

# Science

2



## What does “Progressive Science” series consist of?

Each lesson is supported by :

- Beautiful illustrations
- Learning objectives
- Fact to know
- Let's Recall
- Word power
- Train your Brain
- Cross Curriculum Connect
- Exercises with Revision and Model tasks
- Activity time
- HOTS
- Project time

Tasks for RTP and MTP include :

- Answer the questions in short
- Fill in the blanks
- Answer the questions
- True/False
- Multiple choice questions
- Answer in one word
- Match the columns

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# Preface

The "**Science**" series, which is intended for students in grades 1 through 8, is precisely developed in accordance with the requirements and recommendations set forth in the Most Recent National Curriculum Framework appropriate for CBSE and other state board schools.

Children are inherently curious, and they begin to engage in scientific inquiry at an early age. The series emphasises learning with understanding by keeping this in mind.

A fascinating voyage into cause and effect, as well as the inspiration for all life and the universe we inhabit, is offered by science. It is a topic that has a predetermined impact on our line. Therefore, it is crucial to instil a scientific mindset in kids as early as feasible.

The book includes Model Test Paper and Revision Test Paper in accordance with the new plan.

Important details regarding the series:

- ★ Learning objectives : which provides quick points about what students going to learn in the chapter.
- ★ Fact to know : which provides interesting facts to extend learning beyond the curriculum.
- ★ Let Recall : which is provided to summarise the key lessons learned.
- ★ Word Power : In this section, difficult words' definitions are provided.
- ★ Train your Brain : This part aims to help pupils improve their critical and creative thinking abilities.
- ★ Cross Curricular Connect : To assess and evaluate the students on a regular basis throughout each chapter in the form of MCQs, one-word questions, columns to match, activity time, and project time in accordance with CBSE rules on the CCE pattern.
- ★ Revision Test Paper : To test and evaluate the students on a regular basis in each chapter using MCQs, one-word questions, column-matching activities, and project time in accordance with CBSE standards on the CCE pattern.

Model evaluations gauge the depth of a student's learning. It is presented in the form of questions and answers and fill-in-the-blanks in each chapter. High order thinking skills (HOTS): Difficult opportunities provided to enhance analytical abilities.

To Offer Continuous and Comprehensive Evaluation of Knowledge, Understanding, and Application of Concepts Learned.

A lot of work has gone into making the series successful. We appreciate any advice you may have to make the series better.

- ★ High order thinking Skills (HOTS) : Difficult opportunities are provided to enhance analytical abilities.



– Publishers



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# Types of Plants

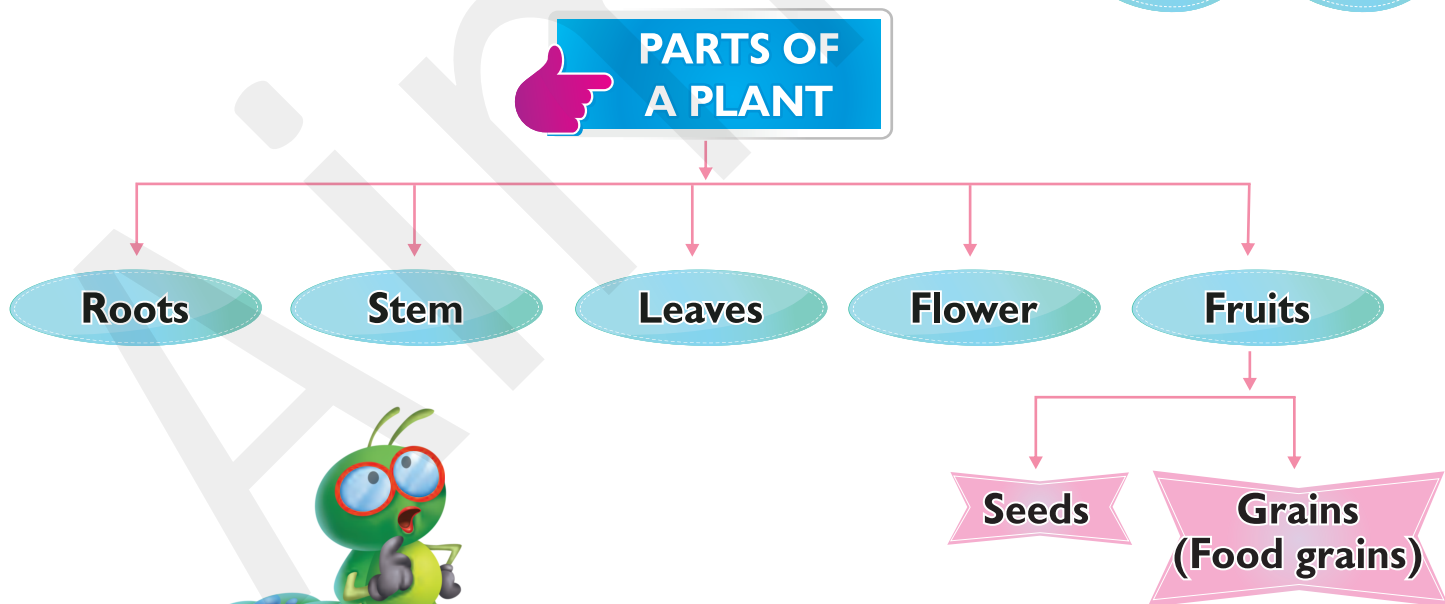
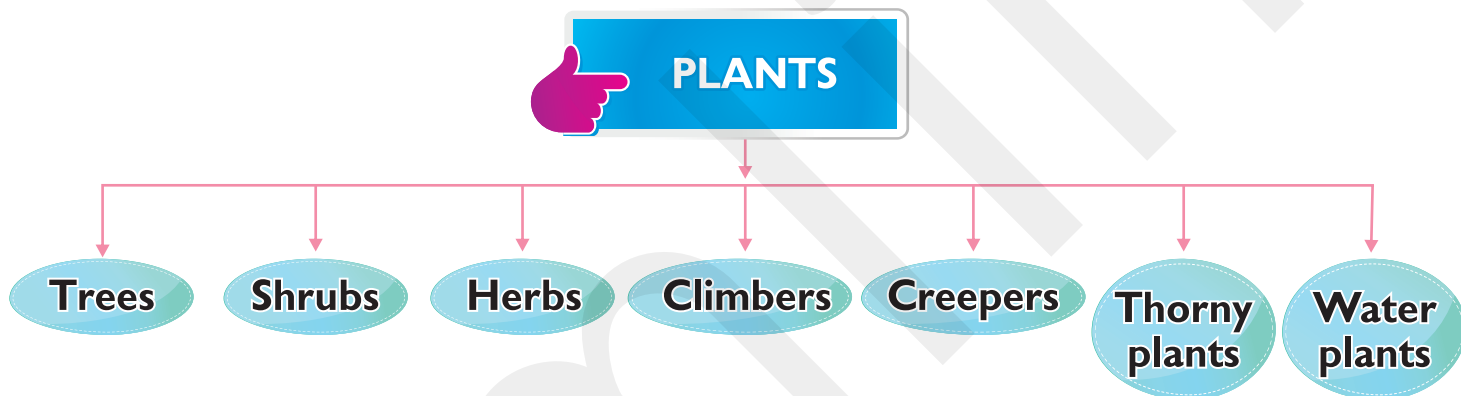
## Learning Objectives

1. Trees
2. Herbs
3. Shrubs
4. Climbers
5. Creepers
6. Thorny plants
7. Water plants



### Let Me Answer

Depending on the presence of flowers, plants are classified into two type how many types?



# TYPES OF PLANTS

Plants are present all around us.

There are different types of plants on the Earth.

Some grow in cold places while some grow in hot places.

Some grow on land while some grow in water.

The food we eat, the juices we drink and the clothes we wear, all come from plants. Trees provide us wood for fuel, furniture and tools.

Plants use the sunlight as a source of energy to produce food.

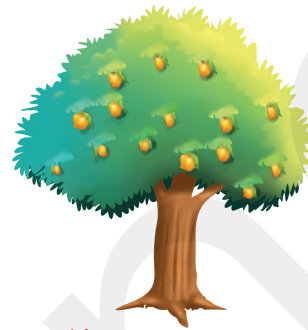
This process is known as **photosynthesis**.

Plants differ in size and shape.

Let us learn about various kinds of plants.



Banyan tree



Mango tree



Gulmohar tree



Papaya tree



Date tree



Coconut tree

## Trees

Trees are big plants.

They have hard woody stems called **trunks**.

Most trees have branches, e.g. : gulmohar, mango, banyan etc.

Trees live for many years.

They give us fresh air.

Some trees do not have branches.

They are called **branchless trees**, e.g. : papaya, date, coconut etc.

They grow straight/erect.

## Shrubs

Shrubs are small **bushy plants**.

They have thin and weak stems with many branches.

They do not live for many years.

Some shrubs have good smell, so they are used to make perfumes and deodorants, e.g. : rose, jasmine, hibiscus etc.

Cotton plant is a shrub that provides cotton to make cotton clothes.

The oil that mothers and grandmothers use in kitchen for cooking, also comes from the shrubs like mustard and sunflower.



Jasmine plant



Cotton plant



Sunflower plant

## Herbs

Herbs are very small plants.

These have soft, thin and weak stems.

They live for three-four months. So, they are called **seasonal plants**, e.g. : brinjal, coriander, spinach etc.



Brinjal plant



Mint plant



Spinach plant

## Climbers

Some plants have weak and soft stems.

They cannot stand on their own.

They need support to stand and grow.



Pea plant



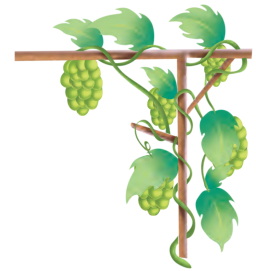
Bean plant



These plants are called climbers, e.g. : pea plant, money plant, grapevine etc.



Money plant



Grapevine

## Creepers

Some plants have very weak and soft stems.

They spread on the ground.

These plants are called creepers, e.g. : pumpkin, cucumber, watermelon etc.



Pumpkin plant



Cucumber plant



Watermelon plant

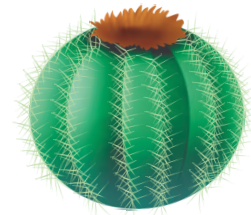
## Thorny Plants

Some plants bear thorns. So, these are called thorny plants, e.g. : cactus, barberry etc.

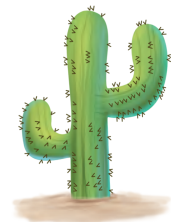
Thorns protect these plants.

Thorns also save water for plants from evaporation.

They mostly grow in desert region.



Largest barrel cactus plant



Cactus plant

## Water Plants

Some plants grow in water.

These plants are called water plants, e.g. : lotus, water lily etc.

They have soft stems.

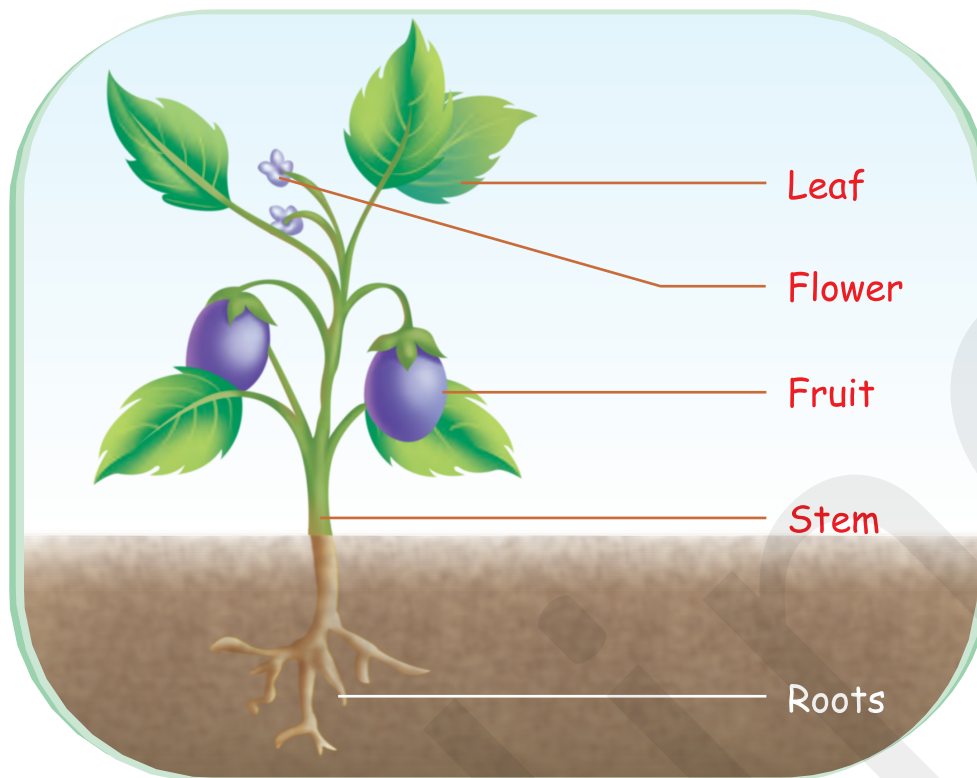
Some water plants float in water and act as a water purifier, e.g. : hydrilla, tape grass etc.



Lotus plant



# PARTS OF A PLANT



## Roots

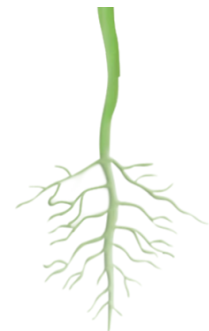
Roots usually grow under the ground. They give support to the plant. Roots collect water and minerals from the soil and send them to the other parts of the plant.

## Stem

Stem usually grows above the ground. It is the main body of the plant. It bears branches, leaves and flowers. It carries food and water to other parts of the plant.

## Leaves

Leaves are usually green coloured part of the plant. They make food for the plant. Leaves are also called the "Kitchen of the Plant".



## Flower

A flower is the colourful part of the plant from which the seed or fruit develops.  
It gives beauty to plant.



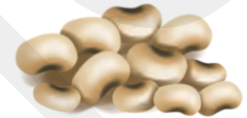
## Fruit

Fruit is the fleshy part of a plant.  
Fruit grows from flower and contains either one or many seeds inside it.



## Seed

A seed is that part of a plant from which a new plant can grow.  
Seeds which are edible are called **food grains**.



### Facts to know

- ⊙ All living things are natural.
- ⊙ All natural things may not have life.

### LET'S RECALL

1. Plants differ in size and shape.
2. Trees are huge plants with strong, woody stems called trunks.
3. Papaya, palm and coconut are some of the branchless trees.
4. Shrubs are small bushy plants with thin and weak stems.
5. Herbs are weak plants with soft, thin and weak stems.
6. Climbers are plants with weak stems. They need support to stand and grow.
7. Creepers are plants with very weak stems. They spread on the ground.



branches : the part of tree growing out of stem (trunk)  
food grains : the seeds that are used as food, two types of grains-cereals and pulses  
photosynthesis : a process of making food by plants using sunlight, water and carbon dioxide



### Cross Curriculum Connect



#### 1. Answer the following questions in short.

- What is the name of plant having thin and weak stem?
- Which plants creep on the ground?
- Name any two branchless trees.
- Name any two climbers.

#### 2. Fill up the blanks with suitable words.

Cactus shrubs climber branches Creeper

- Most trees have .....
- Pea plant is a .....
- ..... have thin and weak stems.
- Watermelon plant is a .....
- ..... is a thorny plant.

#### 3. Answer the following questions.

- What kind of stems do trees have?



- b. Which plants are called seasonal plants? Why?
- c. What are shrubs?
- d. What are climbers?
- e. What are creepers?

**4. Tick (✓) the right and cross (✗) the wrong statements.**

- a. Trees have strong woody stems.
- b. Brinjal and banana are herbs.
- c. Creepers have strong stems.
- d. Jasmine is a climber.
- e. Cactus and rose plants have thorns.

**5. Multiple choice questions**

- a. .... live for many years.
  - (i) Shrubs  (ii) Trees  (iii) Herbs
- b. Cactus is a .....
  - (i) herb  (ii) shrub  (iii) desert plant
- c. The stems of ..... are very weak.
  - (i) trees  (ii) herbs  (iii) shrubs
- d. Sunflower is a .....
  - (i) shrub  (ii) tree  (iii) water plant
- e. .... have many branches.
  - (i) Trees  (ii) Desert plants  (iii) Shrubs

**6. Give one word for each one of the following.**

- a. One seasonal plant .....

- b. One shrub
- c. Name of the place where lotus grows
- d. The thorny desert plant

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

**7. Match the columns.**

**Column A**

- a. Tree
- b. Shrub
- c. Herb
- d. Climber
- e. Creeper
- f. Thorny plant

**Column B**

(i)



(ii)



(iii)



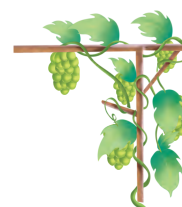
(iv)



(v)



(vi)



Take two plants. Provide water to both the plants. Keep one plant in a dark room and keep the another plant in the sunlight. You will observe that the plant, kept in dark, turns pale. This shows that plants need sunlight for growth.



### HOTS

1. What kind of plants serve as home for birds and animals ? Can you tell the reason ?
2. Two friends Ravi and Rahul were talking about the oldest Banyan tree in the world. Do you know where is it found ?



Complete the following table with the names of plants other than those mentioned in the lesson. Tick the correct category of plants, they belong to.

S No.	Name of the plant	Trees	Herbs	Shrubs	Climbers	Creepers



## Uses of Plants

### Learning Objectives

1. Food grains and fodder from plants
2. Fruits and vegetables from plants
3. Wood, fibre and paper from plants
4. Edible oils, rubber, herbs and gum from plants



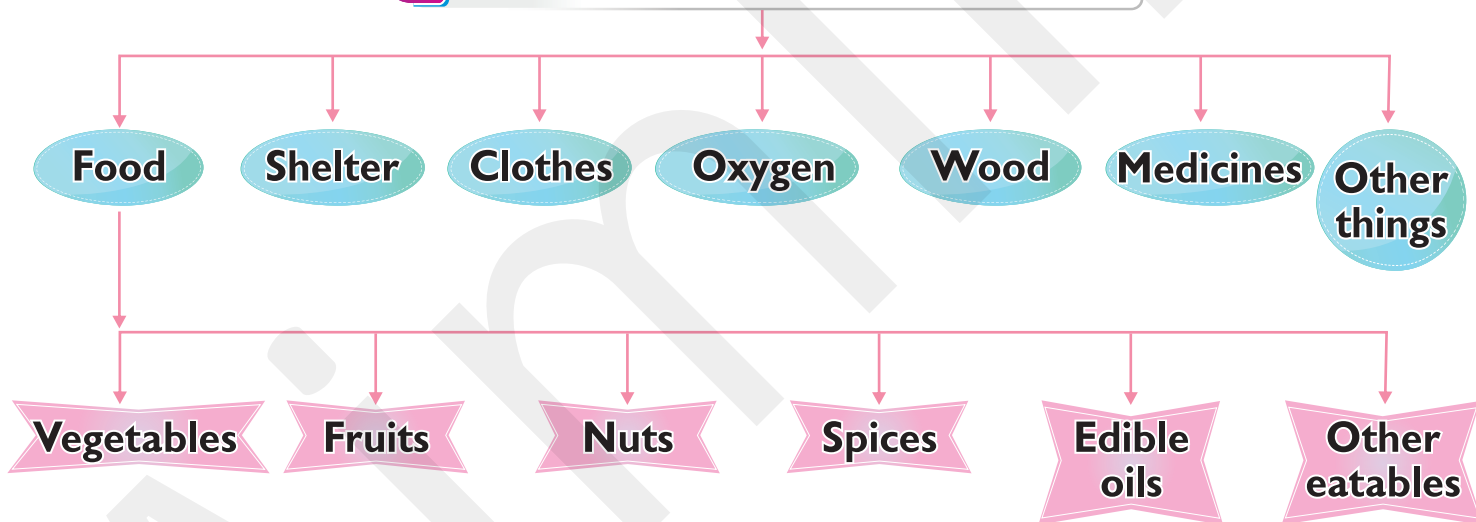
### Let Me Answer



- Do you think Plants prevent air pollution?
- Do you think Plants are a good source of wood and timber?



### THINGS WE GET FROM PLANTS



### THINGS WE GET FROM PLANTS

Plants are very useful to us. We get many things from plants. They keep the **air**, fresh and clean. They give us **oxygen** to breathe in. Plants give us **food**.



Wood for our chair, table or bed comes from plants.

We get herbs and oils from plants.

We get cotton from plants to make our clothes.

Paper comes from plants.

## 1. Food

Plants give us food.



We get vegetables

from roots

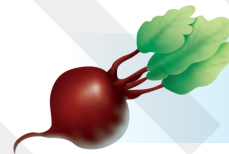
from stem

from leaves

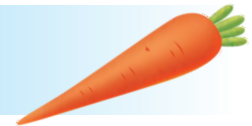
from fruits

Some plants store their food in roots.

These roots bulge up and are used as food, e.g. : radish, carrot, beet etc.



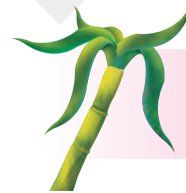
Beetroot



Carrot

Some plants store their food in stems.

These stems are eaten as food, e.g. : sugarcane, onion etc.



Sugarcane



Onion

Some plants store their food in leaves.

These leaves are used as food, e.g. : lettuce, cabbage, spinach etc.



Cabbage



Spinach

Some plants store their food in fruits.

These fruits are eaten as vegetables, e.g. : brinjal, tomato etc.



Brinjal



Tomato





Apple



Mango



Orange



Banana

### As Fruits

Fruits are the fleshy parts of a plant that can be eaten as food.

Fruits are **sweet** in taste.

They keep us healthy, e.g. : mango, orange, banana etc.



Almond



Cashew nut



Walnut

### As Nuts

We also get nuts from plants.

Nuts are dried fruits with a hard shell.

Nuts give us **energy**, e.g. : almond, cashew-nut etc.



Black pepper



Clove



Turmeric

### As Spices

Plants give us spices.

Spices add **taste**, **colour** and **flavour** to food, e.g. : pepper, clove, turmeric etc.



Coconut oil



Sunflower oil



Mustard oil

### As Edible Oils

We get edible oils from plants.

These are used for cooking, as medicines and for applying on hair and body, e.g. : coconut oil, sunflower oil, mustard oil etc.



Tea



Coffee



Sugar

### As Other Eatables

Plants also give us **tea**, **coffee** and **sugar**.

We get tea from tea-leaves, coffee from cocoa beans and sugar from sugarcane.

## 2. Shelter

Many animals like monkeys, squirrels, birds and insects live on plants and trees. Plants provide shelter to these animals. Sometimes, on hot sunny days or when it rains, people take shelter under big trees.



## 3. Clothes

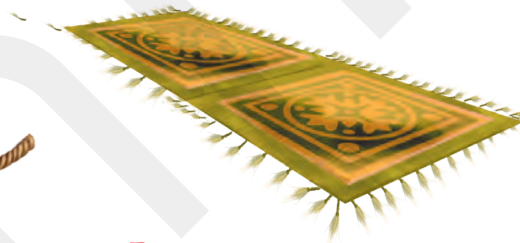
Cotton plants give us fibres to make cotton cloth. We also get jute fibres from jute plants. Different clothes and items like sacks, ropes, bags etc., are made from jute.



Cotton shirt



Rope



Jute mat



Jute sack

## 4. Oxygen

Plants keep the air fresh. Plants provide oxygen which is needed for living organisms to breathe. Oxygen is also needed for **burning**.



## 5. Wood

The woody trunk of big trees is used as wood to make wooden houses, furniture, doors and windows.

Plants also give us wood for fuel.

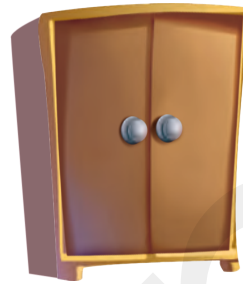
Wood from some trees is also used for making boats and carts.



Wooden house



Chair



Almirah



Boat

## 6. Medicine

Many medicines are made from plants like tulsi, neem, mint, eucalyptus etc.

Tulsi leaves are used to cure cold and cough.

Amla, turmeric and aloe vera are also used as medicines.



Mint



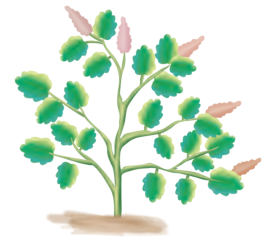
Neem



Amla



Aloe vera



Tulsi

## 7. Other things

We get **perfumes** from flowers like rose, jasmine etc.

Some oils are used to make **soap** and **shampoo**.

We get **rubber** from the latex (liquid) of rubber tree.

**Gum** is made from the latex of trees like keekar and acacia.

**Paper** is made from the pulp of trees like bamboo.



We make **dyes, paints** and **varnishes** from juices of some trees.

We get dyes from plants like henna, true indigo etc.

We make **compost** with dry leaves.

Flowers and leaves of many plants are used for decoration and making bouquets.



Perfumes



Soap



Paper



Paint

### Facts to know

- ◎ Bamboo is a giant grass, not a tree.
- ◎ Some stems grow underground and give vegetables as food, e.g. : potato and ginger.

### LET'S RECALL

1. Plants give us food.
2. Some plants store their food in roots.
3. Fruits are the fleshy parts of a plant that can be eaten as food.
4. We also get nuts from plants.
5. Plants give us spices.
6. We get edible oils from plants.
7. Plants also give us tea, coffee and sugar.
8. Many animals like monkeys, squirrels, birds and insects live on plants and trees.
9. Cotton plants give us fibres to make cotton cloth.
10. Plants keep the air fresh.





- bulge up : a rounded swelling  
fibre : a thread or filament from textile plant or animal  
fleshy : the soft part  
latex : a milky fluid in plant  
shelter : a place giving protection



### Cross Curriculum Connect



#### 1. Answer the following questions in short.

- Which gas do plants give us?
- Where does paper come from?
- Why do we use spices?
- Which gas do we need for burning?

#### 2. Fill up the blanks with suitable words.

Cotton bamboo gum Rose, hibiscus and jasmine medicinal

- Tulsi is a ..... plant.
- ....., ..... and ..... plants give us perfumes.
- ..... plant gives us fibre.
- Acacia plant gives us .....
- We get paper from ..... tree.

#### 3. Answer the following questions.

- Why are plants useful for us?
- Write the names of some fruits and vegetables, we get from plants.
- Which are the medicinal plants?



- d. How do we get the following?
  - (i) Rubber
  - (ii) Gum
  - (iii) Paper

**4. Tick (✓) the right and cross (✗) the wrong statements.**

- a. Plants give us food, vegetables and fruits.
- b. Plants keep the air dirty.
- c. Plants provide us wood, medicines, fibres, perfumes etc.
- d. We get rubber from the latex of rubber tree.
- e. Gum is made from the latex of acacia tree.

**5. Multiple choice questions**

- a. Which statement is right?
  - (i) Plants provide us food and shelter.
  - (ii) Plants keep the air dirty.
  - (iii) Plants give us oxygen.
- b. Which statement is wrong?
  - (i) Plants provide us oxygen.
  - (ii) Plants give us fibres.
  - (iii) Plants do not provide us food and shelter.

**6. Name any two plants which give us the following.**

- a. Gum .....  
.....
- b. Vegetables .....  
.....
- c. Perfumes .....  
.....
- d. Edible oils .....  
.....
- e. Medicines .....  
.....
- f. Fibres .....  
.....

## 7. Match the columns.

### Column A

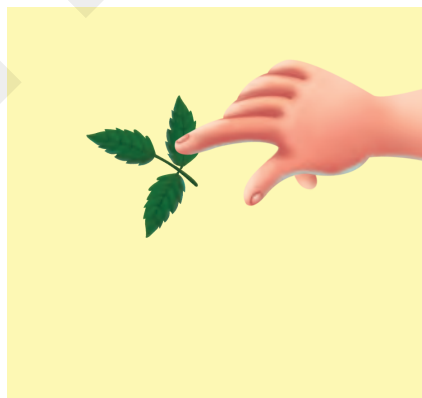
- a. Pulse
- b. Paper
- c. Gum
- d. Fibre
- e. Vegetable

### Column B

- (i) Acacia
- (ii) Pumpkin
- (iii) Moong
- (iv) Bamboo
- (v) Jute



Take a piece of paper, some leaves of a plant like neem and some pieces of carrot and ladyfinger. Dip one side of a leaf in a colour of your choice. Gently place the side of the leaf dipped in colour on the piece of paper and press it. Now, remove the leaf. You will be able to see the imprint of the leaf. Do the same with pieces of carrot and ladyfinger. You can make greeting cards with prints like these and give them to your friends.



## HOTS

1. Name a few things you use in your bathroom, which are made from plants.
2. There are so many trees planted on roadsides. They also bear certain fruits. Are these fruits edible? Give reasons.

## project Time

You thought pulses were only meant for eating. Here's something else you can do in your scrapbook.

Take some pulses of your choice such as :

1. Masoor dal
2. Rice grains
3. Rajma
4. Green moong dal

Using fevicol and arrange them to form flowers, as in the picture.





# Domestic Animals

## Learning Objectives

1. Domestic (pet) animals
2. Domestic animals :
  - give food
  - give fibres
  - used as carriage
  - other uses



### Let Me Answer

- What are domestic animals?
- What are the advantages of domestic animals?



## TYPES OF ANIMALS

Domestic

Wild



## USES OF DOMESTIC ANIMALS

Give food

Give fibre

Used as carriage

Other uses



## ANIMALS

There are various kinds of animals.

We see many animals around us.



## Domestic (Pet) Animals

We tame some animals because they are useful to us. We keep them in our homes, nearby our homes or on a farm. They are called **domestic animals**. We also keep some animals like cat, dog, parrot etc., at our homes because we love them. They are called **pet animals**. They are friendly animals.

We should look after them and take care of them properly. These animals give us many things like food and fibres. They are also used as means of transport.

### Animals give us food.

Cow, buffalo and goat give us milk.

We drink milk and use milk in making curd, cheese, butter, ice-cream etc.



Cow



Buffalo



Goat

Hen, duck and goose give us eggs.

Eggs are used as a healthy food and used for making cakes, pastries etc.



Hen

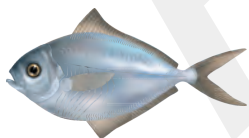


Duck



Goose

Some animals, like fish, goat, lamb, cock etc., give us meat or flesh to eat.



Fish



Goat



Lamb



Cock



## Animals give us fibres.

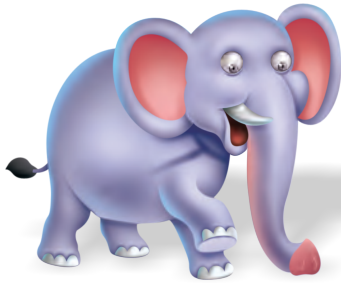


Sheep

We get wool fibres from sheep.  
Wool is used to make woollen clothes.  
Woollen clothes keep us warm in winter.  
We get silk from silkworms.  
Silk is used to make sarees, scarves, shirts etc.  
We also use fur from the bodies of some animals to make beautiful and warm clothes for us.

## Animals carry load.

Some animals are used as carriage for heavy loads.  
Elephants, camels, donkeys, horses etc., help us and make our work easy.



Elephant



Camel



Donkey



Horse

## Other Uses of Animals



Honey bee



Dog

We get honey from honey bees.  
We get leather from skin of some animals.  
Leather is used to make our shoes, belts, bags, purses etc.  
We keep dogs as pets who safeguard our homes.



Ox



Things made of animal skin

Some animals, like oxen, help us to draw water from wells and work in the fields.

Feathers, horns and hooves of some animals are used to make many things.



Furcoat

### Facts to know

- ☉ Camel is called the "Ship of the Desert".

### LET'S RECALL

1. We tame some animals. These are called domestic animals.
2. We look after them and take care of them properly.
3. Cow, buffalo and goat give us milk.
4. We get wool fibres from sheep.
5. Some animals are used as carriage for heavy loads.
6. We get honey from honey bees.

### Word Power

- carriage : carrying goods from one place to other  
tame : easier to control



### Train Your Brain



### Cross Curriculum Connect

#### 1. Answer the following questions in short.

- a. Name one animal which gives us milk.
- b. Where do we get silk from?
- c. Name two pet animals.
- d. Name two animals that carry load.

#### 2. Fill up the blanks with suitable words.

cow fish silkworm honey donkey sheep Camel

- a. .... is called the "Ship of the Desert".



- b. Honey bees make .....
- c. A water animal that is eaten as food is .....
- d. An animal used to carry load is .....
- e. An animal that gives us silk is .....
- f. The hair of ..... are used to make wool.
- g. We get milk from .....

**3. Answer the following questions.**

- a. Which animals are called domestic animals?
- b. Why some domestic animals are called pet animals?
- c. What do we get from animals?
- d. Which animal helps the farmers in the fields and how?

**4. Tick (✓) the right and cross (✗) the wrong statements.**

- a. Cows give eggs.
- b. Silkworms give us wool.
- c. Goat gives us meat and milk.
- d. Camel carries load for us.

**5. Multiple choice questions**

- a. One of the following is made from milk.
  - (i) Sweets  (ii) Honey  (iii) Meat
- b. Some of us eat the meat of this animal.
  - (i) Dog  (ii) Buffalo  (iii) Goat
- c. This animal carries loads for us.
  - (i) Cow  (ii) Donkey  (iii) Buffalo
- d. This animal gives us honey.
  - (i) Honey bee  (ii) Silkworm  (iii) Goat



**6. Give one word for each one of the following.**

- a. An animal which is called as the “Ship of the Desert” .....
- b. The name of a milk giving animal .....
- c. A wool giving animal .....

**7. Match the columns.**

**Column A**

- a. Cow
- b. Sheep
- c. Silkworm
- d. Hen
- e. Honey bee

**Column B**

- (i) Wool
- (ii) Honey
- (iii) Milk
- (iv) Silk
- (v) Egg



Draw and colour the picture of a pet you have or would like to have.



- 1. If you go to a dairy farm, which animals would you find there ?
- 2. Ramcharan owns a poultry farm. What product would he sell ?



Collect the pictures of some domestic animals, pet animals and birds, useful to us. Paste them in your scrapbook.



# Wild Animals

## Learning Objectives

1. Wild animals
2. Habitat of wild animals
3. Places of living for wild animals
4. Types of wild animals by way of their eating habits
5. Endangered wild animals

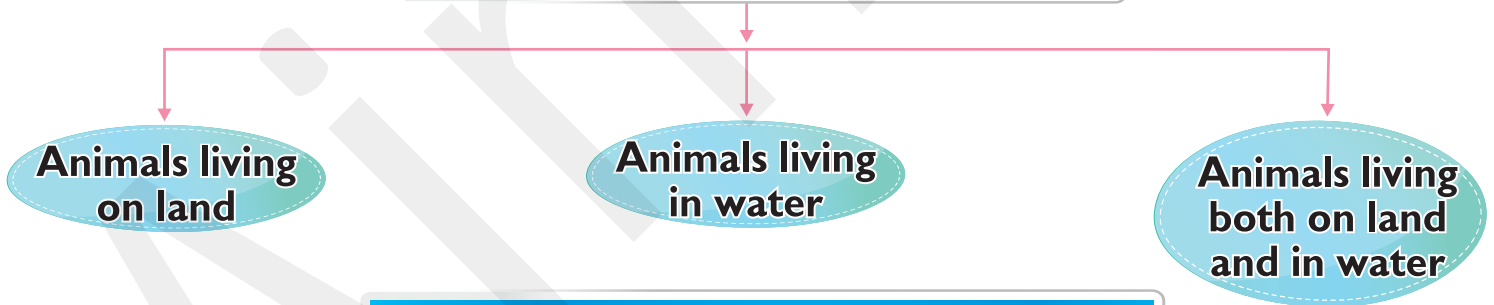
**Let Me Answer**

- What are domestic animals?
- What are the advantages of domestic animals?

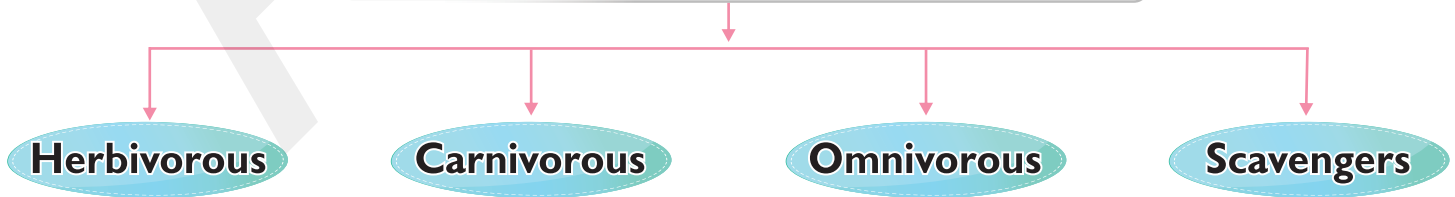
## TYPES OF ANIMALS



## HABITATS OF WILD ANIMALS



## FOOD HABITS OF WILD ANIMALS



## WILD ANIMALS

Forests are home to many animals.

We do not tame such animals.

Animals that live in deep and thick forests are called wild animals, e.g. : elephant, fox etc.

Some wild animals are big and some are small.

Some wild animals live on land, some in water and some on both land and in water.

Wild animals also differ by their eating habits, like some are herbivores, some are carnivores, some are omnivores and some are scavengers.

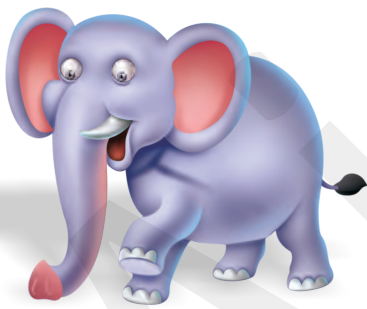
Wild animals also live in different places, like lions in den, rabbits in burrows, rats in holes etc.

Lion is called the "King of the Jungle".

### Animals that live on land

Elephant, lion, tiger, giraffe etc., are the animals that come under this category.

These animals live on land safely in their natural environment, like in forests.



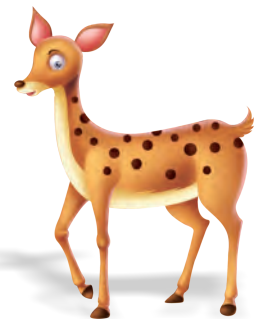
Elephant



Lion



Zebra



Deer

### Animals that live in water

Some animals live in fresh water like fishes and some live in salty sea water like seahorse.

These are called **aquatic** animals.



Most of these animals have boat shaped body and breathe through



Fish



Whale



Seahorse

gills.

### Animals that live both on land and in water

Animals, like frogs, crocodiles, tortoise etc., live both on land and in water. These are called **amphibians**.

Frogs lay their eggs in water.



Frog



Crocodile



Tortoise

## EATING HABITS OF ANIMALS

All animals do not eat same type of food.

Different animals have different eating habits.

### 1. Herbivores

These are **grass-eating** animals. They eat grass, leaves of trees and green plants, e.g. : sheep, cow etc.

Some of them eat fruits and nuts also, e.g. : monkey.



Sheep



Cow



Monkey



## 2. Carnivores

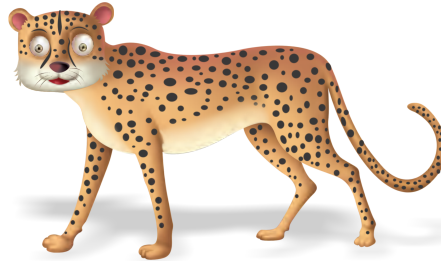
These are **flesh-eating** animals.

They hunt and kill small animals and eat their flesh, e.g. : wolf, leopard etc.

They are also called **hunters**.



Wolf



Leopard



Tiger

## 3. Omnivores

These animals eat both plants as well as animals, e.g. : bear, crow etc.

They eat whatever comes in their way.



Bear



Crow



Chimpanzee

## 4. Scavengers

There are some animals that feed on the flesh of **dead** and **decaying** animals.

They help to maintain the **cleanliness** of the forest.

They are called scavengers, e.g. : jackal, fox, vulture etc.



Jackal



Fox



Vulture



## HABITAT OF ANIMALS

Some wild animals wander from one place to another in search of food and water.

They live in groups called **herds**.

They do not have fixed place to live in.

They rest under trees, e.g. : elephant, zebra etc.

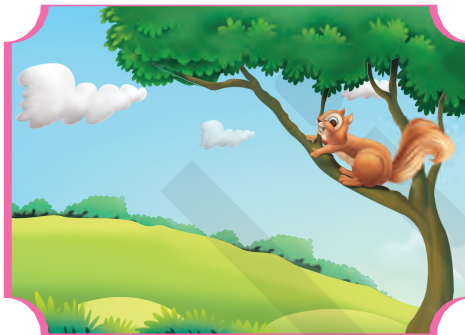
Some animals live on trees, e.g. : squirrel, monkey etc.

Some animals dig holes in the ground and live there.

These holes are called **burrows**, e.g. : rats, snakes, rabbits etc., live in burrows.



Herd



Squirrel on tree



Rabbit in burrow

## ENDANGERED ANIMALS

Many wild animals are killed by human beings for sport, food or medicines. As a result, animals like tiger, pandas, Indian rhinoceros have become very few in number.

They would vanish from the Earth one day.

We need to protect them.



Tiger



Panda



Rhinoceros

Endangered animals are kept safe in wild life sanctuaries and national parks.

This helps to increase their number.

### Facts to know

- ⊙ There are no more cheetahs left in India. They are only found in Africa.

### LET'S RECALL

1. Animals that live in deep and thick forest are called wild animals.
2. These animals live on land safely in their natural environment like in forests.
3. Animals, like frogs, crocodiles, tortoise etc., live both on land and in water.

### Word Power

aquatic	:	animals that live in water
amphibians	:	animals that live on both land and in water
endangered	:	in danger of vanishing from the Earth
forest	:	a large area covered with trees thickly

### Train Your Brain

### Cross Curriculum Connect

#### 1. Answer the following questions in short.

- a. Name one endangered animal.
- b. What are scavengers?
- c. Where do rabbits live?
- d. Name two animals that rest under trees.

**2. Fill up the blanks with suitable words.**

Vulture      herbivorous      animals      Fox

- a. Lion and ..... live in jungle.
- b. Deer is a ..... animal.
- c. Omnivores eat both plants and .....
- d. .... is a scavenger animal.

**3. Answer the following questions.**

- a. What are the types of animals according to their habitats?
- b. Write two features of aquatic animals.
- c. What are amphibians?
- d. Why do animals live in herds?

**4. Tick (✓) the right and cross (×) the wrong statements.**

- a. Lion is a domestic animal.
- b. Giraffe is called the king of animals.
- c. Water animals breathe through gills.
- d. Omnivores are only plant-eaters.

**5. Multiple choice questions**

- a. Zebra is a/an .....
  - (i) omnivore
  - (ii) herbivore
  - (iii) carnivore
  - (iv) none of these
- b. One of the following is a scavenger.
  - (i) Lion
  - (ii) Elephant
  - (iii) Jackal
  - (iv) Tiger
- c. Omnivorous are animals which eat .....
  - (i) plants
  - (ii) animals
  - (iii) both plants and animals
  - (iv) none of these

d. Rabbits live in .....

(i) burrows

(ii) pits

(iii) caves

(iv) water

**6. Give one word for each one of the following.**

a. The name of a herbivorous animal

.....

b. The name of the biggest animal on land

.....

c. The name of a scavenger animal

.....

d. The name of an animal who digs holes in the ground

.....



Paste the pictures of animals (as directed).

Herbivore

Carnivore

Omnivore

Scavenger



1. Why do you think that panda is an endangered animal ?

2. Do you know how hyenas help to keep the jungle clean ?



Arrange a visit to a zoo with your parents and observe the behaviour of various animals.

# OUR BODY: A WONDERFUL MACHINE

## Learning Objectives

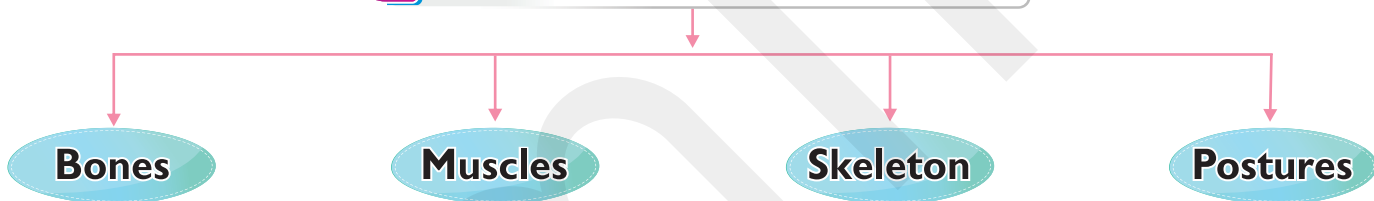
1. The framework of bones in our body
2. The Skeleton
3. Shape and support of our body
4. Muscles and their help
5. Regular exercise and benefits
6. The correct postures

### Let Me Answer

- Why you should take care of your body?
- How do you take care of your body?



## OUR BODY : FRAMEWORK



## OUR BODY



A child touching his arm



A child touching his head

Have you ever felt the different parts of your body with your fingers?

Some parts of your body are soft while others are hard.

The **soft** parts are the **muscles**.

The **hard** parts are the **bones**.

The bones give shape and support to our body.

These bones and muscles are covered with skin.

There are 206 bones and about 600 muscles in an adult human body.

## Bones

There are **206** bones in the body of an adult. Bones are hard and strong.

Bones give support and shape to our body. Bones join to form the framework of our body called skeleton.

The point where two bones meet is called a joint, e.g. : elbow joint, knee joint etc.

In addition to provide support to the body, the skeleton protects vital organs, such as the heart and the brain.



Skeleton

## Muscles

There are about **600** muscles in an adult human body.

Muscles are closely attached to the bones.

Every action we make is a result of the action of muscles.

Bones and muscles work simultaneously.

They help us to work and do various activities, like walking, running, bending etc.

Muscles get stronger the more we use them.

Therefore, we must exercise and play games to keep our muscles fit.



Playing is a good exercise.



Swimming is a good exercise.

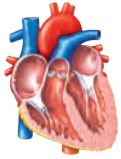


Cycling is a good exercise.

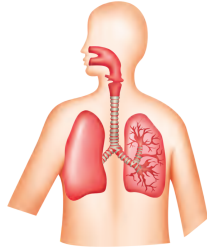


All parts of the body work with the help of the muscles, e.g. :

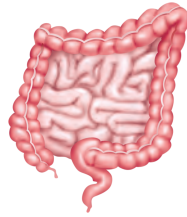
- ◆ Eye muscles help us to see all the sides by moving the eye ball.
- ◆ Heart muscles help the heart to beat.
- ◆ Stomach muscles help to push the food to other parts for digestion.



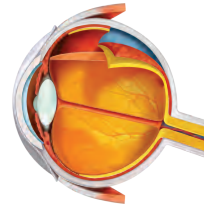
Heart



Lungs



Intestine



Eye muscles



Stomach muscles

## POSTURE

Posture is the position in which we sit, stand, bend and walk.

A posture makes our body fit and smart.

A good posture keeps our bones and muscles in proper shape.

It helps the bones to grow well.

It makes our backbone strong.

It makes our body work properly.

### Directions for correct postures



Sitting right



Sitting wrong



Standing right



Standing wrong

#### 1. When we sit.

We should sit upright.

We should keep our back straight against the back of the chair.

We should keep our chest out.

We should not bend our shoulders.

#### 2. When we stand.

We should stand with our back straight.

We should keep our chest out while standing.

We should always keep our feet about 15 - 20 centimetres apart.

### 3. When we walk.

We should walk with our chest out properly.

We should hold our head upright.

We should swing our arms freely while walking.



Walking right



Walking wrong

#### Facts to know

- ⊙ Muscles become strong, if you use them regularly.
- ⊙ Skin forms a protective layer above the bones and muscles.
- ⊙ Thigh bone is the longest bone in our body.
- ⊙ The smallest bone of our body is in the ear.

#### LET'S RECALL

1. Our body is made up of bones and muscles.
2. Bones give shape and support to our body.
3. Bones and muscles are responsible for the various movements of our body.
4. Regular exercise makes our muscles strong and healthy.
5. The correct posture helps us to keep our body in right shape.
6. We should always walk with our back straight.
7. We should never bend forward while standing.
8. We should sit upright.

#### Word Power

framework : the strong part that gives shape to something

skeleton : the framework of bones

joint : a place where two or more bones join

posture : the position of our body when we stand, sit or walk





## Train Your Brain



### Cross Curriculum Connect



#### 1. Answer the following questions in short.

- How many bones are there in an adult body?
- What is the main function of bones in our body?
- How can we make our muscles strong?

#### 2. Fill up the blanks with suitable words.

shoulders      shape; support      bones; muscles

- Our body is made up of ..... and .....
- Bones give ..... and ..... to our body.
- We should not bend our ..... while sitting.

#### 3. Answer the following questions.

- What is the posture?
- Give three reasons why should we always keep our body in a proper posture.
- What is the function of skeleton in our body?



### Formative Assessment



#### 4. Tick (✓) the right and cross (✗) the wrong statements.

- Bones are attached to the muscles.
- We should bend our shoulders when we sit.
- We should bend our head while walking.

#### 5. Multiple choice questions

- Our body is made up of .....

(i) blood and skin

(ii) hands and legs

(iii) bones and muscles

(iv) none of these



- b. Posture is the position of our body in which we .....
- |            |                          |                   |                          |
|------------|--------------------------|-------------------|--------------------------|
| (i) sit    | <input type="checkbox"/> | (ii) stand        | <input type="checkbox"/> |
| (iii) walk | <input type="checkbox"/> | (iv) all of these | <input type="checkbox"/> |
- c. We must do exercise and play games to keep ..... fit.
- |            |                          |               |                          |
|------------|--------------------------|---------------|--------------------------|
| (i) legs   | <input type="checkbox"/> | (ii) hands    | <input type="checkbox"/> |
| (iii) eyes | <input type="checkbox"/> | (iv) our body | <input type="checkbox"/> |

**6. Give one word for each one of the following.**

- a. Number of bones in our body .....
- b. Hard parts that give shape and support to our body .....
- c. The place where two or more bones join .....

**7. Match the columns.**

**Column A**

- a. Walk  
b. Stand  
c. Good posture  
d. Exercise

**Column B**

- (i) with your back straight.  
(ii) makes our muscles strong and fit.  
(iii) with your head upright.  
(iv) makes our body work properly.



Make a list of games which you like the most and make your body strong. Select an outdoor game and play with the children of your neighbourhood and your friends. While playing, the games give sufficient exercise and the required fatigue to your body parts.



1. Ravi walks with his shoulders bent forwards. Is it right ? Why ?
2. Proteins are good for our muscles. Can you tell why ?



Visit a health club near your house. Learn about different types of exercises that make muscles and bones strong.



# FOOD FOR HEALTH

## Learning Objectives

1. Food, the basic need of all human beings
2. Different types of food
3. Importance of food
4. Proper food habits



## Let Me Answer

- Why food is important to us?
- What kind of nutrition do you get from food?



## FOOD FOR HEALTH

We need food to live.  
Food helps our body to **grow**.  
It keeps us **healthy** and **strong**.  
It gives us **energy**.  
We use energy when we work or play.



Vegetables



Bread



Fruits



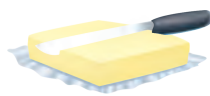
Cheese



Eggs



Fish



Butter



Meat/Chicken



Rice



Chapatis

# DIFFERENT TYPES OF FOOD HELP US IN DIFFERENT WAYS

## Energy-giving food

Some food items give us energy, like sugar, rice, potato etc.

These are called **energy-giving food**.



Rice



Potato



Bread

## Body-building food

Some food items help us to grow and build our muscles, like milk, eggs, pulses, meat and grains.

They make our teeth and bones strong.

These are called **body-building food**.



Pulses



Milk



Eggs

## Protective food

Some food items save us from diseases. They are called **protective food**.

Fruits, vegetables and nuts are some protective food which do not make us fall sick.



Fruits



Vegetables

## WATER

Water is very important for us.

Water also helps us to stay healthy.

We must drink at least eight glasses of water daily.



## HEALTHY WAYS OF EATING

- ◆ Wash your hands before and after eating a meal.
- ◆ Always eat fresh and well cooked food.
- ◆ Eat slowly and chew the food well.
- ◆ Avoid eating junk food, always eat healthy food.
- ◆ Do not eat stale food.



- ◆ Do not overeat. Eat a little less than what you can.
- ◆ We should eat our breakfast, lunch and dinner at a proper and fixed time.

## When do you eat your meals?

Write the time in each blank.



Breakfast .....



Lunch .....



Dinner .....



- ◆ Bits of food get stuck between the teeth. So, we must rinse our mouth after taking food.



- ◆ Wash your hands before and after every meal.



- ◆ Always eat food made at home.



- ◆ Eat with clean hands.



- ◆ Eat at a fixed time everyday.

- ◆ Eat clean and properly cooked food.

## Facts to know

- ⊙ We must drink 8 to 10 glasses of pure water everyday to stay healthy.
- ⊙ The main food of a place is called its primary food. Rice is the primary food of half the world.

## LET'S RECALL

1. Food helps us to stay healthy and strong.
2. Food helps us to grow.
3. Food gives us energy to work and play.
4. Food protects us from diseases.
5. We must drink ten glasses of water everyday.
6. We should eat our breakfast, lunch and dinner at the right time.
7. We must wash our hands before and after having meals.

### Word Power

- disease : a condition of illness  
energy : the ability to do work  
overeat : having excessive food than you require  
stale food : cooked food items that have been kept for many days



## Train Your Brain



## Cross Curriculum Connect

### 1. Answer the following questions in short.

- a. What type food is sugar?
- b. What is to be done before and after taking meal?
- c. How much water should we drink daily?



## 2. Fill up the blanks with suitable words.

Protective      cover      energy-giving      lunch

- Potato is an ..... food.
- ..... foods save us from diseases.
- We should eat our ..... at a proper and fixed time.
- We should ..... our food well.

## 3. Answer the following questions.

- How does food help us?
- Name three energy-giving food items.
- Name three protective food items.
- Write two healthy ways of eating?
- Why is it important to eat fruits and vegetables?



## 4. Tick (✓) the right and cross (✗) the wrong statements.

- Potato and rice are body-building food.
- Milk and eggs are body-building food.
- Fruits and vegetables are energy-giving food.
- We should eat food at regular intervals.

## 5. Multiple choice questions

- We should avoid that type of food which is called .....  
(i) junk food  (ii) fresh food   
(iii) energy-giving food  (iv) salad
- Make sure that the food is .....  
(i) half cooked  (ii) over cooked   
(iii) well cooked  (iv) raw
- Water helps us to stay .....  
(i) smart  (ii) ill   
(iii) weak  (iv) healthy



**6. Give one word for each one of the following.**

- a. One energy-giving food .....
- b. The food type of oil, ghee, butter and cheese .....
- c. One protective food .....
- d. The food type which protects us from diseases .....

**7. Match the columns.**

**Column A**

- a. Bread, rice, sugar and sweets
- b. Peas, beans, fish, eggs and milk
- c. Oil, ghee, butter and cheese
- d. Fruits and vegetables

**Column B**

- (i) Protective food
- (ii) Fats
- (iii) Food for growth
- (iv) Food for energy



Make a list of food items and write (F) for fat, (P) for protein, (C) for carbohydrate and (H) for healthy food in front of the food mentioned in the list.



- 1. Chhavi's mom gives her maggi in her tiffin while Sneha's mom gives vegetable and chapati in her tiffin. Who according to you is serving healthy food and why ?
- 2. After playing for two hours in the park, Rajat became exhausted. What should he prefer to eat for his hunger ?



Pick out the items from the list given below and add them under the right columns :

- Eggs    Spinach    Cabbage    Chicken    Pulses  
Radish    Carrot    Banana    Apple

Full of Iron

Consumed Raw

Full of Protein



# SAFETY HABITS

## Learning Objectives

### Safety Rules :

- while walking on the road
- while riding a bus
- while at school
- while crossing the road
- while at home
- while at play

Some general rules of safety



### Let Me Answer

- What are the safety habits that we must follow?
- How do you keep yourself safe and protected?



## SAFETY RULES



## SAFETY RULES

Accidents can take place anywhere and anytime.

Safety rules keep us safe.

We must follow safety rules.

There are certain rules of safety we should observe.



### Walking on the Road

Always walk on the **footpath**.

Where there is no footpath, walk on the left side of the road.

### Crossing the Road

While crossing the road, first look to your right, then to your left and then again to your right.

Cross the road only when it is clear.  
Cross the road at the **Zebra crossing**.  
Follow the traffic signals.  
Cross only when the traffic light is red.  
Do not run across the road when vehicles are moving.

### Riding a Bus

Stand in a **queue** at the bus stop.  
Get into the bus only when your turn comes.  
Do not get in or get off a moving bus.  
Do not put your hand out of a moving bus.

### At Home

Always use a sharpener to sharpen your pencil and not a blade.  
Never touch open electric wires, switches or plugs.  
Never touch hot things.  
Do not leave your toys or books on the floor, otherwise you will stumble and fall.

### At School

Do not jump or run on benches or desks.  
Do not climb on trees.  
Do not push others while on stairs.  
Do not push anybody even in fun.

### While Playing

Do not play in the middle of the road.  
Never play with sharp edged objects, like blades, knives, needles and scissors.  
Do not play with matchsticks and fire.  
Never play near a lit stove or gas.



## GENERAL RULES OF SAFETY

- ◆ Never shout into someone's ear.
- ◆ Do not put any object in your ears.
- ◆ Always be careful when you are near a machine.
- ◆ Do not reflect sunlight with a mirror into someone's eyes.
- ◆ Do not take any medicine without the permission of your parents/ guardians.
- ◆ Never tease the animals.
- ◆ Never walk fast alongside the horses and the donkeys. They may kick you.
- ◆ Never look directly at the sun. It may seriously damage your eyes.
- ◆ Do not eat the fruits or nuts from unknown plants. They may be poisonous.
- ◆ Do not throw banana peels at public places.
- ◆ Be careful while swimming. Use a swimming tube if you are learning.



### If you are injured :

If you are injured, inform your elders immediately.

If you are injured at school, report it to your teacher. Do not hide your injury.

Your parents or teachers would give you **first-aid**. If the injury is deep and serious, they would take you to a doctor.

You must follow the advice of the doctor and your elders.

## FIRST-AID

### What is first-aid?

First-aid is the help given to the injured, before the doctor arrives.



## First-aid Box

Do you have a first-aid box in your school and at home? The first-aid box must contain the following :

1. Cotton
2. Gauze
3. Soap
4. A pair of forceps
5. Antiseptic cream
6. Tincture iodine
7. Burnol
8. Bandages of different sizes
9. Adhesive tape
10. A pair of scissors

### Facts to know

- ⊙ Always use seat belt while sitting on the front seat in a car.

### LET'S RECALL

1. We must keep ourselves safe.
2. We must follow safety rules.
3. We should be careful to avoid accidents.
4. We should not hide our injury.
5. We must travel in a safe way.
6. We should not tease the animals.
7. Do not do any activity which harms you or others.

### Word Power

accident	: a mishappening
first-aid	: the immediate remedy given to an injured person
footpath	: a way for pedestrians
safety	: staying away from harm
silently	: without speaking
stray-animal	: animal moving around streets
swimming tube	: an air filled rubber tube used to help in swimming safely
Zebra crossing	: the path across the road that has dark and light stripes





# Train Your Brain



## Cross Curriculum Connect



### 1. Answer the following questions in short.

- If you are injured, whom should you inform?
- To which side of the road should we walk?
- When should we cross a road?

### 2. Fill up the blanks with suitable words.

Zebra ear footpath traffic

- Walk only on the .....
- Cross the road only at the ..... crossing.
- We must follow the ..... rules on road.
- Never shout into someone's .....

### 3. Answer the following questions.

- What should we do before crossing the road?
- Why should we not leave things on the floor?
- When should we get into a bus?
- What is first-aid?



## Formative Assessment



### 4. Tick (✓) the right and cross (✗) the wrong statements.

- We should cross the road only when the traffic light is red.
- We can jump into a moving bus.
- We may get a shock if we play with fire.
- We should learn swimming with air filled rubber-tube.

### 5. Multiple choice questions

- We may get a shock if we play with .....
  - fire
  - water
  - air
  - electric wires (live)



b. We should cross the road at .....

(i) a turning

(ii) in the middle of road

(iii) Zebra crossing

(iv) a running speed

## 6. Give one word for each one of the following.

a. The habit of staying away from harm

.....

b. The type of toy we should not play with

.....

c. Directly seeing it may damage your eyes

.....

## 7. Match the columns.

### Column A

a. Green signal

b. Yellow signal

c. Red signal

### Column B

(i) Get ready

(ii) Stop

(iii) Go



In case of an insect bite, clean the area with soap or antiseptic solution and visit a doctor.

In case of burns, put cold water immediately on the burnt area and use some antiseptic cream like burnol. In case of cuts too, clean the part with dettol or savlon and apply some antiseptic cream like betadin etc.



1. Suppose your friend has fallen down from stairs and blood is coming out from his leg. How will you provide him first aid ?
2. Sandeep was playing cricket with his friends on footpath beside the road. Was he doing right ? Why ?



1. Make a chart of a traffic signal and explain the meaning of red light, yellow light and green light.
2. Ask your parents or teachers to take you to a traffic park to learn about traffic rules.





# FORMS OF WATER

## Learning Objectives

1. Three forms of water : solid, liquid and gas
2. Processes like freezing, melting, evaporation and condensation
3. Water cycle in nature



## Let Me Answer

- Water is available to us in various forms, what are they?
- Can you store water in a different form?



## FORMS OF WATER

Solid

Liquid

Gas



## FORMS OF WATER

Water is the most common natural substance. It covers about three-fourth of the Earth's surface.

Water has three forms : solid, liquid and gas. On cooling or heating, the water can change its form.



## Water in the form of gas

When water is heated, it starts boiling and changes into water vapours.

These vapours are called **steam**.

Water vapours or steam is a gaseous form of water.



## Water in the form of liquid

The water we use in our homes is in liquid form.

It has no shape.

It takes the shape of the vessel in which it is kept.



## Water in the form of solid

Ice is the solid form of water.

Take 2 or 3 ice cubes. Touch them. They are hard and cold. They do not change their shape when transferred from one vessel to another.



## Existence of water in three forms

Fill an ice-tray with water. Keep it in the freezer of a fridge. After some time, it will change into ice. This process of conversion of water into ice is called **freezing**.

Take the tray out of the freezer and keep it in the open. The warm atmosphere changes the solid ice cubes into water. This process of conversion of solid ice into water is called **melting**.

Boil this water in a container. The water changes into water vapours or steam. This process of conversion of water into water vapours is called **evaporation**.

On cooling, water vapour or steam changes into water. This process of conversion of water vapours into water is called **condensation**.

Similarly, this cycle of changing from one form to another applies to nature as well.



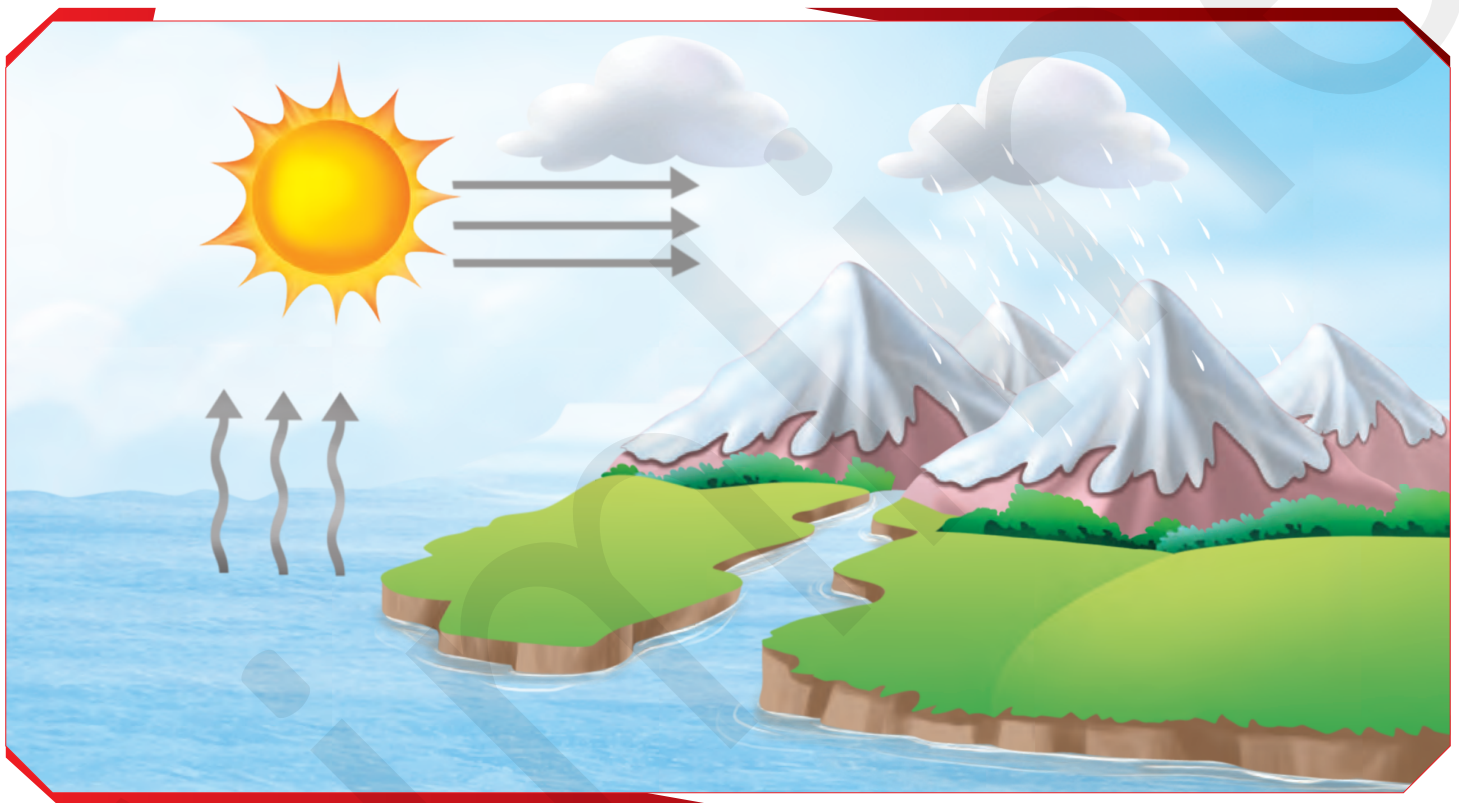
## Water cycle in nature

When the Sun shines, it heats the water in rivers, lakes, ponds and seas. This changes water into water vapours.

Water vapours rise up in the air, high up where they cool and turn into tiny drops of water. These drops of water form clouds.

In the clouds, these tiny drops join up to form large drops. These large drops become heavy and fall on the Earth as rain.

The rain water flows back into ponds, rivers, lakes and seas. This cycle goes on and on in nature and is called **water cycle**.



### Facts to know

- ☉ Water is the only substance that is found naturally on the Earth in three forms: liquid, gas, solid.
- ☉ Frozen water is 9% lighter than water, that is why ice floats on water.
- ☉ Each day the sun evaporates a trillion tons of water.
- ☉ Humans daily use about 190 litres (50 gallons) of water.

## LET'S RECALL

1. Water can be found in three forms : solid, liquid and gas.
2. On heating, water changes into water vapours.
3. On cooling, water vapour changes into water, it is called condensation.
4. On being cooled in a freezer, water freezes into ice, it is called freezing.
5. Water is always on the move in a never ending cycle, it is called water cycle.
6. Falling of water from the clouds, in the form of drops, is called rain.

### Word Power

- dam : a wall built across a river  
purify : to make clean  
reservoir : a place where water is stored



### Cross Curriculum Connect

#### 1. Answer the following questions in short.

- a. Where does rain water go?
- b. What would you get if you heat ice cubes?
- c. Upon condensation, water changes into which state?
- d. How does ice change into water?

#### 2. Fill up the blanks with suitable words.

solid    Steam    three    vapours

- a. There are ..... forms of water.
- b. Ice is the ..... form of water.
- c. When we heat water, ..... are formed.
- d. .... is the gaseous form of water.



### 3. Answer the following questions.

- a. Describe the three forms of water.
- b. What do you mean by melting, freezing and condensation?
- c. What is water cycle?



### 4. Tick (✓) the right and cross (✗) the wrong statements.

- a. Steam is a form of solid.
- b. We cannot make ice from steam.
- c. Water cycle goes on in nature.
- d. Water is always on the move.
- e. Dams are built across rivers.

### 5. Multiple choice questions

- a. The forms of water are .....
  - (i) ice
  - (ii) gas
  - (iii) water
  - (iv) all of these
- b. We dig these to get underground water.
  - (i) Wells
  - (ii) Ponds
  - (iii) Lakes
  - (iv) None of these
- c. Water in rivers and lakes is .....
  - (i) safe for drinking
  - (ii) unsafe for drinking
  - (iii) both (i) and (ii)
  - (iv) none of these
- d. The gaseous form of water is .....
  - (i) ice
  - (ii) water
  - (iii) water vapour
  - (iv) all of these

### 6. Give one word for each one of the following.

- a. The process of conversion of ice into water .....
- b. The conversion of water vapour into water .....



- c. The conversion of water into ice
- d. The main source of water

.....  
 .....

**7. Match the columns.**

**Column A**

- a. Rain water
- b. Underground water goes in
- c. Pond water
- d. Water is filtered

**Column B**

- (i) wells and tube wells.
- (ii) gets collected in ponds, lakes and rivers.
- (iii) to remove dirt and germs from it.
- (iv) has germs in it.



Draw the water cycle in your scrapbook to show different forms of water. Label the forms and colour them. Show this to your teacher and ask for his/her remarks.



Can you give an example of water cycle from daily life ?



Make your own refrigerator.  
 Take a clay pot and soak in water. Keep the things which you want to cool, inside the pot. As water evaporates from the pot, it takes away the heat. So, the things inside the pot will remain cool. If you keep the pot in a bowl of water, it will soak up more water as it dries out and your refrigerator will last longer.





# OUR EARTH

## Learning Objectives

1. Shape of the Earth
2. Model of the Earth
3. Places on the Earth
4. Rocks and their contents



## Let Me Answer

- How can you save water on earth?
- How can you save the environment on earth?



## LANDFORMS OF THE EARTH



## EARTH



We all live on the Earth.

The Earth is **home** not only for human beings but also for all living creatures.

When we look at our Earth from the space, it looks like big ball that seems to be blue in colour.

So, the shape of our Earth is **round**.

## The Globe

A small model of the Earth is called a globe.

We refer to the globe to explain about the Earth.

## Surface of the Earth

The Earth is made up of **water** and **land**. About three parts of the Earth's surface is covered with water and the rest is land.

The Earth is surrounded by a layer of air which is called **atmosphere**.

**Air**, **water** and **land** are necessary to all living creatures for life to exist on the Earth.

Some places on the Earth are flat. They are called **plains**. Some are covered with sand. They are called **deserts**.

In some places, the land is elevated. These are called **mountains**.

In some places, the land is not as high as the mountains. Such places are called **hills**.



We have changed the face of the Earth by building bridges, dams, buildings, roads and factories on the Earth.



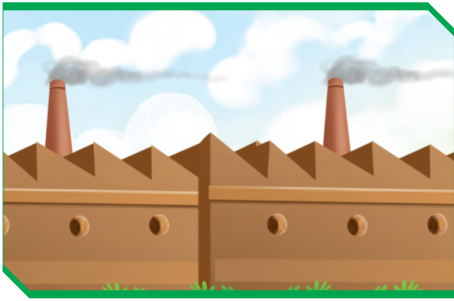
The Earth is our home for living in proper environment.

We should not damage our Earth by releasing different harmful substances into air, water and land.

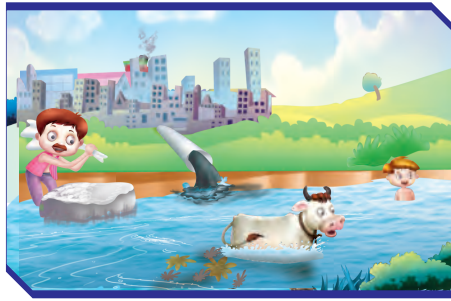
We must take care of it. It is our duty to keep the Earth's atmosphere clean.



We should plant more and more trees to keep our Earth green and beautiful.



Air pollution



Water pollution



Land pollution

## Rocks

The Earth is made up of different types of rocks. Some rocks are also found below the surface of the Earth.

### Properties of rocks

- ◆ Different rocks are of different colours, e.g. : marble is white in colour, slate is black in colour etc.
- ◆ Some rocks are very hard, e.g. : marble is hard, sandstone is hard but less harder than marble and so on.
- ◆ Some rocks are soft and break easily, e.g. : coal, slate etc.



marble

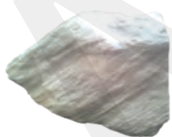


Sandstone



Coal

### Contents of rock



Talc



Graphite



Gypsum



Silica

- ◆ Rocks are made up of certain useful substances called **minerals**.
- ◆ Some rocks contain more than one type of mineral.
- ◆ Minerals usually occur as crystals in the rocks.
- ◆ The examples of minerals are talc, graphite, gypsum, silica etc.

## Facts to know

- ⊙ The Earth isn't perfectly round, it is slightly flattened at the North and South poles.

## LET'S RECALL

1. The Earth is our home.
2. The small model of this Earth is known as the globe.
3. We have plains, deserts, mountains and oceans on the Earth.
4. We should protect the environment of the Earth.
5. Man has polluted the Earth by means of his development.
6. We must take care of the Earth.
7. The Earth is made up of different types of rocks.

## Word Power

- atmosphere : the gaseous layer that surrounds the Earth
- desert : part of the Earth covering with sand and with lack of water
- flat surface : a plain area of land on the Earth
- garbage : all waste or rubbish
- hills : a high area of land that is not as high as a mountain

## Train Your Brain

## Cross Curriculum Connect

1. **Answer the following questions in short.**
  - a. Write the name of a small model of the Earth.
  - b. What is the shape of our Earth?
  - c. Define atmosphere.
  - d. What are the flat places on the Earth called?
  - e. Write the name given to the places covered with sand.

## 2. Fill up the blanks with suitable words.

water home protect globe

- The Earth is our .....
- The model of our Earth is known as the .....
- Our Earth is made up of ..... and land.
- It is our duty to ..... environment of the Earth.

## 3. Answer the following questions.

- How can we prove that our Earth is round in shape?
- Name three necessary things for life on the Earth.
- What are minerals and how do they occur?



## 4. Tick (✓) the right and cross (✗) the wrong statements.

- Only one third part of the Earth is land.
- The Earth looks like a big ball of fire.
- We should not plant more trees on the Earth.
- Air, water and land are necessary for life.

## 5. Multiple choice questions

- The Earth spins on its axis from .....
  - West to East
  - East to West
  - North to South
  - none of these
- How many times the Sun is bigger than the Earth?
  - 2 times
  - 3 times
  - 4 times
  - Many times
- About how much part of the Earth is covered with water?
  - Half
  - Three-fourth
  - Two-third
  - Five-sixth



**6. Give one word for each one of the following.**

- a. Name given to the model of the Earth .....
- b. The place where we all live .....
- c. The shape of our Earth .....
- d. Name given to the part of the Earth covered with sand .....

**7. Match the columns.**

**Column A**

- a. The Earth is surrounded by
- b. Places covered with sand are called
- c. The model of the Earth is called
- d. A very high raised land is called

**Column B**

- (i) mountain.
- (ii) globe.
- (iii) deserts.
- (iv) atmosphere.



Collect some colourful pictures of the Earth, plains, deserts, mountains, lakes and oceans. Paste them in your scrapbook and show it to your friends.



Bring a globe to your classroom and discuss its similarities with the Earth among your friends.



Go to the computer lab and surf on the computer, find out the following :

1. The highest mountains on the Earth.
2. The smallest continents on the Earth.
3. The deepest point on the Earth.

You can make a list of your findings.



# ROCKS AND MINERALS

## Learning Objectives

1. Rocks
2. Minerals
3. Gemstones



## Let Me Answer

- Where are minerals found?
- Why are rocks and minerals important?



## VARIETY OF ROCKS



## ROCKS AND MINERALS



The major part of the Earth is made of rocks.

The presence of rocks can be found almost anywhere.

The stones which you see in playgrounds, parks and on roads are nothing but small pieces of rocks. Even the clay and dust particles are made up of rocks.

Rajat and Divya have gone to the beach with their parents. There are many kinds of rocks on the beach.



Colour the rocks that you see in the picture below.



## Rocks

Rocks are found on the mountains, hills and in valleys. They are also found under seas and rivers. Rocks are of many kinds. Rocks are of many colours like black, white, red and grey.

Rocks are usually hard.

**Granite** is a very hard rock. Floortiles are made from it.

**Marble** is also a hard rock. It is used for making buildings, statues and floors. The Taj Mahal in Agra is built of white marble.

**Sandstone** is also a hard rock. It is not as granite or marble. The Red Fort in Delhi is made of red sandstone.



Some rocks are soft. **Coal, chalk** and **slate** are soft rocks.

Steam engines move with coal.

Electricity is produced in the thermal power station with burning of coal.

We use chalk to write. Most of the teachers, lecturers and professors write in the class on the blackboard with chalk sticks.

Chalk is made of gypsum.

Roofs of houses are made of slates in snow falling region.

## Minerals

All rocks are made up of minerals. Minerals are of different colours, shapes and sizes.

Many things that we use every day, are made of minerals.

Iron is used to make nails.

Tungsten is used in light bulbs.

Quartz is used in watches.

Graphite is used as the 'lead' of a pencil.



Silica is used to make mirrors.

China clay is used to make flower vases.

Talc is used to make talcum powder.

Silica is used to make glass.

## Gemstones



Garnet



Diamond



Sapphire



Emerald

Gemstones are very hard minerals. These are cut into various shapes and polished.

In their original forms, they do not look beautiful.

When they are polished, these gemstones look very attractive and are used in jewellery.

Garnet, diamond, sapphire and emerald are beautiful gemstones. They are very expensive in the market.

## Facts to know

- ⊙ There are over 4000 different types of minerals. Only around 30 of these are commonly found in the Earth's crust.

## LET'S RECALL

1. Rocks are available almost anywhere.
2. Rocks are of many colours like white, black, red and grey.
3. Granite, marble and sandstones are hard rocks.
4. Coal, chalk and slate are soft rocks.
5. All rocks are made up of minerals.
6. Minerals are of different colours, shapes and sizes.
7. Gemstones are hard precious minerals used in jewellery.

### Word Power

gemstone : a precious or semi-precious stone, especially when cut, polished and used in a piece of jewellery

mineral : a material of which rocks are made

marble : a hard rock in different colours (black, white, green and pink)

rock : the hard mineral material of the Earth's crust, exposed on the surface or underlying the soil



## Train Your Brain



## Cross Curriculum Connect

### 1. Answer the following questions in short.

- a. Where are rocks found?
- b. Name three hard rocks.
- c. Name three soft rocks.
- d. What are rocks made up of?
- e. Name three gemstones used in jewellery?



## 2. Fill up the blanks with suitable words.

- The crust of our Earth is made of ..... (rocks/paper).
- ..... (Hard/Soft) rocks are mostly used for building purposes.
- ..... (Granite/Chalk) is used to make floors.
- Ruby is a type of ..... (chalk/gemstone).
- The 'lead' of a pencil is made from ..... (graphite/oil).
- Granite and marble are ..... (hard/soft) rocks.

## 3. Answer the following questions.

- What are minerals?
- How are gemstones used in jewellery?
- Write the names of different rocks and one use for each of them.



## 4. Tick (✓) the right and cross (✗) the wrong statements.

- Granite is a very hard rock.
- Marble is a very soft rock.
- Coal, chalk and slate are soft rocks.
- Graphite is not used as the 'lead' of a pencil.
- Gemstone is a precious hard rock used in jewellery.

## 5. Multiple choice questions

- The crust of our Earth is made of .....  
(i) rocks and minerals  (ii) wood   
(iii) air  (iv) none of these
- The Taj Mahal in Agra is built of .....  
(i) granite  (ii) red stone   
(iii) white marble  (iv) iron
- Granite is used to make .....  
(i) floor tiles  (ii) walls   
(iii) roof  (iv) none of these



**6. Give one word for each one of the following.**

- a. The rock used to make floor tiles .....
- b. The rock of which Taj Mahal was made .....
- c. The rock used for writing at blackboard .....
- d. The material of which the Earth crust is made of .....

**7. Match the columns.**

**Column A**

- a. The Earth
- b. Taj Mahal
- c. Red Fort
- d. Floor

**Column B**

- (i) Granite
- (ii) Red stone
- (iii) White marble
- (iv) Rocks and minerals



Visit any under construction building in your neighbourhood to see the different types of rocks used in its construction.



- 1. Which rock is used to make the roofs of some houses ?
- 2. Collect some rocks from a ground near your house. Try to distinguish them from each other.



Collect five samples of rocks from a garden or roadside. Go along with your parents or Science teacher. Later, find out the following about the collected rock samples

Sample No.	Weight	Colour	Hard or Soft
1.			
2.			
3.			
4.			
5.			

# Revision Test Paper-I

(Based on Chapters 1 to 4)

Max. Marks : 10

## 1. Multiple choice questions (2)

- a. .... live for few months.
- |             |                          |                    |                          |
|-------------|--------------------------|--------------------|--------------------------|
| (i) Trees   | <input type="checkbox"/> | (ii) Shrubs        | <input type="checkbox"/> |
| (iii) Herbs | <input type="checkbox"/> | (iv) None of these | <input type="checkbox"/> |
- b. The pet who safeguards our home is a .....
- |             |                          |          |                          |
|-------------|--------------------------|----------|--------------------------|
| (i) cat     | <input type="checkbox"/> | (ii) dog | <input type="checkbox"/> |
| (iii) horse | <input type="checkbox"/> | (iv) cow | <input type="checkbox"/> |

## 2. Give one word for each one of the following. (2)

- a. A thread or filament from textile plant or animal .....
- b. A large area covered thickly with trees .....

## 3. Tick (✓) the right and cross (×) the wrong statements. (3)

- a. Creepers are plants with very weak stems.
- b. Lettuce is an example of leafy food.
- c. We get wool fibres from sheep.

## 4. Match the columns. (3)

### Column A

- a. Used to draw water
- b. Feeds on dead animals
- c. Perfume

### Column B

- (i) Jackal
- (ii) Rose
- (iii) Oxen



# Revision Test Paper-II

(Based on Chapters 5 to 7)

Max. Marks : 10

## 1. Multiple choice questions (2)

a. There are ..... bones in an adult's body.

(i) 106

(ii) 206

(iii) 306

(iv) 406

b. We must drink ..... glasses of water everyday.

(i) 8 to 10

(ii) 5 to 15

(iii) 0-5

(iv) none of these

## 2. Give one word for each one of the following. (2)

a. Animals moving around streets .....

## 3. Tick (✓) the right and cross (✗) the wrong statements. (3)

a. We should sit upright.

b. Fruits and vegetables are body-building food.

c. First-aid is the help given to the injured after the doctor arrives.

## 4. Match the columns. (3)

### Column A

a. Safety rules

b. Do not eat

### Column B

(i) stale food.

(ii) save.

# Model Test Paper

Max. Marks : 25

**1. Answer the following questions in short. (5)**

- a. What is fruit?
- b. Write one use of wood.
- c. Why do we tame some animals?
- d. Name the type of body shape of aquatic animals.
- e. Name the soft part of our body.

**2. Fill up the blanks. (5)**

- a. .... bone is the largest bone in our body.
- b. Food protects us from .....
- c. .... need support to stand and grow.

**3. Answer the following questions. (15)**

- a. Explain the function of stem.
- b. What are nuts? Give examples.
- c. What are the uses of leather?
- d. Which animals are called as hunters and why?
- e. Name the vital organs protected by the skeleton.

# Revision Test Paper-III

(Based on Chapters 8 to 10)

Max. Marks : 10

**Multiple choice questions (10)**

a. The vapour is called .....

- |             |                          |                    |                          |
|-------------|--------------------------|--------------------|--------------------------|
| (i) ice     | <input type="checkbox"/> | (ii) water         | <input type="checkbox"/> |
| (iii) steam | <input type="checkbox"/> | (iv) none of these | <input type="checkbox"/> |



- b. The shape of the Earth is .....
- (i) conical  (ii) round   
(iii) cylindrical  (iv) none of these
- c. Rocks are found in the .....
- (i) mountains  (ii) hills   
(iii) valleys  (iv) all of these
- d. Water has ..... forms.
- (i) four  (ii) two   
(iii) three  (iv) three
- e. A small model of the Earth is called .....
- (i) map  (ii) book   
(iii) copy  (iv) globe
- f. The Red Fort in Delhi is built of .....
- (i) white marble  (ii) granite   
(iii) sandstone  (iv) none of these
- g. Out of three states of matter, ..... has no shape.
- (i) solid  (ii) liquid   
(iii) gas  (iv) both (iii) & (ii)



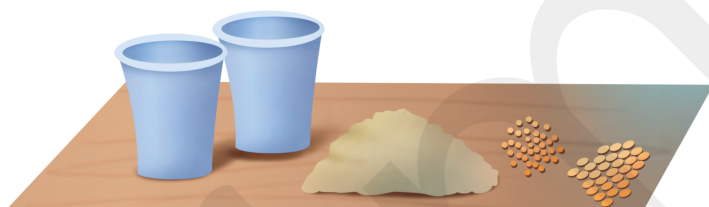
## ACTIVITY-1

Grow your garden.

**Material&required** : Seeds of mustard or coriander, 2 - 3 paper cups and soil

### Procedure :

1. Take some mustard or coriander seeds.
2. Put some soil in the paper cups.
3. Sow the seeds in the soil. Sow about 4 to 5 seeds in each paper cup. You may take help from an adult.
4. Sprinkle water on the soil and place the cups near a window where it can get sunlight.
5. Take a look at the paper cups every day.



**Conclusion** : After a few days, you will observe small plants in the paper cups.



## ACTIVITY-2

To make a cute hut.

**Material&Required** : One empty tea packet, poster colours (blue, green, yellow and brown), paper cutter, one sheet of thick paper, glue, one big button and



cello tape

**Procedure :**

1. Remove the inner foil of tea packet.
2. Make a triangular roof with the help of a paper cutter. Use the thick sheet of paper as raw material.
3. Cut two triangles of paper from the thick sheet of paper.
4. Stick the roof on the top of the tea packet. Also fix up triangles on the front and back of this roof. Use cello tape, glue and small sheets of paper to do so.
5. Cut a gate from the front of the hut. Cut a window from its side (as shown). Use a cutter to do so.
6. Paint two sides and top of the hut as shown in the figure. Any two opposite sides would have two same colour. Do not paint the of hut. Rather, paste a small cardboard sheet on the bottom with the help of glue.
7. Let the paint dry up.
8. Finally, apply some glue to one side of a big button and stick it above the door.



**Conclusion :**

You can do wonders with simple material available at home.



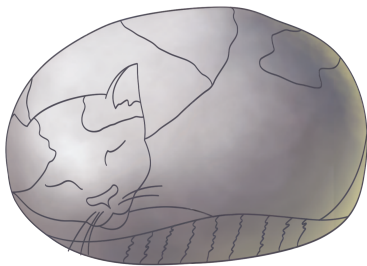
## ACTIVITY-3

Make your pet rock.

**Materials required** : rocks of different shapes and sizes, different coloured paints and paint brush

### Procedure :

1. Collect some smooth, medium-sized rocks.
2. Wash the rocks. Keep them under the sun to dry.
3. Look closely at the rocks you have collected. Try to imagine an animal that the rock could look like.
4. Paint eyes, nose, ears, mouth and other features that will make the rock look like the animal you have imagined.



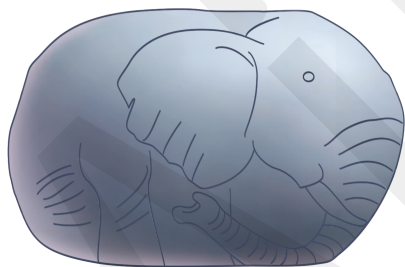
Cat



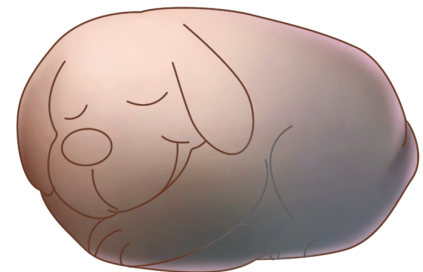
Penguin



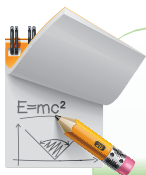
Rabbit



Elephant



Dog



**Conclusion:** Now, give names to your pet rocks.

How about Rocky or Mr. Stone?





## ACTIVITY-4

Air makes things move. Make a paper plane and fly it.

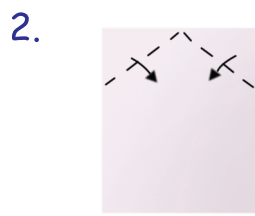
**Material Required:** a used sheet of paper

### Procedure :

Follow the steps as shown in the pictures below.



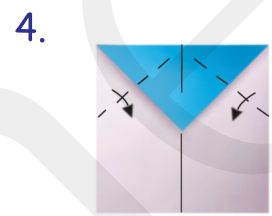
Use 2/3 piece of paper.



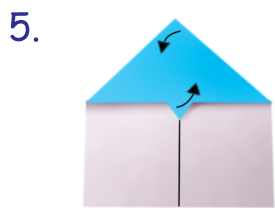
Fold top right and left corners inwards.



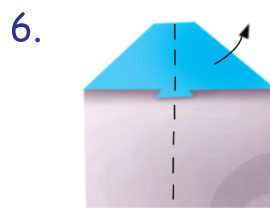
Again fold it along the dotted line.



Fold top right and left corners inwards.



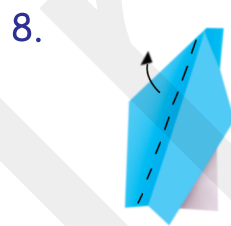
Again fold it as shown.



Fold it backwards from centre.



Fold it as shown.



Fold right and left wings downside.



**Conclusion:**

- ✘ Your paper plane is ready to fly. Throw it in the air and see how it flies.
- ✘ Air makes things move.





## ACTIVITY-5

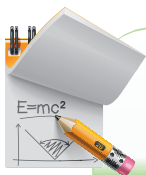
To make Yoghurt.

**Material&required** : 400 grams of milk, two onions, two tomatoes, black pepper (grounded) 1 tsp, salt to taste, curd 3 tsp and one green chilly

**Procedure :**



1. Slightly heat the milk in a pan. Do not overheat. Let your mother (or any elder) do this for you.
2. Now, bring the pan on table. Add 3 tsp of curd into it. Stir well.
3. Let this milk lie covered for one night.
4. Next morning, wash tomatoes. Cut them into small pieces. Cut onion into small pieces (let any of your elder help you in cutting).
5. Add tomatoes, onion, salt, black pepper and diced green chilli to the curd which must have been set by now.



**Conclusion:** Serve in small bowls. You can also eat chapattis and vegetables along with this





## ACTIVITY-6

Prepare colour from different flowers.

**Material Required** : different types of flowers like rose, marigold, hibiscus etc.

**Procedure** :

1. Take leaves of different flowers.
2. Dry them in the sunlight.
3. Crush the dried flowers into a powder.



**Conclusion**: You can use this powder as a natural colour.



## ACTIVITY-7

Make a yummy fruit salad.

**Materials required** : one apple, one banana, one pear, lemon juice, salt and pepper

**Procedure** :

1. Ask an adult to peel and cut apples, pear and banana into small pieces.
2. Mix the cut fruits in a bowl.
3. Ask an adult to cut a lemon and squeeze some juice into the bowl containing the cut fruits.
4. Add a pinch of salt and pepper to it.
5. Keep it in the refrigerator for some time.



**Conclusion**: Your fruit salad is ready to eat.

# Protect Your Environment

## *Save Our World*

All of us can see this vast world. But in sense of natural destruction or calamity, it is very small just like a football. It is like a toy for natural annihilators. So, we should follow these points to save this whole world.



- We should grow many plants and trees.
- We should not produce chemicals which are harmful for human beings, plants and animals.
- We should not add industrial water to rivers and drainage.
- Polluted water should be cleaned after collecting in the same factory or industry.
- A lot of trees should be grown in different areas.
- Plants and trees reduce excessive quantity of carbon-di-oxide.

# SL GANS



Grow, grow more tree,  
get food, wood and oxygen free.



Plants are environment cleaner,  
where trees grow,  
they bring rain and water.



Go, go, far away pollution  
if you grow a number of trees.  
Take, take fresh air  
if you have dense greeneries.

SAVE WATER



WATER IS LIFE

Everyday, everyday, everyday,  
see your moon's face.  
No air, no water, no air, no water  
it reminds all of us  
still save water! still save water!  
accept the challenges with grace.



Smoke, it is industrial or cigarettes,  
fall ill all with fierce diseases.  
No way left except planting trees  
it is the total path, which makes me alive.



Plants are essential for animals  
and human beings,  
Sow seeds, grow plants  
use woods, eat fruits from twigs.