishna Devaraya was the most famous among Vijayanagara kings. He ruled Vijayanagara kingdom from 1509 to 1529. There were eight poets called as "Ashtadiggajas" in his court. He himself was a poet. He wrote 'Amuktamalyada'. He is the one who said that Telugu is the best among our country's languages.

### Kakatiyas - Rudrama Devi

Ganapatideva and his daughter Rudrama Devi were famous among Kakatiyas. They united telugu speaking people. Warangal fort, thousand pillar temple, Ramappa temple and tanks like Pakala and Ramappa were built during their period.



### Mughals - Akbar

Akbar was the most famous Mughal emperor who ruled India. Though he was a muslim, he was tolerant to others religions also. Literature and administration of his period are quite popular.

### Chatrapati Shivaji...

Shivaji was a brave man who revolted against Mughals and established the Maratha kingdom. He was a follower of Hinduism but was tolerant towards other religions and earned a good name. Great saints like Saint Tukaram, and Samarth Ramadas Swami lived in his period.



## Discuss in groups



- ◆ You have learnt about some important people of our country. What is their greatness?
- ◆ What should we learn from them?

### Key words :

- |                  |                      |                        |
|------------------|----------------------|------------------------|
| 1. History       | 4. Life style        | 7. Empire              |
| 2. Culture       | 5. Civilization      | 8. Rulers              |
| 3. Primitive man | 6. Country's culture | 9. Religious tolerance |

### What have we learnt?

#### 1. Conceptual understanding

- Tell the similarities and differences between the lifestyles of a primitive man and a modern man.
- What are the evidences that help us to know our Indian history?
- We should protect our country's monuments and buildings. Why?
- Tell about some important people of our country and state. Why are they great?

#### 2. Questioning - hypothesis

- ◆ What historical details do you know when you visit an old building or fort. What questions do you ask?

#### 3. Experiments - field observations

- ◆ What features tell you about your village's history? Observe them and tell the details.

#### 4. Information skills, projects

- Make a table showing the details of important people and monuments of our country as learnt from the lesson.
- Collect some more information about Satavahanas and Quli Qutub Shah and exhibit in the class.

## 5. Communication through mapping skills, drawing pictures and making models

- You have learnt about the important monuments, point out the monuments in the map of India.
- Among of the important personalities of our country, Kakatiyas and Satavahanas belong to our state. Point out the places they belonged to in the map of India.

## 6. Appreciation, values and awareness towards bio-diversity

- We should protect our ancient monuments. What can we do in this regard?
- How can you say that the culture of our country is great?
- What features of our culture do you like most? What do you do to preserve them.
- Monoact any one of the important persons of our country.
- Write your experiences after visiting a historical place.

### Can I do this?

- |  |        |
|--|--------|
| 1. I can explain about our country's history and culture.                  | Yes/No |
| 2. I can ask questions necessary to know the history of our country.       | Yes/No |
| 3. I can collect the details about the history of a village.               | Yes/No |
| 4. I can write the details of important persons in the form of a table.    | Yes/No |
| 5. I can identify / point out the monuments and persons / places in a map. | Yes/No |
| 6. I can strive to protect the buildings related to our culture.           | Yes/No |

