ENVIRONMENTAL STUDIES

Class-4

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Foreword

It is necessary that both teacher & student be active for the acquisition of knowledge. It was a great challenge to bring out the different social, cultural & geographical diversity which is the strength of our state, in this book. It was greatly planned that each student would find the book to be his personal one.

Children of this age group have an overall view of their surroundings. So care has been taken to include the natural, cultural and social things in their surroundings. To make the book child centred, care has been taken to provide opportunities to children for search, observe, express their views and find solutions by them selves.

In the textbook many opportunities has been given for the students to work individually, in groups and with the society. It has also be devised in this book that the children take the help of other sources along with that of the textbook and their teachers-as-family, society, newspaper, library etc. By this Family and society will be connected to the school.

During the making of this textbook many environmental points have been kept in mind as forests, animals, plants-trees, rivers, transport, petrol, water, pollution, natural disaster, family relations and disability so that the children may be aware of these and develop a positive thinking about them.The activities given in the book are suggestive. You are free to add more at your level.

Evaluation would be at your level but must be continuous, comprehensive and child centred.

Right to Education Act-2009 stresses on providing quality education. NCERT New Delhi has established class wise, subject wise, learning outcomes for students of class 1 to 8 and has suggested pedagogical activities for achieving the all-round development of the children. So for the year 2018-19 textbook has been made even share & relevant so that children get maximum opportunity to acquire knowledge. Hope this book will help teachers, parents and children to reach their goals.

In the production of this book we have received great help and guidance from teachers of government and private schools DIETs colleges and Ravishankar University Raipur, private institutions and enlighted citizens. We are greatly obliged and offer sincere thanks to all.

We would welcome suggestions for the improvement of this book from all of you.

Director
State Council of Educational Research
and Training Chhattisgarh, Raipur

For the Teacher and Guardians.

State Council of Educational Research and Training Raipur has prepared these text books on Environmental studies with the objective of increasing the skills & abilities of the children. To make sure that children may analyse their experiences and learn and understand the subject. Some points of Environmental Studies are relevant which is given below.

⇒ Provide opportunities to obtain knowledge instead of giving information.

⇒ To enforce learning and comprehension instead of rote memorization.

⇒ To induce children to do experiments and activities.

⇒ To make children learn in groups, discuss with each other, arranging the activities together and them coming to the conclusion.

⇒ To motivate children to find solutions to the questions given in the textbook.

⇒ Try to organize the different informations present, to draw a conceptual formula. Also to try to develop scientific view by believing the evidences and learn.

It is quite natural that children of class IV are expected to know more, so in comparison to class III these children are given more challenges through the medium of activities and experiments. It is expected that children read and understand some of the lessons. it will be better understand some of the lessons. It will be better if the children work in groups or it may be displayed before the class by the one who could comprehend it properly.Another one of the important issues of environmental studies is that children learn to tabulate their observations and experiences and find solution to them and analyse them. This point has been taken carotid in this book.

A list of the skills which are to be developed in the children on the basis of the materials given the textbook is also given in this book. Please read this list. we have to provide opportunities to help them develop these skills. You should provide open space for the children to learn motivation them to do as many activates as they

can give them a chance to know and ask questions about the world around them. You know that children are aware of their surrounding and having a chance to tell something about at will help in building up their moral/ self-confidence.

The Main objective of elementary education is understanding or comprehending the written matter some steps has taken to develop linguistic skills also. It is expected that you care about developing the linguistic skills.

During teaching these lessons, children are to be taken to gardens, historic places and other places. For some lessons as Respiration Games of Air Heart Beats, materials from nearby surrounding are to be collected for the activities 7 experiments in the lesson. It is expected that the guardians will co Operate in this. In every lessons there are questions along with the activates& experiments, to which the children are to find answers. Please don't be anxious to provide answer to these question but motivate the children to find the answers themselves. Many opportunity stages are provided in the book were the student could discuss about their experiences and also write about them. The part of the teacher guardians and elders become more important as they have to see that their experiences are correlated to environmental studies and the different social issue be taken to include children with special needs with the common stream. At the end of each lesson a portion with a subtitle of "Find from Your Surrounding" has been given where there are some extra interesting activities. Please guide the children to these activates. It is expected that you all will help them to complete these activities.

The activities and experiments given in the book is just suggestive. May be on working with the children, you may need to change the sequence of the lessons. You are quit free to do this.

Your suggestions are warmly expected.

Director

S.C.E.R.T.C.G, Raipur

Environmental Studies
Skills And Contents

1. Inspect, Identify, collect data & register them

⇒ To investigate about the qualities of various things by touching & feeling them.

⇒ To observe & understand certain things carefully when going on excursion.

⇒ To know & understand new things by asking questions from related persons.

⇒ Understand by reading brief description.

⇒ To study the charts, visual maps, models or pictures and understand the important things.

⇒ Collect information.

⇒ To organize & express the knowledge according to written orders.

⇒ To present the acquired knowledge in small sentences through verbals & written method.

2. Comparison, classification synthesis and simplification.

⇒ To fill the table of two-three columns.

⇒ To organize registered picture systematically.

⇒ To make maps & organize them in order.

⇒ Recognize the qualities- what are the facts or aspects which tell us about the qualities of things and distinguish them from other things.

⇒ To find 2-3 similarities & dissimilarities in the articles.

3. Development of Pattern, interrelationship & hypothesis.

⇒ To develop understanding on the basis of given knowledge & experiences.

⇒ Develop inter-relations between the circumstances & the work done under such circumstances, like wearing of cotton clothes during summer.

⇒ Start understanding the beliefs of celebrating the festivals of any particular region by reading or listening.

⇒ Develop the creativity.

⇒ To be able to identify the things and different parts and develop relationship between them.

4. Recognize problems, suggest & decide options

⇒ To search solutions of some visual puzzles and visual problems.

⇒ To understand the importance of looking after our self in the present conditions and to cure one self in case of facing any minor accident.

⇒ Identify certain hidden problems. To differentiate & find similarity between two or more things.

5. To find reasons and effects and suggest the treatments.

⇒ To understand the importance of water, air, soil, plants and living organisms.

⇒ To find the causes and think the ways of stopping their bad effects.

⇒ To use the natural resources and understand their importance & suggest the remedies for protecting them.

⇒ To understand the importance of rules of protection, safety and adopt them in one's own life.

6. Development of presentation, Interests, Habits & Patience:

⇒ Curiosity (Why, How - About the environment) to be able to ask questions, evaluate & experience on the basis of challenges.

⇒ Be able to speak in groups after hearing & understanding them.

⇒ Form teams and adjust according to the emotions & feelings of group (without illitreating the other team) & begin the activities.

⇒ To express any social & historical event through a play.

7. Experiment, construct hypothesis & check, reconstruct & understand the reactions.

⇒ To experiment on activities based on arithmetic evaluation & find conclusions.

⇒ Evaluation, Identification & conclusions.

8. Learn to Study & Construct Pictures & Maps.

⇒ To learn from Pictures. To form relations and organise them in series.

⇒ Construct Pictures for reference.

⇒ To look at Maps and understanding of Symbols & to identify signs & symbols.

With Best wishes,

Director
SCERT
Chhattisgarh, Raipur

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Environmental Studies

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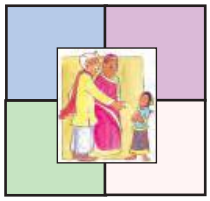


1 Relations

Guests and relatives
Came from all over,
For my sister's marriage.
From Delhi came my 'dada-dadi'
Also came my 'nana-nani'
They brought 'sari', 'bindi', 'bangles', 'kangan'
And there were gifts many.
'Mama-mami', 'mausa-mausi',
'Kaka-kaki' came
They brought their dear children
Along with them.
Thus our 'didi' was married
with pomp and show
All the guests returned home
only 'dada-dadi' are with us.

Have you ever been to any of your relative's marriage? If yes, then, whose?

_____

Which of your relatives went there?

_____ _____ _____

_____ _____ _____

_____ _____

Could you identify all of them?

_____

Name the relatives you could identify.

_____

Name the relatives you could not identify. Who were they? Why could you not identify them?

_____

_____

In the table given below, write the names of some relations from you mother and father's side -

Related to Mother	Related to Father
Nana	Chacha

A marriage forms many new relations in the family. Find out what new relations are formed after marriage. Add some new in the table given below -

Who?	Whose?	What?
Bride	groom's father	Bahu
Bride's mother	groom's	
Groom's sister	bride's	
Groom's brother	bride's	
Groom	bride's	husband
Bride's sister	groom's	
Bride's father	groom's father	
Groom's sister's husband	bride's	
Bride's brother	Groom's	
Groom's sister's son	bride's	

Baby guest

Meenu's family is very happy. She has a small baby sister now. What changes will be there in Meenus family members on the coming of her small sister? For example : How will Meenu spend her day now?

What other works would her father and mother do?

Meenu saw that her sister has black curly hair. Meenu said to her grandmother "her hair is same as yours". Little sister's hair is as curly as her maternal grandmother. Find any such identification in any of your brother-sister or cousins. Look for identifications as colour of the eyes, height, short or stout nose, voice, dimples on cheeks etc. Try to tell which side – father or mother, did these qualities come from.

Draw the following table in your book and then fill it. Here an example of (little sister) is given.

Nanhi – Quality Curly hair	Similar to Maternal grand mother	Mother's side ✓	Father Side x
–	–	–	–
–	–	–	–
–	–	–	–

Transferred

Meenu's father has been transferred to another city. Now they have to go to another city. What changes will be there in Meenu's family due to her father's transfer. For example Meenu will study in a new school. Meenu will have new friends.

Find out if some student in your class or school has come from another place. If so then talk to him/her.

- From where have they come?
- How was the school there?
- How do they feel here?
- Do they like this change?

You have seen that there is a change in the family due to marriage, birth and transfer. Come let's find out if there is any change in your family.

Family - yesterday, today and tommorow

There are changing everyone's family for some season of the other let us see if there are changes in your family as well.

Find out from your grandparents who all were there in their family during their childhood. Draw a family tree of any one of your grandparents as per their childhood.

Do you find yourselves or your brother/sister or father, mother in this family tree?

Now make your present time family tree in your copy.

Find where you are in this family tree.

Today who all are there in your family?

Where are your grandparents – maternal and paternal?

Find out

How your family tree differs from that of your maternal & paternal grandparents.

Back to School

There are many girls who are married off quite young (below 18 years). Many of these girls are forced to leave school. It is seen that with the help of the family, school, society and panchayat these girls are returning to school for studies.

Everyone believes that playing and studies are very important for all children. They must not be married in their childhood.

Find out & Write

Are there any children in your neighbourhood who have been removed from schools? Do they want to study now?

What are they doing at present?

What did we learn?

Oral

1. Who tells you stories at home?
2. What do you call your mother?
3. How do you feel when you meet your relatives ?

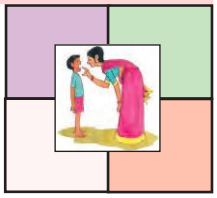
Written

1. On what occasions do your relatives meet?
2. What will your '*mama's*' son be to your mother?
3. What will your '*chacha's*' brother's sister be to your mother?
4. Seema's 'didi' has been married. Can you tell how will she be known after marriage? (for example, she can be someone's 'mami'.)

Find out and Do

1. Ask your mother about her childhood stories and discuss among yourselves. Who were there in your mother's family? Find out.
2. Describe a family relationship in the form of a tree.

2 Teeth



Yesterday I told Ganpat,
To close his eyes and open his mouth,
He must have thought to himself,
It's the 'laddu' which is round.

Quickly I counted his teeth,
The teeth in his mouth,
Looking at their structure,
I told him a known myth.

Ladoos I'll give
Sure I will
First let me count your teeth within
Then the ladoos you'll win.

Front teeth bite,
Middle teeth tear,
Chewing is done
By teeth which are rear

Poem - Smita Agrawal
(Courtesy "Chakmak")

If someone is eating a banana. Which teeth help in cutting and grinding a banana?

_____

How do you know the taste of food?

_____

_____

_____

We eat the food by chewing it well. Teeth help in chewing the food.

_____

Count the teeth

Lets find out, how many teeth are there ?

Tell a person to open his mouth. Now count the teeth one by one. First count the teeth which are in the upper jaw, then count the teeth which are in the lower jaw. Now tell -

How many teeth are there in the upper jaw?

_____

_____

_____

_____

_____

How many teeth are there in the lower jaw?

_____

_____

How many teeth are there in all (upper + lower jaw)?

_____

_____

Fill in the table given below after counting the teeth of the persons given -

No.	Whose teeth	Number of Teeth		
		Upper jaw	Lower jaw	Total
1.	My teeth			
2.	My friend's			
3.	Elder's			
4.	2-3 year child's			
5.				

Now tell the difference in the number of teeth of an adult and you?

_____

Is the number of teeth of a two year old child and your friend equal?

_____

How many teeth fell

A baby's teeth are called milk teeth or temporary teeth. Generally their teeth fall by the age of 12-13. In their place, new teeth grow. These are called permanent teeth. Have your milk teeth fallen?

How many teeth have fallen up til now?

Ask your friend if any of his teeth have fallen. And how many have fallen.

What Stuck

Collect some eatables like 'jaggery' chocolate, a piece of bread or fruit. Now eat them one by one.
What stuck to your teeth?

If some eatable sticks to your teeth, how do you take it out?

Layer on Teeth

When you get up, feel your teeth with your tongue. Do you find a thin layer on your teeth?

After brushing the teeth, again feel them with your tongue if the layer has been removed or not.

How do you clean your teeth?

1. _____ 2. _____ 3. _____

Why are you told to gargle after having food, chocolate or sweets?

Speak and See

Some words are given below. Speak them out -

grinding teeth	mama	dada	parrot	bhaiya	didi
comb	wire	little	dew	hand	fertilizer

While speaking what words does your tongue touch the teeth?

Try to speak these words without touching the teeth with your tongue. If you succeed in some, round them.
Find out such more words for which teeth are used. Teeth are important to speak some words. Write some such words.

_____

_____

Do and See

Try to eat a 'roti' without using your teeth.
Try to cut carrot, radish etc. with the back-teeth.
Try to chew carrot, radish with the front-teeth.
Are different teeth used for these actions?

_____

Which teeth do the chewing work ?

_____

Which teeth are used for peeling a sugarcane?

_____

What did we learn?

Oral

1. What do we call the teeth which falls in childhood?
2. By what age do the temporary teeth generally fall?

Written

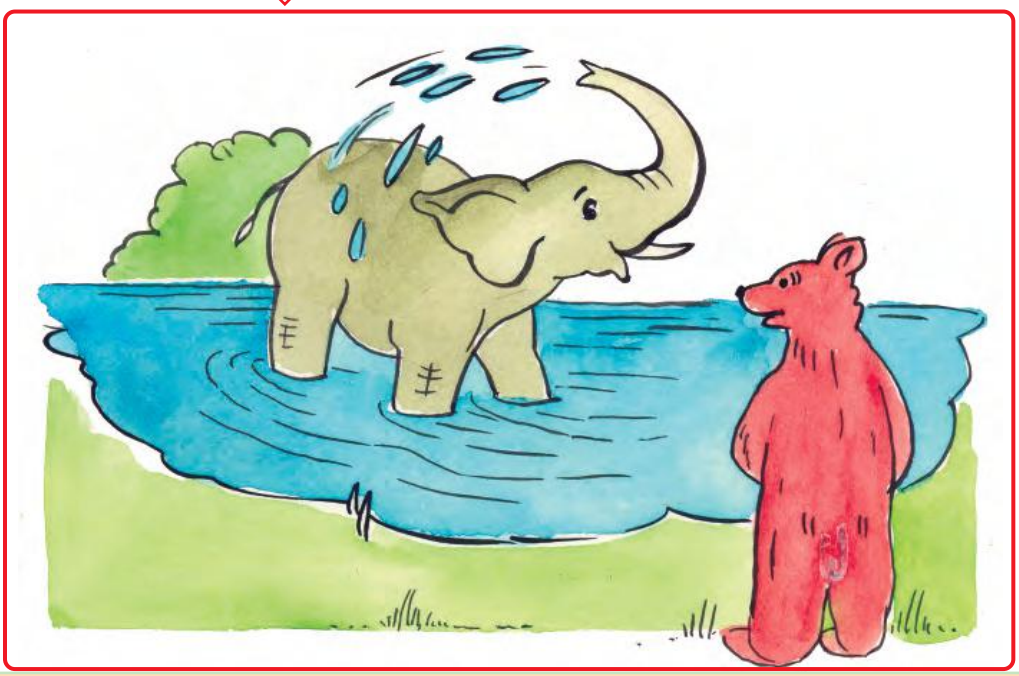
1. By what age do the permanent teeth start growing?
2. Which part of the mouth is touched while pronouncing 'ta' 'tha' ?
3. Why do the teeth rot ?
4. How many teeth do the grown ups have?
5. Name different types of teeth.

Find out and Do

1. Look at the artificial teeth of an elderly man and draw a picture.
2. What is the change in pronunciation if the teeth fall ? Also find out whether there is any change in the feature of the face if the teeth fall.
3. Following are the words which we speak with the help of tongue and lips. Match the given words :
   (Pa, Bha, Ra, Ba, La, Kha, Sa, Ta, Na, Sha, Pha)

with the help of Tongue	with the help of lips
1.	
2.	
3.	
4.	
5.	
6.	

3 Water O Water



There lived an elephant
And also a bear,
The world knew that
They had friendship rare.
Hide and seek they were playing,
"Listen Bear, said the elephant,
Now I go to hide,
You will find me
Where water is by the side.

Having said so, the elephant went to the place where there was water. After completing his work, the bear went to look for the elephant.

What places could he go to look for the elephant?

_____ _____ _____

_____ _____ _____

The bear found the elephant near a river.

The bear asked - how much water did you drink?

The elephant said - stomachfull.

Guess and tell how much water the elephant drank.

_____

_____

Water from which places?

From where does your village or locality get the water? For what purposes is it used? Find out and write in the table.

Sources of water	For what purposes is water used ?	At what time of the year is water found ?
Tank		
Well / Pond		
River / canal		
Hand pump		
Tap		
Other		

Do your family members have to go far for water ? How long does it take to fetch water?

_____

One village, how much water?

Find out from your house how much water is needed for daily work. (To measure it, a bucket or a pitcher can be used)

S.No.	Uses of water	How many buckets/pitchers
1.	Bathing	
2.	Drinking and cooking food	
3.	Clearing utensils and washing the clothes	
4.	For the cattle	
5.		
6.		
7.		
8.		
9.		
10.		

On the basis of the table, tell how many buckets or pitchers of water are used daily in a family?

_____

How many houses are there in your village or 'colony' ?

_____

Tell how much water is consumed in your village or 'colony' in a day?

_____

Now tell how much water will be consumed in your village or 'colony' in a month?

_____

A wonderful way to save water

Imagine about an area where there is only sand. It is a warm place with very little vegetation. The rainfall is also very little here. The people living here use the water economically.

Generally, we clean the utensils with water and soap. This needs a lot of water. But in the sandy areas, the utensils are cleaned with sand.

What more ways are adopted to conserve water? Find out and write.

_____

_____

_____

_____

In many houses, the water used in bathing, washing clothes and cooking food is drained for plants. Do you also do the same ?

A Newspaper Report

Water—water—water. There was acute shortage of water in the village. The people were harassed. The wells and the ponds had dried up. The government hand pumps also dried up. In such a situation the people had to fetch water from afar.

To solve this problem, one day a panchayat-meeting was called. They discussed how to solve this problem. They decided to clean and deepen the wells and ponds and repair the hand pumps also.

Next day, the work started. All the wells and ponds were cleaned and deepened. The hand pumps were also repaired.

What measures do your people adopt to tackle the water-problem ?

_____

_____

_____

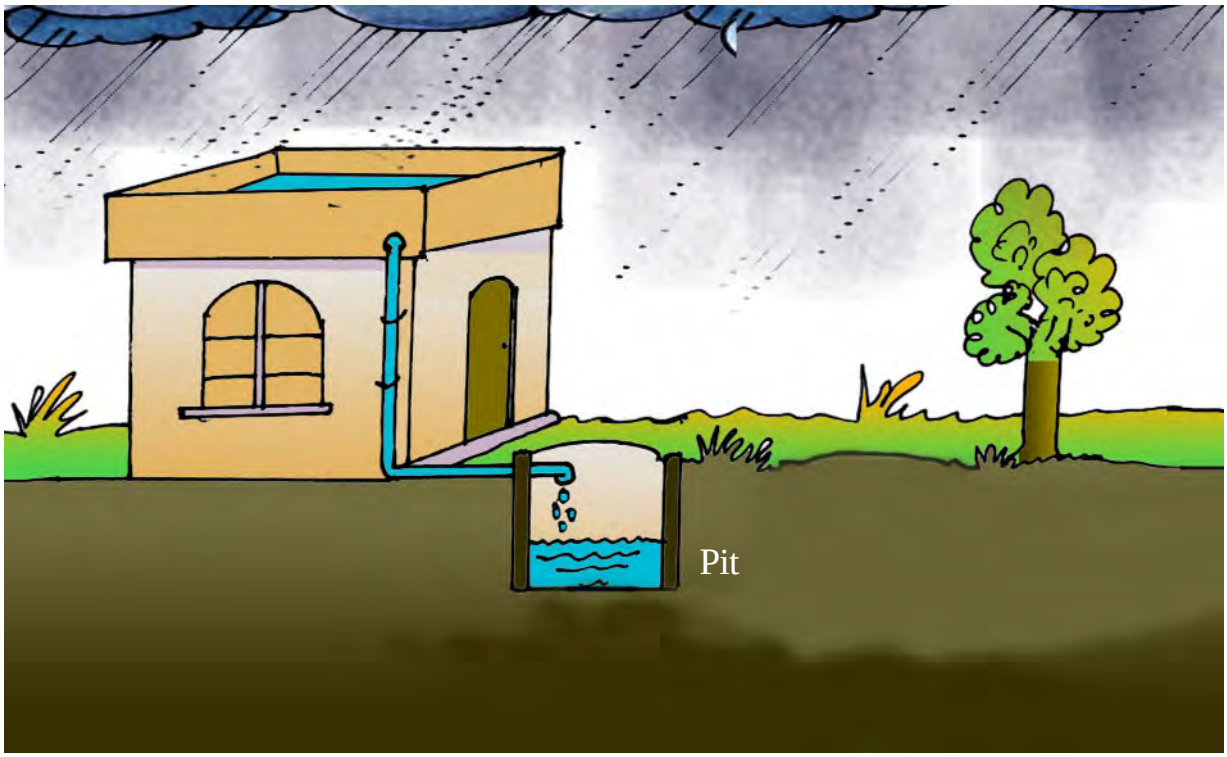
What can we do to conserve water ?

_____

_____

Rain Water Harvesting

Collecting the rainwater and using it as required is known as rainwater harvesting. For this harvesting rain water collected on the rooftops are collected through pipes in a pit or tank in the ground. This pit has a simple base, on which layers of stone metal and sand is put, which helps infiltration of the water. Through this, the water is filtered and then soaked inside the ground. This helps in increasing the underground water level. This water is which we draw out from hand pump or water pump for our uses.



Water-O-Water

Let's tell you an interesting thing about water. Now a days the scientists are looking for water at places in addition to the earth.

Suppose, water is found elsewhere; then would there be dogs, cats, fish and the people like us also in such places?

When Fuleshwari a student of class - IV was asked this question, she said - 'yes'.

Do you also agree with Fuleshwari ? Discuss among yourselves and write.

_____

_____

If we do not get water for a day, what will happen to us ?

_____

_____

Dirty Water and Diseases

Has anyone suffered from jaundice in your area?

This disease happens because of dirty water. Dysentery, Cholera, Typhoid all these diseases are caused due to dirty water.

Drinking water must always be clean.

The best way of cleaning water for drinking is boiling it. For making water suitable for drinking there are many methods.

How is water cleaned in your home?

Find out different methods of cleaning water for example – Boiling water, Cleaning by using alum, sieving or filtering the water.

Have you heard of the red medicine (potassium permagnate)? This medicine or chemical is poured into the well to clean the water.

Water is precious, know its importance. Write same rhymes related to this.

What did we learn?

Oral

1. How will you keep water safe at home ?
2. What difficulties will you face if you do not get water ?

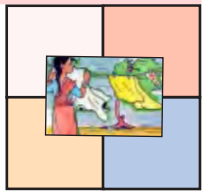
Written

1. For what purposes do you use water daily ?
2. Who brings water in your house ?
3. What are the sources of water in a village ?
4. Write down the ways to conserve water.
5. What is the harm in drinking dirty water ?

Find out and Do

1. Find out the sources of water an your village or 'colony' have they become diry? If yes them what are the reasons for that?
2. Name the animals that can live without water for many days.
3. Name the plans which grow in water.

4 Air



Air is present all around us. You did some experiments related to it in classIII. Do you remember ? We cannot see air but we can feel it, e.g., from the trembling leaves of trees.

Write down any three things by which you feel the presence of air.

_____

_____

_____

We use air to blow a horn. Write down the names of three games and toys in which air is used.

_____

_____

_____

In your daily life, for what purposes do you need air in addition to the activities given above?

_____

_____

_____

_____

Looking at the pictures given below. In which direction is the air blowing? Indicate with an arrow mark also.

_____

_____

The power of a blowing

Come, let's do some interesting experiments regarding air.

Experiment - 1

Blow a piece of paper. How far does it go?

Now make a ball of paper. Can you blow it into an empty bottle? Do and see. For this take a plastic bottle and as shown in the picture put it horizontally on the table. Then, put the paper ball in its mouth and blow it. What happened? Did the paper-ball go inside ?

Tell your friends also to do this experiment. What happened? Discuss about it in the class and write down.

Experiment - 2

Take an empty plastic bottle. Come, let's see whether this empty bottle is really empty?

Cut the bottom of this bottle. Now tie a balloon at the mouth of the bottle. Now slowly sink the bottle into a bucket full of water as shown in the picture.

After the bottle is sunk, write down whatever you see.

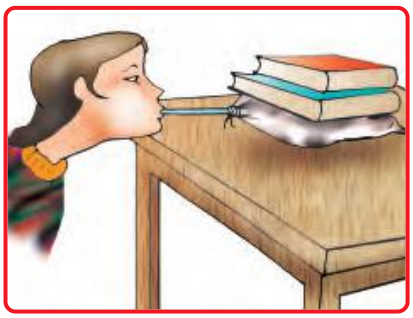
Now slowly bring the bottle up. See what happens.

Who has power?

Experiment - 3

Take a thick polythene bag. It should not have any holes. Tie the tube of an old pen to the mouth of the bag. The tube should be open on both sides.

Now, put this polythene bag on the table and put some books on it. Now, blow into the bag.



What happened when air was filled in the bag ?

When the bag is filled with air, the weight of how many books can it bear? Do and see.

Air and Heat

What happens if the air gets hot ? Let's do an experiment.

Experiment - 4

Take a bottle made of glass. Open the cap of the bottle. Now, insert the bottle upside down into water. Insert only half the bottle.

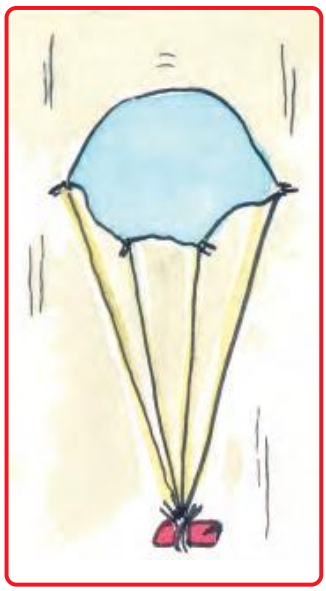
Now tell your friend to rub his palms and hold as shown in the picture. You keep on watching the layer of water.

What happened when the bottle was held after rubbing the palms ?

You will see a bubble in water.

Where did this bubble come from ?

Make your own parachute



Take a big polythene bag, cut it into two handkerchief like pieces. Now take four cords of the same length and tie them to the four corners of the piece of polythene.

Now, tie the second side of all the cords. The length of all the cords should be the same even after they are tied.

Now tie a pebble to where all the cords meet.

Your parachute is ready.

Now after folding it, throw it upward. See, how it comes down flying in the air. If a hole is made in the parachute, will it be able to fly in the air ? Think and tell.

Make two holes in the polythene of the parachute. Now, fly it again. Did it fly in the air the same way ?

What did we learn?

Oral

1. Is air present all around us?
2. When an empty glass is sunk in the water and tilted, bubbles come out of it. Why?

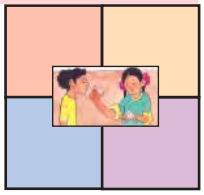
Written

1. Tick (✓) the right answer and (✗) the wrong answer given below -
   - a. We can see air, ( )
   - b. There is no air around us. ( )
   - c. Air expands when heated. ( )
2. Give two examples where air is used.
3. How do we feel air?

Find out and Do

1. Look at these figures and select the things which work with the help of air.

5 Breathing



Deepa and Meena are friends. One day they had a race-competition about who reaches school first. Both of them started together. Meena reached the school first and won.

Both of them were breathing fast. Meena said, “I am panting”. Then Deepa said - “You always pant if you run fast”.

What other activities cause fast breathing?

_____

_____

_____

_____

How many breaths in a minute?

How many times do you breathe in a minute ? Let’s find out.

You will need a watch for this. Better, there is a wall-clock in the room of your school.

Take your palm near your friend's nose. Tell your friend to inhale and exhale. Be careful that your friend breathes normally.

How do you feel when your friend inhales and exhales?

_____

If you inhale and exhale once, it is called one breathing. When your friend inhales and exhales once, count it as one breathing.

How many times does your friend breathe in a minute? Write in table 1.

Table 1

No.	Friend's Name	Number of Breaths in a minute
1.		
2.		
3.		
4.		
5.		

Do all of us have the same number of breathing in a minute?

_____

_____

Work and Breathing

Now, do one more experiment with your friends. Any four friends should do skipping or running. When they are through, count their breathing. Fill in the table 2.

Table 2

No.	Friend's Name	Number of Breaths in a minute after skipping or running
1.		
2.		
3.		
4.		
5.		

Now, tally the number of breaths with that of table - 1 and tell -

Is there any difference in breaths ? If yes, then why ? Discuss and write.

_____

_____

Stop breathing and see

How do you feel when you stop breathing ? Do and see.

_____

_____

Measurement of Chest

When we breathe, the air fills in the lungs. When we inhale and exhale, what effect does it put on the chest ? Let's find out.

Measure your chest with the help of your friend with a ribbon.

_____

Now inhale deeply and measure your chest again in this state.

_____

What is the difference in both the conditions ?

_____

Do the same activity with the other friends. When you inhale and exhale, what effect does it have on your chest ?

_____

_____

Smoke in Breathing

In winter-mornings you must have seen that the smoke comes out with breathing.

Let's do an experiment.

- Take a face-mirror. Clean it properly with a piece of cloth.
- Now blow air from your mouth on to the mirror.

  What do you see on the surface of the mirror ?

_____

Tell what is it?

_____

_____

_____

What did we learn?

Oral

1. With which organ do you breathe?
2. In what circumstances does breathing go fast?

Written

1. Why does the chest expand when you inhale deeply?
2. Find out the sentences from the chapter and complete it —

   a If you inhale and exhale once _____.

   b. In winter morning _____ .

   c. When we breath the air _____ .
3. Where does the air go when you inhale?
4. Fill in the blank with the suitable words -

   (air, fast, slow)

   (i) While inhaling the ..... goes inside the body.

   (ii) The breathing is ..... while sleeping.

   (iii) The breathing is ..... while running.

Find out and Do

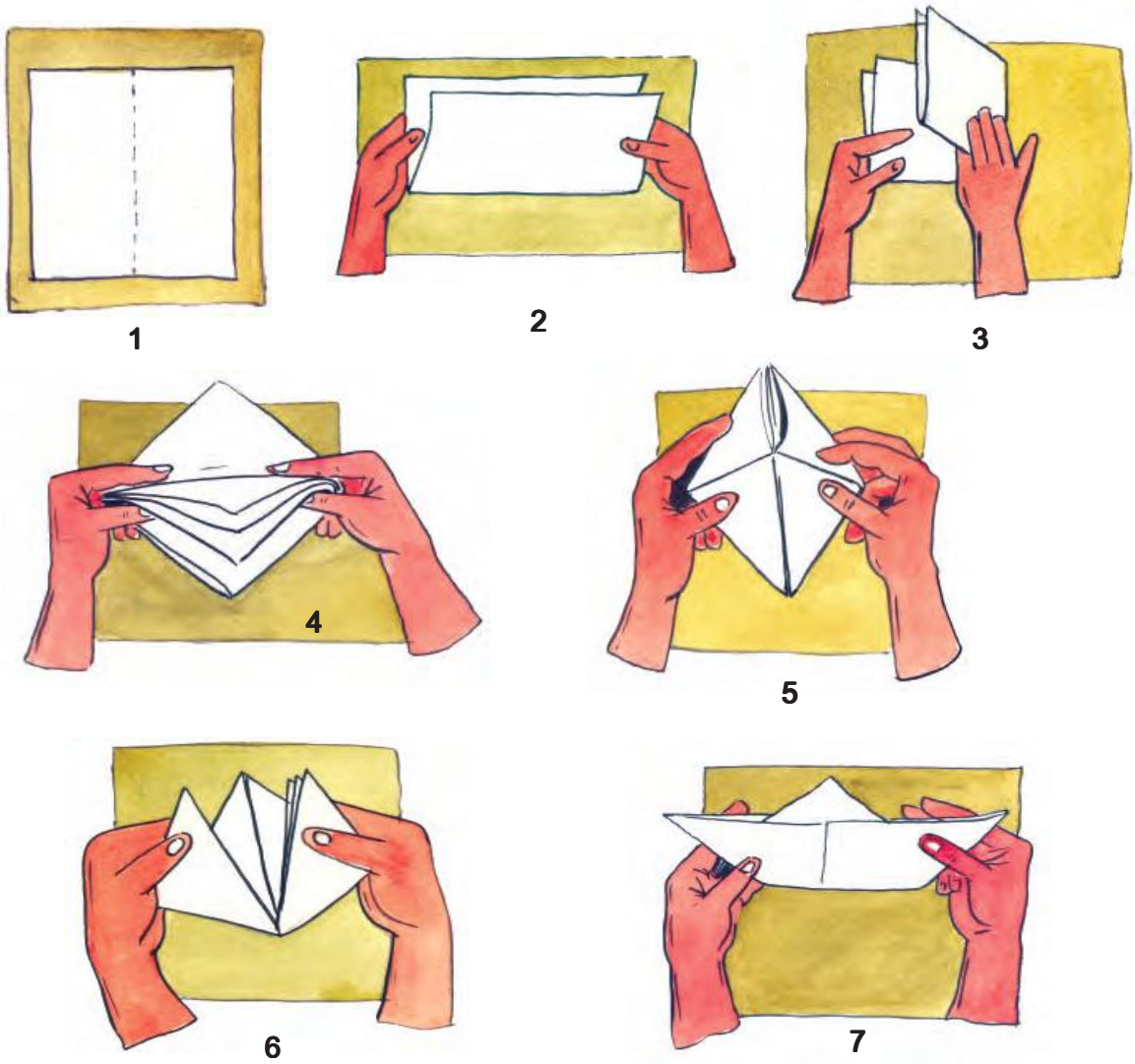
1. Count your breath in the morning. How many times do you breathe in a minute?
2. Count the breath of a two or three year old child. Is there any difference between your and the child's breathing?

6 The Boat Goes

Have you ever made a paper-boat ? We shall teach you how to make a boat. May be, you know it already. Still, let's make a boat together and float it in water.

The Boat is made this way

Take a piece of paper. Fold the paper as shown in the pictures below.



Your boat is ready. Now float it in the flowing water.

Which direction is the boat going? And why?

_____

Why does the boat not move in still water?

_____

How can you move the boat in the still water?

_____

Dulari saw a Boat

Once, Dulari went to Jagdalpur with her family. Dulari's uncle lives at Jagdalpur. She went to the bank of a river. Its name was 'Indrawati'. Dulari saw that a number of people were having bath in the river, a boat was also sailing in it and the people were moving from one bank of the river to the other.

Dulari had made a paper boat earlier. But she saw a real boat for the first time. Dulari asked her uncle from where these people were coming by boat ? Her uncle told pointing out with his finger that they were coming from a village called Dongaghat.

Dulari also expressed her desire to travel in the boat.

Dulari got seated with his uncle on the boat. Dulari was watching carefully how the boat was moving.

Did the boat exist earlier also? What kind of boat would it have been?

Come, let's try to find out the answers to these questions.

The early boat

Lets look at the pictures given below and find out how the people used to cross the rivers and streams.

Picture 1

In picture 1 two persons are crossing a stream. This was a way to cross it. Do the people cross a stream the same way even now? Find out.

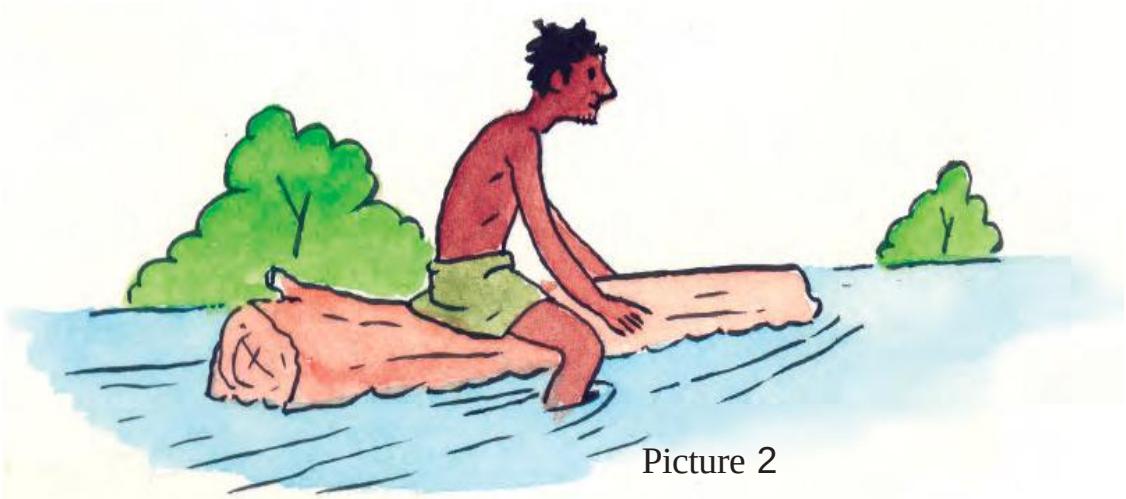
_____

_____

Look at the picture 2. How is the man in this picture travelling in the river? Write.

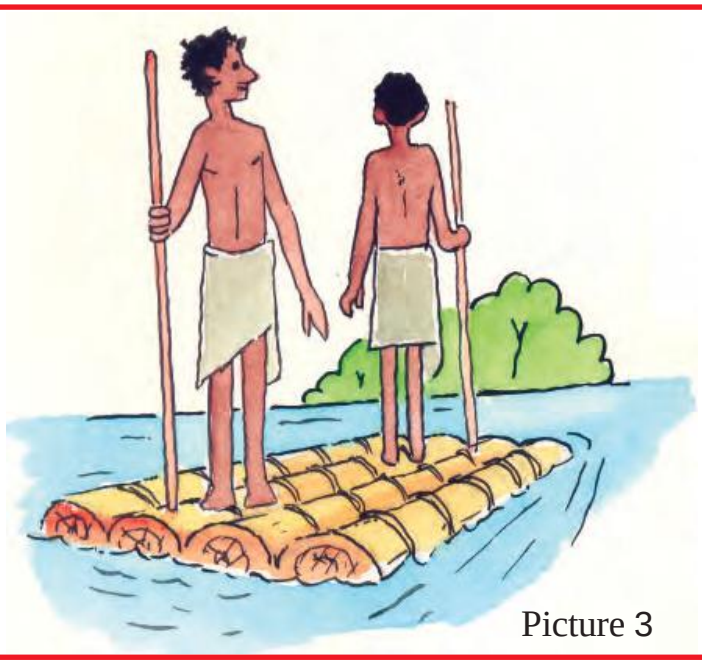
_____

_____



Picture 2

In the beginning, the people adopted this way to travel in the river (Picture 2). But with the passage of time, the people modified it slowly as shown in picture- 3. After some time, how did the people travel in the river ? Look at picture 3 and tell.



Picture 3

_____

_____

In picture 3 and 4, why do the people have thick sticks in their hands ? What are they doing with these ?

_____

_____

Look at this picture carefully. Thoughtfully, people tried out new ideas and finally the people made a beautiful boat.
How has this been made ?

_____

_____

Picture 4

_____

Can you think by which of these means you can travel in a deep river?

_____

_____

_____

Think and tell

Now tell what are the changes and modifications brought about in a boat since then ?

_____

_____

Now-a-days, what type of boats and ships are found ?

_____

_____

What did we learn?

Oral

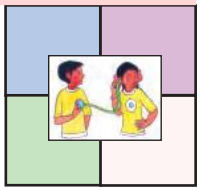
1. What means are used to cross a river?
2. What do we call a man who sails a boat?

Written

1. In ancient times, from which material was the boat made?
2. What is the difference between an early boat and a modern boat? Write.
3. If there were no boats and ships, what difficulty would we have to face?

Find out and Do

1. Look at a boat which is floating nearby and draw its picture.
2. Collect the pictures of different types of boats and ships.
3. Put some pebbles in the floating bowl in a bucket. Keep on putting pebbles until it sinks. After putting how many pebbles did the bowl sink?

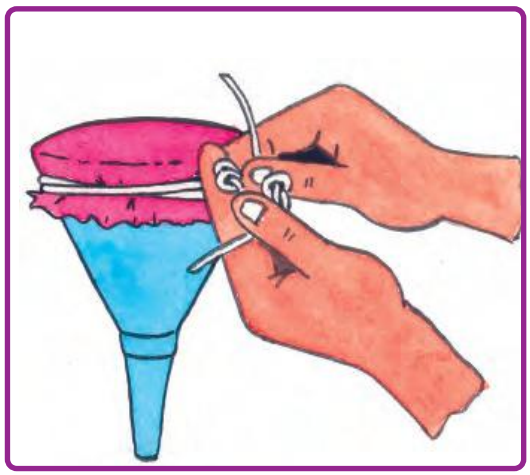


7 Heart Beat

Rani was running a high fever for two days. Today, her grandmother took her to a doctor. Doctor examined Rani with his stethescope and prescribed some medicines. Rani asked his grandmother "What does the doctor hear from the stethescope?" Her grandmother answered "Doctor listens to the heart beat with stethescope". She diagnoses the diseases by listening to the sounds of the chest and the stomach.

Rani was well now. One day Rani asked her grandmother to listen to some sounds with a stethescope. Her grandmother told her, "Let's make a stethescope-like instrument. Rani collected some materials for this."

1. One funnel
2. A rubber tube
3. A balloon
4. Cord

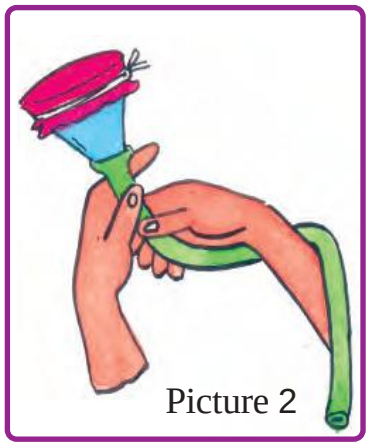


Picture 1

Rani put one end of the rubber tube on the end of the funnel tightly. She tied the balloon to the wide mouth of the funnel.

Her grandmother said, "Now your stethescope is ready.

Her grandmather told her, "Now press the funnel end of the stethescope to the left side of my chest and put the other end to your ear."



Picture 2

Make your own stethescope

Make your own stethescope as Rani and her grand mother made. Put the stethescope's funnel end on your friend's chest and the tube-end to your ear.

Did you hear any sound ?

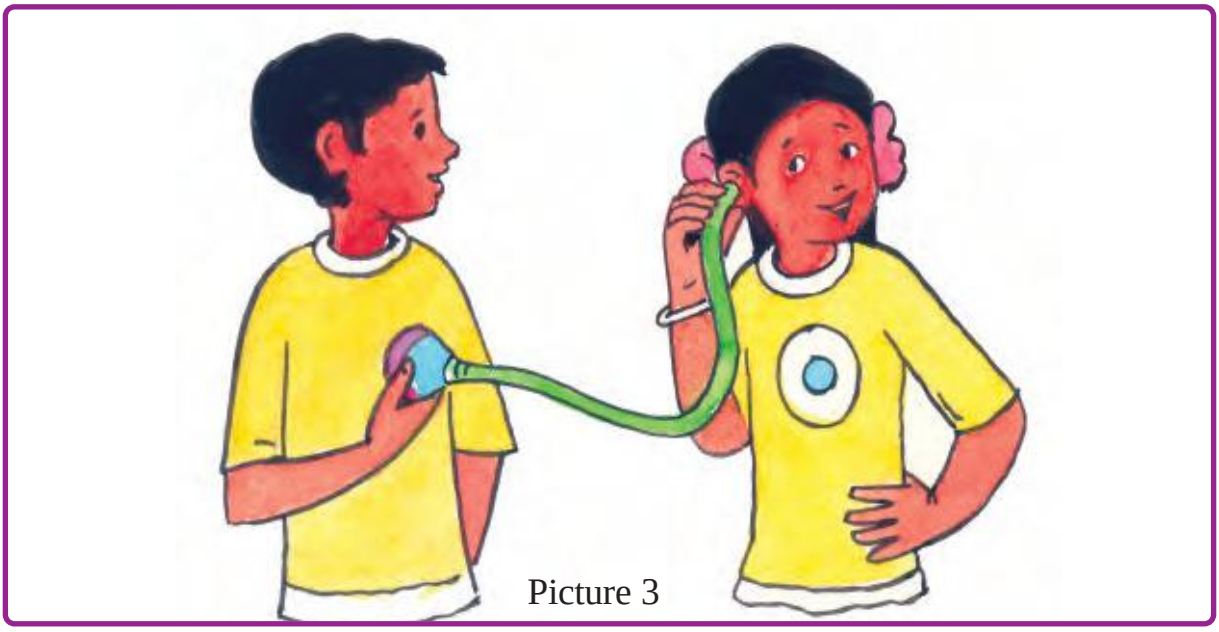
_____

What was that sound like ?

_____

Now keep stethescope on the different parts of your friend's chest and listen to the sound.

On which side is the beating heard clearly?



Picture 3

.----------

Put this stethescope on your chest and listen to your heart beating.

Now, skip or run for sometime. After doing this, put the stethescope on your chest and listen to the sound.

Was the beating faster or slower?

.----------

Pulse rate

You listened to the heart beating with your stethescope. Now let's feel the pulse rate.

The doctors look for the pulse in the patient's wrist.
Find out your own pulse in your wrist and feel it beating.

Picture 4

Put your right hand on the table or ground and press the wrist with the fingers of the left hand as shown in the picture.

Did you feel any beating?

How many times does your pulse beat in one minute ? Count and write.

In your body, where do you find the pulse rate elsewhere? Look at different parts of your body. For example on the skull, below the ear, behind the knee etc. Write the names of the parts of body where you feel the pulse.

What did we learn?

Oral

1. In the body, on which side can you feel the heart beat ?
2. What do the doctors look for in a patient's wrist ?

Written

Objectives :-

1. Write true or false :-

   1.The heart always beat. ( )
   2.While running heart beat become slow . ( )
   3. With the help of stethescope pulse rate cannot be checked. ( )

2. In your body, where do we find the pulse?
3. There is a list of activities/instances in the table given below. Think and tell which activity/instance makes the beating faster or slower? Write in the table.

S.No.	Activity/Instance	Beating: fast/slow/normal
1.	After cycling	
2.	After reading	
3.	when afraid	
4.	while sleeping	
5.	while eating	
6.	while watching T.V.	

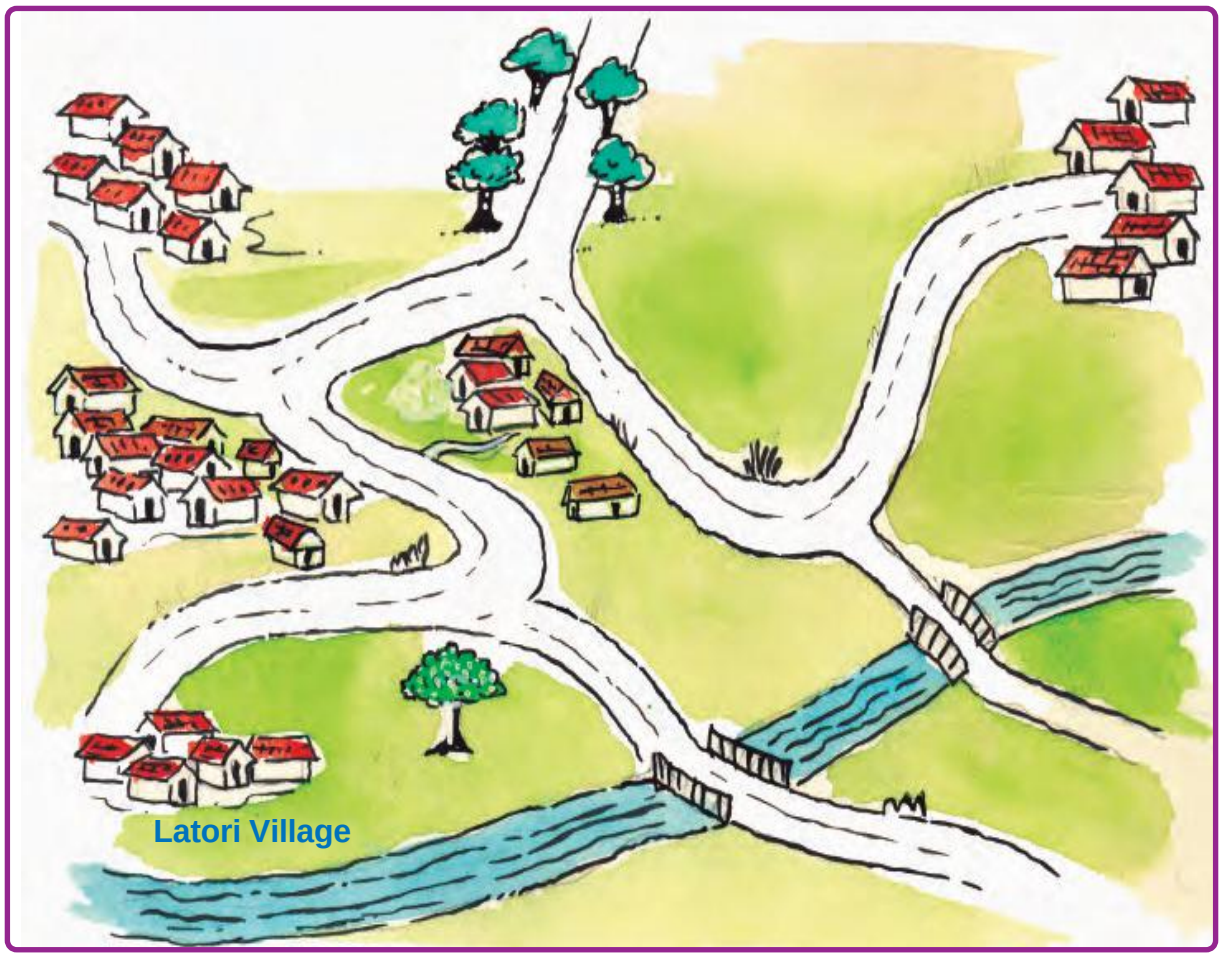
Find out and do

1. Listen to your heart beating with the help of your stethescope in normal condition. Now take one round of your school and count the beating immediately. Is there any difference in the beating?

8 The Directions

Gulab Singh lives in Latori village. He had to go to Luchakighat for some purpose. From there, he had to go to Avaradand. Gulab Singh did not know the route properly. He asked his grandfather about the route.

His grandfather explained, “When you leave from Latori, you will find a peepal tree on the way. From there, turn left. After some time, you will reach Badgaon. Go straight from there. You will arrive at Luchakghat in a short while.



Picture 1

When you return from Luchakighat, there is a road which goes left from near Badgaon. Take that route. On the way, there is a mango orchard. From there, turn right. At some distance, there is a river. Don't follow the footpath which goes towards the river. From there, if you keep on going to the left, you will reach Avaradand.

Draw in the Map

Draw a route that grandfather told Gulab Singh. Where is Badgaon? Mark it.

Where is Luchakighat and Avaradand in the map? Mark them on the map.

Explain the route to the city from your village to your friends as the grandfather did.

Explain the route to Latori village from Avaradand.

The Riddle of Directions

When Gulab Singh returned from Avaradand, he got totally confused. The things which were on the left were now on the right while returning and the vice - versa. The things which were ahead were now behind while returning.

Write in the table the things which fell on his right and on his left hand while going to Avaradand from Latori village.

On the Left hand	On the Right hand

While returning from Avaradand to Latori, what things fell on his left and right hand? Write in the table.

On the Left hand	On the Right hand

When Gulab Singh was going to Luchakighat, Badgaon was on his left hand and Nayagaon fell on his right hand.

When he was returning, Nayagaon fell on his left hand and Badgaon was on his right hand.

Picture 2

Gulab Singh thought whether it was possible to describe the locations of those villages in such a way that it would not change while going or while returning.

Gulab Singh saw that the Sun rose towards Badgaon and set towards Nayagaon.

Gulab Singh said it this way-the sun rises towards Badgaon and sets towards Nayagaon.

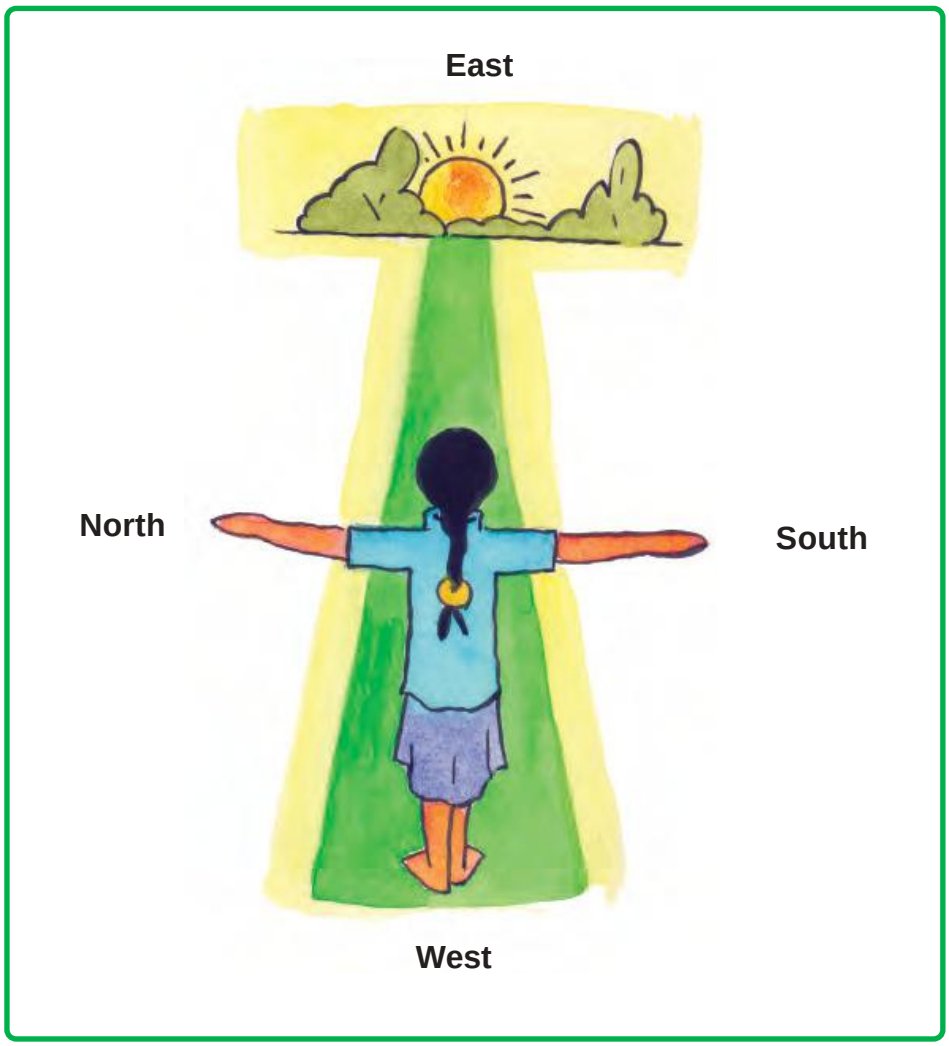
Now, the problem was solved. Badgaon was towards the rising sun and Nayagaon was towards the setting sun. When Gulab Singh was going to Luchkighat and when he was returning the location was the same.

How to decide the Directions

On the basis of the way Gulab Singh solved the problem, we shall decide the directions. In your school, stand facing the direction in which the sun rises. Now, we shall decide the directions.

The direction in which the sun rises is the east. Behind it will be west where the sun sets.

To your left hand will be north and to your right hand will be south.



Picture 3

Let's do some more exercises to understand it better.

Now tell

What things do you see in the east of your school?

.....

What is visible in the west of your school?

.....

What is situated in the north of your school?

.....

What is visible in the south of your school?

.....

In which direction is your house situated from your school?

.....

In which direction is the Panchayat of the village from your school?

.....

Stand in front of your house, identify the directions and tell

What do you see in the east of your house?

.....

What is situated in the west of your house?

.....

What is visible in the north of your house?

.....

What is situated in the south of your house?

.....

In which direction is your school situated from your house?

.....

Stand facing the north. Now tell.

Which is the direction on your left hand?

.....

Which is the direction on your right hand?

.....

Which is the direction behind you?

.....

What did we learn

1. Draw a bird towards the west of the hut.
2. Draw a tree towards the south of the hut.
3. In which direction is the hand pump from the hut?
4. In which direction is the hut from the hand pump?

9 Speciality of Water

Water has many specialities. It dissolves many things in it. On the other hand, it does not dissolve many things. Certain things float on it, while some others sink.

Does water have any taste?

.....

Does water have any smell?

.....

Write down the specialties of water known to you.

.....

.....

Where did water go?

Put a spoonful of water in a bowl. Keep it in the sun. Look at the bowl after an hour.

Tell, where did the water from the bowl go?

.....

.....

Water in "Kulfi"

Tell, what is "Kulfi" made of?

.....

How is "Kulfi" made?

.....

What dissolved and what didn't?

Sugar is dissolved in water to prepare sweet drink. What are the things which dissolve in the water? Let's find out

Can you guess what are the things which not dissolve/do not dissolve in the water? On the basis of your guess, fill in the table given below with the things which dissolve or do not dissolve in the water.

Table

Name of things	Guess	Tried to dissolve		Guess right or wrong
		dissolved	did not dissolve	
Sugar	Dissolves	dissolved	-	Right
Paper				
Chalk				
Pencil				
Rubber				
Marbles				
Wax				
Soda				
Haldi				
Flour				
Lime				
Soil				
Sand				
Urea				

If you have filled in the table with your guess, then do some experiments to verify it.

Experiment 1:

Collect the things given in the table. Now, put them one by one in a bowl or glass which is full of water. Wait for a while and observe.

Did they dissolve or not? Fill in the table.

Now, tell how many of your guesses proved right?

Experiment 2:

Which dissolved more?

Sugar and salt both dissolve in water. Say by guess, which of them dissolves more.

.....

Let's find out.

First of all, make some packets of sugar and some packets of salt. The quantity of sugar and salt should be the same. Use a small spoon for this.

Now, take two small and similar bowls and fill them with equal quantity of water. Now, pour the sugar and the salt into them. Keep shaking the bowls. When one packet dissolves, pour another packet. There is a situation when either of them will not dissolve. If it does not dissolve even after shaking for a long time, stop pouring.

How many packets of salt dissolved?

.....

How many packets of sugar dissolved?

.....

Now, tell which of them dissolved more?

.....

Which dissolves more - sugar or salt if the water is heated? Do it at home.

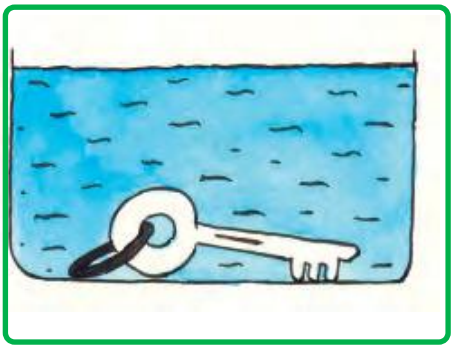
.....

What does a sweet maker do to prepare "Sugar Syrup" to make sweets? Find out.

.....

Who sank and who swam

In the above experiment, Ravi saw that though pencil did not dissolve in water, it was floating. He tried to sink it into the water, but did not succeed.



Ravi decided to see what things float and what things sink.

For this, he put a few things on the water. You too guess and fill in the table what are the things that sink into the water and what are the things that do not.

Do an experiment to verify your guesses.

Experiment 3:

Take a bucket full of water. Now, put the things on the water and see. What are the things which float and what are the things which sink? Fill in the table-

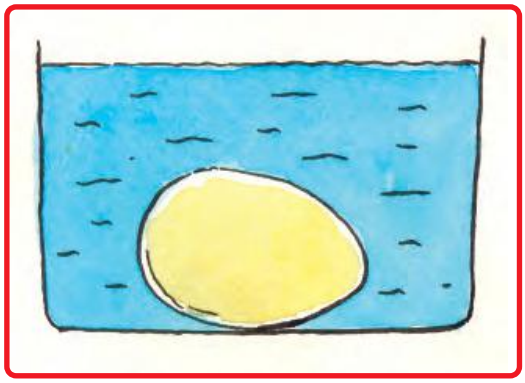
Table

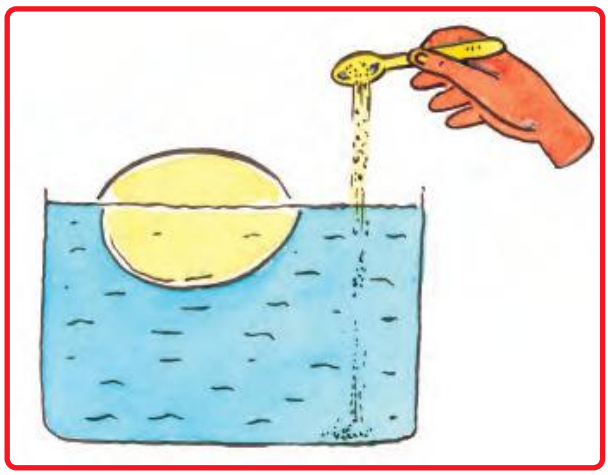
Name of things	Guesses	Put on the water		Guess right or wrong
		Float on water	Sinks	
Pencil	Floats	Yes	No	Right
Rubber				
Marble				
Scale				
Stone				
Wax				
Steel bowl				
Plastic Mug				
Key				

The Egg sank and floated:

Take an egg. Now drop it on a glass full of water. What happened? It sank. Come; let's float it on the water.

Pour some salt into the glass in which the egg sank. Keep on pouring the salt and keep on shaking it until the egg starts floating.





Did the egg start floating?

.....

You will be surprised to know about a sea in which there is a lot of salt. Even if some one falls into it, he will not sink. This sea is known as Dead Sea.

What did we learn?

Oral:

1. What are the things like water that we can drink?
2. Besides water, in what dissolves sugar?

Written:

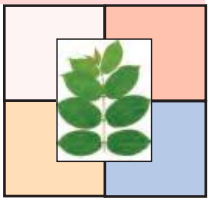
1. Write the names of things which flow like water.
2. Write four qualities of water.
3. Name the things which do not dissolve in water.
4. What is speciality of "Dead Sea" ?
5. Match the columen :-

1. Sugar syrup	-	dissolve in water
2. Key	-	dissolve more salt in water
3. Floating egg	-	float on the water
4. Salt	-	sink into the water
5. Plastic doll	-	solution with excess sugar

Find out and Do

1. Can the salt and sugar dissolve in the things which flow like water? Find out.

10 Our Flora and Fauna



You see many types of plants and trees near your house. Some of them are very big and some very small. Their height also varies. When the trees are small, they look like plants and slowly they gain their form and size.

Some trees and plants have strong and hard stems while some have rough and delicate stems. Separate them on the basis of the stems they have - hard and strong or soft and delicate and fill:

Table 1

S.No.	Having soft stem	Having Hard stem

Now separate these plants and trees on the basis of their height.
Fill in the table 2.

Table 2

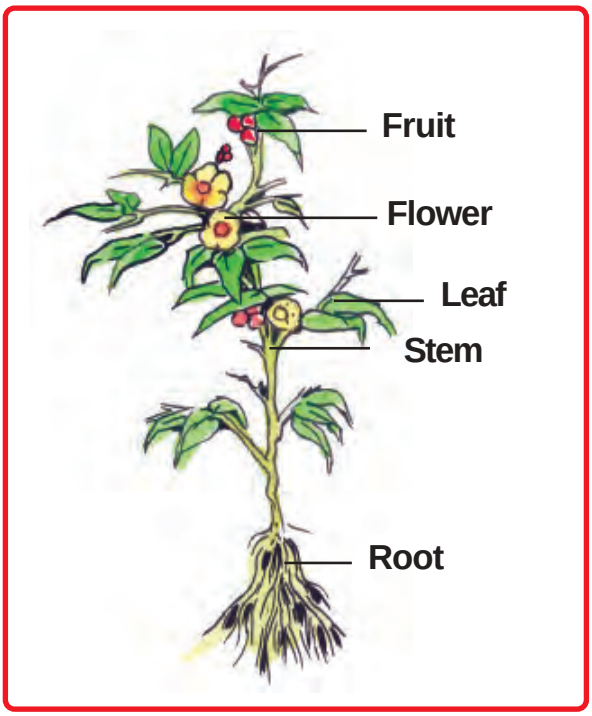
S.No.	The plants / trees taller than you	The plants / trees smaller than you	The plants which are very small

Go out of the class and bring a plant

Uproot a small plant which is not useful. You can find it near your school. Be careful that its roots are not broken. Now, look at the parts of this plant carefully.

Parts of the plant

Draw the picture of the plant you have brought. Name its parts. Compare it with the plant given in the picture.



Draw a picture

Root:

What is the role of root in a plant? Discuss among yourselves and write.

.....

Make a list of such plants whose underground part is eaten.

.....

Leaf:

Which are the plants whose leaves are eaten by us?

.....

Collect the leaves of a few plants and trees growing in your neighbourhood. Observe these leaves carefully. Now fill in the table 3 with their qualities.

Table 3

Name of the plant or tree	Qualities of the leaf				
	smooth	rough	sharp	round	long
Mango	yes	no	yes	no	yes

Now you have written some qualities of the leaves. Can you find out some more qualities in these leaves? Write them.

.....

Flower:

Collect the flowers found in your neighbourhood. Separate them on the basis of their colour, petals, smell and fill in the table 4

Table 4

No.	Name of flower	Season when it blooms	Colour	No. of petals	Has smell/ Does not have smell

Tell on the basis of the table -

Do all the flowers have smell?

.....

Have you seen such board anywhere?
Do people pluck flower even when these boards are there?
Must they do so?

Use of flowers

At Amita's house a curry is made from the flowers of drumsticks. Is any curry made in your house or neighbourhood from flowers.

Many flowers are used as medicines.

Find any two flowers which are used as medicines.

Many flowers are used to make natural colours. Many flowers are used to make perfumes. Write the names of same flowers from which perfumes are made.

Apart from these, flowers are used in different functions/occasions as Weddings, festivals and prayers (puja).

Have you seen garland of flowers in the market or near the temples. If possible you can try to talk to the garland sellers.

Which flowers do they sell?

_____

_____

From where do they get these flowers?

_____

_____

For what all purpose does people buy flowers?

_____

_____

In which form do they sell the flowers as garlands, bouquet, sheet or mat of flowers etc.

_____

_____

From where did this sellers learn to make bouquet or mat of flowers?

_____

_____

Do they want that their family members learn this art and do this work?

_____

_____

Fruit:

Make a list of the fruits you eat and write about them in table 5.

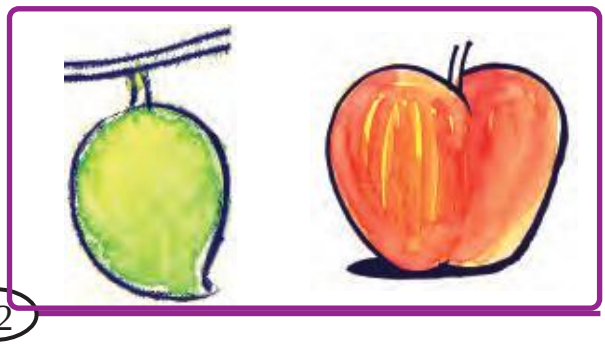


Table 5

No.	Name of fruit	Season in which they are available	Colour of the fruit	No. of seeds
1.	Mango	Summer	yellow	One

Small plants becomes a tree, Bringing lots of prosperity

What did we learn?

Oral:

1. Name five trees.
2. Name the parts of a plant.

Written:

1. Name any two thorny plants.
2. What are the functions of root?
3. Name a tree whose branches hang.
4. Write any four uses of flowers.

5. Choose the correct answers : -

(i) Hibiscus plants have leaves.
(a) Smooth (b) Rough
(ii) Guava fruit have seeds
(a) One (b) More than one
(iii) Underground root which is eaten.
(a) Carrot (b) Spinach
(iv) Flower having fragnance.
(a) Mogra (b) Hibiscus

1. Collect leaves from your neighbourhood. Keep any one of them in your notebook. Now, keep another paper on it and rub with a pencil or coloured wax - pencil. What happened? Is the replica of the leaf visible on the paper? Do the same with different leaves.
2. Collect different types of leaves from your surroundings and make a beautiful shape from it.
3. Find medicinal plants and flowers in your area and find out for which they are used for.

11 The Crop of Chhattisgarh- Paddy

Most of the people of Chhattisgarh do farming. Paddy is mostly grown here. That is why Chhattisgarh is also called "**THE BOWL OF RICE**".

One of the speciality of paddy crop is that this plant grows in the fields which are full of water. This is because these plants need much water to grow.

Ask your elders whether there is any crop in your area which is grown in water?

.....

Do you also grow paddy crop in the fields full of water?

.....

Before the paddy crop:

Before planting the paddy, it is necessary to prepare the field properly. For this, the farmers start ploughing the field before the advent of rainy season.

With the first rains, the fields are ploughed.

During this process, the bio-fertilizer is sprayed which raises the fertility of the field.

When the fields are filled with water and the soil is in a pool of water, then to level the soil, “pata” is used. In this way, the field is prepared to grow paddy. After this comes the turn to plant the paddy.

In a small part of the field, the paddy plants are prepared beforehand. Then, these plants are planted in rows.

How is paddy plant prepared? Ask your elders.

.....

Draw a picture planting a paddy plant in the field below:

When the paddy is planted, the men and women working in the field sing songs. Sing such a song in the class and write here.

.....

.....

.....

.....

There is another method to grow paddy. This is called "Bota" or "Chhitawan". After the first rains, the paddy is sprayed in the field and then ploughed.

The chemical fertilizers are also sprayed in the field to ensure good crop. When is the chemical fertilizer sprayed in the field?

.....

Ask the farmer what chemical fertilizers are used in the field?

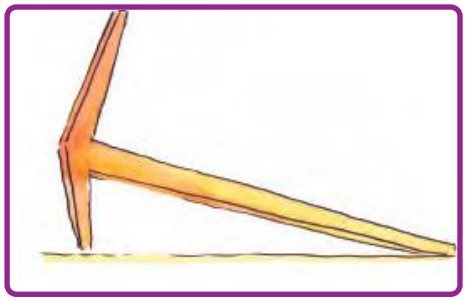
.....

Draw the picture of a field where the paddy crop looks beautiful in rows.

Some other plants also grow along with the paddy. This is called weed. The farmers uproot them and throw them out of their field. This process is called "Nindai" or weeding.

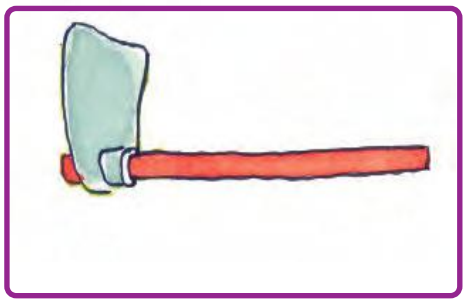
Instruments of Farming:

The pictures of some instruments used in farming have been given below. Write their names. For what purposes are they used in the field?



Name .....

Use .....



Name .....

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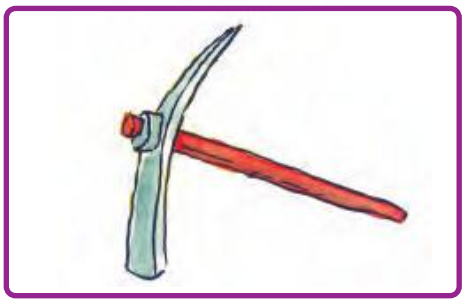


Name .....

Use .....

Name .....

Use .....

Along with your Teacher contact any farmer's family and ask then about:

1. In which month is the paddy sown?

.....

2. Take help from the teachers and write some points regarding some varieties of paddy grown in Chhattisgarh.

.....

3. What are the diseases affecting the paddy crop?

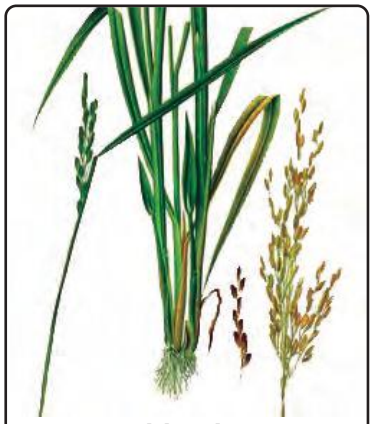
.....

4. To prevent these diseases what measures do the farmers adopt?

.....

5. How long does it take for the paddy crop to mature?

.....



Paddy Plant

After cutting and threshing (misai), the crop is sold in the “Mandi”. From there, it is sent to the mills.

What are the methods used in your village to get rice out of paddy? Name them

.....

.....

In what forms is the rice used as food?

.....

What are the dishes made of rice during festivals? Name them.

.....

.....

.....

.....

What did we learn?

Oral:

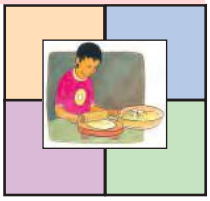
1. What crop is mostly grown in your neighbourhood?
2. What are the methods to sow paddy?
3. What dishes are prepared from rice in your house?

Written:

1. Name the instruments used in ploughing of the field?
2. Why is Chhattisgarh called a bowl of rice?
3. What measures do the farmers adopt to prevent diseases?
4. What are the processes that the paddy has to undergo to become rice? Their names have been given below. Arrange them in correct order.
   Cutting, 'Nindai'(weeding), sowing, 'misai'(threshing)
5. Fill in the blanks:
   (Mandi, bowl of rice, in rainy season, dishes)
   - The farmer sell the paddy in.....
   - The paddy crop is sown in.....
   - Many..... are prepared from rice.
   - Chhattisgarh is called the.....

Find out and Do

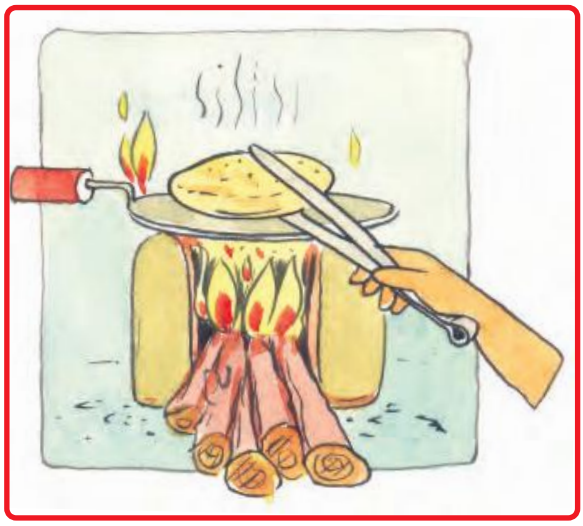
1. Ask any farmer how he does paddy farming?
2. Learn how to prepare any one dish from rice.
3. What are the festivals celebrated in your house after harvesting the paddy crop?



12 The Story of Roti

Sheela started to have food. Seeing round - shaped chapatis in her plate, she questioned to herself as to how a chapati is made. How does the air go inside it? She asked these questions to her mother.

Mother said “A chapati is made of flour. The flour is kneaded. Then the kneaded flour is divided into small balls. This is called “Loi” . Now the Loi is pressed with a “rolling pin” in round shapes. Now the Chapati is kept on a tawa and roasted.



Sheela asked - “Where does the flour come from?”

Mother told - “The flour is made of wheat. The wheat is ground in a mill.”

Sheela had more questions like, “From where does wheat come?”

Mother told Sheela, “You find out these answers yourselves.”

Help Sheela to find the answers to her questions.

.....

.....

.....

.....

Who's Chapati is round?

Whenever "Chapatis" are made in your house, go to the kitchen with your mother. Ask your mother to teach you how to make Chapatis. Now tell -

Could you make Chapatis round?

.....

Did your Chapatis puff up?

.....

What can be the reasons of a Chapati's puffing up or not puffing up? Find out and tell.

.....

.....

What is the problem in making Chapatis when the flour is very wet?

.....

.....

What more from wheat

Many more things are made of wheat, for example – "Suji", "Dalia", "Maida" etc. Many dishes are made from these things also.

Besides "Chapatis" what is made of wheat ?

.....

.....

Besides wheat,from which grains, are chapatis made. Find out ?

.....

What is the difference between a Chapati made of "Wheat" and a Chapati made of rice?

.....

.....

Different Likings

Monu likes “Puris” made of wheat while Rani likes “Suji Halwa”. Now find out -

How is Halwa made? What things do you need for this?

.....

.....

How is a Puri made? What things are needed for this?

.....

.....

What things made of wheat do you like ?

.....

.....

Mid - Day Meal

You get mid - day meal in your school. What do you get to eat? Fill in the table

Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Tell something about mid-day meals.

At what time is it given?

.....

Who cooks it?

.....

Where do you sit to eat it?

.....

Who serves it?

.....

What did we learn?

Oral

1. Name any five grains which are grown in the field?
2. What are the things made from wheat?

Written -

1. Name various steps from the sowing of grain / pulse to its use.
2. Describe the process of making Chapati from flour?
3. How is Dalia made?
4. Mark (✓) mark before the correct answer.

   (i) Who grows grains in the field -

   1. farmer 2. potter 3. blacksmith

   (ii) Suji is made ;

   1. of tuar dal 2. of wheat 3. from pea

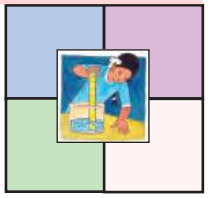
   (iii) The grains are sold;

   1. at Mandi 2. in the garden 3. in the school

Find out and do

1. In the earlier lesson you learnt about the journey of rice from field to Mandi. Now find out the journey of wheat from field to your house in form of chapatti.

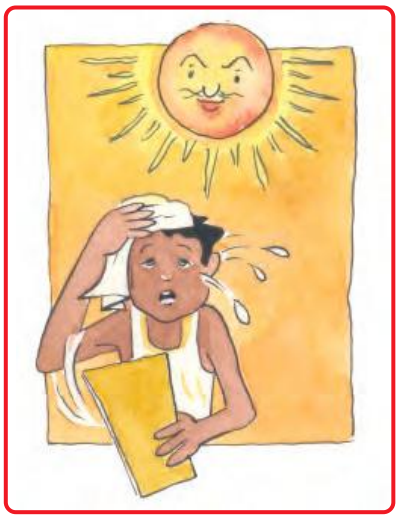
13 Seasons



Comes the rain, comes the rain,
With that come the clouds dark,
Also there's thunder and lightening,
This we can easily mark.
With water are filled
Rivers, ponds and fields,
Joyous and happy,
The farmers are thrilled

Comes the winter, comes the winter,
With that comes Diwali,
Cool breeze, now we feel,
Woollen clothes a great deal.

Goes the winter comes the summer,
Hot wind starts blowing,
The children have holidays,
Their faces are glowing.



On the basis of the poem, draw a picture of all three seasons in your notebook and hang it on the wall of your classroom.

Write whatever you know about the seasons.

.....

.....

.....

.....

Seasons and animals

As soon as the rains come after the summer, a lot of small insects and worms can be seen. You can see a bed of greenery all around.

What insects are seen in the rainy season? Pictures of some worms have been given here. Look at the similar insects and identify them.

Sounds of what animals are heard in the rainy season.

.....

Slowly, the winter comes. Many new animals are born and many hide.

Which animals hide?

.....

Is the sound of frog heard in winter?

.....

What other new animals are seen in winter?

.....

Here are the pictures of some special birds. These are seen in winter only. Try to find out these near your paddy fields, gardens, ponds, rivers and tanks in winter. Look at the colour, and the way these birds fly.

What are these birds called in your area? Ask your elders and write.

_____

Cold lessens and warmth comes.

Do you Know which animals can be seen during February & March.

Slowly the heat increase and becomes unbearable. As heat increases less animals are seen. Some of them hide and some even die.

Seasons and the Sun:

In rainy season generally the sun remains hidden behind the clouds. In winter the nights are long and the days are short. In summer the days are long and the nights are short.

At what time does the Sun set in winter? Find out.

.....

.....

At what time the Sun set in summer? Find out.

.....

.....

How much rain:

How much did it rain in a day? How do you measure it?

Let's do a simple experiment. Keep a broad - mouthed clean utensil on the roof of your house when it is raining as shown in the picture below.

When the rain stops, measure the collected water with a plastic scale.

How much did the scale go inside? Write its measurement. This is the measurement of the rain.

.....

.....

Now tell how much did it rain that day in your area?

.....

.....

Lets find out some more about the seasons.

Make Instrument showing the direction of Wind:

What will you do to find out the direction of the wind. Discuss with your friends. Let's make an instrument to find out the direction of the wind.

Take a glass bottle with rubber lid. In the rubber lid insert an empty refill. Now make an arrow like strip of thick paper. Now pin it up with the part of the refill which is out of the rubber lid.

Your instrument is ready. Now keep this at an open place. Is it showing the direction of the air?

Find out the direction of the air.

.....

.....

Record of weather:

Does the weather remain the same daily? No. On some days it is cloudy, some days it is stormy.

Let's record a week's weather information . Make a weather information chart as shown in the next page.

Fill in the table with what you see daily, for example -

Black clouds, white clouds, rain, storm, sun, humidity, heat, cold etc.

From date..... to date Month ..... Year

Day	Cloud Black / White	rain yes/ no	air more / less	sun hot / mild	hot / cold	humid
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

When this chart is completed, hang it on the wall of your classroom.

The weather and the related actions have been given below. Which weather relates to which action? Match them. A pair has been made as an example.

Rain	-	muddy
	-	feeling very thirsty
	-	ripening of mango
	-	sowing of paddy
	-	enjoying mild sun
	-	wearing shawl, sweater
	-	using umbrella
	-	eating icecream / kulfi
Winter	-	late drying of clothes
	-	eating water melon, musk melon
	-	to have flood
	-	forming of rainbow
Summer	-	clear sky
	-	hot sun
	-	quick spoiling of food
	-	sun not visible
	-	blowing of hot air

What did we learn?

Oral:

1. Which season do you like the most?
2. Which season comes before the rainy season?

Written:

1. Name the months of winter season.
2. When does peacock start dancing?
3. What flowers bloom during winter?
4. In which season are the wheat and gram sown?
5. What animals do you see in rainy season?

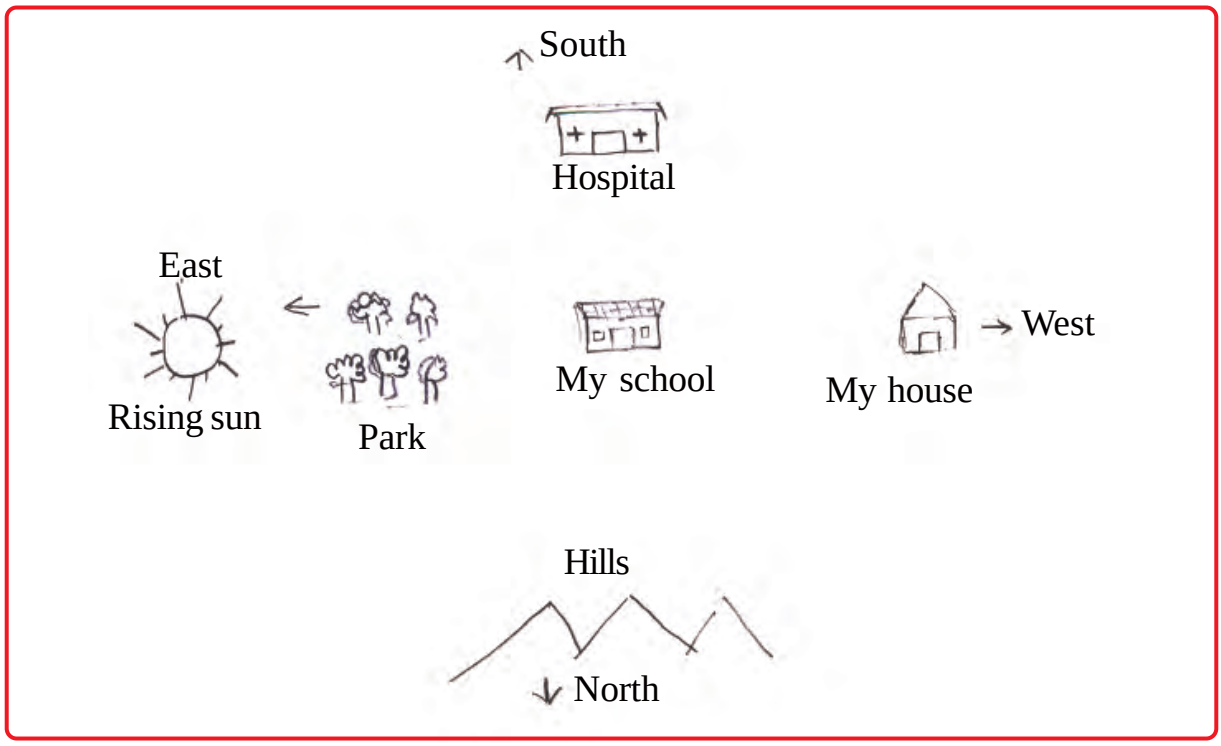
Find out

1. How do you protect yourself from summer, winter and rain ?
2. What kind of diseases spread more in rainy season ? Find out.

14 I drew a map

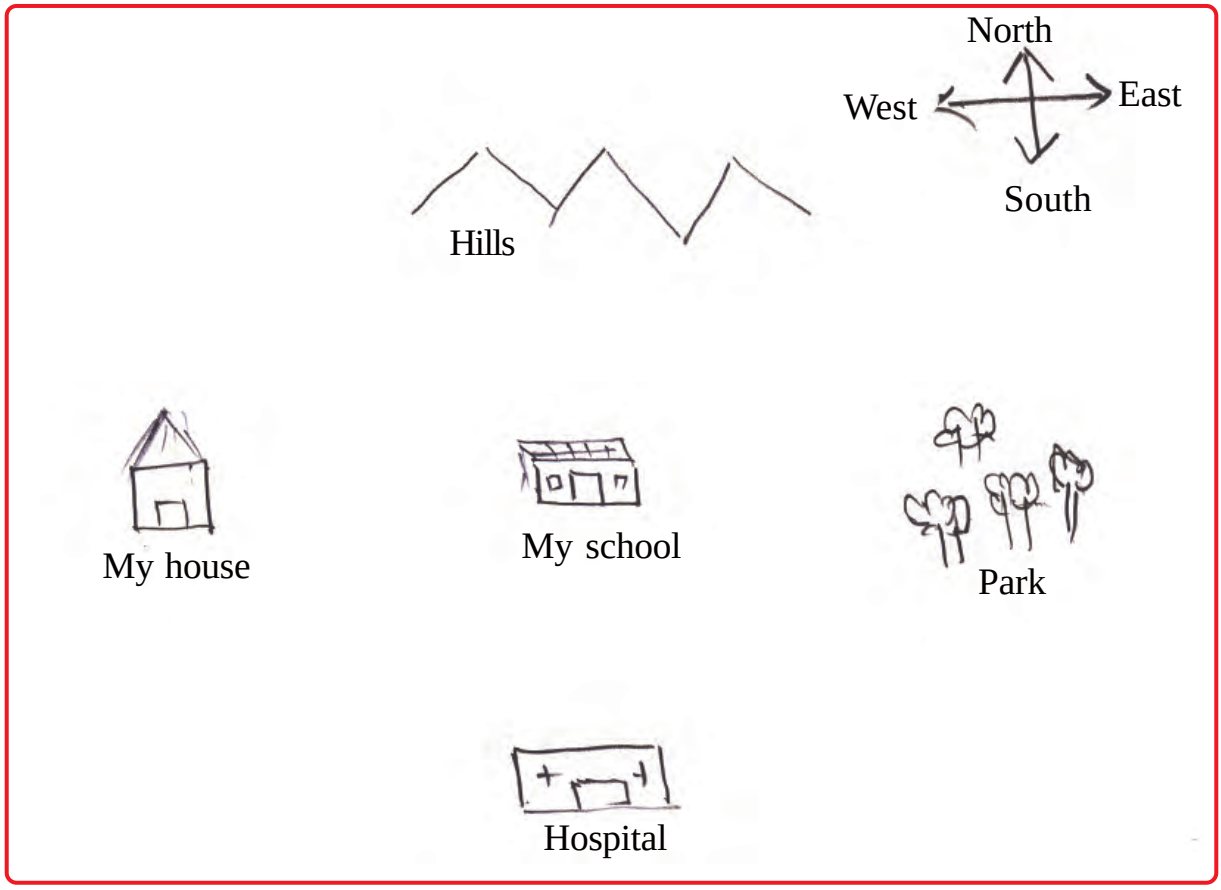
Sheetal lives in Kankana village. She can identify the directions. On the basis of the rising Sun, she can identify the directions from her house, school or any other place.

One day she marked, on a piece of paper, the different places which are there in her neighbourhood .



Sheetal drew a map

Sheetal's brother studies in class VIII. Looking at the map made by Sheetal he said - "Your map is right. But when the map is made on the paper, the north is always kept at the upper side. It means the places which are to the north from any point will be shown at upper side on the paper. The places to the south will be made at the lower side. Similarly the places towards the east will show on the right side and the places to the west will be made on the left side.



Sheetal's brother drew a map.

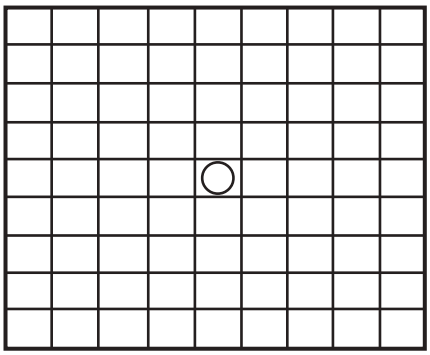
The map of the places around your school will be like this.

What is the difference between Sheetal and his brother's map ? Look at them carefully.

Make a map on the basis of the brother's theory in which Chhattisgarh lies in the middle, Delhi to the north, Kerala to the south, Kolkata to the east and Mumbai to the west.

Let's play a direction game

Class IV student Vikram always plays some or the other game. He used to make squares in his note-book and cut them. One day, he made an eighty - one square game. He kept a pebble in the middle. He started playing with it. If you want to play this game, then make nine horizontal lines at an equal distance on your note-book. Then draw 9 vertical lines on it. Thus, you will get an 81 lines square figure.



Instructions - Walking to the north means walking upward, south means downward, east means towards the right and west means towards the left. Now move the pebble according to the instruction given below.

1. Keep a pebble right in the middle of it.
2. Move the pebble three places to the west.
3. Now, move the pebble four places to the north.
4. Now, move the pebble six places to the east.
5. Now, move the pebble seven places to the south.
6. Now, move the pebble three places to the west.
7. Now, move the pebble two places to the north.
8. Tell where the pebble has reached.

In the same way, tell your friends to play this game with different moves using different directions.

One more way

Take two dice. On one dice, write north, south, east, west, north and south. On the other dice, write 1, 2, 3, 4, 5 and 6.

Now throw both the dice together. On the first dice, you will get direction. On the second dice, you will get number. According to the direction and the number in the dice, make the move. Suppose, on the first dice you get north and on the second you get three. It means you have three places to the north. Keep on playing this way.

What did we learn?

Oral

1. Where do we show north on paper?
2. In which direction is your school from your house?

Written

1. Write the names of three places on the way to school from your house and draw a map.
2. Name the directions.
3. In which direction does the Sun set?

Find out and do

1. How can we identify directions apart from using Sun?

15 Fire

Think of the problems we would have to face if fire were not there.

.....

.....

For what purpose do we use fire? Make a list.

.....

.....

Fire changed the world

Fire did exist. It is only when man learnt to control fire that he started using it in many ways.

Imagine the life before the use of fire was known. Write about it.

.....

What are the things which can not be eaten without roasting in fire?

.....

Is the fire used to make pitchers and bricks? Ask the elders and write.

.....

You must have seen that the blacksmith gets the iron heated in his furnace to make things from the iron. When iron becomes red and hot, he gives it the desired shapes and sizes.

Ask your elders whether fire is used to make gold and silver ornaments.

.....

.....

To light "Chulha" or "Sigdi" the match sticks are used in our houses.
What did our ancestors do to light "Chulha"?

.....

.....

Story of match

The match was discovered about three hundred years ago in 1680. The match found at present came in use in 1855. It is safe to burn something with it.

It is very easy to light a fire with a matchstick. You know that when the matchstick is rubbed against the brown powder on the sides of the box, it catches fire. Such matches are known as "Safety matches".

Earlier the fire was kept under the ash in our houses. This fire was used when there was a need to burn "Chulha" etc.

What problems were there when there were no matches? Think.

.....

.....

The ways to burn fire

When there was no match, glittering stone was used to burn fire. But every one could not burn fire this way? Let's see what are the other ways than match to produce fire.

Fire with Glittering stone

In Chhattisgarh and many other areas glittering stone was used to produce fire.
Is the glittering stone still used for this? Find out?

.....

.....

The process of producing fire with glittering stone is very interesting. We need two glittering stones and some cotton thread for this. This thread is put in a reel. One end of the thread remains out of the reel. This end is attached to a glittering stone and both the stones are rubbed against each other. Thus, the cotton thread catches fire.

Fire with a glass lens

Take a glass lens, the same lens with which small objects look bigger. Focus the lens on a piece of paper. The lens should face the sun. Keep the lens stable in this position. What do you see? Does the paper burn?

What things burn?

We use fire for many things daily. We have many things around us which burn and many which do not burn.
Think and tell of such things.

.....

.....

Candles Flame

Burn a candle in the class and look carefully at its flame. Does the flame look uniform over?

.....

Now put a metal bowl or a plate over this flame for sometime. What is collected at the bottom of the plate?

.....

Make a picture of a burning candle.

When the wood is burnt in the 'chulha', what colour of flame do you find?

.....

What colour of flame do you get from the wick - stove?

.....

Ask your mother if the utensils get black while cooking on stove or a chulha.

.....

What to do when fire breaks out?

Many times, the fire breaks out in a village, farm, granary or factory. There is huge loss of life and property.

What is done to put out fire? Write.

.....

.....

.....

.....

What to do when some one burns?

If unfortunately someone burns, then some measures can be adopted as first – aid.

As covering the burning item or person with a blanket so that air contact with fire is broken and fire is extinguished. First aid depends on how much the person has burned her/himself. Some first aid tips are given here.

(1) Keep on pouring water on the burnt parts until the burning gets less.
(2) The clothes should be taken off.
(3) Fan the burnt parts, but only when the fire has been put out completely.
(4) Take the person to a hospital immediately.
(5) Console the person.

What did we learn?

Oral

1. How was the fire produced before the discovery of match?
2. What are the things which do not burn?

Written

1. For what purposes do we use fire daily? Write.
2. In which season the fire catches most? Why.
3. What are the things with which fire can be produced?
4. What measures are adopted to put out fire?
5. **Write true or false in the following sentencess :-**

   (i) Earlier match stick was used to make fire. ( )

   (ii) The glass lens focuses the sun rays on the paper and burnts it.( )

   (iii) In rainy season the fire catches most. ( )

Find out

1. Go to a goldsmith and see how he blows the flame of chimney while making ornaments .Find out what happens when he blows.
2. Other than water, what are ways to put out fire ?

16 Where will you find them?

You can see the animals of all sizes - big or small around us. Some of them are seen on the land, some on the tree and some in the water.

A list of such animals has been given. Add some new names.

Earthworm, Ant, Lizard, Duck, Frog, Crow, Butterfly, Mouse, Spider, Hawk, Squirrel, Monkey, Fish, Cow .....

Think where they live and write their names in the given table.

If we have to tell which animal lives where, then how would you tell it? Take for example earthworm.

It lives in the soil, not in water nor on trees. Similarly think of other animals and write where they live.

Table

S.No.	Name of the animal	Where it lives
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		

On the basis of this table, write –

Which are the animals that live in water?

……

Which are the animals that live on land?

……..

Name the animals that live on trees.

……..

Name the animals that live in burrows.

……

Animals living in water

Do water animals have special organs?

.....

Do all animals have these organs?

We cannot breathe in water, while the animals living in water breathe easily.

Can you distinguish between the animals living in water and the animals living on land?

Animals Living in water	**Animals Living on land**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Make picture of an animal living in water.

The fish use the air dissolved in water for breathing. The fish uses the gills for breathing. If they are taken out of water, they will die.

Why does this happen?

.....

.....

Both in water and on land

Is there any animal which lives both in water and on land?

.....

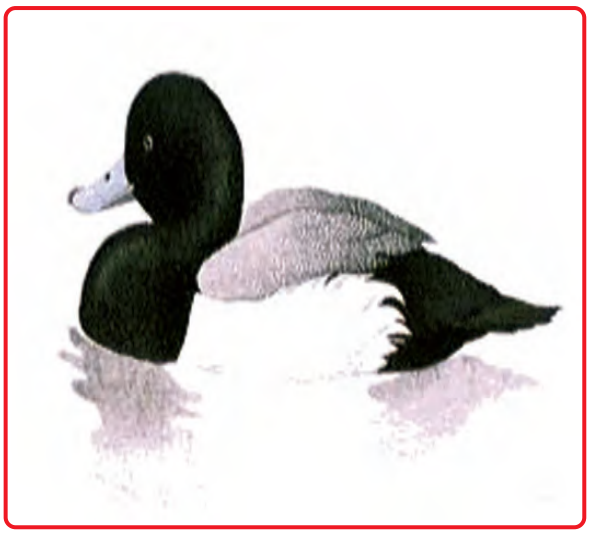
.....

The frog can live both in water and on land. It can breathe in two ways. It can breathe in open air like us and when it is in water, it breathes through its skin.

From where do water animals get their food?

.....

Water Birds



There are many kinds of ducks swimming in water. They swim on the surface of the water. But they cannot live in water like fish.

To catch their prey, sometimes they dive into water. But their feathers do not get wet. Observe, they bring their beak near their tail and often rubbing it, they touch it on the feather. Actually some oil like thing keeps emitting near their tail. With the help of their beak, they sprad that oil-like thing on their feather. That is why their feather does not get wet. Apply oil on a piece of paper and then pour some water over it. Does it get wet? No.

Something more about the Earthworm

Where would you find an earthworm?

.....

If an earthworm is left in an open place, what will happen? Guess and write.

.....

An earthworm's skin is always wet and it tries to keep away from light.

Butterfly

To find butterflies, look for the plants and trees which have flowers. What do the butterflies feed? They suck the nectar of flowers. To suck the nectar from the flowers, the butterflies have antenna. This is spiral. When a butterfly sucks a flower, it becomes long.

Antenna of Butterfly

Why are the butterflies found near the flowers?

.....

What are the other animals which hover around the flowers? Name them.

.....

Honey bee

You must have seen bee hive. In each bee hive there is a Queen bee. This queen bee lays eggs. There are male bees also in the hive. Bees makes honey from nectar of flowers. They store them in the hives. Termites and wasps also live in groups.

Find out other animals which lives in groups.

Birds and trees

Name any five birds which live on the trees.

.....

.....

How do the birds sit on trees? Why do they not fall? Have you ever thought? When the birds sit on trees or electric wires their claws clasp it.

Is there any bird which can not sit on trees or electric wires? Ask your teacher or the elders.

.....

Animals Riding Animals

Is there any animal which live on our body or any other animal's body?

.....

Where do they get their food ?

.....

What did we learn?

Oral

1. Name any two animals which live in groups?
2. Name an animal which lives on our head?

Written

1. Which organ does the fish use for breathing ?
2. How do the butterflies get their food ?
3. Write two example of the following :-
   a. Animals that crawl .
   b. Birds which live near our houses.
   c. Insects which hover on flowers.
   d. Animals which live in burrows.
   e. Animals which live in water.

Find Out

1- Look at a tree. What animals can you see on it?

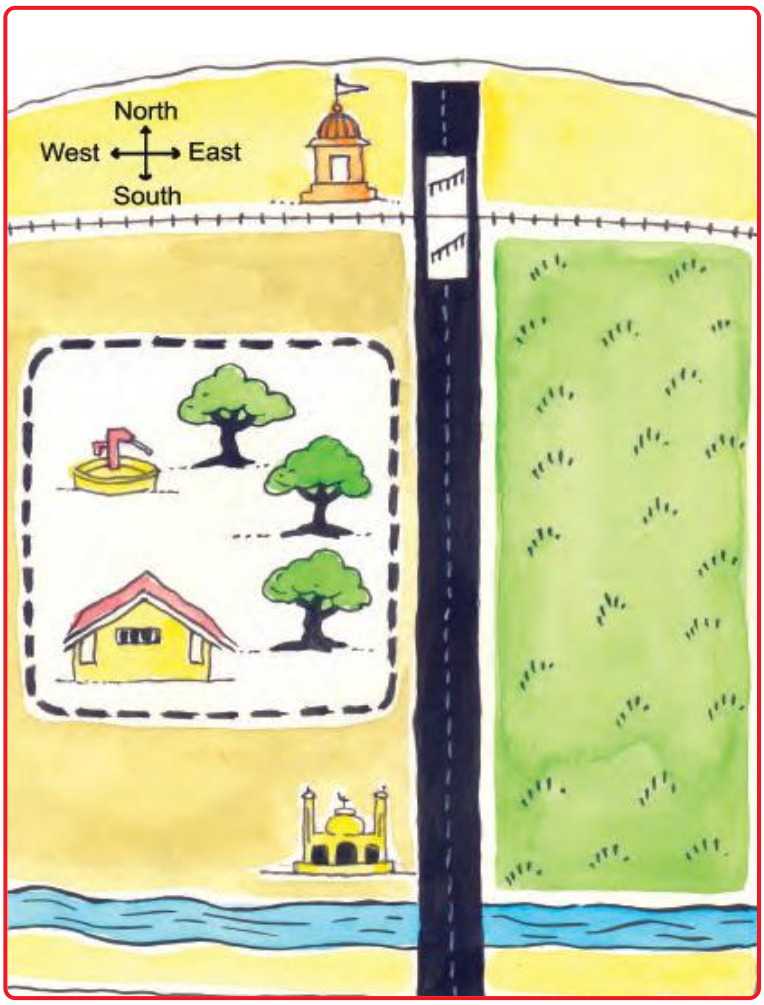
2- Along with your teachers and friends visit a zoo/museum and write about the birds and animals you have seen.

3. Find and collect information about nests of birds in your neighbourhood about how the nests are made and using what materials.

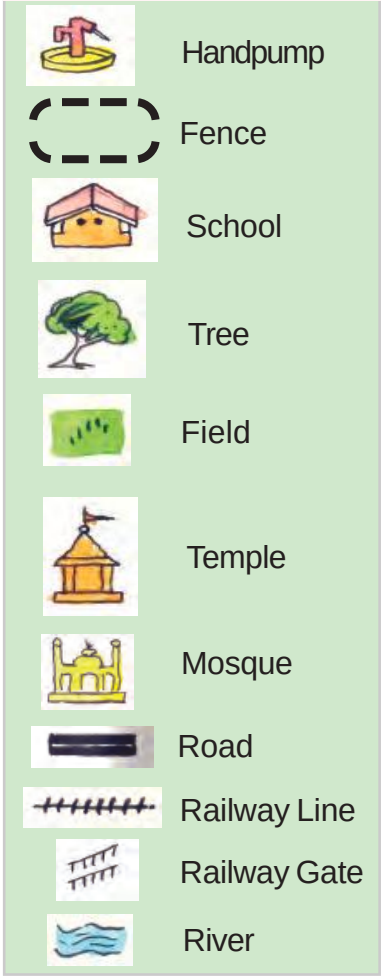
17 Azad Drew a Map

You have learnt to identify the directions surrounding your school. You have also learnt to show them in a map. *(In a map, the north is always towards top, and south is towards bottom. The east is to the right and the west is towards the left side)*

Azad has drawn this map. The places near his school have been shown in it. He has shown a school, a tree, a field, a temple etc. in the map. To show them, he has made an indicator list also. How are the temple and the mosque shown in it? To help you, Azad has made direction arrow also.



Conventional Symbol List



Looking at the map and symbol list, answer these questions.

1. a. In which direction is the hand pump from Azad's school?

.....

b. In which directions are the road and the railway line from Azad's school?

.....

c. To which direction from the school does the river lie?

.....

d. What lies at the top in the map?

.....

e. What do you see at the west of the road?

.....

You too make

2. You also make the following in the map made by Azad.

a. Draw a tree out of the fence in the south of Azad's school.

.....

b. Draw Santu's house out of the fence in the north of the school.

.....

c. Draw Panchayat Bhawan, out of the fence in the south of the school.

.....

d. Draw one more tree within the fence.

.....

3. Now write

a. What are the things in the south of the railway line?

……

b. What are the things in the west of the fields?

……

c. What are the things in the east of the school?

……

d. The river is to the south of Azad's School. But in which direction is the school from the river.

……

4. Draw a map of your school. Remember, sit facing the north and

a. Whatever lies in the north should be drawn towards the top of the paper.

b. Whatever is behind means in the ……should be drawn towards the bottom of the paper.

c. Whatever is on the right hand means in the ……should be drawn on the ..... hand.

d. And whatever is on the left hand means in the ……should be drawn on the ..... hand.

5. Draw more things on the map and ask each other.

18 Caves of Ramgarh

There is a place near Ambikapur called Ramgarh. There are many old sites worth seeing there. The people come from far off places to see them.

Amita lives in Ambikapur, but she never visited these places. Amita thought what was in it to see.

Amita enjoys playing. Amita has a wooden horse. With this she plays many types of games.

One day, her father told her that the horse she has, was very old. When he was a child, he himself used to play with it.

Amita was surprised that even her father was young some day. Then she asked a lot of questions to her father. Like :

When you were young, what did you wear?
Where did you study?
How was the school?
Who were the friends?

Now, think what more questions Amita could have asked.

.....

To answer these questions, her father showed some of his childhood things to Amita. He told some very interesting things about Amita's grandfather and great grandfather.

Amita's father also told her that their house was very old while their neighbour's house was made after Amita's birth-just a few years ago. There are many differences between these two houses. For example, the old house was a mud house while the new house is a brick house. There are differences between their doors and windows also.

What are the differences between new and old houses in your surroundings . Find out about them and fill in the table.

Old House	New House

Amita started enjoying listening about old things and people. Now she started thinking about their dresses and their way of living, and how they used to travel from one place to the other.

Discuss with the elderly people and find out what they used to wear when they were young.

.....

What were the eating habits?

.....

What were the crops?

.....

How did they travel?

.....

Was there any school?

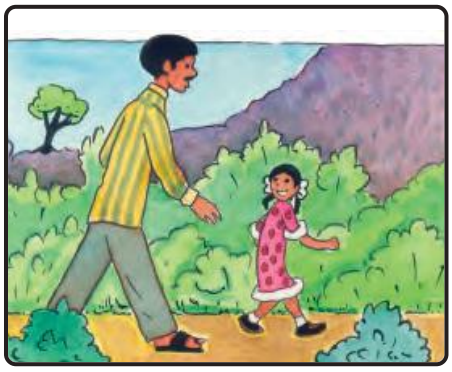
.....

How was the road?

.....

One day Amita expressed her desire to visit the places worth seeing at Ramgarh.

Fathers took Amita to the hills of Ramgarh and they had a close look of the caves.



First of all, they saw a tunnel. In it, there was a small tank. Amita's father told her that this tunnel is called Hathipol and the 'Kund' is called Sitakund. This tunnel is as big as an elephant. Perhaps, that is why it is called Hathipol.

Hathipol

They went ahead. There was a theatre nearby. This is called Sitabengara. In ancient times, people used to organize plays and dance there. This was made by cutting a stone.

Sitabengara

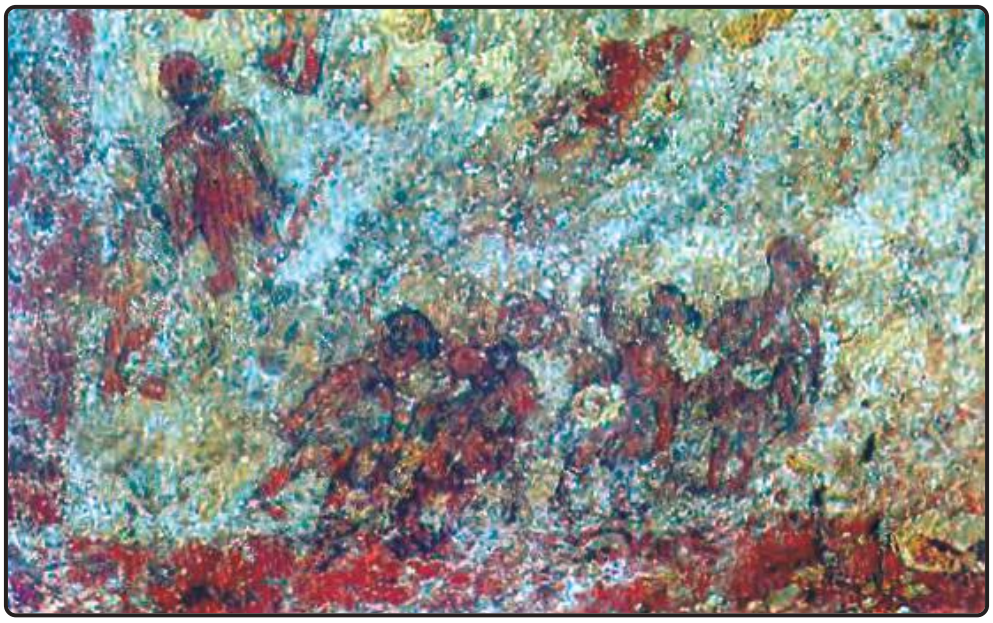
Then they saw one more cave having pictures of older times. Father told this is Jogimara cave.

In ancient times, the people used to make pictures in the caves. There are some pictures of these times here also. When they looked carefully, they could see them.

Amita asked how old those places were. Father told that they were quite old. May be about, two thousand five hundred years old.

Amita exclaimed with surprise. So old!

Having known the history of Ramgarh, Amita was quite happy.



Pictures on the rocks of Jogimara

Some pictures of Jogimara are given.

Look at these pictures carefully.

What can you see in them?

……

Draw these pictures in your notebook.

Looking at these pictures, what do you know about the older times?

……

Something is inscribed on a big stone here. This is a style of writing. This style is known as Brahmi Script. This script was used to pass on information.

Brahmi Script

In your school you see information on notice boards. Write some of them here.

.....

.....

Write down some information for your friends.

.....

.....

Do you get any information from coins and currency notes/ Collect some new and old coins & currency notes. Write what all information you can get from them. Compare two coins of the same amount and find out the changes.

What did we learn

Oral

1. What is the name of your village/City/Area?

2. How did your village get its name? Find it asking your elders.

Written

1. Go and see an old building of your area.
   a. Write its name.
   b. How did the building get its name?
   c. What type of materials have been used in it?
   d. Find out how old it is.
   e. What do people say about it?
2. What caves are there on the hills of Ramgarh?
3. For what purposes was Brahmi script used?
4. Match the column :-

1. Brahmi script	-	Ambikapur
2. Theatre	-	Jogimara cave
3. Hatipol tunnel	-	Sitabengara
4. Ramgarh	-	Sitakund.

Find out

1. Draw a picture of Jogimara cave on a card sheet. And stick it on the wall of your class.
2. Visit the historical places which are nearby. Know about them from newspapers and magazines.
3. Find out and write what are our responsibities for the maintenance of historical buildings.

19 Variety of Clothes

Letter....letter.. as soon as Meenu heard these words, she rushed out and took that letter. She came in and she asked her mother, "Mother, does the postman uncle not have any other dress? Why does he wear the same clothes?

Can you tell what answer the mother might have given to Meenu?

……

……

Do you know some more persons who wear a special uniform while going on duty? Find out the colour of their dress and fill in the table 1.

Table 1

No.	Profession	Colour of Dress
1	Police	Khaki
2		
3		
4		
5		

What type of school uniform do you wear?

……

……

In your opinion why do people need to wear uniform? Write.

……

……

Do you always wear uniform? When do you wear a different dress?

……

……

……

……

In different seasons, what type of dresses do you wear? Write in table 2.

Table 2

Season	Dress
In Winter	
In Summer	
In Rainy season	

What is the difference between your winter and summer clothing?

1. ……
2. ……
3. ……

When do you like to put on warm clothes? Why?

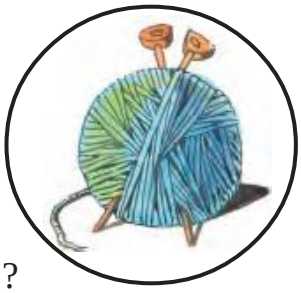
……

Think and Tell

What types of dresses do the people wear in very hot regions? Think and write.

.....

Let's do something and see. Take a ball of wool and look at it carefully.



Open it and count how many threads of wool are there in it ?

.....

Now, out of them look at one thread. Do you see fibres in it?

.....

These are woolen fibres. Do the same with a thick cotton cloth. Try to find out fibres in it. You will see that the cloth is made of fibres.

To make cloth where do we get these fibres from? Find out and write in table-3.

Table 3

Clothes	Fibre: from where
Cotton	
Silk	
Tat	

Some fibres like polyester, nylon etc are made in the factories also. The clothes are made from these also.

Chhattisgarhi Kosa

Our state is known for Kosa cloth. In many parts of the state Kosa cloth is made It is a type of silk.

Do you know how to make Kosa cloth, where do we get the fibres from? Have you ever seen the process of making Kosa cloth?

.....

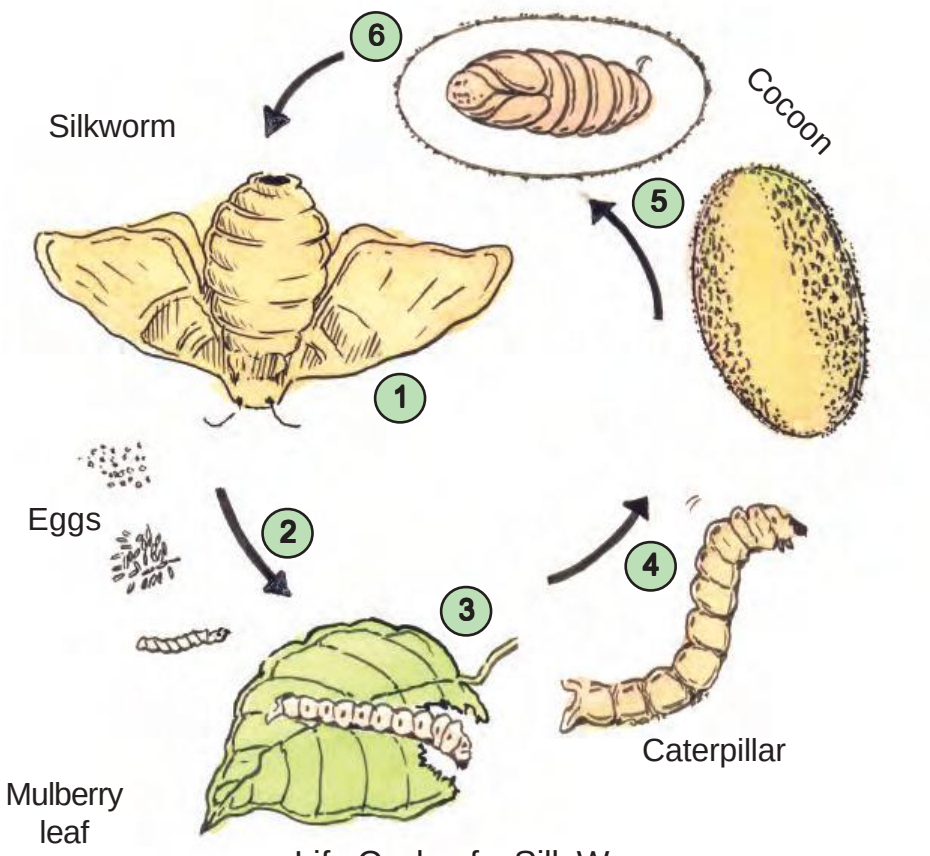
How is Kosa made?

It is made by some specific worms called silk worms. From the eggs of these worms we get caterpillars. Caterpillars grow by eating the tree leaves.

Ask your elders and write which tree leaves these caterpillars eat.

.....

.....



Life Cycle of a Silk Worm

Caterpillars make a covering around them. This is called pupa, which are called cocoons. Cocoons are boiled in water and the fibres are separated. From these fibres the Kosa thread is made. And from the kosa thread the cloth is made.

Now, you understand the process of making kosa cloth. Find out the steps to make cotton cloth and discuss among yourselves.

.....

.....

What Did We Learn?

Oral

1. Name the plant from which we get fibre to make cloth?
2. From which animals do we get wool ?

Written

1. What are the uses of cloth in our life ? Write any four.
2. Write in order the steps needed to make silk cloth.
3. Match the following –

A	B
Wool	cocoon
Kosa	who sews clothes
Weaver	hair of sheep
Tailor	summer days
Cotton cloths	who weaves cloths

Find out

1. In the puzzle given below the names of some clothes and the seasons are hidden. Find them and write them in the space given.

M	T	W	O	O	L	R	S
B	S	I	L	K	B	K	U
F	K	N	Y	L	O	N	M
C	O	T	T	O	N	U	M
D	S	E	F	G	P	M	E
R	A	R	A	I	N	Y	R

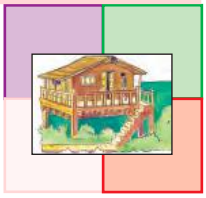
1. ..... 2. ..... 3. .....

4. ..... 5. ..... 6. .....

7. ..... 8. ..... 9. .....

2. Collect the pictures of costumes from different states and stick in the scrap book.

20 Different types of Houses



In the previous class, we came to know about mud and brick houses. The brick houses are made of bricks, cement, stone, and iron, while mud houses are built of soil, grass etc.

Draw a picture of the house you live in.

Picture of Your House

Different Types of Houses

You see different types of houses around you. There are many different types of houses apart from these, which you might not have seen. Let's find out.

Such houses are built in the areas having heavy rainfall and where the ground fills with water and mud. These houses are built at a height of 10-12 feet on strong bamboo poles. Bamboo does not get spoilt in water even after prolonged use. Some houses are made of wood from the inside.

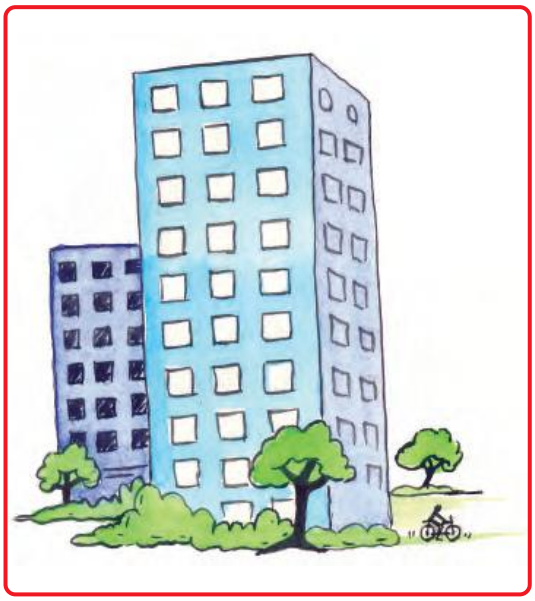
In Assam and Meghalaya such houses are made. Here it rains heavily round the year and dense forests are found here.

If your house would also be like this, how would you like it ?

_____

_____

House on House



You might have seen single or double storey houses in your neighbourhood. But in big cities like Delhi and Mumbai , there are 15-20 storied buildings also. Here, in one storey 4-5 families live in separate flats. There is limited space in cities. Therefore such buildings are made.

What are the differences between your house and these buildings ?

_____

_____

Can a big pipe be used as a place for living? Find out.

Ice House

Can you imagine a place where there is only ice all around, nothing else - neither stone, nor brick nor soil.

If you have to build a house at such a place, what would you do ?

Here the people make houses from icebergs, which are called Igloo. The walls inside feel cold on touching. But they prevent the falling ice and cool air from entering the house. A fire is burnt inside, so the house remains warm. It is so warm that the children sleep without woollen clothes.

Can the ice houses be made in your area ? If not ,why ?

_____

_____

What did we learn?

Oral

1. What materials is your house made of ?
2. Why are multistoried buildings built in metro cities now ?

Written

1. What kind of protection does an ice house give?
2. Describe your house.
3. Why are bamboo houses built in Assam and Meghalaya?
4. Fill in the blanks with the correct option given below in the bracket.

   (Meghalaya, Flats, mud, icebergs, limited, water)

   (i) In cities the space is _____ there people live in _____ of multistorey buildings.

   (ii) Igloo is made up of _____ .

   (iii) Bamboo houses are made in _____ .

   (iv) Bamboo does not get spoilt in _____ and _____ .

Find out

1- [a] In your house, ask your grandparents or some one of their age group about their childhood

- What were their house made up of ?
- Was there toilets in their homes ?

[B] Go along with you teacher or some relative to the place where some building is being built. Try to get answers to these questions by asking it to the workers working there.

1. What is being built here?
2. How many persons are working here?
3. What work are they doing?
4. How many men and how many women work here?
5. Are there children working here?
6. What are the things used to make this building?
7. What are the cost rate of :-
   (a) one gunny bag of cement
   (b) one brick
   (c) one big truck full of sand

2. Ask your elders what type of house they lived in during their childhood.
3. Look at the mud houses and find out what things they are made of.

21 What do the Pictures say?

You must have seen and drawn various types of pictures. A number of them are associated with our life and conceptions. Even today we draw pictures. Different pictures have different purposes. For example, there are pictures depicting some personality so that they are remembered for a long time. Some pictures are made on walls to decorate houses. While some others are made to express certain thoughts and experiences.

Painting in the House

Are the pictures drawn in your house also ?

On what occasions are the pictures drawn in your house ?

———————————————————————————————————————

Who draws pictures in the house ?

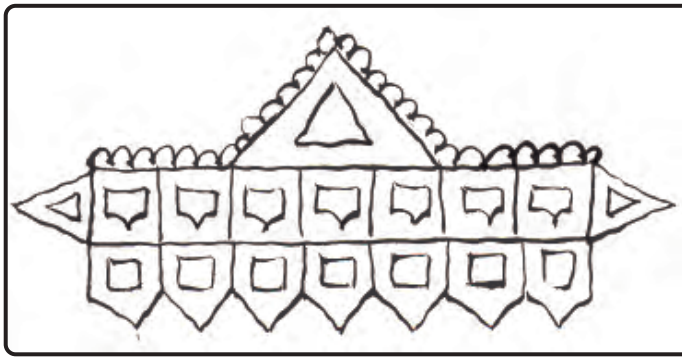
———————————————————————————————————————

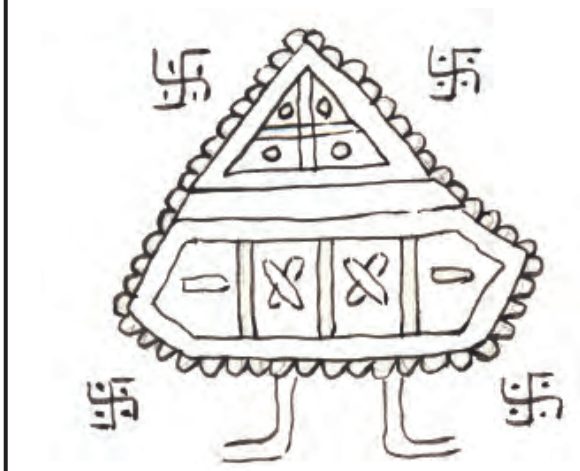
What type of pictures are drawn ? What are these pictures called ?

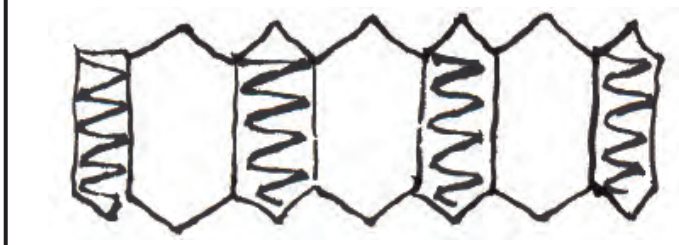
———————————————————————————————————————

Draw any one picture by your own choice.

There are some pictures given below. Colour them and tell on what occassions they are made.





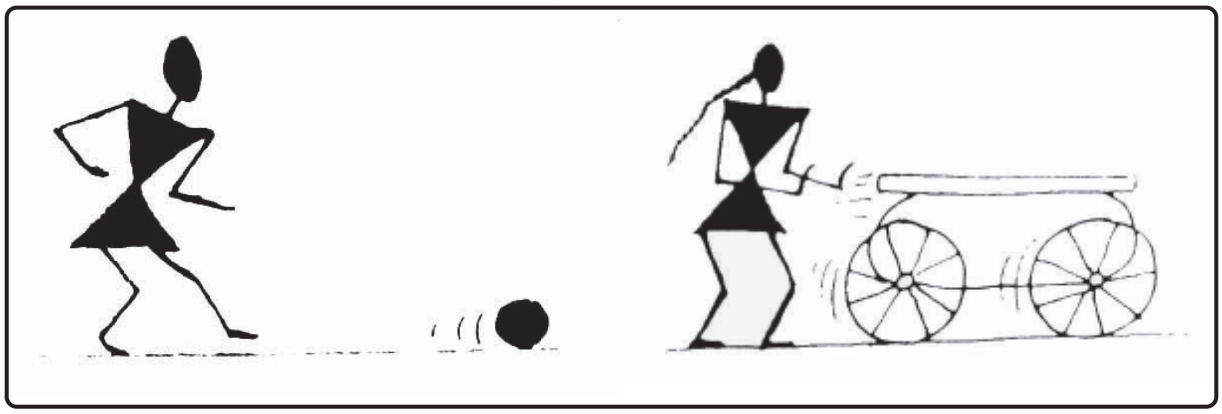


Pictures also Speak

Look at the pictures given below and tell what is happening.

_____

_____



Before Pen and Paper

Long ago when there were no pen and papers. Even then man used to draw pictures. They used to give messages through pictures.

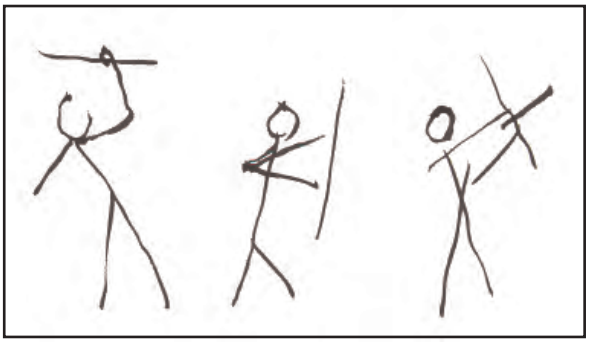
He used to draw pictures on the stones, hills and walls of caves. Such pictures can be seen at many places even today.

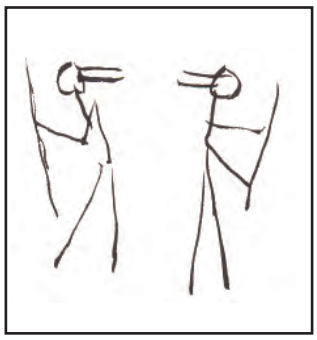
At that time, there were neither pens nor brushes or colours which are easily available today.

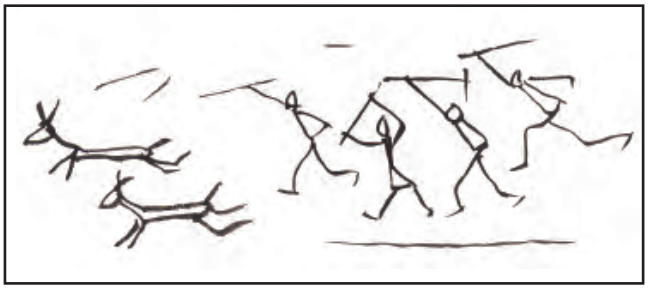
Perhaps coloured soil or colours of the flowers or coloured stones mixed with animal's fat were used to colour the pictures. The fibrous branches of trees and plants might have been used as a brush after pounding them properly.

Some of those colours were so fast that even today they have not faded. They are still intact.

At Kabra Hills of Raigarh and caves of Singhpur, the pictures of ancient times have been found.







What has been shown in the pictures above ? Write .

_____

_____

_____

_____

_____

What did we learn?

Oral

1. What are the occasions when the pictures are drawn in houses?
2. In which festival is Rangoli made ?

Written

1. What things are used to colour the pictures?
2. At what places have the pictures drawn by early man been found in Chhattisgarh?
3. Make Rangoli patterns in your notebook.
4. Early man did not have _____ and _____ . At that time he used to give messages through _____ . He draws pictures on _____ and _____ . He used _____ and _____ to colour the pictures. To make brush he used the _____ of trees and plants.

Find out

1. Collect different types of pictures. For example from sports, animals, trees and plants, players, leaders etc.Divide them into groups.Diplay it on the notice board of your school or in the classroom
2. Draw pictures which are made at different festivals.

22 Sound

We hear many sounds daily. But we do not pay attention to all of them. Let's try to see how many sounds fall into our ear together.

Different types of sounds

Don't create any sound for sometime and be silent. What sounds did you hear ?

_____

Besides these, what sounds do you hear in and out of the house ?

_____

Whose Sound

What kind of sound do you hear when you clap?

_____

If a spoon falls on the floor, what kind of sound does it create?

_____

There is difference in the sound created by a clap and the cup-plate.

There is a table below. Produce those sounds according to it and write it.

Table 1

No.	Sound	Write the sound
1.	**Failling of thali on the ground**	
2.	**Sound of crow**	
3.	**Barking of dog**	
4.	**Crowing of cook**	
5.	**Ringing of school bell**	
6.	**Opening a door**	
7.	**Sound created by cow**	

Could you write all the sounds?

_____

_____

Every sound is different

How do you come to know about mosquitoes in darkness ?

_____

_____

Can you distinguish between the voices of your friends. If your best friend calls you in a crowd, can you identify her voice ?

Blindfold one of your friends and tell your friends to call her by name.

Can she identify the different voices ?

_____

_____

One thing - Different sounds

You must have heard the sound of rain-drops in rainy season when they fall on iron-sheets, the sound is different when they fall on the ground, it's different. Now, you must have understood that different things have different sounds and the same thing creates different sounds when they fall on different surfaces.

Now, take a pebble, drop it on the things given below and listen to the sound it creates.

Drop a pebble on a pebble

Drop a pebble on a table

Drop a pebble in water

Drop a pebble on a 'thali'

What is the difference in sounds where they fall on different things ?

_____

_____

Think a little

Imagine that some day, you get up and find that all sounds have disappeared. What are the problems you will have to face if all sounds disappear?

_____

_____

If the sounds disappear, what activities will be difficult ? Fill in the table 2.

Table 2

Work	Difficult / Not difficult
Watching T.V.	
Playing with friend	
Asking mother for food	
Calling someone	

Write these

You know different sounds by different names. For example -

Sound created by dog - ‘bow’, ‘bow’

Sound created by cat - ‘mew’, ‘mew’

Find out more such examples.

Talk to your friends. Copy the sounds given in table - 3 and write them.

Table 3

No.	Sound	Write the sound
1.	**Sound of clock**	
2.	**Thunder of cloud**	
3.	**Sound of telephone**	
4.	**Crowing of cock**	
5.	**Sound of goat**	
6.	**Roaring of tiger**	

Lion Chirps

Once Gagri went to zoo. There she saw a peculiar thing. There all animals have changed their voices. See what happens.

O! how funny!

Hear the animals

They have changed their vioces

Cat brays,

Donkey mews.

Cock trumpets,

Elephant roars.

Pigeon crows,

Lion chirps.

Find out the sounds created by animals given and write them in table 4.

(Cat, Donkey, Cock, Elephant, Pigeon, Tiger)

Table 4

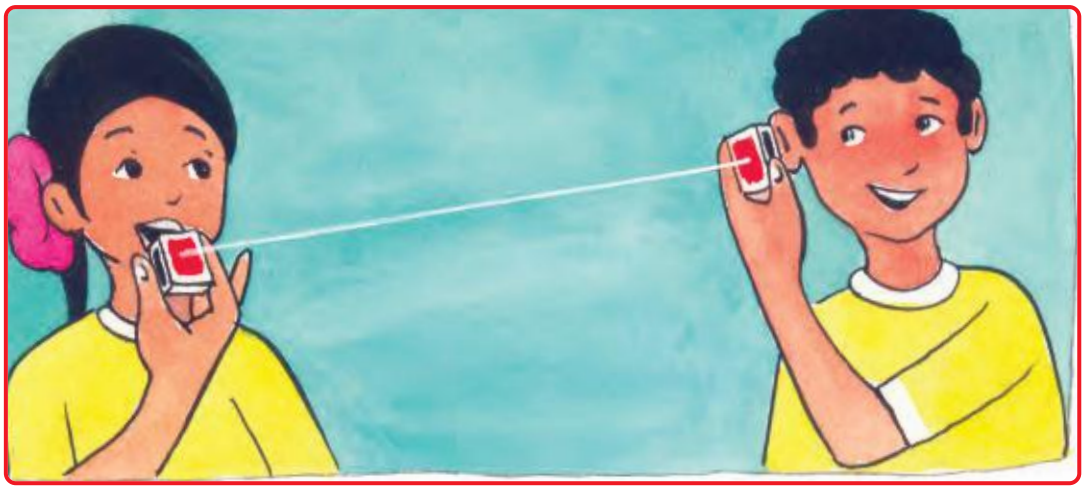
No.	Animal	Sound
1.	**Cat**	
2.	**Donkey**	
3.	**Cock**	
4.	**Elephant**	
5.	**Pigeon**	
6.	**Tiger**	

Make your own telephone

You must have heard about telephone and even talked on it. Let's make our own telephone and talk to our friend on that.

Take two empty matchboxes and a piece of thick thread. The piece of thread should be at least 10-15 feet long. Make a hole in the matchbox. Take either ends of the thread through the holes as shown in the picture. Tie knows at the two ends of the piece of thread.Your telephone is ready.

Now, tell your friend to take one matchbox to some distance and attach it on his ear. You speak something through the second matchbox. The thread should be kept tight during this. Now, talk one by one. Do you hear your friend's voice ?



What did we learn?

Oral

1. How many voices can you imitate?
2. Name any two animals that roar?

Written

1. Name five instruments which create different sounds.
2. Name two animals which create sweet sounds.
3. How did the sound travel from one end of the matchbox to the other?
4. What are the other means through which sound can travel from one place to another?

Find out

1. Strike pencil on a table, what kind of sound do you hear? Now, place your ear on the table, strike pencil on the table and listen to the sound. Tell the difference between both the sounds.
2. Tap an empty cup with a spoon. What kind of sound do you hear? Now, strike a spoon to a water-filled cup and listen to the sound. What is the difference between both the sounds? Tell.
3. Draw a picture of any musical instrument and colour it.

23 Domestic Animals

Those were the summer-days. All the members of Seema's family were sleeping on the terrace. Their pet dog Moti was in downstairs. Thieves tried to break into the house at night thinking it was vacant. Seeing them, Moti started barking. At this, the thieves tried to run away. Moti started chasing them. All members also got up hearing Moti's barks. Thus, the thief was arrested. Everyone praised Moti.

For long, we have been domesticating the animals. Among them are dogs, horses, hens, cocks, goats, cows etc. Wherever man went, dog also went. Dog also watched at night.

Which animals are domesticated in your village? Make a list of them.

_____

Do you have any pet in your house?

_____

What do you and your family do to look after your pet animals?

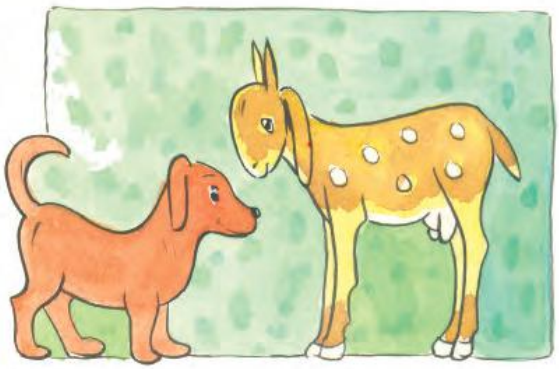
_____

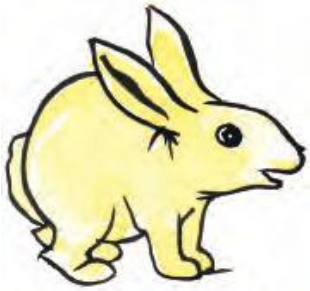
Do they understand what you say?

_____

What actions of yours do they understand? How does it react?

A list of actvities done by some animals is given below. Write their names in front of the activities.





1. In agriculture _____
2. For carrying loads _____
3. For carrying passengers _____

You already know that we use a number of things that we get from animals.

What things do we get from the domestic animals around us. Fill in the table below -

Table

No.	Name of Animal	Things we get
1.		
2.		
3.		
4.		
5.		

What do domestic animals eat? Fill in the table given below -

No.	Name of Animal	Food
1.		
2.		
3.		
4.		
5.		

Name the domestic animals which chew the cud.

_____

_____

_____

_____

Observe the birds & animals near your area.

Different animals have different kinds of ears. Given below are names of some birds & animals. Out of these how many of them have external ears and how many don't have it. Write it in the table.

Cow, elephant, buffalo, pig, cat, crow, sparrow, duck, lizard.

S.No.	Animals with external ears	Animals which do not of have external ears

Those animals which do not have external ears, do you think they have ears or not?

Hen, sparrow, parrot, frog, crow all have ears but we cannot see them. Find out about some more animals whose ears cannot be seen from outside.

You know that ears help in hearing. In birds we cannot see their ears but they have very small holes on both sides of their head. These are hidden by the feathers. In lizards also we can find small hole like ears.

Above, we talked about the ears of animals. Now let us know about the skin of animals. We can see hairs on the skin of dogs, buffaloes, cows, goats and cats. Even elephants have hair on their skin.

You must have seen designs on the skin of animals are due to the hairs on them.

Given below is a list of birds and animals. Write these names in the correct column in the given table.

List - Hen, cat, crow, pigeon, cow, buffalo, duck, myna, goat, rat, pig, elephant

S.No.	whose ears are seen from outside	Who has hair on its body	Whose ears are not seen from outside	Who has feathers on their body

Now find out form these who all give eggs and who all give birth to young ones.

S.No.	Name of the animal which gives egg	Name of the animals which given birth to young ones

Now compare the two tables above and find out -

- Those animals which give birth young ones, do they have external ears and do they have hairs on their bodies.
- Those animals which lay eggs, do they have external ears or not and do they have hair on their bodies or not?

What have you learnt

Those animals which have external ears, they have hair on their bodies and they give birth to young ones.

Those animals which do not have external ears, they do not have hair on their body and they lay eggs -

cow and calf

bird and eggs

Observe the birds and animals around you and see that the ears of different animals have different type of ears.

This is a dianosur. They were on earth many years ago, now they are not present. Find more information about them.

What did we learn?

Oral

1. Name any five domestic animals.
2. Write about food, living and behaviour of any two animals.
3. Animals are our friends. How?

Written

1. What do you do to look after your domestic animals?
2. What problems do we face in performing particular work if we do not get the help of domestic animals?
3. Tell what the horses eat. How do they help us?
4. What will happen if the tigers and crocodiles are domesticated?
5. Tick (√) the right answer from the given three choices and write down in the box :-

(1) Is used in agriculture -

i) Ox ii)Horse iii) Rabbit ( )

(2) Animal that guards the house

i) Donkey ii) Cat iii) Dog ( )

(3) Is not used in carrying passengers.

i) Horse ii) Camel iii) Goat ( )

(4) Do not carry loads.

i) Camel ii) Donkey iii) Pig ( )

Find out

1. Why is the horseshoe nailed to the bottom of a horse's hoof?
2. Find out the diseases which spread in domestic animals.
3. As we know that birds live in nests in the same way animals also live in different places. Write the names of any five animals and write where they live.

S.N.	Name of animal	Place they live
1	Earthworm	mud
2		
3		
4		
5		

24 Map and Measurement

Tillu and Munni have drawn a map of classroom of their school. Before drawing the map, they collected matchsticks. Then, they measured every wall of their class by steps. They arranged the matchsticks according to the measurement of the wall. They took one matchstick for one step.

In the same maner tilly and nurri have measused the three sides of the wall with their steps and kept the matchstick accordingly.

Both of them were happy and they showed the map of their classroom to the teacher made with matchsticks.

Now you prepare a classroom map wide measuring 15 steps long and 12 steps in which 1 matchstick = 3 steps.

Their classroom was 15 steps long and 12 steps wide. Look at the picture given below and say whether they have kept more matchsticks?

After this, they measured the courtyard and added it to their map. What is the length and breadth of the courtyard?

What did we learn?

Oral

1. How many matchsticks did Tillu and Munni use for one step measurement?
2. How can we draw a house or school map on paper?

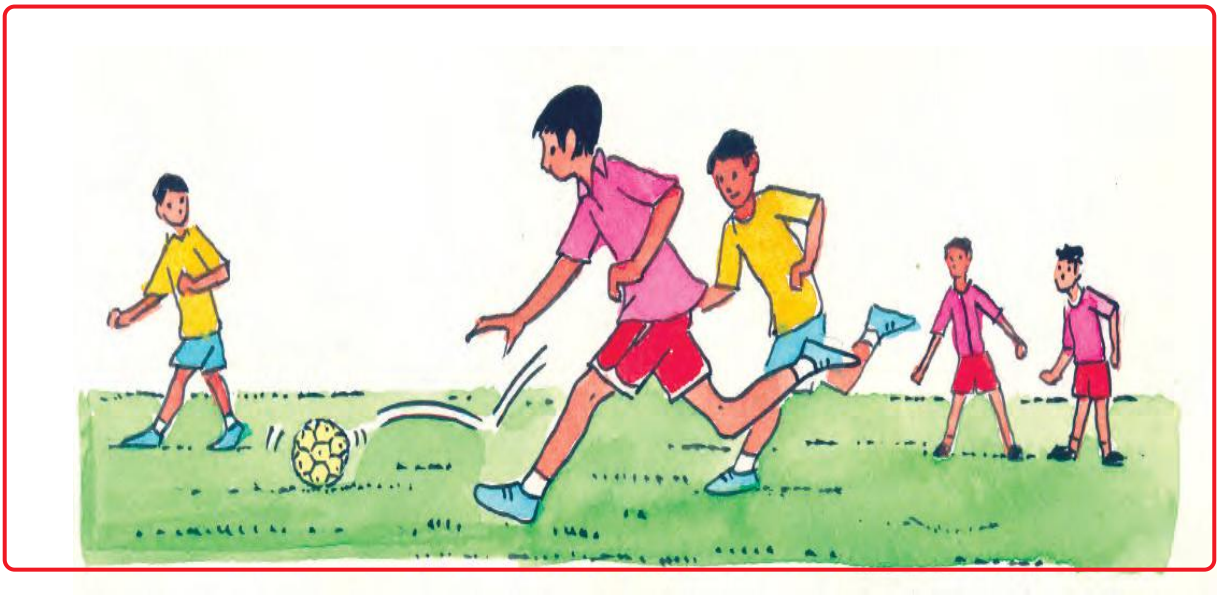
Written

1. How long is your one step? Measure it and write.
2. What is the difference between the length of a step and a matchstick?
3. What is the use of making maps ?

Learning from surrounding

1. According to the lesson draw a map of your room measure the room using something other than matchsticks.
2. Measure the length and width of your copy with a scale.
3. Measure the weight of your Environmental Studies textbook on a weighing scale.
4. Find out how many litter of water do you drink in a day?

25 Football



When Kamal started for school today, he saw a number of people going in groups. He followed them and also reached the ground, behind the school. All over the ground as well as in the middle, there were lime-marks. There were many people in the middle. Some were doing exercises, some were kicking a ball and still some others were stopping a ball. Some people were standing with a cloth outside the lines. At that time, a man standing in the middle of the ground, blew whistle. With this, everything stopped. All the people came and stood in rows.

The whistle-man was standing in the middle of the ground near the white line. When Kamal looked around, he saw two poles with nets. He started counting the persons standing in rows on either side. There were 11 persons on either side. All the 11 persons of either side were wearing the same dresses. But one man looked different. Meanwhile, everyone started shouting and clapping. Kamal also started shouting.

The whistle-man took one person from either side to some distance. Then he tossed something. Kamal could not understand anything. But suddenly the people of one side started jumping. Then all the persons on both sides scattered. Then, the whistle blew and they started to kick the ball. The noise grew.

Kamal also started jumping and shouting. Meanwhile, someone kicked the ball and it went into the net. A boy standing near Kamal started shouting 'goal-goal' Kamal also started shouting with him. But this time less people shouted. Some people were clapping. The player who scored the goal and his teammates were jumping and dancing. On the other hand, some people were silent and looked sad. The people standing near Kamal started to stare at him and other boys.

Suddenly, Kamal got a slap on his back. It was painful. He looked back and found Mansaram. Mansaram said, "Why do you clap when your team is defeated?"

Kamal could not understand anything -

"What team, whose team,

What defeat ?" He said -

"I do not know".

Mansaram explained. This football match is being played between Badgaon and us. Our team is wearing yellow dress. There are 11 players in it. The man standing near the net with a yellow shirt is Sohan. He is our goalkeeper. His job is to stop the ball from going into the nets. The whistle-man is referee. Remaining 11 players belong to Badgaon team. In the mean time, the shout started going up. With this, Mansaram also kept saying, "Look at them; Our players are taking the ball to the Badgaon side. Now, the goal is imminent. But the ball went outside the line made all around the ground. Mansaram said, "They have kicked the ball out to prevent a goal. Now, our players will be getting throw-in".

Look there, Rehman threw the ball. Ramesh, kicked the ball to the goalpost. Oh! Sharif has the ball and he has to beat the goalkeeper only. He kicked and the goal is scored....."

Kamal saw everyone was jumping and the ball went into the net.

Kamal was feeling hungry. So, he proceeded to his house slowly. He could hear the rising and falling noise from behind. The sounds goal-goal were coming to his ears constantly.

Kamal reached his house slowly. He also thought of playing football in the school the next day.

What did we learn?

Oral

1. Why did Mansaram slap on Kamal's back?
2. How many players are there in a football team?

Written

1. Have you ever played a match? Write about it. If you haven't played any, then write about any match you have seen.
2. What the whistle-man would have tossed. Why did the members of one team start jumping?
3. Which sport do you like the most? How is it played? Write it in your notebook.
4. Do you think Sharif knows how to play football. What are the facts of the lesson that give you evidences for this?

Learning from Surroundings

1. Ask your teacher about football and find out some more information from the books available in your school library.
2. What are the games in your area which are played on various occasions in your locality? Make a list of them.