



GOVERNMENT OF TAMIL NADU

STANDARD ONE

TERM - III

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

(Published under New Education
Scheme in Trimester Pattern)

NOT FOR SALE

Content Creation



State Council of Educational Research
and Training

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Printing & Publishing



Tamil NaduTextbook and Educational
Services Corporation

www.textbooksonline.tn.nic.in



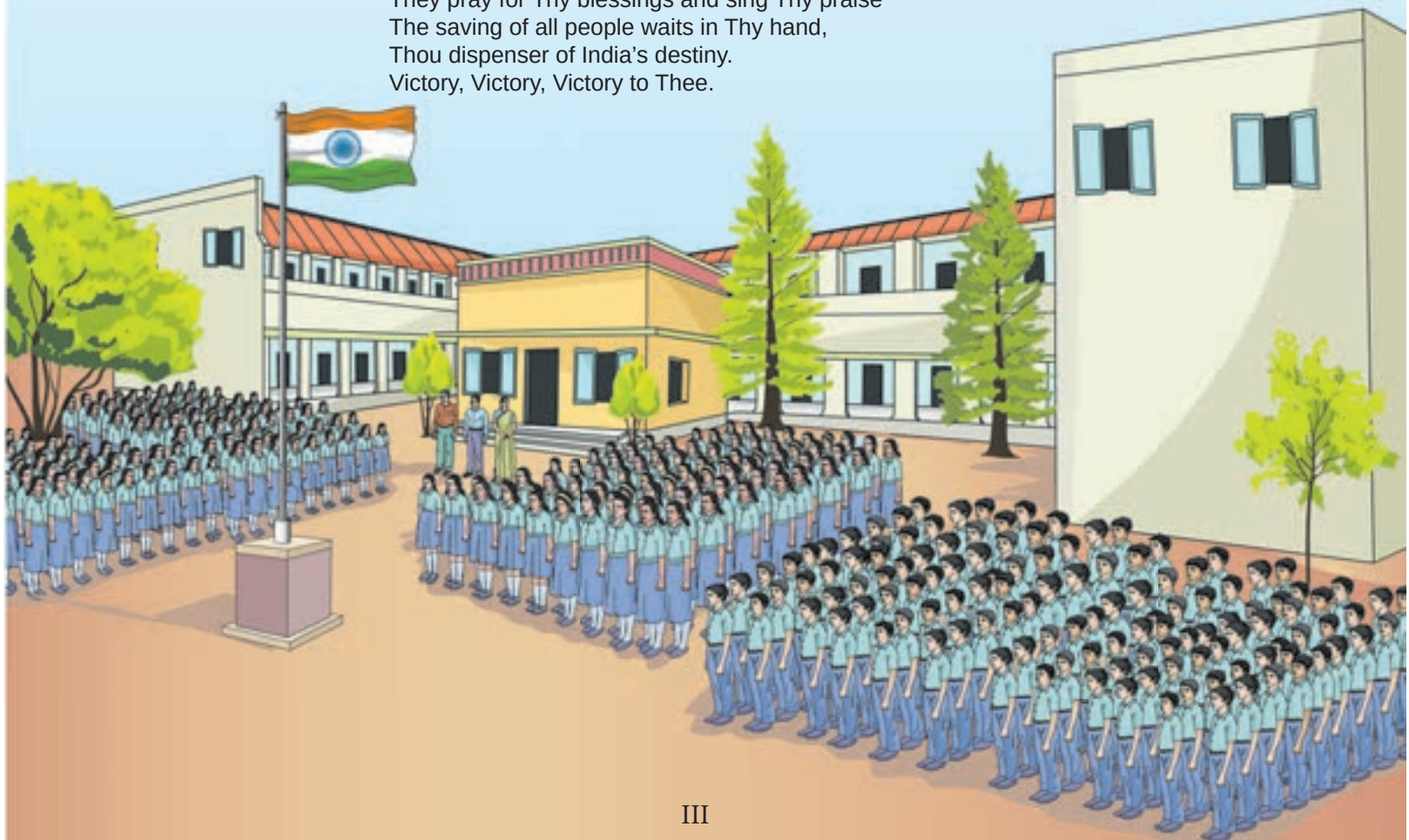
THE NATIONAL ANTHEM

Jana-gana-mana-adhinayaka jaya he
Bharata-bhagya-vidhata.
Punjaba-Sindhu-Gujarata-Maratha-
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchhala-jaladhi-taranga
Tava subha name jage,
Tava Subha asisa mage,
Gahe tava jaya-gatha.
Jana-gana-mangala-dayaka jaya he
Bharata-bhagya-vidhata
Jaya he, jaya he, jaya he,
Jaya jaya, jaya, jaya he.

- Rabindranath Tagore.

Authentic english translation of the national anthem

Thou art the ruler of the minds of all people,
Thou dispenser of India's destiny.
Thy name rouses the hearts of the Punjab, Sind,
Gujarat and Maratha, of Dravid, Orissa and Bengal.
It echoes in the hills of the Vindhyas and Himalayas,
mingles in the music of the Yamuna and Ganges
and is chanted by the waves of the Indian Sea.
They pray for Thy blessings and sing Thy praise
The saving of all people waits in Thy hand,
Thou dispenser of India's destiny.
Victory, Victory, Victory to Thee.



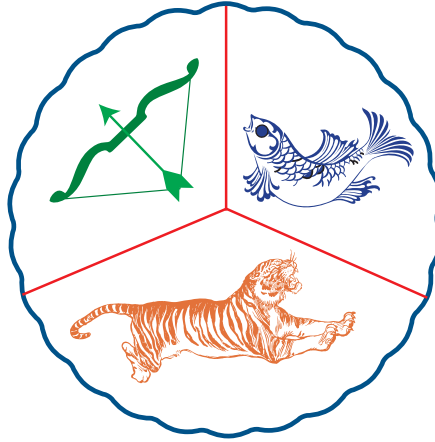


தமிழ்த்தாய் வாழ்த்து

நீராருங் கடலுடுத்த நிலமடந்தைக் கெழிலொழுகும்
 சீராரும் வதனமெனத் திகழ்பரதக் கண்டமிதில்
 தெக்கணமும் அதிற்சிறந்த திராவிடநல் திருநாடும்
 தக்கசிறு பிறைநுதலும் தரித்தநறுந் திலகமுமே!
 அத்திலக வாசனைபோல் அனைத்துலகும் இன்பமுற
 எத்திசையும் புகழ்மணக்க இருந்தபெருந் தமிழணங்கே!
 தமிழணங்கே!

உன் சீரிளமைத் திறம் வியந்து செயல் மறந்து வாழ்த்துதுமே!
 வாழ்த்துதுமே!
 வாழ்த்துதுமே!

- 'மனோன்மணியம்' பெ. சுந்தரனார்.



தமிழ்த்தாய் வாழ்த்து – பொருள்

ஒலி எழுப்பும் நீர் நிறைந்த கடலெனும் ஆடையுடுத்திய நிலமெனும் பெண்ணுக்கு, அழகு மிளிரும் சிறப்பு நிறைந்த முகமாகத் திகழ்கிறது பரதக்கண்டம். அக்கண்டத்தில், தென்னாடும் அதில் சிறந்த திராவிடர்களின் நல்ல திருநாடும், பொருத்தமான பிறை போன்ற நெற்றியாகவும், அதிலிட்ட மணம் வீசும் திலகமாகவும் இருக்கின்றன.

அந்தத் திலகத்தில் இருந்து வரும் வாசனைபோல, அனைத்துலகமும் இன்பம் பெறும் வகையில் எல்லாத் திசையிலும் புகழ் மணக்கும்படி (புகழ் பெற்று) இருக்கின்ற பெருமைமிக்க தமிழ்ப் பெண்ணே! தமிழ்ப் பெண்ணே! என்றும் இளமையாக இருக்கின்ற உன் சிறப்பான திறமையை வியந்து உன் வயப்பட்டு எங்கள் செயல்களை மறந்து உன்னை வாழ்த்துவோமே! வாழ்த்துவோமே! வாழ்த்துவோமே!





ENVIRONMENTAL SCIENCE

STANDARD ONE

TERM - 3





Environmental Science



Term-3

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E-Book



Evaluation



Digilink

UNIT 1

Materials Around Us

Learning Objectives

The Learners

- ❖ Identify the different materials around them
- ❖ Differentiate between the materials

Let Us Talk

Observe the picture and talk about the different objects and what they are made of.



All the objects that we use are made of different kinds of materials.

Wood

Meera is colouring
with a **pencil**.



Grand father
is sitting on a
chair.



Books are arranged
in the **bookshelf**.



Vimal is playing
with a **doll**.





Wood is a material got from the trunk and branches of trees. We make many things such as chairs, toys, pencils, ladders, cricket bats, matchsticks, doors and bookshelves from wood.



Can you identify the things made of wood in your classroom?

Tick (✓) the things made of wood.





Clay

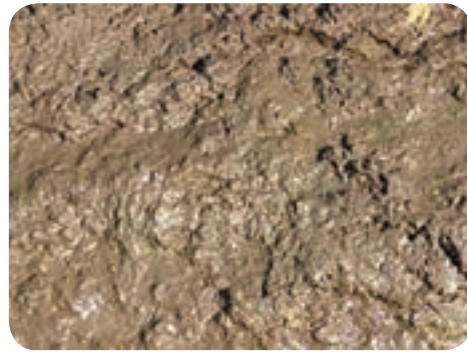


Fathima is planting a sapling in the soil.

Soil is a mixture of clay, sand, small pieces of rock and dried leaves. Clay is sticky. It has the ability to absorb water.



Bricks are made of clay.



Many more things can be made using clay.



Pot



Clay Stove



Lamp



Roof Tiles

Rajan collects wooden toys. Kamala collects clay toys. How many toys do each of them have? Count and write.





Stone



Sandiya and Kaviya are playing with pebbles.



Pebbles are a type of stone.
Stone is a hard substance found on earth.
There are many kinds of stones. We use stone in many ways.



Mahabalipuram is well known for its stone sculptures.



Stones are used to **build houses**.



Marble is a kind of stone. It is used to make **floors** and **buildings**.



Small stones called gravel are used to make **roads**.



Stones are used to make **statues**.



Red stone is also a type of stone used in many **buildings**.



We can make **jewellery** using precious stones called **gems**.



Join the objects to the materials they are made of.



Wood

Stone

Clay



Sand



Ravi and Prabu are playing in the sand. Do you like playing in the sand?

Sand is formed from broken pieces of rock over a long period of time.

Sand is mixed with cement to construct buildings. Sand is also used in making glass. Beautiful sculptures can be made with the sand. This is called sand art.



Sand clocks were used to measure time in the olden days

Shall we make a sand clock?

- ☞ Take two similar bottles.
- ☞ Make a hole on the lid of both bottles with the help of your teacher.
- ☞ Fill one half of one bottle with sand.
- ☞ Paste both bottles with tape as shown in the picture.
- ☞ Now the sand clock is ready.





Let us play with a sand clock

Find out how many times you can jump by the time the sand moves from one bottle to the other. Use the clock to measure the time taken for other activities.



Metals



Surya is riding a bicycle. Bicycles are made of metal. Metal is a hard and shiny material. We use metals in our daily life in many ways. Look at the following examples.



Ring



Vessel



Tap



Car



Wire



Coin

Circle the things made of metals.





Evaluation



1. Which material is used to make the given objects?
Enter the correct number in the circle.

(Sand - 1, Wood - 2, Clay - 3, Stone - 4, Metal - 5)



2. Find and circle the hidden words.



Box

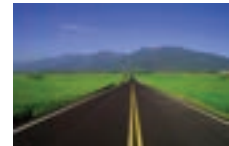


Lamp



Pot

L	U	R	R	O	A	D
A	S	A	L	V	A	C
M	T	P	O	T	M	T
P	O	Z	C	E	P	S
N	N	A	K	L	S	R
S	E	N	B	O	X	V



Road



Stone



Lock





3. Connect the objects to the materials they are made of.

	Wood Metal Clay	
		
		
		

4. Put a tick (✓) mark on the correct material.

Material					
Clay					
Wood					
Sand					
Stone					
Metal					
Plastic					



Self Evaluation

❖ I can identify the different materials around me

❖ I can differentiate between them





UNIT 2

Our Neighbourhood

Learning Objectives

The learners

- Describe their neighbourhood
- Know about different habitats
- Adopt safe practices



Poonjolai is a beautiful town. **Cheenu** lives there with his parents. He stands in the balcony and looks around. What does he see?

Observe the picture and discuss.

Now talk about your own neighbourhood.



Our **neighbourhood** is the area around our house.

People who live in the neighbourhood are our **neighbours**. They are known to us.

We can get all the things we need from our neighbourhood.

We must take care of our neighbourhood and keep it clean.



Trees and animals are part of our neighbourhood.



Where should Cheenu go to get the things inside the circle?
Connect by drawing lines.



Habitats



Cheenu : "Where do my cousins Ram, Ramya, Rekha, Ragav and Raghu live?"

Mother : "They live in different places. I will show you the pictures."





"Ram lives in a **village**.
This is his house.
He has cows and hens too.
The cowshed is **by the side of**
his house."



"Ramya also lives in a **village**.
She has a vegetable garden **behind**
her house."



"Rekha lives in a **city** on the third
floor in a tall building. She likes
her pet dog very much."

Cheenu : "Even I want a pet dog."

Mother : Ok, Cheenu.



Mother : "Ragav lives in a **hill station**.
He is fond of flowers. He has a
beautiful flower garden **in front of**
his house."



"Raghu lives **by the side of a river**.
There are many coconut trees
around his house."

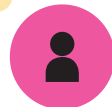
Cheenu : "I like the sound of the
river."



Our houses should always be kept clean and tidy. Houses
protect us from heat, cold, rain, storm and wild animals.

Let us learn to write our address

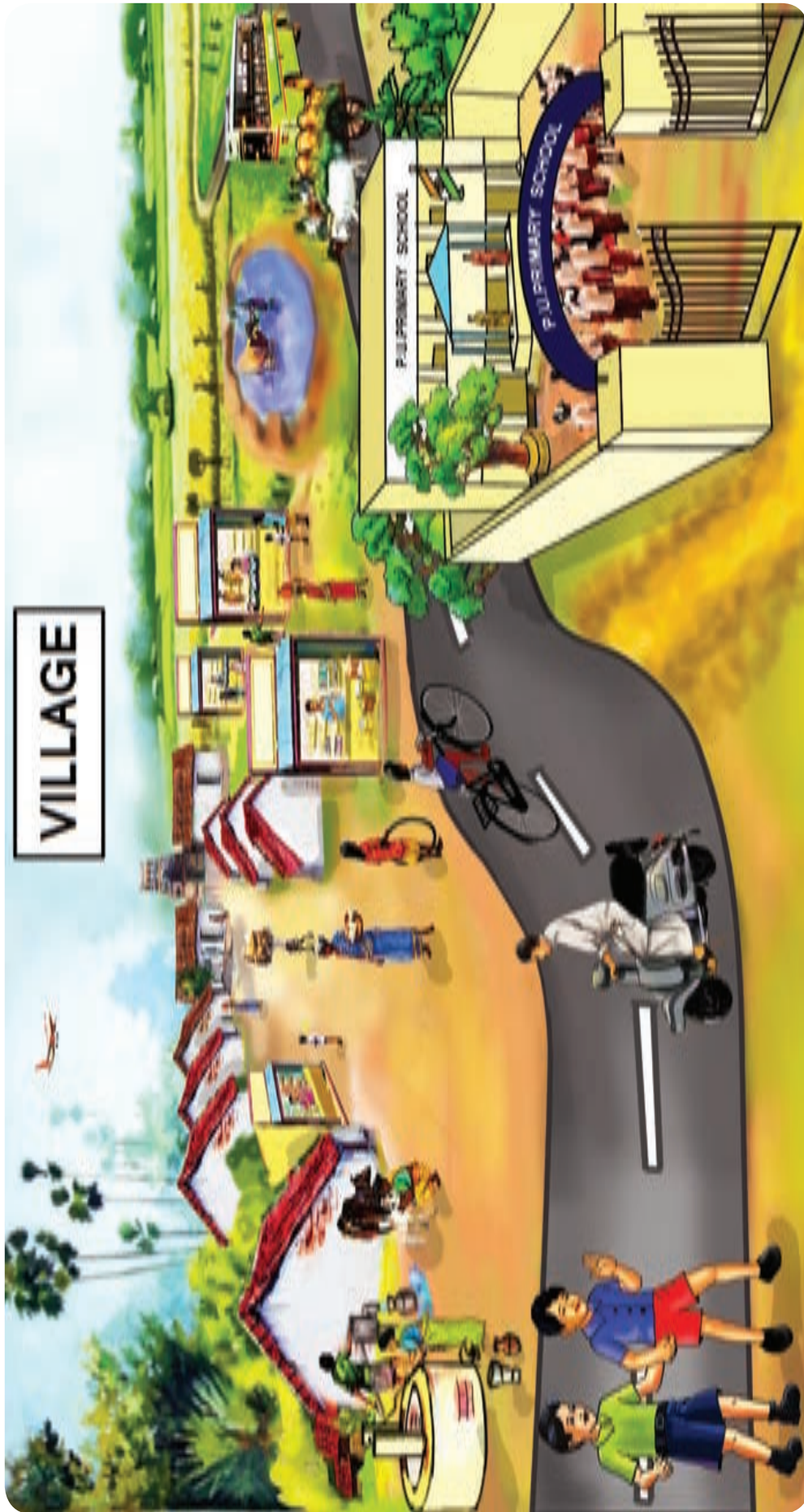
Name : _____
Door number : _____
Name of the street : _____
Name of the village/town/city: _____





Village and Town

Observe the pictures of a village and a town.
Talk about what you see. What differences do you observe?





Put a blue star (★) on three things common to the town and the village.

In the village, if you are going from the school to the temple, what will you see on the way?

Put a red star (★) on three things that are different in the town and the village.

Name the places that you see in the town.

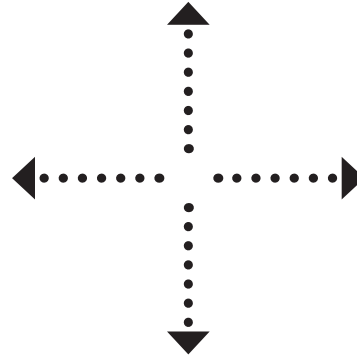


Directions

Observe the picture and talk about it.



Connect the dotted lines and name the directions.



Note for the teacher

Ask students to name friends sitting to their right, left, front and back.

Safety at School



Do not jump on desks/chairs



Use a pencil sharpener to sharpen the pencils. Do not use a blade



Form a queue to get into the bus



Do not harm each other



Do not put your hand or head out of the moving bus

Safety at Home

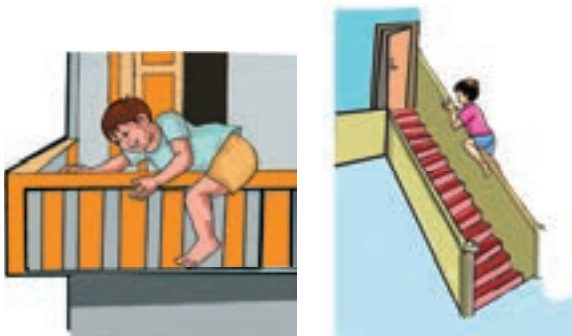
Do not play with sharp things - knives/blades



Do not put any object into your nose and ears



Never touch switches/plugs with your hands, with leaves or with twigs



Do not play on the banister or balcony



Do not play near the stove
Do not comb your hair in the kitchen



Do not catch any insects



Never play with fire

If the action is Safe put a (✓) and if the action is Unsafe put a (X).


☐

☐

☐

☐

Evaluation



1. Write "T" if true and "F" if false.

- We can buy vegetables and fruits from a market.
- We can get money from the ATM.
- We can play with sharp objects.
- We should not play on the road.

☐
☐
☐
☐

2. Colour the star green (★) for the correct action and red (★) for the wrong action.



3. Cross (X) out the objects that you should not play with.



4. Write the name of the places located in your neighbourhood.

(Police Station, School, Bus stand, Market)



Self Evaluation

- ☑ I can describe my neighbourhood
- ☑ I know about different habitats
- ☑ I adopt safe practices



UNIT 3

Transport

Learning Objectives

The Learners

- ◆ Identify the kinds of transport developed over the years
- ◆ Know about road safety



Let Us Discuss

What are the different vehicles that you see?
How do you come to school?



Transport means movement of people and goods from one place to another.

Today we travel by road using scooters, auto rickshaws, cars, buses, vans, trains. A train can carry many more people than a bus or a van. We travel in the air using aeroplanes and helicopters and on water using ships and boats.

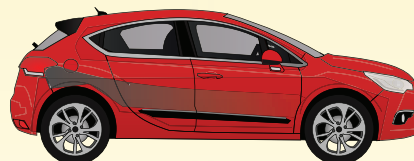
We can travel long distances in a short time using these modes of transport. They need fuel (petrol or diesel) to move.



Scooter



Auto rickshaw



Car



Bus



Van



Aeroplane



Ship



Train

The **fire engine** and the **ambulance** are special vehicles. A fire engine helps us to put out fires. An ambulance helps to take sick people to hospital.



Fire engine



Ambulance





Tick (✓) the vehicles that use fuel to move.

☐☐☐☐☐☐☐☐☐

Story of Transport



In early times man walked, used palanquins or animals like elephants and horses to travel from one place to another.





Elephants were used to travel across thick forests and were trained to carry loads and people.



Then man invented the wheel. No vehicle on the road can move without the wheel. Man used the wheel to make carts. He used animals like horses, bullocks and donkeys to pull carts with loads and to travel.



Horse Cart



Bullock Cart



Donkey Cart

He made chariots and bicycles using the wheel. Then came all the vehicles that we see today - cars, buses, trains and auto rickshaws.



Chariot



Car

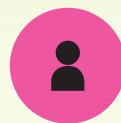


Bus

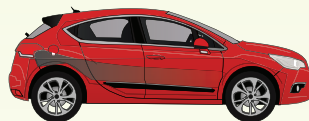




Colour the circle for the **two wheelers** in blue and for the **four wheelers** in red.



Bicycle



Car



Motorbike



Van



Push Cart



Bicycle



All of us love to ride this vehicle. Can you guess what it is? Yes! It is the bicycle. The bicycle has changed from olden times to the present day.



Parts of a Bicycle

Seat

Handle bar

Wheel

Chain

Pedal





Connect the parts of the bicycle with their names.



Seat

Handle bar



Chain

Pedal

Wheel

Road Safety



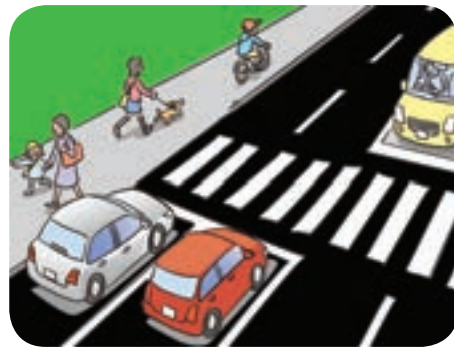
To be safe on the road, we must follow some rules.



1. Follow the signal.



- ❖ **Red** - Stop
- ❖ **Yellow** - Get ready
- ❖ **Green** - Go



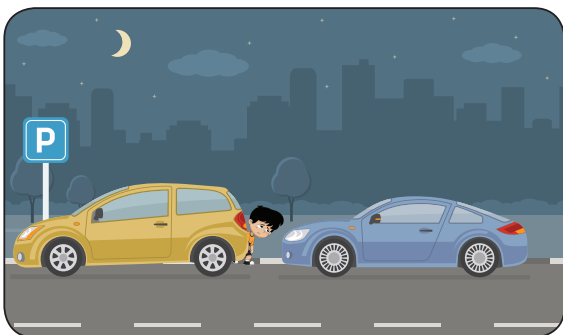
2. Always walk on the footpath.

3. Cross the road only at the zebra crossing. Cross when the symbol of a person walking turns green.



4. Never hide behind vehicles.

5. Never run or play on the road.



Think and Answer

We should cross the road only at a zebra crossing. Why?

Why is it called a 'zebra' crossing?



Tick (✓) the correct word/phrase.

1. Go when the **yellow** / **green** light is on.
2. Walk on the **footpath** / **road**.
3. Cross at **the zebra crossing** / **any other place**.

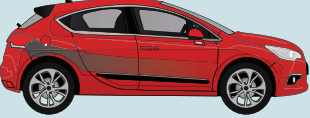




Evaluation



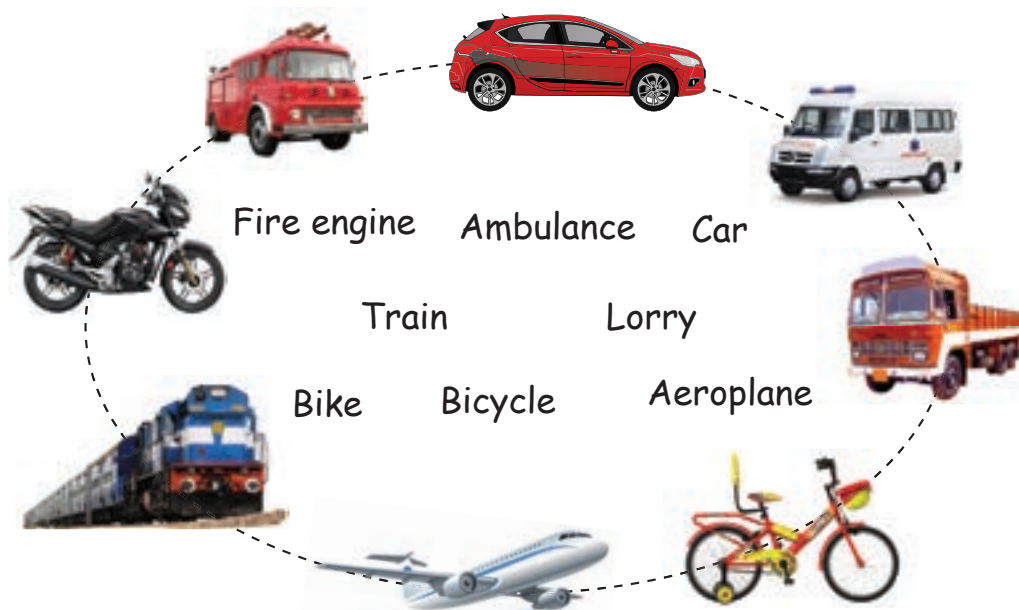
1. Tick (✓) the correct one.

Ambulance	 ☐	 ☐	 ☐
Ship	 ☐	 ☐	 ☐
Bus	 ☐	 ☐	 ☐
Aeroplane	 ☐	 ☐	 ☐
Bicycle	 ☐	 ☐	 ☐

2. Number the vehicles from one (least) to four (most) based on the number of people they can carry.



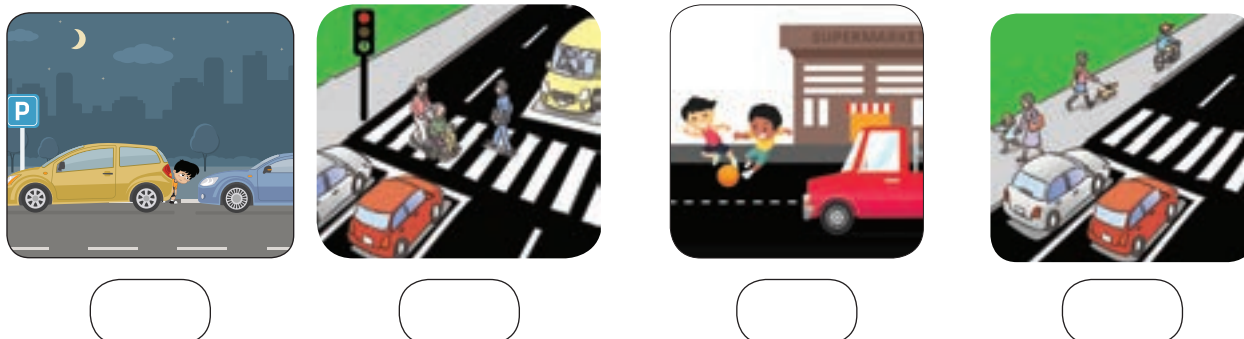
3. Match the words with the pictures.



4. Identify and tick (✓) the modes of transport used in earlier days.



5. Tick (✓) the correct actions.



Self Evaluation

- ☑ I can identify the different kinds of transport - old and new
- ☑ I can follow road safety rules



UNIT 4

Day and Night

Learning Objectives

The Learners

- ◆ Know the differences between day and night
- ◆ Describe the Sun, moon, stars, lightning and thunder

Day

Mother: "Kanmani, Kannan wake up. Come and see the **sunrise**. The sky looks beautiful."

Kannan and Kanmani : "Yes, Mother."



What do they see? Can you look at the picture and describe it?



The **Sun** is a star. We get **light** and **heat** from the Sun. There can be no life on earth without the sun.



The sunflower buds turn and face the Sun.





Dawn is the early morning just before sunrise. It is good for health to wake up at this time.

Vocabulary

Sun, earth, light, heat, dawn, morning, noon, afternoon, evening, twilight, sky, day

Morning follows the dawn. It's the time to get ready, eat breakfast and go to school.



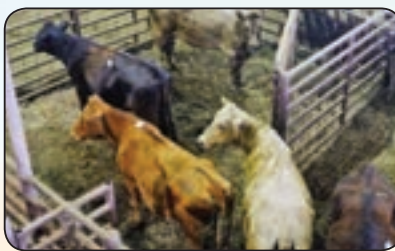
Lunch is at **noon**. The time that follows noon is called **afternoon**.

Evening is play time. Then the Sun sets.

Evening Activities



Birds returning to their nest



Cows returning to their shed



Children playing outdoors

Twilight is the time after sunset, just before the night.

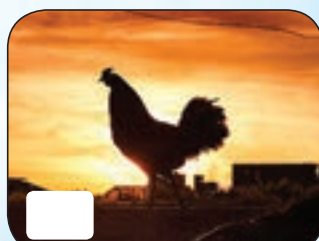
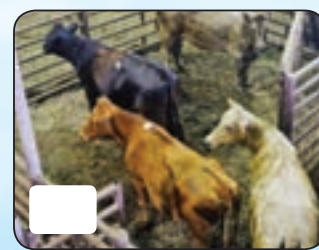
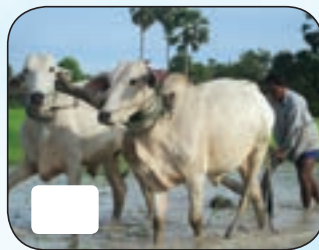
The time between dawn and sunrise is also called **Twilight**.



Night is the time to sleep.



Write "M" for the morning and "E" for the evening activities.



Night

Mother: "It is a lovely cool **night**. Let us have our dinner outside in the moonlight."

Vocabulary

moon, star, cool, night



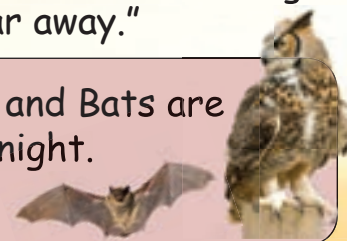
Kannan: "Why is the moon not as bright as the Sun?"

Kanmani: "I know why. The moon has **no light of its own** unlike the Sun. It gets its light from the Sun."

Kannan: "I'll tell you about the stars. See, there are **so many stars** in the sky. **The stars shine at night**. They have their own light. They look small because they are very far away."



The Owls and Bats are active at night.

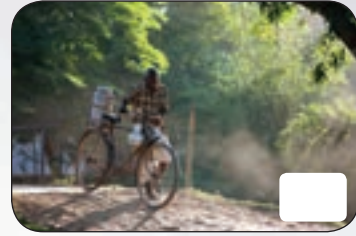


Mother: "Come, it's getting late. Let us go to bed. Early to bed and early to rise is a good habit."

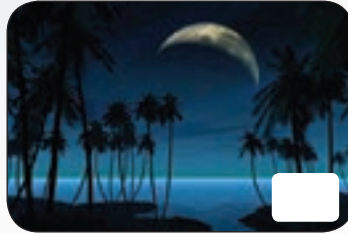
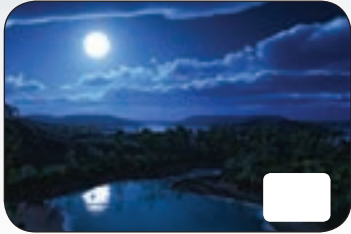
Identify and tick (✓) the odd one.



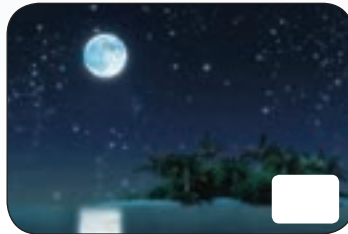
1.



2.



3.



Rain, Thunder and Lightning

Vocabulary

rain, rainclouds, lightning, thunder, rainbow

Kannan and Kanmani loved to watch the sky.

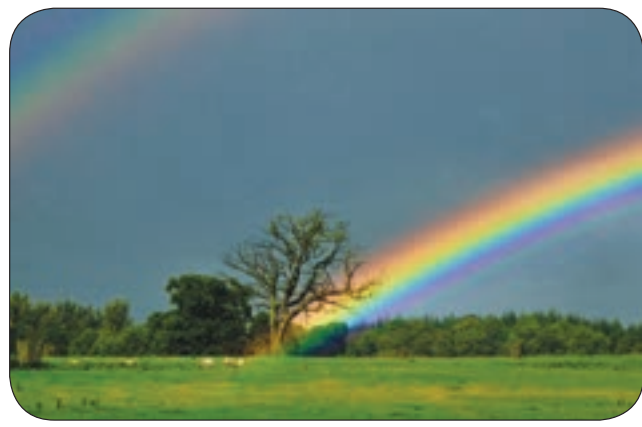
Kanmani : "Today the sky is full of rainclouds."

Kannan : "It has started to rain."



Suddenly they saw a flash of light in the sky followed by loud sounds.

Mother: "It is thunder and lightning. Both occur on a rainy day."

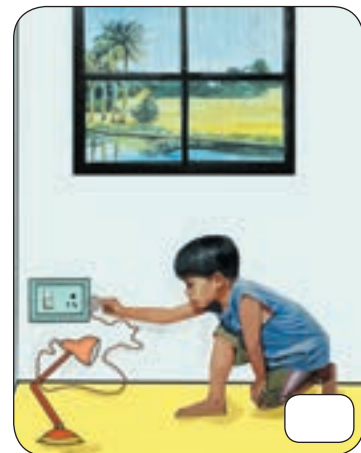
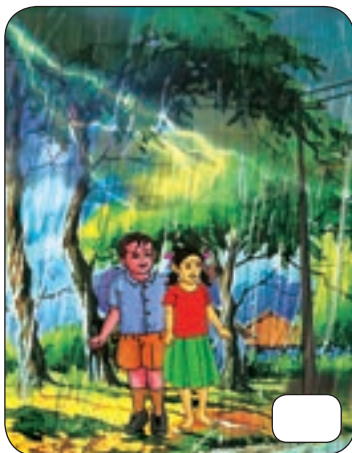


After a while, the rain stopped. Kannan and Kanmani saw a beautiful **rainbow** in the sky.

When there is thunder and lightning,

- Do not stand under the trees and under electrical wires.*
- Do not touch cut and hanging wires.*
- Do not touch electrical plug points.*

Cross (X) the actions that should not be done when it rains.



Evaluation

1. Write "T" if True and "F" if False.

- a. The Sun is a star.
- b. The moon shines with its own light.
- c. We can count the stars in the sky.
- d. A rainbow is seen on a rainy day.
- e. The Sun gives us heat and light.



2. Connect the pictures related to day and to night by drawing a line.



3. Find and circle the given words.

(LIGHT, STAR, DAY, MOON, NIGHT, SUN)

X	S	T	A	R	V	L
J	D	A	Y	A	K	E
E	K	S	M	O	O	N
S	U	N	N	D	E	R
F	L	N	I	G	H	T
L	I	G	H	T	O	P

Self Evaluation

- ◆ I know the differences between the day and night
- ◆ I can describe the Sun, moon, stars, lightning and thunder



UNIT 5

Science In Everyday Life

Learning Objectives

The learners

- ✿ Name different kinds of clothes
- ✿ Recognise the importance of clothing
- ✿ Identify the types of clothes to suit different weather conditions

Salim : "Parveen! What are you looking at?"

Parveen : "I am looking at the dresses."

Salim : "Which is your favourite dress?"

Parveen : "I like skirts. What about you?"

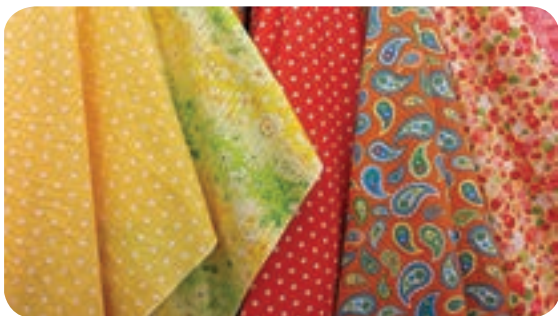
Salim : "I like shirts and shorts."

Father : "Come, let us look at various kinds of clothes and buy what we want."



Cloth

Material that is used to make **dresses**, towels and bedsheets is cloth.



Clothes

Dresses that **we wear** either **stitched** (e.g., shirt, skirt) or **unstitched** (e.g., dhoti, saree) are clothes.



Shirt



Skirt



Saree



Dhoti



Uses of Cloth

The following items are made from cloth.



Bag



Handkerchief



Bedsheet



Curtain



Bandage

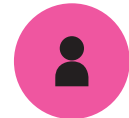


Kitchen towel



Bath Towel

Match the related pairs and name them.



Story of Cloth



Early man used clothes made of leaves and animal skin.



Leaves as clothes



Animal skin as clothes

The clothes we wear nowadays are made of different materials like cotton, wool and silk.

We get **cotton** from the **cotton plant**, from which we make **cotton clothes**.



We get **wool** from **sheep**, from which we make **woollen clothes**.

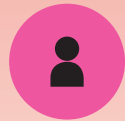


We get **silk** from the **silkworm**, from which we make **silk clothes**.





Match the following.



Clothes and Seasons

Why do we wear clothes?

We wear clothes to protect our body from heat, cold, rain, dust, insects, germs and small injuries.

We wear **different types of clothes** in **different seasons**.



During **summer** the days are **hot**. We wear **cotton clothes** to keep us **cool**.





During **winter** the days are **cold**. We wear **woollen clothes** to keep us **warm**.



Some days of the year are **rainy**.
We wear **raincoats** to keep as dry. We also use an **umbrella**.



Write "W" for the winter clothes and "S" for the summer clothes.











You are going to the hills where it is very cold. What special kind of clothes will you need there? Put a tick (✓) mark.











Types of Clothes



Father: "Hi Salim, you are looking very smart in this dress."

Salim: "Thank you. This is my new uniform. All students wear uniforms when they go to school."

Father: "Good. Have you seen any other people wearing uniforms?"



Students



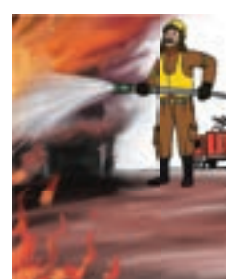
Chef



Policewoman



Nurse



Fireman



Washing Clothes

The clothes we wear should be neat and clean. When we dress neatly, we look smart.

Steps of washing



Soaking in water



Applying soap



Washing



Rinsing



Drying

Match the people with their uniforms by drawing a line.



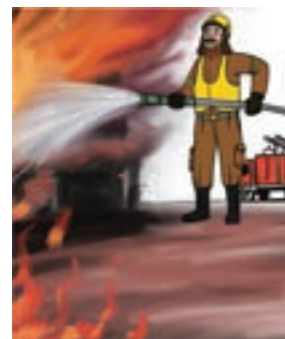
Fireman

Chef



Policewoman

Students





Special Clothes

When people act in a play or give a dance performance they wear special clothes called costumes.



People in different parts of India wear different kinds of dresses.



Punjab



Kerala



Tamil Nadu

You are given a towel. How can you use it? Show the various actions- for example, wiping, wearing it as a dhoti, turban, etc.



Evaluation



1. Tick (✓) the correct answer.

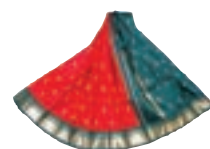
- a) Clothes **protect/harm** our body.
 b) We wear **cotton/wool** in summer.
 c) We must wear **dirty/clean** clothes.
 d) Mary wears a **uniform/frock** to school.

2. Circle the odd one.

a.



b.



c.



3. Look at the pictures. Find and circle the given words.
 (SHIRT, GLOVE, CAP, SKIRT, SAREE)



S	M	C	A	P	T
H	S	A	R	E	E
I	O	P	Q	R	S
R	G	L	O	V	E
T	S	K	I	R	T



Self Evaluation

- I can name different kinds of clothes
 I can recognise the importance of clothing
 I can identify the types of clothes to suit different weather conditions



Environmental Science - Class - I, Term-III

List of Authors, Domain Experts and Reviewer

Reviewer

Dr. Sultan Ahmed Ismail
Director,
Ecoscience Research Foundation,
Chennai.

Domain Experts

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

Dr. Suchitra Ramkumar
Director,
Upasana Center for Learning and Well being,
19/6, Nehru Nagar, Second Main Road,
Adyar, Chennai.

Authors

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

S. Arumbumozhi
Lecturer,
DIET, Ranipet, Vellore.

S. Sakthivel Murugan
BT Asst, PUMS, Sholingallur,
St.Thomas Mount Block, Kancheepuram.

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

N. Anbazhagan
BT Asst, PUMS, 1-3 Ward,
Uthiramerur, Kanchipuram.

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

C. Thangam
BT Asst, PUMS, Kallarapatti,
Alangayam Block, Vellore.

R. Sakthivel
BT Asst, GHS, Sellappanpettai,
Budalur Union, Thanjavur.

R. Geetha
SGT, AMMS, Pattaravakkam,
Villivakkam Block, Thiruvallur.

Academic Coordinators

S. Balasubramanian
Deputy Director,
SCERT, DPI Campus, College Road,
Chennai-6.

T. Ashok
PG Asst, Govt (Boys) HS School,
Ponneri, Thiruvallur Dist.

Content Readers

N. Thamarai Kannan
PGT, JGNHSS, Tambaram, Kanchipuram.

T. Subhaiya
PGT, GGHSS, Achrapakkam, Kanchipuram.

Art and Design Team

Illustrators

N. Gopalakrishnan
Kumara Rajah Muthiah HSS,
Gandhi Nagar, Adyar, Chennai.

S. Manoharan
GHSS, Silamalai, Theni.

D. Durai
Bishop Heber HSS, Theppakulam, Trichy.

D.T.M. Prabu Raj
GHS, Manimangalam, Kancheepuram.

P. Ramar
GBHSS, Kamaraj nagar, Avadi, Chennai.

Layout

V2 Innovations,
Gopalapuram, Chennai-86.

Wrapper Design

Kathir Arumugam

Inhouse QC

Gerard Wilson
Manohar Radhakrishnan

Coordination

Ramesh Munisamy

QR Code Team

R. Jaganathan
S.G.T., PUMS, Ganesapuram- Polur, Thiruvannamalai.

N. Jagan,
B.T. Asst., GBHSS, Uthiramerur, Kancheepuram.

J.F. Paul Edwin Roy
B.T. Asst., PUMS, Rakkipatti, Salem.

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

Printed by offset at: