

**1. Families and Migration**

**What did you learn?**

- A.** 1. (a) 2. (b) 3. (c) 4. (c) 5. (b)
- B.** 1. family 2. ancestral 3. calamities 4. migrants 5. refugee
- C.** 1. Migration 2. Floods 3. Slum-dwellers 4. Refugee camps 5. Migrants
- D.** 1. A family tree becomes bigger when new members keep on adding to the family by birth, marriage and adoption. A family tree becomes smaller when a member dies or shifts to another place.
2. Natural calamities, demolition and displacement are the three reasons responsible for shifting of people.
3. The shifting of families from one place to another is called migration.
4. Many factors are responsible for the change in family structure. They are migration natural calamities, demolition and displacement.
5. When government acquires lands for construction of roads, metro-rail tracks and dams, people's homes and lands are taken away. So, they have to move to other places.

**Activity**

1. Do it yourself.
2. Do it yourself.

**2. Our Organ Systems**

**What did you learn?**

- A.** 1. (c) 2. (a) 3. (b) 4. (c) 5. (b)
- B.** 1. (T) 2. (F) 3. (F) 4. (T) 5. (F)
- C.** 1. Oxygen 2. Carbon dioxide 3. Heartbeat 4. Inhaling 5. Exhaling
- D.** 1. Specific functions in the body are performed by a group of organs. Such a group of organs is called the organ system.
2. The process of changing food into a simpler form that the body can absorb is called digestion.
3. The organs that work to carry blood from one part of the body to another are together called the circulatory system.
4. We have four types of teeth : incisors, canines, premolars and molars.
5. When we inhale, our lungs are filled with air. Blood picks up oxygen from the air in lungs. When blood takes back carbon dioxide and water vapour to the lungs, we exhale and the lungs get squeezed. Carbon dioxide with rest of the air is released from the lungs through the nose.

**Activity**

Do it yourself.

**3. Senses of Animals**

**What did you learn?**

- A.** 1. (b) 2. (a) 3. (b) 4. (c) 5. (b)
- B.** 1. (F) 2. (T) 3. (F) 4. (F) 5. (T)
- C.** 1. olfactory cells 2. communicate with other ants 3. olfactory structures in the antenna of bees 4. thermal vision 5. identify the scent and sends message to the brain.
- D.** 1. Man uses trained dogs in the field of security and protection, detecting land mines, drug trafficking, assisting disabled, tracking lost people and explosives and rescuing people trapped in rubble, etc.

2. Ants use their sense of smell to communicate with other ants.
3. Predatory birds have wide skulls allowing forward placement of their eyes. This gives them a keen eyesight. Other birds have narrow skulls with eyes on either side of the head.
4. Sound travels through a snake's muscles attached to the bones in its jaws. These bones are next to its hearing organ inside the body. This helps a snake to hear sounds.
5. There are two openings on the roof of the snake's mouth that lead to a spot called the Jacobson's organ. This organ identifies the scent and sends message to the brain.
6. Bees perform the waggle dance to communicate to other bees the location and distance of food.

#### Activity

1. Do it yourself.
2. Do it yourself.

### 4. Living and Non-living Things

#### What did you learn?

- A.** 1. (a) 2. (c) 3. (b) 4. (c) 5. (c)
- B.** 1. laying eggs 2. sun 3. seeds 4. gills 5. turns
- C.** 1. (F) 2. (T) 3. (T) 4. (F) 5. (F)
- D.** 1. (i) Living things need food, water and air but non-living things do not. (ii) Living things can move and breathe but non-living things cannot.
2. Non-living things do not need food, air and water, for example toy cat and teddy bear.
  3. All living things need food to stay alive and get energy.
  4. Living things need to breathe to stay alive and to digest food.
  5. Fishes breathe in water through their gills.
  6. Yes, plants show movement. The sunflower turns towards the sun. The roots of plants move towards water under the ground.

#### Activity

Do it yourself.

### 5. Man and Animals

#### What did you learn?

- A.** 1. (b) 2. (a) 3. (c) 4. (b) 5. (b)
- B.** 1. habitat 2. elephants 3. antivenom 4. 1972 5. pulling carts
- C.** 1. Man depends on many animals to fulfil his needs. He uses animals for labour and entertainment. For example, for carrying loads, riding, transportation and farming.
2. Snake charmers have a special talent to treat snake bites and provide a valuable source of snake venom for creating antivenom.
  3. Degradation of natural habitat of animals, over-exploitation, poaching, human-borne infections and diseases and extreme hot or cold climate are the reasons of extinction of some animals.
  4. There are many reasons of decreasing number of tigers. Some of them are deforesting, excessive hunting by humans for their skin, bones, fur, tails and other body parts which are believed to have medicinal properties.
  5. We can conserve wildlife by putting ban on hunting and deforestation, and by setting up national parks and wildlife sanctuaries. The programmes and schemes run for protecting the tigers, such as tiger reserves are together known as 'Project Tiger'.

#### Activity

Do it yourself.

## 6. Forests : Our Wealth

### What did you learn?

- A.** 1. (a) 2. (b) 3. (b) 4. (c) 5. (a)
- B.** 1. The tribal people living in forests are called adivasis. Gandhiji gave them a new name—Girijans which means—hill people.  
2. Tribals have some groups of sacred trees which they protect and worship. Such groups of trees are called sacred groves.  
3. It is a socio-ecological movement and non-violent resistance through the act of hugging trees to protect them from being felled.  
4. Van Mahotasa is a celebration to protect plants from cutting and planting more and more trees through a special drive.  
5. It is a type of slash and burn farming wherein tribals cut or burn down trees to get land to grow crops.
- C.** 1. tribals 2. Santhals 3. carbon dioxide, oxygen into the atmosphere 4. swidden, slash and burn farming 5. sanctuaries 6. Chipko Movement 7. Uttarakhand.
- D.** 1. A forest is a large area where a large number of trees grow. They grow on their own.  
2. Forests are very useful to us. They help in percolation (rain) and retention of rainwater, prevent soil erosion, absorb carbon dioxide and give out oxygen. They give us wood, fruits, herbs, leaves and medicines.  
3. Adivasis are tribal people who live in forests.  
4. Most of the tribals depend on forests for their livelihood. They collect fire wood, gum, herbs, honey, leaves and barks and sell them to earn their livelihood.  
5. Five trees found in sacred groves are banana, coconut, banyan, sandal and rudraksha.  
6. 'Chipko' means to embrace. In the early 1970s, the modern Chipko Movement started in the Tarai forests of Garhwal when a group of female peasants acted to prevent the cutting of trees by embracing them.

### Activity

Do it yourself.

## 7. Producing Food

### What did you learn?

- A.** 1. (b) 2. (c) 3. (a) 4. (b) 5. (c)
- B.** 1. levelled 2. micro-organisms, worms 3. transplantation 4. minerals 5. irrigation
- C.** 1. (T) 2. (F) 3. (F) 4. (T) 5. (F)
- D.** 1. The process of loosening and turning the soil.  
2. To press and level the uneven loose topsoil.  
3. Transferring of seedlings from nursery to the field.  
4. The process of removing unwanted plants from the crop.  
5. The process of cutting ripe crop plants.
- E.** 1. The process of producing food involves the following steps :  
Preparing of soil—sowing seeds—using manure and fertilizers—irrigation—weeding—protection of crops—harvesting—threshing—winnowing and storing.  
2. Furrows help in distributing water in the field uniformly.  
3. A seed-drill is a machine. It is used to sow seeds in the field.  
4. Farmers add manure and fertilizers to make the soil rich in minerals (nutrients).  
5. Harvested grains are dried in the sun. The clean grains are then kept in gunny bags and stored in godown in a dry and cool place protected from rats, insects and birds.

### Activity

Do it yourself.

## 8. Growing Plants

### What did you learn?

- A.** 1. (b) 2. (c) 3. (b) 4. (a) 5. (c)
- B.** 1. (T) 2. (T) 3. (F) 4. (F) 5. (T)
- C.** 1. Seed 2. Wind 3. Plumule 4. Onion
- D.** 1. The process of growing of a plant from seed.  
2. Carrying pollen and fertilizing a plant.  
3. Scattering of seeds away from the parent plant.  
4. The method of growing new plants from leaves, stems and roots.
- E.** 1. When a seed gets suitable environment (air, moisture and warmth), it germinates and grows. The embryo grows into a baby plant. (For diagram, refer to page no. 53 of the textbook)
2. Fungi produce spores that drop out of their gills. These spores fall to the ground and produce new plants.
3. Some fruits have spongy parts which enable them to float on water and reach other places. Thus water helps in dispersal of seeds.
4. The scattering of seeds away from the parent plant is known as dispersal of seeds. Wind, water, birds and animals are agents of dispersal.
5. Man has evolved many methods of growing new plants, which are called methods of artificial propagation. They are cutting, layering, grafting and division.

### Activity

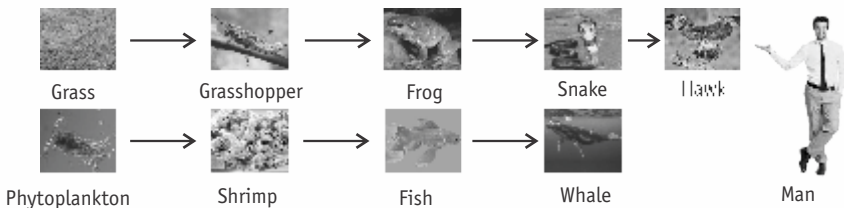
Do it yourself.

## 9. Food for Plants and Animals

### What did you learn?

- A.** 1. (a) 2. (b) 3. (b) 4. (c) 5. (c)
- B.** 1. Omnivores 2. Photosynthesis 3. Chlorophyll 4. Food web 5. Beri-beri
- C.** 1. Photosynthesis is the process of food-making in plants with the help of water, carbon dioxide and sunlight. Roots absorb water from the soil, leaves take carbon dioxide from air and light energy from the sun to make food. (For diagram, refer to page no. 60 of the textbook)
2. Carnivorous plants eat small live animals and insects like flies, gnats, moths, spiders and frogs.
3. The relationship of eating food and being eaten as food by other animals is called food chain.
4. A period of continuous non-availability of food is called famine. Floods and failure of rains are the causes of famine.
5. Marasmus, kwashiorkor and rickets are the diseases caused due to nutritional deficiency.

### Activity



## 10. Preservation of Food

### What did you learn?

- A.** 1. (c) 2. (a) 3. (b) 4. (a) 5. (b)
- B.** 1. (T) 2. (F) 3. (T) 4. (T) 5. (F)
- C.** 1. spoils easily 2. food poisoning 3. consumption 4. temperature 5. chemical preservatives
- D.** 1. Generally, food gets spoiled due to the action of bacteria, fungi, insects and rats. Bacteria and fungi in the air settle on food and spoil it.
2. The process in which food materials are given a suitable physical or chemical treatment to prevent their spoilage is called food preservation.
3. Fruits and vegetables are kept in refrigerators to protect them from being spoiled.
4. Eating spoiled food can cause food poisoning and diseases such as stomach ache, diarrhoea, fever, cholera, hepatitis, etc.
5. Different methods of food preservation are boiling, drying, pickling, freezing, sweetening, curing and pasteurization.

### Activity



Freezing



Drying



Canning



Pickling

## 11. Plants and Animals in Water

### What did you learn?

- A.** 1. (b) 2. (a) 3. (b) 4. (c) 5. (b)
- B.** 1. Lotus, Waterlily 2. Water hyacinth, Pistia 3. Hydrilla, Vallisneria 4. Whale, Dolphin 5. Crocodile, Fish
- C.** 1. (F) 2. (T) 3. (T) 4. (F) 5. (F)
- D.** 1. The moist skin of frogs helps them to breathe when they are in water. Their lungs help them to breathe when they are on land.
2. Unwanted plants growing in an area are called weeds. Weeds grow rapidly and block waterways for navigation. There is a need to control weed growth to make navigation easy.
3. Humans are mainly responsible for making rivers and seas dirty and polluted. Polluted water is a big threat to the existence of aquatic plants and animals.
4. Organisms or animals that live in water are called aquatic organisms. Some of them are fishes, frogs, whales and dolphins, turtles and crabs.
5. Fishes have a streamlined body that allows them to swim in water with least resistance. Their fins also help them to swim.

### Activity

- (a) Heavy objects containing no air sink, light objects containing air float and soluble objects mix in water.
- (b) Do it yourself.
- (c) Wood, football, boat, Tyre tube.
- (d) Iron, stone, book, metal box.

## 12. Water

### What did you learn?

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

B. 1. (T) 2. (T) 3. (F) 4. (T) 5. (F)

- C. 1. Different means of getting water supply are hand pumps, wells, baoli piaao, water wheel, tubewells, etc.
2. A well is a deep hole dug in the ground where underground water is easily available. Water is taken out from the well with the help of a pulley, a bucket and a rope. A piaao is a place where some people arrange water in tubs and drums and distribute it to people free of cost, especially during summer.
3. People in ancient days used wells and persian wheels to draw underground water for irrigation.
4. The substances which mix or dissolve in water are called soluble substances, as salt and sugar. The substances which do not mix or dissolve in water are called insoluble substances, as wood and sand.
5. In furrow irrigation, the fields are made into a number of ridges and furrows. Crops are raised in the ridges, and irrigation is carried out in furrows. In sprinkle irrigation, water is sprayed on standing crops through pipes using a pump. The pipes have small holes through which water is sprayed in the form of artificial rain.

### Activity

1.



Well



Baoli



Piaao



Denkli

2.



Floats



Floats



Sinks



Floats

## 13. Natural Calamities

### What did you learn?

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

B. 1. embankment 2. cyclone 3. Richter 4. landslide 5. plates 6. water vapour

C. 1. (T) 2. (F) 3. (F) 4. (T) 5. (F) 6. (T)

- D. 1. (i) People must be warned over TV and radio much before floods enter an area. (ii) People must be helped to leave the place with their belongings. (iii) Temporary shelters must be built for them in safe places. (iv) People trapped in a flood-hit area must be rescued quickly.
2. Hilly areas not covered with plants and places with no rivers or streams are naturally prone to droughts.
3. Trees draw water from the soil and throw out unused water in the form of water vapours in the air. This helps in forming clouds that cause rain and make a place less drought-prone.
4. The paste-like rocky material of the mantle below the earth keeps on moving slowly. This, sometimes, makes the plates of the earth crust slide past one another, and thus, the earth under our feet shakes, and we feel an earthquake.

5. Some ways to remain safe during an earthquake are (i) Crawl under a bed or a table. (ii) Stay away from building, trees and poles. (iii) Never use a lift to get out of the building.
6. (i) Embankments should be made on river banks to stop overflowing of rivers. (ii) Planting more trees reduces the damage that can be caused by floods.

**Activity**

(a) Share (b) room (c) escape (d) contact (e) phone (f) Stock (g) map (h) first

s	h	a	r	e	c	f	s
a	d	s	o	s	o	i	t
l	t	p	o	c	n	r	o
m	a	t	m	a	t	s	c
a	s	p	l	p	a	t	k
p	h	o	n	e	c	s	z
t	r	n	o	b	t	w	p

**14. Fuels and Travelling**

**What did you learn?**

- A. 1. (a) 2. (b) 3. (c) 4. (b) 5. (a)
- B. 1. (F) 2. (T) 3. (F) 4. (F) 5. (T)
- C. 1. combustion 2. fossil fuels 3. electric engines 4. petrol 5. fuel
- C. 1. Fossil fuels are formed by natural resources such as anaerobic decomposition of buried dead organisms under the earth. Coal, petroleum and natural gas are fossil fuels.
  2. Coal is a readily combustible black or brownish black sedimentary rock. Coal is used as a fuel mainly for cooking, producing electricity and moving train engines.
  3. (a) **Petroleum** : Petrol, diesel and CNG are petroleum products. All engines in vehicles use petroleum products to run. Petrol is the costliest fuel. It is used to run cars and two wheelers.
 

(b) **Coal** : It is a sedimentary rock, naturally occurring in rock strata in layers or veins called beds. It is used primarily as an energy source, either for heat or electricity.

(c) **Diesel** : Diesel contains more energy and greater power density than other fuels. It is a little cheaper than petrol. Big and heavy vehicles like buses, trucks, tractors and train engines use diesel as fuel.
  4. Alternate fuels are the substances that can be used as fuels. They are known as non-conventional or advanced fuels. Some alternate fuels are biodiesel (methanol, ethanol), batteries, hydrogen, non-fossil methane and vegetable oil.
  5. Sunita Williams is a United States Naval officer and a Nasa astronaut. She holds the record of the longest spaceflight for female space travellers.

**Activity**

	fossil		fossil
	alternate		alternate
	alternate		fossil

## 15. Games and Sports

### What did you learn?

- A.** 1. (a) 2. (b) 3. (c) 4. (c) 5. (b)
- B.** 1. (T) 2. (F) 3. (T) 4. (F) 5. (F)
- C.** 1. sportsmanship 2. individual games 3. inspiring for the team 4. cooperation 5. Field hockey
- D.** 1. When we play games, we relax our body and mind. So, games are important for good health. Games also teach us the spirit of patience, courage, self-confidence, discipline and justice.
2. Some qualities required to be a good captain are : responsibility, ability to inspire, ability to recognize the capability of each team member, and dependability.
3. The games that are played by individuals or all by oneself are individual games. The games we play in teams are called team games.
4. Team spirit refers to the trust and cooperation among the members of a team. Working as one to achieve a common goal is called team spirit.
5. Gender dominion or gender bias is basically to put down someone on the basis of gender, or not believing that he/she is able to do something because he/she is either male or female.

### Activity

1. Do it yourself.
- 2.



Rohit Sharma  
Cricket



Mitali Raj  
Cricket



Sardar Singh  
Hockey



Vishwanathan Anand  
Chess



Abhinav Bindra  
Shooting



Alka Tomar  
Wrestling

## 16. India : Land and People

### What did you learn?

- A.** 1. (b) 2. (c) 3. (c) 4. (a) 5. (b)
- B.** 1. east 2. sundarbans 3. delta 4. Gangotri 5. 572
- C.** 1. Peninsula 2. Bay 3. Oasis 4. Plateau 5. Valley
- D.** 1. Six physical divisions of India are : 1. The northern mountains. 2. The northern plains 3. The Indian desert 4. The peninsular plateau 5. The coastal plains 6. The islands.
2. The three ranges that make up the Himalayas are : The Great Himalayas, the Lesser Himalayas and the Outer Himalayas or Shiwalik range.
3. The northern plains are so fertile because of the soil called alluvium brought by rivers. Other reason for fertility is availability of water for irrigation.



4. The Vindhya and Satpura mountain ranges divide the peninsular plateau into two parts—Central highland and Deccan Plateau.
5. In some places in deserts, underground water comes up to the surface and forms a pool. Plants grow around such pools. Such green spot in the middle of a desert is called an oasis.

#### Activity

Do it yourself.

### 17. Our Heritage Monuments

#### What did you learn?

- A.** 1. (b) 2. (c) 3. (c) 4. (b) 5. (b)
- B.** 1. (F) 2. (T) 3. (F) 4. (T) 5. (T)
- C.** 1. Shah Jahan 2. Tirupati Temple 3. Mandap 4. Brihadeshwar Temple 5. Large domed-hall
- D.** 1. We learn about a country's glorious past from heritage monuments, about the materials used in architecture and skills of craftsmen.
2. Patterned screen in arch form, dome-shaped canopy, balcony (Jharoka) and high minarets are the main features of Mughal architecture.
3. Edicts and stupas are the most important structures of Buddhist architecture such as Sanchi Stupa and Ashoka pillar edicts.
4. Buddhist cave temples of Ajantas and Ellora at Aurangabad in Maharashtra are popular form of Buddhist architecture.
5. Some of the features of Hindu temple architecture are garbhagriha, mandap, gopuram and shikhar. Most of them are built of fine marble with fine carvings. Most of them are famous pilgrimage centres.

#### Activity

1. Do it yourself.
2. Do it yourself.

### 18. Mosquitoes and Malaria

#### What did you learn?

- A.** 1. (a) 2. (b) 3. (c) 4. (b) 5. (b)
- B.** 1. antennae 2. malarial germs 3. eggs, larvae 4. liver, spleen 5. transmitted
- C.** 1. When an infected mosquito bites (to suck blood) a healthy person, it transmits the malarial germs into the body of the healthy person. Thus, it spreads malaria.
2. The four stages in the life cycle of a mosquitoes are : eggs—larvae—pupa—mosquito
3. Symptoms of malaria are high fever, shivering, headache and nausea. Temperature falls after sweating. Fever is repeated every 48 or 72 hours.
4. Mosquitoes lay eggs in water. We can destroy their eggs in the following ways :  
 (i) By filling ditches where mosquitoes breed. (ii) By spraying kerosene or DDT on the surface of ponds and lakes. (iii) By frequently changing the water of room coolers.
5. We can protect ourselves from mosquitoes bites in the following ways :  
 (i) By fixing wire-nettings on doors and windows to prevent entry of mosquitoes. (ii) By using mosquito nets and repellants such as creams and coils. (iii) By wearing full-sleeved clothes and nightdresses.

#### Activity

1. Do it yourself.
2. Fogging/Fumigation.

## 19. Scaling New Heights

### What did you learn?

- A.** 1. (b) 2. (b) 3. (c) 4. (a) 5. (b)
- B.** 1. mountaineers 2. Mt. Everest 3. Bachhendri Pal 4. Great Bear 5. Apa Sherpa
- C.** 1. Mountaineers 2. Crampons 3. Lahue Spiti 4. Min Bahadur Sherchan 5. Star charts
- D.** 1. Mountaineers face very difficult challenges while climbing such as falling rocks and blocks of ice, avalanches and ice cracks, altitude sickness and bad weather conditions such as whiteout, thunderstorms and lightning.
2. To reduce the risks, mountain climbers take training to acquire technical knowledge such as to use ladder, crampons and ice axe, rope techniques, crevasse rescuing, route finding and food proportion at high altitude.
3. Mountaineers carry GPS device, sunglasses, sunscreen lotion, safety knife, waterproof matches, first aid kit, ice axe, carabiner, harness, crampons, helmet, snow goggles and oxygen cylinder.
4. Sir Edmund Hillary and Tenzing Norgay were the first mountaineers to climb Mt. Everest.
5. Many climbers face altitude sickness because atmospheric pressure decreases and there is a very little oxygen in the air. Some of the symptoms are severe headache, sleeping problem, nausea, lack of appetite and bodyache.
6. The hobby of watching stars in the sky is called star gazing. A pair of binoculars is required for star gazing.

### Activity

1. Do it yourself.

2.



Skiing



Surfing



River rafting



Bungee jumping



Wind surfing



Skydiving