

# ENVIRONMENTAL STUDIES

## SECOND STANDARD TERM III

### Chairperson

**Mr. G. SADASIVAM,**

Principal

Shri. Krishnaswamy Matriculation Higher Secondary School,  
Annanagar, Chennai-600 040.

### Reviewers

**Mr. K. RAMACHANDRAN**

Lecturer,  
D.I.E.T,  
Uttamapalayam,  
Theni District.

**Mr. S. SARAVANAN**

AEE0 (Science),  
District Elementry  
Educational Office,  
Kanchipuram District.

**Mrs. Dr. M. SEETHALAKSHMI**

PG Teacher,  
Chennai Girls Higher  
Secondary School,  
Saidapet, Chennai - 600 015.

### Authors

**Mr. G. NAGARAJAN,**

Graduate Teacher,  
Panchayat Union Middle School,  
Perla Kodunthurai, Musiri, Trichy District.

**Mr. K. PRABAHARAN,**

Graduate Teacher,  
Government High School,  
Uthupatti, Tuticorin District.

**Mr. V. RAJA,**

Graduate Teacher,  
Panchayat Union Middle School,  
Old Seevanam, Kancheepuram District.

**Mrs. R. ROSLIN JAYA,**

P.G Teacher,  
B.S.G.R. Krishnammal Girls Higher Secondary School,  
Peelamedu, Coimbatore District.

**Mrs. P.J. MARIA AUXILIA,**

Graduate Teacher,  
Holy Angel Anglo Indian Higher Secondary School,  
T. Nagar, Chennai - 600 017.

**Mrs. T. ARCHANAA,**

P.G Teacher,  
Mahatma Montessori Matric Higher Secondary School,  
K. K. Nagar, Madurai District.

### Laser Typeset

S. YUWARAJ,  
B. SUGUNTHI

### Illustrations

A. KASI VISWANATHAN, M. GHINNASWAMY  
N. JAYAKUMAR, N. GOPALAKRISHNAN

### Layout

R. EDWIN, S. SIVAKUMAR  
M. SUNDARAMURTHY

# 1. AIR



Shall we complete the poem!

When the air blew,  
The windows opened!  
As windows opened,  
The papers flew!

When the air blew,  
The trees swayed!  
As trees swayed,  
The leaves withered!

When the air blew,  
The clothesline glide!  
As clothesline glide,  
The clothes dried!

When the air blew,

---

---

---

When the air blew,

---

---

---



**Look at the picture and answer.**

- Why do coconut leaves move?
- Why do kites fly?
- What is filled in the balloon?
- Why do the blades of the windmill rotate?

Air is present all around us.  
We cannot see the air.  
We can feel the air.

## BREATHE

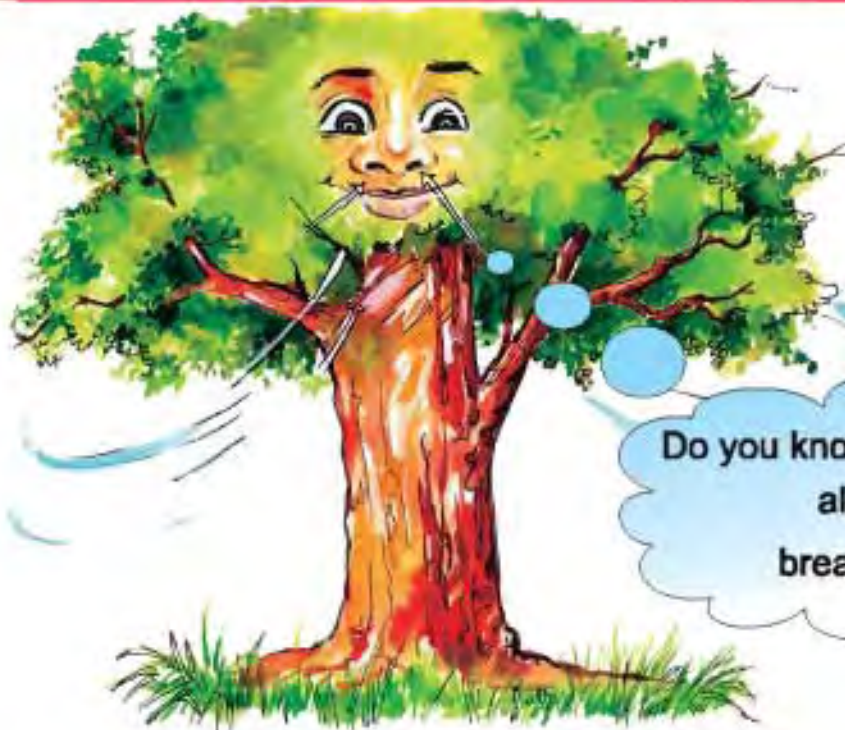


Close one nostril and inhale air through the other nostril. When you do this you can feel air going inside.



When you exhale, keep your finger below your nose. You can feel air coming out.

- Inhaling and exhaling of air through the nose is called breathing.
- We should breathe to live. Air is essential for breathing.



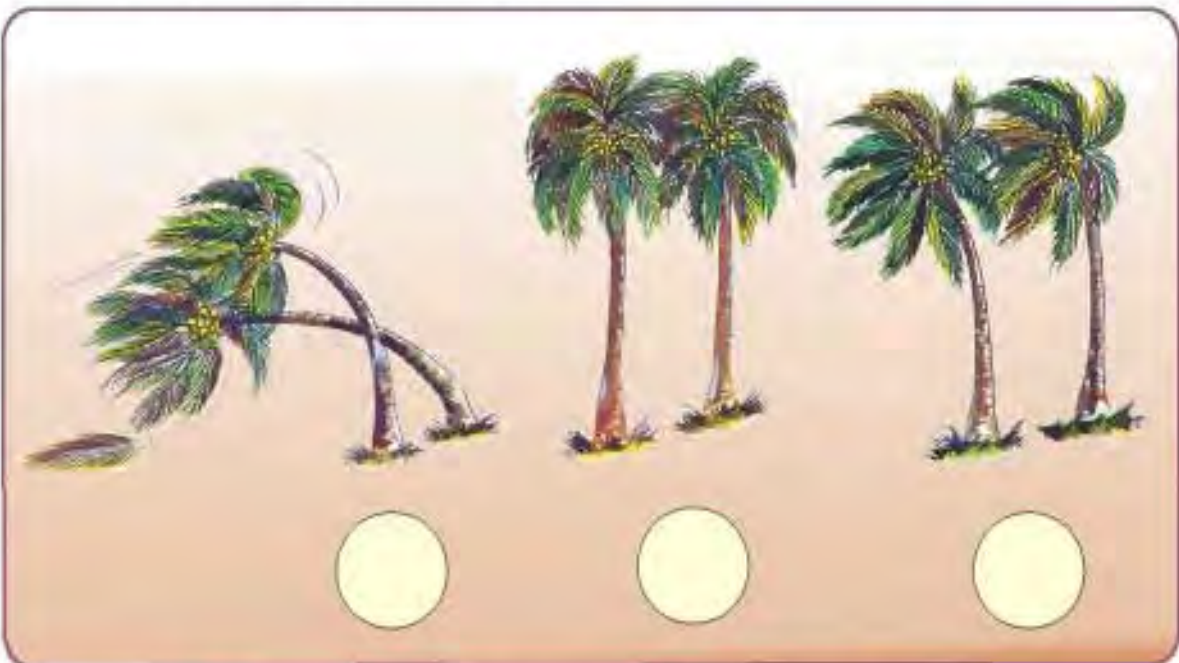
Plants, animals and man need air for breathing.



Bubbles are coming out from the mouth of the fish.  
Do you know why?

### Shall we know the movement of Air !

Look at the pictures and number them 1, 2, 3.. based on the current of air that forced the trees to bend.



- Air moving slowly and gently (a light wind) is called breeze.
- Wind moving strongly is called a storm.
- A strong wind is called a gale.

**Shall we know the direction of the wind?**



Blow a balloon. Tie it and allow it to fly in the air. The direction in which it flies shows the direction of the wind.

Mark  for the right action and  for the wrong action.



Fill in the blanks choosing the right choice.



Football is filled with \_\_\_\_\_  
(air / water)

The direction in which the kite flies is

\_\_\_\_\_  
(the direction of wind / opposite to the  
direction of the wind )



Inhaling and exhaling air through the  
nose is known as \_\_\_\_\_  
(Respiration / Digestion)

\_\_\_\_\_ is produced from the  
windmill.

(Electricity / Light)



\_\_\_\_\_ is helpful for  
candle to burn.

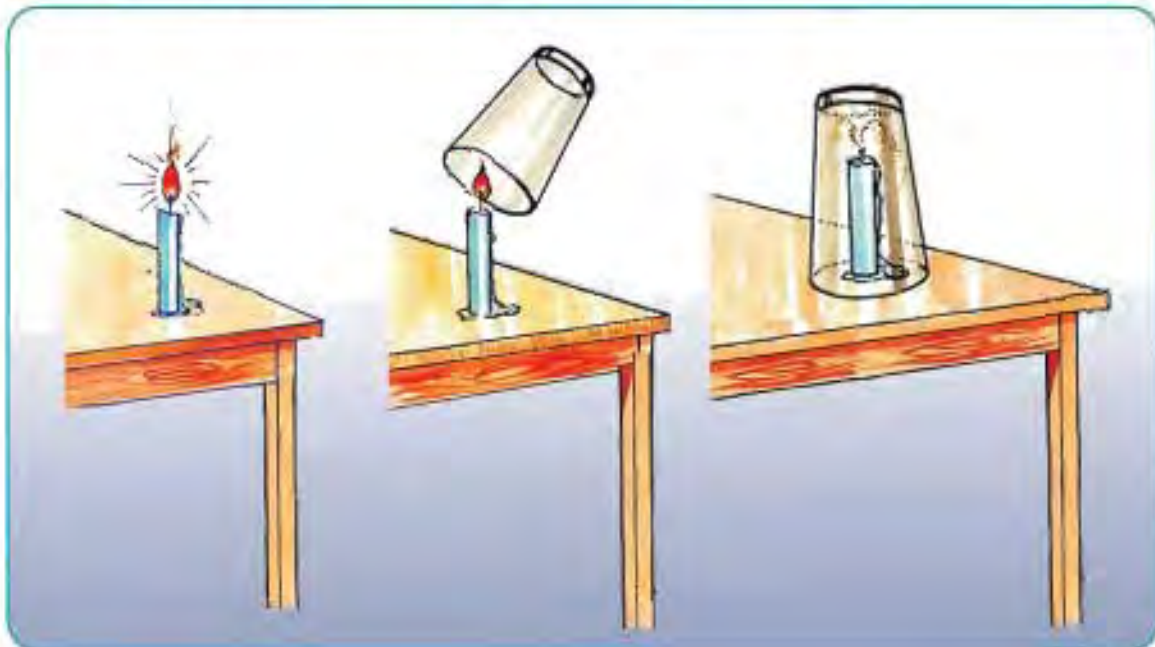
(Gentle breeze / Strong wind)



**Shall we make a fan!**

- Take a sheet of paper.
- Draw a picture that you like and colour it.
- After colouring it fold it alternatively and hold it tightly at the bottom.
- Wave it. Can you feel the air ?

**Can you say how the candle light is put out ?**





**Shall we make a balloon missile?**

**Shall we jump and catch it as it goes higher?**



Watch the balloon missile as it goes higher.

Why does the balloon fly high?

**Shall we float a balloon boat in water?**

**Isn't it beautiful to see the boat floating?**



Watch the balloon boat moving in water.....

Why does the balloon boat move forward in water?

**Do you know?**

What are the necessary things needed for the movement of cycles, two wheelers, four wheelers and aeroplanes ?



## 2. WATER



**I come as Rain!  
Flow as Flood!  
Gather as Pond!  
Change as Lake!  
Run as River!  
Mingle with the sea  
Transform into clouds  
To return as Rain again!  
I quench thirst!  
Put out fire!  
Clean everything!  
Give electricity!  
Make plants grow!  
There is no life without me!  
I am "Water"**

**I am going to talk to you ! Do you know about me ?**

I am essential for your life  
I fall on earth as **rains..**



When I flow into the shallow pits,  
I am called **Pond.**



When I collect in a deep,  
wide area I am called **Lake.**



When small streams join  
together, I am called **River.**



When all the rivers meet  
together, I am called **Sea.**



**The main source of water is Rain ! There are different water sources  
such as **Pond, Lake, River and Sea.****

**Shall we write in which of the water sources  
Shankar and Saritha are fishing....**



**Write whether these water  
sources are natural or artificial.**



Shall we mention the uses of water?



To cook.....



To wash clothes....





To grow plants....



To put out fire...



Discuss with your friends, the other uses of water.

Mark  for the right action and  for the wrong action.



- Drinking water should be stored in clean vessels.
- Drinking water should be covered and protected from impurities.
- Drinking water should be boiled, filtered, cooled and used.
- Drinking water should not be polluted.
- Drinking water should not be wasted.
- We should save every drop of water.
- It is our duty to save water.

Polluted water contains disease causing germs. Drinking polluted water causes diseases. Therefore we should protect and keep water clean.

Observe the pictures and mark whether the following statements are right or wrong!

The discharged water comes from the factory.

The water for cultivation comes from the dam.

This water can be used for drinking.

This water should not be used for bathing.



The polluted water from the dyeing factory is coming out through the pipe.

The pure water is coming out through the pipe.

This water can be used for washing.

In this water, crops grow well.

Plastic waste is mixed with water.

Garbage should not be mixed with water.

This water can be used for agriculture.

This water cannot be used for cooking.





**Mettur Dam is situated in Salem District in Tamilnadu. We get hydroelectric power from this dam.**



**Courtallam Waterfalls, Tirunelveli District, Tamilnadu.**

**Name some of the waterfalls that you know.**

---

---

**Do you know?**

**Why do most of the parts of the Earth look blue?**





### 3. NATURAL RESOURCES



In the classroom, the children were waiting eagerly to see the puppet show.



Good morning! I am **Kalvarayan**, made of stone. I am made of the rocks from mountains and hills. Rocks are useful to people in many forms such as granite, marble and chalk. People use me to build houses, make statues in temples, construct roads and dams.

Good Morning! I am **Madhavan**, made of soil. Soil is formed when the rocks rub against each other and break into very small pieces that is by the weathering of rocks. People classify soil into different types, such as gravel, sand, clay, red soil, alluvial soil , black soil etc,. I am used for agriculture and to make clay vessels.



Good Morning! I am **Ulaganathan**. I am made of metal. I am separated from the earth crust. I am hard and shining. I exist in different forms like iron, gold, silver, aluminium, etc,. People wear me as ornaments and use me to make different household articles.



Good Morning! I am **Maragatham** made of wood. Wood is available everywhere on earth. All living beings depend on me. I give food, shelter and clothing for living beings.

“ Hey children! I make a request to you, when people cut and destroy trees rain becomes scanty and the world will turn into a desert without water. So please don't cut us !” Saying so, she left with tears.





**Colour the above pictures of articles.**

- Use yellow colour for wooden articles.
- Use red colour for metal articles.
- Use black colour for stone articles.
- Use brown colour for clay articles.

**Classify :**



Articles made up of Wood	Articles made up of Clay	Articles made up of Metal	Articles made up of Stone

What are the following toys made up of ?



**What are the following toys made up of ?**



**Shall we go to the seashore?**



**Look at the seashore.**

**What do you see?**

_____	_____
_____	_____
_____	_____

**Seashore is a long area covered by sand.  
The sand is made up of small particles.**

- Sand in the seashore is not suitable for agriculture.
- This sand cannot be used for construction also.



**Have a look at the field.**



**What are the activities going on there?**

- Soil is seen in the field.
- This soil is suitable for agriculture.
- When water mixes with soil, marsh is formed.
- Seedlings are planted in this marshy land and agriculture is done.



**Have you seen marshy land elsewhere?**

**Classify the pictures given below and number them**

**1 Sandy area 2 Marshy area.**

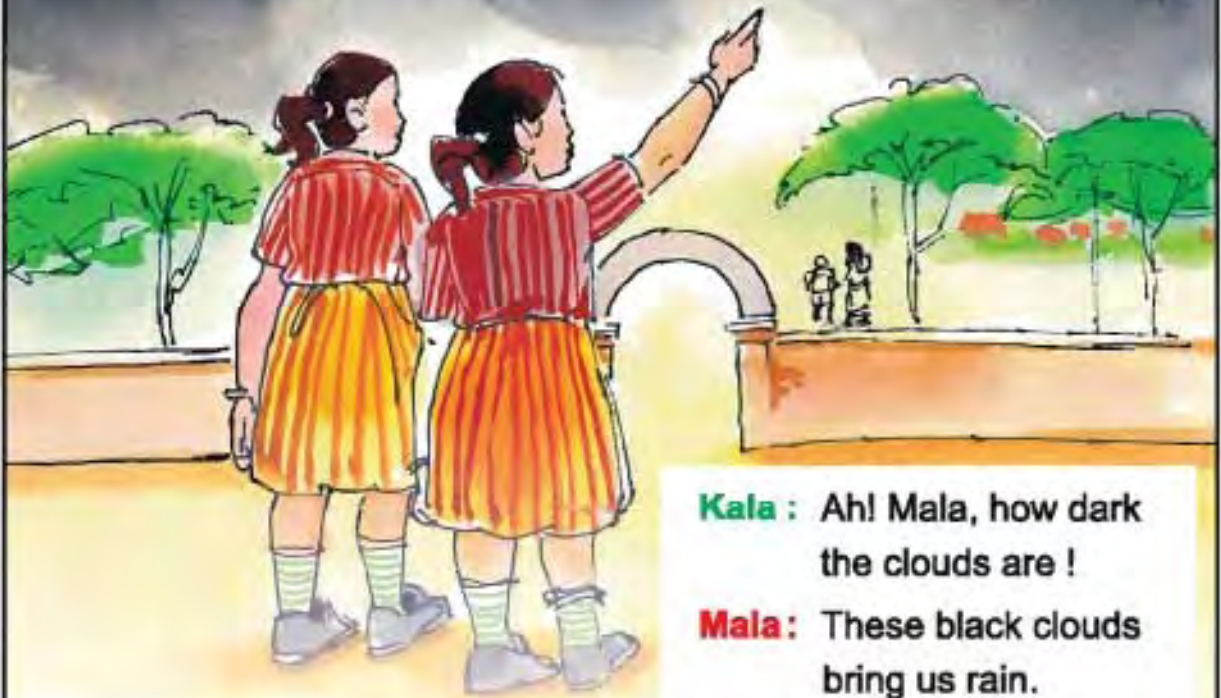


**Do you know?**

Why is the temperature low in the mountainous regions even during the summer season?



## 4. SKY



**Kala :** Ah! Mala, how dark the clouds are !

**Mala :** These black clouds bring us rain.



It started raining....



**Kala :** What are those coloured bands in the sky?

**Mala :** Oh! This is the rainbow. usually it appears just after the rain when sunlight falls on the drops of water.

**Kala :** The sky looks blue.

**Mala :** The sky appears to be blue during the day.



**Kala :** Then, why does the sky appear red early in the morning and late in the evening?

**Mala :** When the sun rises in the east and sets in the west, the sky appears red in colour.

**Kala :** Can you tell me about the stars, sister?

**Mala :** The stars blink like fire flies. They look small as they are far away from us.



The sky is always beautiful!

**Sun :**

The sun is a star. It is a ball of fire. It gives us light and heat.

**Moon :**

The moon is a satellite. It is made of rock. There are no living beings in the moon. The moon has no light of its own. It reflects the light of the sun.

**Stars :**

Stars are seen in the sky at night. They are either seen alone or in groups. We cannot see the stars during the day because of the strong and bright light of the sun.

**Rainbow :**

Rainbow is seen in the day sky during the rainy season opposite to the sun. It has seven colours.

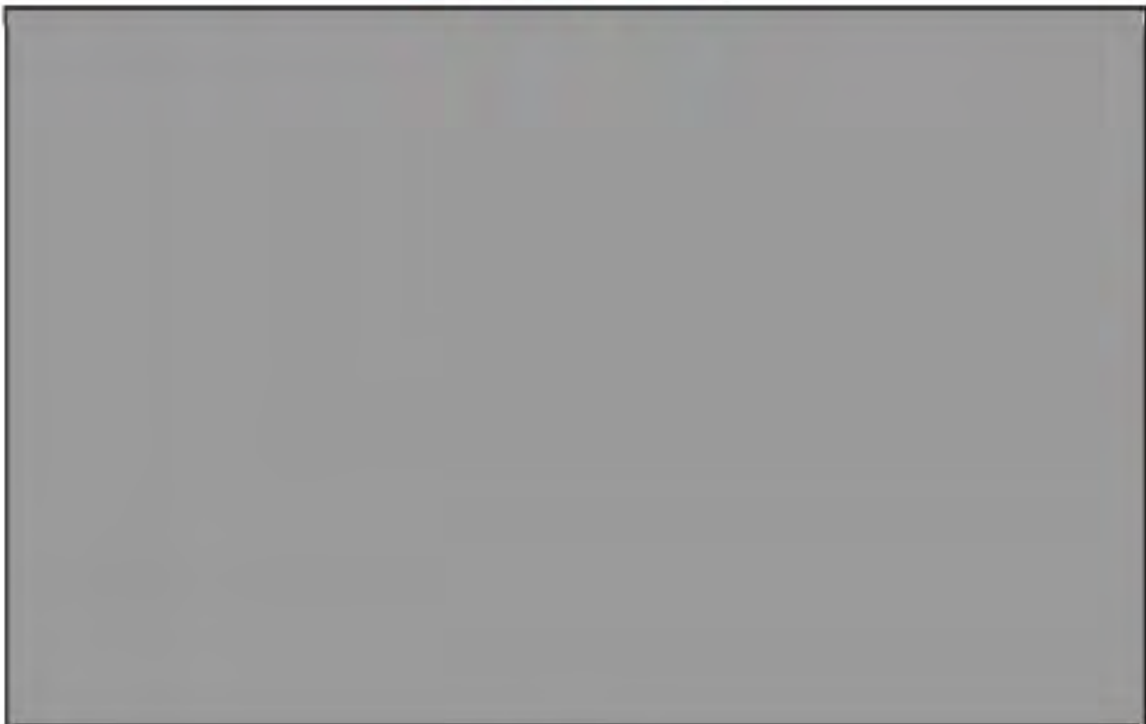


**1. In the pictures shown below, draw the things that you see in the sky during the day and at night.**

**Sky at daytime**



**Sky at night-time**



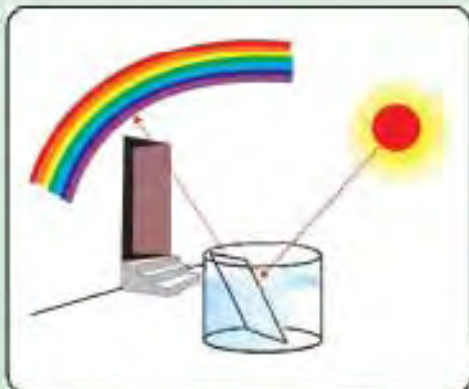
**Fill in the missing letters.**

**Shall we try making a rainbow at home?**

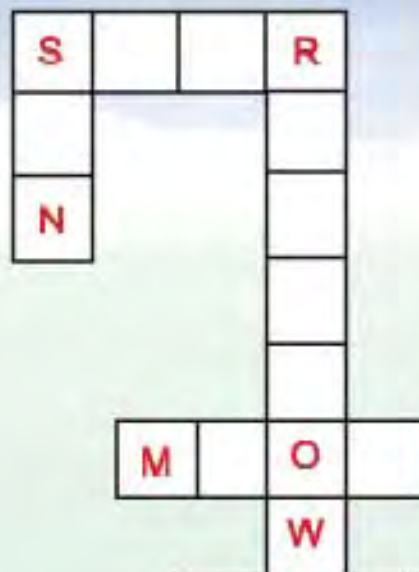
- Take a glass tumbler and fill it up with water.



- Place a piece of mirror inside the tumbler in a slanting position.



- Place the set up in direct sunlight.
- Sunlight should fall on the mirror.
- What do you see on the wall?



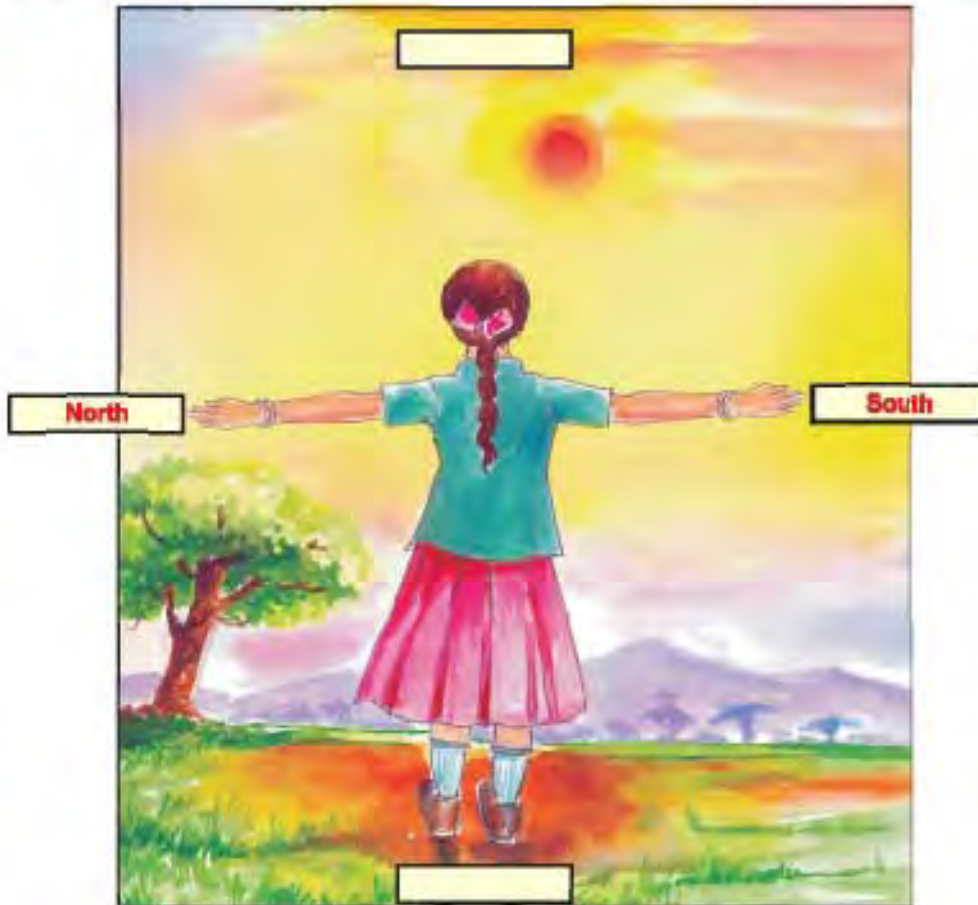
## Do we know about directions?



The sun rises in the East.



The sun sets in the West.



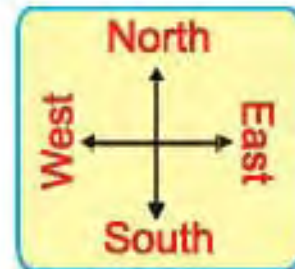
When we stand facing East ...

- ▶ The left arm points the North direction..
- ▶ The right arm points the South direction.

East, West, North and South are the four directions.



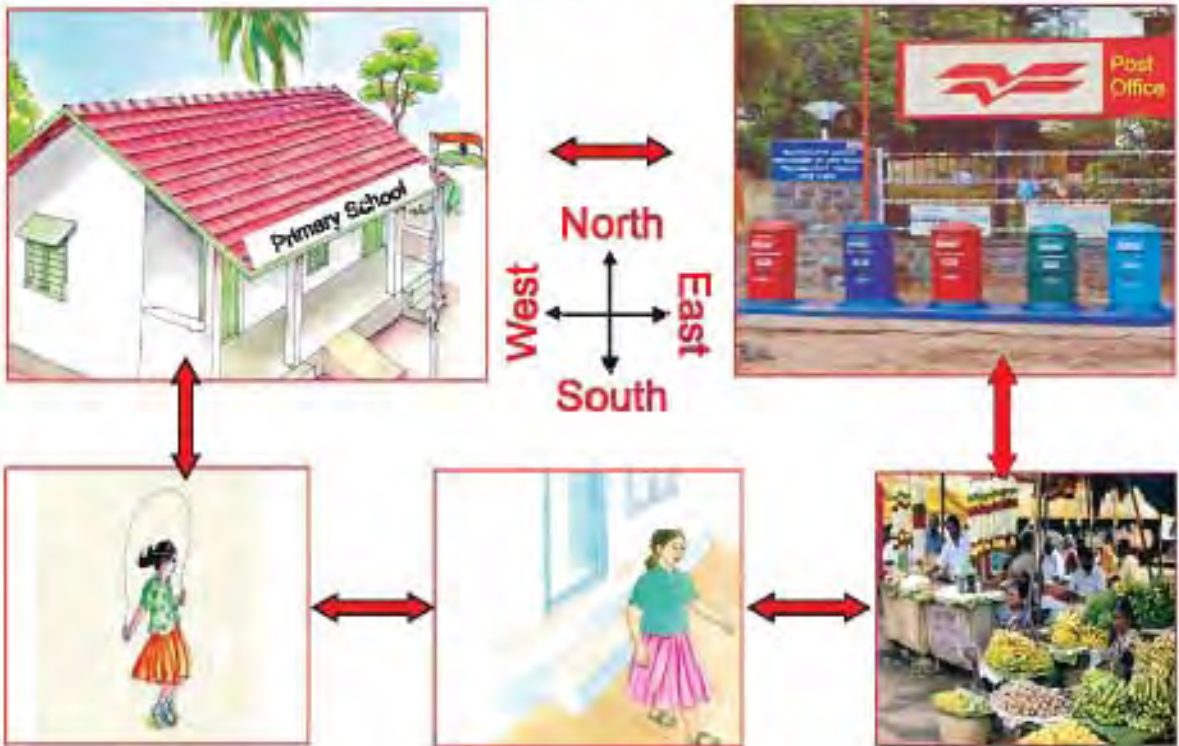
**Show the directions to the butterfly.**



When the butterfly flies from the basket of roses, in which direction does it have to fly...

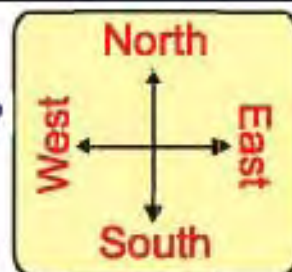
- to reach the basket with white samanthi?
- to reach the basket with jasmine?
- to reach the basket with lotus?
- to reach the basket with sunflower?

## Shall we help Fathima to find out the directions?



- Fathima must go in \_\_\_\_\_ direction to the market from her house.
- From the market Fathima should go in \_\_\_\_\_ direction to the post office.
- The school is located at the \_\_\_\_\_ of the post office.
- The playground is located in the \_\_\_\_\_ of the school.
- Fathima's house is in the \_\_\_\_\_ direction of the playground.
- What are the directions, Fathima has to take if she goes to the school through the playground?
- What are the directions, Fathima has to take if she goes to the school through the post office?

Are these land marks found in your town?  
In which direction are they from your house?



S.No	Place	Yes/ No	Direction
1.	School	Yes	East
2.	Police Station		
3.	Bus stand		
4.	Hospital		
5.	Post Office		
6.	Library		
7.	Airport		

• From your house, towards

North, \_\_\_\_\_ is found.

South, \_\_\_\_\_ is found.

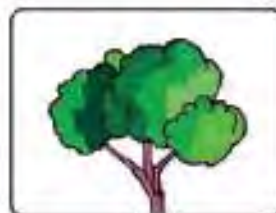
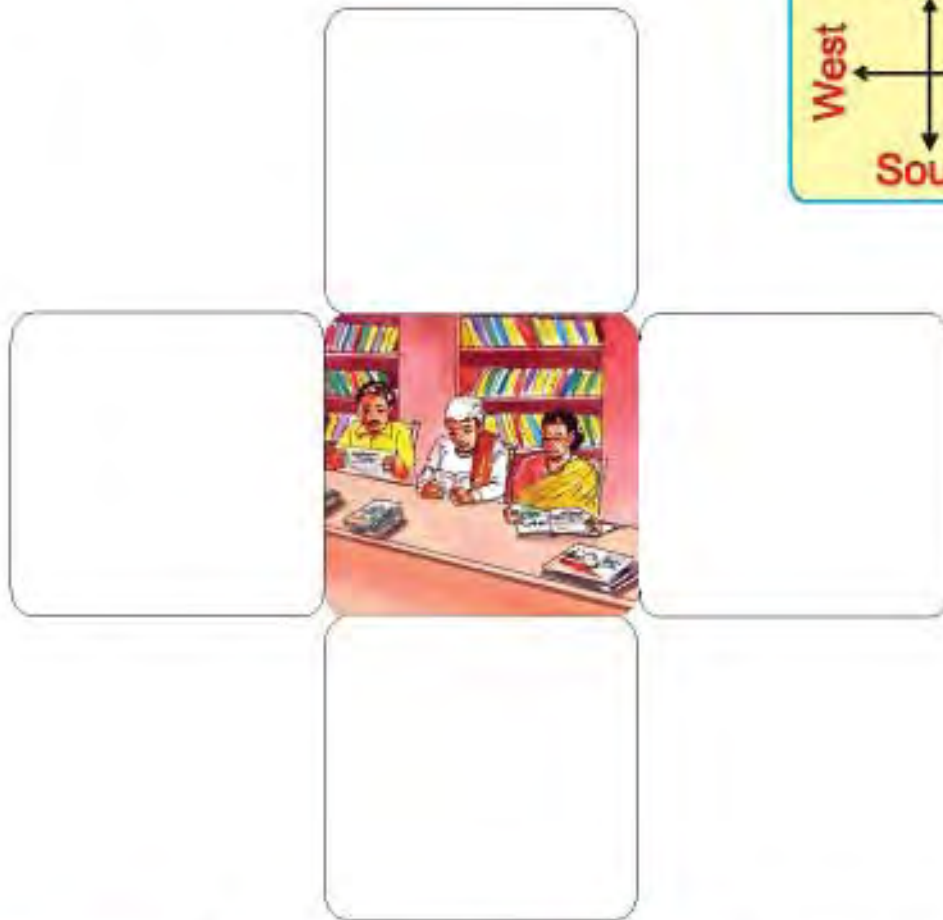
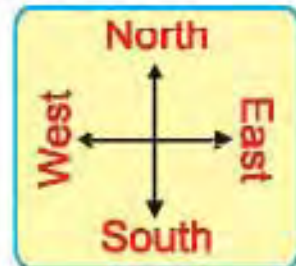
East, \_\_\_\_\_ is found.

West, \_\_\_\_\_ is found.

Draw your house and surroundings. Assume the top side of your house as north.

**Draw the following in the four directions of the library.**

- Tree in the East.
- House in the West.
- Mountain in the North.
- Electric post in the South.



**Do you know?**

How do soldiers find directions, when they are in dense forests ?



