The World Around Us

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. food 2. bending 3. seeds 4. nose 5. eggs, young ones

C. Write 'T' for true and 'F' for false statements.

1. F 2. T 3. T

D. Match the following:

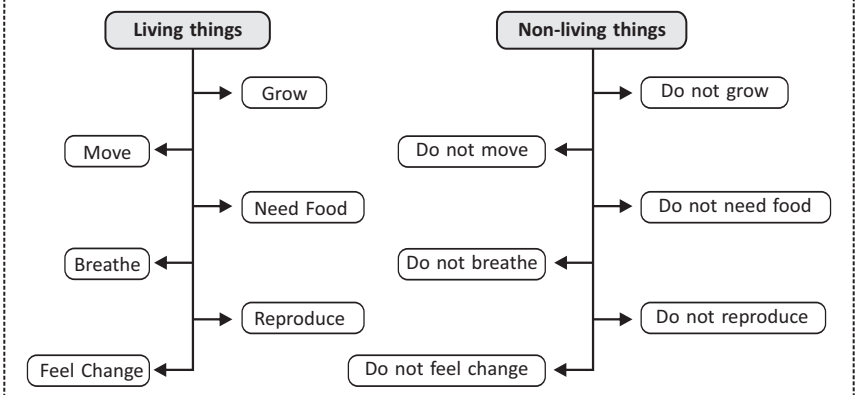
1. d 2. a 3. b 4. c

E. Answer the following questions.

1. Living things need food to grow.
2. • We breathe through our nose.
   • Fishes breathe through gills.
   • Plants breathe through stomata.
3. Things which have life are called living things. Things which do not have life are called non-living things.
4. The process by which living things produce more of their own kind is called reproduction. Animals reproduce by either laying eggs or giving birth to young ones. Human beings and animals like cats, dogs, cows, buffaloes etc., give birth to their young ones. Birds, fishes, snakes and frogs lay eggs and the young ones hatch out of the eggs.

   Plants produce seeds. These seeds grow into new plants. Some plants also give rise to new plants with the help of their roots, stems or leaves.

Learn by Doing



Think and Answer

Tree	Furniture Items
1. Tree provide us wood ot make furniture. 2. Trees are living things. 3. Trees absorb carbon dioxide gas from the environment and Purify the atmosphere.	1. Furniture includes objects such as tables, chairs, beds, desks etc. 2. Furniture items are man made. 3. Furniture items do not absorb carbon dioxide gas from the environment.

Parts of a Plant

EXERCISES

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

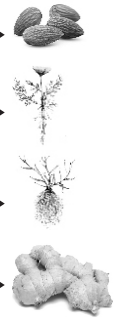
1. Root 2. Leaf 3. germination 4. Petals 5. Stomata

C. Write 'T' for true and 'F' for false statements.

1. F 2. T 3. T 4. T 5. F

D. Select the correct label for each of the pictures given below.

1. Fibrous roots
2. Underground stem
3. Edible seed
4. Taproot

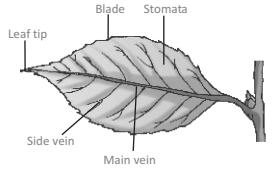


E. Answer the following questions.

1.

Taproot	Fibrous Root
Some plants have one main root growing from the end of the stem into the soil. This main root is called the taproot. Plants like carrot, radish, turnip, bean, mustard and hibiscus have taproots.	Some plants do not have a main root. In these plants, a number of roots grow directly from the lower end of the stem. These are called fibrous roots. Grass, wheat, rice and onion have fibrous roots.

2. Leaf is the most important part of the plant. It prepares food for the plant. So, it is called kitchen of the plant.
3. **Functions of Stem**
   - Stem is the main support of plant and holds it upright.
   - Stem helps in carrying water and food to different parts of the plant.
4. The flate surface of the leaf is called leaf blade or lamina. We see a number of lines running across it. These lines are called veins. In the middle of the leaf there is main vein. The veins carry water to the leaf. A number of small openings are present on the surface of the leaf. These are called stomata.



Parts of a leaf

5. When a seed gets the right amount of air, water and light, it grows into a healthy plant. The growth of a seed into a new plant is called germination.

Think and Answer

Some insects use siphoning, as if sucking through a straw, like moths and butterflies. This long mouth-tube that they use to such up the nectar of the flower is called a proboscis. Some moths, however, have no mouth parts at all.

Food Habits of Animals

EXERCISES

A. Tick (✓) the correct option.

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

B. Fill in the blanks with correct words.

1. swallow 2. dependence 3. lick
4. suck 5. Carnivores

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. T 4. T 5. T

D. Answer the following questions.

1. The elephant uses its trunk to suck water, uproot grass and tear off branches from trees.
2. Cows and buffaloes swallow their food after chewing once. Later they bring it back into their mouth and keep chewing it for hours. This is called chewing the cud.

   Sheep, giraffes and camels also chew the cud.
3. All living things depend on each other for their food. This dependence is shown by a food chain. Food chain begins with plants which make their own food. These plants are eaten by; herbivores. The herbivores are eaten by carnivores or omnivores.

   The food chain shown above starts with grass and ends on eagle.
4. Birds pick up grains and worms with their beaks. Some birds peck at fruits with their beaks, break off a piece and swallow it.
5.

Herbivorous	Carnivorous
They chew grass and leaves of plants. So, they don't need pointed teeth. They have sharp front teeth to cut and flat grinding teeth to chew food well.	They catch and kill other animals. These animals have sharp pointed teeth to tear the flesh and strong grinding teeth to chew the flesh and bones of animals.

Fun Activity

Grass → Grasshopper → Frog → Snake → Eagle

Think and Answer

- Carnivorous animals catch and kill other animals. So, these animals have sharp pointed teeth.

  Herbivorous animals chew grass and leaves of plants. So, they don't need pointed teeth. They have sharp front to cut and flat grinding teeth to chew food well.
- When a mosquito bite us, it pierces the skin using a special mouth part (proboscis) to suck up blood.

4 Birds

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. fly 2. nest 3. beak 4. webbed 5. tailor

C. Write one word for the following.

1. Beak 2. Wings 3. Feathers 4. Down Feather

D. Match the following:

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

E. Answer the following questions.

1. Flight feathers.
2. Down feathers and flight feathers are the two kinds of feather that birds have.
3. The tailor bird uses its beak like a needle to sew leaves together to build a nest.
4. Perching birds have three toes in the front and one facing backwards which help them to have a tight grip to hold on to a branch.
5. (i) Hooked beak (ii) Strong and chisel shaped
   (iii) Short and broad (iv) Hard, sharp and curved
   (v) Short, hard and horny
6. (i) Two toes pointing upwards and two downwards
   (ii) Strong, sharp claws (iii) Sharp, horny claws
   (iv) webbed toes (v) Three toes in front and one at the back

Fun Activity

Do it yourself.

Think and Answer

The holes in their beaks are nostrils, called nares. If ducks ans geese didn't have them, they would have to breathe through their mouths, the same as if you didn't have a nose.

Our Body

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. heart 2. reproductive 3. 206
4. excretory system 5. nose

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. F 4. T

D. Write the organs of the given system.

1. Mouth, foodpipe, stomach, small intestine, large intestine, and anus.
2. Heart, blood vessels
3. Kidney, ureters, urinary bladder, urethra
4. brain, spinal cord, nerves

E. Answer the following questions.

1. Sense organs are the specialized organs composed of sensory neurons, which help us to perceive and respond to our surroundings. These are five sense organs-eyes, ears, nose, tongue and skin.
2. Our excretory system cleans our body by throwing out body wastes like urine, sweat etc.
3. Respiratory system consists of nose, windpipe and lungs. We breathe in air containing oxygen through our nose. This air then goes down in the windpipe and reaches to the lungs. We breathe out carbon-dioxide to the air.
4. The adult human skeleton is made up of 206 bones.
5. The are eight main organ systems in human body : skeletal system,

muscular system, digestive system, respiratory system, circulatory system, excretory system, nervous system, reproductive system.

Think and Answer

Similarities	Dissimilarities
1. Machines are built with a purpose in mind, just as humans have various roles and functions in society. 2. Both machines and humans are capable of solving problems.	1. Humans rely on cognitive abilities, creativity and learning, while machines use algorithms. 2. Humans understand the situation and respond accordingly whereas machines do not have the capability of understanding.

Housing and Clothing

EXERCISES

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. walls 2. animals 3. clean
4. weather 5. waterproof

C. Match Column A and Column B.

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

D. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. F 4. T

E. Answer the following questions.

1. We need a house to live in. A house protects us from heat, cold and rain. It keeps us safe.
2. Three features of a good house :
   - Three should be big doors and windows to let sunlight and fresh air come in.
   - A good house should have proper drainage system.
   - Thick walls are very important.

3.

Similarities	Dissimilarities
Natural fibres are obtained from plants and animals. Cotton, jute, silk, wool are natural fibres.	Fibres that are made by man are called man-made or synthetic fibres. Nylon, polyester and acrylic are examples of synthetic fibres.

4. Fibres that are made by man are called man-made fibres. Nylon and polyester are examples of man-made fibres.
5. There should be proper wire-nettings in doors and windows. This stops the entry of insects like mosquitoes and flies and allows sunlight and air to come in.

Think and Answer

Animals living in cold regions developed layers of fat, thick fur and various other traits to live in the cold regions.

Light and Sound

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. more, less 2. push 3. size 4. muscular 5. lubricants

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. T 4. F 5. T

D. Match Column A and Column B.

1. c 2. d 3. a 4. b

E. Answer the following questions.

1. Objects that emit light are called luminous objects. Luminous objects are also called sources of light. A luminous object can be natural or man-made. The sun and stars are examples of natural luminous objects. Candles, torchlights and bulbs are examples of man-made luminous objects.
2. Objects that do not emit-light are called non-luminous objects. Paper, pencils, books and tables are examples of non-luminous objects. We can see non-luminous objects when light falls on them.

3. Shadow is an image formed when an object blocks the path of the light.
4.

Opaque	Transparent	Translucent
Objects that do not allow light to pass through them.	Objects that allow light to pass through them.	objects that allow light to pass through them only partially.

5. Some sounds do not soothe us. These sounds are irritable. Our ears cannot hear them. This type of sound is called noise.
6. Music playing softly and a mother singing softly to her child are two examples of pleasant sound.

Learn by Doing

Do it yourself.

Think and Answer

The lamp should be placed so that hand shadows don't streak across your work. if you're right-handed, this means placing the light source on the left side of your desk.

Force and Friction

EXERCISES

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. more, less 2. push 3. size 4. muscular 5. lubricants

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. T 4. F 5. T

D. Match Column A and Column B.

1. c 2. d 3. a 4. b

E. Answer the following questions.

1. A force an do following things:
   - A force can move an object.
   - A force can change the direction of object.

- A force can stop or slow down a moving object.
- A force can change the shape or size of an objects.

2. **Push :** Push the car, walking, and pushing the sofa.
   Pull : Pulling the rope, lifting a bag and removing a plug.
3. Different kinds of forces : Muscular force, fore of gravity, electrical force, magnetic fore, force of friction.
4. When you walk on the road, your feet and the road are in touch. So, friction develops between your feet and the road. It is because of friction only that we are able to walk. Without friction, we would keep slipping off the floor.
5. Substances like oil and powder which reduce friction are called lubricants.

Fun Activity

- To move the things, squeezing a tube of toothpaste, rolling out a chapatt, changing the shape of the lump of dough, riding the bicycle etc. use muscular force.
- Examples of magnetic force is a compass, a motor, the magnets that hold stuff on the refrigerator, train tracks, and new roller coasters.

Think and Answer

- To reduce friction
- If the child wants to move the cart, he can pushes or pulls the cart by applying force.

Measurement

EXERCISES

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. metre 2. weighing balance 3. cylinder
4. 00C, 1000C 5. 1000

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. F 4. F 5. T

D. Match Column A and Column B.

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

E. Answer the following questions.

1. We need a standard unit for measurement to measure the quantities accurately and to make our judgment more reliable and accurate.
2. Length is the distance between two points or two objects. It is measured in metre. Metre is the standard unit of length.

   Length can be measured in kilometres and metres. Centimetres and millimetres are used to measure short length.

   Distance between villages, towns, countries is measured in kilometres.

   Length of a cloth is measured in metre and centimetres.

   Rulers are used to measure length in centimetres and millimetres.
3. The temperature is the measure of how hot or cold an object is. Temperature is measured in degree centigrade but the standard unit of temperature is Kelvin.

   A thermometer is used to measure the temperature.
4. Weight is the measure of the force of gravity acting on a body. SI unit of weight is Newton (N).
5. Time is measured using a clock or a watch. Second is the standard unit to measure time. Other common units are minutes and hours.

Think and Answer

The size of body parts are different from person to person.

Air, Water, Weather

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. moves 2. three 3. ice, water, water vapour
4. Weather 5. polluted

C. Write 'T' for true and 'F' for false statements.

1. F 2. T 3. T 4. T 5. T

D. Circle the odd one out.

1. air 2. wind 3. germs 4. season

E. Answer the following questions.

1. Water exists in three forms solid (ice), liquid (water) and gas (water vapour).
2. Uses of Air
   - Human beings breathe in oxygen present in air to survive.
   - Air helps the birds to fly in the sky. It helps in the movement of aeroplanes, helicopters and in flying kites.
   - Air dries our clothes faster.
   - Wind help to move sailboats and wind mills.
3. See topic 'Water Cycle' on book page no- 71.
4. There are three main seasons – summer, rainy and winter season.

   Summer Season : During summer the weather is very hot and sunny. The days are long and nights are short. We wear light cotton clothes and want to sit under the fan. We like to have cold drinks and ice-creams.

   Rainy Season : During this season, it rains a lot. Rains may also be accompanied by thunder and lightning. We use umbrellas and raincoats to protect ourselves from rain.

   Winter Season : During winters, the weather is very cold. The days are short and nights are long. Cold wind blows throughout the day. At some places it even rains or snows during winter. We wear woollen clothes. We like to have hot drinks tea and coffee.
5. **Autumn Season :** The weather starts getting cold during autumn season. Leaves start turning yellow and are eventually shed by the trees.

   Spring Season : The trees get new leaves and flowers bloom during spring season. The weather is very pleasant. The surroundings look fresh and green.

Think and Answer

Storms can bring all kinds of bad weather, like floods, avalanches and hailstorms. They can do damage to trees and buildings. Fog reduces visibility, makes it hard to spot hazards, and it becomes difficult for a driver to judge distance. Hence, it is difficult to travel on a stormy or a foggy day.

Soil

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. Clayey 2. Soil 3. damage 4. bedrock 5. loamy

C. Who am I? Unscramble my name.

1. SOIL 2. CLAYEY 3. HUMUS

D. Match Column A and Column B.

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

E. Answer the following questions.

1. See topic 'Layers of Soil' on book page no- 78.
2. there are mainly three types of soil-sandy, Clayey and loamy.
3. Plants need soil to grow. They take in water and nutrients from the soil.
4. Some uses of soil are as follows :
   - Plants need soil to grow.
   - Soil is home for many animals. Burrowing animals like rabbits and moles make holes (called burrow) in the soil and live in them.
   - Soil is also used to make materials for buildings, houses and containers like clay ovens, pots, vases and so on.
   - Soil absorbs rainwater and reduces the damage caused by floods.
   - Many minerals like iron, copper, silver, gold are obtained by digging deep into the soil. Coal and petrol are also obtained from the soil.
5. See topic 'Components of Soil' on book page no- 78.

Loamy Soil: This type of soil is very fertile. It contains a lot of organic substances. This type of soil is also called ideal soil. The amount of sand slit and clay in loamy soil is almost equal. All kinds of crops paddy, onion, potato, maize, mustard etc., grow well in this soil.

The Earth

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. spins 2. axis 3. day, night 4. 365 ¼ 5. 24

C. Write 'T' for true and 'F' for false statements.

1. T 2. F 3. T 4. T 5. F

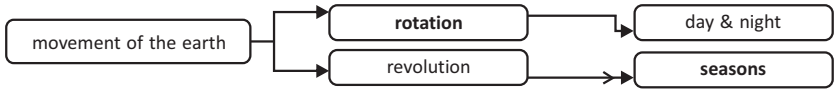
D. Match Column A and Column B.

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

E. Answer the following questions.

1. The rotation of the earth is responsible for the formation of day and night.
2. Our earth is the third planet from the sun. It is the only place in the universe where life exists. The earth is also known as blue planet because about three-fourth of its surface is water and one fourth is land. It is surrounded by a thick layer of air. This layer is called atmosphere.
3. The earth's shape is like an orange. Initially people thought that the shape of the earth was flat. In the long run, scientists discovered that our earth is actually spherical in shape. The fact that earth is spherical (like a ball) in shape was confirmed by scientists and photographs taken by satellites in space.
4. The earth is made up of three layers.
   1. Crust 2. Core 3. Mantle
5. The earth moves around the sun in a fixed path called the earth's orbit. The movement of the earth around the sun in an orbit is called revolution.

Fun Activity



Think and Answer

- There is acute scarcity of water because out of te 75 percent water present, just 3 percent of water is fresh and 97 percent of water is saline present in the oceans and seas. Out of the 3 percent of freshwater, 1 percent is in the form of ice and snow at glaciers and mountains. Also people waste water and over use which caused scarcity of water.
- This is because the Earth is spinning towards the east.

Our Universe

A. Tick (3) the correct option.

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

B. Fill in the blanks with correct words.

1. universe 2. gases 3. Earth 4. planet 5. Moon

C. Write 'T' for true and 'F' for false statements.

1. T 2. T 3. T 4. T 5. T

D. Match Column A and Column B.

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

E. Answer the following questions.

1. Our universe is a vast open space which includes everything that exists as matter or energy. It consists of all the stars, the solar system, galaxies, planets and other celestial bodies.
2. Planets are the heavenly bodies which move around the sun.
3. Stars are huge celestial bodies that can emit light and energy. planets are celestial bodies that orbit around the sun. They don't have the ability to emit light and energy.
4. Sometimes, we see stars in different groups. These groups of stars make different types of shapes. These shapes are named after ancient people or animals and are called constellations. Some commonly seen constellations in the night sky include Ursa Major (The Great Bear) and Orion (The Hunter).
5. See topic 'Phases of the Moon' on book page no- 92.
6. There are eight planets including earth in the solar system. These are
   (1) Mercury (2) Venus (3) Earth (4) Mars (5) Jupiter (6) Saturn (7) Uranus (8) Neptune

Think and Answer

- Planet mercury being closest to the Sun has extremely high temperature on it making the survival of life impossible. Moreover, Mercury does not have water on its surface and these is no carbon dioxide, hydrogen, nitrogen and oxygen in its atmosphere.
- Stars appear small because they are so fare away.