

# WONDERS OF SCIENCE

Teacher's Resource Book

Class  
4



## WONDERS OF SCIENCE-4

### 1. Things Essential for Life

#### EXERCISE

- I. Tick (✓) the correct answer : (Multiple-Choice Questions)**  
**Ans.** (c) air, 2. (b) air, 3. (b) more cold than earth, 4. (d) All of these, 5. (b) 70%.
- II. Fill in the blanks using the words given below :**  
**Ans.** 1. body, 2. sun, 3. ocean. 4. oxygen. 5. seventy
- III. State whether the following sentences are 'True' or 'False' :**  
**Ans.** 1. False, 2. True, 3. True, 4. False, 5. True, 6. True.
- IV. Name two :**  
**Ans.** 1. Fish, Lizard; 2. Mammals, Birds.
- V. Write all the eight things essential for life present in an aquarium.**  
**Ans.** 1. Oxygen, 2. Carbon dioxide, 3. Nitrogen, 4. Water, 5. Heat, 6. Light, 7. Minerals, 8. Interdependence of plants and animals.
- VI. Answer the following questions :**  
**Ans.** 1. The earth does not become too cold like moon at night because the heat received during the day is not allowed to escape by the atmosphere.  
2. We need oxygen to break down food to get energy. This energy is essential to carry out the functions of our body.  
3. To make food, Plants need carbon dioxide, water and the presence of sunlight to make their food.  
4. Living beings need water to perform their vital life processes.  
5. Air and water maintain just the right amount of warmth on earth to maintain life.

#### Activity Time

VII. Do it yourself.

#### Let us Discuss

VII. Do it yourself.

### 2. Plants Are Everywhere

#### EXERCISE

- I. Tick (✓) the correct answer : (Multiple-Choice Questions)**  
**Ans.** 1. (b) on land, 2. (c) a floating plant, 3. (c) an insectivorous.
- II. Fill in the blanks using the words given below :**  
**Ans.** 2. swamps, 1. Free-floating, 3. cones, 4. mushroom, mould, 5. coconut, palm.

**III. Match the columns :**

- | 'A'               | 'B'                             |
|-------------------|---------------------------------|
| 1. Pitcher plants | (i) have no leaves.             |
| 2. Aquatic plants | (ii) are parasites.             |
| 3. Lotus          | (iii) are grown on hill-slopes. |
| 4. Desert plants  | (iv) eat up insects.            |
| 5. Mushrooms      | (v) grow in water.              |
| 6. Tea plants     | (vi) is a fixed floating plant. |

**IV. Name the following ?**

**Ans.** 1. Mushroom, 2. Conifer, 3. Pitcher plant, 4. Mould, 5. Cactus.

**V. Answer the following questions :**

- Ans.** 1. Some aquatic plants are able to float on water because they are small, light and spongy and their roots are not fixed in the soil at the bottom of water.
2. The broad leaves of fixed-floating plants have stomata only on their upper surface.
3. As deserts are places with scanty rainfall, plants growing here do not bear leaves. This is to prevent loss of water.
4. Underwater plants are useful as they breathe in dissolved air by their entire body surface and help to keep the water clean.
5. Mangrove trees grow in swamps where the soil is clayey and does not have air. As the roots cannot breathe, they upwards.
6. Plants like mushrooms and moulds do not have the chlorophyll. Therefore, they cannot prepare their own food.

**Activity Time**

**Fun Time**

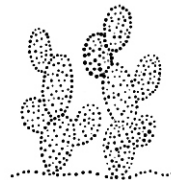
- VI.** Do it yourself.
- VII. Join the dots, identify and write the names of these pictures. Also colour them :**



Mushroom



Pitcher plant



Prickly pear

**Let us Visit**

- VIII.** Do it yourself.

### 3. How Plants Make Food

#### EXERCISE

**I. Tick (✓) the correct answer : (Multiple Choice Questions)**

**Ans.** 1. (a) sunlight, water, chlorophyll and carbon-dioxide;  
2. (c) Both of the above; 3. (a) Leaves; 4. (a) iodine test; 5. (a) lacks chlorophyll; 6. (b) roots.

**II. Fill in the blanks using the words given below :**

**Ans.** 1. food, 2. Carbon-dioxide, 3. the stem, 4. chlorophyll, 5. desert, 6. future, 7. Glucose.

**III. Match the columns :**

'A'	'B'
1. Stomata	(i) food factory of the plant
2. Leaf	(ii) through veins
3. Chlorophyll	(iii) small openings in the underside of a leaf
4. Starch	(iv) green pigment that traps sunlight
5. Water	(v) stored food in plants

**IV. State whether the following sentences are 'True' or 'False' :**

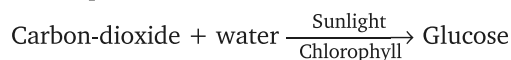
**Ans.** 1. True, 2. False, 3. False, 4. True, 5. True, 6. False, 7. True.

**V. Complete the sentences by giving reasons :**

**Ans.** 1. sugar is stored here.  
2. they transport food and water separately.  
3. its stem contains chlorophyll.  
4. they have a green pigment called chlorophyll.  
5. it has no chlorophyll.

**VI. Answer the following questions :**

**Ans.** 1. The process by which green plants manufacture sugars like glucose from water, carbon-dioxide and chlorophyll in the presence of sunlight is called photosynthesis. It can take place only in day light. The process can be written as follows :



(Simple Sugar) + Oxygen

- The things needed by a leaf to produce food are chlorophyll, water, carbon-dioxide and sunlight.
- Chlorophyll is a green pigment present in the leaves of all green plants.
- The plant uses food for growth, repairing tear and wear, to produce energy and store for the future use.
- The food is stored in the leaves, fruits, stems, roots or seeds of the plant.

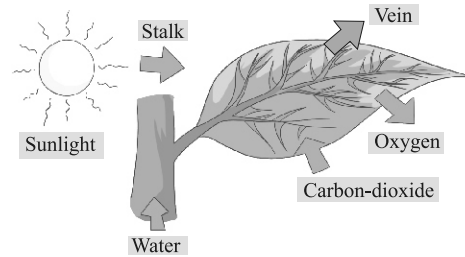


## Activity Time

### Fun Time

VII. Label the following diagram :

Ans.



VIII. Do it yourself.

## 4. Animals All Around

### EXERCISE

I. Tick (✓) the correct answer : *(Multiple Choice Questions)*

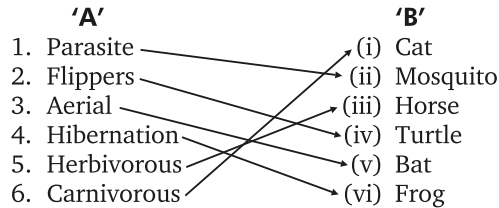
1. (c) herbivores, 2. (b) amphibians, 3. (a) bird, 4. (c) chameleon.

II. Fill in the blanks using the words given below :

Ans. 1. parasites, 2. Fishes, 3. big size, 4. carnivorous, 5. sense.

III. Match the columns :

Ans.



IV. State whether the following sentences are 'True' or 'False' :

Ans. 1. True, 2. False, 3. False, 4. False, 5. False, 6. True.

V. Give reasons :

- Ans. 1. it has a very long neck.  
 2. it cannot be seen easily against the white snow and protects itself from the enemies.  
 3. the surroundings at that time are not suitable for them.  
 4. it sucks blood of other animals.  
 5. they help it to tear the flesh.

VI. Circle the odd one. Give reasons for your answer :

Ans. 1. Jackal : It is carnivorous animal while others are herbivorous animals.

2. Cow : It is herbivorous animal while others are carnivorous animals.
3. Crow : It is omnivorous animal while others are parasites.

**VII. Answer the following questions :**

**Ans.** 1. Different animals develop suitable characteristics to meet their demands of shelter, food and surrounding. These characteristics are called adaptations.

2. Animals living in cold places like polar bear have thick fur to stay warm and desert animals have thick skin to protect them from sun.
3. The sharp claws of arboreal animals help them to climb trees easily.
4. To move without legs, the snakes has scales to help it crawl.
5. The long neck of giraffe helps it in eating the leaves from high branches of trees.
6. Animals that eat the flesh of other animals are carnivorous animals.
7. Animals that live on or inside the body of other animals are known as parasites.
8. Animals protect themselves by flight, big size, mimicry, colour changing, hibernation and migration.
9. The process to go for winter sleep is known as hibernation.
10. Dinosaurs became extinct because they could not adjust to their changing surroundings.

**Activity Time**

**Fun Time**

**VIII. Tell who am I?**

**Ans.** 1. Frog, 2. Lizard, 3. Penguin, 4. Crocodile, 5. Chameleon.

**IX.** Do it yourself.

## 5. Reproduction in Animals

### EXERCISE

**I. Tick (✓) the correct answer : (Multiple Choice Questions)**

**Ans.** 1. (c) yolk, 2. (a) tadpole, 3. (c) caterpillar.

**II. Fill in the blanks using proper words :**

**Ans.** 1. Tadpoles, 2. mammals, 3. Pupa, 4. frogs, 5. mammals.

**III. Find out one word for each of the followings :**

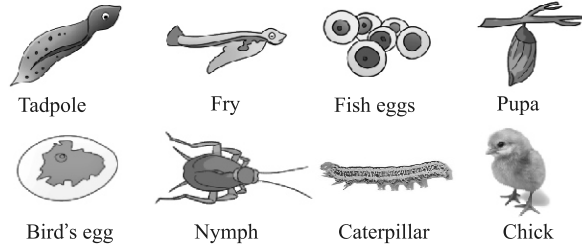
**Ans.** 1. Fry, 2. Nymph, 3. Yolk, 4. Mammals, 5. Caterpillar.

**IV. Name two :**

**Ans.** 1. Butterfly, Housefly; 2. Platypus, Echidna; 3. Fish, Frog; 4. Monkey, Cat; 5. Cockroach, Grasshopper.

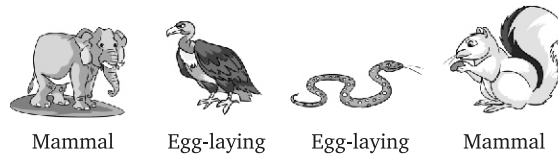
**V. Name the following :**

**Ans.**



**VI. Write Egg-laying or mammal below the pictures :**

**Ans.**



**VII. Answer the following questions :**

- Ans.** 1. The process by which plants and animals produce their own kind is called reproduction.
2. In mammals, following three characters are found :
- (i) Male and female in mammals are separate.
  - (ii) Mammals are warm-blooded animals.
  - (iii) Mammals are the only animals that give birth to fully developed babies.
3. Moulting is the process of shedding of old skin and becoming an adult.
4. Animals reproduce so that their species may survive and prosper.
5. The birds take care of their young ones because their chicks do not have feathers and their eyes are closed.
6. The growing embryo inside the egg gets food from yellow round yolk.

**Activity Time**

**VIII. Understand the relationship and complete the following as shown :**

**Ans.** 1. nymph, 2. yolk, 3. tadpole, 4. baby, 5. embryo.

**Fun Time**

**IX.** Do it yourself.

## 6. Care of Plants and Animals

### EXERCISE

#### I. Tick (✓) the correct answer : (Multiple Choice Questions)

**Ans.** 1. (c) keep plants warm, 2. (b) crops, 3. (a) maintain balance in nature.

#### II. Cross out the wrong words :

**Ans.** 1. hunted, 2. Cow, 3. plants, 4. water, 5. Parrot.

#### III. Match the columns :

**Ans.**

- | 'A'                    | 'B'  |
|------------------------|--|
| 1. Plants and animals  | (i) help to bring rain.                            |
| 2. National parks      | (ii) by veterinary doctors.                        |
| 3. During forest week  | (iii) are set up to save forests and wild animals. |
| 4. Trees               | (iv) new trees are planted.                        |
| 5. Animals are treated | (v) maintain oxygen-carbon-dioxide balance.        |

#### IV. Answer the following questions :

**Ans.** 1. Two harmful effects of thoughtless cutting of trees are as follows.

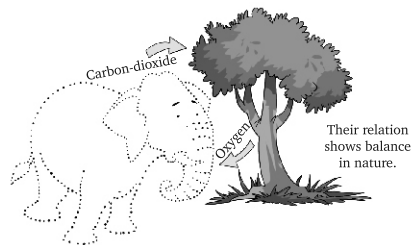
- (i) The balance of oxygen and carbon dioxide in the air will be affected.
  - (ii) It leads to soil erosion and droughts.
2. There are two important way to care for farm plants :
- (i) Plants need water regularly at proper intervals as per the season.
  - (ii) Natural manure provide humus which supplies minerals to the soil and so into the plants.
3. Forests provide us many useful things. They help to bring rain. They prevent floods and soil erosion. They take carbon dioxide and give us oxygen.
4. We should plant trees near our homes because trees maintain pleasant surroundings, moderate temperature and humidity. They give us fresh air rich in oxygen to breathe.
5. There are three essential aspects of animal care which are as follows : (i) Animals should be kept in large dry shelters which are safe from hot sun, cold winds, direct rain and other animals.  
(ii) They and their sheds should be cleaned regularly.  
(iii) They should be given clean and fresh food and safe drinking water at regular intervals.
6. If the sheds of the animals are not kept clean, they will get sick and weak, and will not be able to work properly.

7. Two important way of protecting wild animals are as follows :
- Wild animals should not be hunted for fun, flesh or for their skin.
  - The reserve forest area should not be used for cultivation of crops or for building dams.

### Activity Time

#### Fun Time

- V. Do it yourself.
- VI. **Join the dots. See what is formed. What is their relation? Write carbon-dioxide and oxygen in the proper arrow. Colour it.**
- Ans.



#### Let us Visit

- VII. Do it yourself.
- VIII. Do it yourself.
- IX. Do it yourself.

## 7. The Sun and Weather

### EXERCISE

**I. Tick (✓) the correct answer : (MultipleChoice Questions)**

Ans. 1. (c) In summer, 2. (c) condensation, 3. (a) fog, 4. (b) The sun.

**II. Fill in the blanks using the words given below :**

Ans. 1. dew drops, 2. crystals, 3. Fog, 4. hailstones, snow flakes.

**III. Match the columns :**

Ans.

- | 'A'        |   | 'B'                        |
|------------|---|----------------------------|
| 1. Water   | → | (i) heats quickly          |
| 2. Morning | → | (ii) direct sunrays        |
| 3. Hot air | → | (iii) heats slowly         |
| 4. Noon    | → | (iv) slanting sunrays      |
| 5. Sand    | → | (iv) controller of weather |
| 6. Sun     | → | (iv) goes up               |

**IV. State whether the following sentences are 'True' or 'False' :**

**Ans.** 1. False, 2. True, 3. True, 4. True, 5. True, 6. False.

**V. Give one word for each of the following :**

**Ans.** 1. Condensation, 2. Land breeze, 3. Evaporation, 4. Sea breeze, 5. Sun.

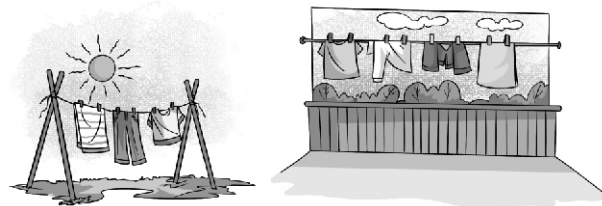
**VI. Answer the following questions :**

- Ans.** 1. Days are warmer in summer because sunrays are vertical.  
2. Sea water is warm even after sunset because it loses heat slowly.  
3. During the day, land gets heated quickly than the sea water. Air above the hot land also gets heated. This lighter air rises up and cooler air over the sea rushes into take its place. Thus, a cool breeze blows towards the land during the day.  
4. When the air gets heated, it becomes lighter and rises up.  
5. The changing of water into water vapour is called *evaporation*. The cooling of water vapour into water is called *condensation*.  
6. When water evaporates, its vapour rises up. As it is cold at great heights, water vapour cools and settles on tiny particles of dust in the air as small droplets of water. These droplets join together to form clouds.  
7. Evaporation is faster on a dry/windy day or in summer or when the exposed surface is large.  
8. Hot air moves upwards because it is lighter and free-flowing material.  
9. When water vapour in the air condenses and appears as droplets on the ground, it is called *dew*. When it is very cold, the dew or surface water freezes into tiny white crystals called *frost*.  
10. The Sun causes the movement of air to cause a breeze or wind and evaporation of water to make clouds and rain. This way, it causes changes in weather.

**Activity Time**

**Fun Time**

**VII. Here are two pictures of weather. Write, in which case the clothes will dry up faster. Why?**



**Ans.** Clothes in figure first will dry faster because the sun rays are falling directly and the temperature is high.

## 8. Our Universe : The Solar System

### EXERCISE

#### I. Tick (✓) the correct answer : (Multiple Choice Questions)

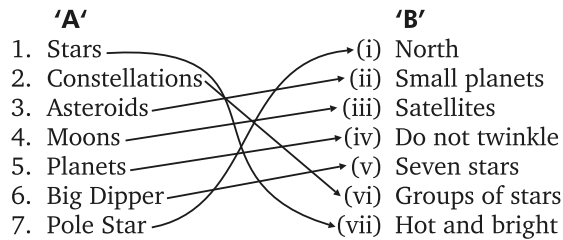
**Ans.** 1. (b) telescope, 2. (b) Mercury, 3. (c) sun, 4. (b) Venus.

#### II. Name two :

**Ans.** 1. Water, Air; 2. Mercury, Venus; 3. Orion, Big Dipper; 4. Uranus, Neptune; 5. Venus, Mercury; 6. Venus, Mercury.

#### III. Match the columns :

**Ans.**



#### IV. Give reasons :

**Ans.** 1. it always seems to be in a fixed place. It is in the North.  
2. there is no air and no water.  
3. they are very-very far away from the earth.  
4. it is very bright and hot, and it has its own light.  
5. they go around the sun and are pulled by its gravity.

#### V. Answer the following questions :

**Ans.** 1. Constellations are called by names of animals or people because they are arranged in different and beautiful patterns which look like figures of animals or people.  
2. Planets do not twinkle because they do not have light of their own.  
3. The sun and its eight planets together with asteroids and moons form the solar system.  
4. The sun has a powerful pulling force called gravity. The planets move around the sun pulled by its gravity. This is the reason they stay in their orbits and do not move away or they collide with each other.  
5. The earth looks like a beautiful blue lighted ball as seen from the moon.

### Activity Time

#### Fun Time

**VI.** Do it yourself.

#### Let us Visit

**VII.** Do it yourself.

## 9. The Revolving Earth and Its Seasons

### EXERCISE

#### I. Tick (✓) the correct answer : (Multiple-Choice Questions)

**Ans.** 1. (b) Equator, 2. (c) Winter, 3. (b) summer.

#### II. Fill in the blanks using the words given below :

**Ans.** 1. southern hemisphere, 2. equator, 3. tilted, 4. revolution, 5. summer.

#### III. Give reasons :

**Ans.** 1. Because due to rotation of earth the position of the sun in the sky during the day also keeps on changing.

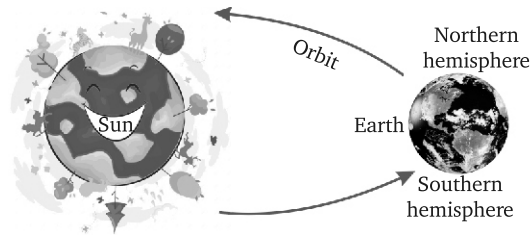
2. Because the earth rotates from west to east.

3. Because three-fourths of the earth's surface is covered with water.

4. Because the earth rotates from west to east.

#### IV. Look at the picture and complete the statements :

**Ans.**



The north pole is far away from the sun.

The Southern hemisphere has summer while the Northern hemisphere has winter. At this time places near the equator have equal days and nights, but places near the north pole have shorter (longer/shorter) days and longer nights.

#### V. Answer the following questions :

**Ans.** 1. The continuous movement of the earth around the sun is called revolution.

2. Revolution of the earth and its tilted axis are the two factors that cause seasons.

3. When Northern hemisphere is tilted towards the sun, it has summer with longer days and shorter nights. In this situation, Southern hemisphere has winter with shorter days and longer nights. The situation becomes reverse when the hemispheres change their positions.

4. On the equator, there is no change of seasons because it receives the same amount of sunlight all the year round.



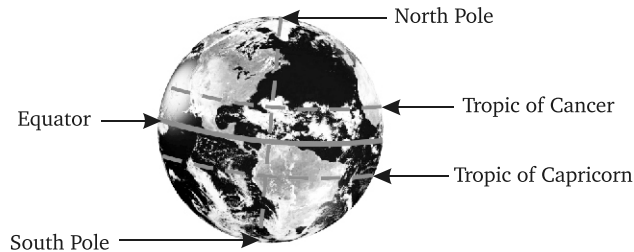
5. In autumn, weather begins to get colder and the leaves fall off from the plants. In spring, weather begins to get warmer and new leaves grow on the plants.

### Activity Time

#### Fun Time

##### VI. Label the diagram :

Ans.



## 10. Matters and Materials

### EXERCISE

#### I. Tick (✓) the correct answer (Multiple Choice Questions) :

Ans. 1. (a) kerosene, 2. (b) evaporation, 3. (c) carbon dioxide, 4. (c) bitter, 5. (a) brittle.

#### II. Match the columns :

Ans.

'A'	'B'
1. Water	(i) helps in burning
2. Kerosene	(ii) dissolves in water
3. Sugar	(iii) is colourless
4. Sand	(iv) is a solid form of water
5. Ice	(v) is insoluble in water
6. Glass	(vi) is inflammable
7. Rubber	(vii) breaks easily
8. Oxygen	(viii) conducts heat
9. Iron	(ix) is soft

#### III. State whether the following sentences are 'True' or 'False' :

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

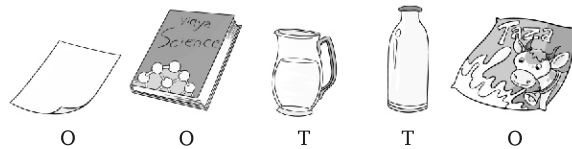
#### IV. Cross out the wrong words :

Ans. 1. Insoluble, 2. Wood, 3. Non-inflammable, 4. soluble, 5. solute.

**V. Think and ponder :**

**Write below each picture which material is transparent (T) and which is opaque (O).**

**Ans.**



**VI. Answer the following questions :**

- Ans.** 1. The features which help us to recognize a material are called the properties of materials. Features like touch, colour and smell help us to recognize a material.
2. The plastic handle in a sauce-pan does not allow heat to pass through it as it is a bad conductor of heat. So when the sauce-pan is hot even then we can hold the plastic handle.
3. When we pour sugar in water and stir it with spoon, a solution is formed and particles of sugar are uniformly dissolved throughout the solution.
4. Petrol is a very good solvent of grease and various oils. That is why, it is used to dryclean the clothes.
5. Crystals are the particles having definite shape and ground into a fine powder.

**Activity Time**

**VII.** Do it yourself.

**VIII.** Do it yourself.

**11. Food, Nutrients and Digestion**

**EXERCISE**

**I. Tick (✓) the correct answer : (Multiple Choice Questions)**

**Ans.** 1. (b) digestive, 2. (b) spinach, 3. (a) Fruits, 4. (c) Chapatis, 5. (a) steaming.

**II. Fill in the blanks using the words given below :**

**Ans.** 1. fats, 2. spoils, 3. Digestion, 4. sugar, 5. protective.

**III. Match the columns :**

**Ans.**

- | <b>'A'</b>   | <b>'B'</b>  |
|--------------|---|
| 1. Proteins  | (i) are found in green vegetables.                            |
| 2. Fibres    | (ii) are found in pears and milk.                             |
| 3. Starch    | (iii) give more energy than the same amount of carbohydrates. |
| 4. Vitamin A | (iv) is found in potatoes and rice.                           |
| 5. Fats      | (v) is needed for healthy eyes and skin.                      |

**IV. Which nutrient am I?**

**Ans.** 1. Carbohydrates, 2. Proteins, 3. Vitamins, 4. Fats, 5. Calcium.

**V. Think and answer :**

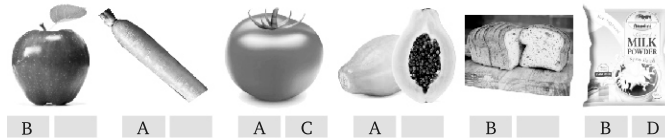
**Ans.** 1. In my opinion Family 2 has a better diet because this diet contains required amount of all the nutrients needed for good health.

2. A new born baby who sleeps most of the time needs milk because it needs some energy while sleeping also.

3. After chewing bread, the saliva of the mouth changes its starch into simple sugar, so it tastes sweet after chewing.

**VI. Write the name of vitamin/vitamins which each of the following contains :**

**Ans.**



**VII. Answer the following questions :**

**Ans.** 1. The diet that contains required amount of all the nutrients along with enough water and fibres is called a balanced diet.

2. (i) Proteins, (ii) Carbohydrates, (iii) Fats, (iv) Vitamins and (v) Minerals are five nutrients.

3. We have food to survive. It helps our body to grow and repair any wear and tear. It gives us energy for warmth, work and play. It protects us from diseases.

4. Most of the foods are cooked to make them eatable. Cooking makes them more tasty, provides them flavour and digestible. It also kills the germs present in the food.

5. In the mouth, we cut and chew the food with our teeth. Saliva is secreted in the mouth and it changes food into a paste. It changes starch into simple sugar.

6. The process of storing food unspoiled for a longer period is called food preservation.

7. Milk, cheese and dal three food items which have proteins.

8. The process of breaking down of food into simpler form inside the body is called digestion.

9. Vitamins and minerals are called protective food because they protect us from diseases and build strong bones and healthy blood.

10. The function of the stomach is to churn the food. It secretes an acid and digestive juices which break down food especially its protein part.

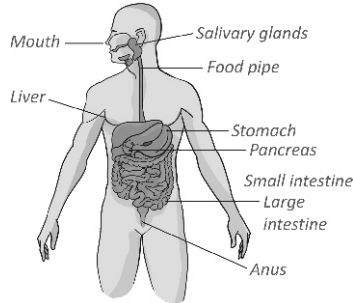
## Activity Time

### Fun Time

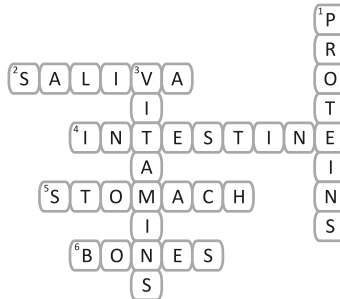
VIII. Do it yourself.

IX. Do it yourself.

X. The following is a diagram of the digestive system of humans. Label it with words from the box.



XI. Solve the crosswoed puzzle with the help of the clues given below :



## 12. Sanitation of Food and Water

### EXERCISE

I. Tick (✓) the correct answer : *(Multiple Choice Questions)*

**Ans.** 1. (a) viruses, 2. (b) Ringworm, 3. (c) pasteurisation, 4. (b) One-celled plants.

II. State whether the following sentences are 'True' or 'False' :

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

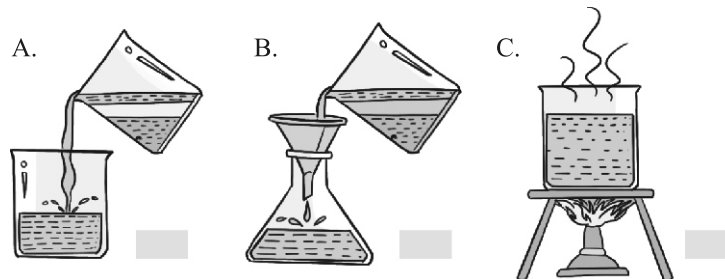
III. Tick (✓) the correct words :

**Ans.** 1. insoluble, 2. warm, 3. distillation, 4. Chlorine, 5. pasteurisation, 6. plants, 7. unsafe.

**IV. Answer the following questions :**

- Ans.** 1. Diseases, such as diarrhoea, typhoid and cholera are spread through food and water containing germs.
2. Pasteurisation is the process to keep milk safe for longer time and make it germ-free.
3. Germs do not grow and multiply in dehydrated food because dehydration kills the germs present in food and does not let them grow.
4. It is safer to drink well water because the water which seeps through the ground, passes through different layers of the ground and its many impurities are filtered out.
5. Drinking water should be purified because there are four kinds of disease causing impurities which are as follow :  
(i) floating impurities, (ii) lighter suspended particles, (iii) heavier suspended impurities, (iv) soluble impurities.
6. Filtration through sand-bed removes all suspended impurities but not all the germs because these are microscopic and easily pass through spaces between sand particles.
7. Boiling water for 10 minutes removes all the soluble impurities and disease-causing germs. Colour and dirty smell of the water also disappear after boiling and make it fit for drinking.
8. Distilled water is the purest form of water because no germs or impurities exist in it.
9. It is necessary to wash water-bottles daily to make them germ-free.
10. Every drop of water is precious and the amount of water on the earth is limited, so we must save water.

**V. Which is the best method of purifying drinking water and why? Tick (✓) mark the right one :**



- C. This method is best for purifying drinking water because water is boiled, cooled and then filtered to make it safe for drinking.

**Activity Time**

**VI. Do it yourself.**

### Let us Visit

VII. Visit a city water-supply system with your teacher. Find out how the water is purified there? Write the steps of purification here :

Ans. Filtration, Sedimentation, Decantation, Chlorination.

## 13. Caring for Teeth

### EXERCISE

I. Tick (✓) the correct answer : (Multiple Choice Questions)

Ans. 1. (d) six to eight months old, 2. (d) bad smell and toothache, 3. (c) 4.

II. State whether the following sentences are 'True' or 'False' :

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

III. Fill in the blanks using the words given below :

Ans. 1. soft toothbrush, 2. cement, 3. clean, 4. cavity.

IV. Answer the following questions :

Ans. 1. All the teeth are not of the same type. The front teeth are used for cutting or biting. Sharp, long and pointed teeth are used for tearing. Grinding or chewing teeth are used for grinding the food. Also, teeth enable us to speak properly and give shape to our face.

2. Toothless people cannot speak properly because teeth are necessary for uttering words with dental letters like, thanks, day etc. It is difficult to understand such words unless the tongue touches the teeth.

3. Mother does not allow us to eat too much sweets because bits and pieces remain stuck to the teeth which, if not cleaned properly, may cause tooth decay and pain. It may also cause them to fall.

4. We can exercise our teeth by massaging our gums with our fingers everyday and by eating fibrous fruits and vegetables.

### Activity Time

V. Do it yourself.

VI. Do it yourself.

### Fun Time

VII. Do it yourself.

## 14. Fire Accidents and First-Aid

### EXERCISE

I. Tick (✓) the correct answer : (Multiple-Choice Questions)

Ans. 1. (a) Running, 2. (a) sand, 3. (b) Applying ice cubes.

**II. Name the following :**

**Ans.** 1. Nylon clothes, Petrol, Paper, 2. Fuel, Kindling temperature, Oxygen.

**III. Give reasons :**

- Ans.** 1. they will become wounds.  
2. electric current will give shock and cause electrocution.  
3. fire will flare up on running.  
4. they catch fire very easily.  
5. it avoids germs infection through the air.  
6. this carelessness may cause fire accidents.

**IV. Answer the following questions :**

- Ans.** 1. Following are the three causes of fire accidents :  
(i) Careless throwing away of a burning matchstick.  
(ii) Wearing nylon or other synthetic clothes while working near fire.  
(iii) Leakage in gas cylinder or lighting stove near kerosene can.  
2. To put out a fire, three ways are as follows :  
(i) Fuel supply must be stopped. If it is an electric fire, main switch must be switched off.  
(ii) Supply of oxygen (air) to the fuel should be cut off.  
(iii) The temperature of the burning substance should be lowered below its kindling temperature.  
3. Fire can be put out by removing the petrol, reducing the temperature and stopping air supply.  
4. If our clothes catch fire, we should never run. We should lie down and put out the flames by rolling on the floor and wrap ourselves with a carpet, blanket or overcoat with head uncovered.  
5. In case of slight burns, pain is relieved by applying cold water or ice-cubes and burnt area is covered with a clean piece of cloth to avoid germ infection.

**Activity Time**

**Fun Time**

- V.** Do it yourself.  
**VI.** Do it yourself.

**15. Clothes and Fibres**

**EXERCISE**

**I. Tick (✓) the correct answer : (Multiple-Choice Questions)**

**Ans.** 1. (b) uniform, 2. (c) Silk, 3. (a) Synthetic, 4. (c) flax plant.

**II. Fill in the blanks using the words given below :**

**Ans.** 1. Ironed, 2. Natural, 3. Fibres, 4. elastic, 5. cultured.

**III. Give one word for each :**

**Ans.** 1. Synthetic, 2. Khadi, 3. Shearing, 4. Loom, 5. Linen.

**IV. Arrange these processes in correct order :**

**Ans.** 1. Shearing, spinning, dyeing, knitting; 2. Spinning, weaving, dyeing, printing; 3. Washing, stain-removing, ironing, storing.

**V. Give reasons :**

**Ans.** 1. dark colours absorb sunlight and keep us warm.  
2. borrowed clothes may cause skin infection.  
3. their strong smell keep the insects away.  
4. they reflect the hot rays of the sun and keep the body cool.  
5. they absorb more heat and keep us warm.

**VI. Answer the following questions :**

- Ans.** 1. We wear clothes to protect ourselves from heat and dust, winds of summer, rain, insects bites and cold.  
2. A man looks smart and cultured when he wears clothes suitable to season and occasion.  
3. We wear three types of clothes, *i.e.*, (i) Protective, (ii) Uniform, and (iii) Decorative.  
4. We wear cotton clothes in summer because light coloured cotton reflects the hot rays of the sun and some air can pass through them to keep the body cool.  
5. While going to school, we protect ourselves from rain by using a raincoat or an umbrella.  
6. Shoes protect our feet from heat, cold, sharp objects like thorns dust, germs and worms.  
7. People in different countries wear clothes of different styles depending on the climate, custom and production of different fibres.  
8. Two differences between natural and synthetic fibres are as follows :  
(i) Natural fibres absorb sweat but synthetic fibres do not.  
(ii) Natural fibres catch fire and burn slowly whereas synthetic fibres catch fire and burn very quickly.  
9. Synthetic clothes are hanged and the water automatically drips off.  
10. Three head-dresses for special purpose are as follows :  
(i) Hat (fashion and protection from the sun).  
(ii) Helmet (safety from injury).  
(iii) Woollen cap (for giving warmth).

**Activity Time**

**Fun Time**

**VII.** Do it yourself.

**Let us Visit**

**VIII.** Do it yourself.

**IX.** Do it yourself.



## 16. Force, Work and Energy

### EXERCISE

#### I. Tick (✓) the correct answer : (Multiple Choice Questions)

**Ans.** 1. (b) When force is applied on an object, 2. (c) When a ball does not move, 3. (b) Because of friction, 4. (c) Energy.

#### II. Which of these are not simple machines? Cross (X) them :

axe		needle	
car	(X)	hammer	
knife		sewing machine	(X)
wheel		fan	(X)

#### III. Give reasons :

**Ans.** 1. so that its moving parts move smoothly.  
2. because the force of friction opposes the motion of the ball.  
3. as buoyant force of water is pushing upwards.  
4. because of the earth's gravity.  
5. to prevent them from slipping on the road.

#### IV. Tick (✓) the sentences that indicate that work is done :

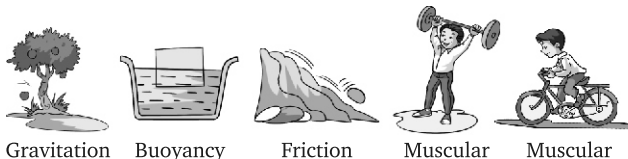
**Ans.** 1. (✓), 2. (X), 3. (X), 4. (X), 5. (✓), 6. (✓).

#### V. Answer the following questions :

**Ans.** 1. Force is recognised by its effect on an object. It can make an object to move, stop, increase or decrease speed or change its direction of movement.  
2. A force can push, pull, turn, lift, heave, twist, squeeze, bend or break things.  
3. If the weight of an object is equal or less than the buoyant force, it floats on the surface of water.  
4. When the force moves an object for a distance, we say that work is being done.  
5. Machine is a tool that makes work easier by changing the direction of the applied force or increasing the speed of work.  
6. Energy is the capacity to do work.  
7. Mechanical energy is the energy that produces push and pull to make things move.  
8. Solar energy is the energy of sun's rays. It has light and heat.  
9. Three uses of electric energy are as follows :  
(i) It makes machines run.  
(ii) It can be changed into mechanical, heat, light, magnetic or sound energy.  
(iii) It reproduces sound and picture.

**VI. Name the force in each picture :**

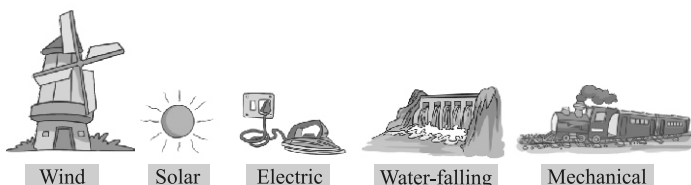
**Ans.**



Gravitation    Buoyancy    Friction    Muscular    Muscular

**VII. Write the name of energy in the following figures :**

**Ans.**



Wind    Solar    Electric    Water-falling    Mechanical

**Activity Time**

**VIII.** Do it yourself.

**IX.** Do it yourself.

**Half-Yearly Test Paper  
(Based on Chapter 1 to 8)**

**Note :** All questions are compulsory.

**I. Tick (✓) the correct answer : (Multiple Choice Questions)**

**Ans.** 1. (b) more cold than the earth, 2. (c) Both of the above, 3. (c) tadpole, 4. (c) keep plants warm, 5. (a) fog, 6. (b) Venus.

**II. Fill in the blanks :**

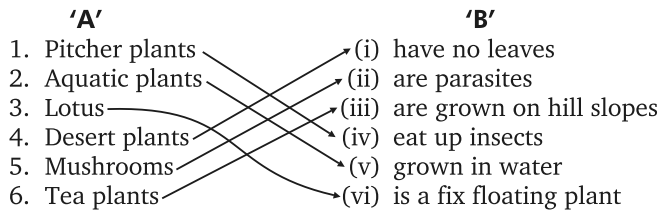
**Ans.** 1. mushroom, mould, 2. chlorophyll, 3. big size, 4. mammals, 5. dew drops, 6. hailstones, snowflakes.

**III. State whether the following sentences are 'True' or 'False' :**

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

**IV. Match the columns :**

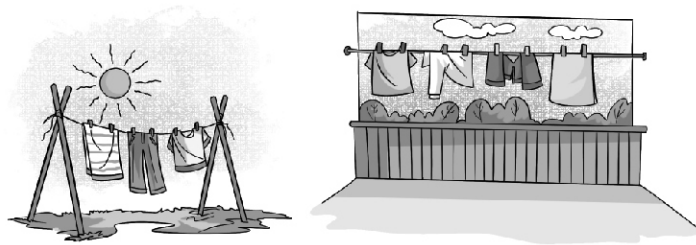
**Ans.**



**V. Answer the following questions :**

- Ans.** 1. Living things need water because most of their life processes happen in water medium only.  
2. Aquatic plants are able to float on water because they are small, light and spongy and their roots are not fixed in the soil at the bottom of water.  
3. The plant uses food for growth, repairing tear and wear, to produce energy and store for the future use.  
4. Animals that live on or inside the body of other animals are known as parasites.  
5. Moulting is the process of shedding of old skin and becoming an adult.

**VI. Here are two pictures of weather. Write in which case the clothes will dry up faster :**



**Ans.** Clothes in first figure will dry up faster because the sunrays are falling directly and the temperature is high.

**Annual Test Paper  
(Based on Chapters 9 to 16)**

**Note :** All questions are compulsory.

**I. Tick (✓) the correct answer : (Multiple-Choice Questions)**

**Ans.** 1. (b) summer, 2. (b) evaporation, 3. (b) digestive, 4. (a) viruses, 5. (d) bad smell and toothache, 6. (a) sand.

**II. Fill in the blanks :**

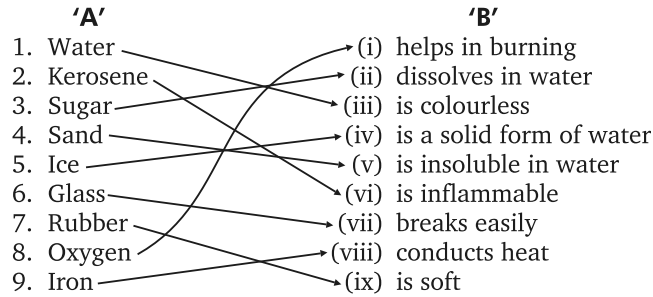
**Ans.** 1. fats, 2. Digestion, 3. protective, 4. cement, 5. cavity, 6. soft toothbrush.

**III. State whether the following statements are 'True' or 'False' :**

**Ans.** 1. False, 2. False, 3. False, 4. False, 5. True, 6. True.

**IV. Match the columns :**

**Ans.**



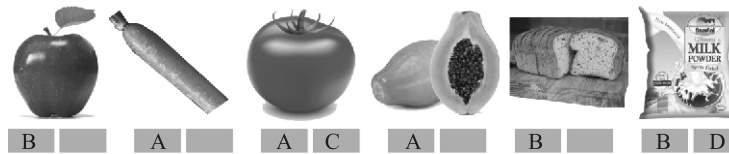
**V. Answer the following questions :**

- Ans.** 1. Revolution of the earth and its tilted axis are the two factors for the change of seasons.
2. The process of storing food unspoiled for a longer period is called food preservation.
3. Pasteurisation is the process to keep milk safe for longer time and make it germ-free.
4. In case of slight burns, pain is relieved by applying cold water or ice-cubes. The burnt area is covered with a clean piece of cloth to avoid infection.
5. A man looks smart and cultured when he wears clothes suitable to season and occasion.
6. Three uses of electric energy are as follows :
- (i) It makes machines run.
  - (ii) It can be changed into mechanical, heat, light, magnetic or sound energy.
  - (iii) It reproduces sound and picture.

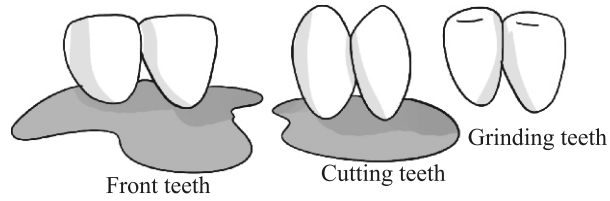
**VI. Which nutrient am I ?**

**Ans.** 1. Carbohydrates, 2. Proteins, 3. Vitamins, 4. Fats, 5. Calcium.

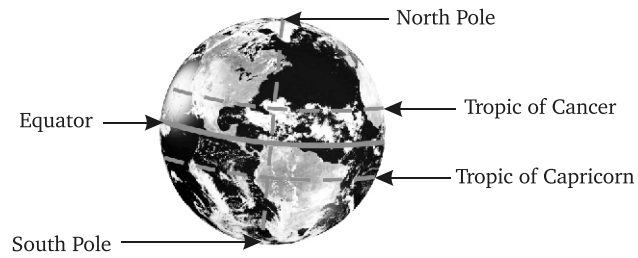
**VII. Write the name of Vitamin/Vitamins which each of the following contains :**



**VIII. Draw the three kinds of teeth and label them :**

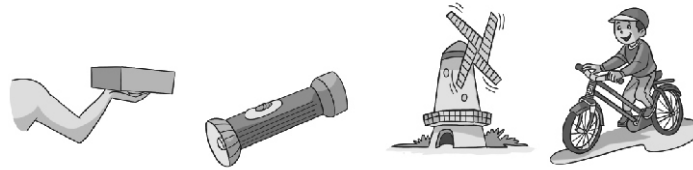


**IX. Label for diagram :**



**Ans.** Equator North Pole South Pole Tropic of Capricorn

**X. Write the name of energy in the following figures :**



**Ans.** Muscular energy Chemical energy Wind energy Mechanical energy