



SHARVIL BOOKS

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Focus of SCIENCE

A main course book of Modern Science

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A Complete **GUIDE**
to Junior Block
SCIENCE

Develops observation
skills, includes
experiments and
hands-on activities

1-5

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Book-1

Chapter 1 — Living and Non-Living Things

EXERCISE

A. Answer the following questions :

1. Things which have life are known as living things.
2. Things which do not have life in them are known as non-living things.
3. Differences between living and non-living things are :

Living Things	Non-living Things
1. Living things grow.	1. They do not grow.
2. They breathe.	2. They do not breathe.

4. Things which are made by human beings are known as man-made things.
5. Things are classified into two categories :
(i) Living things (ii) Non-living things

B. Answer in one word :

1. Man-made things
2. Natural things
3. Living things
4. Living things
5. Non-living things

C. Fill in the blanks with the suitable words given below :

1. life, 2. Living, 3. non-living, 4. natural, 5. clothes

D. Tick (✓) the right and cross (×) the wrong statements :

1. ✓ 2. × 3. ✓ 4. ✓ 5. ×

E. Match the following columns :

1. Mango — living things
2. Computer — non-living things
3. Rocks — natural things
4. Books — man-made things

HOTS Corner

No, non-living things cannot ever become living things.

FUN TIME

1. Collect the pictures of four living and four non-living things and paste them in your scrap book.
Do yourself.
2. Look at the picture below and write 'L' for living thing and 'N' for non-living thing.

Rat

Mobile

Tree

Ant

Chapter 2 — Classification of Plants

EXERCISE

A. Answer the following questions :

1. Plants are different kinds of big and small trees.
2. Trees have thick, hard and woody stems known as trunks.
3. Seasonal plants are those plants which grow in one particular season.
4. Plants that grow in water are called aquatic plants.
5. Creepers are plants with delicate and thin stems.

B. Answer in one sentence :

1. Climbers plants need support to grow and stand erect.
2. Creepers are the plants that grow and spread along the ground.
3. Seasonal plants grow in one particular season.
4. Shrubs are woody, short and strong plants.
5. Aquatic plants float on water.

C. Fill in the blanks with the suitable words given below :

1. tulsi 2. gourd 3. bean 4. Lotus 5. Cactus

D. Tick (✓) the right and cross (×) the wrong statements :

1. (✓) 2. (×) 3. (×) 4. (✓) 5. (✓)

E. Match the following columns.

- | | |
|------------------------|----------------------------------|
| 1. Grapevine — climber | 2. Tulsi — herm |
| 3. Mango — tree | 4. Pumpkin — creeper |
| 5. China rose — shrub | 6. Ashoka tree — branchless tree |

HOTS corner

1. Plants are useful to human beings and animals as they gives us oxygen. They gives us a lots of things such as wood, medicine, food and many more.
2. Life could not exist if there were no plants.

Fun Time

1. There are many plants that you see around your home or in school. Make a list of those trees, herbs, shrubs, creepers and climbers in the following table.
Do yourself.
2. Colour the tree as per the instructions given below.
Do yourself.

Chapter 3 — Parts of a Plant

EXERCISE

A. Answer the following questions :

1. A plant has roots, stem, leaves, flowers and fruits as its parts.
2. The roots of a plant grows under the soil.
3. The stem of a plant grows above the soil.
4. Leaf prepares food for plant.
5. Flower produces seed on fruit.

B. Name the part of the plant, answer in one word.

1. Roots 2. Stem 3. Leaf 4. Roots 5. Flower

C. Identify me as part of the plant.

1. Leaf 2. Seed 3. Flower 4. Dried fruits 5. Roots

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. ✓ 3. X 4. X 5. X

E. Tick (✓) the correct answer :

1. (d) 2. (b) 3. (c) 4. (b) 5. (a)

F. Give two examples of the following :

1. Carrot Radish 2. Cabbage spinach 3. Ginger potato
4. Banana Lotus 5. Papaya, water-melon

HOTS Corner

Name some fruits that are used by us in salad. Apple, banana, melons, pears, oranges, kiwi etc.

Fun Time

1. Take a paper plate and cut a half circle in its centre. Draw a number of leaves on different colourful chart papers. Cut out these leaves, glue them all around the rim of the paper plate. Your wall hanging is ready. Hang it by using a thread.
Do yourself.
2. The children may collect various kind of leaf from different plants and observe the different kinds of layers and veins in these leaves.
Do yourself.

Chapter 4 — Source of Food

EXERCISE

A. Answer the following questions.

1. Plants give us food in the form of fruits, vegetables and grains. They also purify the air we breathe.
2. Two types of grains are cereals and pulses.
3. Two stems used as vegetables are ginger and potato.
4. Two dry fruits are almond and cashew nut.
5. Spices add taste and flavour to our food.

B. Answer in one word.

1. Mango 2. Dry fruits 3. Wheat, rice 4. Apple, mango 5. Spices

C. Give two examples in each case.

1. Walnut cashew nut 2. Cauliflower Broccoli 3. Lentil Green gram
4. Mustard sunflower 5. Neem Amla

D. Fill in the blanks with the suitable words given below.

1. Vegetables 2. Cereals, pulses 3. Carrot 4. Coffee 5. neem

E. Circle odd one in the series.

1. Carrot, 2. Cabbage, 3. Cauliflower, 4. Mustard, 5. Almond

F. Match the following columns.

1. Walnut — dry fruits 2. Cardamom — spices
3. Groundnut — edible oil 4. Sugar — sugarcane
5. Mint — medicines

HOTS Corner

1. We get spices from plants. Ask your mother which spices she uses regularly in the kitchen? Make a list of them.

Do yourself

2. Your father wants salad in his lunch. Can you tell which things your mother use to make salad?

Do yourself

Fun Time

1. Go to the field and collect plants of wheat, rice, barley and paste them in your scrapbook.

Do yourself

2. Different kinds of food have been given below. Write 'F' if it is used as fruits 'V' for vegetables and 'G' for grains.

grapes

tomato

potato

maize

Chapter 5 — The World of Animals and Insects

EXERCISE

A. Answer the following questions :

1. Animals that live in forests are known as wild animals.
2. Animals that live in water are called aquatic animals.
3. Insects are very small in size and have six legs.
4. Birds are flying creatures.
5. The birds which cannot fly are known as flightless birds.

B. Answer in one word :

1. Domestic animals
2. Amphibians
3. Aquatic animals
4. Birds
5. Insects

C. Give two examples in each case :

1. Cat, Cow
2. Frog, Turtle
3. Butterfly, Mosquito
4. Lion, Bear
5. Starfish, whale

D. Fill in the blanks with the suitable words given below :

1. Shark
2. kiwi
3. dog
4. mosquito
5. lion

E. Circle the odd one out :

1. Elephant
2. Horse
3. Kiwi
4. Shark
5. Eagle

F. Tick (✓) the right and cross (×) the wrong statements :

1. ✓
2. ×
3. ×
4. ×
5. ×

HOTS Corner

1. You have learnt about different animal groups. Tell who is the 'king of jungle' and to which group does it belong.

Lion is the king of jungle. Lion belongs to group of wild animals.

2. Can you name the 'National Animal' of our country?

Tiger is the national animal of our country.

Fun Time

1. Collect pictures of various animals, birds and insects. Paste them on a chart paper under different readings. Also write their main features.
2. Some pictures of animals are given below. Write 'W' for aquatic animals. 'L' for animals living on land and 'A' for amphibians.

Frog

Octopus

Dog

Chapter 6 — Food and Shelter for Animals

EXERCISE

A. Answer the following questions :

1. Some animals eat only plants and plant products. They are called herbivores.
2. Some animals eat flesh of other animals. These are called carnivores.
3. Scavengers are those that feed on dead animals.
4. Omnivores are those that eat both plants and flesh of other animals.
5. Carnivores have sharp and pointed teeth to tear the flesh of other animals.

B. Answer in one word :

1. Carnivores 2. Herbivores 3. Omnivores 4. Scavengers

C. Give two examples in each case :

1. Cow, Goat 2. Monkey, Parrot 3. Lizard, Frog, 4. Eagle, Kite
5. Lion, Tiger

D. Fill in the blanks with the suitable words given below :

1. Pig 2. Lion 3. dog 4. rabbit 5. monkeys

E. Tick (✓) the correct answer :

1. cow 2. rabbit 3. spider 4. coop 5. nest

F. Tick (✓) the right and cross (×) the wrong statements :

1. ✓ 2. ✓ 3. × 4. × 5. ×

HOTS Corner

1. I spin a web. It catches prey for me. Who am I?
I am a spider.
2. I have a sticky tongue to catch the insects (my food). Who am I?
I am a Lizard.

Fun Time

1. Collect pictures of homes of various animals and paste them on another chart.
Do yourself.
2. Students are advised to collect pictures of various animals and categories them into various groups, e.g., Carnivores, Herbivores, Omnivores and Decomposers.
Do yourself.

Chapter 7 — Know Your Body

EXERCISE

A. Answer the following questions :

1. The five sense organs present in human body are eyes, tongue, nose, ears and skin.
2. Skeleton gives shape and support to our body.
3. Muscles cover our bones and help them to move.
4. Tongue helps to taste different things.
5. Our sense organs are controlled by our brain.

B. Answer in one word. Name the parts of our body :

1. Thigh bone
2. Skin
3. Nose
4. tongue
5. Muscle and bones

C. Fill in the blanks with the suitable words given below :

1. 206
2. 600
3. eyes
4. skin
5. ears

D. Tick (✓) the correct answer :

1. tongue
2. ear
3. teeth
4. legs
5. bones

E. Tick (✓) the right and (X) the wrong statements :

1. ✓
2. X
3. X
4. ✓
5. X

F. Match the following :

- | | | | | | | | | |
|---------|---|------|-----------|---|-------|---------|---|-------|
| 1. Skin | — | feel | 2. Tongue | — | taste | 3. Nose | — | smell |
| 4. Eyes | — | see | 5. Ears | — | hear | | | |

HOTS Corner

1. What is the importance of sense organs?

We come to know about things around us, through our sense organs. They help to see, hear, taste, smell and feel.

Fun Time

Feel the experience of touching hot and cold objects.

Do yourself.

Chapter 8 — Healthy Body

EXERCISE

A. Answer the following questions :

1. To stay fit and healthy we must take healthy food and keep ourselves clean.
2. We should bath daily to keep our body clean.
3. We should clip our nails regularly and we should wash our hands with soap and water before and after meals to keep ourselves clean.
4. We should brush daily to keep our teeth clean and healthy.
5. Do yourself.

B. Answer in one word :

1. twice
2. eight hours
3. cleanliness
4. our hands

C. Fill in the blanks :

1. Fit
2. twice
3. rest
4. eight

D. Tick (✓) the correct choice :

1. (a)
2. (a)
3. (b)
4. (b)

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. ✓ 3. × 4. × 5. ✓

HOTS Corner

You sleep very late at night. You have to get up early in the morning as you have to go to school. Is it a healthy routine?

No, it is not a healthy routine. We must sleep for at least eight hours to maintain good health.

Fun Time

Playing is a good exercise. It keeps us fit and healthy. All students should enjoy while playing.

Do yourself.

Chapter 9 — Housing and Clothing

EXERCISE

A. Answer the following questions :

1. We need a house. It provides us shelter and protects us from wild animals and thieves.
2. Two kinds of houses are kutcha house and Pucca house.
3. Clothes makes us look neat, clean and smart. It protect us from heat, cold, wind and rain.
4. We get wool from sheep for making woollen clothes.
5. We sleep and take rest in bedroom.

B. Answer in one word. Name the type of room :

1. kitchen 2. Dining room 3. Bathroom 4. study room 5. Bedroom

C. Fill in the blanks with the suitable words given below :

1. house 2. sheep 3. umbrella, raincoat 4. socks, shoes 5. cotton

D. Tick (✓) the correct answer :

1. (d) 2. (a) 3. (a) 4. (d) 5. (d) 6. (a)

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. ✓ 3. ✓ 4. ✓ 5. × 6. ✓

HOTS Corner

1. I am a four-legged animal. You get wool from me. Who am I?

I am a sheep.

2. I protect you from the rain. You can also wear me. What am I?

I am clothes.

Fun time

Match the picture.

Do yourself.

Chapter 10 — Safety First

EXERCISE

A. Answer the following questions :

1. We should follow safety rules to keep ourselves and others safe.

2. Two safety rules to follow at school are :
 - (i) Always walk in a queue.
 - (ii) Do not push others while using stairs.
3. Two safety rules to follow at home are :
 - (i) Do not play with switches and plugs.
 - (ii) Keep your things in proper place.
4. Two safety rules to follow while playing are :
 - (i) Do not play on the terrace.
 - (ii) Always play in a playground.
5. Two safety rules to follow while crossing the road are :
 - (i) Cross the road only at the zebra crossing.
 - (ii) Cross the road only when the signal is green.

B. Answer in one word :

1. queue 2. playground 3. sharp 4. footpath 5. zebra crossing

C. Fill in the blanks with the suitable words given below :

1. road 2. lean 3. zebra 4. play 5. safety

D. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. × 4. × 5. ✓

E. Tick (✓) the correct answers :

1. (a) 2. (a) 3. (b) 4. (a) 5. (a)

F. Ramesh is learning to keep safe. Write (G) for good and (B) for bad in the box :

1. G 2. B 3. B 4. G

HOTS Corner

1. You have to light a candle. Will you light it yourself or call any elder? Why?
We call an elder to light a candle as we may get hurt.
2. You have to cross a very busy road. Where would you stand and what would you do?
We should cross the road only at the zebra crossing when the signal is green. We should stand on a footpath.

Fun Time

1. These words are related to safety. Fill in the boxes with right letters.
Do yourself.
2. Know from your parents about the various form of safety rules.
Do yourself.

Chapter 11 — The Sun, Moon and Stars

EXERCISE

A. Answer the following questions :

1. The period between sunrise and sunset is called day.
2. The changes in the shape of moon are called phases of the moon. Such as full moon, half moon and crescent moon.
3. The sun and the eight planets together are known as solar system.
4. Stars look small from the earth because they are very far away from the earth.

5. Sun gives us heat, light and energy.

B. Answer in one word :

1. Sun 2. Moon 3. Planets 4. Moon 5. Eight

C. Fill in the blanks with the suitable words given below :

1. east 2. eight 3. moon 4. sun 5. stars

D. Tick (✓) the correct answer :

1. (a) 2. (b) 3. (b) 4. (a) 5. (c)

E. Tick (✓) the right and cross (×) the wrong statements :

1. ✓ 2. ✓ 3. × 4. × 5. ✓

F. Match the following columns :

1. Sun — source of light.
2. Moon — natural satellite of the earth.
3. Star — large in numbers.
4. Planet — heavenly bodies.

HOTS Corner

1. At night, Ravi asked his mother, “why cannot we see the moon and stars in day time”? Can you tell him why?

Because of the glare of sunlight we cannot see the moon and stars in day time.

2. Ram and Shyam are talking. Ram asked Shyam, “Why do we all need the sun to live?” Can you answer his question?

Without the Sun’s heat and light, the Earth would be lifeless. It also gives energy to the plants that provide food and oxygen for life on Earth.

Fun Time

1. Collect the picture of the sun, moon, stars and planets. Paste them in your notebook.

Do yourself.

Book-2

Chapter 1 — Living and Non-living Things

EXERCISE

A. Answer the following questions :

1. Examples of living things are animals and plants. Examples of non-living things are house and chair.
2. Five sense organs present in human beings are eyes, nose, skin, tongue and ears.
3. All animals and plants give birth to their own kind. This process is known as reproduction.
4. Three animals that reproduce by laying eggs are frogs, lizards and birds.
5. Natural non-living things are sun and water. Man-made non-living things are house and books.

B. Answer in one word :

1. Gills
2. Stomata
3. Sun-flower
4. Caterpillar

C. Long Answer Type Questions

1. Three characteristics of living things are :
 - (i) Living things breathe.
 - (ii) Living things reproduce.
 - (iii) Living things feel and react.
2. Different methods by which plants reproduce are :
 - (i) Many plants produce seeds. New plants grow from these seeds.
 - (ii) Some plants can produce baby plants from their buds, stems or leaves.
3. Three characteristics of non-living things are :
 - (i) They cannot move on their own.
 - (ii) They do not need air to breathe in or food to eat.
 - (iii) They can neither feel nor reproduce their own kind.
4. Two types of non-living things are :
 - (i) man-made non-living things : Things like computer house and books and made by man.
 - (ii) Natural non-living things : Things like soil, sun, water and air exist in nature.

D. Fill in the blanks with suitable words given below :

1. Fly
2. Crawl
3. lungs
4. sense

E. Tick (✓) the right and cross (×) the wrong statements :

1. ×
2. ×
3. ✓
4. ×

F. Tick (✓) the correct answers :

1. (b)
2. (a)
3. (a)
4. (c)

HOTS Corner

1. Plants show movement by their parts. Flowers of the sunflower plant always face the sun. Petals of morning glory open each morning.
2. All animals and plants give birth to their own kind. This process like cow, cat bitch and more give birth to babies. Some animals reproduce by laying eggs.

Fun Time

Write about the following animals :

Lion	Fish	bird
walks with legs	swims with fins	flies with wings
Flesh	warms and shirmp	seeds and grains
Cub	baby fish	Chick

Chapter 2 — Types of Plant

EXERCISE

A. Answer the following questions :

1. Plants use sunlight, water and air as inputs to prepare their own food. This process is known as photosynthesis.
2. Some trees do not have branches. They are called branchless trees. For example date and papaya.
3. Those plants which live for very short period, are known as seasonal plants. For example brinjal and spinach.
4. Those plants which grow in water are known as aquatic plants. For example water lily and lotus.
5. Those seeds which are edible are called food grains.

B. Answer in one Word :

1. Leaves 2. Roots 3. Flower 4. Creepers 5. Climbers

C. Long answer type questions :

1. Different parts of the plants are roots, stem, leaves, flowers, fruit and seed.
2. Two functions of thorns present in cactus plant are
 - (i) These thorns protect the plant from enemies.
 - (ii) Thorns also save water of plants from evaporation.
3. Three uses of shrubs are :
 - (i) Shrubs like rose and jasmine are used to make perfume or deodrant.
 - (ii) Shrubs like cotton plants provide cotton to make cotton clothes.
 - (iii) Shrubs like mustard and sunflower are used to make oil, used for cooking.
4. Different types of plants are :
 - (i) Trees : They are big plants. Example Mango.
 - (ii) Herbs : They are very small plants. Example spinach.
 - (iii) Shrubs : They are small bushy plants. Example cotton.
 - (iv) Climbers : They need support to stand and grow. Example pea plant.
 - (v) Thorny plants : They have thorns. Example Cactus.

D. Fill in the blanks with suitable worlds given below :

1. Climber 2. branches 3. creeper 4. Cactus 5. Shrubs

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. ✓ 3. × 4. × 5. ✓

F. Tick (✓) the correct answers :

1. (b) 2. (c) 3. (a) 4. (c) 5. (c)

G. Match the following columns :

1. Creeper — (a) 2. Herb — (e) 3. Thorny plant — (c)
4. Climber — (b) 5. Shrub — (d) 6. Tree — (f)

HOTS Corner

1. Two friends Ravi and Rahul were talking about the oldest Banyan tree in the world. Do you know where it is situated?

The world's oldest banyan tree is located in Acharya Jagadish Chandra Bose Indian Botanic Garden, Howarah, Near Kolkata India.

2. Which kinds of plant serve as home to birds and animals? Can you tell the reason?

Native plants are an ideal option for attracting native pollinator insects and birds, but many garden exotics, especially herbs, fruits and vegetable plants are just as popular.

Fun Time

1. Colour the given picture and write the name of the plant.
Do yourself
2. 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.
Do yourself.

Chapter 3 — Domestic Animals

EXERCISE

A. Answer the following questions :

1. We tame some of the animals because they help us in many ways. They are known as domestic animals. For example cow.
2. Three animals domesticated for meat and flesh are fish, goat and cock.
3. Two animals domesticated for eggs are ducks and hens.
4. Two animals that gives us leather are buffalo and goat.
5. Two animals that gives us wool are sheep and Llama.

B. Answer in one word :

1. Silkworms 2. Dog 3. Donkey 4. Hone-bees

C. Long Answer Type Questions :

1. Three uses of domestic animals are :
 - (i) They provide many things such as food, fibre etc.
 - (ii) We can also use than as modes of transport.
 - (iii) They also helps us to draw water from wells. Example oxen.
2. Different types of food we get from animals are :
 - (i) We get milk from cow and buffalo.
 - (ii) We get eggs from ducks and hens.
 - (iii) We get meat or flesh from fish and cock
3. Different type of fibres that we get from animals are :
 - (i) Sheep gives us wool fibre. Wool is used to make wollen clothes.

- (ii) We get silk from silkworms. We use silk to make sarees, scarves and shirts.
- (iii) We also get fur from sheep. It is used to make beautiful and warm clothes.

D. Fill in the blanks with suitable words given below :

1. honey 2. camel 3. donkey 4. fish 5. cow 6. sheep 7. silkworm

E. Tick (✓) the correct answers :

1. (a) 2. (b) 3. (b) 4. (c)

F. Match the following columns :

1. Sheep — (e) 2. cow — (c) 3. Honey-bees — (d)
4. Silkworm — (b) 5. Hen — (a)

HOTS Corner

1. Mr. Suresh owns a poultry farm. What product would be sell?
We get meat or eggs as food.
2. If you go to a dairy farm, which animals would you find there?
Cow, buffalo and goat.

Fun Time

- Make a giraffe with a stretchable neck.
Do yourself

Chapter 4 — Wild Animals

EXERCISE

A. Answer the following questions :

- Scavengers are animals that feed on the flesh of dead and decaying animals. For example Jackal.
- Carnivores are flesh eating animals. For example tiger.
- Bear and crow are two omnivorous animals.
- Fish and sea-horse are two aquatic animals.
- Animals that live both on land and in water are called amphibians. For example frog.

B. Answer in one word :

1. Terrestrial animals 2. Aquatic animals 3. Elephant, zebra
4. Rabbit 5. Hunters

C. Long answer type questions :

1. On the basis of eating habits, animals have been classified into four categories :
- (i) Herbivores : These are grass eating animals. For example goat and cow.
- (ii) Carnivores : These are flesh eating animals. For example tiger and wolf.
- (iii) Omnivores : These animals eat both plants and animals. For example bear and cow.
- (iv) Scavengers : These animals that feed on the flesh of dead and decaying animals. For example Jackal and hyena.

2. Animals like tiger, pandas etc. have become very few in number. They would become extinct from the earth one day. These animals are called endangered animals. Endangered animals are kept safe in wild life sanctuaries and national parks.
3. Different habitats of animals are :
 - (i) Some animals do not have fixed place to live. They rest under trees. For example elephant and zebra.
 - (ii) Some animals like squirrel, monkey live on trees.
 - (iii) Some animals like rabbits, snakes live on the ground.
4. On the basis of living places, animals have been categorized into three groups :
 - (i) Terrestrial animals : Animals that live on land are known as terrestrial animals. For example Lion and Elephant.
 - (ii) Aquatic animals : Animals that live in water are called aquatic animals. For example fish and whale.
 - (iii) Amphibians : Animals that live both on land and in water are called amphibians. For example frogs and alligator.

D. Fill in the blanks with suitable words given below :

1. herbivores 2. Fox 3. Vulture 4. animals 5. plants 6. carnivorer

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. × 4. ✓ 5. ✓

F. Tick (✓) the correct answers :

1. (b) 2. (c) 3. (d) 4. (b) 5. (c) 6. (b)

G. Match the following columns :

- | | | | |
|-------------------|-------|--------------------|-------|
| 1. Wild animal | — (e) | 2. Domestic animal | — (c) |
| 3. Aquatic animal | — (b) | 4. Amphibian | — (a) |
| 5. Herbivorous | — (f) | 6. Omnivorous | — (d) |

HOTS Corner

1. How do hyenas help to keep the jungle clean by eating flesh of dead and decaying animals.
2. Why do you think that panda is an endangered animal?
As they are very few in numbers.

Fun Time

1. Take two pictures of the animals that live both on land and water from the internet. Paste them in your scrapbook.
Do yourself.
2. Mention two names of animals for the following categories :
(i) bear, crow (ii) jackal, hyena (iii) tiger, wolf (iv) goat, cow
3. Colour the given pictures of animals. Also write their correct names under their pictures.
Do yourself.

Chapter 5 — The Sun and Shadow

EXERCISE

A. Answer the following questions :

1. Air is a mixture of different gases.

2. The water of the wet clothes get converted into water vapour and mixes with air, result in drying of wet clothes.
3. Two properties of air are :
(i) Air has weight (ii) Air occupies space.
4. When the wind blows very fast, it is called stem.

B. Answer in one word :

1. wind
2. water-vapour
3. wind vane
4. breeze

C. Long answer type questions :

1. Air is made up of various gases like oxygen, carbon-dioxide, nitrogen and dust particles.
2. We should cover our mouth while yawning as when we yawn germs mix with the air and can enter our body through air.
3. Three methods to breathe in fresh air are :
(i) We should keep windows and doors open to let fresh air enter.
(ii) We must not cover our face while sleeping.
(iii) We must not cut trees.
4. Three uses of winds are :
(i) Wind helps boats sail on water.
(ii) Wind dries our clothes.
(iii) Wind moves windmill to produce energy.

D. Fill in the blanks with suitable words given below :

1. smoke
2. germs
3. dust
4. plants
5. weight

E. Tick (✓) the right and cross (×) the wrong statements :

1. ✓
2. ✓
3. ×
4. ×
5. ✓

F. Tick (✓) the correct answers :

1. (c)
2. (a)
3. (a)

G. Match the following questions :

1. (g)
2. (a)
3. (e)
4. (c)
5. (b)
6. (f)
7. (d)

HOTS Corner

1. Gopal got fever due to germs in air spread by Rohan.
2. To breathe clean and fresh air.

Fun Time

Make a spinner.

Do yourself.

Chapter 6 — Sources of Water

EXERCISE

A. Answer the following questions :

1. All water is not safe for drinking as it may contain many impurities and germs.
2. Do yourself.
3. The sea water is not used for drinking as it has many salts dissolved in it.
4. Boiled and filtered water contains no germs which make it suitable for drinking.

B. Answer in one word :

1. 2. Salty 3. Rain 4. 3/4

C. Long answer type questions :

1. Sun heats the water present in seas, rivers and lakes. Some water gets converted into water vapour. Water vapour evaporates and form clouds. As the clouds rise up, they get cooled. Cool vapour turns into water and falls in the form of rain.
2. Water from wells, tube wells and hand pumps is called ground water. We use underground water for many purposes such as cleaning, bathing, watering the plant setc.
3. Three different ways to filter drinking water :
 - (i) Boiling
 - (ii) Water treatment plants
 - (iii) Electronic water filters

D. Fill in the blanks with suitable words given below :

1. salty 2. rain 3. germs 4. boil, filter 5. water treatment plant 6. well

E. Tick (✓) the right and cross (×) the wrong statements :

1. ✓ 2. × 3. ✓ 4. × 5. ×

F. Tick (✓) the correct answers :

1. (b) 2. (a) 3. (c)

G. Match the following questions :

1. (a) 2. (b) 3. (d) 4. (e) 5. (c)

HOTS Corner

1. It may contains various germs.
2. No, It is not safe for his health.

Fun Time

Do yourself.

Chapter 7 — The Sun and Shadow

EXERCISE

A. Answer the following questions :

1. The size of sun is big but it appears to be small because it is very far away from the earth.
2. When an object comes in the way of light, it forms a shadow.
3. At room, the shadows look short as the sun is over our head.
4. In the moving, the shadows look longer as the rising sun is at lower level in the sky.

B. Answer in one word :

1. Sun 2. Shadow 3. West

C. Long answer type questions :

1. Three uses of sunlight are :
 - (i) It gives us heat and light.
 - (ii) It facilitates water cycle in nature.
 - (iii) Plants need sunlight to grow.

- Life exists on the earth due to the sun because Green plants need sunlight to prepare their own food. Plants cannot survive without sunlight. Human beings and animals cannot survive without plants.
- When the light is shone from the left side of the board, the shadow of the board is formed on the right side and vice-versa. In this way shadows are formed in the opposite direction to the source of light.

D. Fill in the blanks with suitable words given below :

1. hot 2. light 3. shadow 4. west 5. opposite 6. sun

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. ✓ 4. × 5. ✓

F. Tick (✓) the correct answers :

1. (d) 2. (d) 3. (a) 4. (b)

G. Match the following questions :

1. — (c) 2. — (d) 3. — (a) 4. — (b)

HOTS Corner

- The rate of evaporation is higher on a sunny day than a rainy day due to which our clothes dry faster on a sunny day rather than a rainy day.
- Black colour absorbs maximum sunlight.
White colour absorbs minimum sunlight.

Fun Time

Observe the direction of the source of light and draw the shadow of the apple.

Do yourself.

Chapter 8 — Our Earth : Its Environment

EXERCISE

A. Answer the following questions :

- A small model of the earth is called globe.
- About three-fourth of the earth's surface is covered with water so earth looks blue in colour from space.
- At some places, the land is raised. These are called mountains.
- The earth is surrounded by a layer of air called atmosphere.

B. Answer is one word :

1. Globe 2. Atmosphere 3. Mount Everest 4. Sandy soil

C. Long answer type questions :

- The earth is made up of water and land and the earth is surrounded by a layer of air known as atmosphere.
- At mountains, the land is raised high whereas at plateaus the land is not raised as high as the mountains.
- There are four types of soil :
(i) Gravel (ii) Sandy (iii) Clayey (iv) Loam
- Three properties of soil are :
(i) Soil has different sizes and colours.
(ii) Soil has water.
(iii) Soil has air.

D. Fill in the blanks with suitable words given below :

1. globe 2. home 3. protect, 4. water

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. ✓ 4. ×

F. Tick (✓) the correct answers :

1. (d) 2. (c)

G. Match the following questions :

1. — (b) 2. — (a) 3. — (d) 4. — (c)

HOTS Corner

Do yourself

Fun Time

To know how days and nights occur.

Do yourself.

Chapter 9 — Food for Health

EXERCISE

A. Answer the following questions :

- Two examples of energy giving food are sugar and rice.
- Protective foods are those which protect us from diseases. Examples are fruits and nuts.
- Two examples of body-building foods are milk and eggs.
- We should drink 8–10 glasses of water everyday to stay healthy.

B. Answer in one word :

- Energy-giving food
- protective foods
- body-building foods
- Junk food

C. Long answer type questions :

- Three functions of food we eat are :
 - It helps our body to grow.
 - It keeps us healthy and strong.
 - We get energy from food.
- Different types of food are :
 - Energy giving food : These foods give us energy. Examples sugar, rice.
 - Protective food : These foods protect us from diseases. Examples vegetables, nuts.
 - Body-building foods : These foods help us to grow and build our muscles. Examples pulses and grains.
- Three healthy eating habits are :
 - Eat clean food
 - Eat at a fixed time everyday
 - Eat with clean hands.

D. Fill in the blanks with suitable words given below :

1. protective 2. energy giving 3. cover 4. meal

E. Tick (✓) the correct answers :

1. (c) 2. (a) 3. (a)

F. Match the following questions :

1. — (a) 2. — (c) 3. — (b) 4. — (d)

HOTS Corner

1. Rita's mom is serving healthy food as it protects us from various diseases.
2. She should either drink milk or eat vegetables to eat to remove her hunger.

Fun Time

1. Do yourself.
2. Do yourself.

Chapter 10 — Houses and Clothes

EXERCISE

A. Answer the following questions :

1. Mouse protect us from heat, cold, wind and rain.
2. The houses that can be shifted are called temporary house.
3. The houses that are made according to the environmental conditions of an area are called special houses.
4. Caravan is a house on wheels.
5. Four materials used for making houses are Bricks, Cement, Iron rods and Timber.

B. Answer in one word :

1. Sky scrapers 2. House boat 3. Stilt house 4. Igloo 5. Woolen

C. Long answer type questions :

1. House is essential for us because :
 - (i) It protect us from heat, cold, wind and rain.
 - (ii) It also protects us from thieves and wild animals.
2. Two differences between Kachha house and pucca house are :
 - (i) A Kachha house is made of mud and bamboo whereas a pucca house is made of steel, bricks and stones.
 - (ii) The roof of Kachha house can be either of grass, leaves or tiles whereas the roof of pucca house is made of concrete material.
3. Different types of temporary houses are :
 - (i) Tent : It is made of canvas.
 - (ii) Caravan : It is a house on wheels.
 - (iii) Houseboat : It is a floating house.
4. Three properties of a good house are :
 - (i) It should be clean and airy.
 - (ii) It should get proper sunlight.
 - (iii) It must have windows.
5. We need clothes because :
 - (i) It protect us from heat, cold and rain.
 - (ii) We need clothes to wear.

D. Fill in the blanks with suitable words given below :

1. igloo 2. house boat 3. sky scraper 4. tent 5. sloping roof

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. ✓ 3. ✓ 4. × 5. ×

F. Tick (✓) the correct answers :

1. (c) 2. (a) 3. (c) 4. (c) 5. (c)

G. Match the following :

- (i) — (f) (ii) — (b) (iii) — (d) (iv) — (c)
(v) — (e) (vi) — (a)

HOTS Corner

1. We should take woolen clothes as it protect us from cold.
2. No, we cannot live in a tent as tent is a temporary dwelling.

Fun Time

1. Do yourself.
2. Do yourself.

Chapter 11 — Safety Habits

EXERCISE

A. Answer the following questions :

1. Two precautions while walking on the road are :
(i) Always walk on the footpath.
(ii) Walk on the left side of the road.
2. Red light says 'STOP'
Yellow light says 'WAIT'
Green light says 'GO'.
3. Cross the road only when it is clear.
Cross the road at zebra crossing.

B. Answer in one word :

1. Zebra crossing 2. Red, yellow and green 3. stray animals

C. Long answer type questions :

1. Following safety rules need to be followed while riding a bus are :
(i) Stand in a queue at the bus stop.
(ii) Do not lean down from the bus.
(iii) Do not push anyone.
2. First aid is the help given to the injured before a doctor arrives.
The first-aid box must contain cotton, gauze, soap, a pair of forces, antiseptic cream etc.
3. Following safety rules need to be followed at home are :
(i) Do not play with sharp objects.
(ii) Never touch electric wires, switches or plugs.
(iii) Never touch hot things.
(iv) Never leave your things on the floor.

D. Fill in the blanks with suitable words given below :

1. Footpath 2. Zebra 3. traffic 4. ear

E. Tick (✓) the right and cross (×) the wrong statements :

1. ✓ 2. × 3. ✓ 4. ✓

F. Tick (✓) the correct answers :

1. (b) 2. (c)

HOTS Corner

1. No, he was not right. Footpath is not meant.
For playing, He should play in playground.
2. Do yourself.

Fun Time

1. Do yourself.
2. Do yourself.

Chapter 12 — Means of Transport

EXERCISE

A. Answer the following questions :

1. The means used for travelling and carrying things from one place to another are called means of transport.
2. Different means of transport are land, water and air transport.
3. Aeroplanes and ship are two modes of transport used for travelling other countries.

B. Answer in one word :

1. Metro trains 2. Aeroplane 3. Bullock cart

C. Long answer type questions :

1. The difference between land transport and water transport are :
 - (i) Land transport are the vehicles that more on land whereas water transport are the vehicles that are used on water.
2. Rail transport is a mean of land transport whereas aeroplane is a mean of air transport. Aeroplanes are used to travel long distances in a short time than rail transport.
3. Different types of land transport are :
 - (i) Camel cart, bullock cart, etc. are common means of transport in villages.
 - (ii) Cycle, scooter etc. are common means of transport in town and cities.
 - (iii) Metro trains are popular means of transport in metropolitan cities.

D. Fill in the blanks with the suitable words given in the box :

1. Air transport 2. Villages 3. metropolitan

E. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. ×

G. Match the columns :

1. — (e) 2. — (e) 3. — (b) 4. — (a) 5. — (c)

HOTS Corner

1. They are used for traveling and carrying things from one place to another.

Fun Time

- Do yourself.

Book-3

Chapter 1 — Living and Non-Living Things

EXERCISE

A. Answer the following questions :

- Features of living things are :
 - Living things breathe.
 - Living things have life cycle.
 - Living things feel.
 - Living things require food.
 - Living things reproduce.
 - Living things show movement.
- Living things move from one place to another in search of food, water and shelter. They also show movement to protect themselves from enemies.
- Two features of non-living things are :
 - They cannot breathe.
 - They do not require food.
- Three differences between living and non-living things are :

	Living things		Non-Living things
(i)	They can breathe	(i)	They cannot breathe
(ii)	They require food to grow	(ii)	They do not require food
(iii)	They can feel	(iii)	They cannot feel

- Plants make their own food by using air, water and sunlight. This process is known as photosynthesis.
- Human beings use nose, mouth and lungs to breathe in oxygen and breathe out carbon-dioxide.

B. Answer in one sentence.

- Photosynthesis is a process by which plants make their own food by using air, water and sunlight.
- No, book cannot grow as it is a non-living thing.
- Things made by man are man-made non-living things.

C. Fill in the blanks with suitable words given below :

1. air 2. sunlight 3. stomata 4. food 5. eggs 6. sense organs

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. X 4. X 5. ✓

E. Tick (✓) the correct answers :

1. (b) 2. (c)

E. Match the following columns :

1. — (b) 2. — (a) 3. — (d) 4. — (e) 5. — (c)

HOTS Corner

	Non-Living table		Living tree
(i)	They do not breathe	(i)	They breathe
(ii)	They do not feel	(ii)	They feel
(iii)	They do not have life cycle	(iii)	They have life cycle

Fun Time

Do yourself.

Chapter 2 — Plants and Animals

EXERCISE

A. Answer the following questions.

- Differences between plants and animals are :
 - Animals show movement, they move from one place to another in search of food, water and shelter whereas plants do not show such movements.
 - Animals cannot prepare their food on their own whereas plants can prepare their food on their own.
 - Animals have many organ systems whereas plants do not have any such organ systems.
- Animals move from one place to another in search of food, water and shelter. They also move to protect themselves from their enemies.
- Photosynthesis is the process by which plants prepare their food on their own in the presence of sunlight, water and carbon dioxide from air.
- Plants breathe in carbon dioxide from air and breathe out oxygen in air through stomata present in leaves.
- Animals produce their own kind by either giving birth to young ones or by laying eggs.

B. Answer in one sentence :

- Due to the presence of chlorophyll, plants look green.
- Plants breathe in carbon-dioxide from air.
- Animals breathe out carbon dioxide from their lungs.
- Fish breathe through gills.

C. Fill in the blanks with suitable words given below :

- stomata, 2. movement, 3. food, 4. breathing, 5. plants

D. Tick (✓) the right and cross (X) the wrong statements :

- X 2. ✓ 3. X 4. ✓ 5. ✓

E. Tick (✓) the correct answers :

- (a) 2. (b) 3. (c) 4. (d) 5. (a)

F. Match the following columns :

- (a) 2. — (c) 3. — (b)

HOTS Corner

- They have gills that they suck water through their mouths and out of their gills that filter and absorb oxygen from the water.
- When seeds get air, water and sunlight a plant grows in it.

Fun Time

- Do yourself
- Do yourself

Chapter 3 — Parts of Plant

EXERCISE

A. Answer the following questions.

1. The shoot is the part of a plant which grows above the ground. It shows upwards-towards the sunlight. The shoot has stem, branches, leaves buds, flowers & fruits.
2. There are two types of roots :
 - (i) Tap root : In a tap root plant, main root grows from the end of the stem and many small roots grow from the main root.
 - (ii) Fibrous root : In a fibrous root plant, number of roots grow from the end of the stem.
3. Wheat and sugarcane the two plants that have fibrous root.
4. A green leaf makes food for the plant. It is called the kitchen of the plant.

B. Answer in one sentence :

1. It takes in water and minerals from the soil and passes them to the stem.
2. Those stems which are hard, strong and woody are known as trunks.
3. In these plants the stem grows underground and stores extra food.
4. A cabbage has food stored in its leaves.

C. Fill in the blanks with suitable words given below :

1. root 2. upright 3. lamina 4. fruits

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. ✓ 3. X 4. ✓

E. Tick (✓) the correct answers :

1. (a) 2. (d) 3. (d) 4. (d) 5. (b)

F. Match the following columns :

1. — (e) 2. — (a) 3. — (b) 4. — (c) 5. — (d)

HOTS Corner

1. The leaf is called the food factory of the plant because it makes food by the process of photosynthesis with the help of air, water and sunlight.

Fun time

Do yourself

Chapter 4 — Food Habits of Animals

EXERCISE

A. Answer the following questions.

1. Snakes and frogs are two examples of animals that swallow their food as a whole.
2. Omnivores are the animals that eat plants as well as flesh of other animals. Examples bear, human being.
3. The cow and buffalo first swallow the food without chewing. After sometime they bring the food back into the mouth from their stomach and begins to chew. This is called chewing the cud.
4. Carnivores have long pointed teeth called canines to tear the flesh and strong grinding teeth called molars to chew the bones and flesh.

5. Herbivorous animals eat grass, small plants, twigs, branches of trees, fruits and vegetables.
6. Examples of eating habits of animals are :
 - (i) Swallowing : Snakes and frogs straight away swallow their food in the one piece.
 - (ii) Sucking : Insects like mosquitoes, butterflies, etc., suck their food.
 - (iii) Cat and dogs lap up milk or water with their tongue.

B. Answer in one sentence :

1. Dog has higher sense of smell than any other animal.
2. Camels and horses are examples of two animals that are called beast of burden.
3. Cow, horse, elephant are the plant and lion, tiger are the flesh eating animals.
4. Jackal is a scavenger.
5. The animals need food to live, to grow and for energy.

C. Fill in the blanks with suitable words given below :

1. tear 2. scavengers 3. food 4. leech 5. swallow 6. carnivore

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. ✓ 4. X 5. ✓ 6. ✓

E. Tick (✓) the correct answers :

1. (c) 2. (a) 3. (c)

F. Match the following columns :

1. — (f) 2. — (e) 3. — (c) 4. — (b) 5. — (a) 6. — (d)

HOTS Corner

1. They have long and pointed sucking tubes to suck nectar.
2. We can take care of domestic animals by providing them healthy food and water at proper time. We should also provide neat and clean shelter.

Fun Time

- (i) Do yourself
- (ii) Do yourself
- (iii) Do yourself

Chapter 5 — Birds : Feather and Nesting Habits

EXERCISE

A. Answer the following questions :

1. Hollow bones help them to float in air. Feathers present in the wing help them catch the air that keeps them in flight. The tail feathers help the bird to change its direction during flight.
2. Birds have two kinds of feathers :
 - (i) Down feather
 - (ii) Flight feather
3. Birds need nest when they have to lay eggs. When the babies are big enough, they fly away. The birds also leave their nest. It also protects from bad weather and enemies.

- The penguin simply collects a few pebbles and stones to make a nest on the ground.

B. Answer in one sentence.

- Birds lay eggs to produce their young ones.
- Feathers help them catch the air that keeps them in flight.
- Penguins build their nest on the ground.
- Hollow bones help them to float in air.

C. Fill in the blanks with suitable words given below :

- birds
- hollow, light
- wings
- koel

D. Tick (✓) the right and cross (X) the wrong statements :

- X
- ✓
- X
- X

E. Tick (✓) the correct answers :

- (b)
- (d)
- (d)

F. Match the following columns :

- (b)
- (a)
- (d)
- (c)
- (e)

HOTS Corner

An ostrich cannot fly as their light wings cannot lift up its heavy body.

Fun Time

Do yourself

Chapter 6 — Rocks, Soil and Minerals

EXERCISE

A. Answer the following questions :

- Pebbles are smooth and round stones that are found in or near water.
- Soil exists in three layers :
 - Top soil : It is the uppermost layer. It is dark in colour.
 - Sub soil : It lies below the top soil. It is light in colour.
 - Bed rock : It is the bottom layer.
- There are three types of rocks :
 - Igneous rocks
 - Sedimentary rocks
 - Metamorphic rocks
- Weather plays an important role in breaking up of rocks. Rocks get heated during day and cool down at night. This heating and cooling breaks down rocks into smaller pieces.

B. Answer in one sentence :

- Igneous means solidified from lava magma.
- A mixture of rocks and gases present in the central part or core of the earth is called magma.
- The hot molten rock is known as lava.
- Pumice is a type of igneous rock used to clean floors and polish fine furniture.

C. Fill in the blanks with suitable words given below :

- gravel
- cracks
- soil
- sandstone
- metamorphic, rocks

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. X 4. ✓

E. Tick (✓) the correct answers :

1. (d) 2. (c) 3. (d)

HOTS Corner

Rocks formed due to cooling of hot and molten lava coming out from volcanoes are known as igneous rocks whereas rocks formed by deposition of sand, clay and pebbles at the bottom of sea, river and water bodies are known as sedimentary rocks.

Fun Time

Do yourself.

Chapter 7 — Human Body, Health and Hygiene

EXERCISE

A. Answer the following questions.

1. Different organs work together to perform a particular function of the body. They are called organ system. For example mouth, food pipe, stomach, etc., help us in eating and digestion.
2. Skeletal system gives shape and size to our body. It also protects the internal organs of the body.
3. Circulatory system comprises the heart, the blood and the blood vessels. The heart pumps blood to the different parts of the body through small and big blood vessels.
4. The function of excretory system is to clear our body by throwing out body wastes like urine & stool through kidney and sweat through skin.

B. Answer in one sentence :

1. Sense organs are eyes, ears, nose, tongue and skin.
2. Different parts of body move with the help of muscles.
3. Minerals and vitamins are protective foods.

C. Fill in the blanks with suitable words given below :

1. cells 2. organ 3. digestive 4. heart 5. diseases 6. milk 7. proteins

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. X 4. X 5. ✓ 6. ✓

E. Match the following columns :

1. — (d) 2. — (g) 3. — (f) 4. — (e)
5. — (a) 6. — (d) 7. — (b)

F. Tick (✓) the correct answers :

1. (c) 2. (b) 3. (a) 4. (b) 5. (c)

Fun Time

1. Do yourself
2. Do yourself

Chapter 8 — Housing and Clothing

EXERCISE

A. Answer the following questions :

1. We need house to live in. It protects us from heat, cold, rain, wild animals and thieves. It keeps us safe.
2. Open spaces like verandah, courtyard, lawn and balconies make a house airy. It also gives space to the children for playing.
3. We can clean our house by following measures :
 - (i) It should be swept and mopped everyday.
 - (ii) Drains should always be covered.
 - (iii) Everything should be kept at right place.
 - (iv) Wastes should be thrown into dustbin.
4. Functions of clothes are :
 - (i) It protects us from heat, cold and rain.
 - (ii) It also protects us from insect bites.
 - (iii) It also makes us look smart and beautiful.

B. Answer in one sentence :

1. Igloos are made by people living in cold regions where it snows heavily.
2. Wire netting prevents entry of mosquitoes and other insects like flies.
3. Man-made fibres are made from different materials in factories.
4. Natural fibres are the fibres which we get from either plants or animals.

C. Fill in the blanks with suitable words given below :

1. stilt 2. walls 3. drains

D. Tick (✓) the right and cross (×) the wrong statements :

1. × 2. × 3. × 4. ✓ 5. ✓

E. Tick (✓) the correct answers :

1. (c) 2. wool 3. sheep

F. Match the following columns :

1. — (e) 2. — cotton plant 3. — (b) 4. — (c) 5. — (a)

HOTS Corner

1. He lives in a slanting roof type house as there will be heavy rainfall in Kashmir.

Fun Time

Do yourself

Chapter 9 — Safety First

EXERCISE

A. Answer the following questions :

1. Safety rules enable us to avoid accidents.
2. First aid means immediate help given to an injured person before consulting a doctor.
3. If an injured person is bleeding, tie a clean hanky or bandage at the spot. Ask him to lie down keeping the wounded part of the body high.

4. Cross the road at zebra crossing. You must not avoid signals. You should cross the road only when vehicles on both sides stopped after red-signal.
5. Safety rules to be followed in the kitchen are :
 - (i) Never enter the kitchen with loose nylon clothes.
 - (ii) Keep the forks and sharp knives at proper place.
 - (iii) Keep distance from hot objects.
6. Safety rules while playing in the ground are :
 - (i) Do not hit others.
 - (ii) Do not quarrel.
 - (iii) Avoid playing near thorny hedge.

B. Answers in one sentence.

1. Dettol should be used to wash the wounded part & then apply any antiseptic.
2. Red signal means stopping of a vehicle.
3. We should cross only at zebra crossing.
4. In case of burn quickly pour cold water or ice on the affected area.

C. Fill in the blanks with suitable words given below :

1. Safety rules 2. electric shock 3. zebra crossing 4. left

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. X 4. ✓

E. Tick (✓) the correct answers :

1. (b) 2. (c) 3. (c) 4. (a) 5. (b)

F. Match the following columns :

1. — (c) 2. — (b) 3. — (d) 4. — (a) 5. — (e)

HOTS Corner

1. There colours in traffic signal are :

Red means stop

Yellow means get ready to stop

Green means go

Fun Time

Do yourself.

Chapter 10 — The Earth and the Moon

EXERCISE

A. Answer the following questions :

1. The movement of the earth about its axis is called rotation.
2. If we stand at a seashore and watch a ship sailing away from us, we will see that the lower part of the ship disappears first and the top part disappears last. It shows that the earth is round.
3. The movement of earth around the sun in a fixed path is called revolution.
4. The rotation of the earth causes day and night. The earth takes nearly 24 hours to rotate once on its axis 24 hours make a day.

5. $365\frac{1}{4}$ days earth takes to go around the sun.
6. The change in the shape of moon is called phases of the moon. Different phases of the moon are :
 - (i) Some days we cannot see the moon at all. It is called new moon day.
 - (ii) When we see small portion of the moon. It is called crescent moons.
 - (iii) When we see half of the moon. It is called half moon.
 - (iv) When we see full moon. It is called full moon.

B. Answer in one sentence :

1. Revolution of the earth causes change in season.
2. Groups of stars are called constellation.
3. People who travel into space are called astronauts.

C. Fill in the blanks with suitable words given below.

1. spherical 2. third 3. 24 hours 4. axis 5. light

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. X 4. ✓ 5. ✓

E. Tick (✓) the correct answers :

1. (a) 2. (a) 3. (d) 4. (b)

F. Match the following columns :

1. — (c) 2. — (b) 3. — (a) 4. — (e) 5. — (d)

HOTS Corner

1. Life is not possible on mercury as mercury's extreme temperatures and lack of an atmosphere would make life impossible.
2. 5 kg would be the weight on moon.

Fun Time

1. Do yourself.
2. Do yourself.

Chapter 11 — Air, Water and Weather

EXERCISE

A. Answer the following questions :

1. Moving air does a lot of work.
 - (i) Sailboats move with the help of it.
 - (ii) Wind mills also run due to it.
 - (iii) Kite flies due to it.
 - (iv) Clothes dry due to it.
2. Normally water exists in liquid form. It changes into vapour when heated.
3. Due to the heat of the sun, the water from rivers, etc., gets converted into vapour. These vapour moves upwards. Many such drops come together to form clouds. When these drops become heavy they fall back to earth as rain. This process is called water cycle.
4. Different types of weather are :
 - (i) sunny
 - (ii) cloudy
 - (iii) windy
 - (iv) rainy

5. We wear woolen clothes in winter as woolen clothes keep us warm.

B. Answer in one sentence :

1. The average condition of the weather over many years is called climate of a region.
2. Wind is fast moving air.
3. Water exist in three forms such as solid, liquid and gas.

C. Fill in the blanks with suitable words given below :

1. oxygen 2. wind 3. rain 4. water vapour 5. ice

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. X 4. X 5. ✓

E. Match the following columns :

1. — (d) 2. — (b) 3. — (e) 4. — (c) 5. — (a)

F. Tick (✓) the correct answers :

1. (a) 2. (d) 3. (a) 4. (d)

HOTS Corner

1. Because the air temperature is warmer than the freezer.
2. Cloudy nights are warmer because the clouds do not allow the heat of earth to escape into the atmosphere.

Fun Time

Do yourself.

Book-4

Chapter 1 — Food Production in Plants

EXERCISE

A. Answer the following questions in short :

1. A leaf is an outgrowth from a node on a plant's stem.
2. The stalk or stem that connects the leaf to the plant is petiole.
3. The leaf looks green because of the presence of chlorophyll.
4. Extra food is stored in many parts of a plant like leaves, stems and roots. This stored food is known as starch.
5. The process of photosynthesis and storage of food occurs in stem only as their stem contains chlorophyll.

B. Long answer type questions :

1. Photosynthesis is a process by which green plants make their own food.

Chlorophyll : A green pigment found in the leaves of a plant.

Light from the sun.

Carbon-dioxide, a gas found in air.

Water from soil which the plant absorb through its roots. Nutrients and minerals from soil through the roots of a plant.

2. Plants use the food for their survival and growth. They need food to repair worn out cells and build new cells. Extra food is stored in many parts of a plant like leaves, stems and roots.
3. There are some plants such as moulds, mushrooms and fungi which do not possess chlorophyll. These are known as non-green plants. These plants cannot prepare their own food. They get their food from dead and decaying plants & animals.
4. Plants and animals are interdependent for survival & growth. Plants provide oxygen and food to animals and human beings. Plants also provide things like wood, fuel, etc., which are also essential for human beings.
Animals and human beings provide the carbon-dioxide for plants.
5. Plants like amaranth, are not able to make their own food. They take support from other green plants. They develop special roots which penetrate into the host plant for their food.

C. Answer in one word :

1. leaves
2. apex
3. midrib
4. stomata
5. chlorophyll

D. Give the function of following parts of the plant.

1. Chlorophyll present in the leaf allow plants to absorb energy from sunlight.
2. They help to carry water from the roots to the leaves and transfer the food made in the leaves to all other parts of the plant.
3. They regulate the opening and closing of the stomata.
4. They provide nutrients, minerals and water from soil.
5. Chlorophyll allows plants to absorb energy from sunlight.

E. Tick (✓) the right and cross (X) the wrong statements :

1. ✓
2. ✓
3. ✓
4. X
5. X

F. Fill in the blanks with suitable choice :

1. oxygen
2. starch
3. carbon dioxide
4. apex
5. stomata

HOTS Corner

1. Because the production of the chlorophyll pigment is directly proportional to the amount of light available. Chlorophyll a becomes less stable in the absence of light. Thus the leaf turns pale yellow.
2. Onions, tomatoes, spinach, potatoes, etc., can be grown in a kitchen garden.

Fun Time

Do yourself

Chapter 2 — Adaptation in Plants

EXERCISE

A. Answer the following questions in short :

1. The plants have been classified into two categories :
(i) Terrestrial plants (ii) Aquatic plants
2. Plants that grow on land are called terrestrial plants.
3. The plants that grow in water are called aquatic plants.
4. Some plants like pitcher plant eat insects. They are known as carnivorous plant.
5. Plants develop special features to adapt themselves to the surroundings. This process is known as adaptation.

B. Long answer type questions :

1. Different types of terrestrial plants are :
(i) Coniferous trees : pine, spruce etc.
(ii) Mangrove trees : cecropia, kandelia etc.
(iii) Evergreen trees : teak, rubber etc.
(iv) Deciduous trees : mango, sheesham etc.
(v) Desert plants : cactus, plant etc.
2. Different types of aquatic plants are :
(i) Floating plants : There are of two types : those which are rooted with floating leaves like water lily and those which are not rooted in the sediment, but just float on the surface like duckweed.
(ii) Emergent plants : cattail and iris are plants with the lower part often submerged.
(iii) Totally submerged plants : They are the true water plants. Examples water starwort, tape grass etc.
3. In a pitcher plant prey is allowed to enter the pitcher, a cylindrical, modified leaf. As the prey enters, the lid of the pitcher plant is closed. The digestive juices present inside help the plant to digest the prey.
4. Three uses of bamboo plants are :
(i) Bamboo fibre is used to make paper.
(ii) It is used in Chinese medicine for treating infections and healing.
(iii) It is also used for making furniture, baskets and other handicrafts etc.
5. Three adaptations of desert plants are :
(i) The lack of leaves help reduce water loss during photosynthesis.

- (ii) Spines discourage animals from eating such plants.
- (iii) Waxy coating on stems and leaves help reduce water loss.

C. Answer in one word :

1. Bamboos
2. Insectivorous plants
3. Cactus
4. Deciduous trees
5. Mangrove trees

D. Give one adaptation of leaves in the following plant.

1. Their leaves are small and are called needles. The needles are coated with wax which prevents the loss of water.
2. They have thick and juicy leaves to retain water.
3. These plants have lots of leaves and remains evergreen all the year.
4. The leave changes colour in autumn and the tree shed their leaves during winter.
5. They have tall and narrow leaves.

E. Tick (✓) the right and cross (X) the wrong statements :

1. ✓
2. X
3. ✓
4. X
5. ✓

F. Fill in the blanks with suitable words given below :

1. aquatic
2. terrestrial
3. terrestrial
4. mangrove
5. cactus, palm

G. Tick (✓) the correct answer :

- 1.
- 2.
- 3.
- 4.

H. Match the following columns :

1. — (c)
2. — (c)
3. — (c)
4. — (c)

HOTS Corner

Do yourself

Fun Time

Do yourself

Chapter 3 — Adaptation in Animals

EXERCISE

A. Answer the following questions in short :

1. The place where an animal lives is called its habitat.
2. Terrestrial animals are categorized into :
(i) Desert animals (ii) Polar animals (iii) Grassland animals
3. Animals like lizards and frogs sleep for several months to protect themselves from cold. This is called hibernation.
4. Animals that can live both on land and in water are called amphibians.
5. Arboreal animals live on trees and tend to have long tail for balance. Monkeys and tree lizards are some arboreal animals.

B. Long answer type questions.

1. Frogs, toads and alligators are amphibians that become inactive when the conditions are unfavorable for survival. This period of inactivity is called estivation when it occurs during hot and dry weather and hibernation during cold weather.

2. Three adaptations of polar animals that help them to survive in very cold climate are :
 - (i) They have a layer of fat under their skin and fur that helps them to stay warm.
 - (ii) The wide and large paws help them to walk in the snow.
 - (iii) Their tightly packed feathers overlap to provide water proofing and warmth.
3. Difference between aerial animals and arboreal animals are :
 - (i) Animals that fly are called aerial animals while animals live on trees are called arboreal animals.
 - (ii) Aerial animals have wings with either feathers or large flaps of skin to help them fly in the air while arboreal animals have claws or fingers for gripping branches and special toes that can stick to vertical surface.
4. Animals can be classified into four groups according to the type of food they eat :
 - (i) Herbivores : Plant eating animals like cow, goat and giraffe are called herbivores.
 - (ii) Carnivores : Flesh eating animals are called carnivores. For ex cheetah.
 - (iii) Omnivores : They eat both plants and animals. For ex bear.
 - (iv) Parasites : Organisms that live by drawing food from a host organism are called parasites.
5. Three distinct feature of some animals enable them to protect themselves :
 - (i) Camouflage : It is a method used by animals to blend its colour with their environment so that they cannot be seen easily.
 - (ii) Poisonous liquid : bugs, battles, toads and frogs produce poisonous liquid that repel attackers.
 - (iv) Mimicry : Some insects like spiders copy the shape colour and habits of other animals.

C. Answer in one word :

1. Carnivores 2. Parasites 3. Camouflage 4. Amphibians 5. Aquatic animals

D. Give turn examples each of following animals :

- | | |
|--------------|----------|
| 1. Camel | Kangaroo |
| 2. Sheep | Horse |
| 3. Leeches | Bug |
| 4. Alligator | Toad |
| 5. Bear | Crow |

E. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. ✓ 4. X 5. ✓

F. Fill in the blanks with suitable words given below :

1. fur, fat 2. gills 3. water, land 4. shells 5. Sheep

G. Tick (✓) the correct answer :

1. (b) 2. (d) 3. (d)

H. Match the following columns :

1. — (d) 2. — (c) 3. — (a) 4. — (b)

HOTS Corner

1. Arboreal animals usually have long tail for balance.
2. These animals could not adopt themselves according to the changing environment.

Fun Time

1. Do yourself
2. Do yourself

Chapter 4 — Reproduction in Animals

EXERCISE

A. Answer the following questions in short :

1. Life cannot exist on the earth if living organisms do not reproduce.
2. Animals that give birth to young ones and produce milk to feed them are called mammals.
3. Two examples of animals that lay eggs are pigeon and fish. Two examples of animals that reproduce by giving birth are cow and cat.
4. The mother keeps the egg warm by sitting on it. This is called incubation.
5. Two examples of insects that pass through three stages of life are grasshopper and cockroach.

B. Long answer type questions :

1. The process by which the living beings produce their young ones of their own kind is called reproduction. In order to keep life continuous on the earth, each living being has to leave behind one of its own kind. Life cannot exist on the earth if living things did not reproduce.
2. Two methods by which animal reproduce :
 - (i) By giving birth to young ones and they produce milk to feed them. Examples : horse, cat etc.
 - (ii) By laying eggs. Examples : pigeon, butterfly etc.
3. Different parts of bird's egg are :
 - (i) Yolk : The embryo or the growing chick lies in the yellow part of the egg called the yolk.
 - (ii) Albumen : The watery white part is called the albumen. It protects the embryo.
 - (iii) Air sac : It contains air which that developing chick breathes in while it is inside the egg.
4. Reptiles that lay eggs are called oviparous while the reptiles that bear young ones are called viviparous.

C. Answer in one word :

1. albumen 2. yolk 3. bat 4. spawns 5. egg tooth

D. Draw the structure of life cycle of following animals :

1. Do yourself
2. Do yourself

3. Do yourself

E. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. ✓ 3. X 4. ✓ 5. ✓

F. Fill in the blanks with the suitable words given below :

1. pupa 2. yellow 3. bat 4. spawn 5. tadpole

G. Tick (✓) the correct answer :

1. (a) 2. (a) 3. (c)

H. Match the following columns :

1. — (d) 2. — (a) 3. — (c) 4. — (b)

HOTS Corner

1. Lots of baby animals resemble their parents. Cute little chick is among one of them.
2. Do yourself

Fun Time

Do yourself

Chapter 5 — Food and Digestion

EXERCISE

A. Answer the following questions in short.

1. Five essential nutrients needed by our body are carbohydrates, fats, proteins, vitamins and minerals.
2. Three types of carbohydrates are sugar, starch & fibre.
3. A diet that contains the right amount of carbohydrates, proteins, fats, mineral salts, vitamins, roughage and water is called a balanced diet.
4. Digestion is the process of breaking down food into simple & soluble form so that it can be used by the body.
5. The process of treating food in a way that preserve it for a long time is called food preservation.

B. Long answer type questions :

1. Three advantages of eating food are :
 - (i) Food gives us energy and helps us to grow.
 - (ii) Food repairs the worn out tissues of our body.
 - (iii) We get all essential nutrients from different types of food.
2. Fat is essential for our body as :
 - (i) Fats provide us with twice as much energy as carbohydrates.
 - (ii) It is also needed to absorb fat soluble vitamins.
 - (iii) It is stored in the body for extra energy, protection of internal organs and for healthy skin.
3. Water is needed by our body as :
 - (i) It helps in digestion.
 - (ii) It helps in dissolving nutrients to be used by the body.
 - (iii) It regulate our body temperature.
4. Roughage is the fibre present in the body. It helps in healthy eating habits as :
 - (i) It minimize the chances of overeating.

(ii) It cannot be totally absorbed by the body. The unused portion of the bulk material aids in the digestion process and healthy function of bowel system.

5. Four methods to preserve food are :

- (i) Freezing the meat (ii) Dehydrating the peas
(iii) Salting the pickles (iv) Sweetening the jams

C. Answer in one word :

1. Nutrients 2. Vitamin D 3. Water 4. Bile 5. Anus

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. ✓ 4. X 5. ✓

E. Fill in the blanks with suitable words given below :

1. mouth 2. large 3. rectum 4. bile, fats 5. liver, gall bladder, pancreas

F. Tick (✓) the correct answer :

1. (a) 2. (c) 3. (c)

G. Match the following columns :

1. — (d) 2. — (c) 3. — (a) 4. — (b)

HOTS Corner

1. The reason that children need relatively more protein is because of the protein requirement for growth.
2. Mango is a seasonal fruit. It comes in summer season. It is only possible by preservation.

Fun Time

1. Do yourself
2. Do yourself
3. Protein is the second most abundant substance in the body next to water. It is used by the body to make muscle, organs and other tissues such as skin and hair. It also help in the repair of worn out tissues.

Chapter 6 — Food Production in Plants

EXERCISE

A. Answer the following questions in short.

1. Primary teeth and permanent teeth are the two sets of teeth which develop at different stages of life.
2. A sticky yellow layer deposit on teeth in which germs can grow is called plaque.
3. The crown and the tooth are two basic parts of the tooth.
4. Primary teeth falls out because it is being pushed out of the way by the permanent teeth that is behind it.
5. Human adult has 32 teeth.

B. Long answer type questions.

1. Two important functions of teeth are :
(i) It helps to chew and digest food.
(ii) It also play an important role in speech and impact our overall health.

2. Two differences between primary teeth and permanent teeth are :
 - (i) Permanent teeth are larger and take longer to grow than primary teeth.
 - (ii) Primary teeth are twenty in numbers whereas permanent teeth are thirty-two in numbers.
3. Two basic parts of tooth are :
 - (i) The crown, which is the visible white part of the tooth.
 - (ii) The root, which we cannot see. The root extends below the gum line and anchors the tooth into the bone. The gum is the pink fleshy part of a tooth.
4.
 - (a) Enamel : It acts as the tooth's bodyguard. It protects the inside part of the tooth. It also protects the tooth from decay.
 - (b) Dentin : It makes up the largest part of the tooth. It is like bone which supports the enamel.
 - (c) Pulp : It contains blood vessels, nerves and other soft tissues that deliver nutrients and signals in the teeth. It also feed the tooth and keep it alive and healthy.
 - (d) Cementum : It makes up the root of the tooth, which is anchored to the jawbone.
5. Four different types of teeth are :
 - (i) Incisors : It is used for cutting and chopping food.
 - (ii) Canines : They help in tearing food.
 - (iii) Premolars : They are used for chewing and grinding food. Molars work closely with the tongue to help swallow food.
 - (iv) Third molar may cause crowding and need to be removed.

C. Answer in one word :

1. Gum 2. Wisdom teeth 3. Enamel 4. Incisors 5. Pulp

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. X 4. X

E. Fill in the blanks with suitable words given below :

1. eight 2. incisors 3. calcium 4. enamel

F. Tick (✓) the correct answer :

1. (a) 2. (b) 3. (c)

G. Match the following columns :

1. — (d) 2. — (a) 3. — (e) 4. — (b) 5. — (c)

HOTS Corner

1. Incisors teeth are used for cutting and biting our food.
2. Do yourself

Fun Time

1. Do yourself
2. Do yourself

Chapter 7 — The Right Clothes to Wear

EXERCISE

A. Answer the following questions in short.

1. Two types of textile fibres are natural and synthetic.

2. Cotton from the cotton plant and linen from the flax plant are two examples of natural fibres obtained from plants.
3. Wool from sheep and silk from silkworm are two examples of natural fibres obtained from animals.
4. Two methods to prevent clothes from moths are :
 - (i) By keeping mothballs.
 - (ii) By keeping dried neem leaves.
5. Raincoat and gumboots are two examples of water proof clothes used in rainy season.

B. Long answer type questions :

1. We need clothes for many purposes :
 - (i) It cover our body.
 - (ii) It protect us from harmful ultraviolet radiation from sun, cold, dust and rain.
 - (iii) It makes us look smart and feel confident.
2. Textile materials are made in three stages :
 - (i) Spinning : fibres are spun into yarns.
 - (ii) Wearing or knitting : Yarns become fabrics.
 - (iii) Finishing: Fabrics need finishing to make them beautiful.
3. Blending different fibres together produces yarns that have the combined properties of each component fibre. This is known as fibre blend.

Two advantages are :

- (i) It improves the appearance, performance, comfort and aftercare of fabric.
- (ii) It also reduce the cost of an expensive fibre.
4. Four properties of synthetic fibres are :
 - (i) It dries quickly.
 - (ii) It is soft to handle.
 - (iii) It is durable.
 - (iv) It can be recycled.
5. Three methods for proper caring of clothes are :
 - (i) We should wash our clothes with good soap or detergent to remove sweat, dirt and stains.
 - (ii) We should wash woolen and silk clothes with detergent like 'ezee'.
 - (iii) We should dry washed clothes in the sun to kill germs.

C. Answer in one word :

1. Saree 2. Kimono 3. Charkha 4. Synthetic fibre 5. Wool

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. X 4. X 5. ✓

E. Fill in the blanks with suitable words given below :

1. clothes 2. uniform 3. cotton 4. natural

F. Tick (✓) the correct answer :

1. (b) 2. (c) 3. (b) 4. (d) 5. (b)

G. Match the following columns :

1. — (a) 2. — (d) 3. — (e) 4. — (b) 5. — (c)

HOTS Corner

1. Army, doctor, student, pilot and soldiers wear uniform.
2. Do yourself

Fun Time

1. Do yourself

Chapter 8 — Safety and First Aid

EXERCISE

A. Answer the following questions in short.

1. We may get electric shock if we touched electric fittings with wet hands.
2. White and black stripes where pedestrians cross the road.
3. Dettol and savlons are the two antiseptic solution used during cuts and wounds.
4. First aid is the immediate and correct medical help given before the doctor arrives.
5. 'Be prepared' is the motto of scouts and guides.

B. Long answer type questions :

1. Three actions that should be taken in case our clothes catch fire are :
 - (i) STOP where you are and cover your face with your hands.
 - (ii) DROP to the ground.
 - (iii) Roll on the floor.

This will cut off the air supply and stop the fire.

2. Three safety habits while crossing the road are :
 - (i) Cross the road only at zebra crossing.
 - (ii) Stop and look left, then right and then left again, before you cross the road.
 - (iii) Be careful while you are crossing the road.
3. In case our nose bleeds, stay calm and do not get restive. Sit upright and press the nose tightly with your fingers. Keep it closed for 5-10 minutes. This stops the blood from flowing.
4. If any insect bite, we should :
 - Never pinch it as more of the poison may enter our body.
 - Wash the area thoroughly with water.
 - Put some soothing cream.
 - Use a soft pad soaked in ammonia water which gives relief.
 - Apply calamine lotion if there is itching.
5. We can be prepared for accidents in our daily life by the following :
 - (i) Be careful at all times.
 - (ii) By keeping all important telephone numbers handy.
 - (iii) By knowing what needs to be done.
 - (iv) By keeping ourself calm. It helps in taking the right action.

C. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. ✓ 4. X 5. ✓

D. Fill in the blanks with suitable words given below :

1. tetanus 2. do not 3. footpath 4. minor 5. prevention

E. Tick (✓) the correct answer :

1. (a) 2. (b) 3. (c) 4. (c)

HOTS Corner

1. Do yourself 2. Do yourself

Fun Time

1. Do yourself 2. Do yourself

Chapter 9 — Our House

EXERCISE

A. Answer the following questions in short :

- Depending on the size, we can classify houses as small, medium or big.
- In remote areas and mountains, houses are made of locally available materials. Such houses are called kutcha house.
- Houses that can be carried from one place to another is known as temporary houses.
- A house-boat floats on water.
- Primitive humans and animals lived in caves or caverns.

B. Long answer type questions.

- We need a house :
 - It provide us shelter.
 - It protect us from heat, cold, rain, wild animals and thieves.
 - It provide us comfort.
- Two types of temporary shelters are hut and tents.

	Huts		Tent
(i)	It is made up of natural and locally available material.	(i)	They are made of assembled fabric & poles.
(ii)	It can be seen in remote tribal areas only	(ii)	It is used by nomads, soldiers.

- Stilt house is built on wooden posts called stilts. There are seen on mountains. It gives primary protection from flooding.
- An igloo is made of ice. It is usually dom shaped. Eskimos are the people dwelling in the igloos. Eskimos built it from the blocks of now or ice.
- Three good habits to keep our house clean are :
 - We should keep everything at its proper place so that our house looks neat and tidy.
 - The floor should be swept and mopped every day.
 - Toilet and bathroom should be cleaned daily.

C. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. ✓ 4. X

D. Fill in the blanks with suitable words given below :

1. stilt 2. dustbin 3. snow 4. flooded 5. house

E. Tick (✓) the correct answer :

1. (d) 2. (a) 3. (d) 4. (d)

HOTS Corner

1. House boats are way cheaper than regular houses and can be quite charming. Living on a house boat can incorporate lots of eco-friendly resources.
2. Nomads and people to aid disaster victims.

Fun Time

Do yourself

Chapter 10 — Work, Force and Energy

EXERCISE

A. Answer the following questions in short :

1. A pull or a push acting on an object is called force.
2. The ability or tendency of something to float in water or other fluid is called buoyancy.
3. Machines that make difficult task easier are called simple machine. Lever and pulley are two examples of simple machine.
4. Energy is the ability to do work. Solar energy and geothermal energy are two sources of energy that we get from nature.
5. Fission and fusion are two types of atomic energy.

B. Long answer type questions.

1. Three uses of force are :
 - (i) It is used to bring motion in object. For example we use force on pedals to ride a bicycle.
 - (ii) It is used to slow down any object. For example we put force on the breaks to slow down bicycle.
 - (iii) It is used to change direction of any object. For example we put force on the handle to change the direction of a bicycle.
2. If we throw an object upward, it comes down because of gravity. Gravity is the attractive force towards center of the earth. Isaac newton proposed theory of gravity which was inspired by seeing an apple falling from a tree.
3. Friction is an invisible force that acts when two things rub against each other.
 - (i) The bicycle stops after brakes are applied due to friction.
 - (ii) Walking on road is also possible due to friction.
4. Aeroplanes flying in the air do not get pulled down by gravity because of the lift generated by a plane surface that pushes on the air below the plane surface. High pressure from underneath the wings pushes it upwards and keeps the plane up.

5. Simple machine help us to :
- (i) Do our work faster. For example we use a knife to cut an apple. This made our work faster.
 - (ii) Do our work with less effort. For example pulley makes the work of moving heavy loads a lot easier. Cranes use pulley to lift heavy loads.

C. Answer in one word.

1. Solar energy 2. Geothermal energy 3. Pulley 4. Work done
5. Buoyancy

D. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. X 4. ✓ 5. ✓ 6. ✓

E. Fill in the blanks with suitable words given below :

1. force 2. more 3. machines 4. lever 5. wind 6. lever 7. buoyancy

F. Tick (✓) the correct answer :

1. (c) 2. (c) 3. (c)

HOTS Corner

1. Scissors are best to tear paper as by using scissors we can tear it easily and fastly.
2. Playing cricket needs more energy.

Fun Time

1. Do yourself
2. Do yourself

Chapter 11 — Our Planet Earth

EXERCISE

A. Answer the following questions in short :

1. Mercury, venus, earth and mars are the four terrestrial planets.
2. Shape of the earth resembles an orange, slightly flat at the top and bottom.
3. Crust, core and mantle are three layers of the earth.
4. The earth rotation causes day and night.
5. Oxygen, nitrogen and argon are three primary gases present in the atmosphere.

B. Long answer type questions :

1. In the 16th century, Ferdinand Magellan of Portugal started on a long journey from Spain. He kept sailing towards west for three years. After three years he reached the same place from where he started to travel. This journey proved that the earth is round and not flat.
2. The core has an extremely high temperature and pressure. The boiling liquids and gases of the core push against the outer crust. The weak spots of the earth crack open under this pressure, letting the hot boiling liquids and gases come out. This is how a volcano is formed.
3. Rotation and revolution are two types of movement on the earth.
Rotation : The earth's rotation causes day and night. The earth rotates from west to east on its axis.
Revolution : Changes in season occur due to revolution of earth. If the axis of the earth was not tilted, there would be no change of seasons.

4. The formation of the earth started as the youngest planet that developed around their parent stars in a giant cloud of dust and gas. As the planets got older, they become larger and larger by collecting dust and gas from the cloud. Over million of year this dust and gas helped the planets grow. Earth has cooled sufficiently to allow liquid to form but has remained warm enough to sustain life and to keep the water from freezing.

C. Answer in one word :

1. Horizon 2. Atmosphere 3. Mantle 4. Revolution

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. ✓ 4. ✓

E. Fill in the blanks with suitable words given below :

1. mantle 2. rotation 3. orbit 4. sun

F. Tick (✓) the correct answer :

1. (a) 2. (c) 3. (b)

G. Match the following columns :

1. — (d) 2. — (a) 3. — (e) 4. — (b) 5. — (c)

HOTS Corner

1. The earth's rotation causes day and night. The earth rotates from west to east on its axis. As the earth rotates, its one half faces the sun and the other half is away from the sun. The part which gets sunlight has day time. At the same time the other half receives no light. Hence, it is night time in that part.

Fun Time

Do yourself

Chapter 12 — Deforestation

EXERCISE

A. Answer the following questions in short :

1. Cutting down of trees without planting others at their place is called deforestation.
2. Pollution is the addition of harmful substances in air, water and land that can cause harm to living beings.
3. Bronchitis and asthma are two diseases caused by impure and polluted air.
4. Cholera and typhoid are two diseases causes by drinking polluted water.

B. Long answer type questions :

1. People cut down trees as :
 - (i) More areas of shelter is required for increasing population.
 - (ii) Trees have been cut by individuals or government to obtain land for cultivation.
 - (iii) Industries require a lot of land for which trees are cut.
2. Deforest ration has the following disadvantages :
 - (i) Destruction of swaps and forests.

- (ii) Destruction of animal habitats.
- (iii) It leads to flood and drought.
- 3. Four methods to save trees due :
 - (i) For every cut tree, three trees should be planted.
 - (ii) Creating awareness to people about the importance of trees.
 - (iii) Enforcing strict laws against deforestation.
 - (iv) Quick growing varieties should be grown for making furniture, pencils and paper.
- 4. Pollution can be reduced by the 3R's - reduce, reuse and recycle.
 - (i) Reduce : It means buying only those things that you need and can use.
 - (ii) Reuse : It means using those items again that otherwise would have been thrown away as waste.
 - (iii) Recycle : Converting used items into raw materials and then making new products from it is called recycling.

C. Answer in one word :

1. Afforestation 2. Pollutants 3. Soil pollution

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. ✓ 4. X

E. Fill in the blanks with suitable words given below :

1. deforestation 2. planting 3. garbage 4. throw-away

F. Tick (✓) the correct answer :

1. (b) 2. (c)

HOTS Corner

1. Causes of water pollution are :

- (i) Pollutants from factories, refineries and water treatment plants.
- (ii) Pesticides and fertilizers from agricultural fields.
- (iii) Human sewage.

Fun Time

Do yourself

Book-5

Chapter 1 — Flower : The Plants Attraction

EXERCISE

A. Answer the following question in short :

1. Reproduction is the process by which plants multiply to produce more of their own kind.
2. Petals attract pollinators like insects and humans.
3. Plants excrete water vapour and oxygen.
4. Pollination is the way “pollen” from the male part of a flower gets to the egg in the female part of a flower to form a seed.
5. A flower that has both the male parts and the female parts in the same flower is known as a perfect flower.

B. Long answer type questions :

1. Three characteristics of plants that make it different from animals are:
 - (i) Plants make their own food whereas animals cannot make their own food.
 - (ii) Animals excrete waste such as carbon-dioxide, urine, etc., whereas plants excrete water vapour and oxygen.
 - (iii) Plants breathe in carbon-dioxide and breathe out oxygen whereas animals breathe in oxygen and breathe out carbon-dioxide.
2. Most important part of the flower are separated into male and female parts.

Male Parts

Stamen : This is the male part of a flower. It is made up of filament and anther.

- Anther : It produces and contains pollen.
- Filament : This is fine hair - like stalk that holds the anther.

Female Parts

Pistil : It is the female part of the flower. It is made up of stigma, style and ovary.

Stigma : It is the sticky bulb visible at the center of a flower.

Style : It holds up the stigma.

Ovary : It has seeds present inside them.

3. A flower that has either male parts or all female parts, but not both in the same flower is known as an imperfect flower whereas a flower that has both the male parts and the female parts in the same flower is known as a perfect flower.
4. Pollinators are the medium that carry nectar or pollens from one flower to another. Three different types of pollinators are :
 - (i) Humming birds
 - (ii) Bees and wasps
 - (iii) Beetles
5. When pollinators go in to suck up the nectar, they brush against one another and get pollen on their bodies. When they land on a flower, the pollen rub off their body on to the pistil. If the pollen ends up near the opening at the top of the pistil, the pollen make its way down the pistil to the egg. When the egg and the pollen meet, a seed is formed.

C. Answer in one word :

1. plants 2. stamen 3. pistil 4. ovule 5. nectar

D. Discuss the type of flowers preferred by following pollinators.

1. These nocturnal flying mammals are attracted to flowers that are white or pale in colour, large in size and have a strong fruit like fragrance.
2. They prefer flowers shaped like landing pads. They are attracted to strong, sweet and scented night time blooming flowers, muted in colour.
3. They prefer stinky flowers which are pale, dull or drab in colour.
4. They prefer flowers with lots of pollen, dull white or green in colour and mild in odour.

E. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. ✓ 4. ✓ 5. X

F. Fill in the blanks with suitable words given below :

1. sensitive 2. water vapour, oxygen 3. anther 4. style 5. nectar

G. Tick (✓) the correct answer :

1. (d) 2. (a) 3. (b) 4. (d)

HOTS Corner

Do yourself

Fun Time

Do yourself

Chapter 2 — Seed : Germination and Dispersal

EXERCISE

A. Answer the following questions in short :

1. The plant embryo forms a hard wall around itself and that is then known as a seed.
2. The seed with a small root and a small shoot is called a seedling.
3. Seed dispersal is the process of spreading seeds to different places.
4. Germination is the development of a new plant from a seed.
5. Growing crops in the field is known as cultivation.

B. Long answer type questions :

1. The cotyledon absorbs the food in the endosperm and transport it to the embryo.

Two different types of cotyledons are :

- (i) Dicotyledons : Seeds of bean, rajma and pea have two cotyledons. Seeds with two cotyledons are called dicots.
 - (ii) Monocotyledons : Seeds of corn, rice and maize have only one cotyledon. Such seeds are called monocotyledons/monocots.
2. Three process of seed dispersal are :
 - (i) Dispersal of seed by wind : In order to be carried by the wind, seeds dispersed must be light and small so that they can be carried to greater distances.
 - (ii) Dispersal of seed by water : The plants need water for the

dispersal of seed which grow in rivers, oceans and ponds or near water bodies.

- (iii) Dispersal of seed by animals and humans : Animals and humans eat fruits and throw away their seeds. Seeds of apple, mango, etc., are dispersed in this way.
3. Vegetative propagation is the process by which plants reproduce with the help of their body parts such as roots, stems and leaves and not through seeds. Three types of vegetative propagation are :
- (i) Reproduction by roots
 - (ii) Reproduction by stem
 - (iii) Reproduction by leaves
4. Different types of growing crops are :
- (i) Kharif crops : Kharif crops like rice, maize, jowar, bajra, peanuts, jute and cotton are grown in summer.
 - (ii) Rabi crops : Rabi crops like wheat and barley are grown in winter.
5. Soak any kind of seed in water. The seed first absorbs water through its hole. The seeds swell or become large as water enters in them. The seed coat softens and then breaks. Soon a tiny root (radicle) appears from the seed and grows downwards. A shoot, which will become the stem, also appears and grows upwards. Later, the first leaves appear on the stem and the seed coat drops off. As the stem grows upward, more and more leaves appear. By this time, the leaves can prepare food. The plant will use this food as it continues to grow.

C. Answer in one word :

1. Radicle 2. Cotyledon 3. Spores 4. Manure 5. Harvesting

D. Unscramble the following words to make meaningful words :

1. EMBRYO 2. SEEDS 3. RADICLE 4. GROWTH 5. CROP

E. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. ✓ 4. X 5. ✓

F. Fill in the blanks with suitable words given below :

1. crops 2. radicle 3. need 4. seed coat 5. sowing

G. Tick (✓) the correct answer :

1. (d) 2. (d) 3. (c) 4. (a)

HOTS Corner

Do yourself

Fun Time

1. Do yourself 2. Do yourself

Chapter 3 — Lifestyle of Animals

EXERCISE

A. Answer the following questions in short :

1. Plant eating animals like cow, goat, sheep, deer are called herbivores.
2. Animals like hyena and jackal feed on the flesh of dead animals. They are called scavengers.
3. The birds that do not migrate are called resident birds.

4. Most land animals have four limbs, two at the back are called hind limbs.
5. Squirrels and rabbits are rodents.

B. Long answer type questions :

1. Different types of land animals are :
 - (i) Herbivores : Plant eating animals like cow, goat sheep, deer are called herbivores.
 - (ii) Carnivores : Animals like wolf, lion and tiger eat flesh of other animals. They are called carnivores.
 - (iii) Omnivores : Animals like bear, dog and crow eat both plants and flesh of animals. They are called omnivores.
2. Carnivorous fish eat earthworms, larvae of mosquitoes, fruit flies and other fish. Herbivorous fish eat peas, cucumber and potatoes. Limnivorious fish are also known as mud-eaters. They feed on algae and micro-organisms.
3.
 - (a) Earthworms : They breathe through their skin.
 - (b) Frogs : Tadpoles breathe through gills. But an adult frog breathe through its lungs on land and through its moist skin under water.
 - (c) Fish : They are blessed with gills to breathe. The fish take in oxygen through their gills from the water.
4. There are large number of holes on the bodies of insects through which they breathe. These are called spiracles. These spiracles lead into a network of branching tubes called the 'tracheae'. Because of the contraction of the body muscles, air is pumped into the tubes and then carried out to all tissues. The tissues take in oxygen from the tubes and give out carbon dioxide into the tubes.
5. Migration is defined as the movement of animals from one region to another. They migrate in response to changes in weather, habitat or availability of food. Many times animals migrate because of natural calamities.

C. Answer in one word :

1. aquatic animals
2. insects
3. bat
4. hind limbs
5. breathing

D. Tick (✓) the right and cross (X) the wrong statements :

1. ✓
2. ✓
3. X
4. ✓
5. X

E. Fill in the blanks with suitable words given below :

1. plant eating
2. breathing
3. gills
4. tracheae
5. resident birds

F. Tick (✓) the correct answer :

1. (c)
2. (b)
3. (c)
4. (d)
5. (b)

G. Match the following columns :

1. — (d)
2. — (e)
3. — (a)
4. — (b)
5. — (c)

HOTS Corner

1. A human being can dive under the sea and stay there for few hours with the help of oxygen cylinder. It helps in breathing under the sea.
2. Birds have wings which help them to fly. Some birds like ostrich, kiwi, duck and emu can't fly, they walk on the ground. These are flightless birds.

Fun Time

Do yourself

Chapter 4 — The Nervous System

EXERCISE

A. Answer the following questions in short :

1. Three components of the nervous system are the brain, the spinal cord and thousand of nerves.
2. Three major parts of the brain are cerebrum, cerebellum and brain stem.
3. The vertebral column is a collection of bones that houses the spinal cord.
4. Nerves are bundles of nerve cells spread throughout the body.
5. Those actions that happen automatically without thinking are called reflex actions.

B. Long answer type questions :

1. (a) Cerebrum : It controls our ability to think, learn, decide, remember, dream and feel.
(b) Cerebellum : It coordinates muscular activities and is responsible for balancing the body.
(c) Medulla : It controls breathing, digestion and blood circulation.
2. The spinal cord carries out two main functions :
 - (i) It connects the large part of the peripheral nervous system to the brain.
 - (ii) Information reaching the spinal cord through sensory neurons are transmitted up into the brain.
3. Axon carries signals from the brain to the spinal cord and dendrites carry information back to the brain.
4. Three methods for the protection of eyes :
 - (i) Clean your eyes regularly.
 - (ii) Do not read in dim or very bright light.
 - (iii) Do not rub your eyes with dirty hands.
5. Three functions of the skin are :
 - (i) It protects our internal organs from germs and dirt.
 - (ii) It absorbs sunlight for vitamin D and heat.
 - (iii) It regulates our body temperature by controlling blood flow and sweat.

C. Answer in one word :

1. Optic nerve
2. Olfactory nerve
3. Cochlea
4. Cerebrum
5. Axon

D. Fill in the blanks with suitable words given below :

1. pupil
2. motor
3. cerebrum
4. nervous system
5. medulla

E. Unscramble the following words to make meaningful words :

1. MEDULLA
2. BRAIN
3. PUPIL
4. IRIS
5. NERVES

F. Tick (✓) the right and cross (X) the wrong statements :

1. X
2. ✓
3. ✓
4. X
5. ✓

G. Tick (✓) the correct answer :

1. (d)
2. (d)
3. (a)

HOTS Corner

1. Do yourself
2. Cerebellum

Fun Time

1. Do yourself
2. Do yourself
3. Do yourself

Chapter 5 — The Skeletal System

EXERCISE

A. Answer the following questions in short :

1. The lower leg below the knee has two bones called tibia and fibula.
2. The lower arm below elbow has two bones called radius and ulna.
3. Bones are held together in a joint by strong band of tissues called ligaments.
4. The place where two bones meet is called a joint.

B. Long answer type questions :

1. Some muscles work under our control. These muscles control the bones in our arms and legs when we run, walk, jump or swim. These are called voluntary muscles. Involuntary muscles are not under our control. Our stomach and heart have involuntary muscles.
2. Three functions of skeletal system are :
 - (i) Muscles are attached to the bones. Muscles and bones work together to move the parts of the body.
 - (ii) Bones contain bone marrow, a fatty substance which forms blood.
 - (iii) It protects the soft organs of the body. The skull protects the brain. The ribs protect the heart and lungs.
3. A tissue called cartilage is present between most of the vertebrae. Function of cartilage is :
 - (i) It cushions the bones and acts as a shock absorber.
4. Two functions of skull are :
 - (i) Our face gets shape because of skull.
 - (ii) It also protects the organs of sight, hearing, smell and taste.

C. Name the joint taking clue from the statements :

1. Hinge joint
2. Ball and socket joint
3. Fixed joint
4. Gliding joint

D. Unscramble the following words to make meaningful words :

1. MUSCLES
2. JOINT
3. SKULL
4. SKELETON

E. Fill in the blanks with suitable words given below :

1. floating
2. ligament
3. pivot
4. bone marrow

F. Tick (✓) the right and cross (X) the wrong statements :

1. ✓
2. ✓
3. ✓
4. X

G. Tick (✓) the correct answer :

1. (d)
2. (c)
3. (b)
4. (c)

HOTS Corner

1. Walnuts are the top nut for brain health. They have a significantly

high concentration of omega-3 fatty acid which has been shown to protect brain health in newborns, improve cognitive performance in adults and prevent age related cognitive decline.

2. If the heart stops beating, a person would die. It stops oxygen-rich blood from reaching the brain and other organs.

Fun Time

Do yourself

Chapter 6 — Food and Health

EXERCISE

A. Answer the following questions in short :

1. Three types of macro-nutrients needed by our body are carbohydrates, fats and proteins.
2. Two types of micro-nutrients needed by our body are vitamins and minerals.
3. Fibre or roughage are types of carbohydrates that our body cannot digest.
4. Fat soluble vitamins and water soluble vitamins are two types of vitamins needed by our body.

B. Long answer type questions :

1. Vaccine is a substance that is injected into the blood to protect the body from a disease. Common vaccines that are given to us in childhood are polio vaccine, DPT vaccine and MMR vaccine.
2. Lack of proteins and carbohydrates over a long period of time causes malnutrition.

Two symptoms of malnutrition in a child are :

- (i) Improper or stunted growth.
- (ii) Thin legs and hands.
3. Three functions of drinking water are :
 - (i) It maintains body temperature by distributing the heat throughout the body and losing excess of it in the form of sweat.
 - (ii) It helps the food to move through the digestive and excretory system.
 - (iii) It keeps our eyes bright, skin soft and fair shining.
4. Three types of fats present in the food are :
 - (i) Saturated fat found in meat and butter.
 - (ii) Irons fat found in baked items like biscuits and fried foods.
 - (iii) Unsaturated fat found in olive oil and nuts.

C. Answer in one word :

1. Macro-nutrients
2. Micro-nutrients
3. Balanced diet
4. Germs

D. Fill in the blanks with suitable words given below :

1. vitamins
2. night blindness
3. vitamin C
4. iodine
5. anemia

E. Unscramble the following words the make meaningful words :

1. NUTRIENTS
2. GERMS
3. VACCINATION
4. DISEASE

F. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. ✓ 4. X

G. Tick (✓) the correct answer :

1. (b) 2. (a) 3. (a) 4. (c)

HOTS Corner

1. It removes dirt, oil and bacteria that can lead to skin problems. It also helps to remove sweat that accumulates throughout the day. It also relaxes us.
2. It is easier to stop something happening in the first place than to repair the damage after it has happened.

Fun Time

1. Do yourself
2. Do yourself

Chapter 7 — Air and Water

EXERCISE

A. Answer the following questions in short :

1. Nitrogen makes up around 78%.
Oxygen makes up around 21%.
Other gases makes up around 1%.
2. Nitrogen is added into the atmosphere as plants and animals decay or are burned.
3. The mesosphere and thermosphere are often referred together as the ionosphere.
4. Volume of inflated balloon increases means that air occupies space.

B. Long answer type questions :

1. Two functions of oxygen gas present in the atmosphere are :
(i) It is most important for breathing.
(ii) It is also essential for burning.
2. The amount of water vapour present in the air at a given time is called humidity. High humidity indicates the high probability of rain.
3. Atmosphere is the blanket of air surrounding the earth. It consists of four main layers :
(i) Troposphere : The first layer of atmosphere is called troposphere.
(ii) Stratosphere : It lies above the troposphere.
(iii) Ionosphere : It is the thickest layer.
(iv) Exosphere : It lies above the ionosphere.
4. On pushing air in a balloon, its size increases. It could expand upto a certain limit. If we push more air, it bursts because pressure of air inside the balloon becomes more than outside the balloon. This shows that air exerts pressure.

C. Answer in one word :

1. Nitrogen & Oxygen 2. CO₂ and a form of oxygen 3. Troposphere
4. Oxygen

D. Fill in the blanks with suitable words given below :

1. oxygen 2. nitrogen 3. stratosphere 4. oxygen 5. chlorine and iodine

E. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. ✓ 3. ✓ 4. X

F. Tick (✓) the correct answer :

1. (d) 2. (b) 3. (b) 4. (b)

G. Match the following columns :

1. — (e), 2. — (d), 3. — (b), 4. — (c), 5. — (a)

HOTS Corner

1. Helium, neon, argon and krypton are used in electric bulb.

Fun Time

Do yourself

Chapter 8 — States of Matter

EXERCISE

A. Answer the following questions in short :

1. Solid, liquid and gas are three states of matter.
2. Atoms are the smallest unit of matter.
3. A solution is a mixture of two or more substances in a single phase.
4. Alloy is a solid-solid solution.

B. Long answer type questions :

1. Three differences between physical change and chemical change are :

Physical Change	Chemical Change
– The physical change is only in the state of matter	– It results in the formation of a new substance
– It is temporary	– It is permanent
– It can be easily reversed	– It can't be reversed

2. Two differences between solids and liquids are :

	Solids		Liquids
(i)	It has a definite shape and size	(i)	It doesn't have a definite shape and size
(ii)	It can't flow	(ii)	It can flow

3. **Homogeneous mixture :** It has the same uniform appearance and composition throughout.

Heterogeneous mixture : It consists of visibly different substances or phases.

4. **Solute :** The substance in the smallest amount and the that dissolves is called the solute.

Solvent : The substance in the larger amount is called solvent.

C. Answer in one word :

1. solute 2. saturated 3. heterogeneous 4. matter

D. Fill in the blanks with suitable words given below :

1. air 2. paper 3. molecules 4. largest 5. solvent

E. Tick (✓) the right and cross (X) the wrong statements :

1. X 2. X 3. ✓ 4. ✓

F. Tick (✓) the correct answer :

1. (a) 2. (a) 3. (b) 4. (b)

HOTS Corner

1. The water level of the glass remains same as the salt molecules take the empty space that exists between the water molecules.
2. It freezes in the winter.

Fun Time

Do yourself

Chapter 9 — Rocks, Minerals and Soil

EXERCISE

A. Answer the following questions in short :

1. Three types of rocks are igneous, sedimentary and metamorphic.
2. Marble is a metamorphic rock formed from limestone.
3. Gneiss is a metamorphic rock formed from granite.
4. When magma appears above the earth, it is called lava.
5. Soil formation takes place when many things interact such as air, water, plant life, animal life, rocks and chemicals.

B. Long answer type questions :

1. They are formed either underground or above ground. Underground, they are formed when the melted rock, called magma, deep within the earth are trapped in small pockets. As these pockets of magma cool slowly, the magma becomes igneous rocks. They are also formed as the lava cools above ground.
2. Sedimentary rocks are formed by the deposition of material at the earth's surface and within bodies of water. Sedimentation is the collective name for processes that cause mineral and organic particles to settle and accumulate. Particles that form a sedimentary rock by accumulating are called sediments.
3. Metamorphic rocks are formed when existing rock types are subjected to extreme conditions of temperature and pressure leading to change in physical and chemical condition. The process is called metamorphosis and the type of rocks formed in the process are called metamorphic rocks.
4. Three methods of soil conservation are :
 - (i) Grow grasses and creepers when the fields lie bare in between two harvest seasons on flat and open grounds.
 - (ii) Encourage step or terrace forming in hilly areas.
 - (iii) Afforestation or growing trees over hill slopes.
5. Soil is the thin uppermost layer of material on the earth's surface in which plants have their roots. It is formed over a long period of time.

Different types of soil are

- | | |
|-------------------|--------------------|
| (i) Alluvial soil | (ii) Black soil |
| (iii) Red soil | (iv) Laterite soil |

C. Answer in one word :

1. Igneous rocks, 2. Granite, 3. Shale, 4. Sandstone, 5. Methane

D. Fill in the blanks with suitable words given in the bracket :

1. minerals 2. magma 3. sedimentary 4. cotton 5. pumice

E. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. X 3. ✓ 4. X

F. Tick (✓) the correct answer :

1. (d) 2. (d) 3. (d) 4. (a) 5. (b)

HOTS Corner

1. They are formed from decayed plants and animals that have been converted to coal & petroleum by exposure to heat and pressure in the earth's crust over hundreds of millions of years.

2. Qutubh minor—red sandstone and marble

Lotus temple—marble

Red fort—red sandstone

Taj mahal—marble stone

Fun Time

Do yourself

Chapter 10 — Simple Machines

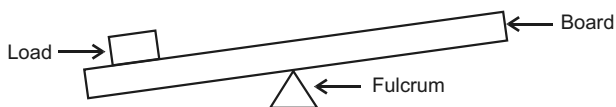
EXERCISE

A. Answer the following questions in short :

1. Machine is a device that helps us to do work more rapidly.
2. There are six types of simple machines lever, pulley, inclined plane, screw, wheel and axle and wedge.
3. Complex machine consists of more than one simple machine in it.
4. Pulleys let us move the load up, down or sideways.

B. Long answer type questions :

1. Simple machine makes our work easier by :
 - (i) Changing the direction of force.
 - (ii) Increasing the distance and minimizing the amount of force needed.
2. A lever is a board or bar that rests on a turning point. The turning point is called the fulcrum. An object that a lever moves is called the load.



3. Levers are of three kinds :
 - (i) First class lever : When the fulcrum is kept between the load and effort, it is a first class lever. Example scissors.
 - (ii) Second class lever : When the load is put between the fulcrum and the effort, it is called a second class lever. Example bottle opener
 - (iii) Third class lever : When the effort is put between the fulcrum and the load, it is a third class lever. Example tongs.

4. Different functions of screw are :
- It makes our work easier.
 - It has ridges or threads that change the direction of force applied.
 - The circular motion helps to move things upwards and downward.
 - It holds things together through a longer distance with stronger grip.
- C. Answer in one word. Name the simple machine in each case :**
 1. inclined plane, 2. Wedge, 3. pulley, 4. screw
- D. Fill in the blanks with suitable words given below :**
 1. single 2. lever 3. third 4. less 5. screw
- E. Tick (✓) the right and cross (X) the wrong statements :**
 1. X 2. ✓ 3. X 4. X 5. ✓
- F. Tick (✓) the correct answer :**
 1. (c) 2. (b) 3. (b) 4. (a)
- G. Unscramble the following words to make meaningful words :**
 1. PULLEY, 2. LEVER, 3. WEDGE, 4. MACHINE, 5. FULCRUM

HOTS Corner

- Screws have the stronger holding capability than nails and can draw pieces together.
- Do yourself.
- Yes, we can collapse a large building in a day by using various machines.

Fun Time

- Do yourself
- Do yourself

Chapter 11 — Safety and First Aid

EXERCISE

A. Answer the following questions in short :

- First aid is the immediate help given to a needy person.
- Dettol or Savlon remove all the dirt from the wound.
- Burnol is the antiseptic cream applied when someone has a burn.
- Ice packs reduce bleeding.
- Water should not be used to control fire caused by petrol because petrol is lighter than water, so it floats on it.

B. Long answer type questions :

- First aid is important as :
 - It can save lives.
 - It can help you do a lot more.
 - It help in an emergency.
- Fire extinguishers are devices to put out fires. They contain carbon dioxide gas or foam. The gas or foam surrounds the fire and puts it off by cutting off the air supply.
- First aid when someone has a burn :
 - Cool the burn under running water for at least ten minute. Ice cubes can also be applied on the burnt area.

- (ii) Apply on antiseptic like burnol.
 - (iii) Call an adult.
 - (iv) If burn is serious, call an ambulance.
4. Remember at all times mean :
- (i) Stay calm.
 - (ii) Check if the area is safe.
 - (iii) Think before doing anything.
 - (iv) Talk to the person you are helping.
 - (v) Look for an adult to help.
5. First aid in case of cuts and wounds :
- Wash your hands before giving first aid to an injured person.
 - Wash the wound with dettol or savlon.
 - Cover the wound with cotton dressing.
 - Continuously press from where the blood is coming.
 - In case of deep cut, make a thick pad of sterile gauze and press it over the wound.

C. Answer in one word :

1. Rabies 2. Tourniquet 3. Carbon dioxide 4. Fracture 5. 102

D. Fill in the blanks with suitable words given below :

1. injured 2. bone 3. antiseptic 4. viruses

E. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. ✓ 3. ✓

F. Tick (✓) the correct answer :

1. (d) 2. (a) 3. (d)

HOTS Corner

1. Electrocution is death or serious injury caused by electric shock, electric current passing through the body.
2. No, first he should wash his hands.

Fun Time

Do yourself

Chapter 12 — Solar System

EXERCISE

A. Answer the following question in short :

1. Sun is the main source of energy on the earth.
2. Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune are the eight planets of the solar system.
3. Mercury is called an evening star as it is often visible for brief period just after the sun set.
4. The sun along with its eight planets and their moons together forms the solar system.
5. Asteroids are the left over materials from the formation of the solar system.

B. Long answer type questions :

1. Satellites are small heavenly bodies that revolve around planets. The moon is a natural satellite of the earth.
2. The piece of rock that is big enough so that it does not burn up while entering the atmosphere and it will hit the ground. We call them meteorites.
3. Similarity between mercury and Venus :
– They have no satellites.

Two differences between mercury and Venus are :

- (i) Mercury is the nearest planet to the sun whereas Venus is the second nearest planet to the sun.
 - (ii) Mercury's Indian name is budh whereas Venus's Indian name is Shukra.
4. Earth's Indian name is Prithvi. Life is possible on the earth because of its moderate temperature, presence of oxygen and water.
 5. A group of stars forming a recognizable pattern that is traditionally names after its apparent form. We call these patterns as constellation.

C. Answer in one word :

1. The sun
2. Mercury
3. Venus
4. Mars
5. Jupiter

D. Fill in the blanks with suitable words given below :

1. Beautiful
2. Mars
3. Saturn
4. Saturn
5. Venus

E. Tick (✓) the right and cross (X) the wrong statements :

1. X
2. X
3. ✓
4. ✓
5. X

F. Tick (✓) the correct answer :

1. (a)
2. (a)
3. (d)
4. (d)

HOTS Corner

1. Stars do appear during the day, but we can't see them because of the glare of sunlight.
2. The stars appear so small from the earth because stars are so far away from the earth.

Fun Time

Do yourself

Chapter 13 — Our Environment**EXERCISE****A. Answer the following questions in short :**

1. The ultraviolet and infrared rays from the sun bring in heat and light.
2. Carbon dioxide gas is produced :
 - (i) When humans and animals breathe.
 - (ii) Natural sources include forest fires etc.
3. Increase in more and more green house gases in the atmosphere leads to rise in temperature of the earth. This is known as global warming.
4. Carbon dioxide, methane and nitrous oxide are three green house gases in the atmosphere.
5. The process of environment being damaged or made worse is called as environmental degradation.

B. Long answer type questions :

1. Earth's atmosphere acts in a similar way like greenhouse gases present in the atmosphere such as carbon dioxide acts like a roof of the earth. During the day, the sun shines through the atmosphere, and the earth surface heats up in the sunlight. At night, earth's surface cools, releasing the heat back to air, but some of the heat is trapped by the greenhouse gases in the atmosphere. It keeps our earth warm and cozy.
2. Two activities of humans beings that produces green house gases are :
 - (i) Cutting down and burning trees produce a lot of carbon-dioxide.
 - (ii) It is produced when humans and animals breathe.
3. Three effects of global warming are :
 - (i) The change in the weather will affect the types of crops grown in different parts of the world.
 - (ii) Water cycle pattern will get disturbed resulting in more rainfall.
 - (iii) Homes of plants and animals will be affected all over the world. Some special plants and animals may become extinct.
4. Three activities that have led to environmental degradation are :
 - (i) The natural qualities of air, water and soil have been degraded due to pollution.
 - (ii) Land has been degraded severely due to overgrazing, deforestation etc.
 - (iii) Overuse and misuse of resources like fossil fuels have caused energy crisis.
5. Gases that help in causing green house effect are called green house gases.
Three greenhouse gases and their source :
 - (i) Carbon-dioxide : It is produced naturally when people and animals breathe.
 - (ii) Methane : It comes from cattle as they digest their food.
 - (iii) Nitrous oxide : It is produced when plants die and rot.

C. Answer in one word :

1. Greenhouse
2. Carbon-dioxide
3. Methane
4. Chlorofluoro carbons
5. Deforestation

D. Fill in the blanks with suitable words given below :

1. ultraviolet, infrared
2. ozone, methane
3. water vapour
4. nitrous oxide
5. chlorofluoro carbons

E. Unscramble the following words to make meaningful words:

1. Ultravilot
2. Ozone
3. Greenhouse
4. Revolution
5. Green

F. Tick (✓) the right and cross (X) the wrong statements :

1. X
2. ✓
3. ✓
4. ✓
5. ✓

F. Tick (✓) the correct answer :

1. (a)
2. (a)
3. (a)
4. (c)
5. (d)

HOTS Corner

1. Do yourself
2. Do yourself

Fun Time

1. Do yourself
2. Do yourself

Chapter 14 — Natural Calamities

EXERCISE

A. Answer the following questions in short :

1. Volcanic eruptions, earthquakes and flood are some natural calamities that happen due to disturbances within the earth.
2. A sudden violent shaking of the ground as a result of movements within the earth's crust is called an earthquake.
3. A volcano is a land form where molten rock erupts through the surface of the earth.
4. Tsunami is a high tidal waves which travel at a speed of more than 800 km/hour.
5. The earth has four major layers the inner core, outer core, mantle and crust.

B. Long answer type questions :

1. The plate boundaries are made up of many faults. Since the edges of the plates are rough, they get stuck while the rest of the plates keeps moving. Finally, when the plate has moved far enough, the edges unstuck on one of the faults and there is an earthquake.
2. There are two different types of volcanoes :
 - (i) Active volcano : A volcano that has had at least one eruption during the past 10000 years.
 - (ii) Extinct volcano : Volcanoes that has not erupted for at least 10000 years and is not expected to erupt again in future.
3. Three causes of Tsunami's are :
 - (i) The vast majority of Tsunamis result from earthquakes.
 - (ii) A large scale undersea landslide also triggers tsunami.
 - (iii) Undersea volcanic eruption of a certain degree also result in tsunami.
4. Flood is over flow of the huge amount of water onto the normally dry land. Floods are of two types natural flood and catastrophic flood. Causes of flood are :
 - Heavy rainfall
 - Heavy snow melting
 - High tides, storm etc
 - Deforestation
5. Three safety measures to be followed during earthquakes are :
 - (i) Get under a bed or table. Cover your head and face.
 - (ii) Never use the lift during the earthquake.
 - (iii) If you are outside, stay at a place till the earthquake stops. Do not stay near walls, buildings etc.

C. Answer in one word :

1. Hypocenter 2. Epicenter 3. Seismographs 4. Richter scale 5. Magma

D. Fill in the blanks with suitable words given below :

1. extinct 2. cracks 3. epicenter 4. richter scale, 5. natural

E. Unscramble the following words to make meaningful words :

1. Tsunami 2. Epicenter 3. Volcano 4. Seismograph 5. Dormant

F. Tick (✓) the right and cross (X) the wrong statements :

1. ✓ 2. ✓ 3. ✓ 4. X 5. ✓

G. Multiple choice questions :

1. (b) 2. (a) 3. (a) 4. (b)

HOTS Corner

1. Do yourself
2. Do yourself

Fun Time : Do yourself.