

ENVIRONMENTAL STUDIES

Grammar & Textbook

Answer Key

CLASS

5

Answers of Environmental Studies Class-5

Chapter 1 Super Senses

In-text Questions

❖ Think and Tell (Pg no. 6)

Ans. Ants have antennae which help them to smell, touch, feel and communicate with other ants. With the help of these super senses, the ant came to know that the other ants were not from its group.

Ans. The guard ant recognised this ant by its smell.

❖ Try this and write (Pg. 7)

Ans. It took almost 15 to 20 minutes for the ants to come.

Ans. One ant came first and then a group of ants came there.

Ans. The ants carried the food and started going away.

Ans. They went to their holes.

Ans. Yes, all of them moved in a line, one after the other.

Now, carefully, without harming the ants temporarily block their path with a pencil.

Ans. Ants climb up the pencil and start moving in a line one after the other in a specific direction.

Ans. Yes, we all are troubled by mosquitoes day and night. Mosquitoes can trace us by the smell of the sole of our feet and heat of our body.

❖ Write (Pg. 7-8)

Ans. Human beings make use of this special sense of smell of dogs in the following ways:

- (1) For catching the criminals.
- (2) For detecting undesirable things such as bombs.

Ans. Yes, we have seen a dog sniffing here and there. It does this to check if any

other dog has arrived in the area by smelling its potty or urine.

Ans. Our sense of smell can be helpful in avoiding accidents in case of a gas leakage, burning of electrical wires, and so on.

Ans. We can recognise animals such as dogs, cats, fish, etc. only by their smell, without seeing them.

I like the smell of	I do not like the smell of
Perfumes and deodorants	Sewage
Incense sticks	Stagnant water
Flowers like rose, etc.	Kerosene oil
Yummy food	Rotten food
Wet soil	Dead and decaying animals

❖ Discuss (Pg. 8)

Ans. Yes, when my father returns home from his office, his clothes smell.

Ans. Yes, I have come across foul smell in a crowded bus and train. This is the smell of body odour or sweat of people.

❖ Think and discuss (Pg. 9)

Ans. Probably, Deepak's nappy is dirty due to potty while her daughter's nappy was dirty due to pee. As the smell of potty is more unpleasant than pee, hence Sushila covered her nose when she cleaned Deepak's nappy, but not when she cleaned her daughter.

Ans. I feel very bad and miserable when I walk near a heap of garbage. Children who spend their entire day picking

things from such garbage may not find it so bad because they have become habitual of the smell of garbage.

Ans. No. A smell is not 'good' or 'bad' for everyone in the same way because it depends on how each person thinks and feels about a specific smell.

❖ **Let's see (Pg. 9)**

Ans. An owl has eyes in front of its head, just like the humans.

Ans. Birds such as crow, sparrow, eagle, pigeon, etc. have eyes on the either side of the head.

Ans. The size of their eyes is considerably smaller as compared to the size of their head.

Ans. As their eyes are fixed, birds move their neck very often so that they can see in both the directions.

❖ **Observing with one or both eyes (Pg. 9-10)**

Ans. I could not see my friend's action without moving my neck.

Ans. Yes, I could see my friend's action now. Looking on things with both eyes is better than looking on them with one eye.

Ans. It is easier to catch a small ball or coin with both eyes open.

Ans. If our eyes were in place of our ears, we could see things only towards our left or right and we could not see things in our front.

Ans. An eagle has a very powerful sense of sight. It can see a roti on the ground from a distance of almost 2 kilometres.

❖ **Write (Pg. 10)**

Ans. List of ten animals whose ears can be seen are :

Dog, Elephant, Sheep, Lion, Cow, Buffalo, Goat, Deer, Cat, Zebra, etc.

Ans. Giraffe, Zebra, Elephant, Cow, Buffalo, etc. are some animals whose ears are bigger than our ears.

❖ **Think and Tell (Pg. 11)**

Ans. Yes, maybe there is a link between the size of animals' ears and their hearing. Animals with bigger ears may have a better sense of hearing than animals with smaller ears.

❖ **Try this (Pg. 11)**

Ans. The sound was sharper when the students put their hands behind their ears.

Ans. Yes, I can hear my own voice.

Ans. Yes, when I placed my ear on the desk, the sound of the tap was sharper.

❖ **Write (Pg. 11)**

Ans. Yes, we can understand the sound of some animals such as cow, dog, cat, sheep, horse, pig, etc.

Ans. Yes, some animals like dog, cow, parrot, cat, etc. can understand our language.

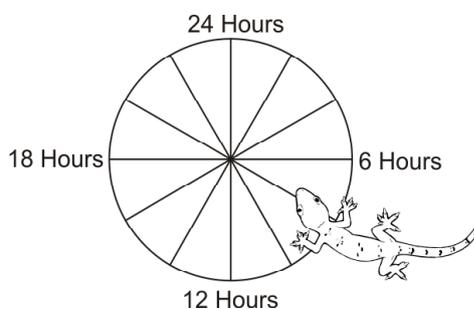
❖ **Communicate through sounds (Pg. 12)**

Ans. We can use sounds such as tick-tick, ping-ping, and so on to give an alarm call when the teacher is coming to the classroom.

❖ **Sleeping-walking (Pg. 12-13)**

Ans. Yes, I have noticed that during the cold season, I cannot see any lizard in the house. I think, it might have moved to some warmer place to protect itself from extreme weather conditions.

Ans.



Ans.

- A cow sleeps for 4 hours a day.
- A python sleeps for 18 hours a day.
- A giraffe sleeps for 2 hours a day.
- A cat sleeps for 12 hours a day.

Ans. (1) Why do these animals have different colours and sizes? (2) What do they eat? (3) For how much time do they sleep? (4) What is the category of these animals? (5) Do they lay eggs or gives birth to its young ones? (6) Are they domestic or wild? (7) How do these animals communicate? (8) Do these animals understand our language? (9) What is the lifespan of these animals? (10) How do these animals help us?

❖ **Risks to Wildlife (Pg. 14)**

Ans. There are several threats to tigers in the jungle. These include hunting these animals for their skin, they are also threatened by lions which are more powerful than tigers, forest fires, destruction of their natural habitat, human interference in the forests, and so on.

Ans. Yes, human beings also pose a threat to animals. Increase in human population has led to the destruction of forests for meeting residential and industrial demand. Humans also kill animals for their horns and skin.

Ans. Yes, today, many animals are killed and their parts are sold. For example, elephants are killed for their tusks, deer are killed for their skin, rhinos are killed for their horns, tigers are killed for their skin, etc.

❖ **Find out (Pg. 14)**

Ans. Other National Parks in India include the following:

- (1) Corbett National Park, Uttarakhand
- (2) Madhav National Park, Madhya Pradesh

(3) Gir National Park, Gujarat

(4) Tadoba National Park, Maharashtra

(5) Dachigam National Park, Jammu & Kashmir

(6) Satpura National Park, Madhya Pradesh

Ans. There are many species of animals and birds found in India. For the protection of these species, the government has established many national parks and wildlife sanctuaries in the country. There are more than 75 national parks and 425 wildlife sanctuaries in India. These are spread on almost 4.5% area of the country in various states of India.

❖ **What We have Learnt ? (Pg. 10)**

Ans. Yes, I have noticed that sometimes singers put their hand on their ear when they sing. I think they do so to avoid external noise and to hear their own voice more clearly. This helps them to give better performance.

Ans. Examples of animals that may have a very strong sense of sight, hearing or smell-

- (1) In case of arrival of a natural calamity, some animals start behaving in a different manner.
- (2) A silkworm can recognise its female moth from many kilometres away by its smell.
- (3) Mosquitoes identify a human being by his smell or heat.
- (4) A dog can sniff and find out whether the another dog has come from another area.
- (5) An eagle flying in the sky can spot an object on the ground from a distance of almost 2 kilometres.

Exercise

1. (c) Five
2. (d) Eyes

3. sense
4. external
5. True
6. True
7. Mosquitoes
8. Some animals like dogs have very developed sense organs, which provide them an extraordinary ability to see, smell, hear, taste and touch. That is why dogs are used in special search operations by the police.
9. Birds can see two different things at the same time because their eyes are on the sides of their head.

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Chapter 2

A Snake Charmer's Story

In-text Questions

❖ **Think and tell (Pg. 19)**

Ans. Yes, I have seen a snake-charmer playing a 'been' in a fair.

Ans. Yes, I have seen a snake with the snake-charmer and also in the field.

Ans. Yes, I was scared by it because I have heard that snakes are poisonous.

Ans. No, all snakes are not poisonous.

Ans. No, the snake cannot hear the 'been' and it dances when the 'been' moves.

❖ **Write (Pg. 20)**

Ans. Yes, I saw animals being used in the circus for the recreation of people.

Ans. I have seen it two years back in my hometown.

Ans. I saw monkeys, lions, elephants, bears, hippos and other animals show.

Ans. Most of the people behaved kindly with the animals in the show.

Ans. Generally, no one was teasing the animals. However, I saw some people throwing empty water bottles at a bear.

Ans. The following questions came to my mind after seeing the animal show:

- (1) Is it fair to exploit the animals for our entertainment?
- (2) How are these animals caught?
- (3) How are they trained?
- (4) Do the circus people treat these animals kindly?
- (5) Is it legal to catch animals and keep them in captivity?
- (6) Would it not be better if all these animals are released and sent back to their natural habitats?

Ans.

- I am afraid when my trainer beats me

if I make a mistake.

- I wish I could be able to enjoy my freedom.
- I am sad when I remember my friends in the forest.
- If I had a chance, I would escape from captivity and run away in the forest.
- I do not like it at all when people tease and bother me.

❖ **Write (Pg. 21)**

Ans. Like snake-charmers, other people which depend on animals for their livelihood include milkmen, fishermen, poultry farmers, tonga drivers, etc.

❖ **(Pg. 21)**

Ans. There is a milkman named Ratanlal, who keeps cows and buffaloes.

Ans. There are 14 animals (9 cows and 5 buffaloes).

Ans. Yes, these animals are kept at a separate place under the shed.

Ans. The entire family of Ratanlal looks after them.

Ans. The animals eat grass and fodder.

Ans. Yes, sometimes the animals fall ill. In such case, Ratanlal (the keeper) takes them to a vet to get them treated.

Ans. (1) Do these animals understand the language of humans? (2) How are these animals helpful to the keeper? (3) What is the monthly cost incurred in keeping these animals?

Ans. I visited a milkman named Ratanlal who keeps animals. I found, that he has 9 cows and 5 buffaloes. He keeps them

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in a separate shed and provides grass, fodder and clean water to them. He obtains milk from cows and buffaloes. He sells it in the market and earns income. The entire family takes care of the animals. Ratanlal takes them to a veterinary hospital in case if they fall ill and provides medical treatment to them.

What we have learnt ? (Pg. 21-22)

Ans. The government has made a law which states that no one can catch and keep snakes. I am in support of this law.

This would prevent cruelty to animals as human beings have no right to keep other animals in captivity. Seizing someone's right to freedom in order to earn some money is not acceptable.

Exercise

1. (c) snakes
2. (b) Animal husbandry
3. (d) 1972
4. Keeping animals in captivity causes the loss of natural habitats of the animals.
5. In the year 1960.

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Chapter 3 From Tasting to Digesting

In-text Questions

❖ Discuss and write (Pg. 25-26)

Ans. My mouth starts watering when I see my favourite food. Following are the things I like to eat, along with their taste:

Things	Ice cream	Samosa	Choco-late	Aam papad	Jalebi
Taste	Sweet	Salty and spicy	Sweet	Sweet and sour	Sweet

Ans. I like different kinds of tastes because only one taste appears boring.

Ans. Yes, only a few drops of something sour are enough to make out its taste.

Ans. Yes, we can recognise things by their smell and taste also, without even seeing them.

Ans. Jhumpa made out the fried fish by its smell. Yes, I can guess some things only by their smell, like- mint chutney, samosas, rice, eggs, fish, etc.

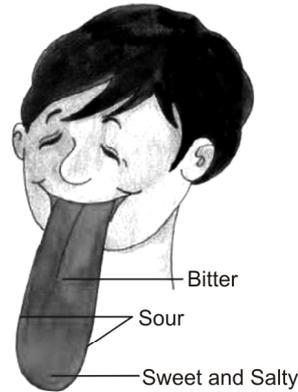
Ans. Yes, my mother told me to hold my nose before taking a medicine. She told me to do so to mask the smell of medicine to some extent.

❖ Observe with Your Eyes Closed (Pg. 26)

Ans. The taste was sweet. The food item was sugar.

Ans. In case of sugar which is sweet in taste, I could get the most taste in the front side of the tongue.

Ans.



Ans. No, I could not get any taste in other parts of my mouth because they do not have taste buds.

Ans. No, I could not taste anything because there was no saliva on the tongue. We get the taste of food only when it gets mixed up with the saliva.

Ans. The surface of the tongue looks rough. Yes, many tiny bumps can be seen on its surface.

❖ **Tell (Pg. 27)**

Food	Taste
Tomato	Sweet and sour
Onion	Pungent
Saunf	Sweet with nice aroma
Garlic	Bitter, with pungent smell

Ans. She might have eaten a chilli.

Ans. Student will attempt themselves.

Expressions and Sounds	Food Items
Tch...tch	Sour items like pickle
Yummy	Sweet items like chocolate, ice cream, etc.
Slurp	Kheer, porridge, noodles

❖ **Chew or chew it well: What's the difference? (Pg. 27)**

Ans. No, the taste did not change much and it is almost the same.

Ans. Yes, there is a change in taste and the food starts tasting sweeter.

❖ **Discuss (Pg. 28)**

Ans. Yes, my mother always tells me to eat slowly and to chew well. I think she says so because chewing food properly helps in swallowing and digesting it easily.

Ans. When I eat a guava, it is hard and tastes somewhat bitter in the beginning, but as I chew it for some time, it becomes soft and tastes sweeter.

Ans. The saliva in our mouth makes the food soft and helps us in digesting it easily.

❖ **Discuss (Pg. 29)**

Ans. When I am hungry, I feel strange sensations in my stomach. I am unable to focus on anything else.

Ans. When I am hungry, I develop a strong urge to eat something. By this, I come to know that I am hungry.

Ans. If I do not eat anything for two days, I think that I will become weak and fall ill.

Ans. No, I will not be able to manage without drinking water for two days. I think, the water that we drink is used by the body for various functions. Excess water in our body is removed in the form of sweat and urine.

❖ **Talk and discuss (Pg. 30-31)**

Ans. Yes, I remember that in Class IV, we made a solution of sugar and salt. I think it is given to someone who has vomiting and loose motions to cope up with the loss of water in the body. As this can lead to dangerous situation such as dehydration.

Ans. Yes, I have heard the word 'glucose' and seen it written on the packets of glucose powder. I have also seen advertisements of glucose powder on the TV.

Ans. Yes, I have tasted glucose. It tastes sweet.

Ans. Once, my grandfather became sick and had to be admitted to the hospital. The doctors gave glucose drip to grandfather to make him recover quickly.

Ans. A lot of sweating takes place when we play outdoor games. This leads to loss of water, sugar and essential salts from the body. This can take away energy from the body. Glucose solution has the capacity to quickly replenish this loss. I think that due to this reason, Nitu's teacher used to tell the girls to have glucose while playing hockey.

Ans. The picture shows glucose drip being given to Nitu. The glucose solution is in the bottle and a tube and needle is used for administering glucose solution to the body.

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❖ **Think and discuss (Pg. 31)**

Ans. Just like Dr. Beaumont, I would also perform experiments using curd, milk and cottage cheese. I would have taken out digestive juices from Martin's stomach and kept equal amounts of curd, milk and cottage cheese in different glasses. I would have checked the time it took to digest each of these food items. I would also have done experiments with various types of milk, such as full cream milk, standard milk and toned milk! If I had performed the experiments using the above mentioned food items, I would obtain the following results-

S. No.	Food item	Time in digestion	Digestive juice in different glass
1.	Milk	2 hrs.	4 hrs. 45 minutes
2.	Curd	1½ hrs.	3 hrs.
3.	Cottage cheese	4 hrs.	6 hrs.
4.	Full cream milk	3 hrs.	4 hrs. 30 minutes
5.	Standard milk	2½ hrs.	3½ hrs.
6.	Toned milk	2 hrs. 15 min.	3 hrs. 20 minutes

❖ **Discuss (Pg. 32)**

Ans. Rashmi is too poor to afford proper food. I think this is the reason she could eat only one roti in the entire day.

Ans. No, I don't think Kailsah would like games and sports because his fat and flabby body suggests that he does not perform any physical activity.

Ans. 'Proper' food means adequate and nutritious food according to one's body requirements.

Ans. I think that the food of Rashmi and Kailash was not proper because Rashmi is too thin as she is not getting enough food, while Kailsah is too fat due to overeating. In addition, he also eats junk food like chips, burgers, pizzas and soft drinks in place of eating homemade nutritious food. These food items are harmful for the body.

❖ **Find out (Pg. 32)**

Ans. My grandparents used to eat nutritious food like fruits, vegetables, dal, rice, milk and so on. They used to do a lot of physical activity. They used to walk two and a half miles every day to go to school. They played many games which involved physical exertion. People have changed in modern times. We do not eat nutritious food and are

inclined more towards eating junk food. We also do not perform physical activities. This has led to obesity and other problems.

Ans. The food we eat and the activities we perform today are different from what our grandparents did. This has led to many problems and diseases.

❖ **Think and discuss (Pg. 33)**

Ans. Yes, I know a few children who live in the nearby slum and do not get enough food to eat the whole day. The reason for this is poverty. They are too poor to afford a proper meal in a day.

Ans. People suffer from starvation when they do not have the money to buy proper food. Many times, natural calamities like drought and floods also prevent access to adequate food.

Ans. If we do not get proper food for a long time, we may fall seriously ill and suffer from various diseases like anaemia, stomach ailments, etc.

Ans. Many times, when food grains are harvested and carried from the fields to the mandis, they are stored in granaries and warehouses for future use.

Ans. Yes, I have heard news related to huge spoilage of food in mandis and godowns.

Ans. Rats and water leakage from roofs in these warehouses spoil the food grains and they have to be thrown away. This wastage can be checked if there are adequate facilities of storing food grains. The people and the government should ensure that food is not wasted because many people in our country sleep with an empty stomach and many children are deprived of their right to food.

Exercise

1. (b) Sweet

2. Saliva
3. Sugar and salt
4. The term 'malnutrition' refers to poor health caused by not having enough food or not getting the right kinds of food. Every child should have proper nutritious food to prevent malnutrition.
5. During the harvest and storage of food grains, pests and leaks can spoil the grains and causes food wastage. This wastage also contributes to the lack of access to the food.

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Chapter 4

Mangoes Round the Year

In-text Questions

❖ **Discuss (Pg. 37)**

Ans. Aman knew that the potato curry had got spoilt because bad smell coming from it gave him the clue.

Ans. Yes, I have seen food that has got spoilt. I knew that it was spoilt due to bad smell and change in its appearance.

Ans. Is she had eaten it, she may have fallen ill.

❖ **Write (Pg. 38)**

Ans. (a) Milk, dal, cooked rice, bread, etc.
(b) Onion, potato, tomato, cake, etc.
(c) Pickle, jam, tomato ketchup, flour, uncooked rice, ghee, etc.

Ans. My friends have also prepared lists with almost similar food items. Most cooked food items get spoil within 2-3 days. Most of the raw vegetables spoil within a week. Most of the dry grains remain fresh for a month or even more.

Ans. No, the list will change according to the season. For instance, during summer season, food will get spoil more quickly than in winter season. During rainy season, excessive moisture present in air facilitates food spoilage.

Ans. We throw spoilt food in the garbage bin.

❖ **Biji returned the bread (Pg. 38)**

Ans. Biji returned the bread because the expiry date printed on the packet of bread had passed.

Ans. She found that the bread had got spoilt from the expiry date which was printed on the packet.

❖ **Find Out (Pg. 39)**

Ans. We can know about the ingredients, price, weight, manufacturing date, expiry date, etc. from what is written on the packet.

Ans. When we buy something from the market, we look for the maximum retail price (MRP), ingredients, nutritional value, manufacturing date, expiry date, etc. on the packet.

❖ **Food Spoilage (Pg. 39)**

Ans. Do yourself.

Ans. These changes have taken place because the bread had got rotten. Spores of fungus present in the air come and grow on the bread when they get conducive conditions.

❖ **(Pg. 40)**

Ans. Food items get spoilt quickly during summer and rainy seasons. Following are some seasons and conditions in which food spoils quickly:

- (1) If we leave cooked food in the open.
- (2) If we do not boil the milk properly.

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- (3) If green vegetables are not kept in the fridge.
- (4) If food is exposed to moisture in the rainy season.
- (5) If cooked food is not consumed at the same time during the summer season.
- (6) If pickles and jams are not packed properly or if they are exposed to moisture.

Food Items	Methods
Milk	Boil it.
Cooked rice	Put in a bowl and keep the bowl in a container with some water.
Green coriander (Dhania)	Wrap in a damp cloth.
Onion, garlic	Keep in a dry open place.

❖ **Write (Pg. 41)**

Ans. This was done to make mamidi tandra (aam papad).

Ans. Because ripe mangoes have less amount of fibre and a lot of juice which provides a rich texture and great taste to mamidi tandra.

Ans. The following steps were involved in the process by which the brothers made the mamidi tandra-

- (1) To make mamidi tandra, they firstly brought a mat, casuarinas poles, string made of coconut husk, some jaggery and sugar.
- (2) Then made a high platform in a sunny spot in the backyard with the help of poles and mat.
- (3) Then they took a vessel and extracted the pulp and juice from the most ripe mangoes and added jaggery and sugar in equal amount.
- (4) They spread the pulp in the form of a thin layer on the mat.
- (5) The thin layer was left to dry under the sunlight.
- (6) They repeated the process day after

day until the layer grew almost four centimetres thick.

- (7) Finally, the layer was taken out after a few days and cut into bite-size pieces.

Ans. In my home, aam papad is made from ripe mangoes and pickle and chutney are made from unripe mangoes.

Ans. Pickles are made of- (1) Mango (2) Indian gooseberry (Amla) (3) Lemon (4) Jackfruit (5) Chilli (6) Carrot.

❖ **Find out and discuss (Pg. 42)**

Ans. Yes, many kinds of pickle like mango, chilli, jackfruit, amla, etc. are made in my house. My mother makes it. She learnt to make the pickle from her mother.

Ans. Things that are required to make a type of pickle include the fruit or vegetable of which pickle has to be made, along with spices, salt, oil, etc.

Recipe to make pickle: To make pickle, we require the fruit or vegetable of which pickle has to be made, mustard oil, chilli powder, salt, ginger, aniseed, fenugreek and preservatives. First, the fruit or vegetable is washed, cut and dried thoroughly in the sun. Then various spices are mixed in it along with oil, and the pickle is stored in an airtight glass container. It is then left undisturbed for a few weeks till it is ready to eat.

Ans. Papad : Papad can be made from urad, sabudana, potato, rice, etc. To make papad from urad, first we boil urad dal and grind it. Then salt and various spices are added to it and dough is made. Small pieces of dough are taken and rolled into thin round shape. These are then left to dry under the sun.

Chutney : The required fruit or vegetable is washed, cut and grinded and then salt and spices are added to it according to taste.

Badiyan : Urad grains are first soaked

in water and then grinded. After this, salt and spices are added. Following this, small lumps are taken and placed on a clean cloth or plastic sheet, which are then left to dry under the sun.

Sauce : To make sauce, first of all we wash and cut tomatoes and onion. We take some oil and add diced onion to it. Then we add some salt and sauté the onion so that it releases liquids. Following this, we add some garlic and then add boiled, peeled and grinded tomatoes. We simmer this for almost 20-25 minutes.

Ans. Pickles and jams do not get spoilt easily when packed in air tight containers and packets. We can carry them along while going on a journey. Other things which do not get spoilt easily are biscuits, dry fruits, sattu (gram powder), curd, rice flakes, corn flakes, puffed rice, puri, dry sabzi, etc. But puri and sabzi should be consumed first, because they may get spoilt, especially during hot summer days!

❖ **What we have learnt ? (Pg. 43)**

Ans. Glass bottles and jars are dried well in the sun before filling them with pickles. This is done in order to remove any moisture present in them. We should remember that the bread/roti in the earlier experiment got spoilt due to the presence of moisture due to which fungus grew on it. The same would happen with pickles if moisture remains in the jars or bottles in which they are stored.

Ans. We can make many things from seasonal fruits and vegetables and enjoy them throughout the year. For example, pickles can be made from various fruits and vegetables, several vegetables like cauliflower can be sun-dried for future use, many items like peda can be made from milk, we can make murabba from amla and apple, and so on. We can also make potato and banana chips and enjoy them throughout the year.

Exercise

1. (b) expiry date
2. (c) week
3. (a) one-third
4. taste, colour
5. transpiration
6. False
7. True
8. **Method of Making Sauce :** Wash and cut tomatoes and onions. Heat oil, add diced onions, salt and saute until they release their liquid. Add garlic and then add boiled, peeled and ground tomatoes. Simmer the mixture for 20-25 minutes.
9. Five perishable food items are milk, lentils, boiled rice, curd, chicken.
10. Pasteurization is a method where packaged and non-packaged food items are heated gently (below 100°C) to kill microorganisms and make them last longer.

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Chapter 5 Seeds and Seeds

In-text Questions

❖ **Discuss (Pg. 47)**

Ans. Apart from gram, we also soak moong, rajma, pulses, rice, dry peas, soyabean, etc. before cooking. All these food items become soft on soaking which makes it easier to cook or grind them.

This, in turn, saves time and energy.

Ans. We eat moong, chana, etc. after sprouting. There is a process for sprouting them. Firstly, they are soaked overnight in water. The next morning, the water is drained out and they are

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kept in a basket or wrapped in a wet cloth so that they may obtain air. After 36-48 hours, we find that chana has sprouted, while moong takes almost 24-36 hours to sprout.

Ans. Doctors and nutritionists usually advice to eat sprouts, as they are extremely nutritious and healthy.

❖ Tell and write (Pg. 48)

Ans. Thus, we find that seeds could sprout in bowl 2 only because in this bowl, seeds could obtain both water and air. On the other hand, we find that in bowl 1, seeds could obtain only water and hence they could not sprout. In bowl 3, both water and air were absent, so the seeds could not sprout in this bowl too.

Ans. Gopal's mother had tied the chana in a damp cloth and hung them so that they could obtain both water and air, which are essential for the process of sprouting.

❖ Draw (Pg. 48)

Ans. Do yourself.

❖ Project (Pg. 48)

Ans. Do yourself.

❖ Find out (Pg. 49)

Ans. It took almost a week for the plant to come out from the soil.

Ans. The height of the plant increased by almost half a centimetre on the second day as compared to the first day.

Ans. The height of the plant increased the most on the fourth day, i.e. 11th January.

Ans. Yes, new leaves came out of the plant every day.

Ans. The stem became thicker day after day.

❖ Discuss (Pg. 49)

Ans. Sesame seeds took the most number of days for the stem to come out of the soil.

Ans. Mustard seeds took the least days to come out of the soil.

Ans. All seeds grow in presence of water,

air and sunlight. However, if these conditions are not met, they would not grow.

Ans. Yes, some plants dried up and became yellow because they did not get the required amount of water and air.

Ans. Plants dry up and become yellow if they do not get the required amount of water.

❖ Straight from the heart (Pg. 50)

Ans. Cotyledons and embryo are present inside the seed.

Ans. The seed germinates and produces a seedling. These seedlings absorb water and nutrients present in the soil and grow into big plants.

❖ Think and imagine (Pg. 50)

Ans. Do yourself.

❖ Find out (Pg. 50)

Ans. Some plants can grow even without seeds. Potato, rose, banana, etc. are examples of such plants.

❖ Think (Pg. 51)

Ans. Yes, I included fennel seed (saunf) and cumin (jeera) in my list.

Ans. The smallest seed is that of cumin (jeera), while the biggest seed is of mango.

❖ Make lists of : (Pg. 52)

Ans. We use several seeds such as cumin, mustard, fennel, etc. in the form of spices.

Ans. Ladyfinger and brinjal are examples of seeds of vegetables.

Ans. Papaya, mango and apple are examples of seeds of fruits.

Ans. When we blow various types of seeds, we find that cumin and fennel (aniseed) are the lightest.

Ans. Muskmelon, pumpkin, cumin and fennel seeds are the flattest.

Ans. We can make several groups of seeds on the basis of edible seeds, seeds from which we can extract oil, seeds which

can float in the air, seeds which can float on water and seeds which can stick to the surface or on our body.

Ans. Children play various games with seeds. For instance, Ashtha-Changa is played with tamarind seeds, while mango seeds are used to make a unique type of flute with which children can play.

❖ **Wandering Seeds (Pg. 52)**

Ans. Yes, I have seen seeds that can fly.

Ans. Do yourself.

Ans. Orchid, cotton, pupa and dandelion seeds travel by flying.

❖ **(Pg. 53)**

Ans. When pods of some plants such as soybean become ripe, they burst and their seeds are thrown out, producing a pop sound.

Ans. If the seeds did not spread out, they would fall in the parent bed itself, leading to struggle among them for water, air and sunlight. Due to this, none of them would be able to develop into plants or survive.

Ans. Different ways by which seeds are spread: (1) Wind (2) Water (3) Birds and Animals (4) Human beings.

❖ **Who came from where? (Pg. 53)**

Ans. Human beings also carry seeds from one place to another. They carry the seeds of plants which they find beautiful or useful and grow them in gardens and orchards. Later, these seeds are dispersed to other places. Many times, we forget that many plants which we find in a particular area did not grow there earlier and these were brought from people arriving from outside!

Ans. Chillies were brought to our country by traders arriving from South America.

❖ **Fantastic Fact (Pg. 54)**

Ans. Many crops such as fenugreek, spinach, radish, mango, orange, banana, etc. were grown in India since a long time ago.

Ans. Yes, mangoes and bananas were grown here.

Ans. Potato, tomato, chilli, coffee, etc. were crops that came to India from other countries.

Ans. Vegetables such as tomatoes and potatoes are used in most of the dishes prepared in Indian kitchens. We cannot even imagine some dishes without them.

❖ **What we have learnt ? (Pg. 54)**

Ans. Seeds need water and air for sprouting. If the seeds do not get water, there would be no change in them. In case if they got water but no air, they would not sprout and only swell up.

Ans. Seeds travel far and wide using different sources. Some plants spread their seeds by animals, some by birds and some spread their seeds by water. Seeds also travel by the action of wind and some seeds are also spread by human beings.

Exercise

1. (c) Both (a) and (b)
2. (b) Potato
3. Seed
4. Seeds
5. Velcro
6. False
7. True
8. Orchids, Dandelions, Willows
9. Germination is the process by which seeds turn into plants.
10. Tomato, Potato, Cabbage

Chapter 6

Every Drop Counts

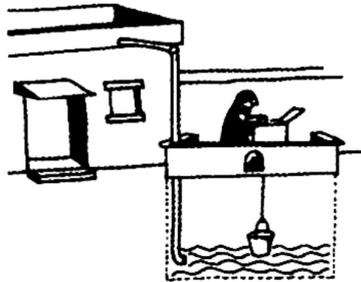
In-text Questions

❖ **Observe and Find out (Pg. 59)**

Ans. While going to school, we come across fields, farms, concrete roads, drains, etc. The area we live in has a flat terrain. When it rains, the rainwater gets collected in drains, pipes and pits. Some of it is also absorbed by the soil.

❖ **Collection of Rainwater (Pg. 60)**

Ans. The path by which rainwater that falls on the roof reaches the underground tank.



❖ **Fantastic Fact (Pg. 60)**

Ans. Many times, we are forced to face shortage of water. One reason for this is cut in the supply of water by the Jal Nigam or water department.

Ans. Earlier, people used to obtain water from wells, step wells, rivers, lakes, bavdis and hand pumps. Nowadays, people obtain water supplied by the Jal Nigam, or from hand pumps and tube wells.

Ans. In earlier times, people used to carry out long journeys with caravans of animals and goods. People felt that it was nice to provide water to thirsty travellers and so they constructed many beautiful step wells. They also made arrangements of piau, mashak, etc. however, today people who travel carry their own water bottles or they purchase packed drinking water.

❖ **Water and Customs related to It (Pg. 61)**

Ans. No, we cannot imagine life without water because it is the very basis of all life forms.

❖ **Storage of Water (Pg. 61)**

Ans. Yes, there are several special pots used to store water at our place. Especially during summers, we use pots made of clay and sand to store water. Water remains cool in them.

Ans. Yes, I have seen the remains of an ancient and beautiful stepwell in the village.

❖ **Find out (Pg. 62)**

Ans. Yes, there is an ancient well near my house. It is beautifully carved and is an architectural marvel.

Ans. It is almost 125 years old and it was built by the local residents.

Ans. There are many residential buildings around it.

Ans. No, the water is not clean. It is not cleaned regularly.

Ans. No one uses its water.

Ans. Yes some rituals such as marriage, birth, etc. are performed at this place.

Ans. There is little water, but it is dirty and not fit for consumption. During the summer season, it gets dried up completely.

❖ **Discuss (Pg. 62)**

Ans. Sources of water get dried up due to several other reasons also. These include extracting water from underground, construction of roads and buildings due to which soil is covered with cement, deforestation, lack of maintenance, etc.

❖ **Water Availability in Present Times (Pg. 63)**

Ans. Today, people living in cities get water

from boring and hand pumps, while people living in villages obtain water from wells and hand pumps. Water department or Jal Nigam also supplies water in towns and cities.

❖ **Discuss (Pg. 64)**

Ans. Today, it is a fact that all the people are not getting enough water. Due to water scarcity, people are forced to buy water. Some people extract water from underground through deep boring. This eventually leads to decline in groundwater level. This practice also deprives other people of water and it also affects the environment in an adverse manner. People can be seen setting up bore wells in their residences in colonies. Some people also extract water from the pipes laid down by the Jal Nigam or water department, which also deprives other people of water. We all experience this in present times.

❖ **Look at this bill and observe it carefully (Pg. 64-65)**

Ans. This bill has come from the Delhi Jal Board.

Ans. Yes, we get a water bill at home. As we live in Delhi, so the bill is sent by the Delhi Jal Board.

Ans. As Delhi Jal Board is a subsidiary of the Delhi Government, so Dilli Sarkar (Government of Delhi) is written under Delhi Jal Board.

Ans. The bill is in the name of SHRI JIT

RAM. They have to pay around Rs. 540/- for each month.

Ans. Yes, we have to pay for water. It amounts to around Rs. 300/- per month. The rate of water is the same in different colonies.

❖ **We Can Do It (Pg. 65)**

Ans. Yes, last year, there was acute water shortage in my village. To solve the problem, villagers made collective efforts and they cleaned up and repaired the pools and wells of the entire village to make them usable again. A lot of garbage was taken out from them. Hard work of the villagers bore fruit and today they are able to fulfil their water requirement from these ponds and wells.

❖ **What we have learnt ? (Pg. 65)**

Ans. Do yourself.

Exercise

1. (c) Jaisalmer
2. (d) Uzbekistan
3. tube wells, hand
4. shortage
5. It is both energy efficient and economically productive, while also being good for the ecosystem.
6. Water conservation means using water wisely and avoiding waste so that we can save it for future needs.

One way to conserve water :

→ Turn off the tap while brushing your teeth. □□

Chapter 7 Experiments with Water

In-text Questions

❖ **Think what would happen if (Pg. 68)**

Ans. Puffed puri will float in water because

it is lighter than water.

Ans. The steel plate will float, while the spoon will sink.

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Ans. The cap of a plastic bottle will float on water.

Ans. Yes, I have seen some things float while others sink in water. Density is defined as a measure of how heavy something is compared to its size. Things with lesser density float, while things with greater density sink in water.

❖ Do this and find out (Pg. 69-70)

Ans. Students may attempt themselves.

Ans. 1. The iron nail sank in water but the katori floats. I think this happened because iron nail could displace lesser amount of water than the katori.

2. The empty plastic bottle floats on water. The bottle filled with water sank because the filled bottle could displace less amount of water than the empty bottle.

3. The aluminium foil floats when it was spread out. When pressed tightly into a ball, it sank. This may have happened because the spread out aluminium foil could displace more water in comparison to its weight.

❖ Is it magic? (Pg. 70)

Ans. Yes, I was able to float my lemon in water containing excessive salt.

Ans. When salt is added to water, its density increases.

❖ What dissolved, what did not (Pg. 71)

Ans. Hamid could stir the mixture thoroughly or warm the mixture over the flame to dissolve the sugar quickly.

❖ Tell (Pg. 72)

Ans. We find that salt cannot be seen after it dissolves in water because it is completely soluble in water. We cannot see it, but the water contains salt.

Ans. No, this does not mean that now the water does not have salt. It cannot be seen because it has completely dissolved in water.

Ans. On one hand, salt gets completely

mixed in water, while chalk powder settles down at the bottom.

Ans. We will be able to separate chalk powder from water by straining with a cloth, while we cannot separate salt from water.

Ans. No, the oil does not get dissolved in the water and it floats on the surface of water.

❖ Racing drops (Pg. 72)

Ans. Water drops slid down quickly, while sugar and oil drops were left behind. This happened because the water drops did not stick to the tiffin like sugar and oil drops.

❖ Where did the water go? (Pg. 72)

Ans. The water got evaporated.

Ans. Chittibabu and Chinnibabu kept their mango jelly in the sun so that the water present in it could evaporate and the mango jelly may dry.

Ans. At my house, papad, potato chips, badis, pickles, etc. are made by drying in the sun.

❖ What we have learnt? (Pg. 73)

Ans. I will squeeze the handkerchief to drain out excess water and then hang it on a rope under the sun. The handkerchief can also be dried quickly by ironing it.

Ans. We add tea leaves, milk and sugar in water to make tea. Out of these, milk and sugar dissolve in water.

Ans. The following ways can be suggested to dissolve the mishri pieces quickly:

- (1) Crush the mishri pieces into fine powder and dissolve it in water by stirring it continuously.
- (2) Dissolve the mishri in hot water while stirring continuously.

Exercise

1. (b) Buoyancy
2. (a) condensation
3. The Dead Sea has a very high salt content (about 300 grams of salt in

every litre of its water) which makes its water very dense and provides more buoyancy (which pushes you up).

4. Three things that sink :

- (i) stone
- (ii) coin
- (iii) iron nail

Three things that float :

- (i) wood
- (ii) plastic ball

(iii) empty bottle

5. Two things that dissolve in water :

- (i) Salt
- (ii) Sugar

Two things that do not dissolve in water :

- (i) Sand
- (ii) Oil

□□

Chapter 8 A Treat for Mosquitoes

In-text Questions

❖ **Find out (Pg. 77)**

Ans. Yes, a friend of mine once suffered from malaria.

Ans. From blood test, he found out that he had malaria.

Ans. He suffered with fever along with chills and rigors. He also became very weak.

Ans. Diseases like dengue, chikungunya, filaria, etc. are caused by mosquito bites.

Ans. Malaria is more common in the rainy season. This is because water logged and damp places provide suitable breeding environment to the mosquitoes.

Ans. We use mosquito repellents and mosquito nets in our house to protect ourselves from mosquitoes. We also ensure that there is no water logging in the surroundings. We keep coolers, tanks, etc. clean. Our friends also do the same to protect themselves from mosquitoes.

❖ **Tell (Pg. 79)**

Ans. Minimum haemoglobin requirement is 12 gm/dl.

Ans. Aarti's haemoglobin went up by 2.5 gm/dl, i.e. almost 30 per cent in around 3 months.

Ans. The newspaper report states that

anaemia is affecting both physical and mental health of the children suffering from it. Due to anaemia, growth of children is retarded and their energy level remains low. This also adversely affects their ability to study.

Ans. Yes, last year, my grandmother got a blood test done. It was because doctors feared that she might be suffering from anaemia.

Ans. It was found that my grandmother was suffering from anaemia.

Ans. Yes, last month, a health check up camp was organised in my school. The doctor told me that I was fully fit and healthy.

❖ **Find out and Tell (Pg. 82)**

Ans. Yes, I have seen posters like this in my school.

Ans. The state and central government puts up such posters and gives ads in newspapers.

Ans. The poster urges the people to remain alert regarding mosquito bite because they spread malaria, dengue and chikungunya. The poster also provides several precautionary measures to keep off mosquitoes.

Ans. Because these become breeding places of mosquitoes if they are water logged and not cleaned regularly.

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❖ Think (Pg. 82)

Ans. It talks about putting fish in the tank because the fish consume the mosquito larvae that have been developing in water.

Ans. When oil is spread on the water, mosquito eggs and larva developing in it die.

❖ Find out (Pg. 82)

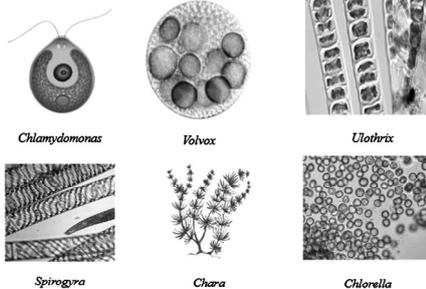
Ans. Flies spread diseases like dysentery, cholera, anthrax, typhoid, and so on. Attracted by dirt, when flies sit on them, they carry the germs along. When they sit on uncovered food, they vomit this dirt on food by which it becomes contaminated. When humans consume such food, they become infected by these diseases.

❖ Tell (Pg. 84)

Ans. Yes, I can see algae in and around the water.

Ans. I have seen algae near the drains, hand pumps, on damp wells, etc.

Ans. They are growing on the side and also in the water. Volvox, Ulothrix, Chara, Chlorella, Spirogyra, etc. are plants that grow on the edges or in the water.



Ans. They have not been planted by anyone and they grow on their own.

Ans. Along with algae, we also find fish, larvae, crabs and prawns in ponds or rivers.

❖ What we have learnt ? (Pg. 85)

Ans. We can take the following steps to ensure that mosquitoes do not breed in our house, school and neighbourhood:

- (1) Not allowing water logging in the surroundings.
- (2) Cleaning the coolers and water tanks from time to time.
- (3) Spraying DDT and kerosene oil in open drains and pits, etc.
- (4) Putting fish in nearby ditches and ponds, as they consume mosquito larva breeding, developing at these places.

Ans. We can find if someone has malaria by conducting a blood test of the patient.

Exercise

1. (c) female mosquitoes
2. (c) rainy season
3. (b) Cinchona
4. (d) 12 gm/dl
5. Algae play a crucial role in the marine food chain—without them, there would be no fish or other sea animals.



Chapter 9 Up You Go !

In-text Questions

❖ Tell (Pg. 89)

Ans. Yes, I have seen the mountains and also climbed a mountain. I saw it last year during the summer vacations when I visited Shimla along with my family.

Ans. I have walked for almost 7 to 8

kilometres at one time and I think that I can walk as far as up to 15 kilometres at a time.

❖ Imagine (Pg. 89)

Ans. The paths on the mountain have a rugged and rocky terrain.



❖ **Tell (Pg. 90)**

Ans. There are many responsibilities of a group leader, and following are the major ones:

- (1) Helping others in carrying their bags.
- (2) Allowing the group to move ahead and keeping to the last.
- (3) Helping those who cannot climb properly.
- (4) Finding a suitable place to stop and take rest.
- (5) Looking after those who are sick.
- (6) Making arrangement of food for the group.

Ans. I would feel very happy and if I were made a leader in such a camp. It would be an honour to be trusted upon for such a challenging job. I would take up my responsibility in a dutiful manner.

Ans. A monitor in my class has to :
 (1) Maintain discipline in the classroom. (2) Arrange important things like chalk, duster, dustbin, etc. (3) Convey the problems of the students to the concerned teacher or headmaster.

Ans. Yes, I would like to be the class monitor as it would be very exciting and help me to develop leadership skills.

❖ **Find out and write (Pg. 91)**

Ans. In order to climb the mountain, mountaineers need various tools like whistle, hook, torch, sling, axe, pitons, stick, rope, and so on.

Ans. A hook and a rope have many uses. These are used to draw buckets of water from the well or pull heavy load upwards. In addition, they are also

used to save people by pulling them through a helicopter during rescue operations.

Ans. We can use a thick rope, sling and pitons if we want to cross a river in the mountains.

Ans. Mountaineers require extra energy because they have to rise up against the gravitational force. Moreover, mountains have a rocky terrain, which makes it challenging to walk on the mountains than on flat or plain land.

Ans. Yes, one of my friends went for trekking in Manali during the last summer vacations. He told that it was extremely adventurous.

Ans. Yes. During the last summer vacations, I went to Shimla along with my family, where I climbed the mountains with the help of rope, sling and pitons. It was really an adventurous experience.

❖ **Tell (Pg. 92)**

Ans. Yes, I climbed a tree some days ago. It was a really exciting experience. Initially I was not scared, but once I climbed the tree and looked down, it felt scary. I thought I would fall down, but I did not.

Ans. Yes, I have seen a friend of mine climbing a wall. In fact, climbing something like a small wall is difficult than climbing a high rock. This is because the surface of a wall is flat and smooth, while the surface of a rock is rough and irregular, due to which one may climb it while placing his hands and feet on the rock.

❖ **(Pg. 93)**

Ans. Yes, a few days back, a student from Kerala joined our class. As Malayalam was his mother tongue, I could not understand his language and he could not understand mine. We talked to each other using body and hand gestures, which was very exciting.

Ans. Yes, I have lost my way several times in the past. Then I requested the local residents to help me in finding out my way.

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Ans. I think Khondonbi probably did this to send an audible signal to the group.

Ans. Yes, once, while climbing a high swing, me and my friends were shouting and yelling in order to overcome our fear and also owing to excitement.

❖ Try This (Pg. 93)

Ans. Students may attempt themselves.

❖ Discuss (Pg. 94)

Ans. I think, a drain was dug around the tent to keep off insects like scorpions and reptiles such as snakes.

Ans. River rafting, skydiving, gliding, rowing, bungee jumping, paragliding, hiking, etc. are other activities that can be called adventure, besides mountaineering. These are popular among people who want to do something adventurous.

❖ Imagine and write (Pg. 94)

Ans. I am on a mountain and feeling extremely excited after climbing it. I can see high mountains all around. There are many trees covered with snow. The entire landscape appears very beautiful and I feel great.

❖ Think (Pg. 95)

Ans. Bachhendri Pal glorified our nation and hoisted the Tricolour on the mountain peak to honour our country.

Ans. National flag is hoisted on national festivals like Republic Day (26th January) and Independence Day (15th August) celebrated every year. It is also hoisted on other moments of national pride.

Some important facts about the Tricolour or Tiranga:

- The national flag of India consists of three colours and the Ashok Chakra in the middle. The saffron colour stands for courage and sacrifice, the white colour stands for truth, peace and purity, and the green colour stands for prosperity.
- The width to length ratio of our flag is 2:3. The three strips of the flag should

be in equal proportion.

- The Indian flag was adopted on July 22, 1947, shortly before India gained independence.

Ans. Students may attempt themselves.

Ans. Yes, I have seen the flags of many other countries in the embassies located in New Delhi.

❖ What have we learnt? (Pg. 96)

Ans. Mountains offer various challenges such as rocky and rough terrain, high altitude, lack of oxygen, etc. which make mountaineering a bit difficult and challenging. If I were to climb a mountain, I would do a lot of practice before going for the expedition and carry various things like mountaineering equipment, food, medicines and oxygen cylinders on the expedition.

Exercise

1. (a) It rises prominently above its surroundings.
2. (c) Uttarakhand
3. The Lure of Everest
4. 1947
5. True
6. False
7. Bachhendri Pal
8. Few uses of Hook and Rope are :
 - Climbing and Mountaineering
 - Lifting Heavy Objects
 - Boating and Sailing
 - Camping
9. The flag's width to length ratio is 2:3, with all three stripes being equal in size.
10. Five landforms found on planet earth are :
 - (i) Mountains
 - (ii) Hills
 - (iii) Valleys
 - (iv) Deserts
 - (v) Plains



Chapter 10 Walls Tell Stories

In-text Questions

❖ **Think (Pg. 99)**

Ans. Bastions (burj) were made to ensure the safety of the fort. These are even higher than the wall. Thick walls, huge gates and so many bastions ensure the better safety of the soldiers.

Ans. Big holes were made in the bastions to increase the viewing area.

Ans. Bastions at a height provide a vantage point from where a large area could be seen and monitored, which would not have been possible from a straight flat wall. Soldiers could look through these and could keep a better vigilance and plan their attacking strategy in case of an external invasion.

❖ **Think and discuss (Pg. 100)**

Ans. These fountains probably obtained water supply from a huge reservoir or tank.

Ans. Large windows, doors and ventilators allowed fresh air and sunlight to enter inside the building.

Ans. Chisels and hammers made of iron would have been used for such fine carving.

❖ **Identifying Directions (Pg. 101)**

Ans. Sun rises in the east and sets in the west. I am standing in the classroom right now. The main gate of the school is in my east and the playground is in my west. There are other classrooms in my north and the principal's office in my south.

❖ **Tell and write (Pg. 102)**

Ans. (a) Katora Hauz is in the north of Bodli Darwaza.

(b) In the south direction.

(c) From Bala Hisar, we can take the east direction to reach Moti Mahal.

(d) Nine gates are visible on the outer walls of the fort.

(e) There are five palaces in the fort.

(f) Five baolis and two hauz are there in the fort for supplying water.

Ans. 1.8 cm, 880 metres

Ans. Makai Darwaza is at a distance of almost 1000 metres from Fateh Darwaza.

❖ **Discuss (Pg. 103)**

Ans. Yes, recently Russia waged a war against Ukraine.

Ans. The main reason behind this conflict is because Ukraine acceded to NATO (North Atlantic Treaty Organisation), which would go against Russia's wishes and continue to endanger its security.

Ans. This war has witnessed the use of ultramodern weapons such as grenades, launchers, flamethrowers, rocket launchers and recoilless rifles, ATGMs, anti-tank mines and so on.

Ans. As the war continues, there has been huge loss of life and property and has led a severe economic crisis across the world.

❖ **Find out (Pg. 103)**

Ans. Yes, I have seen many things like medals, statues and decorative items made of bronze.

Ans. There are many idols, statues and decorative items made from bronze, which are still used in my house. Things made from copper are reddish-brown in colour, those made from brass are yellow in colour and things made from bronze are shiny grey-black in colour.

❖ **Making Arrangements for Water (Pg. 103-104)**

Ans. Bullocks are being used to lift water.

Ans. When the bullocks move, the

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drum attached to the rod moves in anticlockwise direction.

Ans. The 'toothed wheel' will move in clockwise direction.

Ans. The bullocks move the drum, which moves the toothed wheel. The garland wheel is connected to this wheel through a rod. Therefore, as the toothed wheel moves, it rotates the garland wheel, and in this manner, water is lifted from the well.

Ans. Yes, by using this technique the tanks could have been filled up by lifting water from the wells.

Ans. Yes, I have seen such wheels attached to each other mechanical watches, clocks, heavy machines, sewing machines and in generators.

Ans. Nowadays, water is pumped up from the ground to higher places using boring machines, windmills, etc. However, in villages, traditional methods like bullocks are used for drawing water.

Ans. Water is pumped up using electric motor pumps, windmills, etc. The electric motor pumps up groundwater through tube wells. In absence of electricity, water can be obtained using bullocks, windmills, buckets and ropes.

❖ **Travelling Back in Time (Pg. 105)**

Ans. The Sultan is holding a meeting with his ministers. He is wearing elegant dresses and precious jewels. Many types of delicacies including sweets, drinks and Mughlai cuisine are being served to him. What worries him the most was the threat of external invasions on the fort. He is talking in Persian language.

Ans. The Sultan's palace is grand and beautiful. The rooms are decorated with beautiful carpets and curtains. Fountains are there on the terrace and sweet smell of rose and chameli blooming in the garden make the place heavenly.

Ans. Various factories making clothes, utensils, idols, decorative items and arms and ammunition can be seen functioning in the town. At an average, 20 to 25 workers are engaged in making different goods in each of these factories. They are wearing simple clothes and work from morning till late in the evening.

Ans. Craftsmen engaged in the task of carving stones into beautiful idols and other objects use tools like chisel and hammer. They cover their mouth with a cloth to avoid dust that is produced during the work.

❖ **Write (Pg. 106)**

Ans. I have seen pots made of steel, copper, iron, aluminium and plastic.

Ans. In their time, my grandparents used pots and pans made from brass, clay, iron and copper.

Ans. Yes, I have been to a museum located in my town. Antique items of historical importance are kept in the museum.

❖ **Survey and write (Pg. 106)**

Ans. Yes, there is an old tomb near my locality. Many people come to visit it.

Ans. Yes, I have seen an old monument. Once, I visited Agra and saw the Taj Mahal. I felt as if it was narrating the story of its time. It told about the culture, customs, rituals and traditions of those times.

Ans. It is almost 350 years old. I came to know about this by reading history books. This was also mentioned in a inscription present there.

Ans. It is made from marble.

Ans. It is white in colour.

Ans. Students may attempt themselves.

Ans. Nobody lived there in olden days.

Ans. Taj Mahal is a mausoleum where graves of Mughal Emperor Shah Jahan and his queen Mumtaz Mahal are placed. Prayers were offered here.

Ans. No.

❖ **Observe the painting and tell (Pg. 107)**

Ans. In this painting, workers can be seen affixing bricks and carrying things and water for construction.

Ans. Four women and thirty-six men have been shown working.

Ans. Workers can be seen carrying a huge pillar along the slope because it is easier to carry heavy things in this manner.

Ans. Yes, one man can be seen carrying water in a special leather bag called 'mashak'.

❖ **What we have learnt ? (Pg. 107)**

Ans. Antique items kept in a museum help us know about the culture, rituals, customs and traditions of contemporary times. As we can learn a lot from museums, it is important to have a museum.

Ans. This chapter is aptly named "Walls Tell Stories" because it focuses on ancient monuments which are witness to ancient art, culture, science and technology and because their walls appear to be narrating the stories of those times.

Exercise

1. (c) Telangana
2. (d) 1687
3. (d) Bastions
4. (b) mud
5. fountains
6. north
7. There are five palaces, five baoris (step-wells) and two hauz (water tanks) in Golconda Fort.
8. In the past, Golconda was a lively town. The Sultan often met with his ministers, dressed in elegant clothes and adorned himself with precious jewels. He enjoyed a variety of foods. The Sultan's palace was magnificent, with rooms decorated with beautiful carpets and curtains. The terrace featured fountains, and the sweet scents of roses and jasmine from the garden made the place feel magical. The town was bustling with factories producing clothes, utensils, idols, decorative items and weapons.

□□

Chapter 11 Sunita in Space

In-text Questions

❖ **Straight from the heart (Pg. 110)**

Ans. The earth looks like a sphere in shape.

What do you think? (Pg. 111)

Ans. Due to the gravitational pull from the earth towards itself, we won't fall down.

Ans. People don't stand upside down in any part of the earth, including Argentina.

❖ **Look at the photograph and write (Pg. 112)**

Ans. Sunita's hair was standing because she was in space, and there is zero gravity which makes everything float.

Ans.

Date	Event
09-12-2006	The spacecraft is taking off
11-12-2006	Astronauts are floating inside the spacecraft
11-12-2006	Astronauts are having food
13-12-2006	Sunita is in her work mode
16-12-2006	Sunita is roaming outside the spacecraft

❖ **Now say (Pg. 113)**

Ans. No, I am not able to sit in one place. Everyone seems to be floating inside the spacecraft.

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Ans. My hair too seems to be standing up.

Ans. My books and bags floating inside the spacecraft.

Ans. My teacher is floating inside the spacecraft and trying to catch the chalk, which is also floating.

Ans. To eat our food, we had to grab the food items and have them. The water was in the form of blobs we had to suck them in. The ball which we threw up was also floating.

Wow...It's amazing! (Pg. 113)

Ans. Due to the zero gravity in space, Sunita's hair kept standing.

Ans. The earth has a gravitational force, and due to the earth's gravitational force, the water flows down the mountain.

❖ Look at this photograph and tell (Pg. 115)

Ans. Yes, I can see India on the globe.

Ans. Yes, I can recognise Sri Lanka on the globe.

Ans. Blue colour on the globe indicates sea (water).

Ans. No, it is difficult to identify these countries since no particular country can be visible from space.

❖ Look at the globe in your school and tell (Pg. 115)

Ans. Yes, we can easily find India.

Ans. The blue-coloured part is the sea.

Ans. I can see all the countries like India, USA, Australia, South Africa, China, Germany, Europe etc.

Ans. Yes, I can see all these countries.

Ans. Apart from the sea and countries, I can see islands, mountains, etc, on the globe.

Ans. Do Yourself.

❖ Look at the map of your country and tell (Pg 116)

Ans. Student will do themselves.

Ans. Students will do themselves as per their state name.

Ans. Yes, I have been to Uttar Pradesh, Madhya Pradesh, Telangana, Goa and Kerala.

Ans. I think these lines are just on the map and not for real.

❖ Sky Watching (Pg. 117)

Ans. To hide the moon completely, we have to keep the coin at a distance of 25 centimetres away from the eye.

❖ Think (Pg. 117)

Ans. I think the moon is round like a ball.

Ans. Students will do themselves.

❖ Find Out (Pg. 118)

Ans. The next full moon is on 25th of this month. It rises just after the sun sets. The moon looks like a complete white circle.

Ans. Festivals related to the moon are Karwa Chauth, Ganesh Chaturthi, Eid etc.

Ans. (i) At night, I could see the moon and the stars.

(ii) Yes, I saw something moving in the sky. Maybe it is a shooting star since it crosses off faster. In case it is a satellite; it would move very slowly.

❖ Look at the table and tell (Pg. 118)

Ans. On 28th October, the moon came out at 16 minutes past 7 o'clock.

Ans. On 29th October, the moon came out at 17 minutes past 8 o'clock.

Ans. On 29th October, there was a difference of 1 hour and 1 minute in the time of the moon rise (as compared to 28th October).

Ans. No, the moon rises at different times on different days.

Ans. No, I have not seen the moon at 12 in the afternoon. Due to the dominating sunlight we cannot see the moon or stars during the day.

❖ What we have learnt? (Pg. 120)

Ans. Due to the gravitational force of the earth, children slide down and cannot slide up. If this slide was in Sunita's spacecraft, then children would not enjoy it since there is zero gravity and children cannot slide; instead, they would float.

Ans. We see stars only at night because there

is no sunlight at night.

Ans. Humans have created boundary lines; indeed, it's not nature. So from space, we cannot identify a particular country or a city; just for human understanding, they have drawn the lines and separated the countries.

Exercise

1. (c) 1969
2. (a) blobs
3. (b) spaceship
4. vacuum

5. gravity

6. curved

7. Sunita Williams had come to India to fulfill Kalpana's dream.

8. Sunita Williams shared her experiences of living in space :

(i) She explained that in space, they couldn't sit because they kept floating.

(ii) In space, people don't comb their hair because the hair always stands up.

□□

Chapter 12

What if it Finishes.....?

In-text Questions

❖ **Look at the picture and write (Pg. 124)**

Ans. I can see vehicles like cycle, car, mini-bus, bus, scooter, yachts and boats.

Ans. Cycles do not need any fuel, but other vehicles shown here need petrol or diesel as their fuel.

Ans. The vehicles such as cars, buses, motorcycles and auto rickshaw give off smoke.

Ans. The cycle and rowing boat run without petrol and diesel.

Ans. It may cause accidents.

❖ **Tell (Pg. 124)**

Ans. Yes, I ride a bicycle. I use the bicycle to go to the market and playground.

Ans. I come to school by bus.

Ans. My father goes by car, and my mother goes by scooter.

Ans. Smoke coming from vehicles can cause nausea, cough, lung diseases, headache and skin allergies.

Ans. Noise coming from vehicles cause loss of hearing, hypertension, insomnia and so on.

❖ **Find out and discuss (Pg. 125)**

Ans. Andhra Pradesh, Gujarat, Maharashtra and Assam have oil fields.

Ans. Besides oil, many minerals are found deep inside the earth; such as coal, gold, iron, copper, diamond, potassium, magnesium, bauxite, etc

Ans. Students should do themselves with the help of teachers.

Ans. We should use petrol and diesel judiciously because they are limited which will soon get exhausted and these also pollute our environment.

❖ **Write (Pg. 126)**

Ans. Vehicles can run on petrol, diesel, LPG, solar energy and battery.

Ans. If the number of vehicles keeps on increasing, it will lead to many problems, like traffic increased on the road, air pollution, noise pollution and accidents.

Ans. Buses are over crowded, hence, people want to avoid them.

Ans. People should prefer public transport like buses, trains, etc., and people should use carpools to avoid problems arising out of the growing number of vehicles.

Ans. It will save fuel if we switch off the engine of the vehicles at the red light on the road.

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❖ Find out and write (Pg. 127)

Ans. Scooter Car Tractor

8 litres 50 to 60 50 litres

40 km 18 km 10 to 12 km

❖ Look at the table and answer the questions (Pg. 127)

Ans. In 2014, as compared to 2007, the rate of petrol went up by 23.34 rupees. The rate of diesel increased by 28.49 rupees.

Ans. The difference in the rates of petrol from 2002 to 2007 is 13.61 rupees, and diesel is 11.57 rupees. The difference from 2007 to 2014 is 23.34 rupees, and diesel is 28.49 rupees.

Ans. The price of diesel in 2007 was ₹ 30.48 per litre and ₹ 58.97 per litre in 2014 whereas the price of petrol in the year 2007 was ₹ 43.52 per litre and ₹ 67.86 per litre in 2014.

❖ Find out (Pg. 127)

Ans. From year 2014 to 2017 the difference in the price of petrol is decreased by ₹ 2.95 per litre and the price of diesel decreased by ₹ 4.27 per litre.

Ans. The price of petrol in area is ₹ 84.46 per litre, and the price of diesel is ₹ 66.84.

Ans. The prices of petrol and diesel are going up because their production is limited while consumption is increasing day by day.

Ans. It depends upon the distance we travel. It is used for vehicles.

❖ See the poster and write (Pg. 128)

Ans. Oil is used for dry cleaning, lighting, as fuel for automobiles and aeroplanes, making plastic and paints, running machines, and as kerosene and LPG.

Ans. Diesel is used as fuel in cars, buses, trains, generators and to operate machinery.

❖ Think and discuss (Pg. 129)

Ans. If petrol and diesel are not available for a week, become difficult for everyone to travel and to do work in industries.

Ans. Some of the measures to save oil are listed below.

– Switch off the engines of vehicles at the red light on the road.

– Use more public transport than private.

– Use of alternative energies like solar and biogas.

– Prefer walking or cycling for shorter distances.

❖ Discuss (Pg. 129)

Ans. Yes, I have collected dry wood to make bonfires during winter. I have never made cow dung cakes but have seen them in villages. Hay is mixed with cow dung, and the mixture is given a circle shape and is sun-dried to make cow dung cakes.

Ans. Yes, I have seen some people in villages collecting dry wood or leaves for lighting a chulha.

Ans. My mother cooks food in my family. In other families, women usually cook. In some families, servants also cook.

Ans. The smoke from wood or cow dung creates many difficulties like lung diseases, headache, eye burning, nausea and cough.

Ans. Yes, Durga can use cow dung instead of wood.

❖ Change in fuel-use over 20 years (Pg. 130)

Ans. 84 houses.

Ans. Electricity

Ans. 10, 18, 80

Ans. 5 houses

Ans. Coal was used the least in 1996. In 1976, it was used in 5% of houses.

❖ Find out from your elders (Pg. 130)

Ans. When they were young, coal, firewood and cow dung were used for cooking food at home.

Ans. In the past 10 years, the use of LPG and electricity has increased. The use of cow dung cakes, coal and wood has decreased.

Ans. In the next 10 years, the use of LPG

and electricity will increase. The use of cow dung cakes, coal and wood will decrease.

❖ **What we have learnt ? (Pg. 131)**

Ans. I will design a vehicle which is environment friendly. It will run on solar power, and the energy section of society will be able to easily access the vehicle.

Ans. (a) Old people – Low floor, seat belts.

(b) Children – Low floor, closed doors, grills on windows.

(c) Those who cannot see – Tactile sensors at gates and on grab handles near the seats.

Ans. Students should try themselves.

Ans. Following are the slogans to make poster :

“Oil is precious, Save it.”

“Save oil and Save world.”

“Every drop of oil is precious.”

I will pull up this poster on outer wall of my school.

Exercise

1. (c) transportation
2. (c) Both (a) and (b)
3. (b) LPG
4. True
5. True
6. 1. (c), 2. (d), 3. (a), 4. (b).
7. A refinery is a factory where raw materials like crude oil are processed and purified to make useful products like kerosene, diesel, petrol, engine oil, and fuel for aircraft, etc.
8. Some important products made from petroleum are petrol, diesel, kerosene, LPG, lubricating oil, paraffin wax, petrochemicals etc.
9. Different uses of fuel are :
 - (i) Transport
 - (ii) Cooking
 - (iii) Industry
 - (iv) Electricity Generation
 - (v) Heating
 - (vi) Space and Air Travel
10. In India, about two-third of people use upla (cow dung cakes), wood and dry turigs for cooking, heating during winters, warming water and lighting.

□□

Chapter 13 A Shelter so High !

In-text Questions

❖ **Find out (Pg. 136)**

Ans. We pass through states like Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Haryana, Punjab, Himachal Pradesh and Jammu and Kashmir when travelling from Mumbai to Kashmir.

Ans. Gaurav Jani, when going from Mumbai to Delhi, would have passed through Maharashtra : Mumbai, Gujarat : Gandhinagar, Rajasthan : Jaipur and Haryana : Chandigarh, so some of the big cities on his way would

be Ahmedabad, Jaipur, Chandigarh, etc.

Ans. Manali is a hilly area, and it is situated in Himachal Pradesh.

❖ **Tell (Pg. 136)**

Ans. Yes, I stayed in a tent when I was on vacation to Manali. It was a thrilling experience for me.

Ans. I would carry things like blankets, clothes, food, repellents, water, a protection guard, a first aid kit, a

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camera, a torch, woollen clothes, shoes etc.

Ans. I have seen different types of houses like cave houses, castles, apartments, single-family detached houses, carriages etc.

❖ Write (Pg. 138)

Ans. During winters, Tashi and his family live on the ground floor because their ground floor has no windows, which would keep them warm from the outside weather.

Ans. My rooftop is flat in shape. We use the rooftop for drying clothes, storing food items, etc. During summer, we sleep on the rooftop since it is hot inside the house.

❖ Find out (Pg. 138)

Ans. I live in a place which is situated at the height of 350 metres above sea-level.

Ans. The air usually becomes thinner to breathe when going to high altitudes. Hence, the oxygen level would have gone down, so Gaurav Jani said so.

Ans. Yes, I have been to Manali, a hilly place located in Himachal Pradesh.

Ans. It was at a height of 1927 metres above sea level. Yes, breathing became difficult when I reached a height of 1654 metres.

Ans. The highest place I have been to is Keylong pass.

❖ Write (Pg. 140)

Ans. Yes, my pet dog is an important part of my life.

Ans. Five ways in which different animals are a part of life are :

- Cow : It produces milk.
- Ox : It helps the farmers in ploughing.
- Sheep : Its fur is useful in making woollen clothes.
- Dog : It protects and guards our house.
- Camel : It is used to ride in deserts.

Ans. Students should do themselves with the help of teacher.

❖ Find out (Pg. 140)

Ans. In India, the cities which drop below 0°C are Dras, Siachin, Lachen. Thangu valley etc. Abroad, places like Vostok, Etowah, Minnesota etc., see a drop in temperature below 0°C. This usually happens in the month of December and January.

❖ Tell (Pg. 143)

Ans. Yes, there are different types of houses in the locality I live in. Depending on the budget, people have built their buildings—very rich people have constructed bungalows, middle-class people own an apartment and poor people build huts.

Ans. Yes, my house has a sloping roof. When it rains heavily, the water slopes down the roof. We also have a courtyard at the back of the house to dry things.

Ans. Materials required to build my house is mud, brick, cement, glass, wood, stone, etc.

❖ Discuss and write (Pg. 143)

Ans. Similarities :

- They live in the mountains of Jammu and Kashmir.
- They keep moving from one place to another.
- They earn their livelihood by selling the fur obtained from these animals.
- They eat the meat of animals like sheep, yak, goats, etc.

Differences :

- The Bakarwal people graze any type of goat or sheep at any place. And stay at low altitudes only.
- But Chagpas graze only special types of goats at high altitudes

because their wool is very soft, which is very costly. They live at high altitudes only.

❖ **What we have learnt ? (Pg. 144)**

Ans. The shelters are built as per the needs of the people who live there. The houses which are built using stone and wood provide good warmth during the winter season. Houses on water, i.e., the boathouse provide all the comforts required by the occupants. Tents which are built at high altitudes by the Changpas are good for people who keep wandering a lot.

Ans. The houses which we live in are built as per our requirements and depend on the weather conditions. We use cement, bricks, stone, wood, etc., to construct a house. But in the case of Changpas or Bakarwal people, they build tents and

keep wandering. Hence, our houses are different from theirs.

Exercise

1. (b) wool
2. Rebo
3. (d) Kargil
4. (b) 5000 metres
5. (a) Srinagar
6. Dal
7. rainfall
8. Lekha
9. Gaurav Jani is a renowned biker who founded a bikers club named 60 KPH Club in India. His bike is named the 'Loner'.
10. Travelling brings you in contact with people from different cultures, places and lifestyles, helping you form new friendships and learn from others.

□□

Chapter 14 When the Earth Shook !

In-text Questions

❖ **Discuss and write (Pg. 149)**

Ans. No, but I heard it on the television news.

Ans. In such difficulty, many people like people from neighbouring states, military forces, doctors and political leaders helped them.

❖ **Discuss (Pg. 150)**

Ans. Many people came from cities to Jasma's village. Some of them were from non-government organisations, some of them were scientists, and some of them were doctors and medical personnel.

They have helped the people of the village by bringing in much-needed relief. They brought food, clothes, and medicines. The scientists wanted to identify areas which were more prone to get earthquakes.

Doctors and medical personnel provided first aid to the people who got injured.

Ans. The engineers gave suggestion to build houses with specific designs so that there would be least damage in case of an earthquake. So, these houses would be safer in case there is an earthquake again.

Ans. In case an earthquake in my area, my house would definitely be in danger. The worst is the possibility of the roof collapsing.

It can also damage household items and cause injuries to us.

Ans. To save pet animals during a natural disaster, we should tie them in open field, provide water and food. We

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should also provide them safety by covering their shed.

❖ **Write (Pg.150)**

Jasma's House	Your House
Clay, Cowdung and mirror	Bricks, cement, sand, iron

❖ **Write (Pg. 151)**

Ans. Yes, there was a seminar on what to do in case of an earthquake. We were told to go to an open area. If someone is unable to go to an open area, than they can hide under a table and hold it firmly.

Ans. In case of the collapse of a house during an earthquake, the table can save the person from injury. Hence one should go under a table during an earthquake.

❖ **Write (Pg. 152)**

Ans. People do not die because of the earthquake, but they may get injured or die because of house collapse. So, if the buildings are made earthquake - proof, then there will be least damage in case of an earthquake.

Ans. At such times, people will need tents to prepare huts and basic needs like cloth, food, water and medicines etc.

❖ **Whose help will be needed?**

- Ans.** 1. Dog
2. Doctors
3. Government organisation
4. Non-government organisation
5. Labourers

How will they help?

To smell out where people are lying trapped.

To provide first aid and medical care.

To provide required relief measures.

To provide required relief measures.

To help the people to prepare their homes.

❖ **Discuss (Pg. 152)**

Ans. Yes, I have seen people helping each other during accidents.

Ans. People live together in a neighbourhood to share their happiness as well as to help each other in difficult times.

Ans. It would definitely be a difficult situation, the festivals and special days would be boring without anyone. Of course it would be very scary.

Ans. Students should do themselves.

❖ **Your news report (Pg. 152-153)**

Ans. Gwalior, 2 April 201_

A major fire broke out on yesterday evening at 6.45 pm in Tekanpur. The fire had spread to about 200 jhuggies.

About 200 people got severe injuries and 10 people died on the spot. The house and the belongings of the people were completely burnt and destroyed. A huge loss had been estimated and many people have lost their jobs.

Three fire brigades have been called for extinguish fire. It took two hours to stop the fire. The government has declared to provide ₹ 1,00,000 to the family members of the deceased and ₹ 50,000 to the injured people and also gave instructions for the inspection of accident took place.

Ans. Madhya Pradesh hit by drought

02 July 2004, Bhopal

After two years Madhya Pradsesh has been hit by a severe drought again. Due to less rainfall not only agriculture have been affected but shortage of drinking water also arises in the state.

The local people are dying due to water scarcity and starvation. By keeping the view of current situation the state govt. has released relief packages and also gave instructions of proper measures to administrative officers.

Water Tanks has been arranged to supply water in affected areas. Various NGOs are also contributing by donating and providing food, clothes and utensils to the affected family.

According to the Informatives,

geographical situations are the main causes of drought. Government is thinking for providing small level employments for the affected family, so that they need not to be dependent on others and also ensure to control the situation as soon as possible.

Ans.

	Address	Phone Number
Fire Station	Bal Bhawan, Gwalior	101
Nearby Hospital	Jayarogya Hospital, Gwalior	8269923479
Ambulance	Kampoo, Gwalior	108
Police Station	Jhansi Road Station	100

❖ Hard Times (Pg. 153)

Ans. 100 people died in fierce flood in Bihar. Many people become homeless due to excessive rain and flood from last four days in the Bihar state of India. About 100 dead bodies of man float in the water. It is estimated that many people are still underwater. Many rescuer are trying their best in order to provide support to trapped people. Dead bodies of animals could be seen floating around. It is believe that the water level of the river has further rises above the danger mark.

About 40 relief camps have been set up for affected and sad people. Food packets, clothes to wear, drinking water, milk etc. have been provided by the government and the NGOs. Many diseases like cholera and Typhoid fever etc. are spreading due to polluted and dirty water. Doctors are working voluntarily to provide free treatment to the injured. According to meterological department there is a probability of

more rainfall for 2-3 days in the coastal regions of the state.

Government has announced to pay ₹ 1,00,000 to the homeless people and ₹ 50,000 to all the flood hit families as compensation.

❖ What we have learnt ? (Pg. 153)

Ans. Following difficulties are faced by people during floods :

- (a) Many people get injured.
- (b) Many people lose their near and dear ones.
- (c) Crops and houses get destroyed.
- (d) There is a huge loss of property.
- (e) A large number of cattle dies.
- (f) There is acute shortage of food and drinking water.
- (g) Road and rail network is badly damaged.
- (h) Water borne epidemics spread in the affected area.
- (i) Damage of schools, hospitals and important offices.

After the flood children are forced to study in a makeshift school like under a tree or in park. The people have to do the following in order to make their lives normal.

- (a) Treatment of the injured and diseased people.
- (b) Schools of the children should be made functional again.
- (c) Arrangement of safe drinking water and food to the people.
- (d) Taking appropriate measures that diseases could be prevented to be spread.
- (e) Helping and supporting those people who have lost their family members and earnings hands. This can be done by providing them some compulsory money, loans or jobs etc.
- (f) Roadways and railways should be brought back to normal.

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Exercise

1. (c) Both (a) and (b)
2. (d) Gujarat
3. life, property
4. Non-governmental Organisations
5. (a) EARTHQUAKE
(b) AVALANCHE
(c) TSUNAMI
(d) LANDSLIDE
6. (a) TORNADO
(b) FLOOD
(c) STORM
(d) DROUGHT
7. To stay protected from falling debris.
8. Diary Entry :

Date : 1st Aug. 20XX

Place : Coastal Town

Today was the most terrifying day of my life. A huge tsunami hit our area early in the morning. Giant waves destroyed homes, roads, and trees in minutes. People were crying and running for safety. I saw families separated and many injured.

Soon, rescue teams arrived with food, water and medicines. They helped move people to safe shelters. Doctors treated the wounded, and volunteers gave warm clothes and blankets.

Though it was a day of pain, the kindness of the relief teams gave us hope. I will never forget this day.

□□

Chapter 15 Blow Hot, Blow Cold

In-text Questions

❖ **Do this (Pg. 158)**

Ans. Yes, blowing on my hands made my hands warmer in winter. It feels warmer and more comfortable.

Ans. Blowing hard from my mouth onto my hands, the air from the mouth was hotter than the outside air around me.

Ans. When we put our hands at some distance from our mouth and blow the air from the mouth, we feel that the air is not warmer. Since the hand is kept far at a place, by the time the air blown from the mouth reaches the hand, it becomes cold by mixing with the air around.

❖ **Think and Tell (Pg. 158-159)**

Ans. We can use the warmth of the breath for the redness of the eye or any injury by blowing it onto the handkerchief.

Ans. Yes, even after folding the cloth 3-4 times and by blowing the air from the mouth, the cloth results in warmth.

Ans. If Balishtiye had eaten the hot potatoes

without cooling them, then it would have caused burns in his mouth.

Ans. Yes, while sipping hot tea, I burnt my tongue. I sometimes use a fan to cool my food or otherwise, by blowing over it, I cool it.

Ans. To cool down these items, first, we should keep them in a wider container and keep them under a fan, or if they are in less quantity, we can blow over them and cool them.

❖ **Picture - 1 (Pg. 159)**

Ans. Mini's tea will be hotter than the air she blew from her mouth.

Picture - 2 (Pg. 159)

Ans. Sonu's hands will be cooler. Since his hands are open to the air outside, it makes his hands colder.

Ans. To clean spectacles, whistle, clean any dust particles, blown the flute, etc.

❖ **Blow in different ways (Pg. 160)**

Ans. The sequence from the loudest to the

softest whistle is given below.

- The cap of a pen
- By putting fingers in the mouth
- By wrapper of a toffee
- By a balloon
- By a leaf

❖ **(Pg. 161)**

Ans. Yes, with my eyes closed, I can recognize the sounds of flute, dholak, been, guitar, mridang etc.

❖ **Write (Pg. 161)**

Ans. Here are a few musical instruments which produce melodious or pleasing sounds when we blow air into them: flute, mouth organ, been, banjo, etc.

❖ **Do this and discuss (Pg. 161)**

Ans. Yes, I have seen some people blowing air on the spectacles to clean them. The moisture from the air blown gets converted into droplets of water on the glass and, hence, can clean the spectacles.

Ans. Yes, by blowing air into the glass, the moisture formed by the air blown comes in contact with the glass which makes the glass look hazy. It's not just the glass even the mirror also becomes hazy when air is blown onto it.

Ans. Yes, I can make the mirror hazy as well. When we blow the air, the moisture formed by the air, blown comes in contact with the mirror, which makes the mirror look hazy. The air blowing from the mouth is wet.

❖ **Measure your chest (Pg. 162)**

Ans. The measurement of the chest when I took a deep breath in is 25 cm.

Ans. The measurement of the chest when I breath out is 21cm.

Ans. Yes, there was a difference between the two measurements; when we breath in, the chest comes out and measure more. While we breathe out, the chest goes in and measures less.

❖ **How many breaths in one minute? (Pg. 162)**

Ans. When I put my finger under my nose, I can feel the air that we breathe out.

Ans. Around 16-18 times per minute, I breathe in and breathe out.

Ans. Yes, by jumping 30 times, I felt breathless.

Ans. So, after jumping, I breathed in and out around 25 times per minute.

Ans. The difference in the count before and after jumping is 7 counts since the rate of breathing increase due to jumping.

❖ **What we have learnt? (Pg. 163)**

Ans. Didi, by doing so, could reduce the swollen area. Pressing a kerchief blown with air on the injury gives relief and reduces pain.

Ans. To cool hot things like a hot cup of tea, a bowl of hot food, etc, we blow air to cool.

For things which are colder, like cold and numb hands can be warmed up by blowing air.

Exercise

1. (c) Both (a) and (b)
2. (d) All of these
3. (a) cap of a pen
4. stories
5. blowing
6. cool
7. False
8. True
9. 1. (d), 2. (e), 3. (a), 4. (c), 5. (b)
10. Simple Experiment to Prove : Air from Your Mouth is Warm and Wet.

Materials Needed :

- A mirror or metal spoon
- Your breath

Steps :

- Take a clean mirror or spoon.
- Breathe out slowly on it through your mouth (like you're fogging it)
- Observe what happens

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What You See :

– A foggy or misty layer forms on the surface.

Conclusion :

– The fog appears because the warm, moist air from your mouth condenses on the cooler surface.

– This proves that the air you breathe out is :

warm (because it fogs up the cool surface.)

wet (because it contains water vapour that condenses.)



Chapter 16 Who Will Do This Work ?

In-text Questions

❖ **Write (Pg. 168)**

Ans. They have been doing this work since childhood.

Ans. Most of them have studied only upto 5th standard.

Ans. No, they have not tried to look for any other work.

Ans. Yes, the elders in their family also do this work.

Ans. They have to face many difficulties while doing this work such as;

(i) They have to face excessively foul smelling of garbage due to which they might suffer from many health related problems.

(ii) The other people look them with hatred and consider them as belonging to low and backward community.

(iii) Even if they study, they do not get good jobs.

❖ **Related Picture (Pg. 170)**

Ans. Different kinds of work done in the above image are painting, working in a field or garden, carrying the goods, sweeping the road, carrying the garbage and so on.

Ans. The five jobs I wished to do is teaching, doctor, scientist, shopkeeper and artist. Because these jobs earn more respect in society when compared to the rest.

Ans. Five jobs which I would not choose are sweeper, gatekeeper, construction worker and driver. Because I wish to

do a job which satisfies my parents and gives me more respect, and I want to lead happy life.

❖ **Discuss (Pg. 170)**

Ans. People do not want to do the kinds of works which are considered petty and inferior, such as sweeping, cleaning and more.

Ans. Poor and illiterate people do this kind of work because of their poverty and lack of education.

❖ **Imagine (Pg. 170)**

Ans. If nobody does this work, then it will create a lot of problems. The garbage will get collected outside the schools and houses and will give a bad smell due to the process of rotting.

Ans. Some other ways of cleaning so that the people would not have to do the work they don't like to do are :

(a) **Crane :** A crane can be used which carries huge amount of garbage at a time and doesn't require people to hold the garbage by hands.

(b) **Dalas :** It is a special type of big dustbin in which the garbage is collected. When it gets filled up, a crane or truck is brought and it takes away the whole dustbin as it is.

❖ **Tell (Pg. 172)**

Ans. Gandhiji and his team started doing the job of cleaning so that people come out of their mindset. He wanted to respect

all kinds of jobs too. He wanted to show that a particular job is not meant for particular people or caste.

Ans. Yes, nowadays, there are such people who try to help others in solving their problems.

Ans. I would have learnt this work and would have happily done that.

Ans. There are toilets in my house, one is attached to the room and another one is common for everyone. A toilet is built inside the house. The toilet is modern, with a good water facility. Usually, my mother cleans the toilet, though sometimes, whoever uses it cleans it.

Ans. The man behaved with Mahadev bhai in an insulting way because his impression towards cleaning toilet is that it is a dirty job and people who do this are untouchables.

Ans. People generally behave with those people badly because the impression towards them is that they are untouchables.

Ans. Yes, these things have changed a lot, and the concept of untouchability has also vanished.

❖ **Tell (Pg. 173)**

Ans. There are sweepers who do cleaning in my school. They clean classrooms, toilets and playgrounds.

Ans. Yes, most of the students will help them by throwing garbage in specified bins.

Ans. That is because they think cleaning is a dirty job.

Ans. No, all children do not do all kinds of work.

Ans. No, they won't miss classes to do this work. Usually, in our free time, we do this work.

Ans. Yes, both girls and boys do the same kind of work.

Ans. I help my mother with cooking, and drying clothes, and I bring vegetables from the market along with my father.

Ans. No, the work done by boys and girls, men and women is not the same. But

they can share their work and do it together.

Ans. Yes, both men and women, boys and girls, should do all kinds of work.

❖ **Discuss (Pg. 173)**

Ans. No even today people do not look at different kinds of work in the same way. Most of the road cleaners, toilet sweepers etc. are still from some particular communities only. The other people do not consider these jobs respectable and they hate such jobs and also treat these people in a derogatory manner. The difference has been created because the rich people study well and get good jobs. Thus, they earn well and become richer. But the poor people can't even afford to eat. So they can't spend on studying and are forced to take these kinds of jobs. This need to be changed in order to bring equality among people so that everyone should respect each other.

❖ **What we have learnt ? (Pg. 174)**

Ans. If everyone will start doing all kinds of work then no work will be considered low, or disrespectful. There will be equality among the people no one will feel superior or inferior. No one will insult anyone. Everyone will become independent. The practice of untouchability will also vanish. The men and women will work together at our own house also. The men will help women by doing household work.

Exercise

1. (b) Dala
2. (d) Bhim Rao Ambedkar
3. laws
4. occupations
5. Machines
6. Mahatma Gandhi
7. The individuals doing cleaning jobs find their work difficult, messy, and demanding.
8. Crane is one of the machine that reduces the need of people to carry garbage by hand.

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9. The government has enacted various laws making it illegal to insult or mistreat cleaning workers.
10. There are reserved seats for individuals from backward classes in educational institutions and government jobs, helping to promote equality and respect for all occupations.

□□

Chapter 17 Across the Wall

In-text Questions

❖ **Find out (Pg. 178)**

Ans. Yes, we have a playground and park to play near my house.

Ans. People play cricket, throw balls etc., on the ground. Usually, it's the children who play on the ground.

Ans. Yes, children of my age get chance to play there.

Ans. Old age people go for a walk, people go for a jog etc., are the other chance which happen there.

❖ **Tell (Pg. 179)**

Ans. Yes, I was stopped from playing throw ball.

Ans. Some elderly people stopped me from playing throw ball, as they feared it might fall on their head. Then, I stopped playing it.

Ans. Yes, little older people helped me and encouraged me to play throw ball.

❖ **Discuss (Pg. 180)**

Ans. Almost all the games are played by both girls and boys. But few games are played by boys such as cricket, football, hockey, baseball etc., and girls play games such as kho-kho, badminton, basketball etc.

Ans. Yes, there is a difference between the way boys and girls play the game. Boys usually play very harshly, whereas girls prefer playing smoothly.

Ans. I think there should not be any differentiation between girls and boys games. Since both are treated equally, anyone can play the game they like.

❖ **Write (Pg. 181)**

Ans. Yes, I have played for my school team. I

played along with my classmates as well as the seniors. We played throw ball.

Ans. There's a huge difference between playing for myself and for the team. When we play for ourselves, there is no competition, nor there is any fun. But when we play with a team of members, we enjoy a lot, we learn how to play, and there is healthy competition.

Ans. While playing in a team, I would like to play for the team rather than for myself. When we play in a team, there will be a better understanding between the team members, and it will teach us unity is strength.

Ans. Our team is more like the Nagpada team. There is good understanding among our team members, good cooperation, good energy, and encouragement of each other while playing. Since there is good unity among team members, similarly, we would also try to be perfect and successful. Hence, we can say that our team is also the same as the Nagpada team.

❖ **Discuss (Pg. 182)**

Ans. Yes, I have taken part in the game; I felt great when I took part in my school's competition.

Ans. Yes, we went to another school to play the game. The school looked nice, and I liked the school environment when I was there.

Ans. Yes, I have seen matches being played between India and other countries. I liked India and Australia cricket match.

Ans. Yes, the people know and like a few of

the Indian players of other games. I feel happy that other games are becoming popular. No, I have no idea about Indian football or the kabaddi team.

❖ **Discuss (Pg. 183)**

Ans. If girls were not allowed to play games or study, or do any other work of their choice, then it would badly affect them mentally and physically. If freedom is not given, they cannot showcase their talent either.

Ans. It would make me feel bad if I were not allowed to take part in some game or drama.

Ans. Yes, I have heard women players, as mentioned below :

- PT Usha (Athletics)
- Sania Mirza (Tennis)
- Mary Kom (Boxing)
- Saina Nehwal (Badminton)
- PV Sindhu (Badminton)
- Jwala Gutta (Badminton)

Ans. There are areas where women get recognition other than sports, such as the following :

- Kalpana Chawla (Astronaut)
- Pratibha Patil (First Lady President of India)
- Kiran Bedi (Police Officer)
- Indira Gandhi (First Lady Prime Minister of India)
- Bachendri Pal (First Indian Lady to climb Mount Everest)

Ans. No, these women are not less known than the men. These women have brought huge pride and respect to the country in their respective fields.

Ans. If girls never got a chance to take part in games, drama or dance then there would be no competitions or challenges among people and hence it would become uneven world. Similarly in case of boys when it is vice-versed.

Ans. Yes, I would want to become like Sunita Williams (Astronaut) when I grow up.

❖ **Think and write (Pg. 184)**

Ans. The word 'wall' here refers to gender bias. Usually, in rural parts of India, there still exists differentiation between the genders. Girls are usually not allowed to study, work or do anything of their choice, and boys are given more attention than girls. Here, Afsana's mother is trying to tell Afsana to continue with the household work rather than to work outside. Firstly, this gender bias has to be removed from people's minds, and equal rights have to be given to both girls and boys.

❖ **What we have learnt ? (Pg. 184)**

Ans. I feel there should be no different games for boys and girls. Games give relief to the mind, be it a boy or a girl. Physical activity is an important aspect of a child's life. Playing different games allows a child's mind to be active. So, there should not be any differentiation between boys and girls.

Ans. If I were made the leader of a team, I would prepare them as the Nagpada team by keeping in mind a few things, such as :

- Encouraging them to play enthusiastically.
- Respect each other in a team.
- Maintaining cooperation among the team.
- Never discourage anyone, and support each other in difficult times.
- Have a healthy competition.

Exercise

1. (b) police
2. (b) social norms
3. gender
4. athletics
5. True
6. False
7. 1. (d), 2. (c), 3. (b), 4. (e), 5. (a)
8. To promote equality and encourage healthy competition, it is crucial to provide women with opportunities in different areas of life.

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9. As times are changing, people are beginning to recognize that women deserve equal treatment to men in various areas of life.

10. A good leader should foster unity

within the team and promote values like cooperation, discipline, and honesty among its members.



Chapter 18 No Place for Us ?

In-text Questions

❖ **Think and Tell (Pg. 189)**

Ans. Yes, there were times I felt alone, even in a crowd of people. When I joined the school, even though many people surrounded me, I felt alone.

Ans. It is very difficult to leave one's own place and go far away to live in a new place. As the people, place, everything looks strange.

Ans. Because small cities and villages do not have much opportunities. Big cities have many opportunities for education as well as for jobs.

Ans. Yes, I have seen many children go to work.

Ans. They used to sell something, clean the vehicles and serve food in hotels. They work to support their family enough to meet their day to day needs.

❖ **Tell (Pg. 190)**

Ans. Children in Khedi village learnt dancing, playing flute and dhol, making vessels and other things from bamboo and clay and recognising birds and imitating their sounds.

Ans. I learnt to maintain love and affection towards people and animals, respect the elders, help others in their difficult times and many more.

Ans. Jatrya learnt so many things in Khedi, which will be helpful for him in Mumbai. Some of them are playing the flutes, dhol and selling goods, which will help in earning money in Mumbai.

Ans. Yes, I hear the sounds of some birds, like crows, pigeons and sparrows.

Ans. Yes, I can imitate the sound of guttargoo of pigeon. (Note - Students do yourself by choosing their favourite bird.)

Ans. I used to hear the horns of vehicles, the sound of ambulances and police vehicle sirens.

Ans. Yes, I experienced silence in the library and while sleeping.

❖ **Discuss and Tell (Pg. 191)**

Ans. The land and forest were associated with fond memories of many generations of people. Their forefathers had been living on the land for a long period. They were forced to leave the place by government officials and the police. Moreover, they were also promised to be sent to a better place that would have better facilities in terms of electricity and water.

Ans. There were three people in Jatrya's family in Khedi. But for Jatrya, the whole village is like his family. When he thought about his family, his future wife and future children came to his mind.

Ans. When I think about my family, my parents, grandparents, and cousins all come to my mind.

Ans. Yes, my grandparents don't want to be moved from their old place because they won't feel comfortable in cities and they love to enjoy the fresh air and the open space of the village.

Ans. Yes, my grandparents have never been to school. I heard there is no school in some villages of Meghalaya.

❖ **Imagine (Pg. 191)**

Ans. People face many difficulties when a dam is being built. They are people who are forced to leave their place along with family, houses, farms and agricultural fields get destroyed, and they have to relocate to new places and have to struggle for work, education and medical facilities.

Ans. Differences between Khedi Village and Jatrya's dream village:

Khedi village	Jatrya's dream village
1. Houses are made of bamboo, mud and grass.	1. Houses are made of brick and cement.
2. There is no electricity.	2. There is electricity and poles are fitted with street lights.
3. There is a single well for drinking water.	3. There are taps for water supply.
4. Bullock-cart is the only mode of transport.	4. Buses are the mode of transport.
5. There is no school or hospital	5. There is a primary school and primary health centre.

❖ **Write (Pg. 192)**

Ans. Sinduri village is not like the village of Jatrya's dreams.

Ans. The houses in Sinduri village were made up of tin sheets and were very weak; there was electricity but available for few hours in a day, there was no open space, there was school but teacher ignored the children and so on. Thus Sinduri village is totally different from Jatrya's dream village.

Ans. No, I have never been to anyone's house as an 'unwanted guest'. Unwanted guests would not be treated properly, and they will feel lonely.

Ans. When guests come to our home for a few days we will treat them in a special way by preparing nice dishes; we provide all facilities which they need for their comfortable stay, along with love and care.

❖ **Think (Pg. 193)**

Ans. The problems of Sinduri village made Jatrya think as if he was an unwanted guest in the village. So, he wanted to leave Sinduri. As he could not go back to Khedi, he thought of moving to Mumbai. He did not find Mumbai as he had imagined; it was difficult for him to live in Mumbai.

Ans. Jatrya's children would be studying in a government school in Mumbai.

❖ **Find out and write (Pg. 193-194)**

Ans. Students should do themselves on the basis of their experience.

Ans. Yes, I heard in the news the slum is being removed from an area of Yamuna river, which is located in Delhi. I felt very bad for these people.

Ans. Transfer is an integral part of jobs, so people should shift from one place to another. In this situation, they feel very bad about leaving their friends, colleagues and their house. In a new place again, they have to search for schools and workplaces, and have to adjust to new people and new environments.

❖ **Debate (Pg. 194)**

Ans. It is incorrect to say that city people do not create garbage. It is because village people shift to cities because of dams construction, factories etc. The villagers are forced to leave the places and the villagers are not provided proper houses in the cities, they are just given small huts with no proper provision for toilet and bathing. As a consequence, the poor people are forced to use the roads and drains for this purpose. This causes dirty and foul smelling areas. So,

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actually the difficult situations in which they are forced to live are responsible for this. On the other hand, the city people causes a lot of pollution due to the vehicles, factories etc. Thus, the given statement is incorrect.

❖ What we have learnt ? (Pg. 194)

Ans. When families like Jatrya's come to stay in big cities, their life becomes very different from what it was before. They have to face many problems in these big cities such as:

1. They are not provided proper houses in the big cities, they are given small huts to stay with no proper facility for bathing and toilet.
2. There are taps but with no water. They have to pay for the water also.
3. They have the provision of electricity but it remains for sometime. Also they have to pay the electricity bills which they cannot afford.
4. They are not well qualified therefore it is very difficult for them to get the good jobs. Even their children also have to work.
5. There are schools for the children, but it is very difficult for them to understand the new language. Also the teacher does not pay much

attention to them.

Exercise

1. (c) Migration
2. (b) Farming
3. (c) Both (a) and (b)
4. Leaving one's hometown and starting over in a new place can be very hard. Without familiar faces to share thoughts and feelings with, it can feel lonely.
5. Works that people living in villages are formed to do in case of crop failure are fish catching, selling forest produce in the market, playing dhol, cattle farming etc.
6. City life is noisy, with the constant honking of cars, loudspeakers and factory sounds.
7. From the elders, we learn many important lessons, such as respecting others, keeping to a schedule, and helping out with chores at home.
8. **Advantage :** Villagers are being promised that they would receive land in a new area across the river, complete with schools, hospitals, buses, trains and electricity.
Disadvantage : The villagers would be forced to leave their homes and land, which their families had lived on for generations.

□□

Chapter 19

A Seed Tells a Farmer's Story

In-text Questions

❖ Tell (Pg. 198)

Ans. Yes, rotis are made in my home. They are made from wheat and sometimes from rice and ragi.

Ans. Yes, I have eaten roti made from bajra and jowar. They were very tasty.

❖ Find out and write (Pg. 199)

Ans. We use to keep pulses and grains in airtight containers, and some pulses are sun-dried.

Ans. There are many festivals related to farming. They are Pongal, Lohri, Baisakhi, Makar Sankranti, Holi and more. Makar Sankranti in Karnataka is celebrated during the winter season. Yellu Bella is made as the main dish in this festival. In Tamil Nadu, Makar Sankranti is celebrated as Pongal. Likewise, Lohri is celebrated in Punjab during the winter season.

Ans. Gruel is a food consisting of some types of cereal - oat, wheat, or rye flour or rice – boiled in water or milk were prepared at home earlier.

Ans. Many crops like wheat, coffee, pepper, banana, and rice are grown in our area. Of these, rice is famous across the country.

❖ **Discuss (Pg. 200)**

Ans. Damjibhai did farming in a different way than how Hasmukh did. Damjibhai followed the traditional method of farming. He used bullocks to plough the field. He stored grains to be used as seeds. Hasmukh, on the other hand, started modern or new methods of farming. He bought a tractor to plough the field. Expensive fertilisers were used to grow more crops.

Ans. Progress means a better lifestyle. People get better standards of living like education, medical facility and nutritious food.

❖ **Write (Pg. 200)**

Ans. I would like to see well-equipped hospitals, better roads, a good transport system and a good education system in schools.

❖ **Discuss and think (Pg. 201)**

Ans. Hasmukh's farm will lose fertility after some years because he is using chemical fertilisers.

Ans. Paresh could see that his father was running into losses. Farming had become a capital-intensive activity with little profit. Hence, Paresh would have decided to become a truck driver rather than pursuing farming.

Ans. I think the new method of agriculture tends to overexploit the soil and other resources. The loss of fertility of the soil, which may result in the land becoming barren. A machine can do the work of many people, which leaves many people jobless. Too much irrigation depletes the groundwater

and thus leaves little water for the future. Apparently, it looks like people progress, but it is not real progress.

Ans. Yes, there are many changes which may not be called progress in the real sense. Let us take the example of the growing number of vehicles on the road. More vehicles made travelling easier, but it is also the reason for air and noise pollution. Similarly, many machines have been invented which can do the job of thousands of people and thus thousands of people are jobless.

❖ **Project Work (Pg. 202)**

Ans. Some of the questions as asked from a farmer:

Student : Since how long are you farming?

Farmer : I have been farming for about 20 years.

Student : What and how many crops do you grow usually in a year?

Farmer : I usually grow 2-3 types of crop like wheat, paddy, pulses, cotton etc.

Student : Which crop needs a lot of water?

Farmer : Paddy needs a lot of water.

Student : From where you get the seeds? Do you store some seeds for next year?

Farmer : Sometimes, I get the seeds from the market and sometimes I store some seeds for the next year.

Student : Do you spray pesticides in field?

Farmer : Yes, in order to save from pests and insect we spray pesticides in field.

(Note : Students can ask similar questions from farmers.)

Ans. Some days back I went to my uncle's farm house in Panipat. The farmhouse was very beautiful and was fenced with flowers and plants. There was a wide variety of plants like fenugreek, spinach, mustard etc. We couldn't resist, when

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we saw fresh carrots rooted in the soil. We were told by uncle that all these plants have been grown without using any artificial fertilizers. He has been using earthworms for this purpose. The earthworms dig the soil and make it soft and crumbly which is good for the plants. There was a wide variety of plants such as lemon, oranges etc. After asking uncle told that when dead plants leaves, stems, fruits are buried in a pit and earthworms are allowed to enter these automatically convert the waste into manure. This natural manure is very rich in minerals and good for the soil. Whatever we have read in books we have seen there we enjoyed the visit and also get to learn many things.

❖ **Journey of a bajra seed from a field to a plate (Pg. 203)**

Ans. In picture 1 : The stem is being cut, using a knife or cutter.

Ans. In picture 4 : The grinder is being used to grind the bajra seed to turn them into bajra powder.

Ans. In picture 5 : The ready bajra flour separated from the seed husk using a sieve.

In picture 6 : The bajra flour is converted into dough using water and kneading it with hands.

Ans. The sieve have been used to separate the flour from the seed husk.

What we have learnt ? (Pg. 204)

Ans. There have been many changes in our food such as :

1. Earlier people used to eat a variety of foods like bajra, jowar, wheat etc. but

now we are eating mainly wheat.

2. Earlier the old seeds were stored and grown in the next year. Now a days new variants of seeds are grown and their products are quite different in taste.

3. Earlier the foods were eaten in a very simple forms, not very much spicy and over heated.

4. Earlier the traditional methods of irrigation, ploughing etc. were used whereas now a days new methods of irrigation, ploughing are being used.

Ans. If all the farmers will grow only one kind of seeds and crops, the price of these seeds and crops would fall and there would be no profit to the farmers. Moreover, growing same kind of seeds and crop on the same land will extract the same minerals from the soil each time and a result the soil will be deprived of these minerals.

Exercise

1. (b) Neem
2. (d) Stew
3. Cow dung
4. Crops
5. Cotton (all others are food crops)
6. True
7. False
8. BAJRA WHEAT RICE MUSTARD
9. Fertilizers are substances added to the soil or plants to provide essential nutrients that help plants grow better.
10. In India, many people are involved in farming and related activities, making it an agricultural nation.



Chapter 20
Whose Forests ?

In-text Questions

❖ **Discuss (Pg. 208)**

Ans. A forest is a large area covered with varieties of trees. It provides shelter to animals, insects and birds.

Ans. No, this would not become a forest because it won't grow thicker like the forest.

❖ **Find out and write (Pg. 208)**

Ans. Apart from trees the forest consists of animals, birds and insects.

Ans. No, all forests do not have similar types of trees. We can identify trees like the banyan tree, neem tree, mango tree and sandal tree.

Ans. This is because forests help to maintain the balance of the environment. Green plants absorb carbon dioxide and release oxygen which is our basic need. Forest also provide shelter and food to living beings.

❖ **Think and write (Pg. 209)**

Ans. Yes, my parents and I love the forest.

Ans. The contractor have been in the forest to cut the trees to sell somewhere. He may not want local people to use forest resources and hence did not allow Suryamani's people to go into the forest.

Ans. Yes, there is a pond near my place which should be open to everyone. However, for safety purposes, people are not allowed to go there.

❖ **Discuss (Pg. 209)**

Ans. Forests belongs to everyone.

Ans. Yes, there are some other things which are our collective wealth. They are groundwater, minerals and fossils.

❖ **Think and write (Pg. 211)**

Ans. Yes, I have a friend with whom I can share everything.

Ans. The word '*jungli*' refers to uncivilised. These peoples have their own distinct cultures. They are not civilised rather, they are living in a way which is different from our way of living. Hence, it is wrong to call them "*jungli*".

Ans. Adivasis live in forests. They use flowers and leaves as their clothes. They use forest products for their basic needs. They use tress as medicinal herbs.

Ans. No, I don't have an *adivasi* friend.

❖ **Think (Pg. 211)**

Ans. Yes, I know someone who is famous

for planting tress. Her name is Saalu Marada Thimmakka.

Ans. I want to become a doctor. I will study hard to make my dream come true.

Ans. Yes, we find lot of news on the effects of forest cutting on the weather. It reduces the occurrence of rainfall which affects our crops. It also contributes in increasing the global warming. (i.e., temperature increase on the earth).

Ans. Yes, I would like to do something for my community. I would like to preserve the language and costumes of my community.

❖ **Read and Tell (Pg. 212)**

Ans. Yes, construction work is going on in my area. It is the work of metro construction.

Ans. Yes, trees are affected due to the pollution from the factory.

Now, people in that particular area raised this issue.

❖ **Look at the map and write (Pg. 214)**

Ans. The given one is a map of India which shows states and forests located in India.

Ans. Students should do this themselves.

Ans. Yes, the Bay of Bengal is closer to Orissa. I found it with the help of the map.

Ans. The following states have the sea on one side: Kerala, Pondicherry Goa, Maharashtra, Tamil Nadu, Andhra Pradesh, Telangana, Gujarat, Orissa and West Bengal.

Ans. Jharkhand is situated in the south of Bihar.

Ans. Forests are in almost all states of India. They are marked in green colour.

Ans. Thick forests are marked in dark green colour, and less thick forests are marked in light green colour.

Ans. For someone in Madhya Pradesh, the country's thickest forests would be in the north and in the east. The states with thick forests are Arunachal Pradesh, Uttarakhand, Jharkhand and Chhattishgarh.

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❖ **Find out (Pg. 215)**

Ans. The states around Mizoram are Tripura, Assam and Manipur.

Ans. Some of the other ways to measure land are in yards, square metres, foot, gaj and so on.

Ans. The *Adivasis* would have made these cups. They made these cups to help travellers.

Ans. Some of the measures to save forests are as follows:

1. By planting more trees.
2. Control over the forest fire.
3. Regulated and planned cutting of trees.
4. Reforestation.

❖ **(Pg. 217)**

Ans. Cheraw is one of the traditional and oldest dance of Mizoram since the time when Mizos used to live on the hills of China. This dance is performed by an individual or family in most of their festivals and big occasions such as when there is a bumper harvest of a crop. It is also performed in marriage occasions. In this dance, men sit face to face on the ground and tap and beat long pairs of horizontal and cross bamboo sticks in a rhythmic beats. Girls in colourful Mizo costumes dance in and out between the bamboo sticks. Gongs and drums are used to accompany the dance. This is the most popular and colourful dance of the Mizos.

❖ **What we have learnt ? (Pg. 217)**

Ans. Similarities between Bhaskarbhai's way of farming and Jhoom farming :

In both these methods of farming the manures prepared in the factories are not used. Rather the natural manures formed automatically in the farms itself is used.

The difference between the two farming is :

Bhaskarbhai used plant waste like dead and rotten leaves, stem, roots etc. to make manure. He dumped them in a pit and allowed to decompose.

This automatically got converted into manure. Further the earthworms are formed small pits in the soil and make it soft and ready for farming. Whereas in Jhoom farming the weeds are burnt in the field and the ashes are mixed with the soil which acts like a manure. Moreover, the land is not ploughed but shallow trenches are made in the soil in which the seeds are sown. Mixed seeds of various crops like maize, paddy, chillies, vegetables etc. are sown.

Ans. Forests are very important for the people living in the forest. They can't imagine life without forests. They are living there since childhood and thus have many sentiments attached with the forest. They play, sing, dance and study in forest. They obtain their livelihood from the forest. They collect leaves and herbs from the forests and sell these in the bazaar, weave baskets from bamboo and leaf plates from fallen leaves, prepare medicines, herbs etc. Thus their life is entirely dependent on forest.

Ans. Yes, there are few things which are very interesting in jhoom farming such as :

- (a) The weeds are not removed but these are burnt and the ashes are mixed with soil to make it fertile.
- (b) The land is not ploughed, but shallow trenches are made in the soil, in which the seeds are sown.
- (c) Mixed seeds of various crops are sown- paddy, maize, sesame, chillies, vegetables etc.

Exercise

1. (d) All of these
2. (b) Chipko Movement
3. (d) All of these
4. True
5. True
6. (a) NEEM
(b) GUAVA
(c) COCONUT
(d) BABOOL
7. A forest is a large area filled with many types of trees and plants.
8. Forests help keep our environment

clean by absorbing harmful gases like carbon dioxide and giving us oxygen to breathe. Also they provide us many other important resources like wood, fruits, medicinal herbs and rubber.

9. Torang means forest, and it holds deep cultural and emotional value for tribal people.

10. Arunachal Pradesh, West Bengal, Jharkhand, Chhattisgarh, Odisha, Sikkim, Mizoram, Manipur and Meghalaya.



Chapter 21 Like Father, Like Daughter

In-text Questions

❖ **Fill in the table (Pg. 220-221)**

Ans. Do yourself

❖ **Tell (Pg. 221)**

Ans. Yes, some of my facial features resemble my parents. My eyes and eyelashes are like my mother's and my teeth are like my father's.

Ans. My relatives and neighbours told me this.

Ans. I feel happy because I am a part of a great family.

Ans. My uncle laughs the loudest in my family.

❖ **Who Is Who ? (Pg. 221)**

Ans. The list of Nilima's family members :

- Nani – Nilima's grandmother
- Eldest nani – Nilima's nani's sister
- Elder son of nani – Nilima's mama
- Kiran – Nilima's cousin
- Samir – Nilima's nephew

❖ **Find out and write (Pg. 221)**

Ans. Yes, I do have uncle-nephews and brother-sisters in my family where there is a big age difference in the age.

❖ **Find out and write (Pg. 222)**

Ans. Yes, Nilima has curly hair like her nani's.

Special trait	Whom does it resemble?	From whose side?	
		Mother's	Father's
Nilima's curly hair	Her nani (grandmother)	3	
Raju (my cousin brother) Raju's eyes	With his uncle		3
Raju's hair	With his grandfather	3	
Raju's long nose	With his aunt	3	

Ans. Yes, I have seen my aunt's child. The child's eyes are like the mother's, nose like the father's, hair like the child's brother's and fingers like the grandfather's.

Ans. I have straight, black hair.

Ans. My hair colour is black, and it is nearly 35cm long.

Ans. Yes, it is like my father's.

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Ans. My mother has the longest hair in my family.

Ans. My teacher has hair that is longer than one metre. Yes, I heard having long hair runs in her family.

Ans. Yes, I know how to measure height. I can do it using a measuring tape or a metre scale. My height is about 130 cm.

Ans. I think I will be approximately 5.8 feet in height when I grow up because my father's height is 5.8 feet.

Ans. Do yourself

❖ Discuss (Pg. 223)

Ans. Both Saroja and Suvasini look like mirror images because they are twin sisters. Suvasini can speak both Marathi and Tamil, while Saroja can speak only Tamil. Suvasini is a karate exponent.

Ans. Yes, there are two twin sisters in my school. They look similar in almost every trait. One of them has a long nose. However, this has not been inherited from her parents.

Ans. Yes, I know the twins who don't look the same.

❖ (Pg. 224)

Ans. Yes, I heard about polio in the newspaper.

Ans. Yes, I heard about pulse polio. It is a free of cost programme conducted by the government to eradicate polio from the country. Children below five years will get two drops of medicine, and it is free.

Ans. I saw many people who have polio but don't know them personally.

❖ Family Traits and Environmental Influences (Pg. 225)

Ans. Yes, my Grandfather talks very loudly. He cannot hear properly due to some disease in his ears.

Ans. Yes, I do not talk loudly in front of my grandfather and father. This is because I have great respect for them. I can speak loudly with my friends.

Ans. Yes, I know someone who does so like My grandfather uses a machine in his

ear to help him hear better. My Nanaji use spectacles and a stick to walk.

Ans. Yes, my grandfather can't hear very well. He was not like this since birth. But at the age of 15 he got some serious ear infection due to which he developed hearing a problem.

Due to this he has to face many difficulties, such as :

1. He finds it difficult to cross a road as he can't hear the traffic horns properly.
2. He finds it difficult to communicate with people.
3. He finds it difficult to listen to radio/ TV.

❖ What we have learnt ? (Pg. 226)

Ans. I have got the following features from my mother's side :

1. My brown eyes – like my mother
2. My thick nose – like my nani
3. My soft voice – like my mother's sister

Exercise

1. (d) DNA
2. (c) 25%
3. (b) 2014
4. Gregor Mendel
5. viral
6. Inheritance is the way genes are passed from parents to their children. Traits like eye colour, skin tone, height, and hair colour we normally inherit.
7. Parents can make a good guess about how tall their child might be by looking at their own heights. For girls, you can subtract 5 inches from the father's height and then find the average with the mother's height. For boys, add 5 inches to the mother's height and average that with the father's height. This can give a rough idea of the child's future height !
8. We can learn many things like languages, dance, music and hobbies such as reading, swimming or knitting, when we have the right opportunities and environment.

□□

Chapter 22 On the Move Again

In-text Questions

❖ **Tell (Pg. 230)**

Ans. No, only some of the big farmers in Dhanu's village have their own land.

Ans. Dhanu's family gets work from before the rainy season till Dussehra. During the remaining six months, when there is no rain, they do not get work.

Ans. Yes, I know many of such families who have left their village for months in search of work.

❖ **Find out (Pg. 231)**

Ans. If people in Dhanu's village did not leave the village in search of work, they would face many difficulties. They would not be able to earn enough money to fulfil their basic needs like foods, clothes and shelter. And they would not be able to provide education for their children.

Ans. Yes, farming can also be done without rainwater. Modern methods of irrigation technology can be used to provide required water for the crops. Canals, tanks and bores can be constructed to store water for irrigation.

❖ **Write (Pg. 231)**

Ans. Some people need to stay in the village so that they can take care of the house and cattle. They also need to take care of elderly people in the family who prefer to stay back in the village.

Ans. When Dhanu and other children leave the village for six months, the village school gets students from the families of big farmer's only.

Ans. In my family everyone does not go for work and my mother takes care of old and unwell family members.

❖ **Think and Tell (Pg. 232)**

Ans. Mami wanted Dhanu to study well and get a good job so that he could work independently. Mami wished Dhanu to become a rich person and earn money

and reputation from the society. Mami did not want Dhanu to suffer like other family members. Thus, mami wished Dhanu should go to school.

Ans. When I am unable to go to school for a long time, I am unable to grasp the concepts which were already taught.

❖ **Discuss and write (Pg. 232)**

Ans. Yes, Dhanu can get enrolled in a school in the new town. He can look for evening schools.

Ans. Yes, due to job or work, people have to stay away from their families for many months. They include jobs in military force, people who work in the navy and people who do business. It also includes students who study in boarding schools.

Ans. Similarities and differences in the lives of different kinds of farmers:

Similarities	Differences
1. Most farmers are fully dependent on farming for their livelihood.	1. Some farmers have their own land.
2. All family members are engaged in farming.	2. Some of the family members are engaged in farming.
3. Most of them are illiterate.	3. Some of them are literate.
4. They use old and primitive methods of farming.	4. They used modern and new method of farming.

Exercise

1. (b) arrange for farming needs
2. (d) All of these
3. Indebtedness
4. mukadam
5. Many times, famers can't sell their crops at a good price, leading to losses that can be devastated.

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6. The biggest challenge for farmers when there is no rain and no farming work is to meet their daily needs for which everyone borrows money from the mukadam and must work for him to pay it back.
7. Irrigation is the method of providing water to crops in a controlled way to help them grow.
In places where water is limited or there isn't enough rainfall, farmers use different irrigation methods.
8. People may be away from home for various reasons besides farming, such as serving in the defense, running a business, going on pilgrimages, travelling for tourism, or attending boarding schools.

□□

Chapter 23 Madhya Pradesh and its Wealth

In-text Questions

❖ **Things to do (Pg. 237)**

Ans.

Food Crops	Commerical Crops
Wheat, Corn, Millet, Jowar, Rice (paddy)	Cotton, Soyabean, Tuwar, Peanut, Sugar-cane, Lentil, Sesame, Linseed, Pepper

❖ **Discussion (Pg. 238)**

Ans.

District	Crops grown in the district	Which area in the district is it sown?
Gwalior	Rabi – Wheat, Gram, Mustard Kharif – Cotton, Paddy, Tuwar, Jowar	Nearby villages of Gwalior district. Nearby villages of Gwalior district.

(Note : Students should note down the Rabi and Kharif crops grown in thier district)

❖ **Write (Pg. 245)**

- Ans. 1. Bandhavgarh National Park
2. Kanha National Park

Ans. Yes, Bhopal is the city of lakes. (Students should colour it by themselves.)

Exercise

- (a) copper
- (c) Pachmarhi
- area
- Cow milk
- True
- False
- a. CHAMBAL
b. TAWA
- Five major plateaus in Madhya Pradesh are as :
 - Malwa Plateau
 - Bundelkhand Plateau
 - Rewa-Panna Plateau
 - Baghelkhand Plateau
 - Central India Plateau
- Do Yourself
- Gwalior Fort

□□