



GOVERNMENT OF TAMIL NADU

# STANDARD ONE

TERM - I

VOLUME 2

**MATHEMATICS**  
**ENVIRONMENTAL SCIENCE**

A publication under Free Textbook Programme of Government of Tamil Nadu

Department Of School Education

**Untouchability is Inhuman and a Crime**

## Government of Tamil Nadu

First Edition - 2018  
Revised Edition - 2019, 2020, 2022  
(Published under New Syllabus in  
Trimester Pattern)

NOT FOR SALE

## Content Creation



State Council of Educational  
Research and Training

© SCERT 2018

## Printing & Publishing

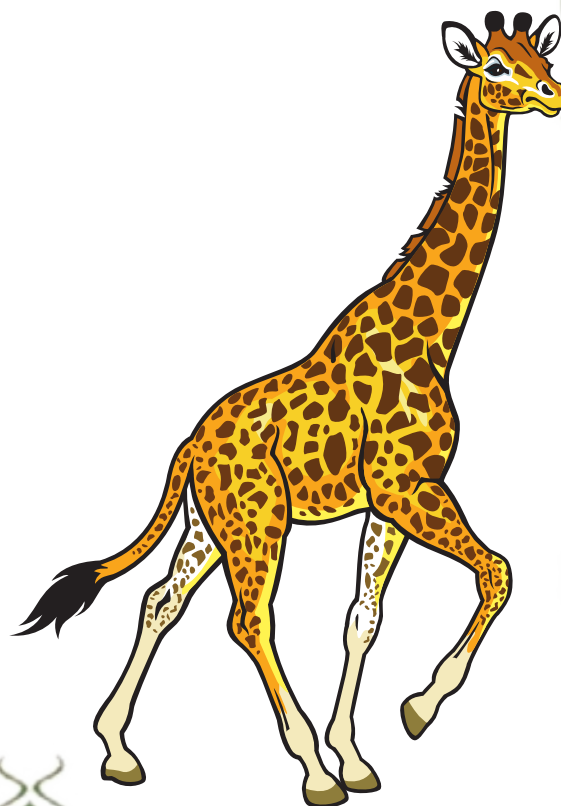


Tamil Nadu Textbook and Educational  
Services Corporation

[www.textbooksonline.tn.nic.in](http://www.textbooksonline.tn.nic.in)



# ENVIRONMENTAL SCIENCE



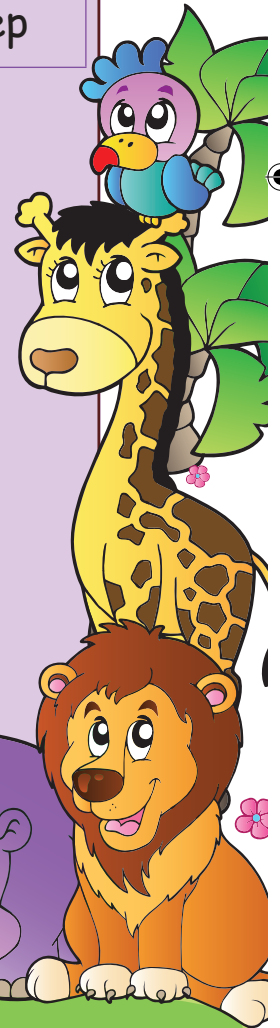
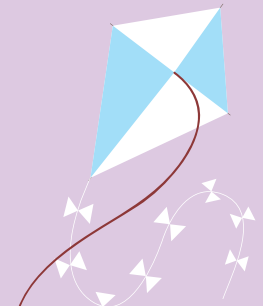
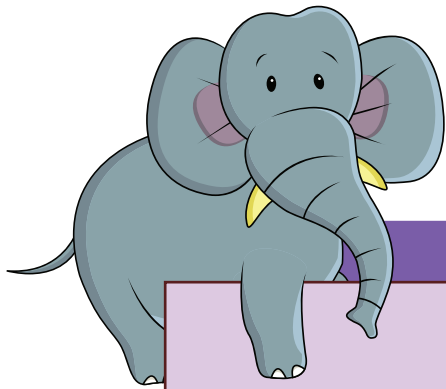
# CONTENTS

| Unit | Topic                        | Page No. | Month       |
|------|------------------------------|----------|-------------|
| 1.   | Living and Non-living Things | 65       | June        |
| 2.   | My Wonderful Body            | 75       | June - July |
| 3.   | Nature's Bounty              | 89       | July - Aug  |
| 4.   | Animals Around Us            | 103      | Aug - Sep   |

E-Book



Evaluation





# UNIT 1

## Living and Non-living Things

### Learning Objectives

The learner should be able to -

I am Harini.  
I have a puppy.  
I call him Jimmy.  
I give him food to eat.  
He eats it quickly.  
I play with him.  
He jumps on me.  
I love him very much.



I have a doll.  
I call my doll Ammu.  
I try to feed it.  
It does not eat or drink.  
It moves only when I wind the key.  
I like my doll.



Harini wondered why her puppy ate food but her doll did not.  
**Do you know why? Let us find out.**



# Living things



Living things eat, grow, move and have young ones. They also breathe and feel.



I eat



I grow



I play

## I am a living being

Living things eat.



Living things grow.

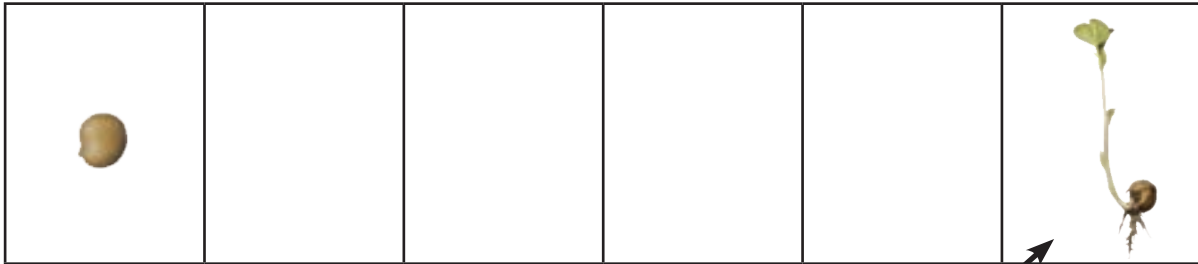




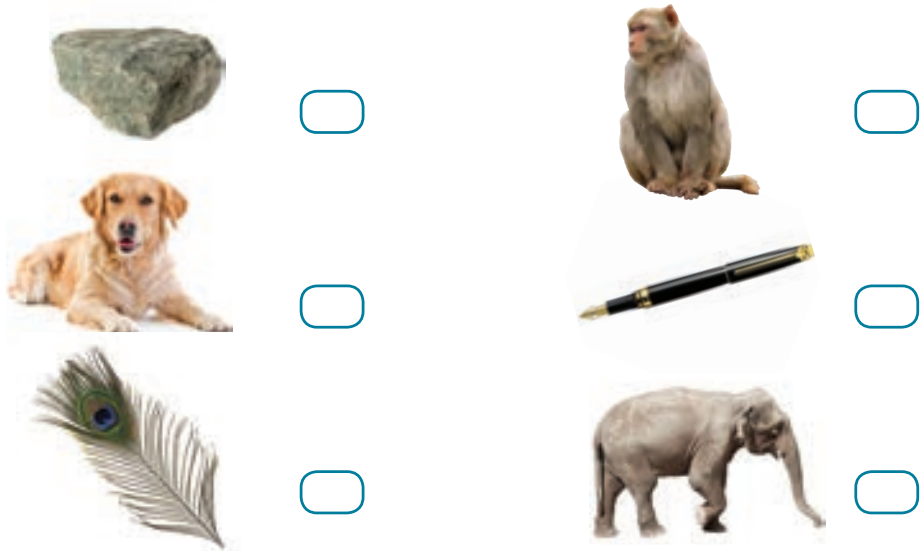
Plant a seed and watch it grow.



Sequence the pictures.



Tick (✓) those that need food to live.







∞ Living things **move** from one place to another.



Horse



Lizard



Bird



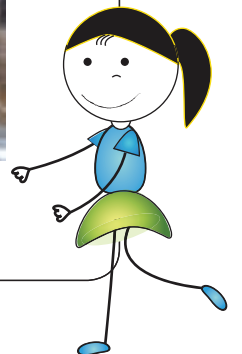
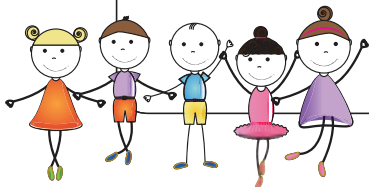
Earth worm

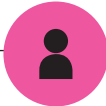
∞ Living things have **young ones**.

**THINK ZONE**  
A boat moves.  
Is it living?

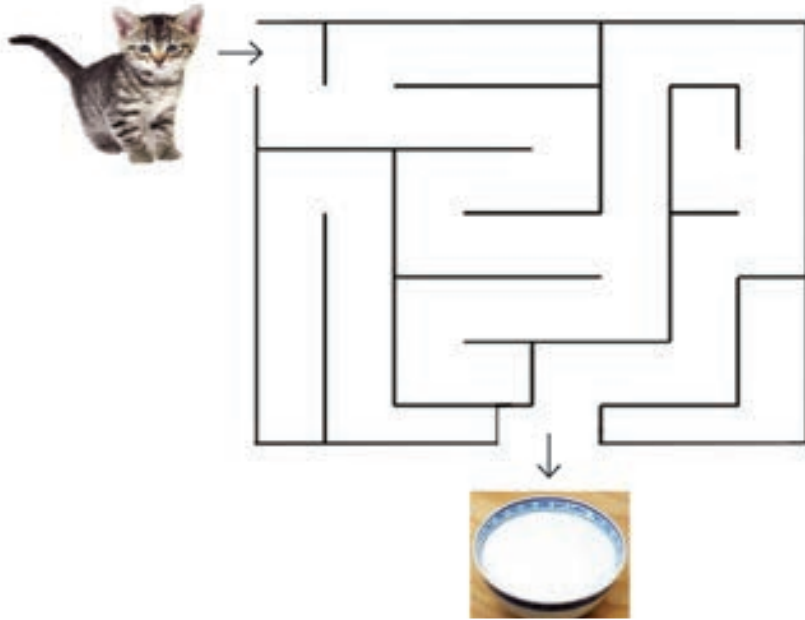


∞ Living things **feel**. Living things **breathe**.

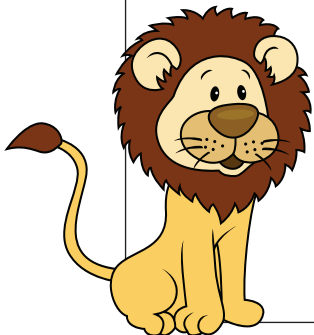




∞ This cat is hungry. Help the cat reach the milk.



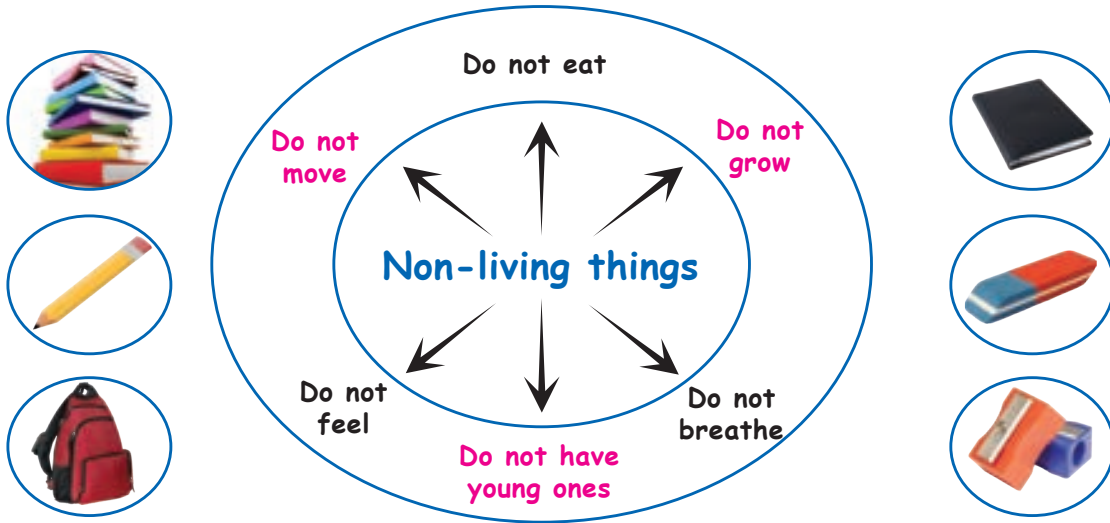
∞ Connect the baby with its mother by drawing a line.





# Non-living things

## Let Us Talk



Look at the pictures. Use the first letters to get the words CAT and DOG.



CAR



AEROPLANE



TABLE



DOLL



OIL



GATE



|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|



|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|







### Look at the picture.

Can you see a **mountain**, a **river**, a **pond** and a **lake**?

Mountains are made up of rocks and soil. The river, pond and lake are full of water. Soil and water help plants to grow. We get our food from plants. We breathe air. **Air**, **water** and **soil** are non-living things. Can we live without them?



### Vocabulary

air, water, soil, river, mountain, pond, lake, sea



### Observe the picture of life in water.

This is the **sea**. There are so many living things in it!



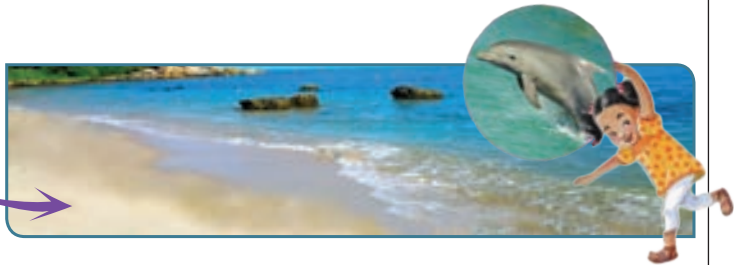


# Rhyme Time



Fly like an eagle in the sky.

Jump like a dolphin in the sea.

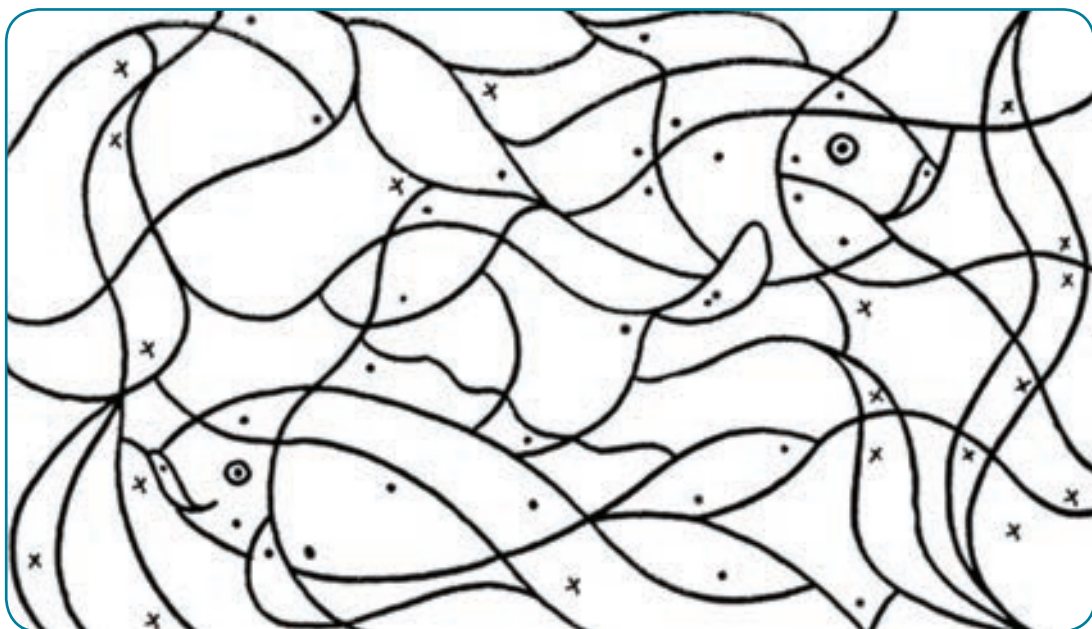


Crawl like a crab in the river sand.

Sky, sea and sand are non-living, where eagle, dolphin and crab are found.



∞ Colour the parts marked with a dot (.) yellow, the parts with a cross (x) green and the rest blue. What do you see?







∞ Observe the picture. Differentiate the living things from non-living things. Give reasons.



### Evaluation

∞ Tick (✓) the living things.



## ∞ Is it living or non-living?



What is this?  
Does it grow?  
Does it breathe?  
Does it move?  
Does it have young ones?  
What food does it eat?



What is this?  
Does it grow?  
Does it breathe?  
Does it move from one place to another?  
Does it have young ones?  
What food does it need?



What is this?  
Does it grow?  
Does it breathe?  
Does it move?  
Does it have young ones?  
Does it need food?

## Self-Evaluation

★ I can identify and differentiate living and non-living things.

I can draw within a grid, connect the dots and colour. ★

★ I can connect related pairs of things.



## Learning Objectives

The learner should be able to

- Name the external parts of the body
- Identify the various senses
- Maintain personal hygiene

## Let Us Talk

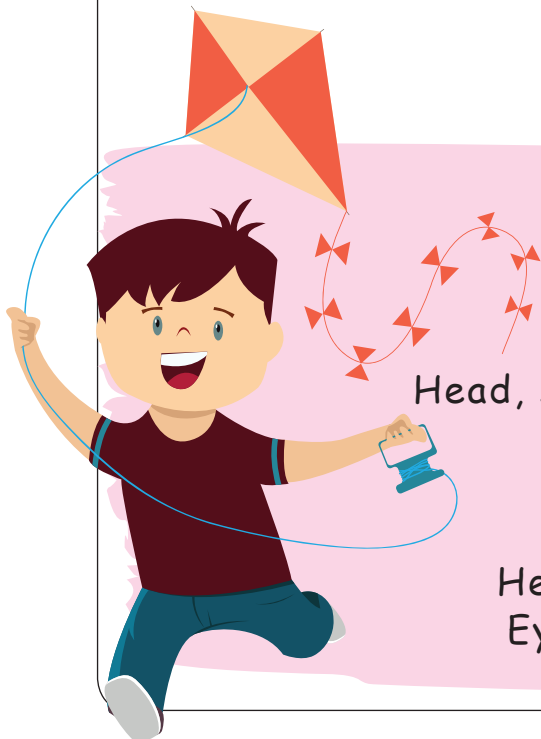


We play, walk, run, hear, see, smell, taste and touch.

We can see some parts of our body but some others are within us, which we cannot see.

Some parts are in pairs. Can you name a few?

Let us learn names of some parts of our body with this rhyme.



## Rhyme Time

Head, shoulders, knees and toes (2)

Knees and toes

Eyes and ears

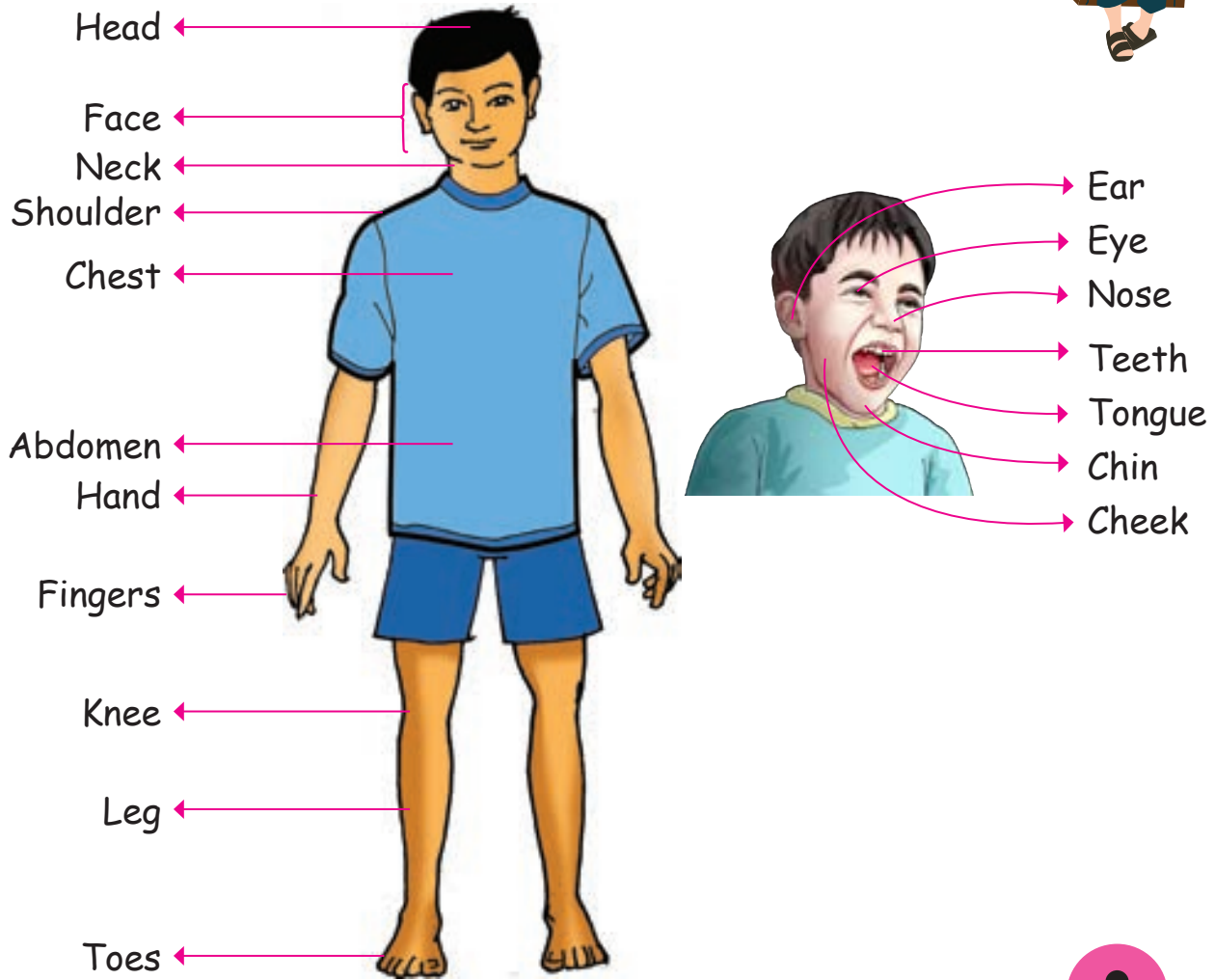
Mouth and nose

Head, shoulders, knees and toes

Eyes, ears, mouth and nose



◇ Let us know the parts of our body.



◇ Connect the labels to the parts.



Chest

Abdomen

Head

Leg

Fingers

Mouth



Shoulder

Eye

Neck

Toes

Knee

Hand





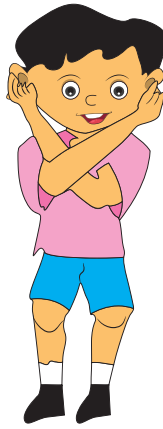
◇ Observe the pictures. Little Varun is moving his body in so many ways. Shall we try the same actions?



Walk



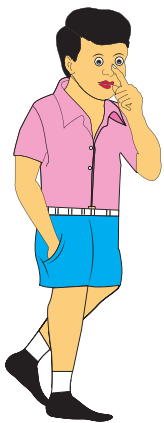
Catch



Squat



Jump



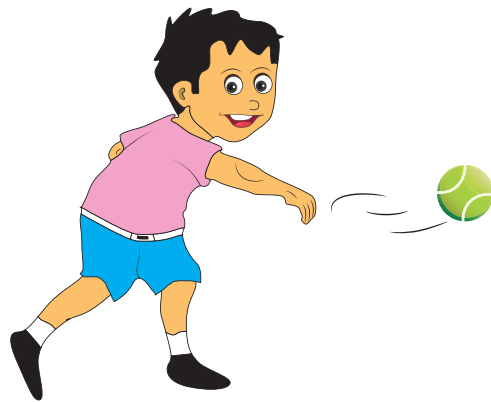
Touch the nose



Raise the eyebrows



Bend



Throw



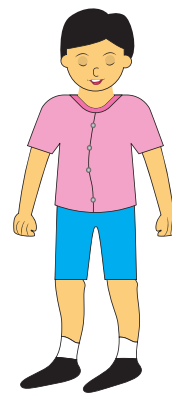
Skip



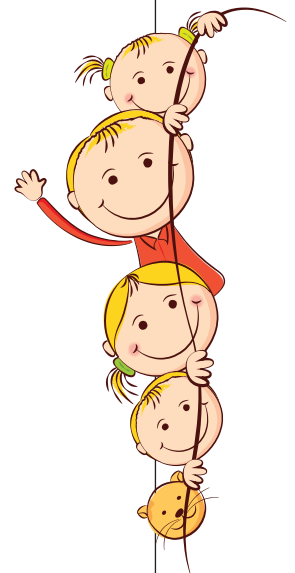
Kick



Lift



Blink



◇ What are some other actions that you can do with your body?

- ◆ Some of our body parts are in pairs and some are single.
- ◆ You can fold your arm and your fingers, wherever there are lines. Try it.
- ◆ We experience different feelings like happiness, sadness, fear and anger.
- ◆ We show these feelings with our facial expressions.



Try making these expressions.



- ◆ Connect the paired parts to the number 2 and the single parts to the number 1.



- ◆ Draw the facial expressions.



**DO YOU KNOW?**  
The giraffe has a long neck and the elephant has a long trunk.





### Rhyme Time

#### Right and Left

Let us sing this rhyme.

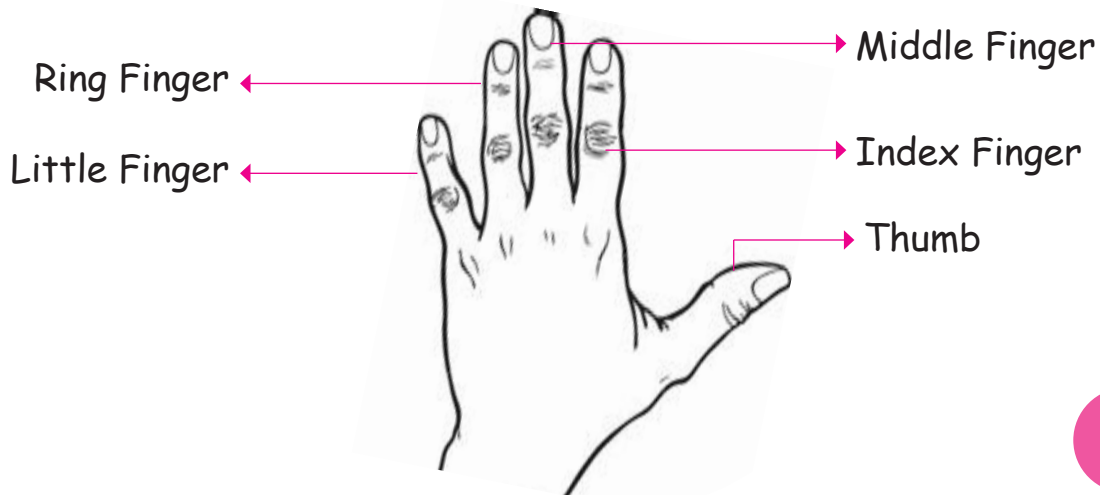


You put your right hand in  
 You put your right hand out  
 You put your right hand in  
 And you shake it all about  
 You do the Hai hai and  
 you turn yourself around  
 That's what it's all about!

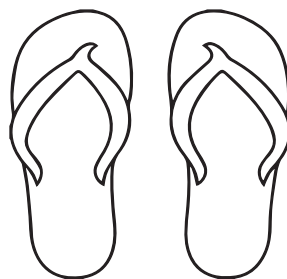
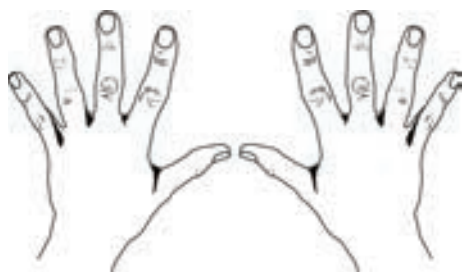


Similarly do the actions with the left hand, right foot, left foot, head and then with your whole body.

Each finger of your hand has a name. Do you know the names?



◇ Colour the pictures on the right side red and the left side blue.





◇ Your thumbprint is special. Put your thumbprint in one of the boxes.

Ask your friend to put his/her thumbprint next to yours.

Do they look the same?



◇ Play the game "Raja Says" or "Rani Says" with your friends.



### My Senses

I hear many sounds with my ears. Some sounds are loud and some are soft.



The cawing of a crow



The ringing of a bell



The ticking of a clock



The sound of a moving train



The sound of a water drop







What are the sounds you hear every day around you?

Which sounds do you like?

◇ Let us play a game.

Blindfold yourself. Let your friends move around you while they make sounds of different animals. Identify the animal with the sound. Indicate the direction of the sound by pointing.



We see the world around us with our **eyes**.  
We see different shapes, sizes and colours.

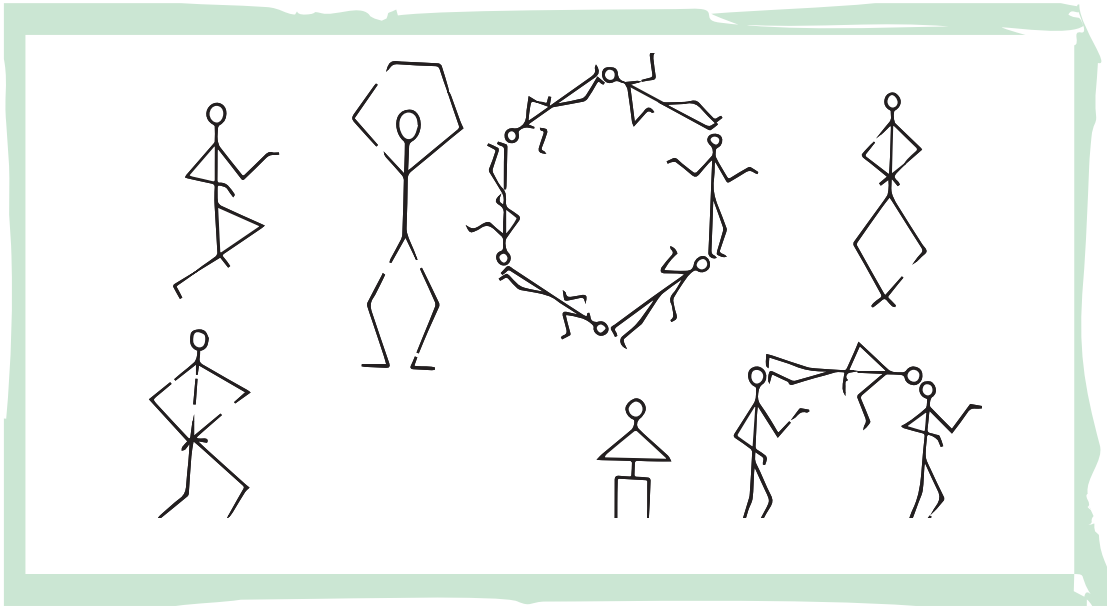


◇ Observe the picture and discuss.





◇ Look at the shapes given below. Can we try the same shapes with our body?



DO YOU KNOW?

Eagles, falcons and hawks can see small objects even from a great height.



We see and hear the world around us. We also use our senses of touch, smell and taste to know the world around us.

There are different kinds of tastes like sweet, sour, salty and bitter. Our tongue helps us to taste.

The lemon is sour, the mango is sweet and the bitter melon is bitter.

What do you like to eat?





Our nose can sense different types of smell.

What are the smells you like? What are the smells you don't like?



◇ Go for a Nature Walk in your school campus.

Feel the plants and the soil.

Touch the flower. It is soft.

Touch the tree trunk. It is hard.

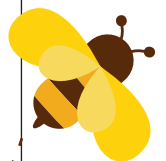
What are the things you like to touch?



◇ Blindfold your friend. Give your friend various things to smell, taste and feel and ask him/her to find out what they are.







A dog's sense of smell is 40 times greater than that of a human.








## Story Time





This is Mala . She wakes up  in the morning. This is

a germ .  cannot see the .  is very small.

 is waiting to get inside  body.  brushes her

teeth.  takes a  bath. The  attacks .

 becomes .  is clean and .  goes to

school .  goes to the washroom .  does not

wash her hands with .  is happy.  enters 

nails.  eats her lunch.  goes into  stomach.

 falls sick .  visits the . The doctor tells

her to  her hands with  before  and after using

the . The  gives  medicines.  gets well.

 is .



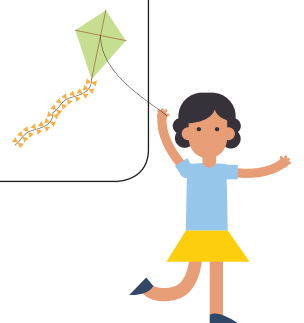
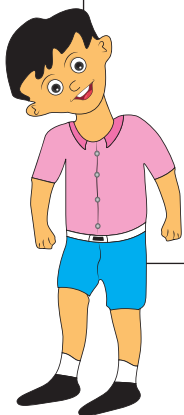
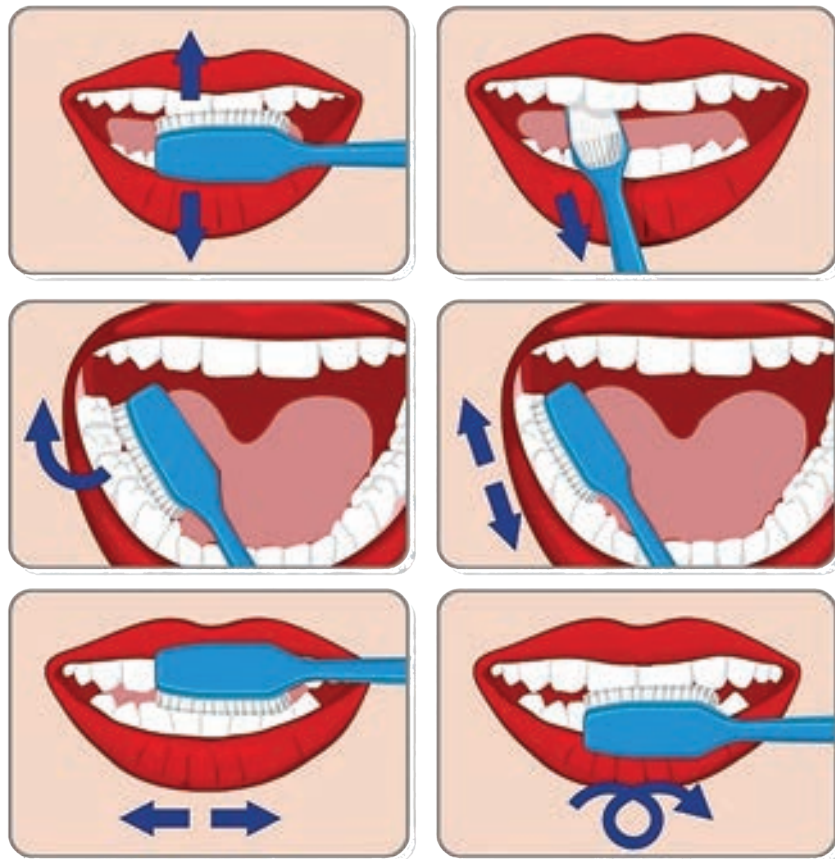


We should keep our hands clean. If we don't, we will fall sick like Mala. Let us learn how to wash our hands properly. Do it step by step.



We must brush our teeth twice a day, once in the morning and once at night. Let us learn the right way of brushing our teeth.

Practice all these routines daily.



### ◇ Healthy Washroom Routines

After using the toilet (wash room) wash yourself.



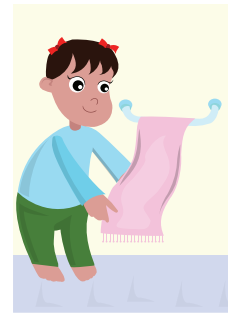
Pour water



Wipe your feet



Wash your hands with soap



Wipe your hands

### Daily Routines

◇ These pictures show our daily routine. Arrange them in sequence.



◇ Tick (✓) the things which help to keep you clean.







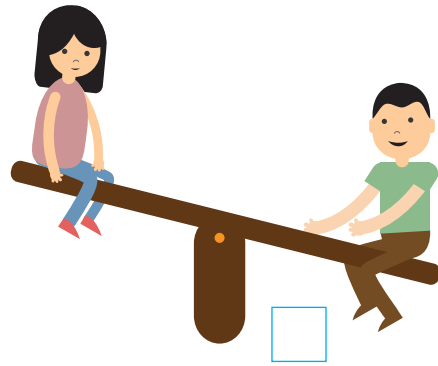
## Evaluation

◆ Observe the picture and draw a -

- near the kite
- ☆ near the objects which produce sound
- near the objects with smell
- △ near the objects which are tasty
- near the objects people touch



◇ Some activities keep us healthy and some don't.  
Tick (✓) the activities that keep us healthy and cross (X) those that do not.



### Self-Evaluation

- I can name the parts of my body.
- I can do many actions with my body.
- I practise good habits to keep me clean.
- I know the names of my sense organs.





## UNIT 3

### Nature's Bounty

#### Learning Objectives

The learner should be able to



Selvi went to a garden. She saw a **yellow flower** on the **tomato plant**. She went to pluck it. A **bee** came and said, "Please, leave it for me. It is my food".



She saw a **red tomato** on the tomato plant. She went to pluck it. A **parrot** came and said, "Please, leave it for me. It is my food".

She saw a **green leaf** on the tomato plant. A **grasshopper** came and said, "Please don't pluck the leaf. It is my food."



Watering the plant, Selvi said, "You provide food for all of us. Thank you very much".



# Leaves

- Let us go on a joyful journey into the world of plants.

## Let Us Talk

Plants have different kinds of leaves. They are of various sizes, shapes, colours and textures. Talk about some leaves that you have seen around you.

- Here are some helping words.

### Vocabulary

light green, dark green, soft, smooth, rough, edge, sharp, rounded, dry, big, small, tip



Banana (Vazhai)



Mango (Maangai)



Drumstick (Murungai)



Neem (Veppa Ilai)



Coconut (Thennai)



Basil (Tulasi)



Mint (Pudhina)



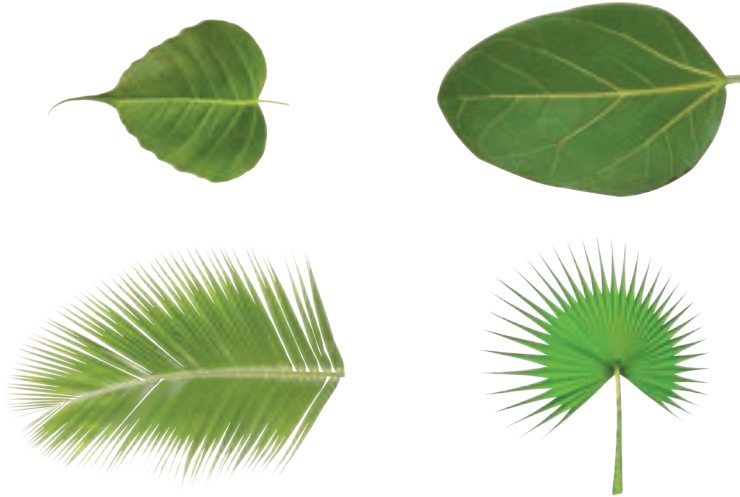
Coriander (Kothamalli)



Curry leaves  
(Karuveppilai)



🍃 Compare the leaves. Use the words you have learnt.



🍃 Leaf Rubbing. Let us make a leaf pattern using crayons. 👤

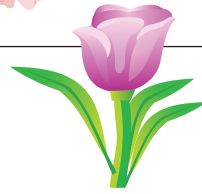


🍃 Bring one leaf to class. Observe the changes in the leaf over a week. 👥





# Flowers



Look at the pictures. These are some flowers that we see around us. Let us name them.



Fire Cracker  
(Kanakambaram)



Jasmine (Malligai)



Marigold (Samanthi)



Lotus (Tamarai)



Frangipani  
(Sampangi)



Rose (Roja)



Screw Pine  
(Thazhampoo)



Shoe Flower  
(Chembaruthi)



Hari Champa  
(Manoranjitham)

Which flower do you like?  
Describe that flower.

Here are some words to help you.

## Vocabulary

smell, petal, soft, smooth,  
rough, thorn, colour, red,  
pink, white, yellow





Some flowers have a pleasant smell.



Champaca  
(Shenbagam)



Jasmine



Rose

We can keep flowers fresh as shown.

Flowers have different kinds of petals. Observe the shapes of the petals.



Match the flowers with their petals.



# Vegetables

## Rhyme Time

I went to the market  
with my bag  
To buy tomatoes  
red and round  
Potatoes big and brown  
Green chillies  
long and thin  
Fat pumpkins  
orange and green  
Purple brinjals  
big and small  
And drumsticks  
green and lengthy  
My bag became heavy  
I came back home  
with my basket full  
Everybody smiled!



### Let Us Talk

We all eat vegetables.  
They keep us **healthy and strong**.  
Which vegetables do you like?  
Can you describe them?  
Here are some words to help you.

### Vocabulary

smooth, rough, big, small,  
size, shape, colour, heavy,  
light, taste, watery, hard,  
round, long, brown, orange,  
green, red, purple

Observe how nicely the vegetables are arranged !  
We see cabbages, tomatoes, cucumber, ridgegourd,  
carrots and many more. Shall we identify them?

### A Vegetable Shop



Here are some commonly used vegetables.



Onion



Ginger



Garlic



Beetroot

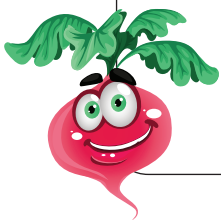


Radish



Ladies finger

Look at the different varieties of brinjals given below.







Observe the vegetable man. Identify the vegetables he is made of. Describe them using the words you have learnt. Answer the questions.

- Which vegetables are hard ?
- Which vegetable is green and long ?
- Which vegetable is orange in colour ?

One group describes a vegetable and the other group names it.



You can play this game with your friends.



### Vegetable Printing



With Ladies Finger



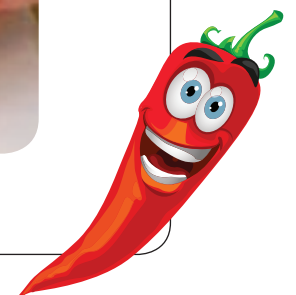
With Capsicum



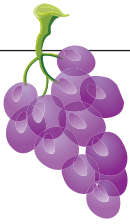
Using Carrot



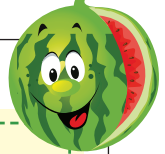
Using Lemon







# Fruits



## Vocabulary

ripe, juicy, fleshy,  
small, big, sweet, sour,  
dry fruits

Fruits keep us healthy .  
There are many kinds of fruits.

Most fruits change their colour when they ripen.



Mango



Guava



Papaya



Banana



These are some fleshy fruits.



Papaya



Sapota

These are some juicy fruits.



Lemon



Watermelon



Orange



These are some small fruits.



Grapes



Jujuba  
(Elanthai)

Some fruits are big.



Watermelon



Jackfruit

These are some fruits that are sour.



Lemon



Gooseberry

Some fruits are sweet.



Banana



Custard apple



Sapota

These are some fruits that taste both sweet and sour.



Grapes



Pineapple



🍏 These are some dry fruits.



Dates



Raisins



Figs

🍏 Do you know? **Birds and squirrels like fruits.**



Match the fruits with their cut portions.



🍏 You have learnt about many kinds of fruits.

You describe a fruit and your friend should name it.







Fruits are grown in orchards.

How do they reach our homes from there ?  
Sequence the pictures in the right order by numbering them.



What does this picture show?

Always wash fruits and vegetables before you eat.

|   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|
| A | G | C | E | D | F | B | H |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

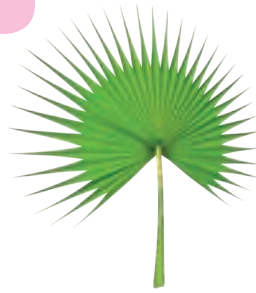
Answer



### Evaluation



1. Circle the big leaf.



2. Circle the vegetable which is orange in colour.



3. Circle the long vegetable.



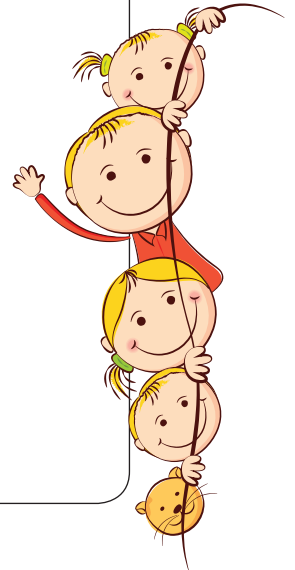
4. Circle the juicy fruit.



5. Circle the sour fruit.



6. Look at the pictures. Which flowers have a pleasant smell? Tick (✓) them.



7. Match the following by drawing lines.



### Self-Evaluation

\_\_\_\_\_ →  
I can name and describe some commonly found leaves, flowers, fruits and vegetables.



\_\_\_\_\_ ○  
I know the importance of plants in my life.

\_\_\_\_\_ ○  
I can draw, colour, make vegetable prints and floral designs.

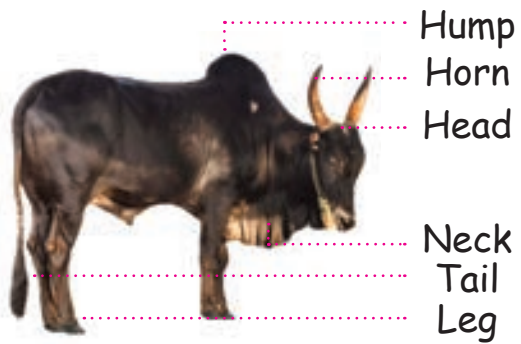






### Let Us Talk

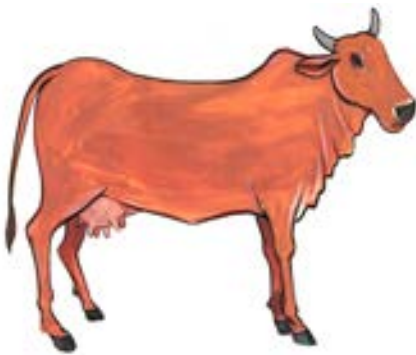
Observe the Kangeyam bull. Let us name its parts.



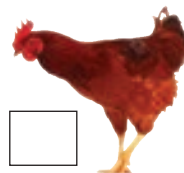
**Vocabulary**  
small, big, head, eyes, nose, ears, mouth, teeth, tongue, horns, neck, colour (patches), hair/fur, tail, legs, hump

◇ Can you now describe the cow using the given words?

◇ Connect the labels with the parts.



◇ Tick (✓) the animals that you have seen.







### About Animals

There are many kinds of animals.  
Some animals are big, some not so big.



Lion



Deer



Giraffe



Elephant



Bear



Tiger



Rabbit



Cheetah

Some animals are small in size.



Mosquito



Ant

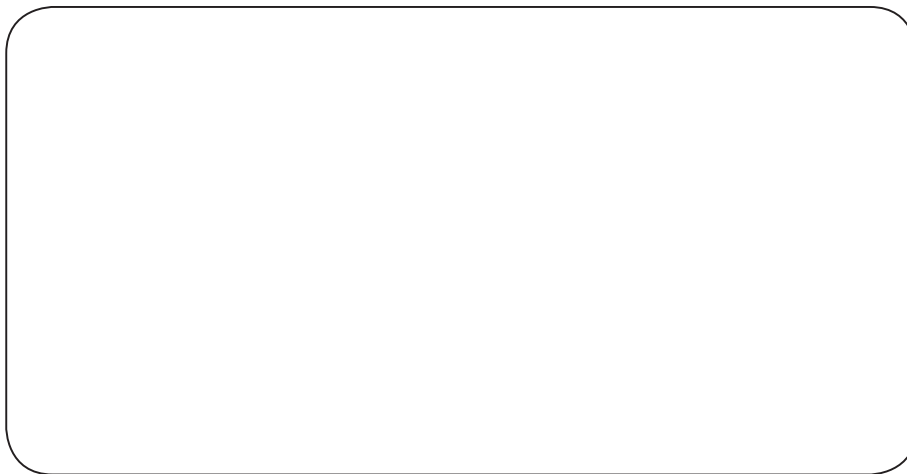


Housefly



Rat

◆ Paste the picture of your favourite animal inside this box.



The elephant is the only animal that cannot jump.





## About Mammals

Some animals have hair or fur on their body. They give birth to and give milk to their babies. They are called mammals.



Dogs, kangaroos and elephants are mammals.



Some mammals fly.



Some mammals swim.



Humans are also mammals.



Bat



Whale



◇ Let us compare the two animals in the pictures.

A Cow and a Buffalo



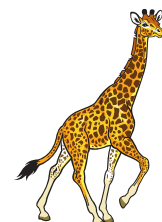
In what ways are they similar?

How do they differ?

A Sheep and a Goat



Use the helping words that you know.



### Animal Tails



Happy dog wags its tail

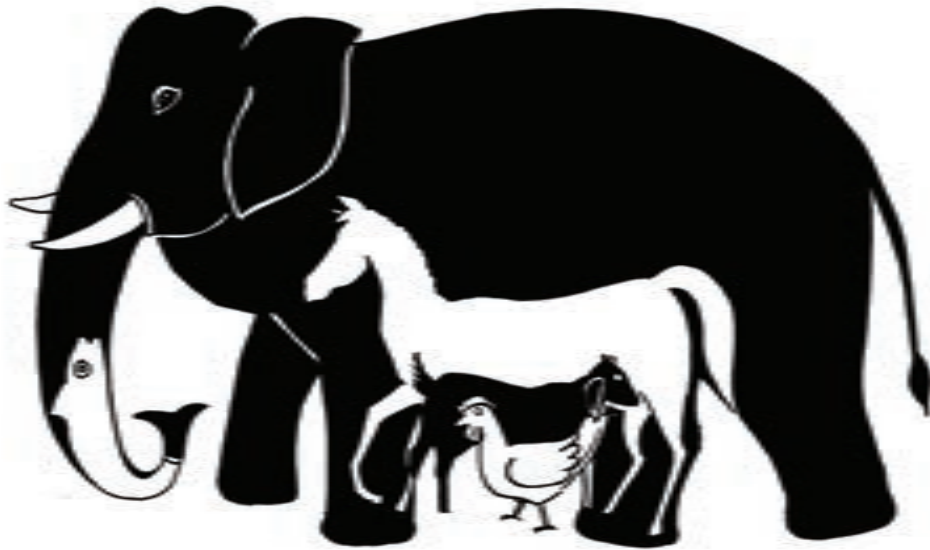


Troubled cow swats flies with its tail

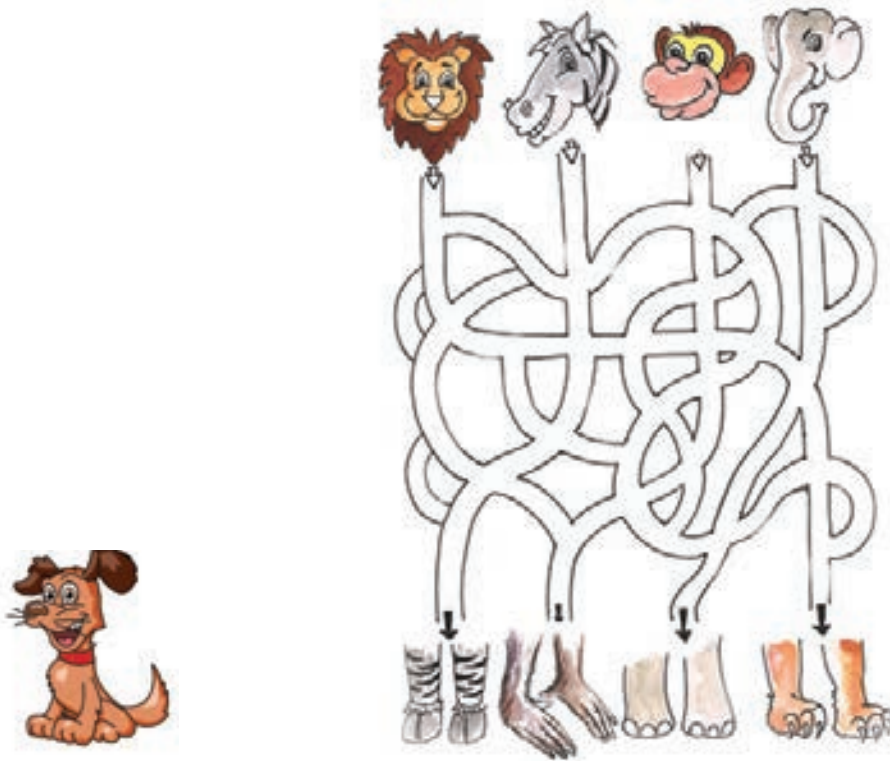
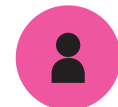


Angry cat stares with its tail up

◆ Find the hidden animals in the picture given below.



◆ Connect the heads of the animals to their legs.







### About Birds

### Let Us Talk

Have you seen these birds? Where have you seen them?



Peacock



Sparrow



Eagle



Crow



Parakeet



Duck



Pigeon



Kingfisher



Cock



Mynah



Woodpecker



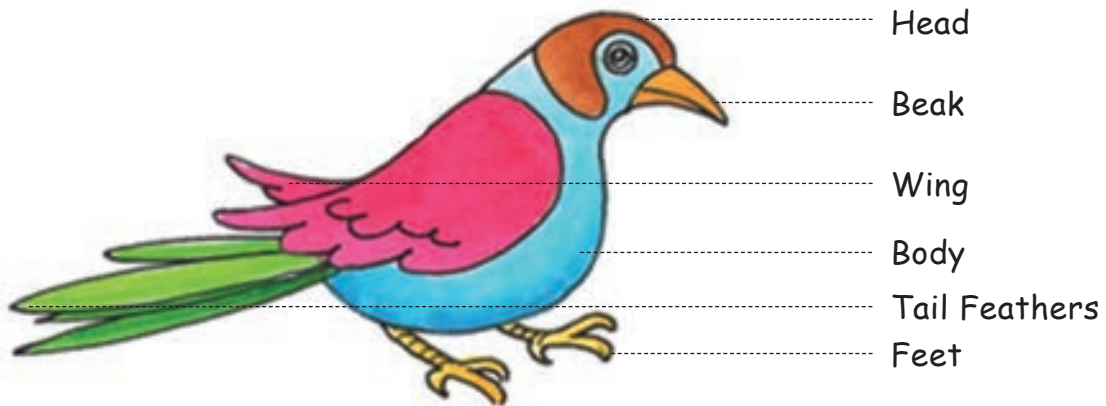
Owl

### Vocabulary

size, colour, wings,  
legs, beak, feathers,  
feet

Name and talk about them. Here are some words to help you.

Observe the bird. Let us name its parts.





### Let Us Talk

Speak about similarities and differences in the given birds.



Mynah



Crow



Cock



Hen



Egret



Sparrow

◆ Connect the birds to their names.



Crow



Duck



Mynah



Cock

Parakeet



Eagle





Birds are animals.

They have two wings, two legs and a beak.



They eat with the help of their beaks. They do not have teeth.



Their legs help them to walk around and run.



They have colourful feathers.







They can fly.



There are some birds that cannot fly.



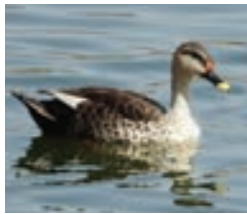
Emu

Kiwi

Penguin

Ostrich

Some birds can swim.



Duck

Swan

Water hen

◆ Tick (✓) the birds that can fly.



Penguin



Kingfisher



Parrot



Crow



Kiwi

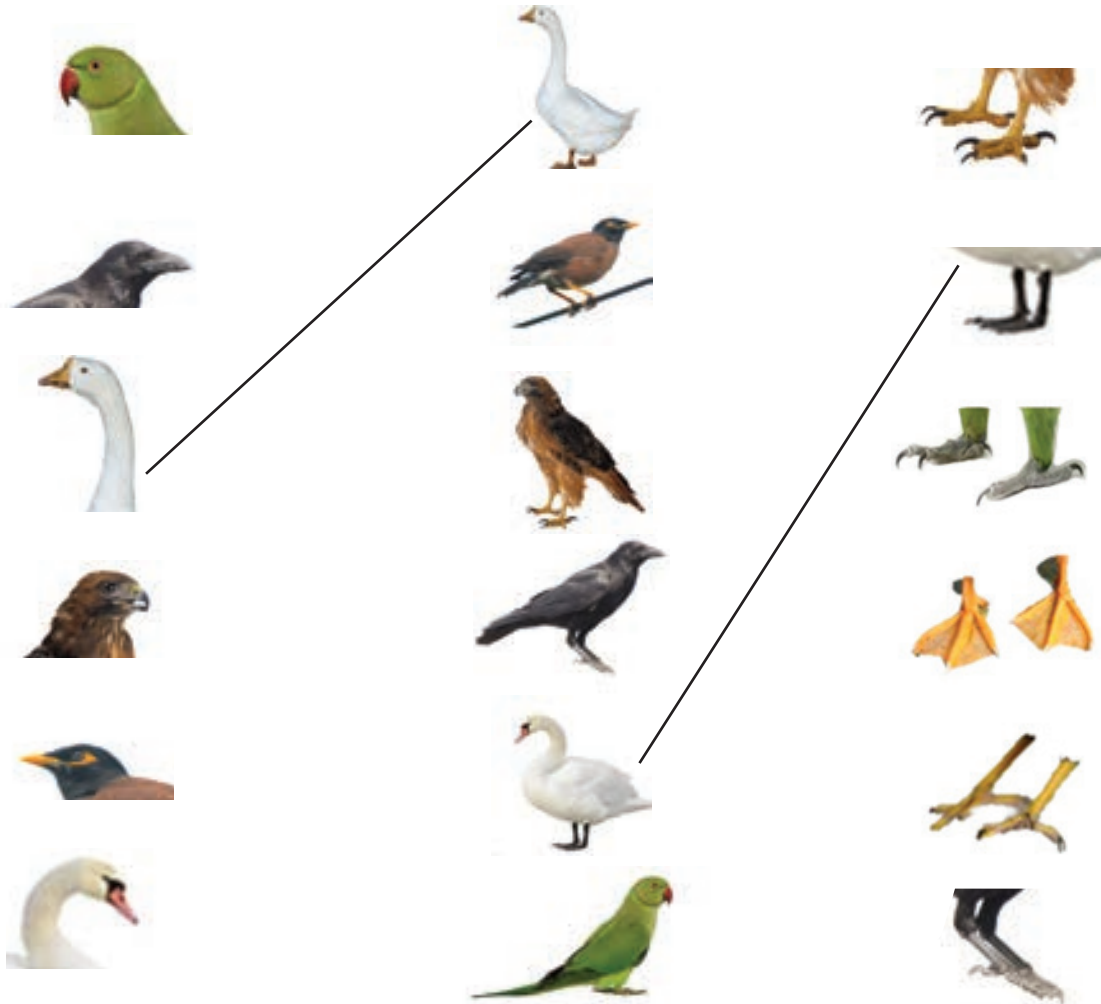


Emu





◇ Match the birds with their beaks and feet.



◇ Thumb Printing

Use your thumb print to complete the pictures.





# About Insects



Walk around the school campus. How many insects can you see? Tick (✓) the ones that you saw.



Beetle



Dragonfly



Butterfly



Housefly



Mosquito



Ant



Observe the pictures of insects.



Honeybee



Leaf Insect



Beetle



Wasp



Stick insect



Cockroach



Grasshopper

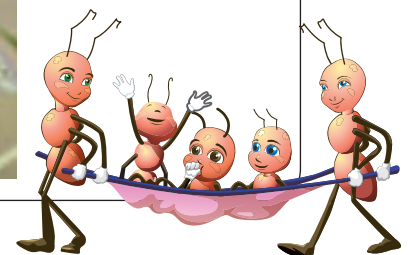
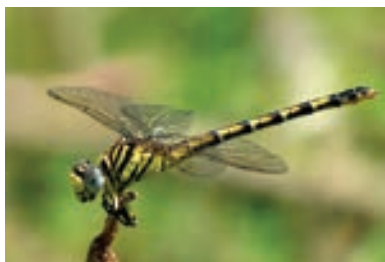


Head louse



Butterflies are good friends of flowers.

Insects are tiny animals with six legs. Some insects have wings that help them fly.







Silverfish



◆ Spot the insects.

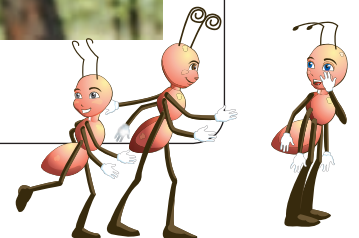
Some insects look like leaves and sticks.

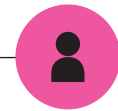


Leaf insects

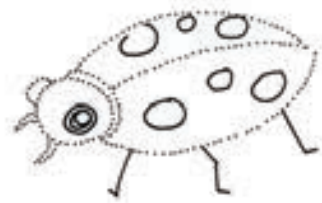


Stick insects





Join the dots and colour the pictures.



### Animal Care and Protection

#### Let Us Talk

Is this bird happy? What do you think?



#### Bird bath

Keep water for the birds in a mud vessel and observe how happy they are.



How can we care for the animals around us?



◇ Solve the riddles and connect them to the given pictures.

1 I live in trees and like to climb.  
I like bananas. Who am I?



2 I live in the forest.  
I have sharp teeth.  
People call me "The King of  
Jungle". Who am I?



3 I have no legs.  
But I slither on the ground and  
on the trees. Who am I?



4 I am not a bird but I can fly.  
I collect nectar from flowers  
and make honey. Who am I?



5 I am a mammal.  
I have big ears. I have a long  
trunk and I walk on four legs.  
Who am I?



◇ "Who am I?" - Play the game with your teacher's help.



◇ Make a paper plate mask.

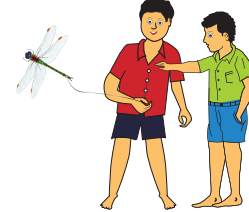
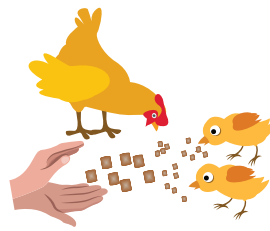
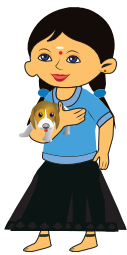
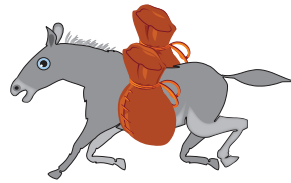
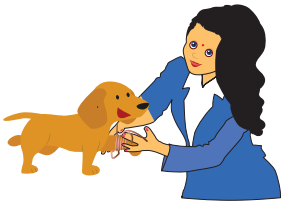


Now wear the paper plate mask you  
have made and enact a story.

◇ Make your own riddles and ask your friend to solve them.



◇ Colour the circle for the correct actions.



◇ Fun Zone



Find out what is strange in these animals and have a good laugh.



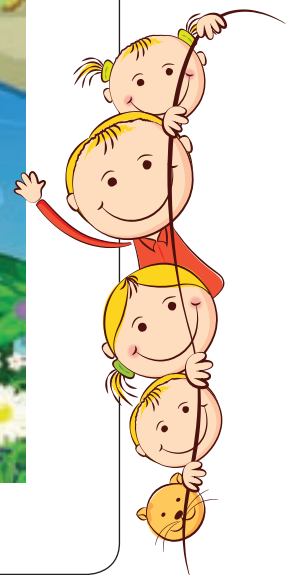
### Evaluation

◇ What do you see in these pictures? How can we care for the animals around us? Talk about it.





◆ Find the animals in the jungle below.  
Name them. Classify them as birds,  
insects and mammals.



◇ Tick (✓) the animals whose parts are found in the picture at the centre.



### Self-Evaluation



I can observe and name some animals.

I can identify and differentiate mammals, birds and insects.



I can compare and describe animals.

I can think - sequence, solve riddles and match.



I can act like animals.

I will be kind to animals.



## Class 1 – Environmental Science – Term I

### List of Authors and Reviewers

#### Reviewers

**Dr.R. Ramanujam,**  
Professor, Institute of Mathematical Sciences,  
Tharamani.

**Prof. Jayashree Ramadas**  
Tata Institute of Fundamental Research  
36/P, Gopanpally Village, Serilingampally Mandal,  
Ranga Reddy District, Hyderabad

#### Domain Experts

**Vijayalakshmi Srivatsan,**  
Educational Consultant,  
(Former Principal),  
P.S. Senior Sec. School, Mylapore.

**Dr. Suchitra Ramkumar,**  
Director,  
Upasana center for learning and well being,  
Adayar, Chennai

#### Academic Coordinator

**Dr. Vanitha Daniel,**  
Deputy Director,  
SCERT, Chennai.

**T.Ashok,**  
Assistant Professor,  
SCERT, Chennai.

**S.Muthamizh Selvi,**  
PGT, GGHSS,  
Tiruttani, Tiruvallur Dist.

#### Art and Design Team

##### Illustration

N.Gopalakrishnan,  
S.Senthil kumar,  
A.Anandha Kumar,  
G.Ramakrishnan,

Art Teachers,  
Government of Tamil Nadu.

Students,  
Government College of Fine Arts,  
Chennai & Kumbakonam.

##### Graphics & Layout

Jerald Wilson, Yuvaraj,  
Prasanth Perumal

##### In-House

QC - Gopu Rasuvel  
- Karthik Kalaiarasu  
- Arun Kamaraj Palanisamy

##### Co - Ordinator

Ramesh Munisamy

#### Authors

**Valarmathi N,**  
Senior Lecturer, DIET, Ranipet.

**Arumbumozhi S,**  
Lecturer, DIET, Vellore.

**Karuppaiyan A,**  
HM, PUPS, Neduvasal(North), Pudukkottai.

**Sathya Kalyani R,**  
BT Asst, PUMS, Parali , Namakkal.

**Anbazzhagan N,**  
BT Asst, PUMS, 1-3Ward, Uthiramerur,  
Kancheepuram.

**Thangam C,**  
BT Asst, PUMS, Kallarapatti, Vellore.

**Sakthivel Murugan S,**  
BT Asst, PUMS, Sholinganallur,  
St.Thomas Mount Block, Chennai.

**Subashini A,**  
BT Asst, PUMS, Nallaganakothapalli, Shoolagiri  
Union, Krishnagiri.

**Revington Babu X,**  
BT Asst, GHS, Sendankadu, Pattukkottai,  
Thanjavur.

**Sakthivel R,**  
BT Asst, GHS, Sellappanpettai, Thanjavur.

**Manimaran S,**  
BT Asst, PUMS, Melaradhanallur, Koradacheri,  
Tiruvarur.

**Kaleswaran G,**  
SGT, PUMS, Kilathari, Sivagangai.

**Thavaselvam R,**  
SGT, PUPS, Malligainatham, Gandarvakottai,  
Pudukkottai.

**Suma Guruprasad,**  
Primary Co-ordinator,  
KRM Matric HSS, Perambur.

**Rekha B,**  
Primary Teacher,  
KRM Public School (CBSE), Perambur.

#### EMIS Technology Team

**R. M. Satheesh**  
**K.P. Sathya Narayana**  
**R. Arun Maruthi Selvan**

This book has been printed on 80 G.S.M.  
Elegant Maplitho paper.

Printed by offset at:



# NOTES





# NOTES







# NOTES





# NOTES

