



Teacher's Manual

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• Nisha Bansal
• Priyanka Singh



Green Earth

A Text Book on **Environmental Studies**

- Multiple Choice Questions (MCQs)
- Activity | Project
- Value Based Questions
- Model Test Paper

1

Relationships

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) (iii); (b) (iv); (c) (i); (d) (ii)
2. (a) joint; (b) nuclear; (c) problems; (d) sorrow, happiness
- C. 1. The parents of father are grandparents.
2. A family in which only parents and children live is called nuclear family.
3. All family members love, support and celebrate in good times and help each other in bad times.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

2

All In The Family

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) fair; (b) straight; (c) stick; (d) grandmother
2. Do it yourself.
- C. 1. Do it yourself.
2. Do it yourself.
3. Do it yourself.
4. Do it yourself.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

3

Differently-abled People

- A. 1. (c); 2. (a); 3. (a)
- B. 1. (a) eyes, ears; (b) ears, eyes; (c) tongue, mouth; (d) eyes, skin; (e) eyes, ears; (f) eyes, ears, nose, skin.
2. (a) (ii); (b) (iii); (c) (iv); (d) (i)
- C. 1. We learn about our world by seeing, hearing, smelling and feeling things.
2. Seeing, speaking, hearing, smelling, walking, touching and tasting are all our abilities.
3. Not able to see, hear, speak or walk are some types of disabilities that people can have.
4. Life is hard for them. We must be kind and sensitive to such people.
5. Louis Braille was a French student and he invented the Braille alphabet.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

4

Living And Non-living Things

- A. 1. (b); 2. (c); 3. (a)
- B. 1. (a) oxygen, carbon dioxide; (b) Non-living; (c) Seedling; (d) swim, fly; (e) trachea; (f) living
2. (a) (iii); (b) (iv); (c) (ii); (d) (v); (e) (i)
- C. 1. Do it yourself.
2. Who give birth to their babies are called mammals.
3. Animals that lay eggs – hen and duck, and that give birth to young ones are – cow and dog.
4. Plants do not move from one place to another but animals can move from place to place.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

5

About Plants

- A. 1. (a); 2. (a); 3. (b)
- B. 1. (a) creepers; (b) Climbers; (c) rubber; (d) shrub; (e) trunk
2. (a) ✓; (b) ✗; (c) ✗; (d) ✓
- C. 1. Plants give us vegetables, wood, oxygen, fruits and paper.
2. A creeper has thin, weak stem and it cannot stand erect.
3. Herbs are very small plants while shrubs are medium sized plants.
4. A climber is a plant which needs support to stand.
5. Plants are useful for animals because herbivores are depend on plants for food.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

6

Leaves In Our Lives

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) crotons; (b) leaves; (c) spinach; (d) curry leaves
2. (a) (iv); (b) (v); (c) (i); (d) (iii); (e) (ii)
- C. 1. They have important pigment chlorophyll in them.
2. The green leaves of the plant use sunlight and water to prepare food of the plant, so they are called food factory of plant.

- When plants use sunlight to prepare their food in their leaves, this process is called photosynthesis.
- Curry leaves and coriander.
- The dry and shed leaves of plants can be collected in a pit dug in the ground, this is called a compost pit.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

7

Animals World

- A. 1. (b); 2. (c); 3. (a)
- B. 1. (a) ✓; (b) ✗; (c) ✓; (d) ✗;
2. (a) Snake, earthworm; (b) Grasshopper, Frog; (c) fish, octopus; (d) Sparrow, Crow;
- C. 1. Animals that live in houses and farms are called domestic animals. They give many useful things like milk, butter, honey etc.
2. They need homes for shelter and safety.
3. Carnivores have strong teeth to tear the flesh of dead animals.
4. Cud chewing animals are called ruminants.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

8

Feathered Friends

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) warm; (b) hooked; (c) strong; (d) hard; (e) tailor bird
2. (a) ✓; (b) ✓; (c) ✗; (d) ✓; (e) ✓
- C. 1. Feathers help a bird to fly. They fall off periodically and help them to fly.
2. Birds have different types of beak that depends on the kind of food they eat.
3. The birds build nests for shelter and safety.
4. The parent birds feed and look after the baby birds till they are little older and strong enough to fly away.
5. Because it weaves its nest by stitching leaves together.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

9

Work We Do

- A. 1. (c); 2. (a); 3. (b)
- B. 1. (a) ✓; (b) ✓; (c) ✓

2. (a) occupation; (b) money; (c) mother; (d) families

C. 1. People work to earn money for their families.

2. Some children work before and after school to earn money for their families.

3. Making children do work under the age of 14 is called child labour.

4. Children can help their parents and grandparents in their daily chores at home.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

10

Playtime

A. 1. (b); 2. (a); 3. (b)

B. 1. (a) exercise; (b) Ludo; (c) Hockey; (d) chess; (e) badminton

2. (a) ludo, chess, carrom; (b) cricket, football, hockey; (c) cricket, football, hockey; (d) chess, wrestling, polo

C. 1. We all need rest to fresh for the next day.

2. Cricket, Badminton.

3. Running, catching, hide and seek, kabaddi, etc.

4. Mountaineering, river-rafting, hand-gliding.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

11

Different Types Of Food

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

B. 1. (a) Spinach, Cabbage; (b) Wheat, Maize; (c) Cauliflower, Broccoli; (d) Radish, Carrot

2. (a) (iii); (b) (i); (c) (iv); (d) (ii)

C. 1. Food gives us energy to live, work and play.

2. Onion, sugarcane and potatoes.

3. Rice, wheat and maize.

4. We get cheese, butter, ghee, curd, buttermilk, etc from animals.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

12

Food For Animals

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

B. 1. (a) (iv); (b) (i); (c) (v); (d) (ii); (e) (iii)

2. Do it yourself.

- C. 1. Animals need food to live.
2. We should take care of domestic animals otherwise they will catch diseases.
3. Crow, pigeon, sparrow, squirrel and dog come to our house in search of food.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

13

What Is Cooking?

- A. 1. (a); 2. (c); 3. (b); 4. (a);
B. 1. (a) (iv); (b) (iii); (c) (v); (d) (i); (e) (ii)
C. 1. We need food for energy to work and live.
2. Plants and animals are sources of food.
3. Spinach and Cabbage.
4. Spices are important because they add flavour to our food. Some spices are – coriander, turmeric, red pepper etc.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

14

Shelters For All

- A. 1. (b); 2. (c); 3. (a); 4. (b)
B. 1. (a) ✗; (b) ✓; (c) ✗; (d) ✓
2. (a) kept, covered; (b) light; (c) place, place; (d) patterns
C. 1. It depends upon climate, availability of building materials and amount of money available.
2. Floors of the house must be clean, the furniture and household goods should be dusted, kitchen and bathroom must be cleaned and dried, ventilation must be smooth.
3. We can keep our house clean by cleaning floors, furniture, kitchen, bathroom, etc.
4. People decorate their houses because clean and beautiful houses make them happy.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

15

Water Air And Soil

- A. 1. (b); 2. (c); 3. (a)
B. 1. (a) Sea; (b) lakes, ponds, streams; (c) Water vapour; (d) water; (e) nitrogen, oxygen, carbon-dioxide
2. (a) ✓; (b) ✓; (c) ✗; (d) ✗; (e) ✗
C. 1. Nitrogen, oxygen and carbon dioxide.
2. We should store water in clean and covered containers.
3. Burning garbage, smoke from vehicles and chimneys of factories cause air pollution.

4. Soil is important because plants grow in soil which give us food.

5. By collecting rainwater, reuse water where possible and closing taps properly.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

16

Maps

- A. 1. (c); 2. (a); 3. (b); 4. (c)
- B. 1. (a) map key; (b) Landmarks; (c) new places; (d) four; (e) Compass
2. (a) ✓; (b) ✗; (c) ✓; (d) ✓; (e) ✗
- C. 1. Landmarks give the reference points for locations on a map.
2. Maps are drawings which show where different places are located.
3. Compass is an instrument used to find directions.
4. Maps use symbols so that we can read maps correctly.
5. Right, left, straight, in front and behind are direction words, and they are used to show directions.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

17

Time To Move

- A. 1. (a); 2. (b); 3. (a)
- B. 1. (a) on foot; (b) bus; (c) camels; (d) planes
2. Do it yourself.
3. (a) simple carts; (b) largest; (c) Mumbai; (d) rocket; (e) thick forest
- C. 1. Four ways of travelling are – land transport, railways, waterways and airways.
2. On land, we use car, bus, bicycle, etc. for travelling.
3. Means of transport in villages are – bullock carts, bicycle, tonga, camels, elephants, mules, etc.
4. Ships and boats.

Activity/Project : Do it yourself.

Value Based Question: Do it yourself.

18

Get In Touch

- A. 1. (c); 2. (c); 3. (a); 4. (b)
- B. 1. (a) (iii); (b) (iv); (c) (v); (d) (i); (e) (ii)
2. (a) Gestures; (b) fax; (c) Communication; (d) aeroplane; (e) STD
- C. 1. Communication is the process by which two or more people (or even animals) exchange ideas, information, thoughts and feelings.

2. A post office sends the letters to respective destinations.
3. The means of personal communication are – landline phones, mobile phones, electronic mail, etc.
4. Through internet, we can communicate to others at any part of the world within seconds.
5. Animals communicate through their special ways of communication.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

19

Pottery

- A. 1. (b); 2. (c); 3. (a)
- B. 1. (a) Clay; (b) kiln; (c) coiling; (d) potter's wheel; (e) matkas, surahis
2. (a) (iii); (b) (v); (c) (i); (d) (ii); (e) (iv)
- C. 1. Pottery is the art of making different things using clay.
2. Early humans made their first were bowls by taking a lump of clay, pitching and shaping it.
3. Kiln is like a furnace where clay pots are baked or fired.
4. First, clay is shaped by spinning potter's wheel then it is dried. After that, it is baked or fired in the kiln.
5. Because pottery developed in the earliest times of human civilization so it is considered one of the earliest art forms.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

20

Textiles

- A. 1. (c); 2. (a); 3. (b)
- B. 1. (a) clothes; (b) baku; (c) phiren; (d) kurta, angrakha
2. (a) Phiren, Phiren; (b) Churidar-kurta, Ghagra-choli; (c) Mundu, saree; (d) Dhoti-kurta, Salwar-kamiz
3. Tie and dye, Block printing, Embroidery, Kalamkari.
- C. 1. The clothes we wear depend upon where we live, the local climate and the season.
2. Saree and shawl are unstitched clothes worn by Indian people.
3. Vegetable dyes are extracted from various plants and flowers like turmeric and indigo.
4. People feel need to decorate things they make because beautiful things make them happy and they take the inspiration from their ancestors.
5. Different ways of decorating and dyeing in our country are tie and dye, block printing, embroidery and kalamkari.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

1

Families Change

- A. 1. (b); 2. (c); 3. (c)
- B. 1. (a) ✓; (b) ✗; (c) ✗; (d) ✓
2. (a) (iii); (b) (iv); (c) (ii); (d) (i)
- C. 1. Anita lived in a joint family with her grandparents, parents, sister, uncle, aunt and cousins.
2. When she get married, the size of her family changed from joint to small family.
3. Misha's mother won a trophy because she won the inter-state school debate competition.
4. Misha's grandfather told Misha that her mother was very fond of sweets in her childhood.
5. Her cousin Rahul had sent a parcel to Anita. He lives in Mumbai now.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

2

My Extended Family

- A. 1. (b); 2. (a); 3. (a)
- B. 1. (a) paternal relatives; (b) school, teachers; (c) talents; (d) head
2. Do it yourself.
- C. 1. The family who stay together in a home are called immediate family. In other hand, who stay in different place but come home to join in a festival or celebration are called extended family member.
2. In earlier times, most of the families were joint families while today most of the families are nuclear families.
3. Earlier girls were not treated equal to the boys but today they are given equal importance. This is good for our society.

3

Where Do We Come From?

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) (iii); (b) (iv); (c) (i); (d) (ii)
2. (a) babies; (b) baby fish; (c) Reptiles; (d) oviparous
- C. 1. The process of producing young ones just like themselves is called reproduction.
2. Fish, frogs, turtles and birds.
3. Animals which reproduce by giving birth are called mammals. Rat, cat, dog and cow are some mammals.
4. When parents take up a child as their own legally, with the court's permission is called adoption.
5. Maintain something at most favourable temperature is called incubation.
6. Young one of a frog is called tadpole.

4

Making Sense

- A. 1. (b); 2. (a); 3. (a); 4. (b)
- B. 1. (a) ✓; (b) ✗; (c) ✓; (d) ✓; (e) ✗
 2. (a) five; (b) The sense organs; (c) pleasant; (d) melodious, disturbed; (e) distinguish
- C. 1. We can see, read, identify colours and can express our feelings with our eyes.
 2. A hug from a friend or our parents is good touch while a hit, slap and pushing may be a bad touch.
 3. Braille is a special script to read and write for differently-abled people.
 4. Sign language is a language to communicate for differently-abled people.
 5. People who are not able to see, hear or speak are called differently-abled people.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

5

Playtime

- A. 1. (b); 2. (a); 3. (c); 4. (c)
- B. 1. (a) indoor, outdoor; (b) relaxation; (c) rules; (d) games; (e) games
 2. (a) ✗; (b) ✓; (c) ✗; (d) ✓; (e) ✓

C.

F	O	O	T	B	A	L	L	J	P	I	C
A	S	F	B	J	M	L	U	O	P	K	R
H	O	C	K	E	Y	J	D	A	J	U	I
D	S	S	C	A	R	R	O	M	K	J	C
V	O	L	L	E	Y	B	A	L	L	K	K
A	F	H	I	G	H	J	U	M	P	L	E
Y	Y	U	C	H	E	S	S	V	N	P	T
S	C	R	A	M	B	L	E	Z	M	P	M
S	A	O	P	M	O	N	O	P	O	L	Y

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

6

Skills At Work

- A. 1. (c); 2. (c); 3. (a); 4. (b)
- B. 1. (a) ✓; (b) ✗; (c) ✗; (d) ✓; (e) ✗
 2. (a) home; (b) work; (c) proud; (d) tools and machines; (e) mends

- C. 1. We mainly work to earn money.
 2. Every work is important and we should be proud of the work we or others do. This is called dignity of labour.
 3. In olden days, parents thought that girls should remain at home and look after the family.
 4. A tailor cuts and then stitches the clothes.
 5. A potter makes pots of clay. He uses clay and potter's wheel.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

7

Fun At The Fair And Circus

- A. 1. (a); 2. (a); 3. (a); 4. (b)
 B. 1. (a) ✓; (b) ✗; (c) ✓; (d) ✗; (e) ✓
 2. (a) (iii); (b) (iv); (c) (i); (d) (v); (e) (ii)
 C. 1. We need relaxation after our daily work to refresh ourselves.
 2. We can see clowns, trapeze artists, jugglers, and animals like lion, horses, monkeys and birds in a circus.
 3. We should not litter in the zoo because animals may eat it or accidentally suffocate while playing with it.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

8

Animals World

- A. 1. (b); 2. (a); 3. (a); 4. (b); 5. (c)
 B. 1. (a) queen bee; (b) Dog; (c) bird; (d) dog; (e) elephant
 2. (a) ✗; (b) ✗; (c) ✗; (d) ✓; (e) ✓
 C. 1. Animals live in groups to protect themselves from other animals.
 2. Animals help humans by giving milk, eggs, meat, silk, wool, etc.
 3. Snakes hear by picking up vibrations from the ground.
 4. Dogs, cats, goats, horses and rabbits.
 5. Animals help each other in many ways. For example – In the forests, monkeys and birds given out alarm cries to warn their kind if there is any danger.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

9

Plants World

- A. 1. (b); 2. (b); 3. (a); 4. (c)
 B. 1. (a) root; (b) root hairs; (c) taproot, fibrous; (d) mangroves; (e) bud; (f) flower
 2. Do it yourself.

- C. 1. Roots help the plants in many ways like fixation, storage, absorption of water and minerals, support, etc.
 2. Plant needs water to live.
 3. A taproot is long and pointed while fibrous root has many roots at the end of the stem.
 4. Do it yourself.
 5. The transfer of pollen from one flower to another is called pollination. Insects help in pollination by taking pollen stick to their bodies, to the other flowers.
 6. After pollination, flower develops into a fruit.

Activity/Project : Do it yourself.

Value Based Questions : Do it yourself.

10

Importance Of Plants

- A. 1. (a); 2. (b); 3. (a); 4. (b)
 B. 1. (a) Farming; (b) wholesaler; (c) ploughing; (d) Tractor; (e) Gardener
 2. (a) (iii); (b) (i); (c) (ii); (d) (v); (e) (iv)
 C. 1. The main steps are – ploughing, planting seeds, harvesting and selling.
 2. A market where goods are bought and sold at large quantities.
 3. Municipal Corporation appoints gardeners to look after trees.
 4. He buys fruits from wholesale market.
 5. Cutting of huge number of trees to clear forested area is called deforestation. We can prevent it by conserving forests and planting more and more trees.

D.

R	I	C	E	Q	W	T	Z	K
B	R	I	N	J	A	L	P	Y
J	L	S	V	Z	G	R	A	M
D	X	G	D	C	M	U	E	U
O	A	P	P	L	E	J	Q	P
U	I	F	X	V	H	W	Y	V
M	U	S	T	A	R	D	R	G

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

11

Eating Together

- A. 1. (b); 2. (b); 3. (a); 4. (c)
 B. 1. (a) family; (b) food; (c) people; (d) langar; (e) good food
 2. (a) ✗; (b) ✓; (c) ✗; (d) ✓
 C. 1. Because eating together builds a sense of unity among family members.
 2. In villages, the function is held in the house itself or in a community hall. In town and cities, weddings are held in big halls, hotels or farm houses.

3. Langar or free kitchen are organised in gurudwaras where people sit on mats and food is served to one and all.
4. In mid-day meal, children are served a nutritious meal in the school.
5. The purposes are – Many poor children can eat at least one wholesome meal in a day. Healthy children means regular attendance and more concentration.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

12

Our Teeth And Tongue

- A. 1. (b); 2. (c); 3. (a); 4. (c)
- B. 1. (a) ✓; (b) ✗; (c) ✓; (d) ✓; (e) ✗
2. (a) Incisors; (b) taste buds; (c) milk; (d) twice; (e) rinse
- C. 1. When a little baby grows old, the teeth begin to appear. These are called milk teeth.
2. We should clean our tongue with a tongue cleaner to take care of it.
3. Teeth in children are called milk teeth while teeth in adults are called permanent teeth.
4. Four types of human teeth are – Incisors, Canine, Premolars and molars.
5. We should take care of our teeth because they help us to cut, bite and chew different types of food.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

13

Beaks And Claws

- A. 1. (b); 2. (c); 3. (a); 4. (b)
- B. 1. (a) Parakeet; (b) Crow; (c) Vulture; (d) Sunbird; (e) Kingfisher
2. (a) Tuskers; (b) sharp; (c) woodpecker; (d) food
- C. 1. Webbed feet are seen in swimming birds.
2. Long legs in wading birds help them to wade through the muddy water without their feet sinking in the mud.
3. Hunting birds have strong and curved beaks to tear out the flesh.
4. The beak of a bird of prey is strong and curved in shape but the beak of a bird that eats seeds and grain is short, hard and pointed in shape.
5. Pigeons, Sparrows.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

14

Houses, Then And Now

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) thick, high; (b) courtyard, angan; (c) flats (d) wood, stone chips
2. (a) ✓; (b) ✓; (c) ✗; (d) ✓; (e) ✗
- C. 1. Iron, cement and bricks are used to build pucca houses.
2. Because there is not much space in cities, so multi-storeyed apartments are being built in cities.
3. Kachcha houses are built with mud, bamboo, straw and leaves. Cow dung and mud are used to make floor.
4. Old houses had thick walls, high ceilings, big gardens with many trees and had enough open space but modern houses have less open space, no trees, no gardens and they are tall buildings with multiple storeys.
5. Poor people in cities live in slums because they do not have enough money to live in bungalows or flats. Slums are made of bricks, cement and waste materials.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

15

Waste Management

- A. 1. (c); 2. (b); 3. (b)
- B. 1. (a) Reuse; (b) Waste; (c) Biodegradable; (d) Non-Biodegradable; (e) Composting
2. **Biodegradable** – Wastes that rot easily and get mixed with the soil are called Biodegradable.
Non-biodegradable – Wastes that do not rot and mix with the soil are called Non-biodegradable.
3. (a) B; (b) B; (c) NB; (d) B; (e) NB; (f) B

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

16

Animals' Shelters

- A. 1. (c); 2. (c); 3. (a); 4. (b)
- B. 1. (a) ✓; (b) ✗; (c) ✗; (d) ✓; (e) ✓
2. (a) burrow; (b) weaving, knotting; (c) Anthills; (d) lay; (e) den
- C. 1. Animals that live on land are called terrestrial animals.
2. Birds and rabbits make their shelters respectively nests and burrows.
3. A beehive is a shelter of bees.
4. Burrows are useful for rabbits because they provide them shelter from the Sun on hot days and also protect them from harsh winter.

5. Anthills are the shelter of ants, where they live and store their food.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

17

Mapping Our Neighbourhood

- A. 1. (b); 2. (c); 3. (a); 4. (c)
- B. 1. (a) correct; (b) physical; (c) political; (d) water bodies; (e) Landforms, forests
2. (a) ✗; (b) ✓; (c) ✓; (d) ✓; (e) ✗
- C. 1. Four directions are – North, South, East, West. Four intermediate directions are – North-East, South-East, South-West, North-West.
2. A map is a small drawing of a geographical area.
3. Directions, Colours, Symbols and Scale help us to read a map.
4. Long distances are represented easily on maps with the help of scales.
5. Map symbols help us to identify places, boundaries, roads, bridges, etc.
6. Colours help us to identify features quickly and easily on map.

Activity/Project : Do it yourself.

18

Water

- A. 1. (b); 2. (c); 3. (b)
- B. 1. (a) Rain; (b) Tubewells; (c) Typhoid; (d) Filtration; (e) Flood
2. (a) Some water seeps through the soil and is stored under the ground. We call this ground water.
(b) Providing water for growing crops in fields is called irrigation.
(c) An advanced method of filtering water is used, which is called Reverse osmosis.
(d) We cannot drink sea water as it is salty. In some places, salt is obtained from sea water by the process known as desalination.
(e) Impure water can lead to serious diseases such as typhoid, dysentery, jaundice, cholera, diarrhoea and hepatitis. These are called waterborne disease.
(f) Have you ever noticed that when we keep a glass or a bottle of cold water for some time, water droplets formed on the outside of the glass or bottle. This happens due to a process called condensations.
- C. 1. Typhoid, dysentery, jaundice, cholera, diarrhoea and hepatitis.
2. We can trap water and make it dry up under the Sun. As the water evaporates, salt gets left behind.
3. The heat of the Sun changes water into water vapour. This is called evaporation.
4. Condensation is the process through which water vapour changes back into water.
5. Purifying water kills all the germs present in water and makes it clean for us to drink.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

19

Travel Time

- A. 1. (b); 2. (a); 3. (c)
- B. 1. (a) ✗; (b) ✗; (c) ✗; (d) ✓; (e) ✓
2. (a) Yaks, reindeer; (b) hooves; (c) Mahatma Gandhi; (d) Dogs; (e) bullocks
- C. 1. Denomination of coins in India are ₹ 1, 2, 5 and 10.
2. Old coins are useful because by studying the writings and images on the coins, we get to know more about the life of the people who used the coins.
3. We can buy tickets directly from the ticket counter or through the internet.
4. Horses, Camels, Dogs and Bullocks help us to travel from one place to another.
5. We filled a form, stood in queue in one of the counters, paid the money and booked the tickets. The coach number and the berth numbers were mentioned on the tickets.
We bought the ticket by conductor in a bus before sitting on the seat.
When we travel by air, we have to go to the air ticket office to buy tickets. The date of our travel, the time of the flight and other essential information is mentioned on the tickets.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

20

Building Materials And Tools

- A. 1. (b); 2. (c); 3. (a); 4. (b)
- B. 1. Architect; 2. Electrician; 3. Plumber; 4. Carpenter; 5. Painter
- C. 1. An architect draws the plan of a building or a house.
2. Bricks, cement, sand, gravel, iron, steel and wood are needed to build a house.
3. Bricks are made in brick-kilns.
4. Mason, carpenter, electrician, plumber, painter, etc. work to build our houses.
5. Suspension bridges, Beam bridges and Arch bridges are different types of bridges.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

1

Family And Relationships

- A. 1. (c); 2. (b); 3. (c); 4. (c)
- B. 1. (a) cities, country; (b) flood, drought; (c) job; (d) nuclear; (e) festivals, celebration
2. (a) ✗; (b) ✓; (c) ✗; (d) ✓
- C. 1. Neelam and Nitin shifted to a new place due to drought and crop failure.
2. Movement from one part of something to another is called migration.
3. Shivani's sister is moving to Mumbai to live with her husband and his family.
4. Because Noori's father wanted Noori and her brother to go to good school in the city.
5. Drought results in crop failure and left people with no food and money to live with. So, this natural calamity makes it necessary for the people to shift to a new city or town.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

2

Feeling To Read

- A. 1. (b); 2. (c); 3. (a); 4. (b)
- B. 1. (a) sensitive; (b) Louis Braille; (c) Anne Sullivan; (d) The story of My Life.
2. Braille Script – Braille is a system of raised dots that blind people can read with their fingertips. It consists of patterns of raised dots arranged in cells of up to six dots in a 3×2 configuration. Each cell represents a letter, numeral or punctuation mark.
Helen Keller – When Helen was $1\frac{1}{2}$ years old, she lost both her vision and hearing due to illness. It was like entering a different world with completely new rules, and she got very frustrated.
- C. 1. Our senses help us to know and collect informations about the world. They help us to see, hear, smell, touch and taste.
2. Braille script is a reading technique for blind people.
3. Deaf or hearing impaired people communicate through sign language.
4. Helen was such a person who lost both her vision and hearing due to illness is the age of $1\frac{1}{2}$ year old.
When she was 20, she entered Red cliffs college of Harvard University. Her fist book called 'The story of my life' has been translated into 50 languages. She wrote ten more books and a lot of articles.
5. Being friendly with differently-abled people is the best way to help them.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

3

Games We Play

- A. 1. (b); 2. (a); 3. (c); 4. (b)
- B. 1. (a) Mallakhamb (✓); (b) team (✓); (c) snake boat race (✓); (d) kabaddi (✓); (d) indoor (✓)
2. (a) Team spirit – When we play as a team, we should have the right team spirit. This means that all the team members should play for the team and not just to achieve individuals goals.
- (b) International game – The best players from all over the country are selected and they form the national team. The national team then plays with the national team of other countries in international games.
- (c) Mixed doubles – When each team has a male and a female player, it is known as mixed doubles.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

4

Blow Hot, Blow Cold

- A. 1. (b); 2. (b); 3. (a); 4. (c); 5. (a)
- B. 1. (a) blood; (b) carbon dioxide; (c) increases; (d) warm; (e) air
2. (a) **The breathing process :** Taking air in and out of our lungs is called breathing process.
- (b) **Hot breath and cold breath :** Breathing on our hand is hot breath while when we blew it on our hand it is cold breath.
- (c) **Healthy Breathing :** Healthy breathing means to breathe properly and in correct way.
- C. 1. Oxygen helps to break down food materials to release energy.
2. Carbon dioxide is found in the air that comes out of our body.
3. Our lungs are protected by ribcage.
4. We breathe very fast when we do some activity which needs more energy to be done.
5. Our body being warm, the air coming is also warm.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

5

Clean Work, Dirty Work

- A. 1. (c); 2. (b); 3. (b)
- B. 1. (a) important; (b) small, dirty; (c) toilet; (d) cultivates, crop; (e) retailer
2. (a) Street sweepers – The street sweeper does not come for a couple of days, our streets be dirty.

- (b) Mandi – The grains are then loaded on trucks and tractors and sold in a mandi.
- (c) Crop – The farmer cultivates the crop with the help of many people. After months of hard work the crop is harvested.
- (d) Wholesaler – The retailers buy the grain from the wholesaler.

- C.
1. The milkman, newspaper boy do their work regularly in the morning.
 2. To respect all types of jobs equally is dignity of labour.
 3. Gandhiji used to clean his toilet regularly, this shows a great dignity of labour.
 4. Many people cooperate to do many work. This is called division of labour.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

6

Forests And Tribal People

- A. 1. (b); 2. (c); 3. (a); 4. (a)
- B.
1. (a) afforestation; (b) Deforestation; (c) Women; (d) afforestation; (e) Greece
 2. (a) Tribal – Tribals are small groups of families that belong to the same race, speak a common language and live together as a community in or near forests. They are dependent on forests for their survivals.
 - (b) Deforestation – As population increases, there is more and more demand for food. Humans have been cutting down forests and using the land for agriculture and living.
 - (c) Afforestation – Afforestation is one of the steps of the government has taken to protect trees.
 - (d) The Chipko movement – The Chipko movement spread and many villagers began to guard the forests fast for them and hug the trees to prevent from being felled.
- C.
1. Humans have been cutting forests to get wood for making buildings, furniture, paper and firewood.
 2. Small groups of families that belong to the same race, speak a common language, live together in an area as a community, and share a common culture are called tribals. The Sentilese of the Andaman Islands, the Bondas of Odisha and the Madias of Bastar are tribals.
 3. The main occupations of tribals are – collecting fruits, edible berries, roots and tubers from the forests.
 4. Sacred groves are vegetation areas with different types of plants. Cutting down trees, hunting and killing animals in these groves are prohibited.
 5. Because of deforestation, tribal people are losing their occupations and their population is decreasing.
 6. Van Mahotsav is an annual tree-planting festival in India. Its objective is to planting more and more trees to save them.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

7

How Do Animals Find Their Food?

- A.** 1. (a); 2. (c); 3. (c); 4. (a); 5. (c)
- B.** 1. (a) compound; (b) vision; (c) smell; (d) echolocation; (e) snakes; (f) earthworm
2. (a) Eyes of animals – Animals like chameleon have two big eyes on the two sides of its head. It helps them see their prey in the darkness of the night.
- (b) Nose of animals – Animals with poor eyesight usually have a highly-developed sense of smell. A keen sense of smell allows animals to locate food, help them find their way, and locate their young.
- (c) Skin of animals – Animals use their sense of touch as we do. However, they have special features like whiskers which allow them to use their sense of touch further away from their bodies.
- (d) Sleep of animals – Just like us, animals also sleep to take rest and recover their energy. Animals sleep in different ways and for different duration of time.
- C.** 1. Insects have compound eyes.
2. Snakes pick up vibrations from the ground with the help of ear-bone found in their head.
3. The ear-bone of snake helps it to hear.
4. Dog is used to track criminals because dog has a very high sense of smell.
5. A good vision helps birds of prey to see their prey from a long distance.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

8

How Plants Grow?

- A.** 1. (c); 2. (a); 3. (a); 4. (c)
- B.** 1. (a) (iv); (b) (v); (c) (ii); (d) (iii); (e) (i)
2. (a) stick; (b) pollination; (c) cherry, blackberry; (d) Endosperm; (e) explode
3. (a) Reproduction – All living things from their own kinds. The process through which living beings produce little ones of their own kind is called reproduction.
- (b) Dispersal of seeds – Wind, water and animals are some agents that help in spreading seeds to different places, so that the seeds get enough sunlight, air and water to germinate. This process is called dispersal of seeds.
- (c) Embryo – Seeds come in different sizes, shapes and colours. Some can be eaten and some can't. Within every seed lives a tiny plant or embryo.
- (d) Germination – When a seed gets water, air and sunlight, it starts growing into a new plant. This is called germination.
- (e) Vegetative propagation – The process of reproduction in plants which do not use seeds but other parts for reproduction is called vegetative propagation.
- C.** 1. The transfer of pollen grains is called pollination.
2. Pollination takes place through dispersal of pollens.
3. The process of reproduction in plants which do not use seeds but other parts for reproduction is called vegetative propagation.

4. Seeds of plants get dispersed by wind, by water, by humans and animals, and by explosion.
5. When a seed starts growing into a new plant, this is called germination. Water, air and sunlight is required for a seed to germinate.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

9

People Who Grow Food

- A. 1. (b); 2. (a); 3. (c); 4. (b)
- B. 1. (a) ✓; (b) ✗; (c) ✓; (d) ✓; (e) ✗
2. (a) tubewell; (b) production, sale; (c) Rain; (d) diversification; (e) loans, agricultural
- C. 1. People who grow different types of crops, cereals, pulses, vegetables, fruits and cotton.
2. The three main kinds of farmers in India are – Big farmers, Marginal farmers and tenant farmers.
3. The process by which a farmer supplies water to his field is called irrigation.
4. Some irrigation techniques are – tubewells, wells, canals and water sprinklers.
5. Farmers are growing such as kiwi, soyabean, kinoo, parsley, broccoli and cherry.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

10

Food : Storage and Shortage

- A. 1. (c); 2. (c); 3. (a); 4. (b); 5. (b)
- B. 1. (a) Louis Pasteur; (b) bacteria; (c) cold storage; (d) Pickling; (e) Apple
2. (a) (iv); (b) (v); (c) (ii); (d) (i); (e) (iii)
3. (a) cold; (b) Pasteurisation; (c) dried, packed; (d) cold storage; (e) Air tight
- C. 1. We need to preserve food because food gets spoilt due to the action of germs such as bacteria and fungi.
2. We store such as cereals and pulses in air tight containers. Air tight containers do not allow germs to grow and the food remains fresh for a longer period of time.
3. Pasteurisation is a method of storing milk. In this procedure milk is heated at 65 degree celsius for about half an hour. This kills all the germs present in the milk.
4. Potatoes, raw bananas in the Sun, to make papad. This is a traditional method of food preservation. Fruits such as dates, figs and prunes are dried and packed.
5. A situation where there is an extreme shortage of food is called famine.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

11

Digestion and Dificiency Diseases

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

- B.** 1. (a) Vitamin-A; (b) Vitamin-D; (c) tongue; (d) soft, moist; (e) Goitre
 2. (a) calcium; (b) Vitamin-A; (c) Vitamin-C; (d) Vitamin-D; (e) Vitamin-B
- C.** 1. The process of breaking down food into a simpler form that can be used by our body is called digestion.
 2. Pharynx, esophagus, stomach, small intestine, large intestine
 3. The juices of the liver and pancreas also get poured into the small intestine. These juices work on the food and digest it completely. The walls of the small intestine have blood vessels which absorb the nutrients from the digested food.
 4. Everyone must eat a balanced diet. It means a diet rich in proteins, fats, carbohydrates, minerals and vitamins when our food does not have all these constituents, it leads to deficiency diseases.
 5. We can safeguard ourselves against deficiency diseases by eating a balanced diet.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

12

Food for Plants and Animals

- A.** 1. (c); 2. (a); 3. (b); 4. (c)
- B.** 1. (a) chlorophyll; (b) lion, tiger; (c) cow, elephant; (d) lice, bugs and mosquitoes; (e) Grass → Zebra → Lion
 2. (a) chlorophyll; (b) primary consumers, herbivores; (c) lice, bugs, mosquitoes; (d) food chain; (e) parasitic, sugars, minerals
- C.** 1. Some plants eat insects. They are called insectivorous plants. Pitcher plant and sundew are examples of such plants.
 2. The leaves prepare food with the help of chlorophyll, water, minerals and carbon dioxide that is absorbed from the air and sunlight. So leaves are also called the 'Kitchen of the plant' or 'food factories'.
 3. A plant require chlorophyll to make food.
 4. Animals eat plants and other animals. Depending upon their food habits, animals are categorised as carnivorous animals, herbivorous and omnivorous animals.
 5. A food chain described how different organisms eat each other, starting with a plant and ending with an animal.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

13

Different Types of Houses

- A.** 1. (a); 2. (b); 3. (c); 4. (b); 5. (a)
- B.** 1. Do it yourself.
 2. (a) Boat-house; (b) Igloos; (c) Sloping house; (d) Architect; (e) Builder
 3. Do it yourself.
- C.** 1. We need house for shelter and safety.

- Weather of a place affects the kinds of houses we build, because of the different climatic conditions of different places.
- Local building materials are stone, mud and wood.
- Yes, it would affect the cost of building the house, because we have to pay extra for the transportation.
- The houses, we build depend upon climate of the place, building materials available and money available.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

14

Times Of Emergency

- A. 1. (b); 2. (b); 3. (a); 4. (c)
- B. 1. (a) ✓; (b) ✓; (c) ✗; (d) ✗; (e) ✓
 2. (a) Relief; (b) Helicopters; (c) Rehabilitation; (d) Food packets, blankets, medicines; (e) Wars, countries.
- C. 1. When rivers overflow due to heavy rains, floods take place.
 2. When earthquakes take place under deep the sea, they create giant waves that sweep away houses, ships, trees and people in the coastal areas. These are known as Tsunamis.
 3. Richter scale is a measurement on which an earthquake's intensity is measured.
 4. Relief camps are temporary shelters in which the victims of natural disasters live.
 5. Government provides the victims the basic needs like food, clothing, shelter, medicine, etc. in relief camps. These kinds of relief camp and rescue operations are carried out by the government.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

15

Water

- A. 1. (b); 2. (c); 3. (a); 4. (b)
- B. 1. (a) solute; (b) Immiscible liquids; (c) shape; (d) Agriculture; (e) Gharats; (f) water
 2. **Bhandaras** are check dams built across a small stream. It helps to store rainwater. This water outlasts the rains by a few months, thus ensuring supply in the lean season. This is a traditional system found in rural Maharashtra, but most of the bhandaras lie defunct today.
Naulas are found throughout Uttarakhand and are considered sacred by the local communities. A deity is installed at the naula with rituals and pujas. This ensures that people do not pollute the source and water is conserved.
Bamboo drip irrigation is an indigenous method of tapping stream and spring water by making use of bamboo pipes to irrigate plantations in Meghalaya. The bamboo pipes are used to divert water from the springs on hilltops to the lower reach through the force of gravity. This system is known to be 200 years old and was used by the tribal farmers.
- C. 1. Some uses of water are drinking, cooking, bathing, washing, cleaning, etc.

2. Because the people knew the importance of water and to store water they constructed large tanks or step-wells.
3. A baoli or step-well consists of a vertical shaft from which water can be drawn and the surroundings inclined passageways and steps which provide access to the well.
4. Piaoos helped the travellers by providing water to them.
5. Means of irrigation in India are – tube wells, dig wells, channels and water wheels.
6. Because tube wells run on electricity and electricity is available in mostly every part of the country.
7. There is need to conserve water today because humans have cut down trees, built many dams and started polluting all water bodies and that is why we are facing shortage of water.
8. Yes, the local practices of conserving water can help us today.
9. **Solute** : When two substances are mixed and one dissolves in another, a solution is formed. The substance that dissolve is solute. Example : When you mix a small amount of salt in water a solution is formed. Here, salt is the solute.
Solvent : The substance that dissolves the other substance is called solvent. The water is solvent in the above given example.
Solution : When two substances are mixed, a solution is formed. In the above example, a solution of water and salt is formed.
10. **Miscible Liquids** : Liquids that mix with water easily are called miscible liquids.
Immiscible Liquids : Liquids that do not mix with water are called immiscible liquids.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

16

Aquatic Plants And Animals

- A. 1. (b); 2. (c); 3. (a); 4. (a)
- B. 1. (a) habitat; (b) aquatic plants; (c) hydrilla, tape grass; (d) water; (e) amphibians
 2. (a) Hydrilla; (b) Frog; (c) Whale; (d) Fish
- C. 1. To live successfully in different places, both plants and animals have developed special features. These are called adaptations.
 2. The place or surrounding where an animal lives is called its habitat.
 3. A mosquito goes through four stages in its life cycle – egg, larva, pupa and adult.
 4. When a mosquito bites a person suffering from malaria, the germs are also sucked up along with the blood. When this mosquito bites a healthy person, these germs enter into the person's body. In this way, the disease is spread.
 5. We must keep our surroundings and home clean. Garbage bins must be emptied regularly. We must wear full dresses and use the mosquito repellents or mosquito nets to prevent the mosquito-borne diseases.
 6. A fish must have adaptations like a streamlined body, fins for locomotion and gills for respiration to be able to live in water.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

17

Fuel

- A. 1. (b); 2. (a); 3. (c); 4. (b)
- B. 1. (a) Coal or diesel; (b) Diesel; (c) CNG; (d) Petrol or diesel; (e) Petrol
 2. (a) Non-renewable sources of energy – Petrol, diesel and coals are non-renewable sources of energy.
 (b) Renewable sources of energy – Solar energy, wind energy and hydel energy are renewable sources of energy.
 (c) Petrol – Petrol is found deep beneath the Earth’s surface. It has been formed from the remains of plants and animals that died thousands of years ago.
 (d) LPG – The process of refining of petroleum a gas is produced which is called LPG or Liquefied Petroleum Gas.
 (e) CNG – It is compressed and used as a fuel called Compressed Natural Gas (CNG) in vehicles such as cars, buses and auto rickshaws.
3. (a) (ii); (b) (iii); (c) (v); (d) (i); (e) (iv)
- C. 1. The fuel that has been formed from the remains of plants and animals that died thousands of years ago is called fossil fuel.
 2. A place where petroleum is refined from crude oil.
 3. In India, petroleum is found in Asom, Gujarat and Bombay High.
 4. When crude oil is refined by heating in furnace, we get diesel.
 5. Some renewable sources are – solar energy, wind energy, biogas and hydel power.

Activity/Project : Do it yourself.

Value Based Question : Do it yourself.

18

Adventure And Expenditions

- A. 1. (b); 2. (c); 3. (a)
- B. 1. (a) very tough; (b) The Himalayan Mountaineering Institute, Darjeeling; (c) courageous, determination; (d) Darjeeling, mountaineering; (e) mountaineering
 2. (a) ✗; (b) ✓; (c) ✓; (d) ✓; (e) ✗
- C. 1. Some adventure sports are – mountaineering, trekking and river-rafting.
 2. The first people who scaled Mount Everest were – Sir Edmund Hillary and Tenzing Norgay.
 3. 15-years old, Raghav Toneja became the youngest Indian to climb the Mount Everest.
 4. A mountaineer has to tackle avalanches, when chunks of ice suddenly break and fall and other dangers such as snow storms and landslides. All these make the mountaineering so adventurous.
 5. Some mountaineering equipments are – Anorak, gloves, goggles, hammer, snow boot, sleeping bag, rope and helmet.

Activity/Project : Do it yourself.

Value Based Question: Do it yourself.