



Help Kit 1-5



INNOVATIVE SCIENCE

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SCIENCE-1



1

Living and Non-living Things

Warm Up

Do it yourself.

CHECKPOINT

1. Table, Chair

2. Tree, Mountain

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c.



2. c.



3. b.



B. Complete the names of two :

Ans. 1. living things

Human

Animals

2. non-living things

Mobile

Car

C. Fill in the blanks with the correct word :

Ans. 1. **Animals** are living things.

2. Living things eat **food**.

3. A **star** is a natural non-living thing.

4. A **bus** is a man-made thing.

D. Answer the following questions :

Ans. 1. Plants and Animals

2. Trees

3. No, They are natural.

4. They are non-living things.

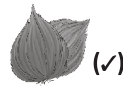


2

The World of Plants

Do and Learn

Put a (✓) for the things which you get from trees :



CHECKPOINT

Big Plants—1. Banyan 2. Mango

Small Plants—1. Mint 2. Rose

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. Rose

2. a. climber

B. Name the following :

Ans. 1. A small plant **ROSE**

2. A big tree

BANYAN

3. A tall tree **ASHOK**

4. A thin and straight tree

COCONUT

C. Answer the following questions :

- Ans.** 1. Very big plants are called trees. They have hard woody stem. Example : Mango, Ashok.
2. Some plants are small but strong. Such plants are called shrubs. Rose, sunflower, and hibiscus are some examples of shrubs.
3. Money plant and Grapevine.



3

Parts of a Plant

Warm Up

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.** 1. c. seeds 2. a. fruits 3. b. seeds 4. a. beautiful

B. Name these parts of a plant :

- Ans.** FLOWER FRUIT LEAF

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

- Ans.** 1. **Roots** grow below the ground.
2. Buds are **unopened** flowers.
3. **Leaves** prepare food for the plants.
4. Most flowers have a sweet **fragrance**.
5. A seed has a baby **plants** inside it.

D. Cross (X) out the wrong words :

- Ans.** 1. Sunflower 2. Flower 3. Roots
4. Stems 5. Buds

E. Answer the following questions :

- Ans.** 1. Roots grow below the ground. They hold the plant in place and allow it to grow straight.
2. A seed grows into a new plant. It has a baby plant inside it. Plants need sunlight, air, water to grow.
3. Flowers grow into fruits.
4. The leaf is green in colour. It is of many shapes and sizes. It makes food for the plant.



4

Plants as Food

Warm Up

Do it yourself.

Do and Learn

Strike off every number to get my name! Am I a fruit (F) or vegetable (V) ? Use the picture clues. One is done for you :

1. PLUM : F 2. PAPAYA : F 3. ONION : V
4. STRAWBERRY : F 5. PEAS : V

CHECKPOINT

Match the following :

- | | |
|-----------------|-----------|
| 1. Tomato | d. Fruit |
| 2. Mint | a. Leaf |
| 3. Kidney beans | e. Pulse |
| 4. Ginger | b. Stem |
| 5. Wheat | c. Cereal |

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c.



2. a.



3. c.



B. Fill in the blanks, with the correct words :

Ans. 1. Gram is a cereal.

2. We get **fruits** and vegetables from plants.

3. We eat roots of plants like **carrot**.

4. Cauliflower is a **flower**.

C. Answer the following questions :

Ans. 1. We get food from different parts of plants.

2. We eat the seeds of Peas.

3. We eat the leaves of spinach.

4. We should eat different types of fruits. They are good for our health.



The World of Animals

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Circle the odd one out :

a. Emu, Parrot, Ostrich

b. Parrot, Pigeon, Ant

c. Whale, Dog, Cat

d. Swan, Butterfly, Duck

e. Duck, Frog, Octopus

f. Egret, Monkey, Squirrel

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c. beaks

2. b. Fish

3. a. Mosquito

B. Fill in the blanks with the correct words.

Ans. 1. **Whale** is the largest living animal.

2. Birds have **wings** that help them to fly.

3. Ostrich is a **bird**.

4. Birds eat with their **beaks**.

C. Answer the following questions.

- Ans.** 1. Lion and Horse 2. Fish, Ostrich 3. Ostrich, Hen
4. An insect is a small animal with six legs. Some insects have wings to fly.

Example : Housefly, Mosquito, Ant



Food and Shelter of Animals

Warm Up

Do it yourself.

CHECKPOINT

Match the following :



Do and Learn

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.** 1. b. carnivorous 2. c. shed 3. a. stable

B. Write True or False for the following statement :

- Ans.** 1. True 2. False 3. True 4. False

C. Match the following :

- | | |
|--------------------------------|-------------------------|
| Ans. 1. Goat and rabbit | c. Plant-eaters |
| 2. Squirrel and mouse | a. Grain-eating animals |
| 3. Snake | d. Hole |
| 4. Hen | b. Coop |

D. Answer the following questions :

- Ans.** 1. A plant eater eats the leaves of plants and a grain-eaten eats only the grains of plants.
2. Some animals eat the flesh of other animals. They are called flesh-eating or carnivorous animals.
3. They need shelter to keep them safe.
4. We make homes for our pets and domestic animals.

Green Pages

• Circle the options that you think are correct :

- Ans.** 1. b. Not cut the trees. 2. a. Home for many birds
3. a. Food and shelter

• Read the questions. Tick (✓) the correct option :

- Ans.** 1. 2.





Our Body and Sense Organs

Warm Up

Do it yourself.

CHECKPOINT

Which part of your body helps you to :

1. Eyes
2. Feet
3. hands
4. Tongue

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c. Pencil 2. b. walk

B. Name the body part. How does it help you?

1. Name **hand** Helps to **carry the things**.
2. Name **tongue** Helps to **taste**.
3. Name **Ear** Helps to **hear**.
4. Name **Eye** Helps to **see**.

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

1. We use our **hands** to pick and hold things.
2. We use our nose to **breathe**.
3. **ears** are used to hear different sounds.
4. We feel different things with our **skin**.

D. Identify the body parts. Write the correct number in the circles :

1. Nose
2. Hair
3. Chin
4. Neck
5. Foot
6. Teeth



E. Answer the following questions.

1. The tongue helps us to taste food.
2. We have 2 eyes.
3. We can write and hold things with the help of our hands.
4. Eyes, ears, nose, tongue, and skin are called sense organs. These help us to feel the world around us.



Our Needs

Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. a. strong 2. c. Sandwich 3. b. cool 4. a. bedroom

B. Write the first letter of each picture in the circles. Find the names of food items we get from plants :

1.
2.
3.

C. Write True or False for the following statements :

Ans. 1. True 2. False 3. True 4. True 5. False

D. Answer the following questions :

1. Food gives us energy to do all our activities. It helps us to grow.
2. We eat many things which are made from milk like Curd, Ghee and Cheese.
3. We use umbrellas, raincoats and gumboots to go out in the rain. It protects us from rain.
4. We need a house to live in. Our house keep us safe from heat, cold, rain and wild animals.



Keeping Fit

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c. both fit and healthy 2. a. smart

B. Name these exercises :

1. CYCLING
2. SWIMMING
3. PLAYING

C. Write True or False for the following statements :

Ans. 1. True 2. True 3. False 4. True

D. Answer the following questions :

1. Exercise and play is essential for keeping us fit.
2. Posture is the position in which we keep our body parts straight when we sit, stand or walk.
3. We should always sit, stand and walk straight.
4. We get tired after working so, we need to take rest.



Keeping Safe

Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. footpath 2. a. electric wires

B. Fill in the blanks with the correct words given below :

- Ans.** 1. **Safety**, means staying away from harm.
2. We should not **run** on the road.

3. Always stand in a queue for **boarding** a bus.
4. **knives, blades** and **scissors** are sharp objects.

C. Match the following by drawing lines :

- | | |
|--|--|
| <p>Ans. 1. Always walk on the</p> <p>2. Stay away from</p> <p>3. To cross the road use</p> <p>4. When someone gets hurt</p> | <p>d. footpath</p> <p>c. fire</p> <p>b. zebra crossing</p> <p>a. inform an elder</p> |
|--|--|

D. Answer the following questions :

- Ans.** 1. Safety means staying away from harm.
2. **At Home**
Do not play with matchsticks.
Do not play with electric wires and points.
- At School**
Always go to your class in a queue.
Never run around in the class.
3. Inform an adult person.
Wash the wound with water and apply Dettol.



11

Good Habits

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.** 1. a. eating 2. c. clean 3. c. every day

B. Fill in the blanks with the correct words given below :

- Ans.** 1. Good habits keep us **clean** and **healthy**.
2. We should **brush** our teeth at least twice a day.
3. **comb** your hair to keep it tidy.
4. We should never **write** on the walls.

C. Answer the following questions :

- Ans.** 1. We should brush our teeth at least twice a day.
2. We should throw the waste in dustbin.
3. We should follow good habits because good habits keep us healthy and fit.



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Air

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

3. The home of horses is called a **stable**.
4. Milk is used to make **cheese**.
5. A **camel** carries load for us.

D. Answer the following questions.

- Ans.**
1. We get many things from animals such as milk, eggs, wool wax, leather etc.
 2. The skin of some animals like snakes, kangaroos and buffaloes is used to obtain leather. Leather is used to make wallets, belts, jackets, and many other things.
 3. We get wool from sheep. Wool is used to make sweater, gloves, caps, socks and blankets.
We get silk thread from silkworms. Silk is used to make saris, scarves and ties.
 4. We must take care of domestic animals. We must be gentle to them. We should give them enough food to eat and clean water to drink. We should bathe our pets regularly. When they fall sick, we should take them to an animals doctor.



Wild Animals

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT


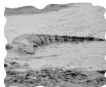


Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.** 1. c. grass 2. b. hole 3. a. tusks

B. Circle the odd one out :

- Ans.** 1.  2.  3.  4. 

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

- Ans.**
1. Animals living in jungles are called **wild** animals.
 2. **Birds** build their own nests.
 3. **Carnivores** hunt other animals for food and eat their flesh.
 4. Hyena and vulture help to keep the **jungle** clean.
 5. We must not hunt animals for our **pleasure**.

D. Match the following by drawing lines :

- Ans.**
- | | |
|-----------------|--------------------------|
| 1. Flesh-eaters | iv. carnivores |
| 2. Plant-eaters | ii. eat only plants |
| 3. Jackal | i. keep the jungle clean |

4. Omnivores iii. bear and crow
 5. Herbivores v. elephant and monkey

E. Answer the following questions :

- Ans.** 1. Wild animals live in Jungle.
 2. (a) cow, (b) lion, (c) hyena
 3. Some wild animals like hyena, jackal and vulture eat the left over flesh of dead animals. These help to keep the jungle clean.
 4. (a) hole, (b) burrow (c) den (d) nests
 5. Many animals and birds are no longer found on the Earth. They have become extinct. The dinosaurs which lived on the Earth long, long ago are now extinct. Some animals are found in very few numbers. They are also in danger of becoming extinct. So, they are called endangered animals.

Examples :



Our Body

Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.** 1. b. bones 2. a. soft 3. a. Exercise

B. Fill in the blanks with the correct words given below :

- Ans.** 1. The **skeleton** is the framework of bones.
 2. Bones give **shape** and **structure** to the body.
 3. We can bend our body around the **joints**.
 4. **Muscles** cover the bones and help them move and work.
 5. Correct **posture** is very important to keep the body healthy.

C. Match the following by drawing lines :

- | | |
|----------------------------------|--------------|
| Ans. 1. Our body has many | iv. parts |
| 2. Standing or walking is called | iii. posture |
| 3. Exercise keeps our muscles | i. strong |
| 4. Muscles cover the | ii. bones |

D. Answer the following questions :

- Ans.** 1. We must exercise daily to keep muscles strong and healthy.
 2. The position in which we hold our body straight while sitting, standing or walking is called posture.



7

Housing and Clothing

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. permanent house 2. c. water

B. Name the following :

Ans. A good house A Mud hut An igloo A tent

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

- Ans. 1. **Temporary** houses are not very strong.
 2. The roofs of houses may be **flat** or **sloping**.
 3. **Things** should be kept in proper places.
 4. We need **warm** clothes in winter.

D. Write True or False for the following statements :

Ans. 1. True 2. False 3. True 4. True

E. Answer the following questions :

Ans. 1. Permanent House

These houses are strong. They are made of bricks, cement, stone, steel, wood and marble. They are built by people who have settled at one place. Most of the city homes are permanent houses.

Temporary Houses

Some people live in houses that can be moved from place to place. These houses are not very strong. Tent, caravan, huts, houseboats are temporary houses.

2. People living on plains usually make houses with flat roofs.
 3. We wear cotton clothes in summer.
 4. We need woollen clothes in winter. Woollen clothes keep us warm.



8

Safety Rules

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c. sharp objects 2. a. road

B. Match the following :

- Ans.** 1. A hard rock
2. A soft rock
3. A mineral used for making pottery
4. Formed by breaking of rocks
5. Hardest mineral
- ii. Marble
v. Coal
iv. China clay
i. Soil
iii. Diamond

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

- Ans.** 1. **Rocks** are the hard, solid parts of the Earth.
2. **Sandstone, granite** and **marble** are examples of hard rocks.
3. Rock salt is used in **flavouring** food.
4. Gold and silver are used in making **jewellery** and **coins**.
5. **Gemstones** are very hard minerals.

D. Answer the following questions :

- Ans.** 1. Rocks are the hard, solid parts of the Earth. They are found on the surface of the Earth, under the ground and also below the sea. Marble is a hard rock and slate is a soft rock.
2. Minerals are the elements found on the earth. Rocks are made up of one or more types of minerals.
3. Gemstones are very hard minerals. These are cut in various shapes and polished. Polished gemstones looking are very beautiful. Example : Ruby and Topaz.
4. a. Marbles are used in making statues.
b. Slate is used in making tiles.
c. Silver is used to make jewellery.
d. Ruby is used to make jewellery.
e. Iron is used to make utensils.
f. Tale is used to make talcum powder.



The Air We Breathe

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option:

- Ans.** 1. b. breathe 2. a. vitamins 3. a. wind

B. Name the following :

- Ans.** 1. breeze 2. Germs 3. Air 4. Storm

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

- Ans.** 1. **Air** is present all around us.
2. Air contains **smoke**, dust and **water vapour**.

3. **Dirty** air makes us ill.
4. We should grow **green** plants.
5. **storm** can blow away things around us.

D. Write True or False for the following statements:

- Ans. 1. False 2. False 3. True
 4. False 5. True

E. Answer the following questions :

- Ans. 1. Wind helps kites and gliders to fly.
 It helps clothes to dry faster.
 Wind helps sailboats to move faster.
2. We must breathe in fresh and clean air.
 3. Air is a mixture of many gases. Air contains many things like dust particles, smoke, etc.
 4. When wind blows gently, it is called breeze.
 5. A powerful storm can damage trees, houses, crops and vehicles. It can cause big trees and electric poles to fall.



Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option:

- Ans. 1. a. rain 2. c. puddle 3. b. sick

B. Fill in the blanks with the correct words given below :

- Ans. 1. **Water** is needed for many things.
 2. **Rain** is the main source of water.
 3. A puddle is a small **pool** of rainwater on the ground.
 4. Dirty water contains **germs**.
 5. We should not **waste** water.

C. Write True or False for the following statements:

- Ans. 1. True 2. True 3. False
 4. False 5. True

D. Match the following :

- | | |
|--------------------------|---------------------------------|
| Ans. 1. We need water | iii. to live. |
| 2. The water from rain | i. is called rainwater. |
| 3. A lake is entirely | v. surrounded by land. |
| 4. Some of the rainwater | ii. seeps into the ground. |
| 5. We should always keep | iv. the drinking water covered. |

E. Answer the following questions :

- Ans.** 1. Water can be made safe for drinking in two ways :
Boiling : Boiling water for about 20 minutes kills germs.
The boiled water is cooled and used for drinking and cooking.
Using water filters : They clean water and makes it safe for us to drink.
2. Rain is the main source of water. The water from rain is called rainwater.
3. We can save water by keeping in mind a few things.
Turn off the taps when not in use.
Place a bucket under a leaking tap and use that water.
Repair leaking taps.
Do not keep the tap running when brushing your teeth or having a bath.
4. A stream is a thin channel of water flowing down a mountain. The stream becomes bigger and bigger as it flows down the mountain to form a river.
5. Dirty water contains germs. Drinking dirty water can make us sick.



Forms of Water

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option:

- Ans.** 1. b. ice 2. c. Gas

B. Correct the sentence by changing the underlined word:

- Ans.** 1. Water in the **liquid** form can flow.
2. On freezing, water changes into **ice**.
3. Water vapour high up in the air **cools down** and forms drops of water.
4. **Sun** is required for water cycle.

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

- Ans.** 1. Water is even present in **air**.
2. When **heated**, water changes into water vapour.
3. When we freeze water it changes into **ice**.
4. **Water cycle** is a never-ending cycle.

D. Answer the following questions :

- Ans.** 1. Vapour change into droplets and these small water droplets come together and form clouds.
2. Water cycle is a cycle of water in which the water changes into water vapour and then come back into it's liquid form.

- The process by which a seed produces a baby plant or seedling when given the right amount of warmth, air and water is known as germination.
- A plant need sunlight, water, air and minerals to make food.



Eating Habits of Animals

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. a. producers 2. b. food 3. c. bear

B. Name the following :

- Ans. 1. An animal which have a long and sticky tongue. **chameleon**
 2. An animal which have sharp and pointed teeth. **buffalo**
 3. I chew the cud. I also give you milk. I am a **cow**.
 4. I eat flesh of animals. I am called a **Tiger**.

C. Classify the following as herbivore, carnivore or omnivore :

Ans.



herbivore



Lion



Chameleon



crow

D. Fill in the blanks :

- Ans. 1. Animals eat both **Plants** and **Flesh** of other animals.
 2. All plant-eating animals are called **herbivores**.
 3. **Human** beings are omnivores.
 4. **Snakes** and **Frogs** do not have teeth to chew their food.
 5. We should not destroy the **homes** of animals.

E. Answer the following questions :

- Ans. 1. frogs has a sticky tongue. It sit still and wait for its prey. When it see an insect it quickly dart their tongue out. The insect gets stuck to its tongue. it then roll back the tongue and swallow its prey.
 2. By using their long trunks elephants break branches and leaves from trees and put them into their mouth. Also they use their trunk to drink water.
 3. A food chain shown the order in which animals eat each other in a community. Plants are eaten by a deer. The deer is eaten by a tiger. The tiger dies and is eaten by a vulture.

4. Animals which feed only on plants or grass are called plant-eaters or herbivores. Cows, buffaloes and goats are herbivores.



4

Birds

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. c. Eagle 2. a. wings 3. c. sparrow

B. Fill in the blanks :

- Ans. 1. **Down** feathers keep the bird warm.
2. Birds of prey have **strong**, sharp and **hooked** beaks.
3. An **ostrich** has long and strong legs for running.
4. The vulture makes its nest on **high** trees.

C. Write True or False for the following statements :

- Ans. 1. True 2. True 3. False 4. False

D. Answer the following questions :

- Ans. 1. Birds have three kinds of feathers.
Down feathers keep the bird warm.
Body feathers cover the body.
Flight feathers help the bird to fly.
2. **Tailor bird** : It sews its nest with its beak. The materials it uses to make its nest are thread, wool and vegetable fibre.
Weaver Bird : It uses grass and twigs to make its nest. The nest is strong and big. The entrance is at the lower end of the nest.
3. **Perching birds** : Perching birds like sparrows, mynahs, crows and finches have three front toes and one toe at the back. The claws in the toes help them to grip branches or wires.



5

Man: The Living Machine

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. c. bones 2. b. brain

3. c. carbon dioxide 4. a. Heart

B. Fill in the blanks :

- Ans.** 1. All the **organs** together make up an organism.
2. The process of digestion begins in the **mouth**.
3. The blood takes **oxygen** to all parts of the body.
4. **Nerves** are wire like structures in our body.
5. The **reproductive** system helps humans to produce babies.

C. Write True or False for the following statements:

- Ans.** 1. True 2. False 3. True
4. False 5. True

D. Read the clues and find the matching organs :

- Ans.** 1. Bones 2. Oxygen 3. Lungs
4. Nerves 5. Heart 6. Reproduction
7. Brain

E. Answer the following questions :

- Ans.** 1. The process of breaking down food into a simple form is called digestion. The organs that help in digestion form the digestive system. The process of digestion begins in the mouth when we eat food. The food is broken down into smaller pieces by chewing with the help of our teeth. The food is mixed with a juice called saliva in the mouth. Then it goes through the food pipe to the stomach. In the stomach, it mixes with the digestive juices. The food then goes to the small intestine. Here the useful part of the food is taken in by the blood and sent to different parts of the body. The undigested food passes from the small intestine to the large intestine. From there it is thrown out of the body through the anus.
2. The system in our body that helps us to breathe is called the respiratory system. It is made up of nose, pharynx, lungs, etc. We breathe in oxygen through our nose and give out carbon dioxide. This oxygen burns up the food we eat and gives us energy.
3. The reproductive system helps humans to produce babies. Men and women have different reproductive systems.
4. Our body is made up of bones. They are very hard. All the bones are joined together to form a skeleton. The skeleton gives shape, size and support to our body.
5. The system that helps to throw or 'excrete' waste products is known as the excretory system. The organs that help to do this work are kidneys, lungs, and skin. The waste products are thrown out through the kidneys, lungs and skin in the form of urine, carbon dioxide and sweat respectively.



Safety and First Aid

Warm Up

Do it yourself.

B. Name the following :

Ans.



Silk Worm



Cotton Plant



Camel



Cotton threads

C. Fill in the blanks :

- Ans. 1. We feel **happy** and **safe** in our house.
2. Stilt houses are made of **wood**.
3. We should throw the **garbage** in the dustbin.
4. **Cotton** is obtained from the cotton plant.
5. Synthetic clothes should not be **squeezed** after rinsing.

D. Write True or False for the following statements:

- Ans. 1. True 2. False 3. False
4. False 5. True

E. Answer the following questions :

- Ans. 1. A house protects us from wind, rainfall and heat. It also protects us from enemies and thieves. We feel happy and safe in our house.
2. Different materials like mud, bamboo, straw, bricks, cement, stone etc can be used to build a house.
3. Keep the drains covered. Mosquitoes breed in uncovered drains or stagnant water. Do not allow water to stagnate.
4. Fibres that come from either plants or animals are called natural fibres.
5. We should cover the windows of our house with wire netting to protect our selves from mosquitoes and insects.



8

Solids, Liquids and Gases

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. c. Book 2. c. Both of these 3. b. Gas

B. Fill in the blanks :

- Ans. 1. Matter has **3** states.
2. **Gas** cannot be seen.
3. Water in its gaseous form is called **water vapour**.
4. **Solids** have a fixed shape and size.
5. Water changes into **water vapour** on heating.

C. Write True or False for the following statements :

Ans. 1. False 2. True 3. True 4. False

D. Answer the following questions :

- Ans. 1. The three forms of water are solid, liquid and gas.
2. The process by which a liquid changes into its solid form is called freezing.
The process by which a solid changes into its liquid form is called melting.
The process by which a liquid changes into its gaseous form is called evaporation.
3. Differences between solids, liquids and gases.

Solid	liquid	gas
(1) has a fixed shape and size	don't have fixed shape and size.	don't have any shape or size.
(2) They can not be poured	They can be poured.	They can be poured.
(3) They can neither change its shape nor can flow	They take the shape of the container they are kept in, and flow easily.	it occupy space and can flow easily.
(4) We can see them	We can see them	We can't see them

4. The form of water changes on heating and on cooling. If we keep some water in the freezer, the water changes into ice (solid form) and if we heat some water, the water turns into water vapour (gas form).



Soil

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. gravel 2. c. Both 3. a. Humus

B. Fill in the blanks :

- Ans. 1. **Soil** is the topmost layer present on the Earth's surface.
2. The process of soil formation takes **hundreds** of years.
3. Soil contains **water** and **air**.
4. **Clayey** soil holds a lot of water.
5. Plants get their **nutrients** from soil.

C. Write True or False for the following statements:

- Ans. 1. False 2. False 3. True
4. False 5. False

D. Answer the following questions :

- Ans. 1. The dead leaves and insects become humus of the soil. This humus helps plants to grow well.
2. Soil is a mixture of minerals, broken rocks, water, air, decaying plants and other substances.
3. Take some soil in a container. Cover it with a lid. Heat the container for some time. Open the lid, we see the drops of water on the lid. This shows that soil contains water
4. Soil is formed from rocks. The Sun's heat, rain and wind help the big rock to crack and break into smaller pieces. This process is known as weathering.
These smaller pieces are blown away by the wind and further broken down into a powdery mass of soil.

Green Pages

Do your self



Measurement

Warm Up Do it yourself.

Do and Learn Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. a. length 2. a. capacity
3. b. 1 minute 4. b. capacity

B. Fill in the blanks :

- Ans. 1. **Metre** is the standard unit of length.
2. Capacity is the **quantity** of a liquid which a vessel can hold.
3. **capacity** is measured by measuring cylinders.
4. We use **clocks** and **watches** to know the time.
5. Time is measured in **hours, minutes** and **seconds**.

C. Write True or False for the following statements:

- Ans. 1. True 2. False 3. True
4. True 5. False

D. Answer the following questions :

- Ans. 1. We need to measure the time for doing many things of our daily activities.
2. Capacity is the quantity of a liquid which a vessel can hold.
3. Mass tells us how heavy or light an object is. Weight is measured in grams (g) and kilograms (kg).

4. Time is measured in hours, minutes and seconds.
1 day = 24 hours; 1 hour = 60 minutes; 1 minute = 60 seconds.
5. Length tells us how long something is.



11

Light, Sound and Force

Warm Up Do it yourself.

Do and Learn Do it yourself.

CHECKPOINT Do it yourself.

EXERCISE

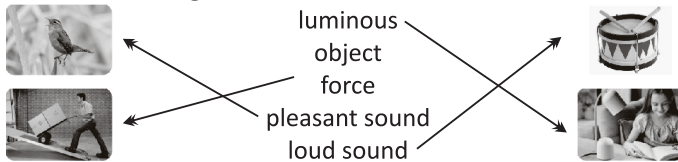
A. Tick (✓) the correct option :

- Ans.** 1. b. Sun 2. a. Table 3. c. light
4. b. Jet plane 5. loud and unpleasant

B. Fill in the blanks :

- Ans.** 1. Objects that give light are called **luminous** objects.
2. **Opaque** object does not allow light to pass through it.
3. Outdoor shadows are longer in the **morning** and **evening**.
4. **Unpleasant** sounds are called noise.
5. A push or a pull is called **force**.

C. Match the following :



D. Circle the odd one out :

Do it yourself.

E. Answer the following questions :

- Ans.** 1. The Sun, candle, diya and lamp are examples of objects that give light. An object that gives out light is called a luminous object. Paper, table, kite, and bed are examples of objects that do not give light. An object that does not give out light is called a non-luminous object.
2. You push or pull to open a door. You pull to open a drawer and push to close it. A push or a pull is called force. Force is not something you can see or touch. But you can feel it. You can also use it to do many things. A girl pulls a trolley of different things—the trolley starts moving.
3. A shadow is formed when an object blocks the path of light.
4. We like the sounds of soft music, chirping of birds and someone singing in tune. These sounds make us happy. Such sounds are pleasant to hear. We dislike the sounds of loud music, honking of horns and screaming people. These sounds annoy us. Such sounds are unpleasant to hear. Unpleasant sounds are called noise.

- Unpleasant sounds are called noise.
Noise disturbs people. Too much of noise can also damage our ears. So, we should :
speak softly
avoid too much honking
keep the volume of radio and television low.
- Friction is a special force that slows down a moving object. When there is very less friction, things tend to slide. When the friction is more, things do not move easily.



12

Air, Water and Weather

Warm Up Do it yourself.

CHECKPOINT Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. wind 2. b. cool

B. Fill in the blanks :

- Ans.** 1. We can feel **air** when it moves.
2. Plants need **carbon dioxide** to make food.
3. **Ice, water** and **water vapour** are the three states of water.
4. The condition of the air of a place at a particular time is called **weather**.

C. Write True or False for the following statements :

Ans. 1. True 2. True 3. True 4. False

D. Answer the following questions :

- Ans.** 1. In the morning and evening, the sunrays are slanting. So, mornings and evenings are cool. But at noon, the sunrays fall directly overhead. So, noon is the hottest time of the day.
2. A cloudy day is cooler than a sunny day because the sun-rays cannot reach us directly. The clouds block the sun rays.
3. The condition of the air of a place at a particular time is called weather. The air around us is sometimes hot and sometimes cold. That is why days can be hot, cold, rainy or dry. The weather keeps changing because of the sun, wind, clouds and rain.
During the year, the weather remains more or less same for a few months. This is called a season.
4. This makes the water warm. It changes into water vapour and rises up. This is called evaporation.
High up in the sky the air is much cooler. When the water vapour rises and reaches the cool air it turns into tiny drops of water. It forms clouds. When water vapour changes to water we say that condensation has taken place. On further cooling, the clouds become too heavy and drop water as rain. This rain water goes back to the different water bodies and some seeps underground. This



Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. carbohydrates 2. c. proteins 3. b. roughage

B. Unscramble the following words with the help of clues given below :

- Ans. 1. A body-building food : AESP PEAS
2. An energy-giving food : IEAZM MAIZE
3. A protective food : PEAPL APPLE
4. A preserved food : AJM JAM

C. Fill in the blanks :

- Ans. 1. Our body needs **food** for energy.
2. **Sugar** and **starch** are two types of carbohydrates.
3. All the cells of the body contains **Protein**.
4. Incorrect posture can lead to pain in **joints** and **muscles**.

D. Answer the following questions :

- Ans. 1. All living thing need food. Food gives you energy to work. It helps you to grow and keep healthy. It also help in repairing the wear and tear of your body.
2. Sugar and starch are two types of carbohydrates. People who do physical work need more carbohydrates.
Proteins are an important part of the food stuff. They are the nutrients which help us to grow.
3. The diet that provides all the nutrients in the right amount is a balanced diet. A balanced diet keeps you fit and healthy.
4. To preserve food we generally :
Freeze it as in ice cream or custard.
Can it as in tinned food.
Salt it as in pickles.
Sweeten it as in jam, jelly and chutney.
Oil it as in pickles.
Dehydrate it, i.e., remove water by drying the food.
Food thus preserved lasts longer.

indigestion. Cavities cause pain, bad breath and indigestion. A visit to the dentist becomes necessary in such cases.

4. We should we should clean your tongue properly.
We should rinse our mouth after every meal.
We should not eat too much of sticky foods, sweets and soft drinks.
We should eat food that contains calcium and vitamins A, C and D.
Foods like milk, cheese, fruits and green leafy vegetables are good for teeth. Apples and raw carrots are considered very good for teeth.
5. The food we eat undergoes certain process. These processes result in the formation of substances which can dissolve in blood. These processes are together called digestion of food.



Plants—Making Food

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. oxygen 2. a. chlorophyll 3. c. producers

B. Fill in the blanks :

- Ans. 1. **Plants** are the only living things capable of making their own food.
2. Chlorophyll helps the **Plants** to absorb sunlight.
3. Leaves make food with the help of **sunlight, water** and **carbon dioxide**.
4. **Glucose** is food prepared by the plant.
5. **Peas** and **chickpeas** are edible seeds.

C. Match the following :

- | | |
|-----------------------|----------------|
| Ans. 1. Seed | iv. Chickpeas |
| 2. Stem eaten as food | iii. Sugarcane |
| 3. Roots | v. Radish |
| 4. Starch | i. Potato |
| 5. Sunrays | ii. Energy |

D. Answer the following questions :

- Ans. 1. The leaves of plants are generally green as they contain chlorophyll. Chlorophyll is a green substance present in leaves, which helps the leaf to absorb sunlight. A few types of leaves are shown below. Stomata are tiny holes mostly found on the under surface of leaves. Gases enter and go out of the leaf through the stomata. Leaves prepare food for the plants. They are, therefore, called the kitchen or the food factories of the plants.

2. Plants are the only living things capable of making their own food that is why they are called producers.
3. The process by which leaves make their own food is called photosynthesis. The food prepared by the plant is glucose. It is used by the plants to grow and live.
4. No, a leaf which is located with wax will not be able to make its food because it will not be able to inhale carbon dioxide.
5. Green plants are the main producers of food. Animals depend on these plants for their food. Thus, a chain exists in nature for obtaining food. A chain that shows a series of organisms where each member depends on the lower member in the series for food is called a food chain.
Besides, plants also give out oxygen, which is needed by animals to breathe. Animals in return give out carbon dioxide, which is needed by the plants for photosynthesis.



Plants—Living and Surviving

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. coniferous plants 2. a. leaves 3. a. in water

B. Fill in the blanks :

- Ans. 1. Plants grow almost everywhere.
 2. Pine and deodar are some plants found in mountains.
 3. Desert plants have spines and thorns instead of leaves.
 4. Lotus and hydrilla are examples of fixed aquatic plants.
 5. Pitcher plant has a pitcher-shaped leaf.

C. Match the following :

- | | |
|--------------------------|--------------|
| Ans. 1. Non-green plants | iv. Mushroom |
| 2. Aquatic plants | iii. Lotus |
| 3. Marshy area | i. Sundri |
| 4. Coastal area | ii. Coconut |

D. Answer the following questions :

- Ans. 1. Plants that grow on land are called terrestrial plants. Terrestrial plants are of many types and grow on different types of land.
 2. Water is scarce in deserts, these plants are adapted to survive with least amount of water. Most of the plants grow without leaves or have very few leaves. Some desert plants have spines and thorns instead of leaves. Spines prevent loss of water.



Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. b. winter season 2. a. protection 3. a. summer

B. Fill in the blanks :

1. **Clothes** prevent insects from biting us.
2. We should wear **light-coloured** clothes in summer.
3. Jackets and coats are **winter** clothes.
4. A **uniform** is a set of similar-looking clothes.
5. We must wash **dirty** clothes with a detergent.

C. Write True or False for the following statements:

Ans. 1. True 2. True 3. True
4. False 5. True

D. Answer the following questions.

Ans. 1. Because clothes protect us from heat and cold. They keep us safe and comfortable.

2. **Natural Fibres** : Natural fibres are obtained from natural sources like plants and animals and include cotton, wool, flax, silk and leather. Cotton clothes are made from cotton. It is obtained from the cotton plant. The raw cotton picked from the plants is made into fibres. These are then woven to make cloth.

We get wool from the fleece of camel, sheep and goat by the process of shearing.

The silk clothes of ours are made from silk. The cocoon of the silkworm is given a special treatment to obtain silk.

The skin of dead animals is used to make leather clothes, such as jackets and coats.

Synthetic or Man-Made Fibres : Synthetic fibres are man-made. Special chemical made from by-products of petroleum are used for making synthetic fibres. Clothes made from these fibres are called synthetic clothes. Nylon, polyester and rayon are synthetic, man-made fibres. They are wrinkle free, waterproof, stretchable, etc.

3. In winter season, we wear thick clothes. They are made of wool, fur, leather or thick cloth. They keep us warm.

E. Answer the following questions :

- Ans.**
1. Any substance that has weight and occupies space is called matter.
 2. Solids are substances in which the particles are packed very close to each other. That is why solids have a definite shape and volume, and they occupy definite space.
 3. Liquids can flow easily because their particles are loosely packed while the particles of solids are packed very close to each other.
 4. Two difference between solids, liquids and gases.

Solid	liquid	gas
(1) The substances of solids are packed very close to each other.	The substances of liquids are loosely packed.	The substances of gases are very loosely packed.
(2) Solids have a definite shape.	Liquids have no definite shape, they take the shape of the container into which they are poured.	Gases have no definite shape and volume. They move freely in any direction.

5. 1. Physical change : The change in which the molecules of a substance do not form new molecule is called a physical change. It is a reversible change. melting of a candle, slicing of bread, melting of ice, etc. are some examples of physical change.
2. Chemical change : The change in which new molecules are formed is called a chemical change. It is an irreversible change. Burning paper, cooking of vegetables, baking of cake, etc. are some examples of chemical change.



Safety Rules

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans.**
- | | |
|-------------------|-----------------|
| 1. a. matchsticks | 2. b. first aid |
| 3. c. slipping | 4. a. Helmet |

B. Fill in the blanks :

- Ans.**
1. Synthetic clothes like **rayon** and **nylon** can catch fire easily.
 2. We should not leave our **toys** lying around on the floor.

layer. This horizon is light in colour and has less organic material than the layers above it.

The C horizon is below the B horizon.

It contains weathered rocks.

The R horizon is the lowest horizon. It is a layer of bedrock. Bedrock is a solid rock layer.

3. Depending on the size, feel, and colour of the soil particles. There are mainly three types of soil.

Gravel consists of tiny stones and does not hold water well. It has gaps between the stones that allow water to pass easily.

Sand is light and dry. Water passes easily through this kind of soil as the particles are rough.

Clay particles are extremely fine. Clay becomes very heavy and quite sticky when wet. Water does not flow freely through this soil.

4. The process of carrying away of topsoil by natural forces, such as water and wind, is called soil erosion.

Natural Causes of Soil Erosion

Running water and rainfall are prime causes of soil erosion. Rivers, and flowing streams of rainwater, etc., loosen the topsoil and carry it with them to deposit it elsewhere. This process is called silting.

Man-made Causes of Soil Erosion

Humans cut down trees to clear land to build houses and factories, to get wood, etc. Cutting of trees makes the soil loose. Loose soil is prone to soil erosion.

5. Soil erosion can be prevented and controlled by soil conservation. When we try to save our soil it is called soil conservation.

We can protect or conserve soil in the following ways.

1. The number of trees planted should be more than the number of cut down trees.

2. We should grow different types of crops in the same field to maintain the fertility of the soil. This is called crop rotation.



Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. a. force 2. b. gravitational force

4. **Rain** is purest form of water.
5. **Boiling** is the most common process of purifying the water.

C. Write True or False for the following statements :

- Ans. 1. False 2. False 3. True
4. True 5. True

D. Answer the following questions :

Ans. 1. Weather is the state of the atmosphere of a place at a particular time in relation to heat, cloudiness, dryness, sunshine, wind and rain.

2. Even though we cannot see the water vapour, it is there in the air. The amount of water vapour in the air is called humidity. We can see it once it is condensed. We can see the condensed water vapour in many different forms. Some of these forms are given below :

Rain : The water vapour condenses and falls to the ground as rain in the form of tiny droplets of water.

Hail : Sometimes raindrops grow in size and are then frozen to form hard balls of ice called hailstones or hail.

3. At night, the land cools down faster than the sea. The air above the sea water is warmer than the air above the land. Warm air rises and cool air from the land rushes towards the sea. This is called land breeze.

4. Filtration is the most common process of purifying the water. In this process, water is passed through a filter paper. Impurities are left behind on the filter paper and clean water is collected in a container below. This process of removing impurities by passing water through filter paper is called filtration.

5. Factors Affecting Rate of Evaporation

Temperature : Higher the temperature, faster is the rate of evaporation. Wet clothes dry faster in the hot sun than in the shade.

Wind : Wet clothes will dry faster under a fan blowing air on them than the clothes which are kept for drying in still air.

Surface area : A wet cloth, which is spread out will dry faster than a wet cloth, which is folded because a larger area is exposed for drying.



Our Earth and Its Neighbours

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. a. days and night 2. a. Neptune
3. a. A star 4. a. day

B. Fill in the blanks :

- Ans.** 1. The **sun** is called the 'morning star'.
2. The **mercury** is the smallest planet.
3. The **saturn** is the planet with rings around it.
4. The Earth rotates from **North to South** on its axis.
5. Life is possible only on **earth**.

C. Write True or False for the following statements :

- Ans.** 1. False 2. False 3. True
4. True 5. True

D. Answer the following questions :

- Ans.** 1. Stars and planets are different from one another. A star is a huge ball of gases.

A star has its own light and heat. Stars look small because they are very far from us.

A planet is a big ball of rocks. Planets do not have light and heat of their own. They reflect the light of the Sun. All planets moves around the Sun along a fixed orbit.

2. Jupiter, Saturn, Uranus and Neptune are called outer planets. They are made up of frozen gases.

Mercury, Venus, Earth and Mars are the inner planets. They are made up of rocks and iron.

3. The Earth is made up of three layers. The outermost layer of the Earth is called the crust. It is the coolest layer. We live on this layer. It consists mostly of rocks, like granite and basalt. The middle layer is called the mantle. It is a thick layer of rocks rich in iron and magnesium. The innermost layer, or the centre of the Earth, is the hottest; it is called the core. It is further divided into a liquid outer core made up of nickel-iron mixture, and the solid inner core made up of iron.

4. **Seasons :** The Earth has a imaginary axis on which it rotates. This axis is tilted. When the Earth revolves around the Sun, due to its tilt, both the hemispheres are not at the same distance from the Sun. Due to this the heat of the Sun and its light do not get distributed equally in those two hemispheres. This results in a difference of temperature and a difference in the length of day and night. This gives rise to the seasons—Spring, Summer, Autumn and Winter.

5. **Equator :** An equator is an imaginary line around the middle of a planet or other celestial body.

Axis : A line we imagine through the middle of an object, around which the object turns is called axis.

Rotation : the spinning of the Earth around its axis is known as rotation.

Revolution : You also know that the Earth also travels around the Sun in a fixed oval-shaped path called the orbit. This movement of the Earth is known as revolution.

Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE
A. Tick (✓) the correct option :

- Ans.** 1. c. sulphur-dioxide 2. c. harmful
 3. a. soil erosion 4. b. paper

B. Fill in the blanks :

- Ans.** 1. The **living** and **non-living** things together makeup our environment.
 2. The presence of harmful substances in air, water and soil is called **pollution**.
 3. **Trees** provide us fresh and clean air.
 4. Biodegradable wastes are those which can be **decomposed** or **rotted**.
 5. **Reuse** means to use a thing again which we throw.

C. Match the following :

- | | |
|--|--------------------------|
| Ans. 1. Harmful substances | v. Pollutants |
| 2. Cutting down of tree in large numbers | iv. Deforestation |
| 3. Loss of fertile top soil | i. Soil erosion |
| 4. Non-biodegradable waste | iii. Plastic |
| 5. Burning of fuels | ii. Air pollution |

D. Answer the following questions :

- Ans.** 1. Pollution is the undesirable change in water soil or air that brings down the natural quality of the environment.
 2. Do yourself
 3. Controlling Water Pollution : We can save water by following these simple tips.
 Waste water from homes should not be allowed to enter wells and other sources of drinking water.
 Factories should be prevented from throwing waste into rivers and seas.
 We should never not throw plastic bags, bottles, metal cans, etc, into the water.
 4. Do yourself
 5. Do yourself

seed coat has a tiny hole through which water enters inside. It protects the baby plant.

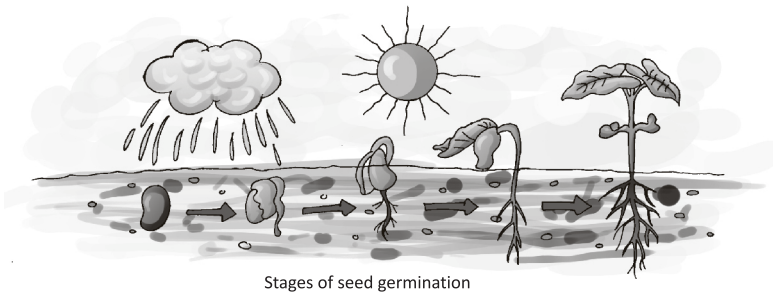
Cotyledons : The cotyledons are also called seed leaves. They lie under the seed coat. They store and provide food for baby plant till it gets its new leaves.

2. Germination is the process by which a seed produces a baby plant or seedling in the presence of water, air and warmth. If any one condition is missing, the seeds will not germinate.

Take three open glass bowls and perform the activity as shown in the three images. Ensure that the cotton does not dry up.



Observe the seeds for a day or two. In which bowl did you find the seeds germinate into plants? Why?



Stages of seed germination

The embryo root pushes the seed coat. It grows down into the soil and forms the root. The cotyledons are pulled upwards. The baby plant, called seedling, starts coming out of the cotyledons. The stem grows longer and the leaves appear first. When the leaves develop completely, the cotyledons fall off. Later, the branches, buds, flowers and fruits appear. The process of germination is thus completed.

3. Some plants have seeds that are very light and have wings or tufts of hair on them. These seeds get easily carried away by the wind. Sycamore and hiptage have winged seed. While seeds of cotton, dandelion and madar have tufts of hair on them.

Dispersal by Water

Seeds of some plants that grow in or near the water bodies are dispersed by water. These seeds are spongy or have fibrous covering. Examples of such seeds include water lilies, palm, coconut and pine.

4. **Kharif crops :** In India, crops that are grown in the summer season and harvested in October and November are called Kharif crops. Rice, jowar, bajra, cotton, jute, hemp, peanut, millet, maize, and pulses are kharif crops. Vegetables such as spinach, brinjal, tomato, onion,

E. Answer the following questions :

Ans. 1. Aquatic animals such as fish, crabs and oysters breathe through gills. A baby frog or tadpole also breathes through gills in water.

Aquatic animals breathe in oxygen dissolved in water. When water passes through gills, many tiny blood vessels present in the gills absorb oxygen from water and let water carry away the carbon dioxide.

2. Rivers, lakes, ponds etc. are called fresh water habitat. Fishes, frogs and salamanders live in fresh water. Frogs and salamanders can live both on land and water. They are called amphibians.

3. Some animals like tiger, zebra and grasshopper have special body covering. They can merge their body with their surroundings. This property is called camouflage and these animals are called camouflaging animals. Camouflage makes animals hard to spot and protect them from other hunting animals and poaching (illegal hunting).

4. On the basis of their feeding habits we can divide animals into three types.

1. Animals that eat only plants are called herbivores or herbivorous animals. Cows, goats and deer are herbivores.

2. The animals that eat flesh of other animals are called carnivores or carnivorous animals. Lion, tiger and wolf are some carnivores.

3. The animals that eat both plants and animals are called omnivores or omnivorous animals. Human being, bear and crow are some omnivores.

5. The movement of large groups of animals from one place to another at a particular time is known as migration. They migrate to avoid some unfavourable conditions or in search of food or to have safe place for breathing.

The Arctic tern is the champion amongst migratory animals. It travels a distance of 17,000 km, from the Arctic to the Antarctic, during winter. It again goes back the same distance to breed in the Arctic. Storks and flamingo are also migratory birds.

The eel is a migratory fish. It depends its life in fresh water until it becomes an adult, and travels to the sea to breed. The locust is a dangerous migratory insect.



Our Skeletal System

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

C. Match the following :

- Ans.** 1. Sprains iii. Apply an ice pack and do not move the joint
2. Fractures iv. Use a splint and do not move the bone
3. Burns ii. Wash the area under running water and apply ice
4. Fire i. Use fire extinguisher to put out fire

D. Write True or False for the following statements :

- Ans.** 1. True 2. False 3. True 4. False

E. Answer the following questions :

- Ans.** 1. There are many signs that we see on the road, that help in reducing the risk of accidents. They also help to regulate traffic. These signs are called traffic signs or road signs. Road signs make use of pictures and symbols. We must read and follow the road signs for our safety.
Fires can be very destructive. To prevent fires, follow these safety rules.
Synthetic clothes catch fire easily. Wear only cotton clothes in the kitchen or while burning crackers.
Never play with matchsticks.
Use a lighter to light the gas stove.
Never keep kerosene, diesel, petrol or other such substances in the kitchen.
Having pets around is fun but it is important to know how to keep ourselves safe. We should take some precautions as given below.
Never play with a pet or pull its food or water away when it is feeding.
Get your pet vaccinated.
Never tease a dog or a cat.
2. For fires due to petrol or kerosene oil, throw sand to cut off the air supply to the fire. Water should never be used in this case. The fire will then spread faster.
3. Sometimes the cut can be deep and bleed more. In that case you must try to stop the bleeding by using a tourniquet. Tourniquet is a tight bandage which can be tightened further by twisting a crosspiece through it.
4. Take a magazine, a piece of cardboard or wood, or a pillow. Tie it around the injured part. This will act as a splint. It will prevent movement of the bone.
5. Rabies is a very dangerous disease. The virus of rabies attacks the nervous system. At an advanced stage, the patient complains of excessive salivation, difficulty in swallowing and develops a fear of water (hydrophobia).



Air and Water

Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

4. You know that the Earth revolves around the Sun and the moon revolves around the Earth. While revolving, sometimes, the Sun, the Earth and the moon fall in a straight line and the Earth comes in between the Sun and the moon. The light from the Sun gets blocked by the Earth. The Earth being an opaque object, casts its shadow on the moon. In other words, the shadow of the Earth covers the whole moon. The moon cannot be seen. This is called the eclipse of the moon or lunar eclipse. A lunar eclipse occurs only at night.
5. Solar eclipse happens when the moon comes between the Sun and the Earth.
6.
 - i. Jupiter is the largest planet of the solar system. The mass of Jupiter is 318 times more than the Earth. It has 80 (57 confirmed and 13 provisional) satellites and takes about 12 Earth years to orbit once around the Sun. It is made up of many gases.
 - ii. The Sun is a star in the centre of the solar system.
It is the nearest star to the Earth. It has a diameter of about 1,392,000 kilometres. It is about 150 million kilometres away from the Earth.
The Sun is made up of hydrogen and helium gases. About three-fourth of the Sun's mass is hydrogen.
 - iii. Pluto, which was earlier considered a planet, was placed in a separate category called 'dwarf planets' by the International Astronomical Union (IAU) in August 2006.
 - iv. Moon is the Earth's only natural satellite. Moon has no air, no atmosphere. No life exists on moon. It is 384,403 kilometre away from the Earth. It shines at night. The moon has no light of its own. It reflects the light of the Sun as moonlight.
 - v. Mercury is the smallest planet in the solar system and is closest to the Sun. It takes 88 days to complete one orbit around the Sun. Mercury has no satellite (moon). It is visible just before the sunrise in the eastern sky and just after the sunset in the western sky.

Green Pages

Do your self



Natural Disasters

Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

Ans. 1. c. Poverty

2. c. extinct volcano

- 3. Marble
- 4. Layered rock
- 5. Petroleum
- i. Metamorphic rock
- v. Sedimentary rock
- iii. Iron and chromium

E. Answer the following questions :

- Ans.**
1. Igneous rocks are formed from magma, the hot molten material found deep inside the Earth. The intense pressure inside the Earth pushes the magma towards the surface of the Earth. This magma cools just below the Earth's surface. It then hardens to form igneous rocks. The first rocks to form on the Earth were igneous rocks.
 2. Repeated heating and cooling of mountain sides by rain, wind and sunlight wear down rocks. These small pieces of rocks are carried down by rivers and strong winds into lakes and seas. They sink to the bottom and settle down to form layers called sediments. As time passes, more sediments build up, it presses down the lower layers. The continuous pressure upon the lower layers hardens them into rocks. Such rocks are called sedimentary rocks.
 3. Metamorphosis means a change of form. Metamorphic rocks are those which have changed their original form. Metamorphic rocks were once either igneous or sedimentary rocks which have been changed due to heat and pressure. Some of these rocks are layered while some are uniform in texture.
 4. Million of years ago, land was covered with dense swampy forests. When these plants died, they fell into water of swamps. Dead plants did not decay completely and turned into a layer called peat. As time went by, sediments brought by water, covered the peat and compressed it further. The high pressure and temperature turned peat into brown soft coal. With further increase in pressure and temperature over a significantly long period of time, this soft peat changed into black hard coal.
 5. Rocks are very useful for us. Many of the materials that we use everyday are made from different kinds of rocks. Granite is used for making statues. Pumice is used in making light weight building materials. Sandstone is used to make buildings. Shall is used to make bricks and tiles and many other rocks are usefull in our day to day life.



Warm Up

Do it yourself.

CHECKPOINT

Do it yourself.

attraction becomes weaker. When this force weakens further the molecules move more freely and thus water changes to vapour. Thus, the process through which liquid turns to vapour by heating is called evaporation.

Condensation

Steam condenses to form water again. When the freely flowing particles of steam touch a cold surface, cooling happens. Cooling a substance slows down the movement of its particles. The particles thus become less free to move and become loosely packed to change from gas to water (liquid).

3. A physical change is a temporary change. It can be reversed. Here, no new substances are formed.

For example, water (liquid) on cooling becomes ice (solid), and on heating becomes steam (gas). Here, even though the state of water has changed from liquid to solid and liquid to gas, it's still the same. Also, if ice is heated or steam is cooled, we get back water in its original form.

A chemical change is a permanent change. This change cannot be reversed. Here, a new substance is formed. The properties of the new substance are different than from that of the original substance.

4. Three properties of each solids, liquids and gases.

Solid	liquid	gas
(1) Molecules of solids are connected with strong bonds.	Molecules of liquids are connected with weak bonds.	Molecules of gases are connected with very weak bonds.
(2) Solids have fixed shape and volume.	Liquids can change their shape but their volume remain fixed.	volume and shape of gas can be changed.
(3) Solids can not flow.	liquids can flow.	gas can move in all direction.



Warm Up

Do it yourself.

Do and Learn

Do it yourself.

CHECKPOINT

Do it yourself.

EXERCISE

A. Tick (✓) the correct option :

- Ans. 1. c. load 2. b. lever 3. a. force
 4. b. wedge 5. c. force

B. Fill in the blanks :

- Ans.** 1. A **Push** or a **Pull** acting on an object is called force.
2. **Gravity** is a force on Earth that makes things fall to the ground.
3. Oil reduces the **Friction** between parts of the machine.
4. We cook food at home by using **heat** energy.
5. A **pulley** is a wheel with a groove in its rim.

C. Write True or False for the following statements :

- Ans.** 1. True 2. True 3. True
4. False 5. False

D. Answer the following questions :

- Ans.** 1. The ability to do work is called energy. To perform any activity like playing, reading and sleeping we need energy. Even machines need energy to work.
2. Work is only said to be done when the force applied on an object causes it to move.
3. Frictional force or friction is the force that tries to stop the sliding movement of objects across a surface. It can slow down the movement of an object or stop it from moving altogether. In general, movement across smooth surfaces such as ice and glass produces less friction.
4. In science, work is said to be done only when force changes position of an object. When we are applying force to move any object and the object changes its position then work is said to be done. No, Because book will not change it's positive.
5. A lever is any simple machine that turns around a fixed point, e.g., scissors, nut-cracker, seesaw, etc.
A lever helps us to do more work by applying less force. This makes our work easier. It consists of three parts—load, effort and fulcrum.
6. A pulley is a wheel with a groove in its rim. The rope moves through this groove.
Water is drawn from a well by using a bucket tied to a long rope. When we lift the bucket of water from the well by pulling the rope vertically upwards, it is a difficult job. But with the help of pulley, we can easily draw water from the well.
7. A simple machine is a device that makes our work easier and faster. Scissors, knives, tweezers and tongs are some examples of simple machines.
Complex machines have many parts and they are made up of a number of simple machines. Computers, typewriters, bicycles, sewing machines, washing machines, etc. are complex machines. They are constructed with many simple machines. They are also called compound machines.