

Environmental Science

Standard III

Part - 1



**Government of Kerala
Department of Education**

**State Council of Educational Research and Training (SCERT), Kerala
2016**

The National Anthem

Jana-gana-mana adhinayaka, jaya he
Bharatha-bhagya-vidhata.
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha.
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he!

PLEDGE

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

I love my country, and I am proud of its rich and varied heritage. I shall always strive to be worthy of it.

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

I pledge my devotion to my country and my people. In their well-being and prosperity alone lies my happiness.

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Dear children,

How wonderful are the things in the magic bowl of nature!

Many of them you discovered,
walking along the soil.....

watching sights of the sky.....

whispering to the flower and the fly!

To remind you of them.....

To provide you new ideas.....

this textbook will be with you
as your friend....

Many treasures lie hidden
in nature's lap.

Let us march ahead
seeking those unending truths.....

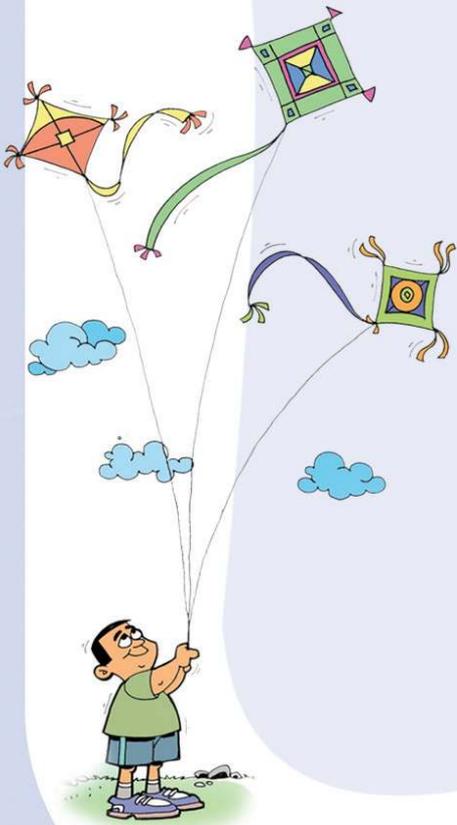
Let us conquer that wonderland
looking, listening, examining and experimenting!

Regards,

Dr. P. A. Fathima

Director,

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*Certain icons are used in this
textbook for convenience*



**For further reading
(Evaluation not required)**



**ICT possibilities for making
concepts clear**



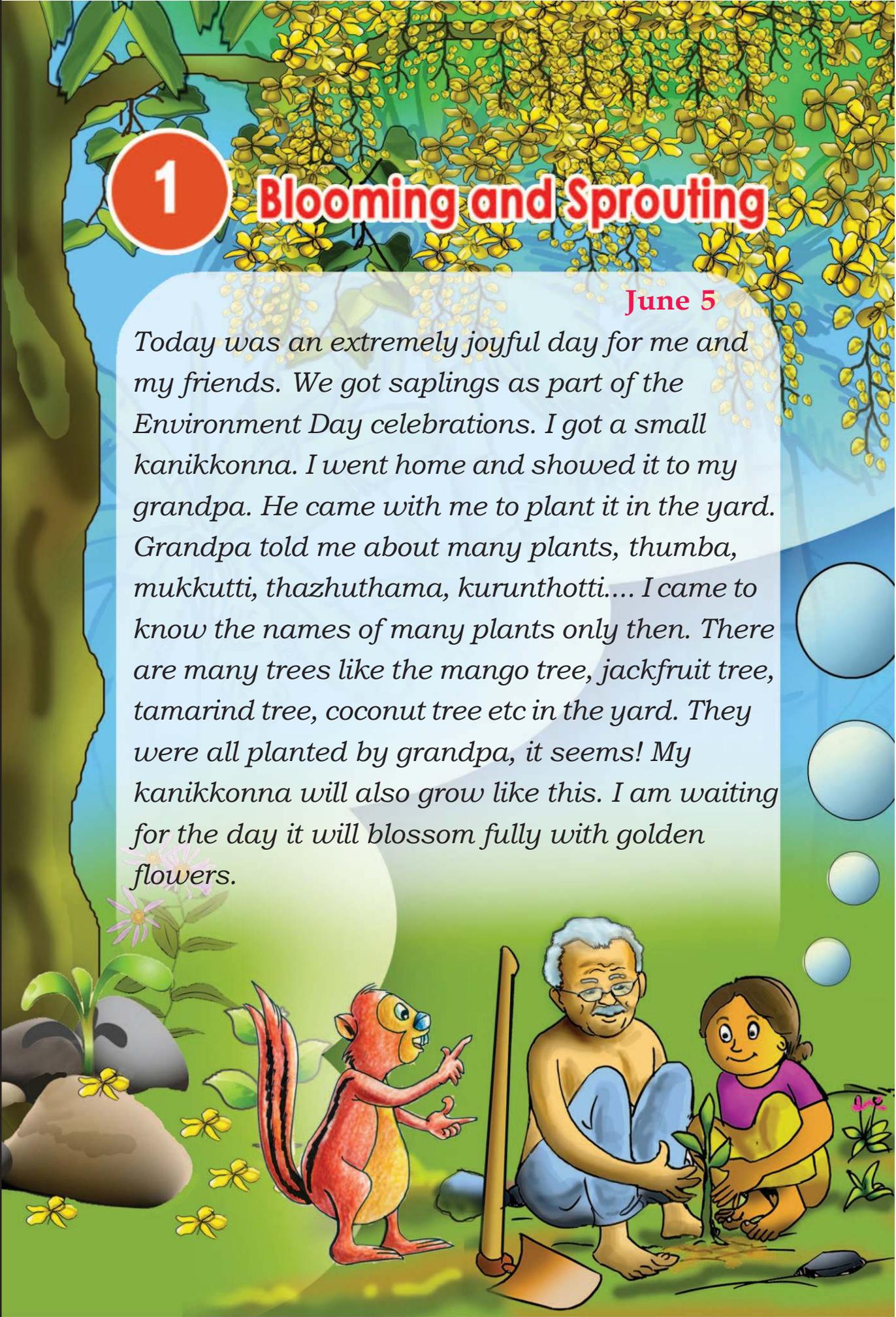
Significant learning outcomes



Let us assess



Extended activities



1

Blooming and Sprouting

June 5

Today was an extremely joyful day for me and my friends. We got saplings as part of the Environment Day celebrations. I got a small kanikkonna. I went home and showed it to my grandpa. He came with me to plant it in the yard. Grandpa told me about many plants, thumba, mukkutti, thazhuthama, kurunthotti.... I came to know the names of many plants only then. There are many trees like the mango tree, jackfruit tree, tamarind tree, coconut tree etc in the yard. They were all planted by grandpa, it seems! My kanikkonna will also grow like this. I am waiting for the day it will blossom fully with golden flowers.

What are the trees you have in your homeyard?

Who planted and nourished them?

Aren't there plenty of plants and trees in our school premises too?

Observe the premises of your school and try to write the names of plants there.

Coconut, Leucas (*thumba*), Hibiscus,

Are all plants around us similar?

Big trees like the mango tree...

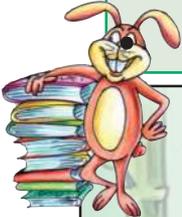
Small plants like the leucas.

Creepers that climb like the jasmine...

So many plants like this...

Try to classify the plants around you on the basis of their peculiarities and write them down.

Trees	Small plants	Creepers
• Jack fruit tree	• Basil (Tulsi)	• Jasmine
• Mango tree	• Hibiscus	• Bitter gourd
•	•	•
	•	•



The Bamboo Lore

Bamboo is the largest plant in the grass family. It is a fast growing plant. It blossoms only once in its life span and gets destroyed completely after this. Each bamboo plant deposits thousands of seeds before it perishes. The seeds of bamboo are known as 'bamboo grains'. These grains, having medicinal value, are used as food.

Smiling blossoms

I too want a garden



Do you have a garden at home?

What all types of plants do you have in your garden?

Which of those plants blossom?

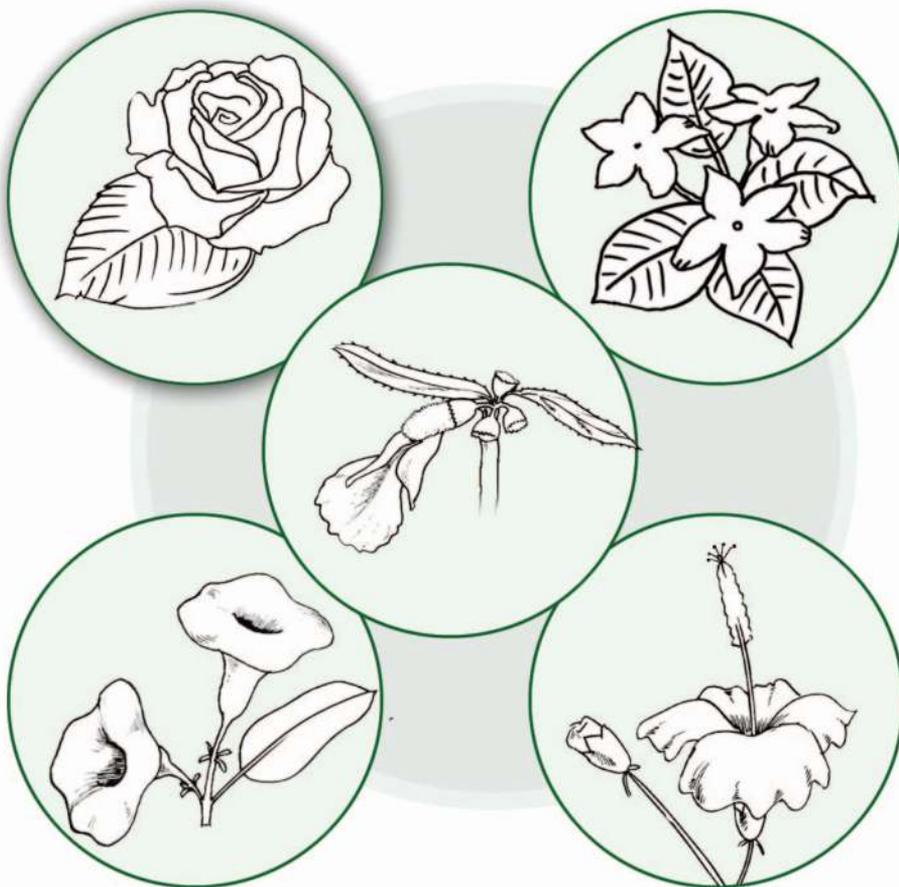
Which is the flower you like?

Try to draw its picture.



What are the flowers seen in the pictures below?

Make the flowers more beautiful using suitable colours.



How many of their names do you know? Try to write them.

Which colour did you give to the rose? Did all of you give the same colour?

Why did you give them different colours?

Do all hibiscus plants have flowers of the same colour?

Haven't you seen plants that bear flowers of only one colour like leucas and jasmine?

Add names of more flowers in the table below.

Plants with flowers of different colours	Plants with flowers of only one colour
<ul style="list-style-type: none">• Hibiscus• Rose••	<ul style="list-style-type: none">• Leucas• Jasmine••



I like the fragrance of rose and jasmine

Try to smell flowers like the rose, jasmine, hibiscus, marigold (*chendumally*) etc.

As in the case of colour, don't flowers have different smell too?

How many plants can be identified only by the smell of their flowers? Try to write.

-
-

-
-

Who am I?

Don't you like the 'eye-band' game?

Collect fragrant flowers like rose, jasmine, chrysanthemum (*jamanthi*), frangipani (*chempakam*), marigold (*chendumalli*) etc. Cover the eyes of your friend with a band and ask her to smell each of these flowers. How many flowers can she identify from their smell?

Those that blossom at night



Flowers that blossom at night are white and fragrant. This helps flies locate them at night.

Queen of the Night (Nishagandhi)

When Neelakurinji blossoms

Neelakurinji blossoms only once in 12 years. What a sight it is to see the Neelakurinji blossomed all over the Nilgiri Hills.



The giant among flowers



Rafflesia is the biggest flower in the world. It has an approximate weight of 10 kilogram and encircles as big as an umbrella. It has foul smell.

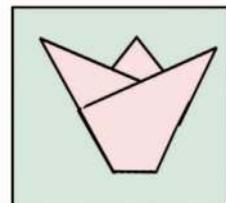
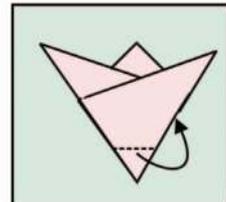
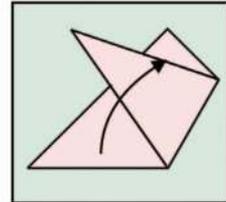
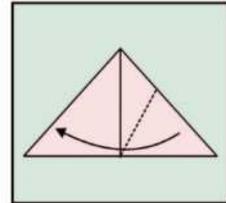
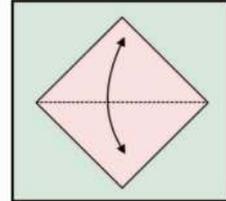
Find out whether all plants flower?



There are flowers of different colour, smell and size. Flowers can be identified by their smell. There are many flowers in nature that arouse our curiosity.

Making flowers

Didn't you see the various stages of making flowers using paper? Now try it out.



Leaves - different types

The smell of each flower can be identified.

What about leaves then?

Which are the leaves whose smell you know?

Try to smell leaves of different plants.

Are you able to identify the smell?

Can you identify the smell of leaves of plants in your locality like basil, mango tree, curry leaf, lemon, cinnamon (*Karuvapatta*), ginger, vetiver (*ramacham*), bitter gourd, cashew nut, Spanish thyme (*panikoorka*) etc?

Isn't the smell of the leaves of each plant different?

Leaf figures

Leaf is a very important part of a plant. Suppose all of you pluck a leaf each. How many leaves will the plant lose! Hence let us do an activity using fallen leaves. Collect leaves of four or five different types of plants. Is the shape of all the leaves you collected the same? Compare the mango leaf with the jack leaf. What is the difference in their shape?

Collect leaves fallen from different mango trees.

Aren't their shapes the same?



Beautify the leaf pictures by colouring them.



Plants can be identified by the shape of their leaves. The shape of leaves of different plants is different. Plants can also be identified by the smell of their leaves.

Living things



What are the objects seen in the picture?

Pick out the living and non-living things in it.

Find the living and non-living things in your surroundings and tabulate, them.

Living things	Non-living things

What all peculiarities of living and non-living things do you know?

Complete the table shown below.

Peculiarities of the living	Peculiarities of the non-living
<ul style="list-style-type: none"> • Grow • New ones are formed • • • • 	<ul style="list-style-type: none"> • • • do not move • do not respond • do not take food •

All living things grow. Food is required for their growth. Don't we grow by taking food? Similarly, food is required for the growth of plants too.

Don't we cook food in our house in the kitchen? Plants prepare their food in their leaves. The prepared food is used for their growth. The remaining food is stored by the plant in its different parts. We use this as our food.

See the pictures of some plants we use for food. Identify each one's name from the box and note down.

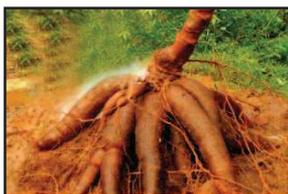




Wheat













- | |
|-----------|
| Rice |
| Papaya |
| Guava |
| Carrot |
| Beet root |
| Tapioca |
| Radish |

Prepare an album of pictures of plants that we use for food.

We use the leaf, flower and fruit of moringa for food. Do we use all parts of all plants for food? Complete the table given below.

Flower	Fruit	Leaf	Stem	Tuber
Onion	Papaya	Amaranthus	Amaranthus	Tapioca
Moringa	Pumpkin	Cassia tora	Taro	Sweet potato
•	•	•	•	•

Germinates when sown

Haven't you seen plants sprouting out?

Haven't you seen the mango seed, coconut and others sprouting out?

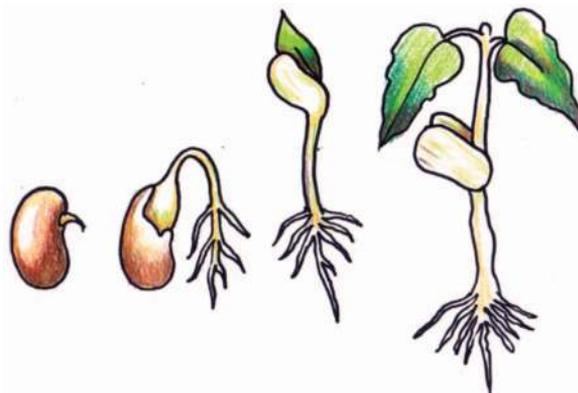
Seeds germinate to form new plants.

Let us also try germinating seeds.

Fill a flower pot with soil. Wet the soil. Bury a few pea seeds a little low in the soil. Observe the seedling sprouting out. What are the changes seen?



Examine the various stages of germination of the pea seed.



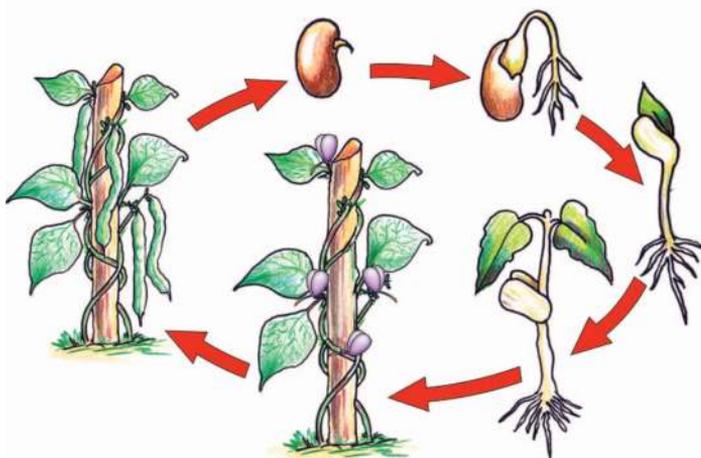
You can't see the root of the pea plant sown in the flower pot. Let us conduct an experiment to see the root coming out.

To see the root

Place some wet cotton in a glass vessel. Put three or four pea seeds in it. Observe daily. Don't forget to wet the cotton daily. Observe the changes in the pea seed everyday and note them down in the environment diary.

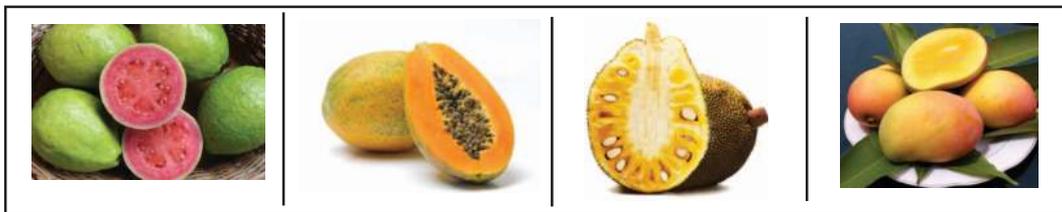
The seed germinates. It grows into leaf, flower and fruit. New plants are formed from the seed in the fruit.

Examine the process of the formation of plant from seed and seed from plant.



Did you understand the significance of seed? Shouldn't such a very significant seed be protected?

See how plants protect seeds.



There are fruits with only one seed and fruits with many seeds. Which is the smallest seed you have seen? And the biggest? Examine the seeds of fruits and vegetables we use for food.

Didn't you observe the germination of the pea seed?

Which comes first - the leaf or the root?

Do you know why plants have roots?

Don't you want to know how the root serves the plant?

Let us try a simple experiment.

Take out a rooted peperomia plant (*mashithandu chedi*). Wash the root of the peperomia plant in water. Observe the colour of the stem and note it down.

Take water in a glass vessel. Mix a few drops of red ink in the water. After 10 minutes place the peperomia plant in the ink-water.

Keep it in sunlight for a while. What change do you observe?

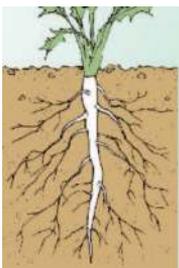
Is there a colour change in the stem?

Why does this happen? Record the observation of the experiment in the environment diary.



Don't forget to replant the Peperomia plant in the soil!

What the root says...



I keep plants fixed in the soil. I help in absorbing water and minerals required for plants from the soil.

My help is required for rain water to seep into the soil and also to prevent the washing away of soil.



Roots

*We use the roots of many plants like the common cida (*kurunthotti*) and vetiver (*ramacham*) as medicines. The roots of teakwood, coffee plant and rose wood (*eetti*) are used to make curios. The roots of tapioca and sweet potato (*madhurakizhangu*) are used as food.*



Plant and stem

Did you see the picture? Which part of the plant is missing? Draw that part.

It is the stem that transported the water absorbed by the root of the peperomia plant to all parts. Just imagine the condition of the plant without stem.



The stem too has to say...



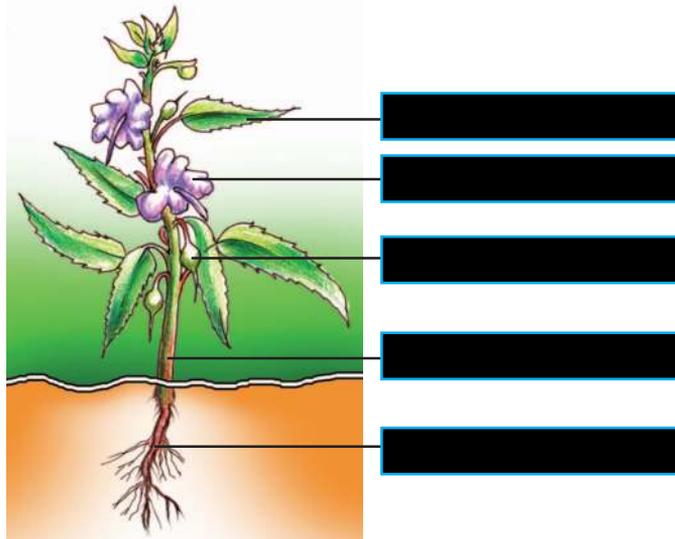
I transport the water and minerals absorbed by the root to the leaves. Haven't you seen leaves arranged in plants? Without me leaves cannot stand.



Sweet stems

Don't we all like the sugarcane stem? Do you know that sugar is produced from the sugarcane stem?

You have familiarised yourself with different parts of plants. Observe the picture of the plant given below and label its parts in the boxes provided.



Native Mango trees vanishing

'Granny Mango tree' that awaited children with her honey sweet mangoes...

'Honey Mango tree' that lent its shade to crows, squirrels and little ants...

How many native mango trees were abodes for several organisms! Many of them are vanishing from our sight.

Not only mango trees but many other trees and little plants are disappearing from our villages.

Is it not our duty to protect them?

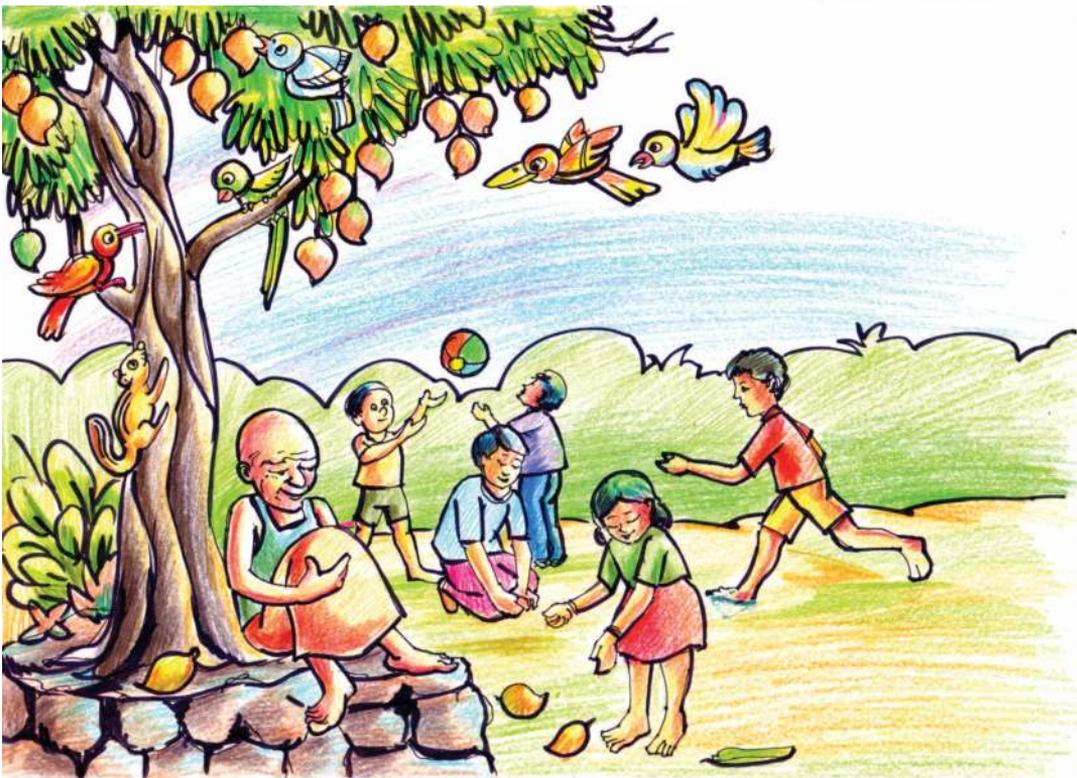
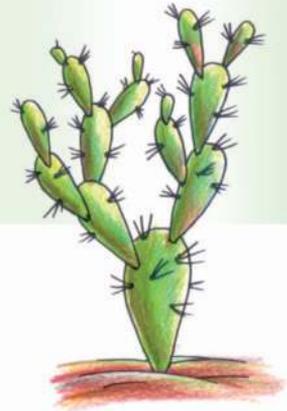
Let us also plant trees.

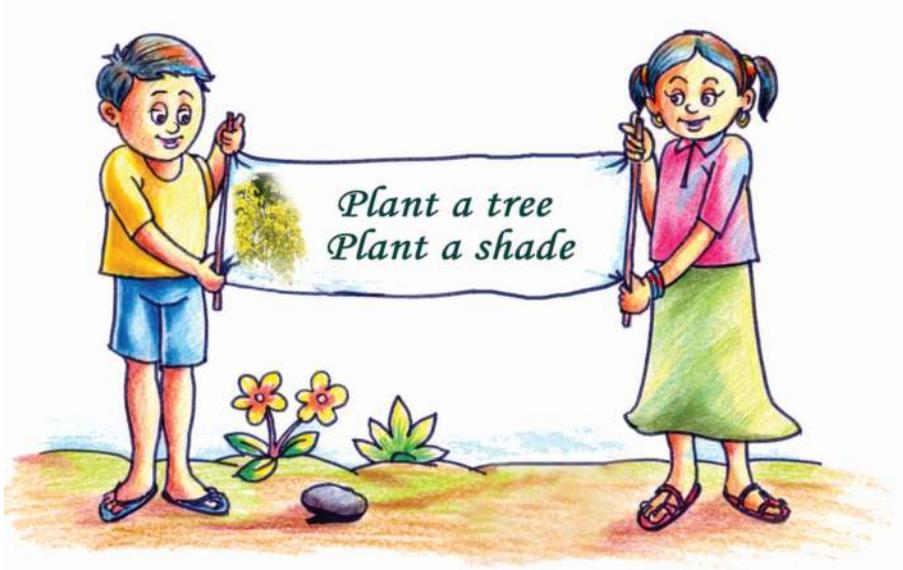
Let us welcome every little seedling sprouting from the soil.

Cactus



Have you seen the plant whose stem modifies into leaves? It can also grow in places where there is water scarcity. The stem does the work of the leaf.





Significant learning outcomes

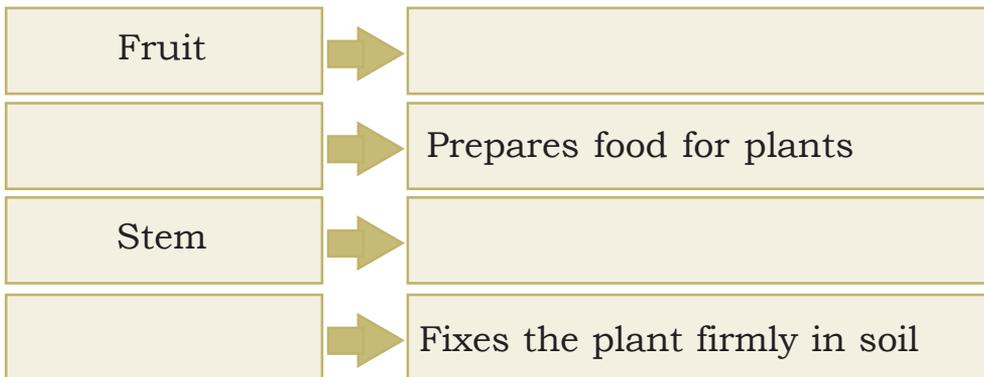
The learner can

- classify plants into different categories on the basis of their peculiarities.
- identify some of the plants by observing their parts.
- identify and explain the functions of root, stem and fruit.
- identify living and nonliving things in nature, tabulate them and mention their peculiarities
- identify parts of a plant that are edible and tabulate them.
- illustrate parts of a plant
- realise the significance of protecting plants and participate in activities to conserve them.



Let us assess

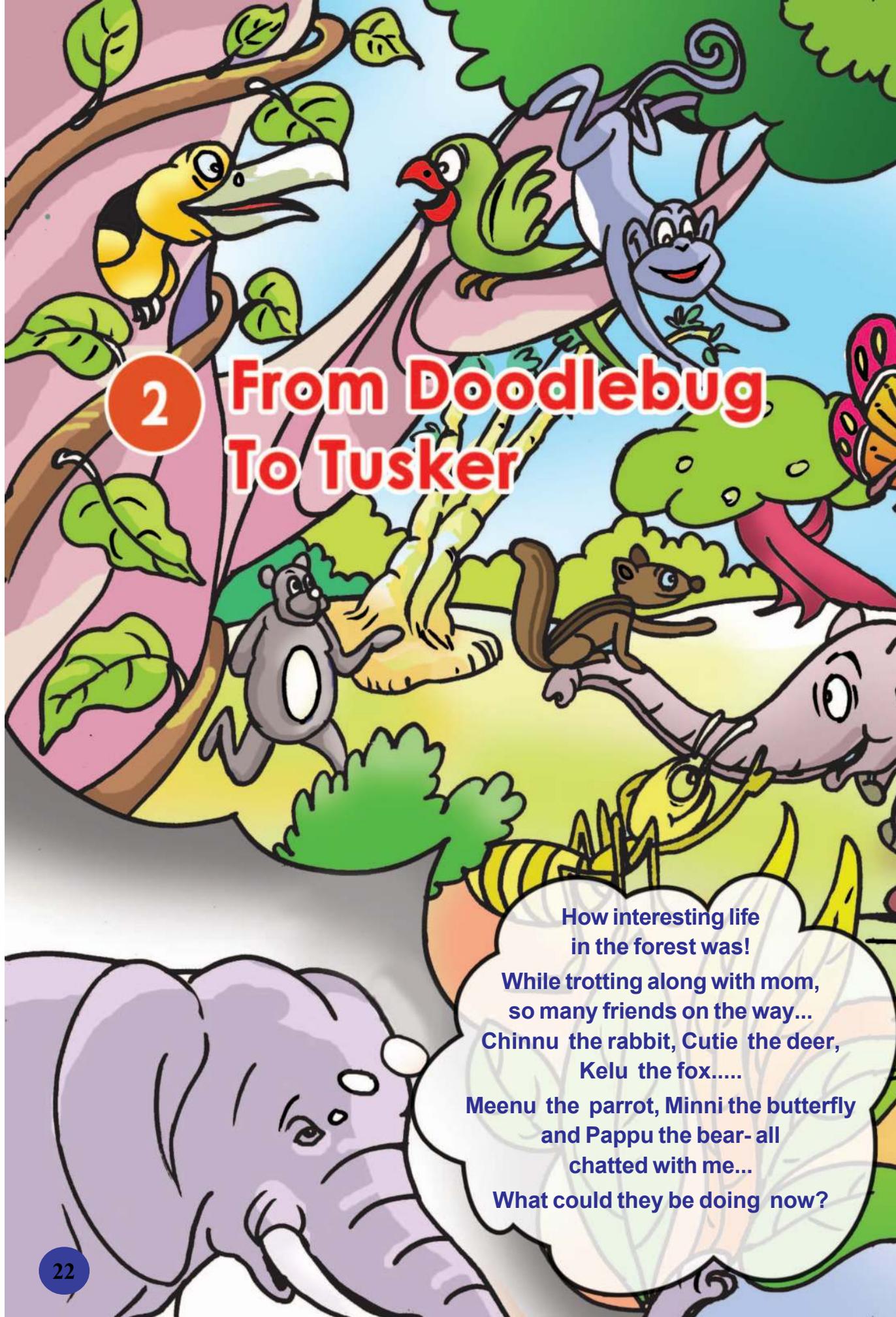
1. Part of the plant that can be called its 'kitchen'
(A) Root (B) Stem
(C) Leaf (D) Fruit
2. Which among the following is not a message related to plant conservation?
(A) Trees-a boon (B) Do not cut trees
(C) Trees only for man (D) Trees-our friends
3. Examine the given details about plant parts. Fill in the missing details.



Extended activities

1. Visit a nearby paddy field, sacred grove, pond, forest etc with elders. Find out the different types of plants there and how they are beneficial to man and other organisms.
2. Place name boards for trees and plants in your school yard.





2 From Doodlebug To Tusker

How interesting life
in the forest was!

While trotting along with mom,
so many friends on the way...

Chinnu the rabbit, Cutie the deer,
Kelu the fox.....

Meenu the parrot, Minni the butterfly
and Pappu the bear- all
chatted with me...

What could they be doing now?



**Bird
from paper**

The childhood of Kittan, the elephant was so interesting, wasn't it?

Who all were Kittan's friends? Try to write. So many creatures around us, aren't there?

What are the creatures seen in your locality?

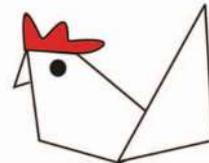
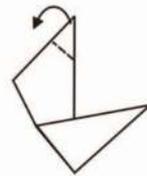
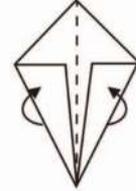
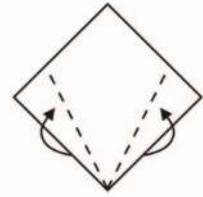
Don't you keep creatures in your house too?

Why do we keep them?

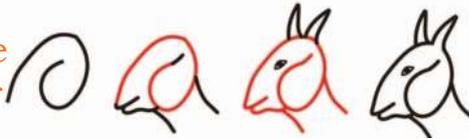
Tabulate names of the creatures that we feed and keep in our homes for particular needs.

For milk	For egg	For meat	As pets

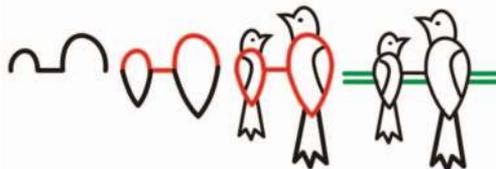
Do you give all these creatures the same food? What are they?



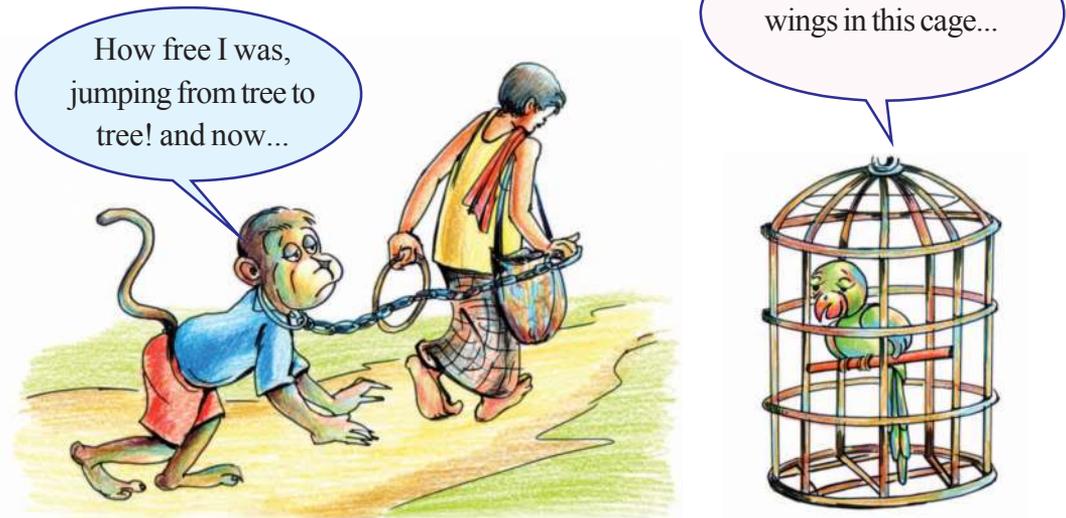
Did you see some letter pictures of creatures?



Add more letter pictures in your environment diary, using letters in English too.

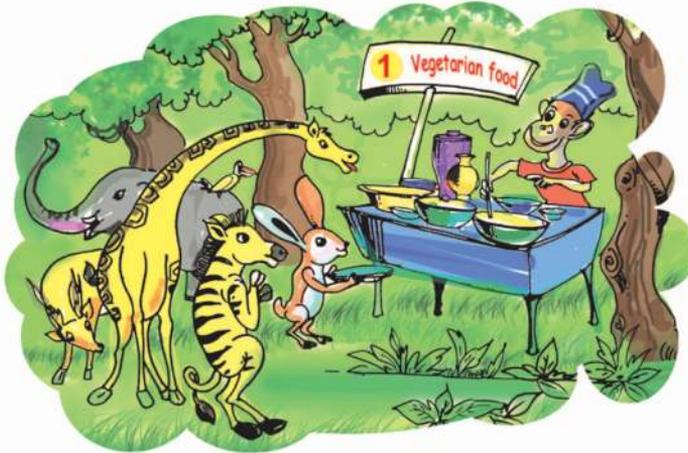


A meeting in the forest

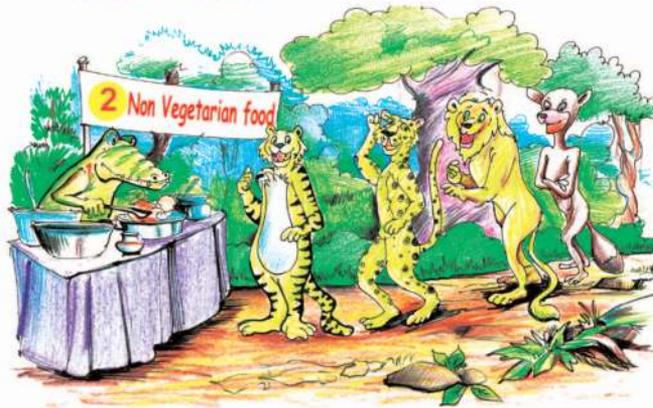


Haven't you seen the grief of creatures finding it difficult to live due to man's interference? Our friends in the forest decided to protest against such cruelties. Many creatures participated in the meeting as part of this protest. Food was prepared for all of them. Food was arranged at two places.

Counter 1



Counter 2



Who all took food from Counter 1?

-
-
-
-

From Counter 2 ?

-
-
-
-

However, some clever fellows took food from both counters. Who could they be?

-
-
-
-

Haven't you understood that all creatures do not take the same food?

On the basis of food habit, creatures can be classified into herbivores, carnivores and omnivores.

Creatures that eat only plant food are herbivores, those that eat only animal food are carnivores and those that eat both kinds of food are omnivores.

Strange creature

Fold a paper into three. Draw the head and neck of your favourite creature on the folded part. Now fold the part drawn down and ask your friend to draw the body of a creature he likes. Again fold it and ask another friend to draw legs of a creature he likes. Now unfold the paper.

Look at the strange creature you all have drawn!



Techniques to catch prey



Haven't you seen how the calotes catches prey? It catches prey using its tongue whereas the spider forms a web to trap prey and then eats them. Similarly, every organism seeks prey in different ways.

Woodpecker

I peck on the tree with my strong beak. Splitting open the dry bark of the tree, I feed on insects beneath it. I have claws that help me fix myself on the tree.



Duck

I have a flat beak. Using this I can search for food in water and mud. My legs help me swim in water and stand firmly in mud without sinking into it.



Doodlebug (Antlion)

Have you seen the antlion catching prey? He digs pits in dry soil of areas that do not get direct sunlight or rain. You may have seen its pits in the verandah and yard of your house. These skillful ones hide in the soil pits with only their horns jutting out. Small creatures that fall into the pit can never climb out of it. This is because of the peculiarity of the pit.



Have you seen the hen searching for food? You may have seen it scratching the ground with its feet and pecking at food with its beak. Observe the way in which birds around you catch prey. Find out how the beaks and feet help them catch prey, and record it in the environment diary.

I have sharp nails and teeth.
They help me catch prey and
tear it.



Haven't you noticed my sharp
teeth? I tear mice using this
teeth.

Observe how the lizard in our house catches prey and note it down in the environment diary.

For defence

" Like how the fox got the tortoise"

Have you heard this saying?

Seeing the fox, the tortoise pulled back its head and legs into its shell. The fox stood waiting for the head of the tortoise to come out.... What a fun! How is the trick used by the tortoise to save himself from enemies?



Have you seen any other creatures using such tricks to escape from enemies?

Name them. How do they escape?

Different techniques to escape

Can you write the ways in which we escape?



Calotes:



Porcupine : Darts the thorns on its body at the enemy.



Squid : Escapes mixing ink in water



Millipede:



Snail:



Lizard:

Organisms use different techniques to escape from enemies.

Organisms escape from their enemies by changing body colour, changing shape and shedding tail. Certain skills given by nature help these organisms in this. Not only animals, plants too have such adaptations.

Crawling Walking Flying

Don't you remember the meeting of creatures? King Lion claimed that the meeting attended by all creatures was a grand success.

Some of them had to travel for days to reach the venue of the meeting.

The cheetah, who is the fastest runner, reached first. The snail sat on the back of the vulture who flew to the spot. The snail was proud of reaching early.

Had the vulture not helped me, I don't know when I would have reached here, crawling and crawling...!



Shadow pictures



Try to form shadows holding your fingers as shown in the picture.

Move the fingers that form the mouth of the shadow figure and imitate the sound of the organism.

Try to create shadow pictures of more organisms.

How might the other creatures have reached the meeting?
 Let us try tabulating organisms on the basis of their mode of locomotion.

Those that came crawling	Those that came walking	Those that came flying
Snail	Fox	Dragon fly

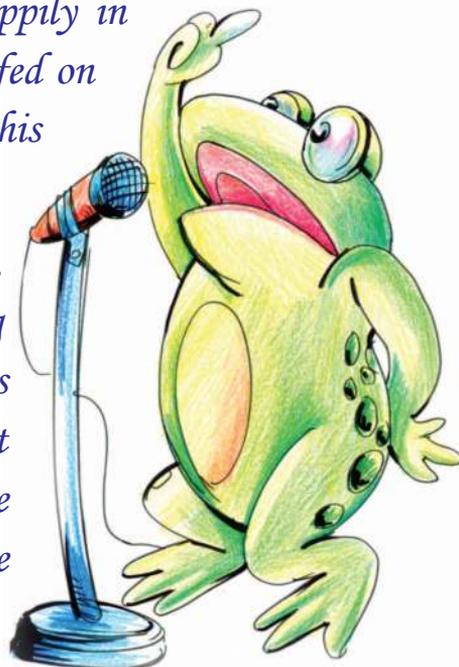
The mode of locomotion of organisms are different. Some can only crawl. Some others can fly, walk and run. Some can walk and run.

Listen to the speech made by the frog at the meeting of the creatures.

Dear friends,

You all know well our croaking sound, don't you? There was a time when we lived happily in yards and fields. We made pests that fed on paddy and other crops our food. In this way we helped farmers very much.

Yet human beings killed and ate us. They levelled fields and swamps filling them with soil. They sprayed pesticides in fields. Mustn't we protest against this? If this is our fate today, it can be yours tomorrow. Something should be done soon.



Did you listen to the frog's speech? Not only the frog, other organisms are also disappearing from the earth because of human interference. Shouldn't they be saved?

Is not the earth theirs too?

What can you do to spread this message to all? Won't you prepare poster, placards etc?



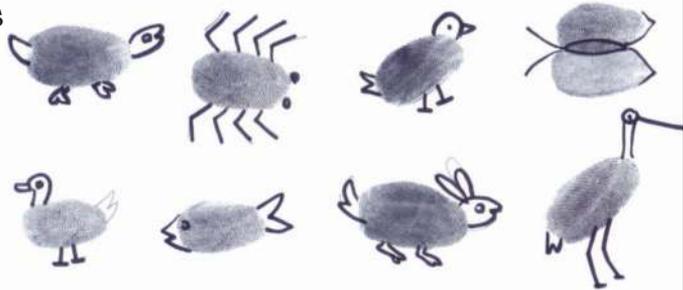
Garden in the sea

Coral reefs are so beautiful to look at. They are a big world of living organisms of the sea. Coral reefs that seem like forests are the rain forests of the sea. They grow one onto another. They are very strong. They are beneficial to us in many ways. However this garden is getting destroyed due to human interference. The destruction of this garden must be prevented.



Look at the pictures made out of thumb impressions.

Try them on your own...





Significant learning outcomes

The learner can

- identify that there are plenty of organisms of different types around us and can mention them.
- recognise domestic organisms, identify their uses and tabulate them, analysing their peculiarities.
- realise that every organism has its own body features according to its food habit.
- state the adaptations that certain organisms possess in order to escape from enemies.
- tabulate organisms on the basis of the peculiarities of their mode of locomotion.
- suggest how human interference sometimes affects the existence of organisms harmfully.
- engage in activities to spread awareness among people that organisms must be protected.



Let us assess

1. Classify the organisms shown in the picture on the basis of their food habits and write their names.



2. Which creature sheds its body part to escape from enemies?
A) Snake B) Lizard C) Calotes D) Rat
3. Which of the organisms given below can swim and walk?
A) Fish B) Snake C) Frog D) Duck

4. Match the pictures and write down the name of the organisms.



Eagle

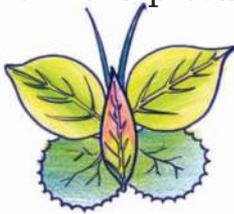


Extended activities

1. Let us make a jigsaw puzzle.

Draw an organism you like and colour it. Paste it on a cardboard. Cut it into pieces and give them to your friend. Let your friend join the pieces and find out the organism.

2. See the pictures of some organisms made from leaves. Can you make more pictures?



3. Collect pictures of organisms and prepare an album.



3

Water - the Elixir of Life

*Walking along the fields I saw
Pale plants, all drooping down,
Raising hand to the cloudy sky I said,
Rain, Rain, Rain, come down!*

*Raising dust all about
Soon blew in the cool breeze
Hearing the thunder roar I ran
Home, to hide before I freeze*

*And as the rain came down in drops
The plants went dancing trop-e-trop!*



Wow ... the rain!

Little drops rushing down from the sky to the earth! Accompanied by the cool breeze. After some time, the little rain grew wild... it became heavy rain. The yard filled with water. Rahul became happy. He made paper boats and let them float in water.

Rahul is not the only one who was happy.

The thirsty earth...

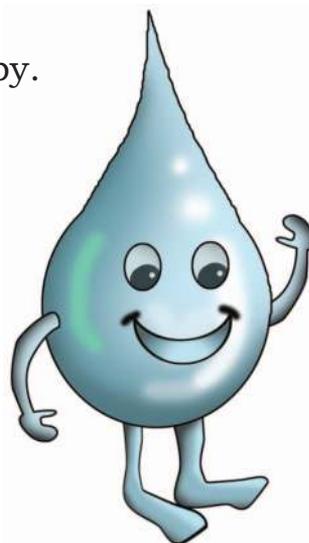
The parched drooping plants...

The croaking frog...

The little ant... the little bird...

Oh what a hot summer! How much everyone longed for the rain!

And here it is... the cool rain bringing relief to all.



When the rain came

Have you, dear friends, noticed the changes around us after it rains?

- We feel cold.
- Water bodies like wells, canals, ponds, rivers etc. fill up.
- Grass sprouts in the yard.
- Plants and trees sprout.
- Cultivation begins.
- Pits and low lands fill with water.
- Soil drains away.
- Mayflies rise from soil.

All organisms of nature, like plants, animals and human beings, depend on the rain that comes from the sky to the earth.

Can we live without water?

Sources of water

Where do we get the water we use for drinking, agriculture and other needs from?

We depend on the water sources around us for this. The rain water that reaches these water sources is used by us for different purposes.

What are the sources of water?

Well, pond, canal, river, lake, lagoon...

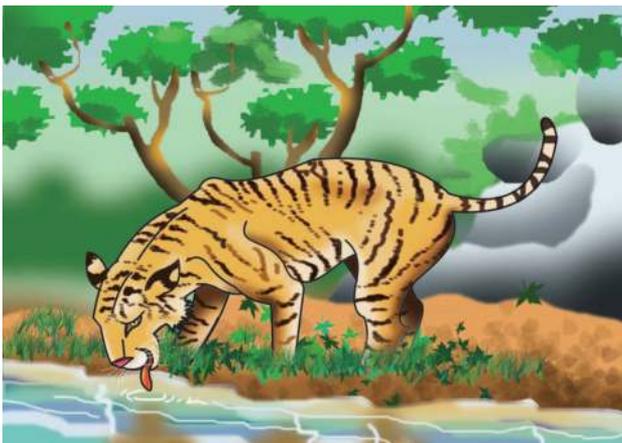
What are the water sources in your locality?

-
-

Most of the people in villages use well water for drinking. But people in towns and cities depend on pipe water. The water from water sources is purified and distributed through pipes.

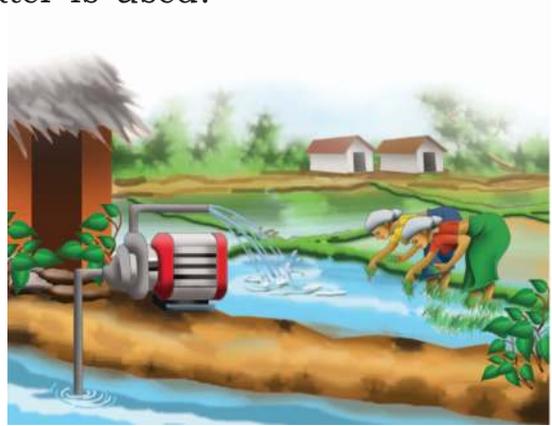
I too need water

Just imagine how it is when you feel very thirsty. What a relief it is if you get water when you are thirsty! Water is essential not only for us, but for the existence of all organisms in nature like animals and plants.



We need water for drinking, bathing and agriculture. What are the other needs for which water is used?

- Cooking
- Washing vessels
- Washing clothes
- Washing vehicles
- Watering plants
-
-
-



So many are the needs of water!

We use water for several purposes like household needs, agriculture, industry, construction etc.

If there is no water



44 rivers, numerous streams, several canals, wide wetlands, lakes, lagoons and so on. Still drought in Kerala?

Oh...! just imagine a situation without water! Dried up agricultural fields, wells, rivers, ponds.... During extreme summer, certain regions experience severe water scarcity. Haven't you seen in newspapers reports and pictures of people suffering due to the scarcity of even drinking water? Have you ever experienced water scarcity in your locality?



Precious water

You may have seen such situations where precious water is wasted, haven't you?

What are the other situations where water is wasted?

- Tanks overflowing
- Leaking taps
- Leaving the shower in bathrooms unnecessarily open



Drinking water for sale!



We too have reached the situation of being forced to buy pure water for drinking.

In cities, pure water is carried through pipelines. We have to pay for this on the basis of the quantity of water used. We must ensure water conservation by controlling the use of water and preventing water pollution.



My right and wrong

	✓	✗
I do not leave the tap open while brushing teeth	<input type="checkbox"/>	<input type="checkbox"/>
I close taps when I see them left open	<input type="checkbox"/>	<input type="checkbox"/>
I use the water used for washing vessels to water the vegetable garden and flower garden	<input type="checkbox"/>	<input type="checkbox"/>
I say 'No' when I see people wasting water	<input type="checkbox"/>	<input type="checkbox"/>
I inform the people concerned when I see wastage of water from broken public taps.	<input type="checkbox"/>	<input type="checkbox"/>

*Water is precious. It is the boon of nature.
We must avoid situations of wasting water.
We must realise that nothing can replace water.*

What all activities are possible to spread the message 'Water Conservation'?

- Placard
- Poster
- Cartoon
- Bulletin board
- Awareness rally
-
-



How many drops?

How much water do we use everyday for drinking, bathing and other purposes?

I will not waste even a single drop of water hereafter.



Try to do the activity given below.

Materials required : Water, filler, spoon, glass, cup, bucket

As shown in the picture, fill water in the spoon using a filler. Don't forget to count the number of drops. See how many spoons of water are needed to fill the glass. How many glasses of water are needed to fill the cup? Now fill the bucket using the cup. How many cups of water are needed?

Now think. How many drops of water were needed to fill the bucket! How many buckets of water are we using like this every day for various purposes!

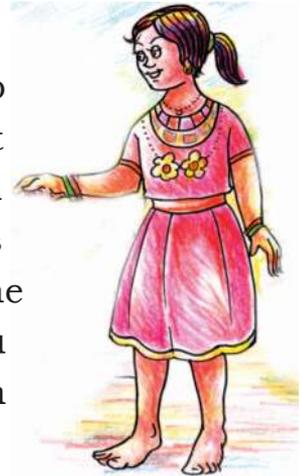
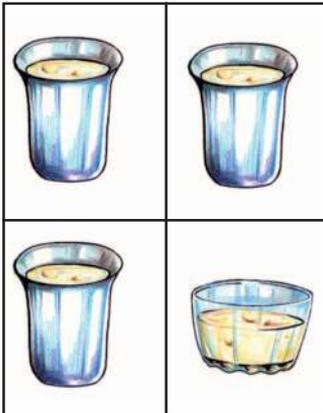


Each drop of water is precious. Don't waste even a single drop. Don't forget the saying "Little drops of water make the mighty ocean"

Radha's complaint

Mom gave payasam in two steel glasses to Raju and Radha. Radha preferred to have it in her favourite glass bowl. Mom transferred the payasam from the steel glass to the glass bowl. But Radha was not happy. She

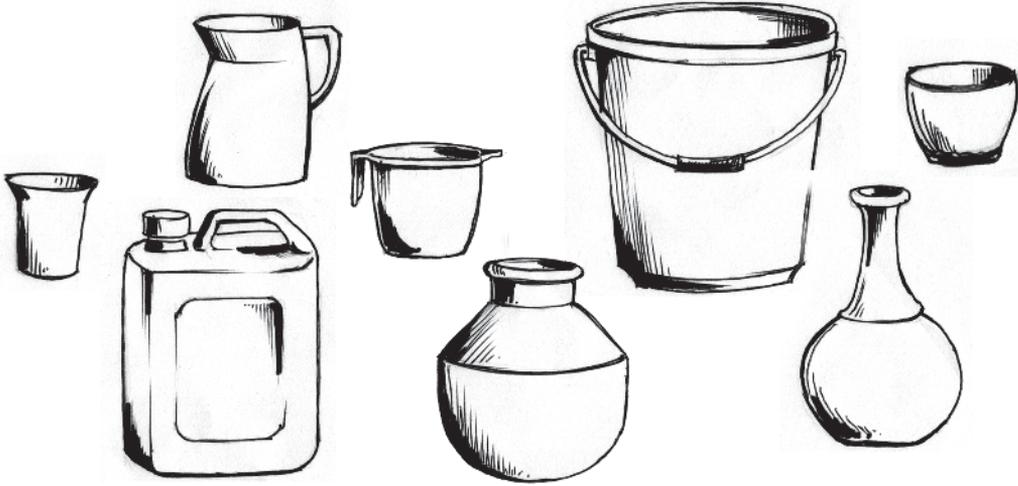
complained, "Mom, you gave me less payasam than brother, right?"



- What do you think?
- Is the quantity of payasam in Radha's glass bowl less?

Colouring

Which of the vessels shown below do you use to store water?
Colour them.

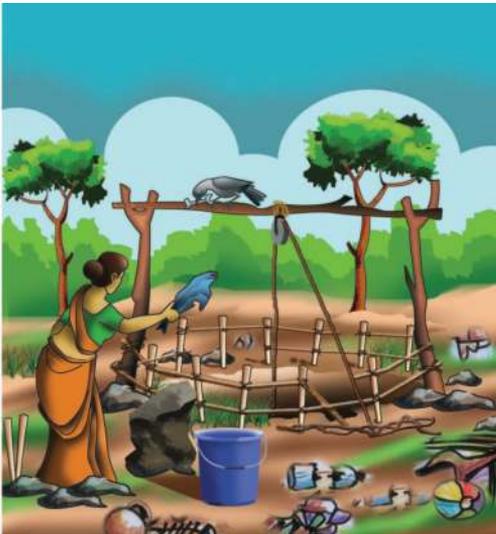


- Which vessel among those shown in the picture can contain maximum water?
- Which vessel can contain the least amount of water?

Draw in the environment diary pictures of other vessels in which you store water at home. Colour them too.

Near the well

Which of the two well-water will you use for drinking? Why?



Most people depend on wells for drinking water. Wells must be kept clean.

There are many reasons for the pollution of well- water. Let us find out what they are.

In the company of your teacher visit wells in your school and four or five houses in the neighbourhood and record your observations in the environment diary.

What all should be observed?

- *Is the well covered with a net?*
- *Is there a protective fencing around the well?*
- *Is there polluted water collecting near the well?*
- *Do people bathe near the well?*
- *Are clothes washed near the well?*
- *Is the septic tank kept away from the well?*

Now say, which among the wells you visited are clean?

Are there unclean wells? Suggest steps to be taken to clean them.

Drinking water

Don't you carry a bottle of water in your bag to school?

Don't you take boiled and cooled water in it?

The water we get may not always be pure. If you don't use pure water there will be the chance of getting different diseases.

Water can be purified

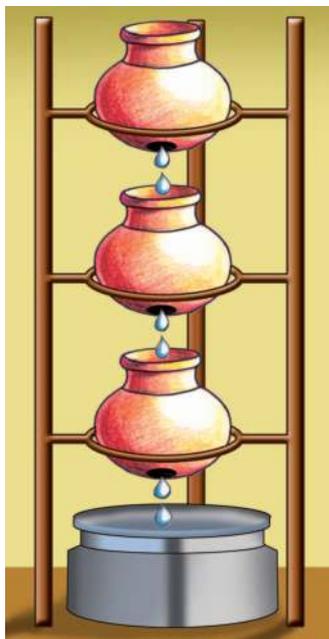
There are several ways to purify water. Modern equipment like water purifiers are available now. Such appliances are used in houses, offices and educational institutions today.



Let us familiarise ourselves with a simple method of purifying water.

Three - potted sieve (Muchatti Arippa)

Take three earthen pots or coconut shells of the same size. Put a small hole at the bottom centre of the pots. Arrange the three pots as shown in the picture. Place washed gravel in the pot at the top, sand and burnt coconut shell flakes in the middle pot and the lower pot respectively. Keep a clean vessel beneath the three-potted sieve to collect pure water. Now pour muddy water in the uppermost pot.



What change occurs to the muddy water? Record the observation of the experiment in the environment diary.

Water is one of the essential factors for the existence of life. There is sufficient water for our use in the earth. See that it is used carefully. We must be able to use water without wasting it. Every drop of water is precious.

Drinking water can be purified



Normally bleaching powder is used to purify drinking water. Well water should be purified atleast once a month. In a well with water upto 2 persons height, bleaching powder in a match box is sufficient. Mix a match box full of bleaching powder with a cup of water. Pour the filtered water into the well. Now stir the well-water using the bucket to draw water from it. The water in the well maybe used the next morning. Bleaching powder can be had from primary Health centres. Won't you remember that overuse of bleaching powder is harmful to health.



Don't pollute water bodies...

There is so much water in our earth! However we can't drink sea water. The water in ponds and rivers was pure once. Today all of them are getting polluted.

Which is your nearby river?

Is the water in it pure?

What all impurities flow into the river?

So many impurities flow into the river everyday from sources like sewage canals!



The pollution of water bodies threatens the existence of organisms. It is our duty to protect water bodies.

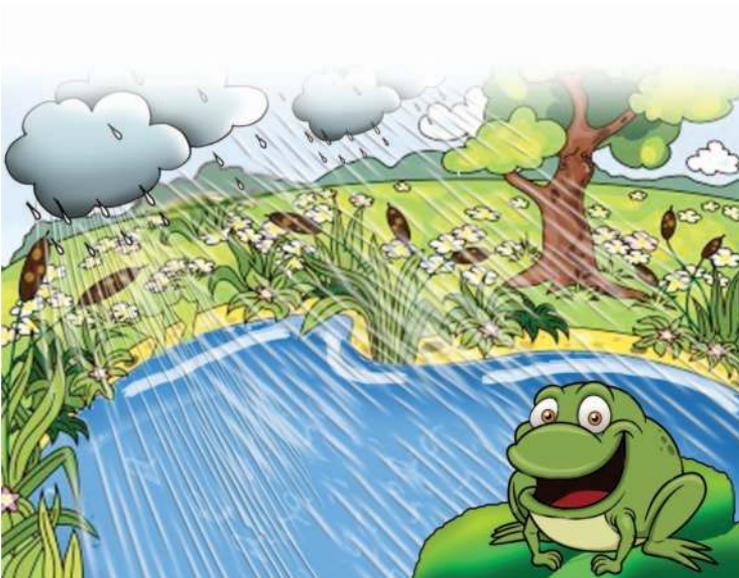
Rainclouds gather in the sky...

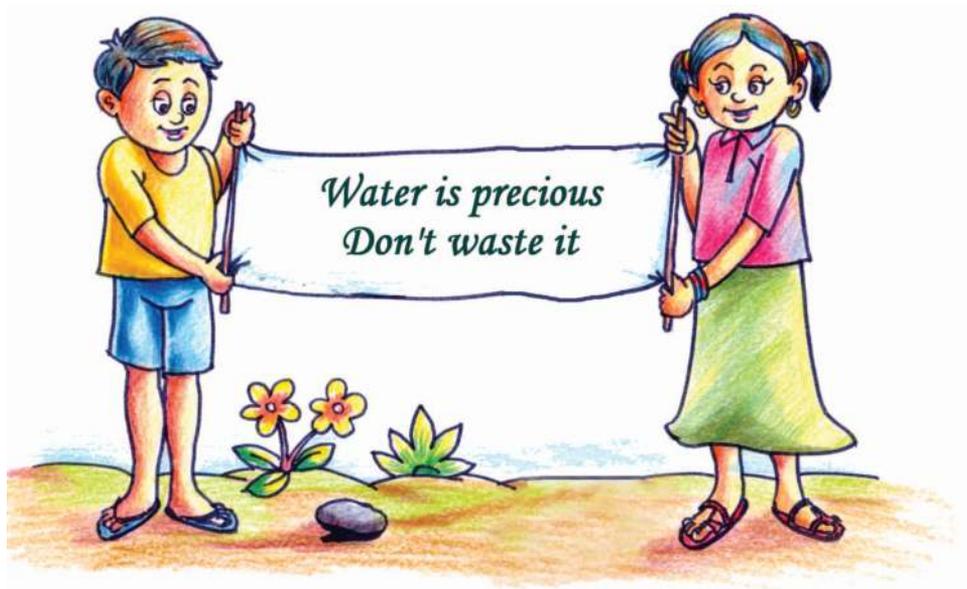
The cool breeze blows...

Little froggie croaks...

And there comes the rain...

Let's welcome the rain!





Significant learning outcomes

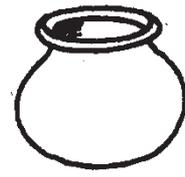
The learner can

- list which are the water sources in his/ her locality.
- list what are the needs for which water is used.
- record the problems caused by water scarcity.
- identify and mention the situations where water is wasted and suggest remedial measures.
- engage in water conservation activities realizing that water, the gift of nature, is precious.
- engage in activities to spread among people the message that precious water must be conserved.
- suggest activities to prevent well-water pollution.
- filter water from muddy water using the three-potted sieve.
- suggest a few methods to purify water.



Let us assess

1. Which are the two substances without taste or smell?
A Water, milk
B Buttermilk, milk
C Water, air
D Air, Buttermilk
2. Which is the statement not related to the rainy season?
A Rivers fill
B There is thunder and lightning
C Soil drains away
D Ponds dry up
3. Observe the pictures...



Which of the vessels is suitable for use without wasting water?
Why? put ✓ mark.



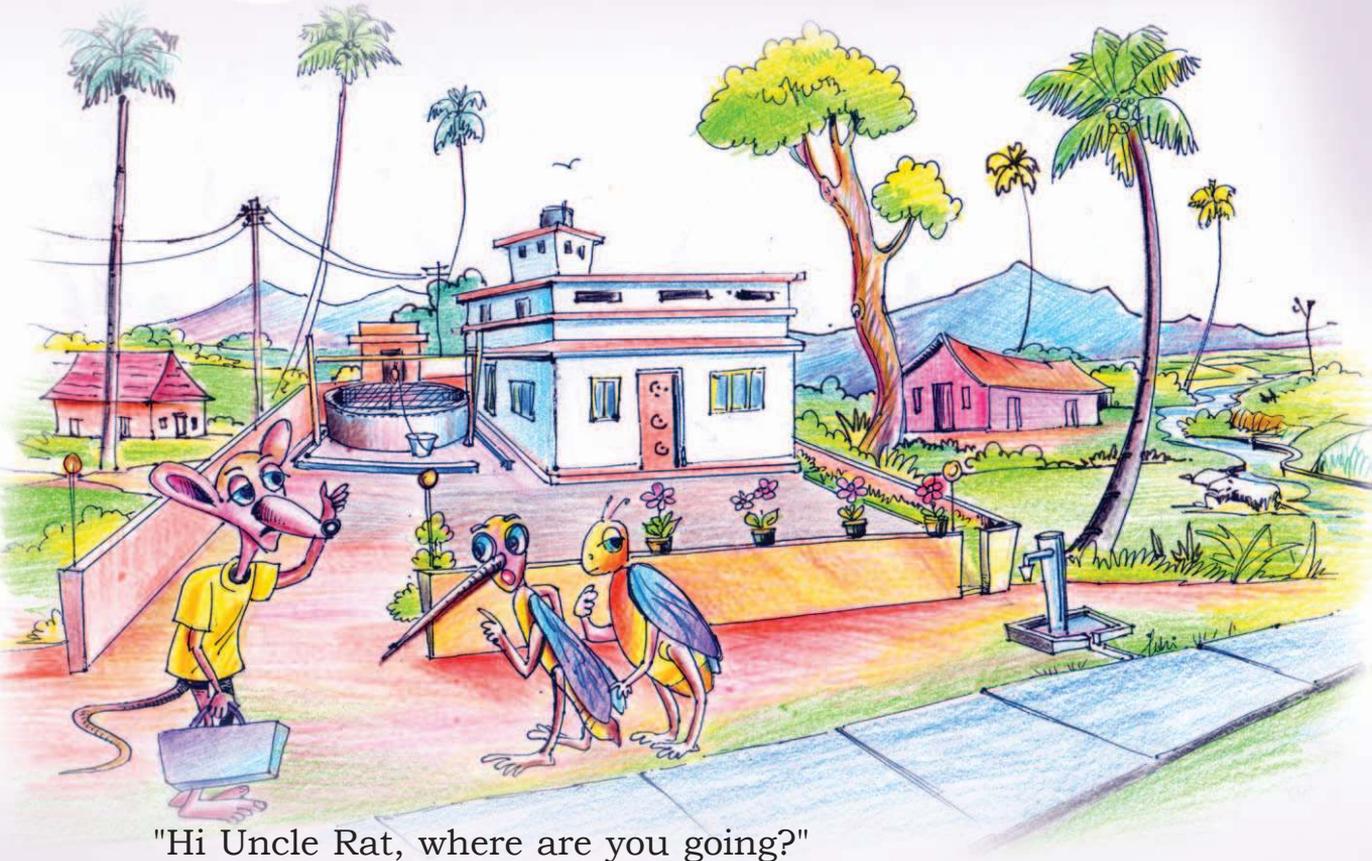
Extended activities

1. Does water have shape? Try doing an experiment. Take glasses and bottles of different shapes. Pour the water taken in the glass into different vessels and observe. What do you see? Why is it seen like this?
2. Take rice water, muddy water and pure water in 3 crystal glasses. Cut out the headline portion of a newspaper. Try to read it keeping it close to the 3 glasses. Can you? What peculiarity do you observe?
3. Prepare posters related to water conservation and paste them in the school and premises



4

Hygiene, our Strength



"Hi Uncle Rat, where are you going?"

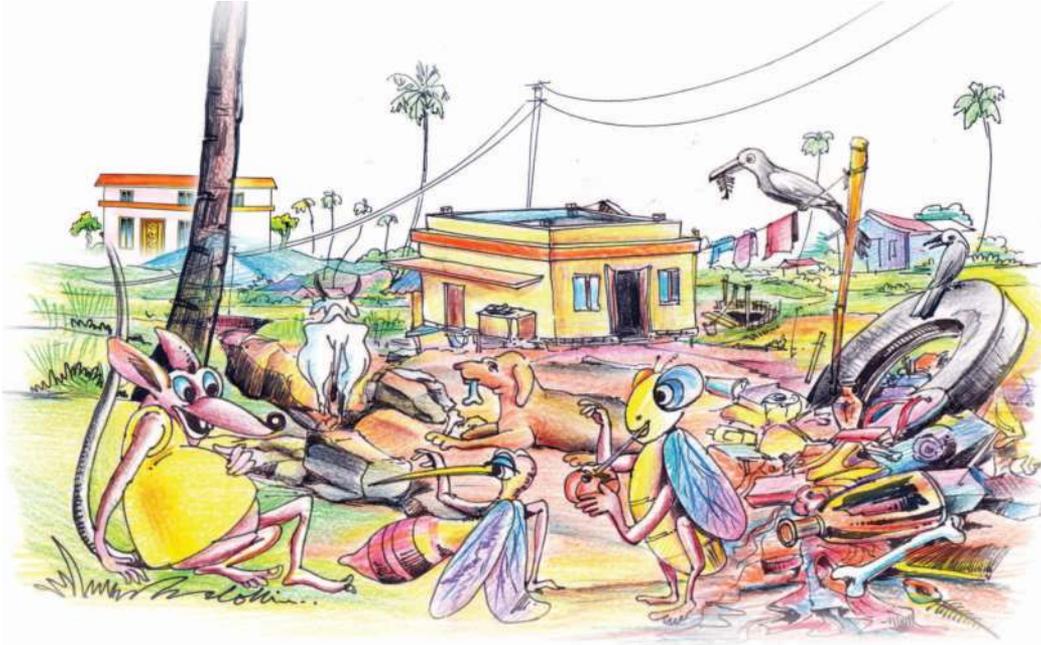
"I am leaving the country dear Mosquito."

"What happened?"

"How can people like us live in this clean land? I can't live starving like this..."

"You're right, there is not a single drop of water lying anywhere to lay my eggs. All my friends have left as life has become difficult. May I come with you too?"

"My situation is equally miserable. I am also coming," Maniyan fly joined them too.



"Wow... lucky that we came here. Our bodies have swelled in just a few days, Mosquito."

"Yeah... lots of food, the best place for us"

"We are never going anywhere else, let's live happily here" Maniyan fly remarked joyfully.

Didn't you see the two villages in the pictures?

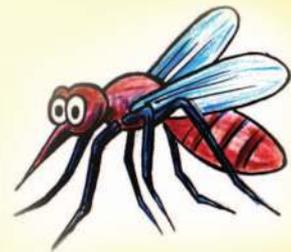
Which of these villages do you prefer to live in? Why?

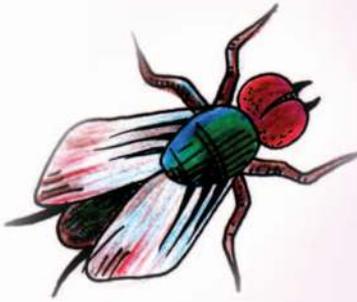
To live healthily, our surroundings should be kept clean.

Mosquitoes, flies and rats live in places that are not clean.

Such creatures spread different diseases.

Mosquitoes lay eggs and multiply in stagnant water. It takes eight days for the eggs to hatch and grow fully. The blood-sucking mosquitoes spread several diseases like malaria, dengue fever and chikungunya.





The housefly is a small insect seen in our surroundings. This creature is seen in polluted areas and on decayed substances. The housefly may sit on food stuff that is sweet or kept open. This small creature spreads diseases like dysentery and cholera.

You might have seen the rat on roofs and in holes. This chap bites into pieces and destroys whatever comes his way. The rat visits the kitchen and store room in search of food. The rat's excreta falls on these food articles spreading different types of diseases. It is the rat that spreads diseases like rat fever, plague etc.



Just think of the problems when the number of mosquitoes, flies and rats multiplies.

There are organisms, including those that are invisible to the naked eye, that cause diseases. We must ensure that situations where such organisms multiply are avoided. What can we do for this?

- Do not allow waste materials to accumulate.
- Avoid water stagnation.
- Observe personal hygiene.
- Keep houses, schools, public places etc. clean.
- The food and water we take must be clean.
-
-



Edubuntu-School Resources-see
'Suchithwam Veettilum Nattilum'

? Have you heard of the 'Dry day', for eradicating mosquitoes?

Dry day

Mosquitoes multiply by laying eggs in stagnant water. The mosquitoes hatch out and mature within eight days. There are several objects in our surroundings like coconut shells, discarded vessels, tyres, bottles, toys etc., in which water can stagnate. Mosquitoes may lay eggs in these. So drain the water accumulating in them once in every seven days. Thus the possibility of multiplication of mosquitoes can be avoided. This activity, carried out in our homes and school is known as "Dry day".

Go through a few sayings on mosquitoes.....



- *Half a mosquito for a thousand diseases.*
- *Even the doctor will fall if a mosquito bites.*
- *Mosquito King in unclean land.*

Kidding with me?

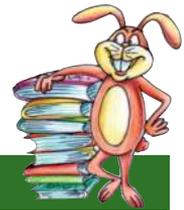
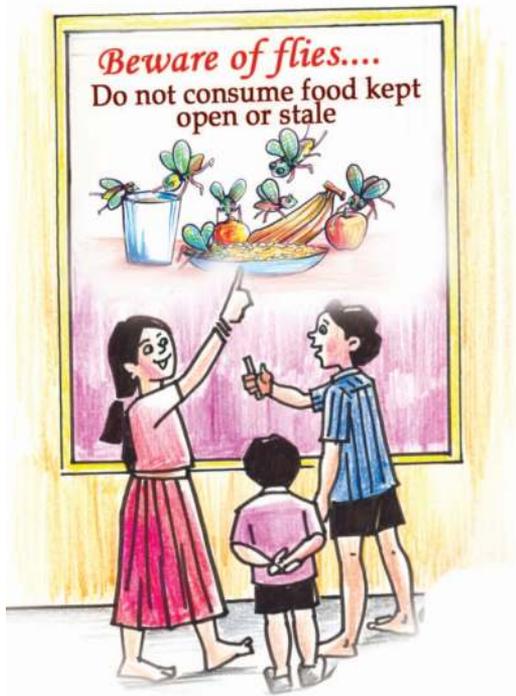


Diseases through water too

Diseases may also spread through water. Diseases arrive through impure drinking water and dirty water in the premises. Diseases like dysentery, diarrhoea, jaundice, cholera and typhoid spread through water.

What are the things we must keep in mind to prevent diseases that may spread through water?

- Use pure water or boiled water for drinking.
- Never allow dirty water to stagnate
- Do not take drinks kept open or stale.
- Ensure that sources of drinking water are pure.
-
-



Rehydration Therapy

When diseases like dysentery are caused, the water content of the body is lost to a large extent. In order to bring back the lost water to the body, rehydration therapy should be carried out.

- Salted rice water.
- Lime juice with salt and sugar
- Salted butter milk (*Sambharam*)
- Tender coconut water etc.

Any of these should be given to drink. The ORS (Oral Rehydration Salt) mixture available at the Primary Health Centre may also be given at intervals, mixing it with one litre of boiled water.

Lack of hygiene is the reason for many diseases. Personal hygiene is as important as environmental hygiene. What are the hygienic habits we must follow?

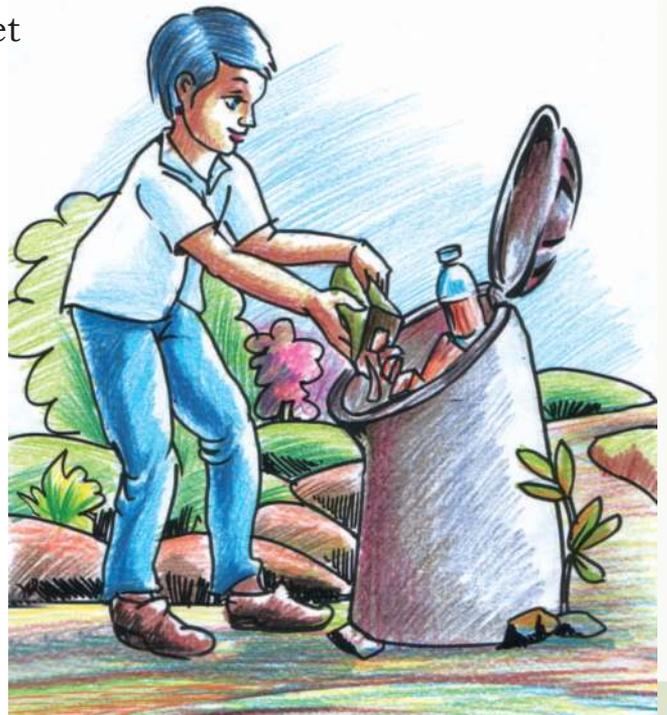
- Take bath every day
- Cut your nails
- Wash hands and mouth before and after food
- Wash hands with soap after using the toilet
- Brush teeth in the morning and night
- Wear clean dress
-
-



You should take care of not only personal hygiene, but the hygiene of your home, school and public places too.

What all can we do with respect to environmental hygiene?

- Do not throw away waste materials
- Defecate only in the toilet
- Pass urine only in the toilet.
- Do not spit in public places.
- Do not throw away remains of food.
-
-



What I do to maintain hygiene

Put a tick (✓) against the activity you do, among those given below, related to hygiene

- Brush teeth twice everyday
- Take bath everyday
- Wipe body after bath
- Drink cooled boiled water
- Use footwear while going out
- Wash hands with soap after using the toilet
- Pass urine only in the toilet
- Take food only in clean vessels
- Clean hands, legs and face after play
- Cut nails and keep them clean
- Wash hands and mouth before and after meals
- Dispose waste materials at the right place

Health club

Take a look at the activities of the Health Club at Govt. LP School, Nandapuram.

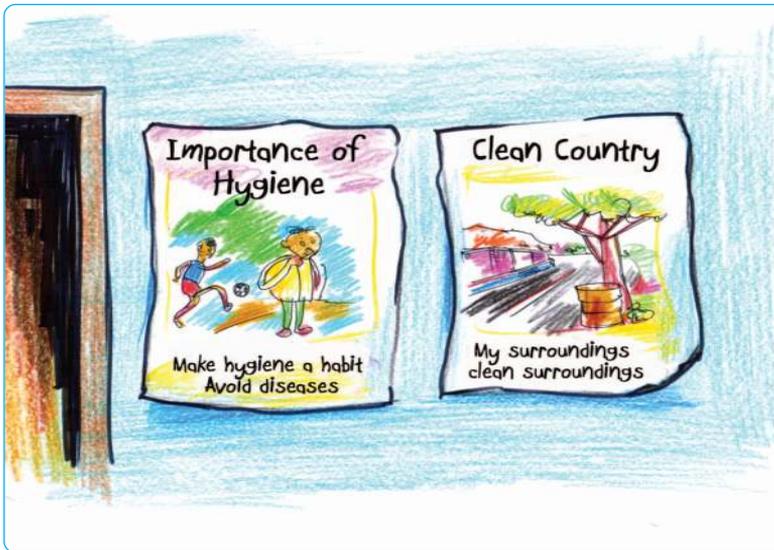
- Observing Dry day every week.
- Making Awareness posters
- Health Chart in each class
- Physical fitness training
- Placing waste baskets in the school and premises

- Hygiene survey
- Compiling health magazine

Don't you have a health club in your school too? What are the activities you conduct?

Let's make posters

Have a look at some of the posters made by friends at Govt. LP School, Nandapuram. Prepare posters like this to paste in your school and surroundings.



News

Look at some headlines that appear in newspapers.



What is the reason for such news coming up?

Will such news come from hygienic places?

What all must be taken care of to prevent such news coming up in our land?

- Each of us must maintain cleanliness
- Homes and surroundings must be kept clean
- Hygiene must be observed in public places
- Health awareness campaign should be conducted

No way here too. This land is also moving towards hygiene

Will there be any place without hygiene?

Programmes on hygiene have been started all over. No way for us anymore



Our place will also become clean if we live observing personal hygiene and environment hygiene.

Let us put our heads together for that.





Significant learning outcomes

The learner can

- list situations where mosquitoes, flies, rats etc. multiply as well as the health problems caused by them.
- suggest measures to be taken care of to keep the house and surroundings clean.
- suggest how mosquito eradication activities can be carried out and take part in these activities.
- say which diseases possibly spread through food and drinking water.
- state what all we must take into consideration to avoid getting diseases that spread through mosquito, fly, rat etc., and those through water.
- suggest hygienic habits we must observe.
- engage in activities that propagate the idea that cleanliness is strength.
- act realising his/ her role in ensuring personal hygiene and environmental hygiene.



Let us assess

1. Which of the following is wrong?
 - a. Do not eat food left open
 - b. Do not pass urine or stool in public places
 - c. Drink cooled boiled water
 - d. Allow polluted water to stagnate

2. Diseases constantly infest a place. What may be the reason?
 - a. There are no hospitals
 - b. People are not well-educated
 - c. Surroundings become dirty due to garbage accumulation
 - d. There are no roads or electricity.
3. Suppose a child in your neighbourhood gets diarrhoea. What all things will you suggest to reduce his weakness?
4. Look at how Ramu filled the checklist given by the teacher. Is there any possibility of Ramu having some health problem? If so, list them.

	What I do	Yes	No
1.	Drink only cooled boiled water	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	Take bath everyday	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	Eat food at the right time	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	Go to take bath leaving food served by mother open to cool and take food after returning	<input checked="" type="checkbox"/>	<input type="checkbox"/>



Extended activities

1. Exhibit written instruction boards needed to maintain cleanliness in the school yard, canteen, toilet and classroom.
2. Be a part of mosquito eradication programmes. Observe Dry day.

3. Visit a few houses near your school with your teacher and assess the hygiene activities they have carried out. Won't you give them the necessary instructions? Discuss the survey inferences in class and note them down in the environment diary.

Survey format

	Items examined	Completely	Partially	Not at all
1.	Keep the well and its premises clean			
2.	Sort garbage and burn them			
3.	Use only boiled water for drinking (pure water)			
4.	Observe personal hygiene			
5.	Take care to keep the nearby public places clean			



5

With Taste... With Health...

Last night, I ate
chappathi and potato
curry



My mom made rice
and sambar



We had food
from a hotel yesterday.
Poratta and Chicken



I like appam and fish
curry. Mom gave me
noodles

Angry with mom,
I did not have food
last night

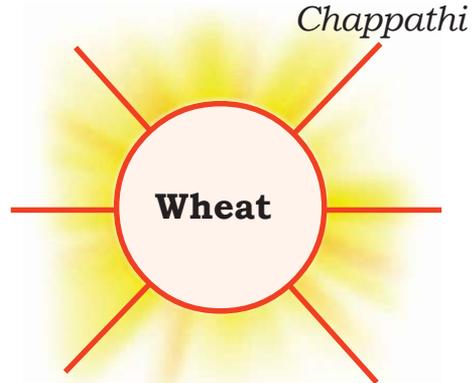
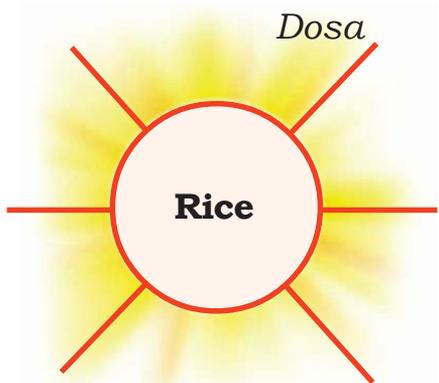


What do the friends in the picture say? Go through it.

What was the food you ate last night? Can you write it down?

- What was the food that your friends ate?
- Did all eat the same food? Why?
- Did the boy who did not eat quarrelling with his mom do the right thing? What is your opinion?
- Have you felt very hungry when you didn't get food?
- What are the food items you like most? Why?
- We mainly use food grains like rice and wheat in our food. What are the other food grains besides these?
 - Maize
 - little millet (*chama*)
 - finger millet (*ragi*)
 - Fox tail millet (*thina*)

What are the food items prepared in your house using rice and wheat? Complete the word-web below:



Are food grains alone used in our food? There are many more items to prepare tasty dishes. We use several items like vegetables, fruits, pulses, tubers and leafy vegetables as food. Don't you include these in your food?





I am the king of fruits

Am I not the most beautiful among vegetables?



Friends, I am the main food of Malayalis

I am the best among tubers



I am the most popular among leafy vegetables

I am a member of the family of pulses



- There are many items to give taste to our tongue, aren't there? Can you tabulate them?

Vegetables	Fruits	Pulses	Tubers	Leafy Vegetables
• Pumpkin	• Apple	• Green gram	• Taro	• Amaranthus (Cheera)
• Bitter gourd	• Grapes	• Bengal gram	• Tapioca	• Boerhaavia (Thazhuthama)
•	•	•	•	•
•	•	•	•	•

? Is there anything other than these that we include in our food?

We discussed the food items derived from plants so far. We depend not only on plants, but on animals also for food.



What are the food substances we get from animals? Milk, eggs, fish, meat etc., are also part of our food.

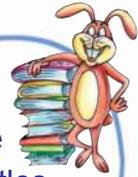
How many food substances do plants and animals give us?

Why is it said that different types of substances must be included in food?



A 'fruit' riddle

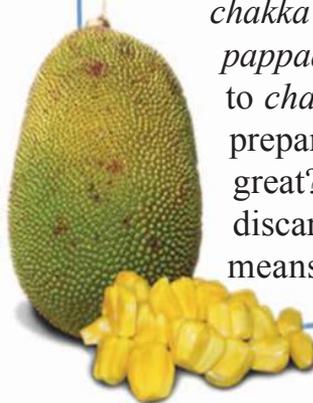
Box full of garbage
Garbage full of bottles
Bottles full of same pills



The Jackfruit Lore

Jackfruit is a delicious fruit seen in the jack trees in our yards. How delicious is the *varikka chakka!* The credit as the biggest fruit goes to the jackfruit. The seed of this fruit, *chakkakuru* is also used in our food. We can prepare several dishes with the jackfruit.

Right from *chakka thoran*, *chakka chips*, *chakka pappadam*, *chakka puzhukku* to *chakka halva* are prepared today! Isn't he great? Friends, don't discard the jackfruit by any means.



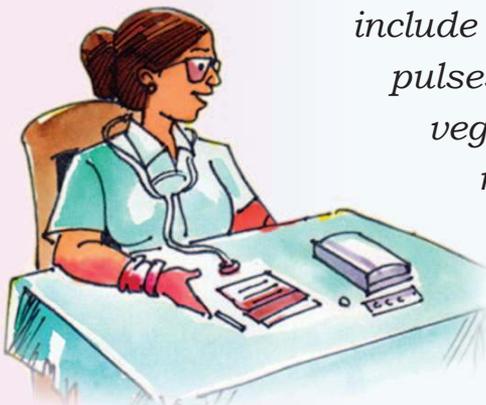
Look at the picture given below.



Didn't you see some of the headlines of newspapers?
The lack of nutrients in food is a cause for various diseases.
Let's see what the doctor says:

Children,

Do you know from where you get the energy to run, jump and play? From the food you eat. Food is essential for strength and growth of the body and to prevent diseases. Various nutrients required for our body are present in food. The nutrients are not in equal quantities in different food substances. It is because of this that we must include different types of food substances in our food. There are more nutrients in milk, eggs, vegetables, fruits etc. Those who take only vegetarian food must ensure to include more vegetables and pulses in their food. Leafy vegetables are rich in nutrients. So don't forget to include leafy vegetables in your food. We ourselves must protect our health.



Didn't you understand why vegetables, milk, eggs etc., have been included in your school midday meal?

Do we use all food substances cooked?

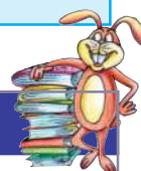
Which are the food substances we eat uncooked?

Try to complete the table given below.

Food taken uncooked	Food taken only cooked	Food taken either cooked or uncooked
• Guava	• Meat	• Carrot
• Salad cucumber	• Fish	• Papaya
• Tomato	• Elephant foot yam	• Jack fruit
•	•	•
•	•	•

When food items are cooked and eaten, their nutritive value gets reduced. However, all food substances cannot be eaten raw. Fruits need not be cooked. There are a lot of vegetables that can be eaten uncooked. Do you prepare any dish at home where vegetables may be used uncooked? Here is one such dish - vegetable salad. Some of you, at least, may know it. How is salad made using vegetables without losing their nutritive value?

Take care, avoid trouble



It is the nutritive value of food that is important. Food in which smell, taste and colour are added artificially harm health. Do you take such food? Soft drinks, sweets, pickles and ice-creams are sold in attractive covers in shops. Buying and eating such food will bring great harm to health. Hence you must be very careful while choosing food items. Why invite diseases unnecessarily?



Vegetable salad

Substances required: Big onion, salad cucumber, tomato, green chilly, carrot, curd and salt.

Method of Preparation : Wash the vegetables well. Cut them into small pieces. Add some curd and stir it with a spoon. Add enough salt.

Tasty salad is ready.



Why not have salad for tomorrow's lunch? Collect the required substances. Prepare the salad and enjoy it in the company of your friends.

While using fruits and vegetables

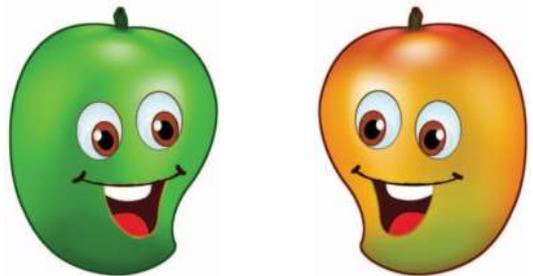
- Fruits and vegetables should be used only after washing well.
- Cut vegetables after washing. Don't wash after cutting.
- Cook vegetables only to the required extent.

Five friends

What is the taste of a raw mango?

And that of a ripe mango?

How did you identify the sour taste of the raw mango and the sweet taste of the ripe mango?



By tasting them with your tongue, didn't you?

It is the tongue that helps us to identify taste.

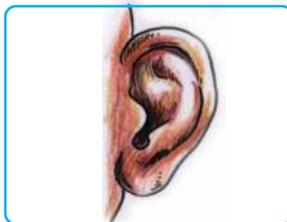
The help of the nose is also needed to identify smell of the ripe mango.

There are other organs too that help us identify things.

We identify things using five organs, namely eyes, nose, tongue, skin and ears. They are called the five senses. Don't we learn by seeing, hearing, smelling, tasting and touching? We come to know of things through these five senses.



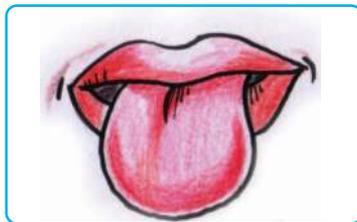
Knowing by seeing



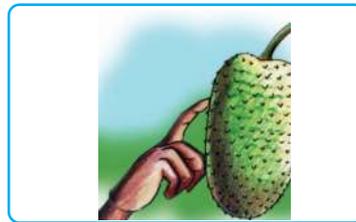
Knowing by hearing



Knowing by smelling



Knowing by tasting



Knowing by touching

How do you know the following? Tick against the appropriate answer.

Situations	Eye	Nose	Tongue	Skin	Ear
• Colour of the rainbow	<input type="checkbox"/>				
• Sound of birds	<input type="checkbox"/>				
• Hotness of tea	<input type="checkbox"/>				
• Smoothness of the feather	<input type="checkbox"/>				
• Hotness of chilly	<input type="checkbox"/>				
• Sound of thunder	<input type="checkbox"/>				
• Sweetness of honey	<input type="checkbox"/>				
• Stars in the sky	<input type="checkbox"/>				
• Fragrance of incense sticks	<input type="checkbox"/>				
• Coolness of ice	<input type="checkbox"/>				

Let's have meals together

It was afternoon. Ramu started feeling hungry. He eagerly waited for the bell. Ting... ting ... ting... He sprang up. Ramu and his friends moved towards the canteen. "Ramu, you didn't wash your hands?" Manikutty's words reminded him of it. He opened the tap and washed hands and plate. Then he sat for lunch.

Do you forget, like Ramu, to wash hands and plate?

What is the harm if you do not wash hands before meals?



Friends, try the simple experiment shown below:

Towards cleanliness



Take three-fourth of pure water in a bucket.

From this, take water in a glass and place it on a table. Before having meals let each of your classmates wash hands with the water in the bucket.

After this, take this water in another glass and place it on the table.

Now observe both the glasses.

What do you find?

Why is there a colour change in the water in the second glass? Because there is so much of dirt that we do not see, isn't it? Don't you realise the harm if you don't wash hands? Will you now forget to wash hands?

Do not forget to write down this observation note in the environment diary.

Lunch

Don't you get lunch from school?

What other food do you get, besides lunch, from school?

Is the 'Midday Meal table' displayed in your school?

Prepare a table of the food items you get at school during a week.

Day	Dishes
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	



Do you think of the millions starving around?



Do not waste food.

"Ramu, come fast, we can sit together," Nasar cried out. Ramu and his friends walked to the class. Thomas, Khadeeja, Murali, Rani, all were there. They ate food together. All the friends liked the coconut chammanthi sent by Khadeeja's mother. "Murali, don't waste food," Rani reminded.

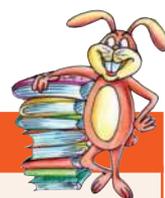


Do all members in your house have food together? Don't your friends have food together?

Which do you like - eating alone or eating with others?

What are the other instances when we sit down to have food with many people?

- Wedding
-
-

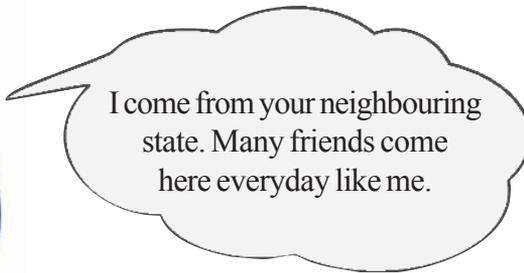
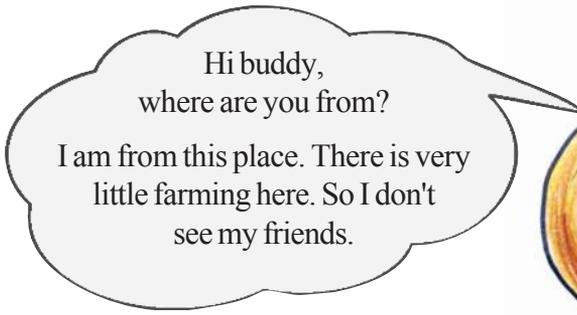


Lunch - the right of every child

There are many children in our country who do not have food even once a day. We must realise that among them there are children who do not go to school too. A child who reaches school without eating food will, surely, not be able to study well.

A few years ago, the Supreme Court of our nation, pronounced an important judgement. It was the decision to prepare food for all students of primary schools and serve it hot to them. Lunch is the right of every child. The Government of India has taken steps to ensure this. The midday meal scheme in your school is also part of this.

Friends from far off lands



What are the vegetables we use?

What are the vegetables cultivated in your house?

Do we use the vegetables cultivated in our place only?

Where do the vegetables in the shops come from?

Visit a greengrocer nearby. Make a small enquiry. What all details did you find?

Doesn't a major portion of the vegetables we use come from other places? This is not the case of vegetables only, but also fruits, food grains and other food substances. Don't we have fertile land for cultivation in our yards too? We must not hesitate in cultivating what we need.

What are the fruits and vegetables you cultivate in your yard?

Aren't the jackfruit, mango, papaya, moringa, amaranthus, *thakara* and plantains we get in our yard highly nutritious food substances? Why do we still buy them from the market?

What are the merits of the vegetables and fruits cultivated in our own yard?

- Can use them fresh
- Excess chemical fertilizers are not used
- Chemical pesticides are not used
- Provide good taste and nourishment
-

Don't we need fruits and vegetables of such quality? If so, shouldn't we have a vegetable garden at home and in our school?

Do you have a vegetable garden at home?

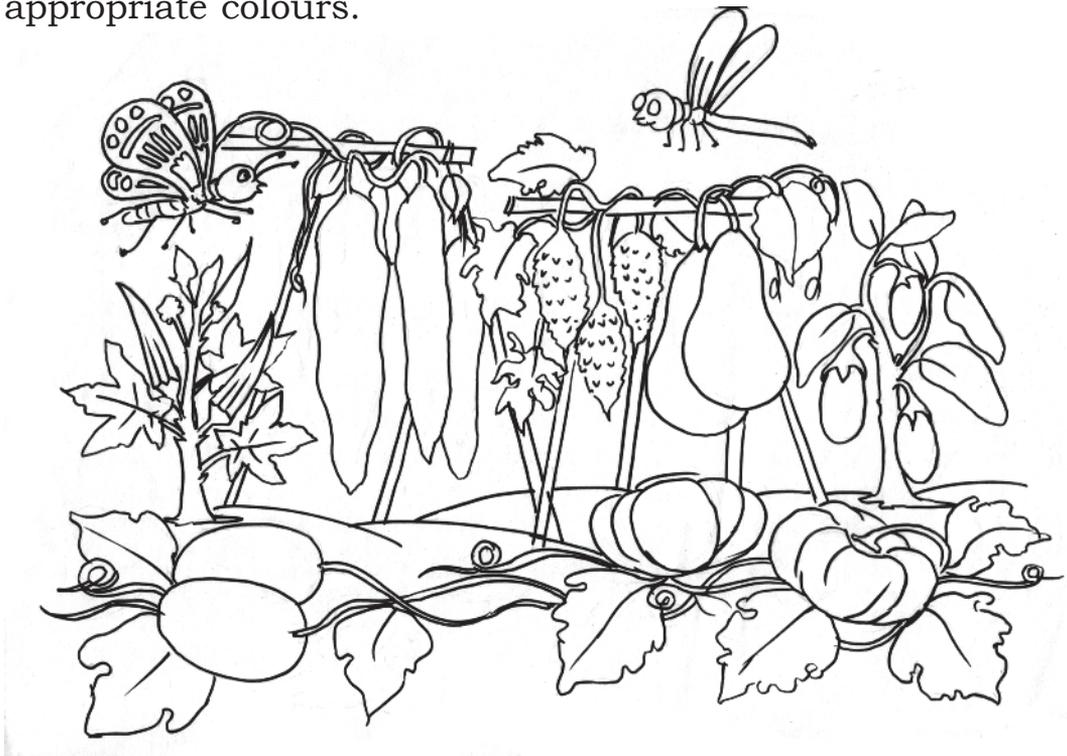
And in your school? If we still continue to hesitate, we will lose our health. A vegetable garden is required both at home and in our school. Let this be our aim. Aren't you ready, dear friends? Let there be a share of vegetables from your vegetable garden for the school midday meal scheme.

Vegetable garden at home and in school

Let us try to prepare a good vegetable garden. What all are required for this?

- Identifying a plot
- Collecting seeds
- Finding the required tools
- Preparing water facility
- Assigning responsibilities to each person

Did you see Rema's vegetable garden? Beautify it giving appropriate colours.



If you do not cultivate...

Is it right to use agricultural land for other purposes? Where will we cultivate paddy if all fields are levelled? Will there be sufficient water if ponds etc., are levelled? What will we eat if no one cultivates? Agricultural land must be conserved.



How can we live in a land without agriculture? Don't we need good food to grow up healthy? Let us try to cultivate what we need in our premises. Let us grow with health, eating tasty and nutritious food.



Significant learning outcomes

The learner can

- identify and state that food is essential for proper growth and health.
- suggest different food substances to be included in the diet for required nutrients.
- suggest and follow good food habits.
- engage in activities spreading the message that food should not be wasted.
- identify and state that the major share of the food substances we need come from other places.
- suggest the importance of vegetable garden.
- mention the five senses and their function.



Let us assess

1. Why is it said that fruits and vegetables should be used after washing?
 - (a) To make them beautiful
 - (b) To avoid traces of dirt and pesticides
 - (c) To make cooking easy
 - (d) To make cutting easy
2. Can you prepare any drink using lemon, sugar and water? Won't you record the name and method of preparing the drink?
3. Given below is the table of the food items eaten by three children. Which child eats the most nutritious food? Why?

Anish	Minimol	Sanimol
Rice	Rice	Rice
Ice-cream	Confectionery	Vegetables
Noodles	Dosa	Fruits
Bakery items	Puttu	Leafy vegetables
Fish	Milk	Egg, Milk



Extended activities

- Didn't you read the lore of the jack fruit? Can you prepare the lore of the coconut like this?
- Prepare a recipe of a dish you like.
- What suggestions can you give to make your school mid-day meal better?
- Prepare a poster to spread the message 'don't waste food'. Paste it in your school premises.
- Draw pictures of fruits and vegetables and colour them. Don't forget to write a simple note on each.





All the animals of the forest are very fond of the Lion King of Thenimala. Once all of them assembled and decided to celebrate the birthday of the Lion King.

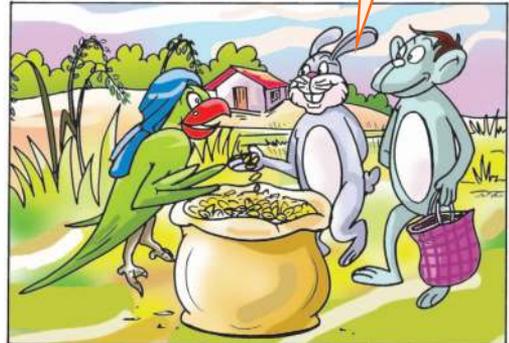
Each of them took up a responsibility each. They decided to set up a grand feast along with the celebrations. The task of making payasam went to Kittu, the rabbit and Mottu, the monkey. Kittu and Mottu started trying to make payasam.

*Brother,
we need a vessel to
make payasam*



Kittu and Mottu approached Balu, the bear for a vessel to make payasam. Brother bear gave them the vessel.

*Hey Mani parrot,
will you give us some
grains to make payasam?*



They approached Mani, the parrot, the farm lady for grains. She gave them the required grain.

*Hey brother tiger,
we need some dry
firewood*



They met Brother tiger, the woodcutter for firewood. He gave them firewood.

*Little Cattie... we
want some milk and sugar*



Smart business woman of the forest, Little cat gave them milk and sugar. Kittu and Mottu became happy.

All the friends in the forest enjoyed the *palpayasam* made by Kittu and Mottu.

Could they have prepared payasam if Balu, the bear, Brother tiger, Mani, the parrot, and Little cat had not helped them? Kittu and Mottu did not forget to thank all those who helped them.

The Lion King became happy. He congratulated all the animals of the forest.

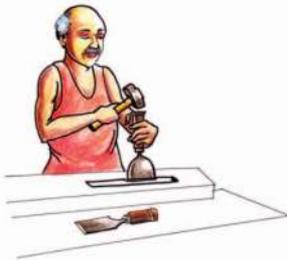
See, whom did Mottu, the monkey and Kittu, the rabbit approach for preparing payasam?

Don't we too have different needs in daily life like this?

Whom do we approach? Complete the table.

Occupation	One who does it
Stitching clothes	Tailor
Driving vehicles	
Treating patients	
Nursing patients	Nurse
Painting	
Making doors and windows	
Carrying letters to the addressee	
Farming	

Take a look at some of the occupations in our state. Write down in your environment diary those that are seen in your area, from the list.



Treating patients

Constructing buildings

Making mud vessels

Mending shoes

Making coir

Fishing

Weaving baskets,

Rubber tapping

Muram etc.

Making furniture

Making snacks

Breaking rock

Teaching

Plucking tea leaves

Agriculture

Arguing cases

Wood work/Carpentry

Making candlesticks

Ensuring law and order

Taking photograph

Making gold ornaments

Distributing newspapers

Driving vehicles

Repairing vehicles

Weaving cloth



What other occupations are there in your area? Note them down.

You have now seen that there are different types of occupations in our land. Occupations are essential for us to make a living. It is when all people engage in occupations that the country develops. We need the service of people engaged in different occupations. Therefore all occupations are equally important.

Through many hands...

Have you seen paddy cultivation? How beautiful are the paddy fields full of stalks!

Are there paddy fields in your locality?

Have you ever thought that the rice brought to our schools for lunch is from such paddy fields?

What are the stages of paddy cultivation?

- preparing the field
- sowing seeds



- planting seedlings
- providing water and manure
- weeding

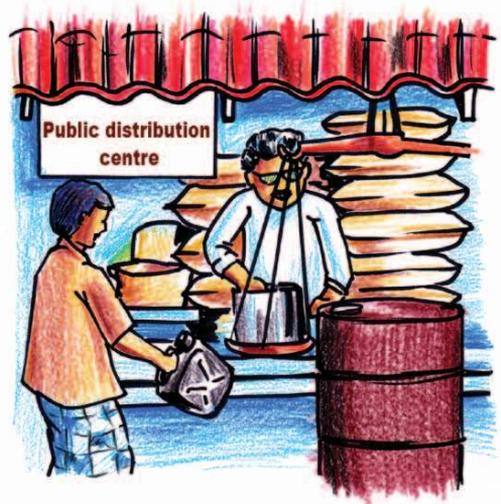
- harvesting
- threshing

How many people might have worked for this?

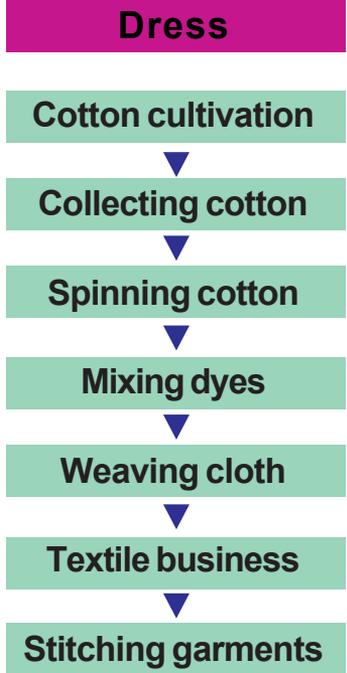


The hard work of many more workers are required if the paddy harvested in fields should reach us in the form of rice.

Can you identify the work of the people shown in the pictures below:



Similarly, clothes too reach us as a result of the hard work of several people. From separating cotton from cotton boll to dyeing cloth and taking them to shops, clothmaking involves many stages.

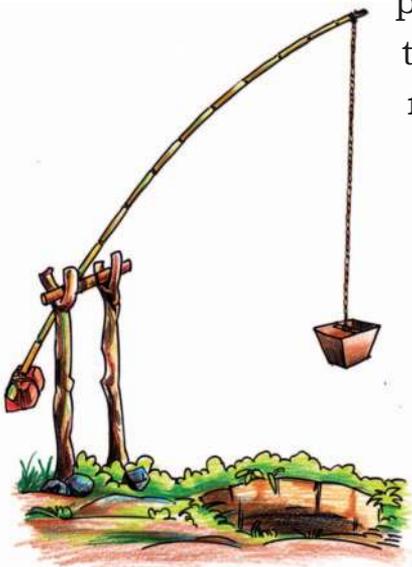


How many hands have joined to work to make my dress!

Each product we use in day-to-day life passes through different occupational fields.

Let us know an old friend

Friends, have you ever seen me? My name is 'Plough'. I spent my entire life on agriculture. I was used to plough the field. But when machines like the tractor came, many of us lost our job. There are not even a handful of



people who use us to plough fields today. As days pass by, probably we may not be seen at all. My friend, the *thevukotta* is also not seen nowadays. It was used to drain water into the field. So many such friends! We don't have any value in today's world of machines. Please keep atleast a picture to remember us.

Did you listen to what the plough said?
Every occupation needs some tools.

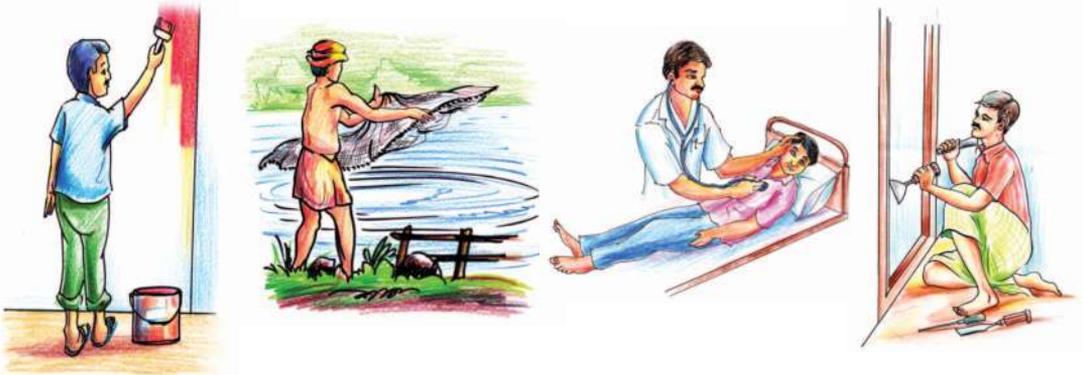
Occupation and tools

What are the tools required for farming?

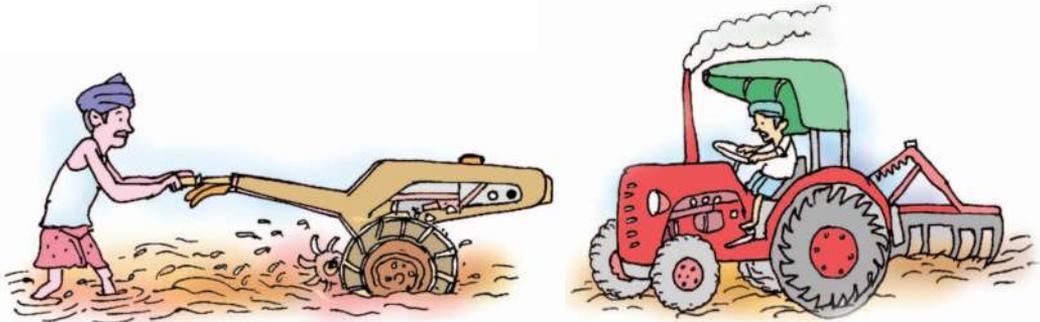
Are the tools required for farming the same as the tools for other occupations?

Let us identify some occupations, tools of occupation and their uses from the table shown below.

Occupation	Name of the tools	Use
Painting	Brush	to paint
Fishing	Net	to catch fish
Treating patients	Stethoscope	to diagnose diseases
Carpentry	Chisel and hammer	to make wooden objects

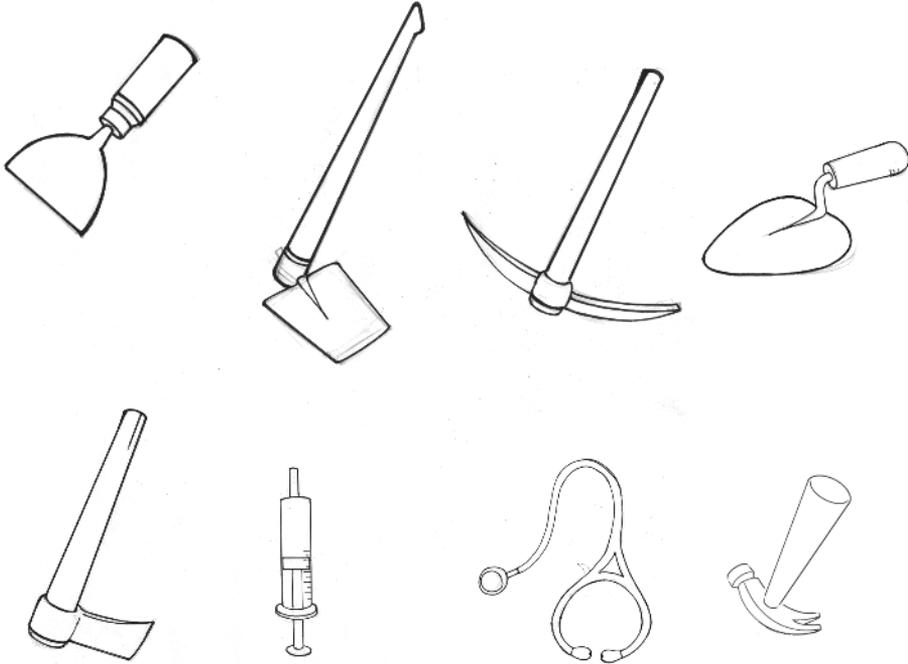


There are several occupations around us. They are made easy using different tools. Considering different needs, some tools gave way to machines.



Observe the tools for various occupations shown below. Note down their names and the occupation to which they are related, in the environment diary.

Colour the tools appropriately



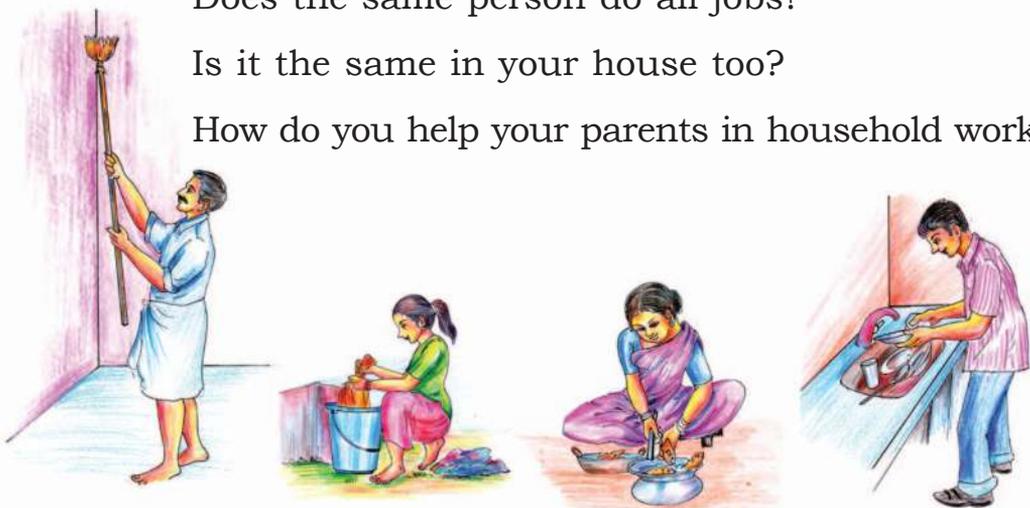
Greatness of work

Didn't you see the work done by the members of Ramu's house?

Does the same person do all jobs?

Is it the same in your house too?

How do you help your parents in household work?





Like any other occupation, household work is also very important. It is better that the members of the family do it together.

Occupation survey

What occupations do most of the people in your locality engage in? Let us find this through a simple survey. Prepare and complete the table incorporating details related to five houses including your house.

No.	Name of house	Name of workers	Occupation
1		<ul style="list-style-type: none">•••	<ul style="list-style-type: none">•••
2		<ul style="list-style-type: none">•••	<ul style="list-style-type: none">•••
3		<ul style="list-style-type: none">•••	<ul style="list-style-type: none">•••
4		<ul style="list-style-type: none">•••	<ul style="list-style-type: none">•••
5		<ul style="list-style-type: none">•••	<ul style="list-style-type: none">•••

Let us consolidate the details in the table shown below.

Name of occupation	No. of workers					Total number
	House 1	House 2	House 3	House 4	House 5	

Didn't you find out from the survey the different occupations done by the people in your locality?

Can't you find from the table the occupation in which more people are engaged?

There are people engaged in various occupations in all our places. According to the peculiarities of the area, some occupations are seen more among the people. For instance, many of the people living in coastal areas engage in occupations related to fishing. We need the help of people engaged in differing occupations.

Let us say...



My father is a good farmer. I too shall become a good farmer like my father.

I like to become a good teacher. I shall try to give good lessons to a lot of children.





I shall become a good businessman. My shop will have all products for the people of my locality.

I like soldiers who protect our country. My wish is to become a soldier.



I am interested in treating poor patients. I will surely become a doctor.

I like to become a bus driver who takes his passengers to safe destinations without any danger.



And what about me?

.....
.....
.....

Didn't you read what these friends said?

Did you understand that all occupations are equally great?



Whatever be the occupation chosen, it should be done well. Ability and experience are essential for all kinds of occupations. All occupations are equally important. Know that any occupation we do is important and work accordingly.



Edubuntu School Resources - see
'Vastranirmanam vividha ghatangal'



Significant learning outcomes

The learner can

- list different occupations.
- explain that any product is formed by the effort of different kinds of workers.
- identify the tools used in different occupations and can state their uses.
- find out through survey the occupation in which most people in my locality engage in.
- realize that every occupation has its own merit.



Let us assess

- (1) Choose the odd pair out.
 - A. chisel, sword
 - B. plough, spade
 - C. sewing machine, scissors
 - D. driver, mechanic

- (2) Which of the following does not come under the stages of paddy cultivation?
 - A. harvest
 - B. rice business
 - C. threshing
 - D. seedling planting

- (3) A newly built hospital with all facilities has started functioning in Ramu's village. Tabulate the service each one should do for the proper functioning of the hospital.

Work	Service

- (4) Suppose there are no workers to repair vehicles in your place. What will be the difficulties faced by the people there?



Extended activities

- Visit a workplace in your area. What are the jobs undertaken by each one there? With whose efforts do products come out?
- Collect pictures of occupation tools, write the name of tools and related occupation and prepare an album.

