

My World

(Environmental Studies)

For class IV



Punjab School Education Board

Sahibzada Ajit Singh Nagar

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Foreword

The Punjab School Education Board has been continuously engaged in developing syllabi, producing and renewing text books according to the changing educational needs at the state and national level.

This book has been developed in accordance with the guidelines of National Curriculum Framework-2005 (NCF) and PCF-2013, after careful deliberations in workshops involving experienced teachers and experts from the board and field as well. All efforts have been made to make this book interesting with the help of activities and coloured figures. This book has been prepared with the joint efforts of subject experts of Board, SCERT and experienced teachers/experts of environmental studies. Board is thankful to all of them.

The authors have tried their best to ensure that the treatment, presentation and style of the book in hand are in accordance with the mental level of the students of class IV. The topics, contents and examples in the book have been framed in accordance with the situations existing in the young learner's environment. A number of activities have been suggested in every lesson. These may be modified, keeping in view the availability of local resources and real life situations of the learners.

I hope the students will find this book very useful and interesting. The Board will be grateful for suggestions from the field for further improvement of the book.

Chairman

Punjab School Education Board

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Class-IV (EVS)

Learning Outcomes

The Learner :

- Identify simple features (e.g. shape, colour, aroma, where they grow/any other) of flowers, roots and fruits in immediate surroundings.
- Identify different features (beaks/teeth, claws, ears, hair, nests/shelters, etc.) of birds and animals.
- Identifies relationship with and among family members in extended family, changes in family (e.g. due to birth, marriage, transfer, etc.)
- Explains the herd/group behaviour in animals (ants, bees, elephants), birds (building nests).
- Describes different skilled work (farming, construction, art/craft, etc.) their inheritance (from elders) and training (role of institutions) in daily life.
- Explains the process of producing and procuring daily needs (e.g. food, water, clothes) i.e. from source to home. (e.g. crops from field to mandi and home, water from local source and ways of its purification at home/neighbourhood).
- Differentiates between objects and activities of past and present. i.e. transport, currency, houses, materials, tools, skills-farming, construction, etc.)
- Groups of the animals, birds, plants, objects, waste material for observable features. (e.g. on appearance (ears, hair, beaks, teeth, texture of skin/surface), instincts (domestic/wild, fruit/vegetable/pulses/spices and their shelf life) uses (edibility, medicinal, decoration, any other, reuse), traits (smell-taste/likes, etc.)
- Guesses (properties, conditions of phenomena), estimates spatial quantities (distance, weight, time, duration) in standard/local units (kilo, gaj, pav etc.) and verifies using simple tools/set ups to establish relation between cause and effect. (e.g. evaporation, condensation, dissolution, absorption; for places; near/far, objects; size and growth; shelf life of flower, fruit, vegetables)
- Records his/her observations/experiences/information for objects, activities, phenomena, places visited (mela, festival, historical place) in different ways and predicts patterns in activities/phenomena.
- Identifies signs, locations of objects/places and guides for the directions w.r.t. a landmark in school/neighbourhood using maps etc.
- Use the information on signboards, posters, currency (notes/coins), railways ticket/time table.
- Creates collage, designs, models, rangolis, posters, albums, and simple maps (of school/neighbourhood etc.) using local/waste material.
- Voice opinion on issues observed/experienced in family/school/neighborhood e.g. on stereotypes (making choices/decision making/solving problems), discrimination practices on caste in use of public places, water, MDM / community eating, child rights (schooling, child abuse, punishment, labour.)
- Suggests ways for hygiene, reduce, reuse, recycle of waste and takes care of different living beings (plants, animals, and the elderly, differently abled people), resources (food, water, and public property.)

LESSON-1



DAUGHTER BRINGS JOY

A few days ago, Deepu's sister took birth in his family. Today on her '**Namakaran**' Ceremony, her bua and other relatives have gathered. The new born baby was named as 'Anu'. Deepu was really happy to see his bua at home. Before her marriage when his bua ji was with Deepu's family, she used to love and take care of Deepu. That's why Deepu loved his bua a lot. Deepu's mother said to his bua, "Sister, Deepu feels very happy on your visit. He missed you a lot".

- Bua** – I too miss this place and family members a lot. Here, we have a big family which includes your family, elder brother's family, my mother and children. There, in the city, earlier we were only two persons, Deepu's uncle and I. Due to his job, we could not stay with our joint family in the village. You know very well that we could not have a child, from the day we have adopted Sonu as our son, we are enjoying a very happy life.



Mother: In the old days, there were only joint families. It was very easy to bring up children in a joint family, and living together was a great fun and beneficial too. The elders had their hold on the family and children didn't get spoiled and rather used to feel safe. They learnt here to live in society and all used to enjoy living together.

Q.1. Fill in the blanks :

(company, family, affection)

- a. Ours is a very big here.
- b. The children do not get spoiled if they live in the of elders.

Bua – Bhabi ji, I always wished to live in a joint family but due to my husband's job, I could never live with my family. Here it is a big family and there we are a family of three members only.

Mother – Anyway, you have done a good job by adopting Sonu. He is a very sweet child !

Bua – Yes, now we are very happy. He does not misbehave unlike other children. We really love him. I never feel that I have not given birth to him.

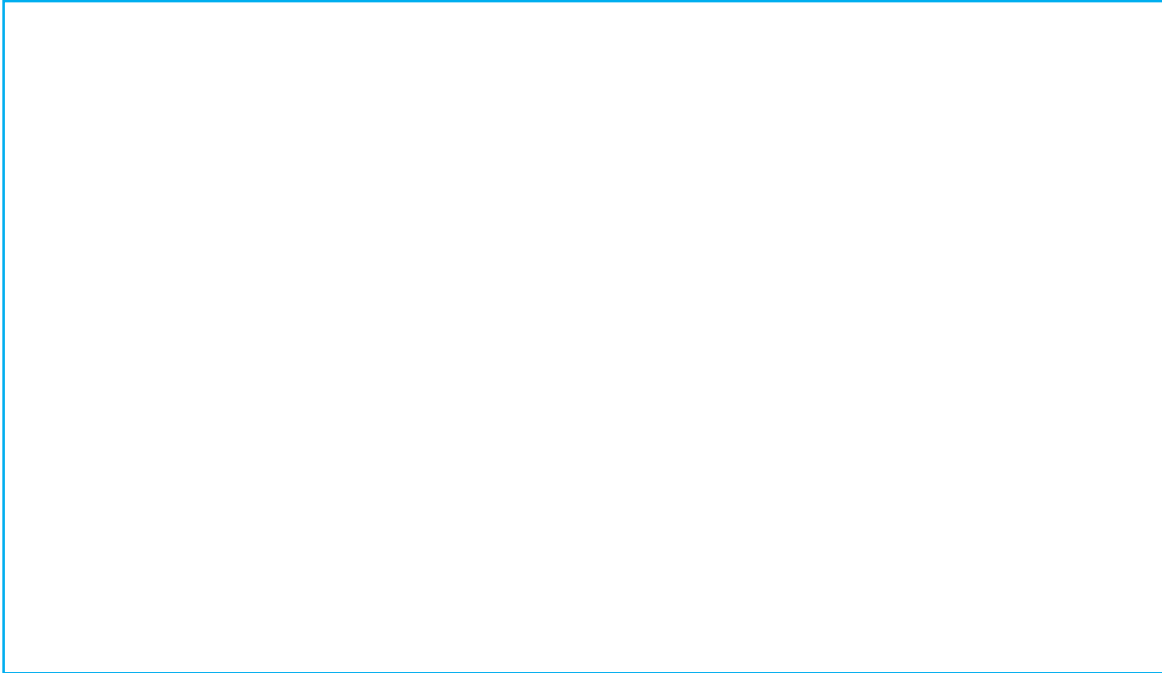
Meanwhile Deepu's elder aunt (Tai ji) and her daughter Suman came. Suman teased Deepu's sister Anu and the little girl started crying. Deepu's mother took her in lap.

Q.2. Write any two benefits of a joint family.

.....

.....

Activity 1 : Draw a family tree of your present family members.



Anu stopped crying. Deepu's mother and aunts resumed their conversation. Deepu's bua said, "In my in-laws house, there is a modular kitchen but you don't have even an exhaust fan." Deepu's mother told her that she had also asked her husband many times for exhaust fan but he did not care. He spends his income in his own way.

Bua said, "This is not fair. If he earns and goes to office, you also don't sit idle for the whole day. You do all house hold jobs. The home should be run according to the consent of all. I think, you should buy a sewing machine, because you are expert in stitching and tailoring. You can earn something for yourself. It will help you to fulfill your own needs".

Deepu's mother replied, "Sister, you are right. I also think like this, but at present Anu is too young to be left alone. When she grows up a little, I will start stitching".

After sometime, Deepu's friend, Happy, came there. Happy and Deepu started taking food together. On seeing this, Deepu's grandmother started grumbling. Deepu's mother said, "Maa ji, why are you getting upset ? Happy is a nice boy, he is very good at studies. I feel that Deepu should live in his company so that he can become a nice boy".

Grand Mother : But I have come to know that he belongs to a different caste. I do not like Deepu sharing food with him. In our times, it was not allowed.

Mother : Maa ji, now the time has changed. His friends should be good irrespective of their caste and religion. It does not matter who is born in which religion or caste.



Things to remember

- There is an increase in the number of family members due to birth or adoption of child.
- When a girl gets married, the number of members in family decreases.
- With the coming of newly wed, after the marriage of a boy, number of family members increases.
- It is more beneficial and secure to live in joint families.
- We should spend with the consent of the family.
- Women are also participating like men in every work.
- There is a lot of work for home-makers.



Q.3. Fill in the blanks with appropriate words:

(happily, nice, bad, sadly)

- a. Our friends should be
- b. Birth of a girl child should also be celebrated

Q.4. How many members are there in your family ?

.....

Q.5. Who earns money in your family ?

.....



Q.6. Who is your best friend ?

.....

.....

Q.7. Write any good habit of your friend.

.....

.....

Q.8. Why was the aunt living separately from joint family ?

.....

.....

LESSON- 2



IN THE PARK

Dear Children, we deal with many things in daily life which we recognise quickly. Do you know, that we can identify these things not only by seeing, but our skin, nose and ears also play a great role in doing so. We can even recognise something by touching, smelling or by hearing its sound with our closed eyes. Let us try to understand the experiences shared by children while walking in a park.

Today, Kiran was very happy as she stood first in her class. On reaching home, she put her school bag aside and ran to her father to give good news. Her father happily patted Kiran's back and appreciated her. Kiran really liked that. Kiran's father called her mother and said, "Look, our daughter has stood first in her class".

Yesterday, Kiran was constantly busy in making mischiefs. She spilt tea on her clothes. So, her mother got irritated and scolded her. That is why Kiran was unhappy with her mother and was not talking to her. But to day when her mother hugged her and kissed her affectionately, she forgot her anger and became happy.



She also promised her mother not to be negligent while doing activities which could harm her or anybody else. Father told that 'Anger' and 'Happiness' are feelings felt by our mind.

Q 1. How do you feel when somebody pats your back ?

.....
.....

In the evening, Kiran and her elder brother Raju went to the park to play. Near the gate, the gardener was digging wet ground to make flower beds. From the newly dug ground, a typical pleasant smell was coming. They went ahead and saw many different flowers in their full bloom due to spring season. Kiran took her brother to the rose plants and said, "What a pleasant smell is coming from these flowers!". Raju said, "Yes, it is good but the white flowers on the other side have also very nice smell, which I like very much."

Q.2. Make a list of any four flowers the fragrance of which you like the most.

1. 3.
2. 4.

When both of them were busy in smelling the flowers, one of Raju's friends came from behind and covered Raju's eyes. Raju just touched and felt his hands with his own hands and at once shouted, "Arshdeep!". Arshdeep removed his hands from Raju's eyes and said, "Very Good ! I thought you would not recognize me and I would tease you". Raju said, "Arsh, your hands are rough and fingers are very fat. So by the touch only I guessed that these were your hands".

Activity 1 :

One child will sit in the class with his back towards the students. One student from the class will close his/her eyes. The sitting child will try to recognize/guess him/her by touching his/her hands, arms, clothes, fingers etc. This action will be repeated with other students also.

Today Arshdeep has brought his dog also with him. Raju was scared of his dog and he was getting aside Arshdeep said, "Don't get scared of my dog, it won't harm you. I gave him a bath with soap, just touch and see how soft is its fur !"

So, Raju started patting the dog. Its fur was very soft. Raju liked it. Raju moved his fingers on its back lovingly and the dog too liked his action and started wagging its tail. Arsh said, “See! You were getting scared of it unnecessarily; it is looking at you so lovingly.” Then Raju remembered that whenever he pats his cow’s calf at home, it too starts licking his hand.

He understood that animals, like humans, also feel emotions and touch. In the mean time, gardener of the park also came there and he told Arsh that Dogs were prohibited in the Park and so he should take it out. Arsh didn’t like what he said, but afterward, he realised his mistake.

Activity 2: Some pieces/articles of iron, wood, plastic, brick, stone, clay, rubber, etc., will be kept on the table. The students, with their eyes blind folded, will try to recognize the material of these pieces by touching them only.

Both the friends were lost in gossiping, they forgot about Kiran and walked away from her. Kiran sat down on a bench near the flower beds. A man was already sitting on the bench. He moved towards Kiran and engaged her in his talks. He started asking about her class, home etc. He also gave a toffee to Kiran. While talking, he started moving his hand on her back. Kiran felt very uncomfortable due to his behaviour. She got up at once and ran towards her brother and Arshdeep. She told them that a bad man is sitting on the bench. Raju and Arshdeep ran towards the bench but by the time the man had gone away from there.

Children, whenever somebody touches you or talks to you in the manner not liked by you or teases you, move away from that person and immediately tell your elders.

Then they drank cool water from the water cooler situated in a corner of the Park. The Sun was setting, so they started back to home. There was a huge heap of garbage in the corner of the park. It was stinking badly. Kiran closed her nose. Raju said, “Just now we have been enjoying the fragrance of the flowers and here it smells bad.” Arsh said, “If garbage is removed daily, it will not smell foul. If it remains here for many days, it gets decayed and gives such a foul smell”.

We should produce minimum garbage. We should reduce the usage of polythene bags which turns into garbage.



Heap of garbage in the corner of a park

Kiran and Raju reached home. A lovely aroma was coming from the kitchen. Both of them went straight to the kitchen.

Kiran – Mummy, what are you cooking ? It smells so good.

Mother – You do guess.

Raju – From aroma, it seems to be Halwa.

Mother – Very right.

Kiran – Mummy what is this ? It also smells very nice.

Mother – These are mint leaves, I will prepare tasty ‘chutney’ with it.

Raju – Mummy, the nice smell of food has made us very hungry. Please give us food quickly.

Mother – O.K., wash your hands. I make food for you.

Then whole family ate ‘Hot Halwa’ in food.



Things to Remember

- We should not do such mischievous activities which may cause harm.
- We can identify things not only by seeing, but also by smelling, touching and hearing their sound.
- Many flowers bloom in spring season only.
- Animals, like humans, feel emotions and touch.
- If behaviour of any known or unknown person is not liked by us, then we should tell elders immediately.
- We should produce minimum garbage.
- We can feel different types of tastes with tongue.



Q.3. Fill in the blanks with suitable word :

(man, fur, loved, happy, fragrance, flowers)

1. Father was very
2. Mummy Kiran by taking her in lap.
3. Many bloomed due to spring season.
4. How soft is the of dog !
5. Another was also sitting on the bench.

Q.4. Tick (✓) the correct and cross (×) the wrong sentence :

(a) All flowers give same fragrance.

☐

(b) Garbage must be managed daily.

☐

Q.5. Tick (✓) the right sentence :

(a) **The fur of dog was very**

Hard

☐

Soft

☐

Thick

☐

(b) **If somebody's touch is not liked by you, then**

tell the elders

☐

hide from the elders

☐

should not do anything

☐

(c) **Stink was coming from**

Heap of soil

☐

Heap of flowers

☐

Heap of garbage

☐

Q.6. Write the name of any two stinking things.

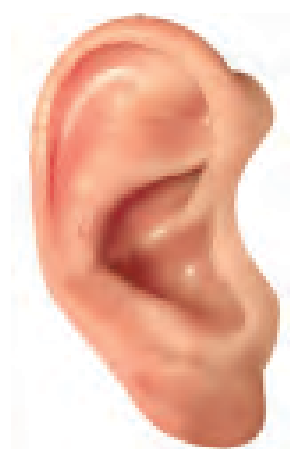
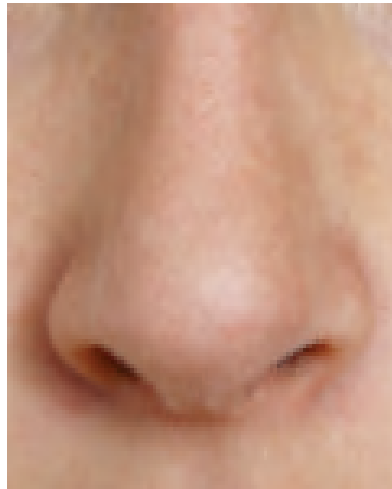
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Q.7. Write the name of any three flowers which give fragrance ?

.....
.....



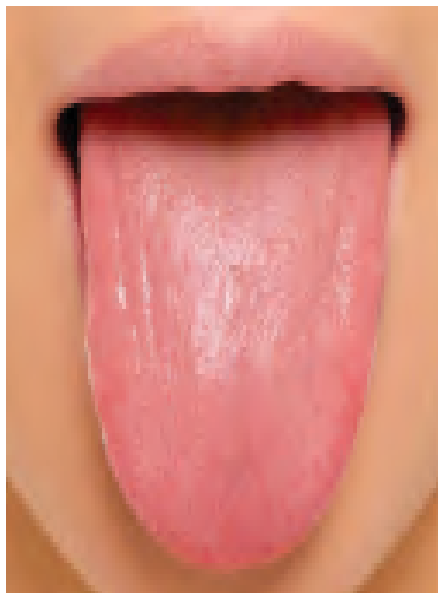
Q.8. Write the name of organ below the pictures :



.....

.....

.....



.....

.....

Above mentioned all the five organs are also known as sense organs.

LESSON-3



FAIRS AND SPORTS

Simran was hiding her kites at different places. She had made kites with great efforts. Today, there was a Kite Flying Competition in her school. She was really afraid that her younger brother might spoil her kites. Her mother felt it strange that girls fly kites. Her father said, “If girls can fly aeroplanes why can’t they fly kites ? There is nothing to worry. The competition is being organized in school’s ground. It is really safe to have ‘kite flying’ in an open space instead of flying on roof tops. Basant festival comes once in a year. Her brother said, “Papa, this means that today we are not going to the Shalimar Garden to see fair ?” His Mummy said, “Why not ? Today I have prepared sweet yellow rice for you. First have this, then after dropping Simran at her school, we will go to Shalimar Garden. While returning from Shalimar Garden, we will pick her up from the school.”

There are many dangers of kite-flying on roof tops :

1. Danger of falling off from the roof top unknowingly.
2. Danger of getting electric shock.

Q.1. Why is it dangerous to fly kites on the roof tops ?

.....

.....

Q.2. On which particular day is it a tradition to cook yellow rice ?

.....

.....

Do you know ?

Fairs: Many kinds of fairs are organised in Punjab. Festival of Basant Panchami is celebrated with great zeal in Kapurthala (Kapurthala is a district also). This fair has been organised for approximately 100 years (till 2018). Can you guess when did this celebration start ? This festival is held in city's famous Shalimar Garden. A variety of stalls like toys and eatables can be seen here to attract the children.



Likewise, the festival of Maghi is celebrated with great enthusiasm and dedication in Sri Muktsar Sahib. People take bath on Maghi (On Sangrand of Magh month) in the Holy Sarovar, one day after 'Lohri'. This festival is celebrated every year in the month of January, in the memory of '40 Muktas'. It continues for many days. The entire city adorns a festive look. Huge crowd can be seen in markets. There is a variety of stalls. Not only from Punjab but

vendors come from all over India to participate in the festival. There are many means of entertainment in the festival. Many people can be seen waiting for rides but some people feel scared of riding on Giant Wheel. Everyone enjoys watching circus. Nihang-Singhs show skills of Gatka.



Scene of Mela Maghi at Sri Muktsar Sahib

Do you know that the old name of Sri Muktsar Sahib was 'Khidrane Di Dhab'. Try to find out if your city, town or village earlier had some other name also.

Q.3. Which fairs have you seen or visited ?

.....

Sports: Not only fairs but sports are also a source of our entertainment. Besides fun, games provide mental and physical health also.

We play different types of games, e.g., Ludo, Carrom-board, Hide & Seek, Chor-Sipahi, etc., at home with our friends or siblings. Some children play cricket which need bat, ball and wickets, etc., in streets or parks. Hockey is our National game in which hockey stick, ball, net and helmet for goal keeper are used Goalkeeper. We play Kabaddi, Kushti (Wrestling), Races,

Long-jump, Kho-Kho etc. Kabaddi, Kushti and Kho-Kho are played in playground. Races are run on the tracks. Ribbon and whistle are required for these games. Shot put and Football are also played in some schools.

Today, there is Sports Day in Rani's school. Let's see in which game Rani is participating !.

On seeing Rani running ahead of all, the students started clapping with joy. To everybody's surprise, a loud roar, "Happy wins", "Happy wins" went the sky. "Rani wins" was the counter side's claim. So, there were two groups of students. One group was supporting Happy and the other group was with Rani. Finally students turned to their teacher, Ms. Sukhdeep who smilingly said, "Participation in games is more important than to lose or win, and Happy is the winner of this race". At this announcement, most of the students unanimously shouted, "Madam, but Rani was ahead, all the time, how could Happy be the winner ?" The teacher said, "No doubt, Rani was running ahead of all the competitors in the race but in the last part of the race, Happy took rapid strides and touched the ribbon. So dear children, there are some rules that help us to play the games properly. It becomes easy to decide the winner with the help of these rules."

Referee or the Umpire settles the disputes during the games.

Q.4. What is the importance of game rules ?

.....
.....

Below are given the pictures of some Indian players who have brought laurels to their parents and to themselves because of their consistent hard work and commitment. Now a days girls, like the boys, also take part in all games. Till now many Indian girl and boy players have earned name & fame at National and International level :



Sunita Rani
Field- Athletics
Honour- Padamshri



Dr. Rupa Saini
Field- Hockey
Honour- Arjuna Award

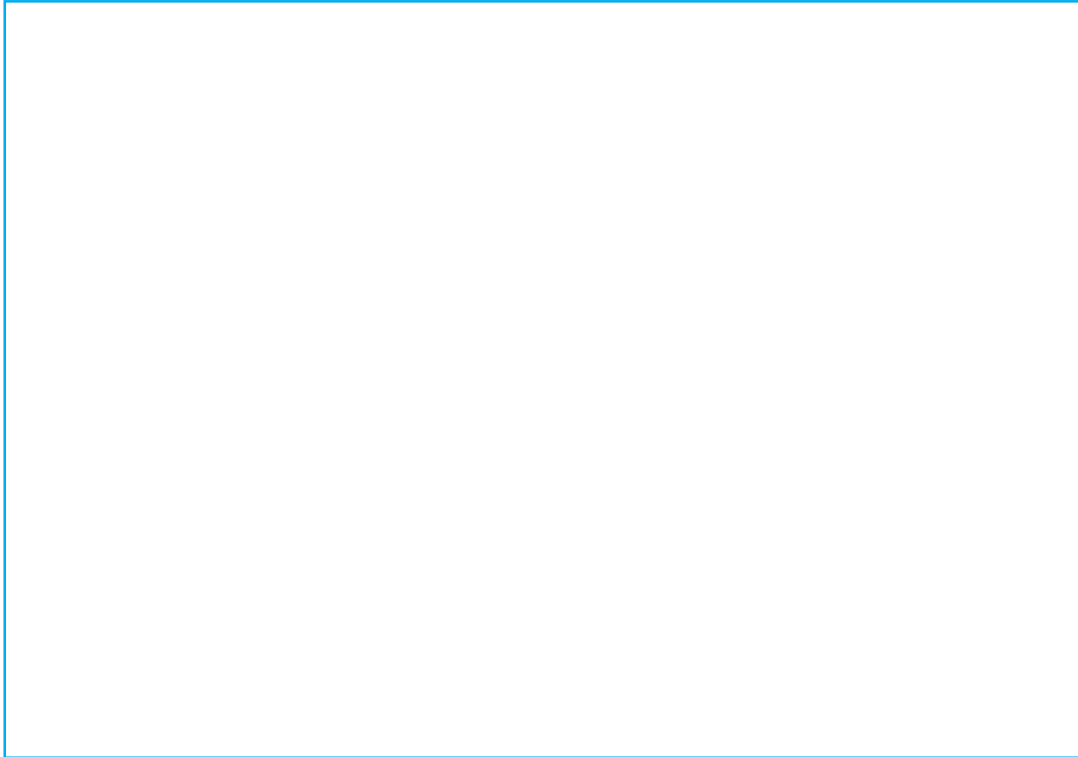


Manjeet Kaur
Field-Athletics
Title- Golden Girl



Milkha Singh (The Flying Sikh)
Field- Athletics
Honour- Padamshri

Activity 1 : Who is your favourite sports star ? Cut his/her picture from the newspaper or magazine and paste it in the given box.



Things to Remember

- Basant Festival of Shalimar Bagh in Kapurthala city is world famous.
- Khidrane Di Dhabh is the old name of Sri Muktsar Sahib which is famous for Maghi festival.
- There are different rules for different games.
- Participation in games is more important than to loose or win.
- Games provide physical and mental fitness along with entertainment.



Q.5. Fill in the blanks with suitable words :

(gatka, Participation, games, girls, healthy, fairs)

- (a) Not only fairs but are also our source of entertainment.
- (b) is more important in games than to loose or win.
- (c) Nihangh Singhs show their skills.
- (d) If can fly aeroplanes then why can't they fly kites.
- (e) Many are held in Punjab.
- (f) Games Keep us

Q.6. Tick (✓) the right and cross (×) the wrong sentences :

- (a) Basant Panchmi fair is held in Kapurthala City. ☐
- (b) There are some rules for every game. ☐
- (c) Games teach us to fight. ☐
- (d) Basant comes after winter season. ☐
- (e) Maghi Festival is held a day after Lohri. ☐

Q.7. (a) To which game Milkha Singh is related ?

Cricket ☐ Hockey ☐ Races ☐

(b) What do the games teach us :

Fighting ☐ Coordination ☐ Jealousy ☐

(c) Where is the Maghi Festival held ?

Sri Anandpur Sahib ☐

Sri Muktsar Sahib ☐

Jalandhar ☐

(d) **Who out of these is a player related to Hockey ?**

Roopa Saini

Sunita Rani

Manjeet Kaur

Q.8. Match the Columns :

(A)

Cricket

Hockey

Kabaddi

Badminton

(B)

Pala, Dhavi, Jaafi

Racket, Shuttle, Net

Hockey-Stick, Ball, Net

Bat, Ball, Wicket

Q.9. Which games do you play ?

.....

.....

Q.10. What was the old name of Sri Muktsar Sahib ?

.....

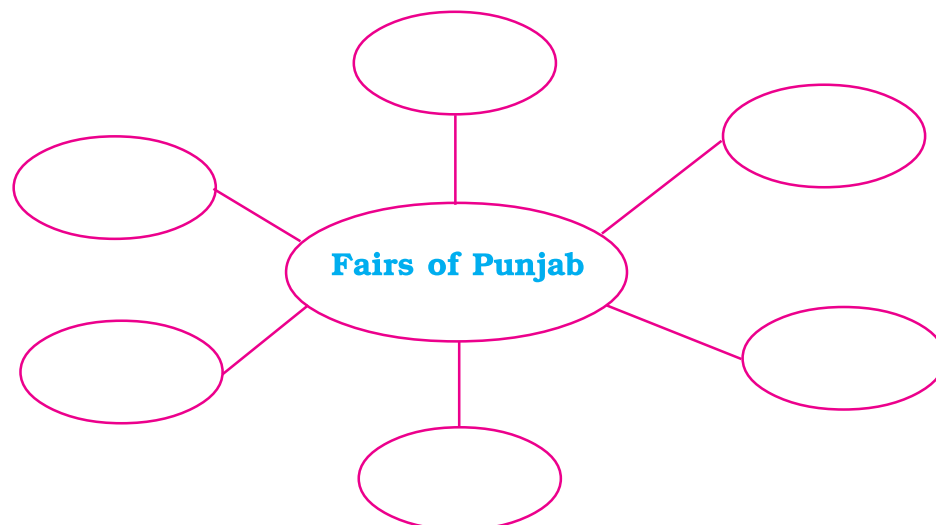
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Q.11. On which festival kites are flown ?

.....

.....

Q.12. Mind Mapping.



LESSON-4



DIFFERENT PROFESSIONALS

In third class, we have made introduction to a few professionals. Let's now acquire knowledge about more professionals and the instruments used by them.

Next week, there is annual function in Rajju's school. On that day, there will be a fancy dress competition also for the children. Rajju wants to act as a doctor in that competition. She said to her mother, "Mummy, please stitch a doctor's coat for me to wear in the competition."

Her mother refused and said, "Dear Rajju, I don't know how to stitch a coat." "Mummy, once you stitched a beautiful 'Salwar Kameez' for me," Rajju said. "Dear, your (grandmother) Nani had trained me in stitching salwar kameez only," mother replied.

"Did Nani know everything?"

"Yes, she used to knit carpets and thick sheets very beautifully. Today also, She has kept her *Charkha* and its *hathha* with tender love". "Then my coat.....," Rajju was sad.



Charkha



**Tapestry beater
(hathha)**

Her mother lovingly touched her head and said, “Don’t get upset dear. Let us go to the tailor and ask him to stitch a coat for you.”

“Yes, It is right, besides, I will buy the apparatus and instruments i.e. thermometer, syringe, stethoscope, etc., used by a doctor,” said Rajju.



Stethoscope



Thermometer



Syringe

Q.1. For what purpose does the doctor use thermometer ?

.....
.....

Q.2. Which instruments are used to make ‘Carpets’ ?

.....
.....

Rajju’s mother agreed to take her to the tailor. While getting ready she said, “O.K., I will accompany you and also get my shoes repaired from Prem (cobbler).” Rajju reached the tailor’s shop with her mother.

Rajju asked tailor, “Uncle, can you stitch a doctor’s coat for me ?”

“Yes, baby definitely.” the tailor replied.

“Uncle from where have you learnt all this?”

“I have done two years course in tailoring. Your aunt does the embroidery work,” he pointed towards his wife.

The tailor took Rajju’s measurement with the help of an inches tape.

Rajju carefully observed the tailor’s sewing machine. The tailor’s sewing machine was bigger than the sewing machine at her home. She saw

the embroidery machine for the first time. She had seen the scissors and the inches tape at her home also.

Rajju was very happy to see colourful chalks lying near the tailor. He was marking on clothes with the help of these chalks. There were buttoning and hemming needles also.



Tools used by a tailor

There are 12 Inches in a feet.

Activity 1: Measure your height with inches tape and find out how feet tall you are. feetinches.

On their way back, Rajju's mother gave her shoe to the cobbler for repair. With the help of different tools, he mended the shoe.

Let us learn about cobbler's tools.



Brush

Iron Tripod

Needle

Rajju and her mother started back to their home. On the way, seeing Soni's shop, suddenly her mother remembered that she had to buy the pickles for home too. Rajju's mother told Rajju that Soni's mother prepare pickle herself. As it is very tasty, all villagers buy pickle only from Soni's shop.

A fruit cutter was lying there which Rajju has seen for the first time.



Fruit Cutter

For the teacher : The teacher should discuss in class about the different fields in which women are working.

Q.3. Which of the following jobs are being done by women too ? Tick (✓) the right answer:

1. Rearing of cattle.
2. Weaving of carpets and thick sheets.
3. Driving of buses.
4. Making clay pots.
5. Working in armed forces.
6. Managing hotels/dhabas.

☐
☐
☐
☐
☐
☐

Then they purchased a pot from a Potter, sitting in a decorated shop beside the road. Rajju asked the potter, "Uncle, how can you prepare round clay pots and from where have you learnt it ?," Rajju spoke in a single breath.

Potter replied, "Clay is prepared by kneading it properly. Utensils are prepared with the help of Potter's Wheel. Then these are dried and hardened in the furnace. This is our ancestral profession. I had learnt this work from my father and grandfather.



Potter's Wheel



Things to Remember

- The professions were learnt earlier from ancestors or Gurus. Now-a-days, they are learnt through professional courses.
- Different tools are used in every profession.



Q.4. Tick (✓) the right and cross (x) the wrong sentences:

(a) Tailor measures with Inches tape.

☐

(b) There are 12 inches in one feet.

☐

(c) Cobbler makes earthen utensils.

☐

(d) Potter dyes 'Dupattas'.

☐

Q.5. Match the Columns :

(A)

Tailor

Cobbler

Potter

Doctor

(B)

Needle

Syringe

Scissors

Potter's Wheel

Q.6. Which tools are used by a tailor ?

.....

.....



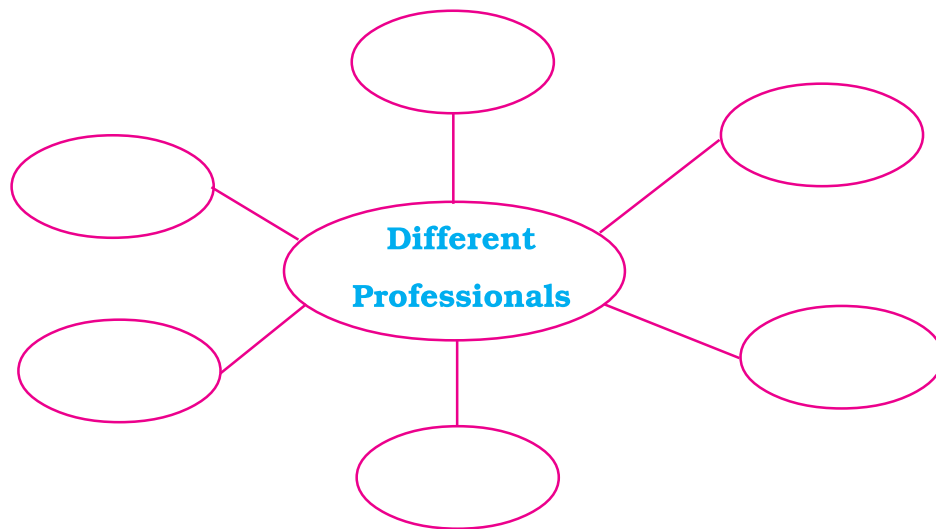
Q.7 Who uses thermometer ?

.....
.....

Q.8 Which are the ancestral professions ?

.....
.....

Q.9. Mind Mapping



LESSON-5



WORLD OF ANIMALS

Activity 1: In the following pictures young ones of some animals have got separated from their mothers. Let us help these young ones to reach their mothers by matching.



Animals and their young ones

As your parents look after you, similarly animals also look after their young ones. Many birds rear their young ones themselves.

You must have seen pigeons and sparrows looking after their young ones. These birds build nests by collecting straw, grass, etc. Then they lay eggs in the nests. Chicks which come out of the eggs are very weak. They do not have feathers. Pigeons and sparrows bring food for their young ones till they are not capable of finding food for themselves. Their parents protect them from bad weather and enemies till the young ones are not able to fly properly. They also cover them with their feathers to protect them from rain and cold weather.

Activity 2:

Get information from your teacher or parents, how the hens look after their young ones in a nearby poultry farm or homes. Discuss about it in the class room.

Some animals give birth to the young ones. Such animals are called mammals. Mammals have hair on their body and they have external ears. New born babies take feed from their mothers's milk. Some animals do not have external ears, e.g., reptiles like earthworms, snakes and lizards. They do not have hair on their body.

Animals not only bring food for their young ones but also protect them. If they feel danger for their young ones, they can even attack for the protection of their young ones. When we try to touch puppies and calves, their mothers try to oppose us. That's why you should be very careful in this situation. If any animal has given birth to young ones in your house/neighbourhood, you



should go near it only in the presence of your elders.

Most of the animals look after their young ones, but there are some animals who do not take care of them. Snake, crocodile, lizard, frog, fish, insects, etc, make a safe place to lay eggs but do nothing to feed or protect their young ones.



We can divide the animals into two groups :

Egg laying animals	Birth giving animals
Crow, Ant, Koel, Parrot, Fish	Lion, Tiger, Deer, Cat, Elephant, Pig

Activity 3: Let us make an album. Take one simple note-book. Divide it into two parts. In the first half, paste the pictures of those animals that look after their young ones and in the second half, paste the picture of those animals who do not look after their young ones. You can take these pictures from old news papers and magazines.

Do you know that like these animals, their young ones also have special names?

Cat
Goat
Bitch
Sheep
Mare
Buffalo/Cow

Kitten
Kid
Pup
Lamb
Colt
Calf



Things to Remember

- Most of the animals take care of their young ones.
- Mammals give birth to their young ones.
- Birds make nests with straws, grass, etc.



Q.1. Fill in the blanks with the help of suitable words :

(birth, feathers, nests, bring-up, Reptiles)

- Most of the animals their young-ones themselves.
- There are some animals who give to their young-ones.
- do not have external ears.
- There are no on chicks hatched from eggs.
- The birds live by making

Q.2. Tick the right (✓) and cross (×) the wrong sentences :

- Snake does not look after its young ones.
- The birds protect their young ones from enemies.
- All animals lay eggs.

☐☐☐

Q.3. Match the Columns :

(A)

Cat

Cow/Buffalo

Bitch

Mare

(B)

Colt

Calf

Pup

Kitten

Q.4. How do the birds make nest ?

.....

.....

Q.5. Write any two features of mammals.

.....

.....

Q.6. Write name of any two crawling animals.

.....

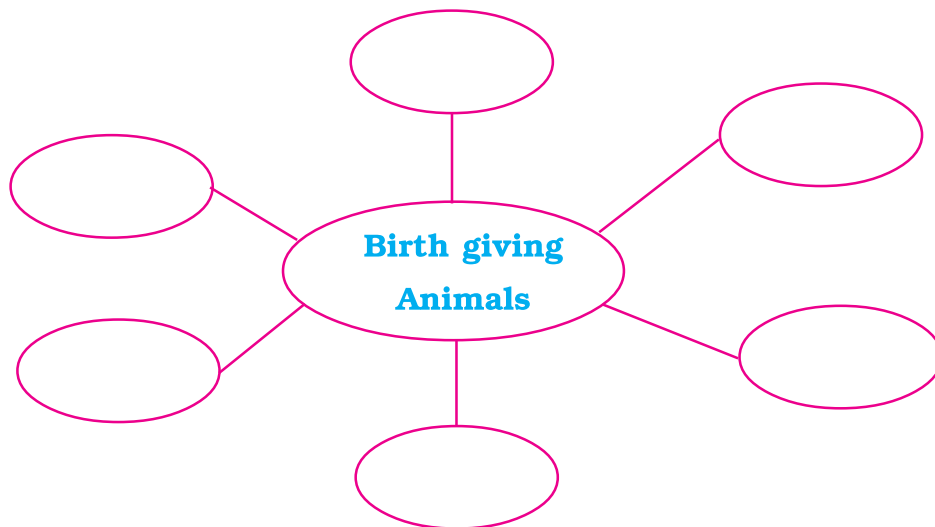
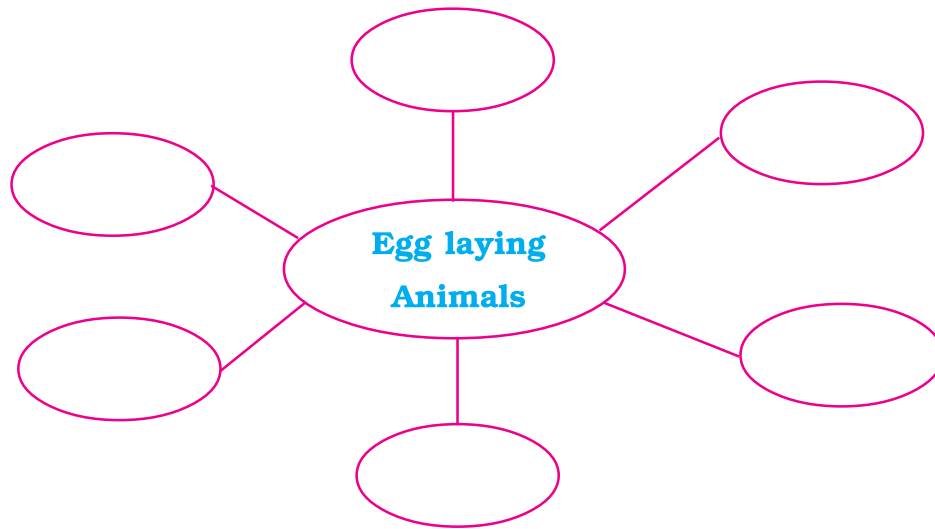
.....

Q.7. What can an animal do if it feels danger for its young-one ?

.....

.....

Q.8. Mind-Mapping



LESSON-6



ANIMALS AND HERDS

Just as we live in families, similarly some animals also live in groups. They feel secure in their groups. Let us know about these animals.

Ginni is a colourful butterfly. It came out in the forest with its mother for the first time. There were beautiful flowers all around. Ginni was pleased to see them. They both sat on a flower to suck the nectar. Ginni was scared to see a brown thing on the flower. Its mother said, “Do not get scared. It is a honey bee. Like us, it has also come here to suck the nectar from the flowers. Look, there is her house.”



Beehive

“What kind of house is it !”, Ginni was looking at it surprisingly. Honeybee said laughingly, “Ginni come, Let me show you my house. It is called beehive. Three types of bees live in this house. Every beehive has a queen bee. Its size is bigger than the rest of the bees. Queen bee lays eggs. There are some male bees too. The third type of bees do all kinds of work. They are called workers. They make beehives. They also prepare honey from the nectar collected from flowers.

Ginni said to its mother surprisingly, “Do they all live together ?” The mother said, “There are some other animals also in the forest who live together. Come, I will show you.” The mother said, pointing at a herd of animals, “Ginni my baby, these are horses. They also live together.”



Herd of horses

“Look at that young one. It is Chetak. Chetak is just one year old and it is very charming. Its companion horses love it very much. It is very happy today. It has run a lot of races with its friends and has won all the races. Its friends wanted to go still further in the jungle but Chetak wanted to come back. Chetak knew that everyone would start worrying about them if they do not return soon in their herd. Now they were hungry also. That’s why they had to return to their herd. Their whole herd goes together for grazing and drinking water. Chetak’s mother decides where to go and which way to go. She is the leader of that herd as she is the eldest one.”

Do you know that a horse lives not only with other companion horses but also with other animals and human beings ? It is very intelligent and faithful animal. Its memory is amazing.

Chetak loves to run a race with its companions.

Which game do you like to play with your friends ?

Ginni, pointing to the other side, said, “Mom look ! what kind of horses are they ?” Her mother said, “No my dear, they are not horses, they are deer.

They also live in herds. Now their number has decreased a lot due to excessive hunting and shortage of food.”



Herd of deer

Do you know, blackbuck is the state animal of Punjab.

For the Teacher : Discuss in the class-room that not only blackbuck but also many other animals are endangered. Reasons for their decreasing number are excessive hunting, deforestation and shortage of grasslands for their grazing. Their habitat is getting reduced.

Elephant is also an animal who lives in herds. Like horses, its relationship with human beings is also very old. In ancient times, horse and elephant used to be the man's first choice of riding. Many Kings and Emperors used to keep horses and elephants. It was their hobby. Camel also likes to live in herds.

How herding benefits animals :

- They get secured from hunters while living in herds.
- They can get hold on specific areas living in herds.
- They learn the skills to compete and to get secured from enemy.

You have learnt that many animals like to live in herds. Can you tell why animals live in herds ? If they donot live in herds in forests then, think,

what would happen ?

We have learnt that many animals like to live in herds. Let us know about the nature of some other animals.

Some animals are shy or fearful by nature. They run away on seeing any strange creature or human beings. A few pictures of such animals are given below. Name these animals in the given spaces.



1.



2.



3.



4.

Shy animals

Do you know something else about the nature of some other animals ?
If yes, then write about its nature.

Name of animal

Monkey

.....

.....

.....

Nature

Imitates

.....

.....

.....



Things to Remember

- It is safe to live in herds.
- Most of the herds of animals have female leaders.
- Black Buck is the State Animal of Punjab.



Q.1. Fill in the blanks with appropriate words :

(grasslands, blackbuck, shy, horse)

- (a) Memory of the is very sharp.
- (b) There is shortage of for grazing of animals.
- (c) Some animals are by nature.
- (d) Number of is decreasing due to hunting.

Q.2. Tick (✓) the right answer :

(a) **Bees live in?**

Beehive ☐ Nest ☐ hole ☐

(b) **State animal of Punjab is?**

Blackbuck ☐ Elephant ☐ Camel ☐

(c) **Which bee lays eggs?**

Queen bee ☐ Male bee ☐ Worker bee ☐

(d) **Which is a shy animal?**

Dog ☐ Monkey ☐ Rabbit ☐

Q.3. What work is done by worker bees ?

.....

.....

Q.4. Write two characteristics of the horse ?

.....

.....

Q.5. Why is the number of black-buck decreasing ?

.....

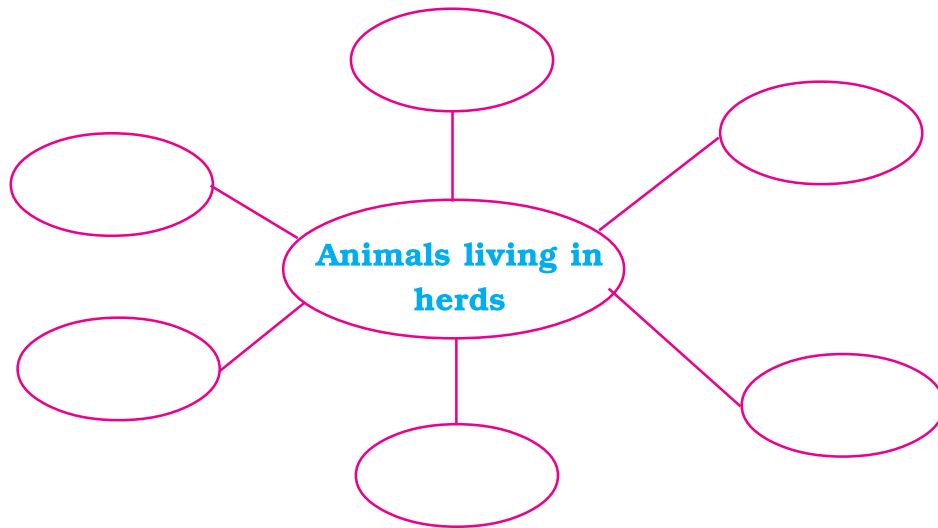
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Q.6. Why do the animals live in herds ?

.....

.....

Q.7. Mind Mapping



LESSON-7



THE ROOTS OF PLANTS

Root is the special part of a plant. While roots are important for plants, they are also useful for human beings. Let us have some knowledge about their specialities. The process of making new votes is going on in the school of a village. People are coming and going in the school play ground. The children, who came to play cricket have returned back due to great rush there.

They went to other open place near the village dharmshala for playing cricket. At that place, many small plants were grown. Children pulled out those small plants to clean the place for playing. There was a guava tree also. They tried to pull it out from the ground but they could not uproot it. There came an old man.

“What are you doing ?”, old man said.

“Baba ji, we want to play here but this guava tree is in the middle of the play-ground so we can not play. We tried our best to uproot but could not do it.” It was all narrated to Baba ji, by Lovepreet, in a single breath.

The old man advising the children said, “Children firstly, it is very bad to uproot trees. **No tree means no human being can survive.** Learn this fact right now and secondly, the guava tree is held strongly by its roots.”

“Roots! what are roots ?” one of the boys asked.

“A plant’s roots are under the soil. They hold the soil strongly,” said Baba ji.

“Are these small plants without roots ?” Tirath asked pointing towards those small plants which were pulled out.

“No children, these plants are very small so their roots are also small. As the small plant grows and becomes a big tree, its roots spread deep in the soil. In this way, the tree is firmly held to the ground and it becomes difficult



to uproot it,” Baba ji replied. “What are the other functions of roots ?,” Sukha asked Babaji.

“When we water the plants, roots absorb it and the trees grow,” Baba ji replied.



Roots of a tree

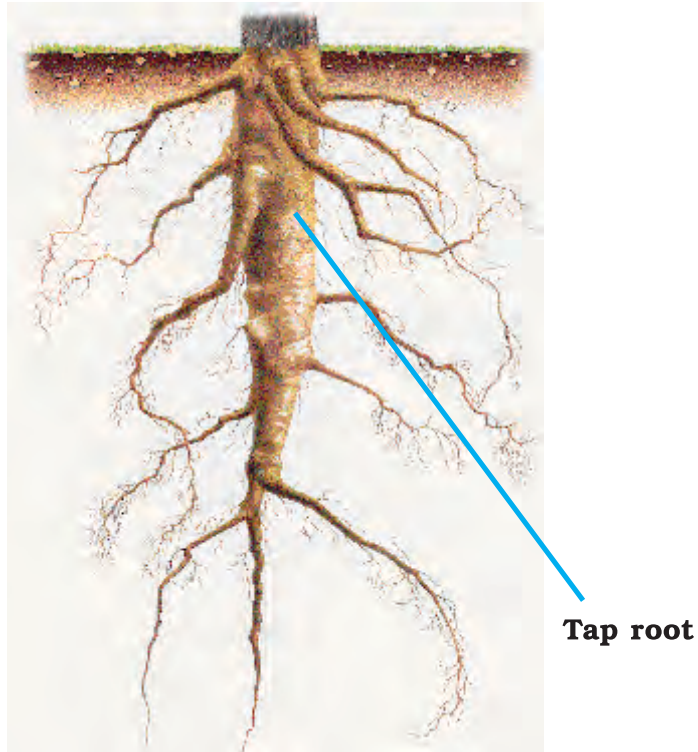
Activity 1:

Find out the oldest tree in your school ? Give information about it in the following blanks:

Name _____ Age ____ (Approximate) _____

Do you know

One root of a tree is thicker than the other roots. It goes straight under the soil. Other roots come out of it like branches. They are called the tap roots.



Tap root

Q.1. Which part of the plant absorbs water ?

.....

.....

Q.2. Write the functions of roots.

.....

.....

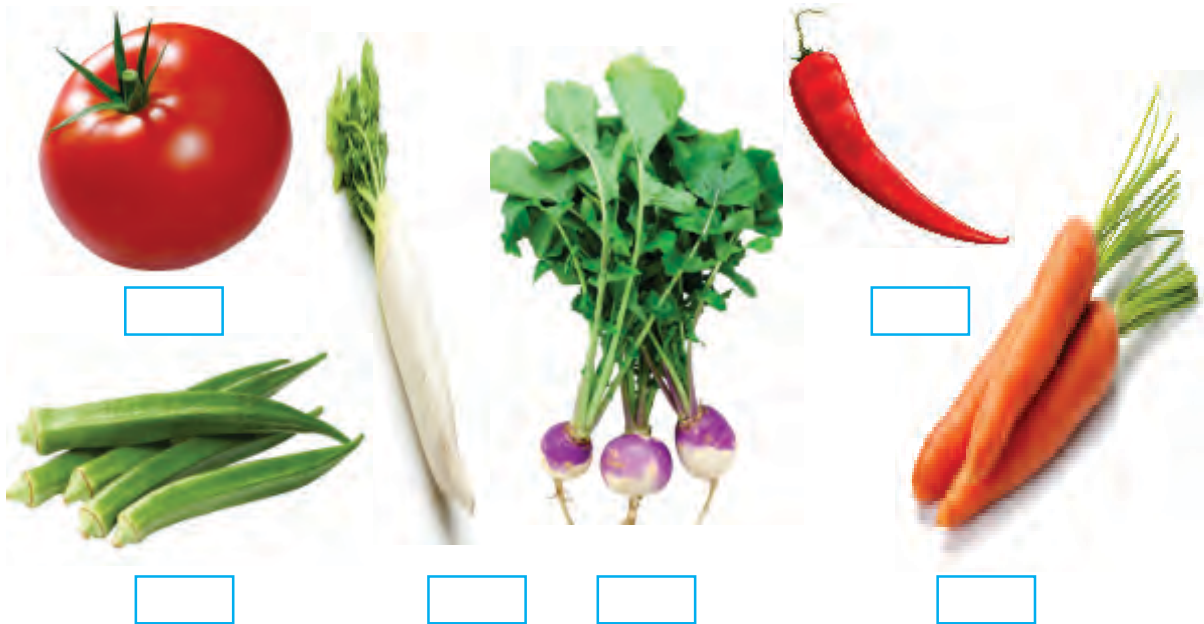
Do you know

Kachalu is a type of a root which is very thick and big. It is eaten as 'chaat'



Picture of Kachalu

We eat some roots in the form of vegetables. Put tick (✓) on such vegetables in the picture.



Pictures of some vegetables

Baba ji enjoyed a lot while talking to the children. He said, “Shall I tell you a story ?”

“Yes-Yes,” the children shouted together.

‘It is an old story. A king sat under a tree to have some rest. A parrot was sitting on that tree. The parrot threw a half eaten berry upon the king. The king got angry. He shot one arrow towards the parrot but the arrow got



stuck in the branches of that tree. The king got annoyed with the tree as well. That foolish king got cut all the trees in his kingdom. After that, there was no rainfall in his kingdom. Some years later, there was shortage of food. People started dying of hunger. They started migrating to far off areas. The king also reached a distant forest along with his family. They could not find anything there to satisfy their hunger.

While roaming there they met a saint. The king narrated him everything. The saint told the king that cutting of all the trees was his big mistake. Due to that act, the rainfall stopped. He further told them that there were no fruits in the forest, so they might eat roots. The king got puzzled and said, “Roots ! I don’t understand”. The saint said, “some kinds of tree roots are edible. I have some roots of ‘shtawari’ (Asparagus) and sweet potatoes which you can eat after boiling.” In this way the king’s family started living near the forest and eating the roots for their survival. Ultimately the king felt sorry for his wrong decision of cutting trees. He realized that even the roots of trees are helpful for the human beings.

Do you know ?

Look at the pictures on the next page. This is a banyan tree. Its roots are also under the soil like other trees. Besides, it has some roots hanging from the branches. These roots also give support to the tree. These are called aerial roots. Some people call it ‘beard of the banyan tree’.



Picture of a banyan tree

Have you seen any other such tree ? Write its name and place where have you seen ?

Name _____

Place _____



Things to Remember

- Root is a special part of a plant.
- Roots are beneficial for plants as well as humans.
- Roots absorb water from the earth.
- Roots hold the plants in soil firmly.
- Shtavari, Sweet Potato, Kachalu, Carrot and Radish, etc., are edible roots.



Q.3. Make diagram of Tap root ?

Q.4. Fill in the blanks with suitable word :

(root, soil, thicker, water)

- (a) Roots of trees are in
- (b) Kachalu is a
- (c) Tap root is than the other types of roots.
- (d) Roots absorb

Q.5. Why was guava tree not pulled out ?

.....
.....

Q.6. What is a tap root ?

.....
.....

Q.7. Which of the plant roots can be eaten ?

.....
.....

Q.8. Why should we not cut the trees ?

.....
.....



LESSON-8



COLOURFUL FLOWERS

“Nana Ji, my exams are over. So, today I am coming to Patiala with my mom”, my son Sukhman was talking to his grandfather on the phone.

It took us just about four hours to reach Patiala from Faridkot. Sukhman touched the feet of his grandfather and grandmother, as he entered the house.

“Nani ji, what are you eating ?”, Sukhman asked pointing to the dish plate.

“This is called Gulkand, Sukhman”, My mother replied.

Sukhman surprisingly asked, “Gulkand! what is it ?”

“It is prepared from rose flowers, my son”, I tried to convince Sukhman.

“Are flowers edible ?”, Sukhman asked surprisingly.

“Yes, my son, the cauliflower, which you eat as vegetable, is also a flower.”

Do you know ?

Kachnar and Banana flowers are used as vegetables. Pakoras are prepared from the flowers of Moringa. Salad and Vegetable is made from Broccoli flowers. Write the names of following flowers after identifying them with the help of the teacher.



1.



2.



3.



4.

Q.1. Which flowers are cooked as Vegetable ?

.....

Q.2. What is made from broccoli flower ?

.....

“Sukhman my son, flowers are also used for other purposes,” Nana ji said.

“Nana ji, tell me everything,” Sukhman asked eagerly.

“Gulab Jal, Scent and Sharbat are prepared from rose flowers. Jasmine and lavender flowers are used for making scented oil. Flowers of sweet violet (banafshan), kachnar, rose, kikar and aak are used for making certain medicines. Marigold, dhak, hibiscus and rose flowers are used for making colours. Honey-bees and butterflies suck nectar from the flowers”, Nana ji told Sukhman about the flowers in detail.



1.



2.



3.



4.



5.



6.



7.



8.



9.

Write the names of the flowers in the provided space.

Q.3. Give the name and uses of any two flowers in the above picture.

.....

Sukhman said firmly, “Nana ji, I want to see all the flowers.”

“Son, let us go to Baradari garden. There, we shall be able to see many kinds of flowers,” my papa told Sukhman.





Scene of flowers at Baradari Garden

They all reached Baradari Garden. It seemed as if there were colourful carpets of various flowers. Sukhman was extremely happy.

“Mom, take me to garden at least once in a month,” Sukhman requested.

“Son, all flowers do not always bloom. Many flowers bloom during December to March, e.g. dahlia, pansy, aster, etc. Some flowers bloom throughout the year, e.g., motia and sadabahar. Some flowers bloom during summer, e.g., lily, cock’s comb, zinnia, etc.,”

“Some flowers blossom at night only, e.g., as night blooming Jasmine plant.”

“Nana ji what is this ! Some flowers are growing on small plants and some are on creeper which is hanging from the wall !” Sukhman asked.

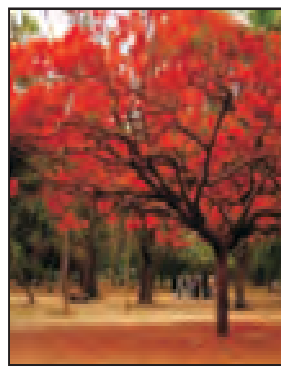
“Sukhman, some flowers grow on small plants, e.g., poppy, pansy, etc. Some flowers grow on creeper like jhumka vine, some on big trees like gulmohar but lotus flower blooms in water,” My father answered.



Poppy



Jhumka



Gulmohar



Lotus

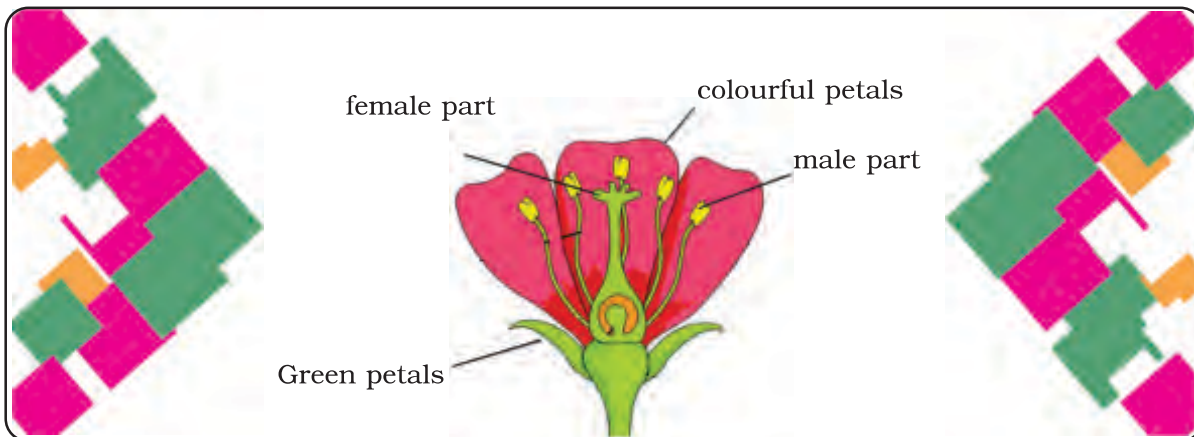
Sukhman said, pointing towards flowers, “Mom, look at these flowers. Some are bell shaped and a few flowers look like a ‘Rakhi’.

Activity 1:

Some items and flowers are given in the picture. Match, which flower resembles which item ?

Match the following





Different Parts of a Flower

Activity 2:

With the help of teacher, visit a garden and get knowledge about parts of flower.

“Nana ji, I want to know more about flowers,” Sukhman asked as he never wanted to go home.

“Son, rest of this will be told by your mother”, papa replied.

Activity 3:

Sukhman’s mother played a game about flowers with him. You can also play this game. Choose any three different flowers and tell.

Name of the flower	1	2	3
Colour of the flower	1	2	3
Number of the petals	1	2	3

After answering all the questions, Sukhman said, “Mother, can I take these flowers home ?”

“No, my son, we should not pluck the flowers. They add to the beauty of our surroundings”, I advised Sukhman. Another man who was also watching flowers recited a poem on flowers to Sukhman.

Colourful flowers, tiny leaflets in sight.

They are blue, yellow and some are white.



Pluck them and they wither quickly.
But if not, they shine forever brightly.
Some in the sun and some at night.
Some blossom during their season and some forever bright.
They giggle in joy and their aroma is free.
Always remain happy, whatever it may be.

After listening to the poem, we happily returned home. While passing by 'Sri Dukh Nivaran Gurudwara Sahib' Sukhman asked to stop.

- Nana ji – What is the matter ?
- Sukhman – Look at that shop. There are so many flowers. Why the shopkeeper has plucked so many flowers ? It is very bad.
- Nana ji – My son, flowers are also grown for selling. Some people trade in flowers. The plucked flowers are sold.
- Sukhman – What do the people do with these flowers after buying it ?
- Nana ji – For performing prayer, decoration, making garlands, to put them in hair, for making bouquets, etc. Now no more questions. I think that is enough. Laughing and enjoying they reached back home.



Things to remember

- Broccoli and Cauliflower are flowers.
- Scent, perfumed oil, paint, etc., are prepared from flowers.
- Flowers bloom according to season.
- Some flowers blossom on plants, some on trees and some on climbers.



Q.4. Fill correct word in the blanks :

(nectar, rose, flowers, suhanjana)

- (a) Gulkand is made from flowers.
- (b) We make pakoras with flowers.
- (c) Some bloom during night only.
- (d) Honeybees and butterflies suck from flowers.

Q.5. Tick (✓) the correct and cross (×) the wrong sentences:

- (a) Kachnar and banana flowers are used for making vegetables. ☐
- (b) Perfumed oil is prepared from Jasmine (Chameli) and Lavander flowers. ☐
- (c) Flowers always bloom. ☐
- (d) Marigold (Genda) flower blooms in water. ☐

Q.6. Tick the (✓) correct Answer :

- (a) **Which flower grows in water.**

Marigold ☐ Lotus ☐ Rose ☐

- (b) **Which flower is used for making perfume.**

Banana ☐ Broccoli ☐ Rose ☐

- (c) **What is prepared from flowers of 'Wild Aak'.**

Medicine ☐ Gulkand ☐ Vegetable ☐

- (d) **Which flower is large in size ?**

Marigold ☐ Neem ☐ Kikar ☐

Q.7. What is prepared from rose flower ?

.....
.....

Q.8. Which flowers are used for making perfumed oil ?

.....
.....

Q.9. On which occasions, decoration is done with flowers ?

.....
.....

Q.10. Match the Columns :

(A)

Flower blooming at night
Flower blooming at noon
Flower blooming on creeper
Flower blooming on tree

(B)

Gulmohar
'Jhumka'
'Lili'
'Raat Ki Rani'



LESSON-9



TREES AND BENEFITS

Once upon a time, someone's cycle got punctured in a deserted place. It was very hot, so it was difficult to walk in the scorching sun light. After walking a little distance, he was hungry and felt like sitting in the shade.

There were some mulberry trees. After resting under those trees, he felt much relieved and relaxed. After eating the fruit from the trees, his hunger got satisfied.

There were many 'Malhe' and 'Ber' trees nearby. He enjoyed eating the fruits of these berries. He was thinking, "It is the wonder of nature. How the seeds of that trees reach here. These wild trees grow at their own. There is no one to look after them. These plants are very useful for us. All of us should make friendship with trees." These trees appeared very dear to him. His tiredness and hunger got relieved. He recalled an old saying- 'We should grow maximum trees and they should be protected.'

The trees like Banyan, Peepal, Mango, Jamun, Amaltas, Amla, etc., are grown in our houses, fields, roads, parks, etc., are very useful for us. These are called domestic plants. Fruits of some trees are eaten either by humans or by animals.

Q.1. You must have eaten fruits after plucking them from trees or collecting them from land, under the trees in your area (field, school, garden etc.). Write names of those trees.

.....
.....

Important things to know

Whether the plants are grown or they grow at their own, they are very helpful to man in one way or the other. We get shade, fruits, flowers and wood from them. Fruits, flowers, barks, leaves and roots of many plants are used for making medicines. Trees provide oxygen, an essential thing required for our living. The most important thing is that we get all these things from plants **'free of cost'**.

Activity-1 : Look carefully at the trees around you and complete the following exercise. You can take the help of your teacher.

S.No.	Name of Tree	Who looks after it	Who eats its fruits	Specialities of that tree
1				
2				
3				
4				
5				

‘Some people live in jungles. They are called Tribal. They eat fruits from the forest trees. They use parts of these plants for making medicines too. Their whole life is dependent on the trees.’



Tribal People

Then he took out his notebook and made a list of some wild trees of Punjab.

‘Sheesham’ is the state tree of Punjab.

He thought many of these trees are found around us.





Sheesham



Bamboo



Babool



Jandd



Phalahi



Kareer



Khair

Some plants are found in forests of Punjab. For Example sheesham, bamboo, babool, jandd, phalahi, kareer, khair, etc.

2. Mind Mapping



Do you know

According to a survey report of 2011 the recorded forest area in the Punjab state is 3315 km² which is 6.5% of the total geographical area of the state. We have damaged our environment by cutting the forests for our selfish motives. Wild animals are also endangered due to this. We can recover this damage by planting more and caring them.

Here is an interesting story for you.

Neem Rani

Besides Panchayat Committee Members, many people of village have gathered in Panchayat Ghar. They were to arrange funds for the construction of Dharamshala in the village. With everybody's consent, the land adjoining



Panchayat Ghar had been selected for constructing the Dharmshala.

All the villagers were happy with this decision. But a 12th class student, Rani and other girls of the village were not happy with the decision of cutting an old Neem tree. Its wood was supposed to be used for making benches for the Dharmshala. This Neem was so big that four swings could be arranged on its branches at a time. Rani, in her childhood, had utilized this Neem tree for swinging purpose. Time spent on Teej festival under that neem was really memorable. The whole night Rani kept on thinking how to save that neem from being cut down. Next day, early in the morning, she reached under the neem with her friends. The sarpanch and labourers had already reached there to cut the tree. Rani requested the sarpanch not to cut that neem. The sarpanch explained his helplessness as they didn't have money for buying



Neem Tree

benches. Rani removed her gold ear rings from her ears and gave it to the Sarpanch and said, "Please sell these ear rings and get your benches made. We will collect some more money too. Benches can be purchased from the market but the shade, the shelter for the birds and the oxygen can not be purchased from any shop," Her eyes were full of tears. Her friends also gave the money collected by them to the sarpanch.

On seeing the love and concern of those girls for the neem tree, the

sarpanch at once decided not to cut that neem. He returned Rani's ear rings and also the money given by her friends. With the intelligent act of Rani, the neem tree got protected from being cut. Villagers were very happy. They gave Rani's name to that neem as '**Neem Rani**'.



Things to Remember

- Trees are grown as well as they grow themselves.
- Trees provide fruits, shadow, oxygen, wood, etc.
- Many parts of trees are used in medicines.
- We should be friendly with trees.



Q.3. Fill in the blanks :

(oxygen, medicines, trees, mulberry)

- (a) There were trees in desert.
- (b) The trees provide us..... which is an essential gas for our life.
- (c) The life of tribal people is fully dependent on
- (d) Different parts of plants are used in

Q.4. Tick (✓) the right and cross (×) the wrong sentence :

- (a) We should grow more and more trees. ☐
- (b) Shadow of trees can be bought from any shop. ☐
- (c) Neem tree was cut due to Rani's wisdom. ☐
- (d) We have harmed the environment by cutting the trees. ☐
- (e) Everybody should be friendly with trees. ☐

Q.5. What is provided by the trees ?

.....

.....

Q.6. Who are the Tribals ?

.....

.....

Q.7. Which tree bears mulberries ?

.....

.....



LESSON-10



FIELD TO HOME

We eat Mid Day Meal together in school. As usual the vegetable prepared in mid day meal was very tasty. By smelling the aroma from it, Lakhveer asked the teacher what aroma was that.

Teacher : Beta, this aroma is coming due to spices added to the vegetables.

Lakhveer : Sir, What is meant by spices ?

Teacher : Beta, these spices are the seeds, leaves, barks and roots of different flavoured plants. They give colour and flavour to our food. They also make the food tasty.

Besides, some spices are used for curing the diseases. Turmeric is used for curing wounds and clove oil is used for relieving toothache. Usually we grow spices like turmeric, coriander, methi (fenugreek), mustard seeds, ginger, carom and chilli in our fields. Then, we use them in small quantity after making their powder.

Clove, black pepper, cumin, curry leaves, cardamom, cinnamon, etc., spices are produced in South India.



Coriander



Turmeric Plant



Different Spices

Activity 1 :

Keep different spices on a table in the classroom. Teacher will ask students one by one to identify various spices by tasting & smelling them. Prepare a list of spices identified by them.

With smell _____

With taste _____



Activity 2 :

Which spices are used for cooking at your home ? Know from your mother & write below :

.....

Shankar : Sir, My mother prepares Garam Masala by mixing all spices. Oil is also used to cook vegetables. Is this also produced in fields ?

After listening to Shankar, Teacher took all of us to nearby fields of Khushman. Khushman's father is a farmer. All students wished his father. He asked us to sit on a cot. Teacher discussed something with his father, and continued while showing some seeds out of mustard beans.

Teacher : We use many types of oils for cooking food. Oil is extracted from Mustard seeds by a machine (KOHLU). Besides, Groundnut, Soyabean, Sunflower, Til, Coconut, Olive Oil, etc., are also available.

Ramandeep : Do all of us eat wheat and rice only ?

Teacher : Ramandeep, wheat and rice are the main grains. Different types of food are prepared from them in different parts of our country. Flour is made by grinding the wheat. Then Chapattis, Puris, Mathis, bread, etc., are prepared from wheat flour.

Besides wheat and rice, millet, oats and maize are also cereals. We also eat gram, moong, rajmah, moth, mahn, etc., as pulses.

Activity 3 :

Which cereals, pulses and edible oils are used in your houses ? Write with the help of your mother :

Cereal

Pulses

Oil

(During this, Khushman's father plucked fresh kinoos from the garden and gave to all children to eat.)

Kiran : Uncle, these Kinoos were purchased by my mother in the morning from a fruit seller. How these reach to him ?

Teacher : Come on children ! Khushman's father will provide us the knowledge regarding journey of crops from fields to our home.

Father : Children, different farmers produce cereals, pulses, fruits and vegetables in their farms as per their requirement. First of all, fields are prepared for sowing by ploughing with the help of tractors or oxen. Then we grow crops according to season. Rice is sown in 'Kharif' and wheat in 'Rabi' season.

Manure is also added while sowing seed to the fields so that crop production can be increased. Crop is also irrigated from time to time to save it from drought.

Insecticides (for protecting crops from insects) and weedicides (for preventing the crop from weeds) are sprayed from time to time.

The crop ripens in a span of approximately six months. Then extraction of seeds is done with the help of Thrasher or Combine Harvester. In the same way, vegetables and fruits are plucked with hand.



Combine Harvester



Ripe Fruits

Children, wheat, rice and pulses are taken to grain market after putting them in trolleys. After plucking fruits and vegetables in evening, we put them in different sacs or containers. There, the big traders purchase them by way of auctions.

Small shopkeepers and street vendors (Rehri walas) sell them to us after purchasing the fruits and vegetables from big traders.

Wholesale dealers or big traders send the remaining fruits to other states by trucks and trains. Similarly, other crops are also taken to the market by farmers, and then it reaches to the shops. We purchase them as per our requirement. **This is called marketing.**





Scene at Grain Market

Kuldeep : My father drives a truck. He takes bananas and onion from Maharashtra to Jammu-Kashmir. He brings apples to Punjab.

Father : Children, this way one crop grown in a particular state is sent to (delivered to) other states. Now-a-days, vegetables and fruits of other countries are also available in our market throughout the year.





Various Scenes of market of Vegetables



Things to Remember

- Farmers grow fruits, vegetables, grains and pulses in their fields.
- Spices make our food flavoured and tasty.
- Farmers sell their crops in the market.
- Food is an important part of community programmes.
- Different types of food are eaten by the people of different regions in our country.



Q.1. Write the names of three summer & winter vegetables each :

Summer Vegetables

Winter Vegetables

Q.2. Write the names of three summer & winter fruits each :

Summer Fruits

Winter Fruits

Q.3. Guess, what is it ?

(Hari aur Lal Mirch, Nariyal, Piaaz, Chhalli, Kela (Banana))

a. Katore ch Katora, Beta Baap Toh vi gora.

b. Vatt te Khara patwari, lattan thothian Sir bhari.

c. Nikka Jiha sipahi, Odi Khich ke vardi lahi.

d. Hari ci, man bhari ci, lallan moti jari ci

Raja Ji de bagh ch dushala lye khari ci.

e. Hari-Hari Laal-laal lagdi c sohni,

Muh vich pa lyi bari hoi anhoni

Teacher should Share more such riddles with the students.

Activity-4 :

Identify and write the names in front of pictures given below. Write the names of two more such crops, in the spaces given :



Identify			
	Vegetables	Fruit	Oil
Name			
Example 1			
Example 2			

Identify			
	Pulses	Spices	Cereal
Name			
Example 1			
Example 2			

Q.4. Write the names of spices produced In South India.

.....

.....

Q.5. How do the Fruits and Vegetables reach our home ?

.....

.....

Q.6. Which fruits are grown in your area ?

.....

.....

Q.7. Write the different stages of farming according to the proper order in the column provided :

Irrigating the crop	
Ploughing the field	
Spraying the weedicides and insecticides	
Sowing seeds	
Adding manure	
Reaping of the crops.	
Purchasing by small shopkeepers or street vendors	
Taking to market	
Extraction of seeds	
Cooking of food	
Purchasing for home according to need	
Selling crop to Traders	

Always Remember



Our Environment gets polluted due to the use of insecticides and weedicides on our crops. This results in occurrence of dangerous diseases like cancer to humans and animals. We should minimise their use. Children should also stay away from the insecticides.



LESSON-11



EAT GOOD, STAY HEALTHY

Today, the weather was very pleasant. Morning Assembly was being held. Suddenly, my friend Raman fell on the ground during daily exercise. Our teacher gave water to her and lay in office. She also gave her biscuits to eat. After a while, she felt better and came back to the class.

Teacher : Raman, did you not take your breakfast today ?

Raman : Yes Sir, I am not feeling well from few days. I had a bad appetite, so I did not take my breakfast today.

Teacher : Child, you cannot do any work with empty stomach. We get energy to do work from food. We must eat food, containing different nutrients. You must eat green & leafy vegetables and drink milk.

Kiran : Sir, what are the functions of nutrients of food for our body.

Teacher : Children, there are three main functions performed by nutrients of food.

Nutrients	Function
Carbohydrates and Fats	Provide Energy to body
Protein	Helps in body growth
Vitamins and Minerals	Protect body from diseases

Harinder : Sir, so many functions are performed in our body, by them. So, we should come to school after taking the breakfast daily. My mother has the poor visibility at night. According to the doctor, she has developed night blindness, which is caused by the deficiency of Vitamin-A. Sir, what is meant by Vitamins ?

Teacher : There are many nutrients in our food. They are very important for our body. If there is deficiency of any of these, we fall ill. Now I will give you the knowledge regarding the nutrients one by one.



Name of Nutrients	Functions	Sources
Carbohydrates	It gives us energy to work and play. The body gets tired due to their deficiency	Rice, wheat, sugarcane, sweet potato, potato, sweets fruits, etc.
Fats	Fats give more energy than carbohydrates. It keeps our body warm	Ghee, butter, nuts, khoa, meat, etc.
Proteins	Proteins are necessary for growth of body. Growing children like you must eat protein rich food	Egg, fish, meat, cheese, soyabeans, peas, pulses, milk, etc.
Vitamin A, B, C, D, E, K	They keep us healthy by protecting us from diseases. Deficiency of Vitamin A causes night blindness	Carrot, tomato, orange, egg and milk. We get Vitamin D from direct sunlight
Minerals Calcium Iodine and Iron	Minerals also make our body fit and healthy. These help in making bones, teeth and blood.	Fresh fruits, Vegetables and milk.

So we should eat food containing all nutrients for our body fitness. The diet which contains all of the nutrients in right amount is called **balanced diet**.



For Teachers: Tell the children about water and roughage also.

Q.1. Write the names of different nutrients present in food.

.....
.....

Q.2. What is provided by carbohydrates and fats to the body ?

.....
.....

Q.3. Write different sources of vitamins and minerals.

.....
.....

Q.4. Fill in the blanks :

(Vitamin D, Protein, balanced, energy)

- a. is necessary for growth of our body.
- b. We get from sunlight.
- c. All the nutrients are present in a diet.
- d. We get by eating Ghee.

Food on Special occasions

Teacher : Children, as we have read, food is very important for our body. Food is the important part of special occasions like marriage, birthday party, langar, etc. On these occasions relatives, friends, neighbours and other people eat food together. Have you ever gone to these types of programmes ?

Sunita : Sir, my grandmother and I, after taking bath and wearing clean clothes, went to neighbour's house in a religious programme.

After the religious ceremony, all of us sat in rows for taking Langar. My grandmother and I helped the cooks too by making dough balls.

'Halwai' had prepared food in big containers.



Preparation and Distribution of Langar

Then Sewadars distributed thalis, spoons and glasses to Sangat. Afterwards, they started distributing Kheer, Halwa, Jalebi, Matar-Paneer Vegetables, Dal, Roti and Curd. Kids were pouring water in glasses.

People were eating Langar lovingly. My grandmother and I along with the other persons, cleaned the dishes.

Dadima (Grandmother) told that Langars are arranged on GURPURAB also.

Avtar : I went to a marriage palace to attend a marriage ceremony of my father's friend. There were many stalls of different types of food.

People were eating Manchurian, Dahi-Bhalla, Gol-Gappa, Paneer-Pakora, Tikki and Fruit Chat from these stalls. Some people were also taking juice, shake, coffee and tea.

There was a lot of raw food in the big Kitchen of the palace. *Halwai* and his helpers were quickly preparing food in very big containers.



Pictures of Marriage Ceremony

Activity 1 :

Make a list of food available in the marriage ceremony

Teacher : Children, during parties we should eat food according to our need. We should not leave the food in plate.



Tejinder : Sir, last year, First Lohri of my cousin was celebrated. There were many relatives and friends in our home. At night all of us ate gachak, reories and groundnut.

Teacher : On these occasions, some of the foods are of same type but some other dishes are specially prepared, as on the occasion of Diwali, sugar chips (Khand de *Khidoney*), *gulgulas*, *puas*; *mathis* in Sawan; halwa, puri-chana in navratras and yellow sweet rice are made on the occasion of Basant.

Activity-2



1.	2.	3.
----	----	----

Write down the names of foods shown in above pictures prepared on different occasions.

Akbar : My elder sister studies in day-boarding school. She lives in hostel. All hostellers eat food from the mess collectively. They get different types of food daily. They clean their hands properly before and after meals with soap and water.

Maninder: Akbar, Mid Day Meal is also prepared in our school. We also eat food together. The cooks serve different types of food according to the daily menu. Our menu includes dal-chawal, roti, green vegetables, kale chane and kheer. We also thank the cook for making delicious food. Firstly, kids are served food. Sometimes, I and my friends help the cook and teachers in serving food. Madam, Is mid day meal prepared in all schools ?

Teacher : Yes, Midday Meal Scheme is organised by government in all govt. schools for the better health of students. Every child should get hot and fresh food. The children get balanced diet due to this scheme. They learn to eat food lovingly in a group.

Activity 3 :

Write down the weekly menu of mid day meal.

Day						
Food						

Satpal : When we went to Goa on tour then we were provided food in the train. Sir, is there any kitchen in the train ?

Teacher : Yes, There is a kitchen in long routed superfast trains which is called **Pantry Car**. Here tea, breakfast, lunch and dinner is prepared for passengers. Now-a-days due to security purpose, pantry cars are used to keep previously cooked food.



Some pictures of Pantry Car of a Train



Things to Remember

- Carbohydrates and fats give us energy.
- Protein is necessary for growth of body.
- Vitamins and Minerals are protective foods.
- There is a pantry car for cooking food in long routed trains.
- Food is an important part of community programmes.



Q.5. Fill in the blanks :

- There were different types of in marriage ceremony.
(stall/shops)
- We should take food according to our in ceremonies.
(need/plate)
- Mid-Day-Meal is provided in School.
(daily/sometimes)
- is the name of kitchen present in the train.
(Pantry Car/Dhabas)
- There are types of shake in marriage.
(one/ different)

Q.6. Match :

Festival

Diwali
Lohri
Spring
Sawan
Navratras

Food

Puri-Channas
Sugar toys (Sugar Chips)
Gachhak and Reori
Yellow rice
Mathis and Puas



Q.7. What should the children do before and after taking meals ?

.....

.....

Q.8. Which habits are developed by taking meals together ?

.....

.....

Always remember



Take only the required amount of food in your plate during meals. Never waste food in your plate. Left over food, in marriages and other functions, should be distributed among the poor and needy.



Dimple was touching her loose tooth. The tooth fell off and was in her hand. She went to her mother crying, “Mummy! I have lost my tooth.”

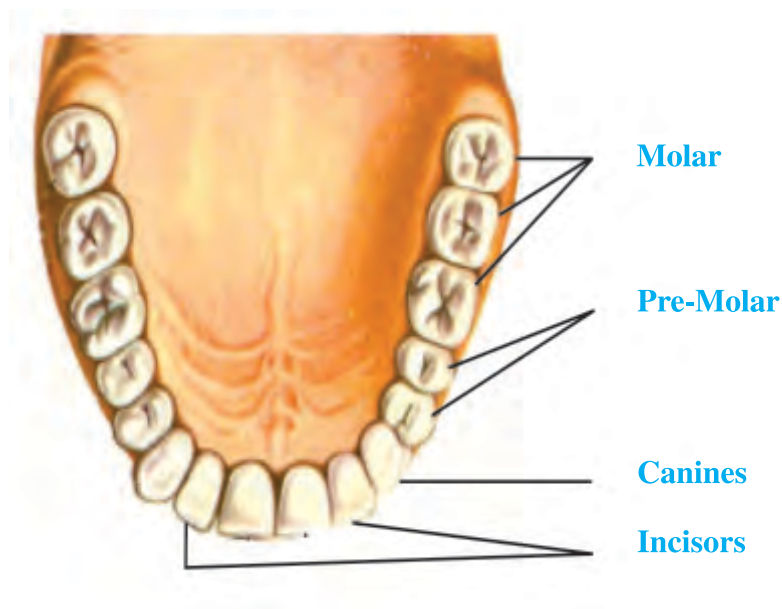
“It is not unusual, baby, it has fallen, not broken. These are not your permanent teeth. These are milk teeth, which you have just started losing,” mother explained to her.

“But now how will I eat without my teeth?”, Dimple asked.

“Baby, you were without teeth when you were an infant. Then you got your milk teeth (temporary teeth) But now, new teeth will come out, as the old will be lost. The only point to note is that you need to take adequate amount of milk and other calcium rich food, so that the new teeth don’t grow unhealthy and ugly.” mother said

“Mummy, will as many new teeth grow, as old ones lost?”, Dimple asked her curiously.

“Baby, milk teeth were only twenty in number. The new teeth include Grinding teeth (Molars) also, and they will be total 32 in number.” mother explained.



Permanent Teeth

“Mummy, If more calcium is given to grandpa, will he also get teeth again ?” Dimple asked her mother innocently.

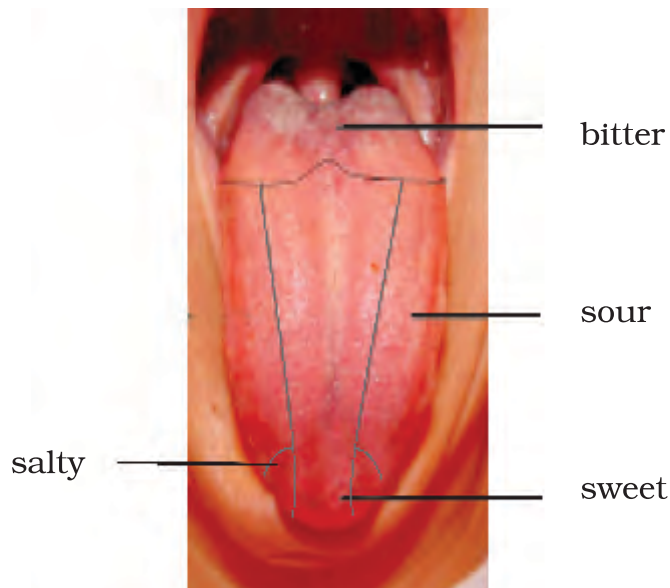
“No baby, human teeth grow twice only. One set of temporary teeth and one set of Permanent teeth”, mother answered, smiling at her.

“Mummy, Dadaji cannot speak some words clearly due to the absence of teeth.”

“Yes, it is so, because teeth help us in speech also. While speaking, sometimes tongue touches the teeth and sometimes moves behind the teeth,” She told her.

Dimple asked again, “What is the function of tongue, Mummy ?”

“Baby, tongue not only helps in speech but, various tastes like sweet, sour, salty & bitter are also recognised by tongue,” she explained.

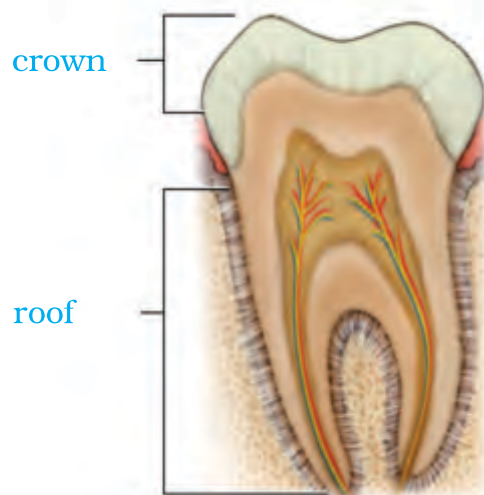


Different Taste Buds Over Tongue

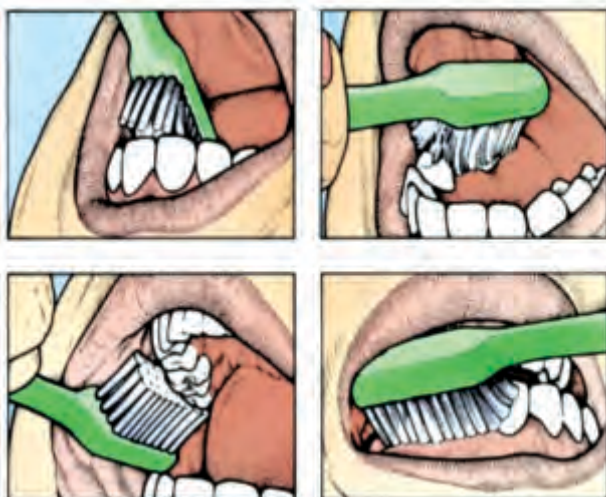
Do you know?

Teeth are made of very hard material called calcium. Teeth are situated in jaws. Teeth have mainly two parts-

1. **Upper part or crown** : The part of teeth which is visible outside the gums is called crown. It helps in chewing food.
2. **Lower part or root** : The part of teeth, which is not visible and is inside the gums, is called root. It holds the teeth firmly.



PARTS OF TOOTH



Method of Brushing

Teeth should be cleaned in up-down, down-up, inside-outside way slowly with the help of soft brush. The toothpaste should be applied on the brush.

Outer white layer of teeth is the hardest part of our body. It is called Enamel.

Teeth are mainly of four types. Their types and functions are mentioned below :

Type of Teeth	Function of Teeth	Number
Incisors	Cutting of food	8
Canines	Tearing of food	4
Pre-Molars	Chewing of food	8
Molars	Grinding of food	12

Total number of teeth in an adult is 32.

Activity 1 :

Speak some tongue twister sentences rapidly. Few are given below :

- (1) Kutcha papad pucca papad—Kutcha papad pucca papad.
- (2) Dilli de dukandar, dadi de do dukhde danda di dawai de de.

This makes students realize the role of various parts of mouth in speaking different words.



Q.1. Write the number of milk teeth & permanent teeth.

.....

Q.2. What are the functions of tongue ?

.....

Activity 2 :

Write down the number and health of teeth of your family.

Name of Member	Relation	Number of Teeth	Health of Teeth

Q.3. What is Enamel ?

.....



Q.4. What do you do to prevent tooth decay?

.....

.....

Q.5. Match the Columns :

A	B
Incisors	Tearing of food
Canines	Chewing of food
Pre-Molars	Grinding of food
Molars	Cutting of food

Q.6. Which tastes are felt with tongue ?

.....

.....

In the meantime, some people gathered in the street to see an elephant. Dimple along with her mother also saw the elephant. She was surprised to see two long teeth projecting out of its mouth. Mother told Dimple that those teeth were not meant for eating. Teeth, meant for eating are present inside elephant's mouth.



Teeth of Dog & Elephant

Some dogs were barking at the elephant. “Mummy, look at the dog. It has some long teeth inside its mouth.” Dimple said, pulling the hand of her mother. “ Yes, all flesh eating animals have longer teeth. They tear the flesh with the help of these teeth. With the help of other teeth, they chew other eatables,” her mother explained to her as per her own knowledge.

“Mummy ! What are the cows and buffaloes chewing ?” she asked her mother. Mother told her that incisors of grass eating herbivores are broad and sharp to cut grass & fodder. They can eat fodder quickly with them. Then they get back the swallowed food into the mouth and chew and grind it with the help of molars and premolars, while sitting leisurely. This makes the food digestible. This is called rumination.

Teeth of animals like squirrels and rabbits are very sharp to peel the fruits and cut the nuts (seeds).

Q.7. What do you mean by ‘Haathi de dand, khan de hor, vikhaun de hor ?

.....

Q.8. What is the function of long teeth (incisors) of dog ?

.....

Activity 3 : Observe the food habits of animals living around you.

Name of animal	Food	Herbivorous/ Carnivorous	Shape of incisors

Beaks of Birds

Next morning, Dimple went for a walk on the bank of canal with her family. Pleasant sounds of different birds were heard from nearby trees. Koel was singing sweetly.

While seeing a flock of sparrows eating grains, Dimple asked Papa about the number of teeth in birds.

Papa told, “Birds use beaks in place of teeth, for eating food. Their favourite food can be guessed from the shape of their beak.”



The beaks of **sparrows, pigeons, peacocks, hens and Dove** are so short and hard that they can break the grains easily. Parrot likes fruit. It eats hard, unripe and ripe fruits with its round and curved beak. It spoils the fruit by pricking.

The beaks of **kite, owl, eagle (the birds of prey)** are hooked, sharp and hard. With the help of this they tear and eat the flesh of their prey i.e. rats and little birds.

The beak of a duck is big, straight and perforated. It eats insects from the muddy water. The mud and water flow out from the perforations of beak. It eats the remaining insects. The beak of a pelican bears a pouch on its lower part. The long, straight and sharp beak of a woodpecker helps it in eating insects from the cavaties and barks of the trees.

Honeyeater sucks the nectar from the flower while flying with its thin and long beak. Kingfisher eats small creatures like fishes and frogs from the ponds with its long and broad beak.

The birds use their beaks for making nests, feeding young ones, cleaning feathers and self security besides eating food.

Write names of the birds below the pictures



.....



.....



.....



.....



.....



.....

Q.9. Tick (✓) the correct answer

a. Which of these birds eat fish ?

Parrot

☐

Kingfisher

☐

Crow

☐

Pigeon

☐

b. Which of these birds have a pouch under its beak ?

Duck

☐

Pelican

☐

Woodpecker

☐

Kingfisher

☐

Q.10. Why is the beak of woodpecker larger than beak of Sparrow ?

.....

.....

Q.11. Which of the birds eat flesh after preying ?

.....

.....

Activity 3 :

Write the names of the birds with long & short beaks and their food.

Long beaked birds	Food	Short beaked birds	Food

Claws of Birds

Kirat, the younger brother of Dimple, asked surprisingly to her father, “Why the toes of the claws of birds are webbed to each other ?”

Papa replied that usually there are four toes and four nails attached to them in each bird. The nails in duck are attached to each other with a fine layer, for walking and swimming in water.

Nails of sparrows, crows and pigeons are used for holding trees firmly. They can sleep for a long time while sitting. Birds like hen and peacock eat insects and grains by searching the ground with their hard and sharp nails. Nails of hunting animals like Eagle and Owl are strong and sharp.



An Eagle Eating Flesh



Wood pecker

The nails of claws of woodpecker are opposite to each other in the form of a pair so that it can move easily by holding the bark of a tree.

Ostrich cannot fly. It is a running bird. **It has only two toes in each claw.**

Children ! thus, toes and beaks of birds are different according to their living and feeding style.



Eagle



**Wood
Pecker**



Sparrow



Duck

Claws of different birds are given, write their functions.



Things to Remember

- There are 20 milk teeth in children and 32 permanent teeth in Adults.
- Most of the birds have four toes in their claws.
- We should clean our teeth with brush or miswak (datun) daily.
- Front teeth are sharp in carnivorous animals.
- We can estimate the favourite food of birds from their beaks.

Q.12. How does the eagle use its claws ?

.....

.....

Q.13. How do the Claws of a duck useful for it ?

.....

.....

Q.14. Which bird can easily climb the trees ?

.....

.....

Activity 4 :

Write the function of nails by seeing the birds around :

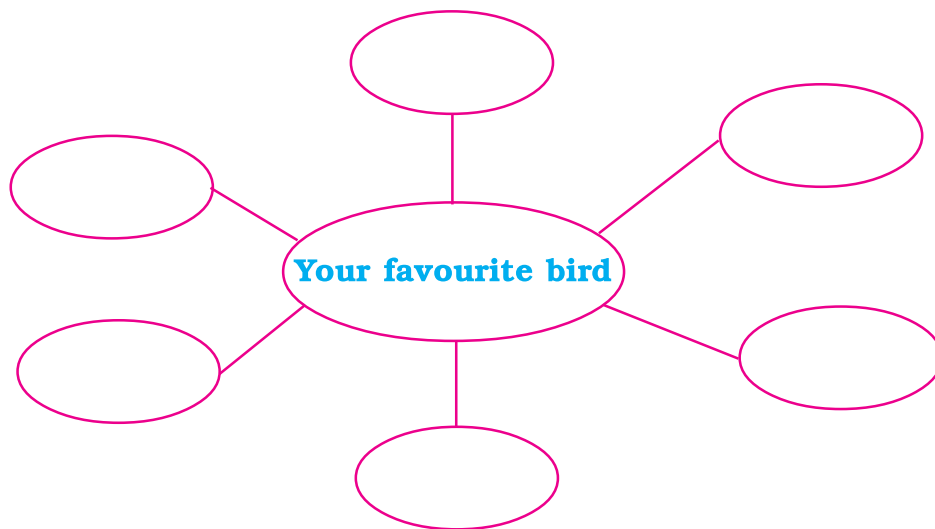
Name of the bird	Function of nails

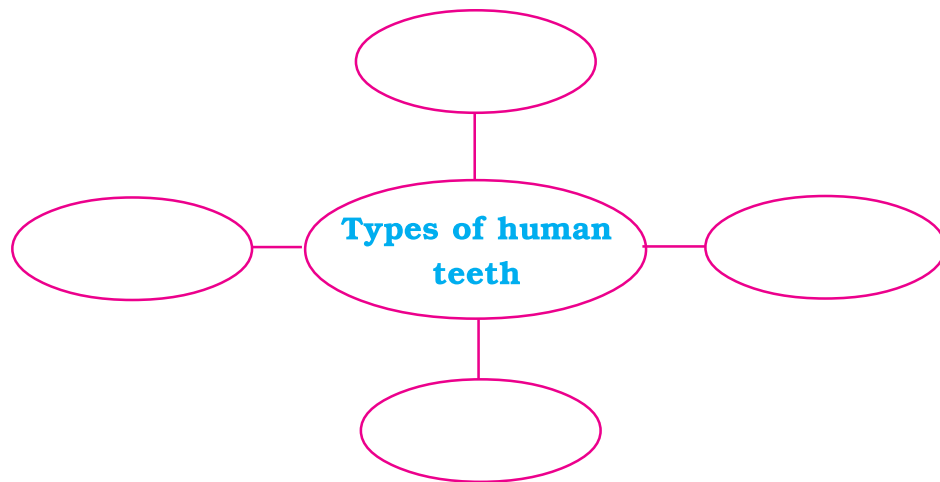
Activity 5 :

Put the grains for the birds at same place daily in your house and write down the name and number of birds who came there to eat grains :

Name of the bird	Number	Name of the bird	Number

Think ! how nice it would be if some animal or bird becomes your friend.

Mind Mapping



We should not tease or hunt animals. They make our environment beautiful and pleasant with their notes (voice) and colourful wings. We should keep grains, water, etc., on the roof top of our houses.

LESSON-13



Human Habitat

Earth - Our home

Our actual home is our Earth. Earth is the living place not only of humans but also of all animals and plants. But only man, out of all living beings on earth, has made different habitats due to his high intelligence. We will read in detail about human habitat, in this lesson.



For Teacher : Globe is the model of earth. Teacher should give the information about islands/oceans to the students. Information regarding earth's moving around its own axis (forming of days and nights) can be given. Solar System and other planets can also be taught.

Habitat of Earlyman – Early man means the man who lived in jungles like animals lakhs of years ago. He used to make his both ends meet by eating leaves and fruits of trees or flesh of animals. He lived in caves in winter and during summer he passed his time by sleeping under trees. But, as his intellect grew with time, he felt the need of permanent place to live. He started making houses with the help of wood and grass. The houses saved him from rain, storm, heat and cold. They also protected him from wild animals.



How did the Villages and Cities come into existence ?

Man made progress in different areas of life according to his intellect. He started living in groups. These groups were called “**tribes**”. Slowly these tribes started growing in the form of villages.

Gradually, human intellect grew up. His needs increased, with this business started to exist. Business centres came into existence with the development of business. Slowly and steadily, people started inhabiting near these business centres. This led to the birth of cities.

Development of Villages and Cities:

Needs and sources of every village and city are different. Agriculture is the main occupation of villagers while urban people mostly do the service or business. So the living style of people living in urban or rural areas is different. The structure of their houses also differs.

Structure of houses :

People in different places make their houses according to their needs, sources, season and environment. So, our houses are not identical. There are many Pucca houses in villages and cities of Punjab. But sometimes, we see Kutcha houses also.

Kutcha Houses :

These are made with raw bricks, mud, soil and grass. These houses are made by family members themselves. There is very little expenditure on construction of these houses. Usually, these are made outside the villages and cities.



Pucca Houses :

A plan is developed before making these houses. A map maker draws a map. He is called **Architect**. Location of kitchen, rooms, bathrooms, lobby and stairs is



determined by the map. It is insured that the house is open and airy. Bricks, cement, sand, gravel and iron is needed for making a Pucca house.

Most of the villagers do farming. So a special place is allocated for keeping agricultural equipments, while making home in villages. Due to expansion of education, a separate room is made for children to study, in



most of city houses. Lawn is made in the courtyard of the house and many plants are grown for maintaining ecological balance.



Multistoreyed Houses :

Multistoreyed houses are made due to insufficient land in big cities. These are called flats (apartments). Special care is taken to set the direction



of windows, doors and ventilators for the provision of sunshine, air and light in the house. Here schools, parks, playground, dispensaries and shops, etc., are built for serving common purpose.

Activity :

Make a model of a house with icecream/kulfi sticks.

Slums :

Some people make small houses in vacant space lying outside the cities. This place is not purchased by them. In these houses, even the basic amenities of life and clean water are not available . They does not lead a healthy life. These places are called slums. These people usually do small jobs and remain poor due to unavailability of fixed employment. They cannot even provide education to their children. Due to unplanned construction of the slums, government faces great difficulty in arranging electricity, water and drains over there.



Important Places of Villages/Cities :

There are many important places in almost all villages and cities. They work for a common purpose and betterment of the society.

These places are as under :

1. **School** : It provides education to children. It helps them be better citizens.
2. **Primary Health Centre or Dispensary** : It provides medical facilities to the people.

3. **Post-Office** : It helps us develop relations (through letters) with our friends and relatives. Postman distributes the letters, parcels and moneyorders. He collects the postage from people and takes to the head post office.
4. **Panchayat Ghar** : Here Panchayat meetings are held. Panchayats work for the development and welfare of the village.
5. **Sports Stadium** : Here games are organised. It plays an important role for physical fitness of youth.
6. There is a meeting place (Sathh) in every village, where old people pass their leisure time. Senior Citizen Homes are made in cities.
7. There are Dharamshals in villages for common purpose. Community Halls serve the same purpose in cities.
8. Besides, there are religious places like Gurudwara, Temple and Mosque in every village and city.

For Students : Note down the places seen on the way from home to school.

Some Special types of Habitat :

All people do not live in houses. Some people are homeless too. They live on roads or footpaths. Rehabilitation centres are built for them. Besides, students live in hostels far away from their houses. Some helpless old persons live in old age homes, Soldiers live in camps for the safety of nation. Some persons, due to their occupation, live in rented accommodations. Habitat is the basic necessity of a man, which provides shelter and protection to him.



Things to remember

- Earth is the basic habitat of man.
- Globe is the model of Earth.
- Agriculture is the main occupation of villagers.
- Early man lived in forests.
- There are many types of houses.
- People living in slums lack facilities.

Q.1. Fill in the blanks :

(big cities, bricks, jobs, forests, good citizen)

- (a) Early man lived in
- (b) Pucca house is built from and cement.
- (c) There are multistoreyed buildings in
- (d) Most of the people of cities do and trade.
- (e) School helps the children to become



Q.2. Tick (✓) the correct and cross (x) the wrong sentence:

- (a) Early man used to live in pucca houses. ☐
- (b) Agriculture is the main occupation of villagers. ☐
- (c) Kutcha house is built with the help of bricks and cement. ☐
- (d) There is no need of sun light and fresh air in house. ☐

Q.3. Tick (✓) the right answer :

(a) **What are multistoreyed buildings called ?**

Flat ☐ Basti ☐ Slum ☐

(b) **Panchayat meetings are held :**

Under trees ☐ In Panchayat house ☐

In Post office ☐

(c) **Health services are provided in villages :**

By Post Office ☐ By Health Centre ☐ By Villagers ☐

Q.4. What is meant by flats ?

.....
.....

Q.5. What type of life is led by slum people ?

.....
.....

Q.6. What materials are used in making Kutcha houses ?

.....
.....

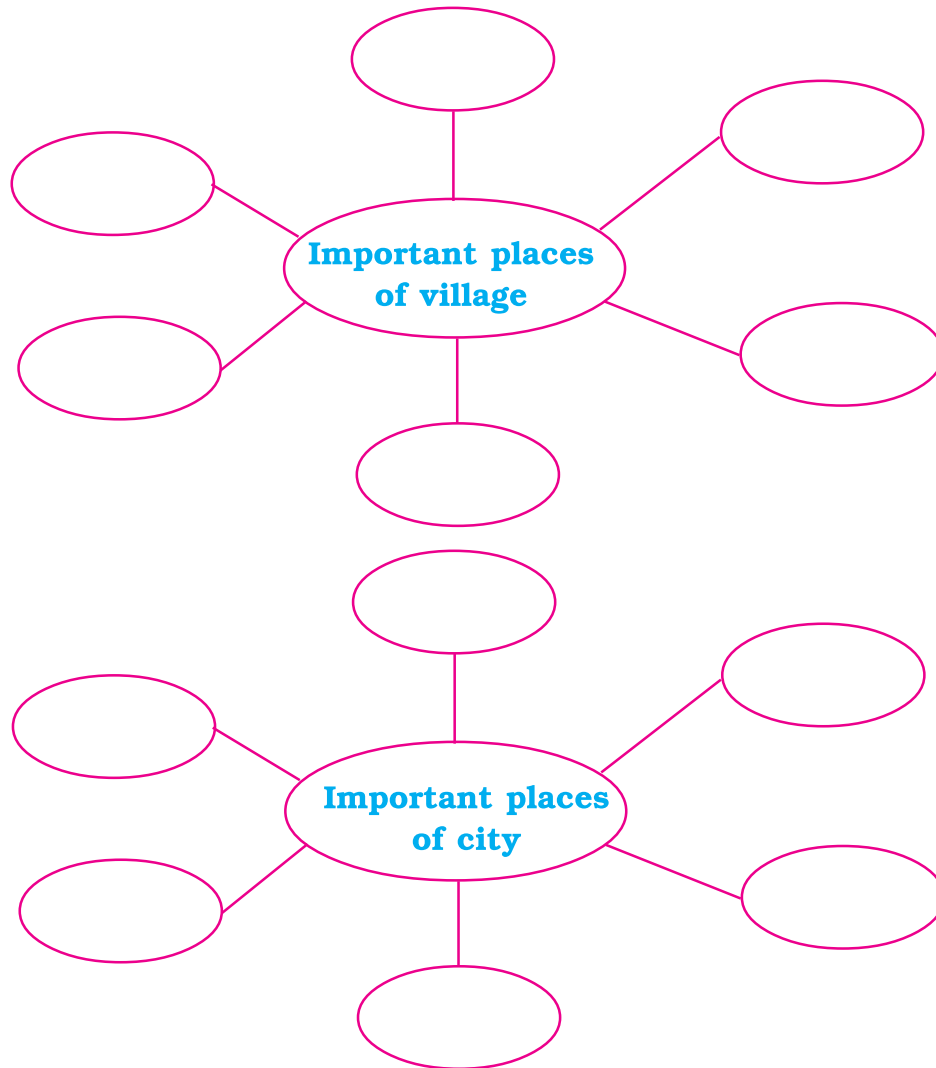


Q.7. What materials are used in making pucca houses ?

.....

.....

Q.8. Mind Mapping



Always Remember

The population of our country is increasing continuously. The houses are built on large scale due to increasing population. The fertile, land under agriculture and forests, is decreasing. We should not misuse the natural resources.

LESSON-14



HABITAT OF ANIMALS

Our earth is abundant in many types of animals – some are big, some are small and some are of medium size. Each differs from the other in outlook, colour, shape, structure and other characteristics. Some live in the fields and some in forests; some in water and some fly in the air. But all living-beings are similar. In fact, everyone requires a home. Like man, animals also need a secure place. Their place of living is called **Habitat**. Different living beings like to live in different places due to their different needs.

Activity 1 :

Below are written the names of few animals. Find out who lives where:

Tortoise, Lion, Fish, Dog, Cat, Sparrow, Snake, Monkey, Crocodile, Buffalo, Duck , Octopus

On Land

In Water

Both on land and in water

Animals living on Land : Animals living on land are called **terrestrial** animals. They live at different places on earth.

Habitat of Wild Animals :

Many animals live in forests they are called **wild animals**. Out of these, some live in natural caves e.g. lion, leopard, tiger, wolf, bear, etc. Some grass-eating animals like deer, giraffe, zebra, elephant, etc., like to live in hideouts under trees or shrubs. Some animals like rats, hare, etc., like to live in burrows dug by them while animals like snake live in burrows dug by others. Burrows save them from heat, cold, bad weather and hunters.



Some animals like ants and termite live in mounds made under the earth. Cockroach likes to live in damp and dark places. Honeybees and wasps live in beehives which are made of wax like material. Besides, creature like wasps live in hives or in walls made of clay. Similarly, spiders also make web



with sticky material coming out of their mouth. This web becomes not only their living place but also helps it catching its prey. When the prey is caught in web, the spider makes it its food.

For Teacher : Show spider webs to students woven on shrubs and tree twigs i.e. the webs whose pattern children can understand easily.

Habitat of Pet Animals : As the pet animals are useful to humans, so man provides food and shelter to them in return and takes care of them. Cows and Buffaloes are kept in sheds; mule, horse and camel in stables; sheep and goats in pens, and hens are kept in chicken-coops. We should take proper care of our pet animals. Their living place should be clean, dry, airy and have adequate sunlight.



Habitat of aquatic animals :
 Animals living in water are called **aquatic** animals, e.g., Whale, Dolphin, Octopus, Sea-horse, thousands of fishs and many insects. Besides, there are a lot of animals who can live on land as well as in water e.g. crocodile, snake, turtle, frog, hippopotamus and duck. They are known as **amphibians**.



Habitat of Birds : Birds fly in the sky. They have wings, feet and beaks. But they do not have teeth.



Q.1. Which birds have you seen around you ?



Mostly, birds can fly but some birds like penguin, ostrich, emu, etc., cannot fly. The birds make nests to lay eggs, to take care of their young ones and to protect themselves from bad weather. They make their nests from sticks, grass, straw, leaves, tree twigs, paper, cotton, cloth pieces, etc., so that the nest is comfortable and there is no uneasiness for the baby birds hatched from eggs.

Different types of birds make different types of nests. Many birds make their nests on rocks or on branches of the trees. Some birds like sparrows, pigeons, etc., make their nests on the windows & ventilators of the houses also. Owl, parrot, kingfisher, etc., live in cavities or hollow tree trunks, vulture, kite and eagle make their nests on tree tops. Birds like peacock, lapwing, ostrich and penguin make their nests on earth by collecting pebbles and stones. Some birds make such a beautiful and attractive nest that everybody is surprised to see it. Weaver bird knits its nest with the help of fine sticks. Its nest is like hanging bottle. The nest has its opening in the lower side from where the bird enters it. Tailor bird stitches big and broad leaves to make its nest. It makes holes on the edges of the leaves and then stitches them with fine thread like sticks. Thus, tailor bird makes a beautiful and strong nest which shows his art skill.



The eggs of birds are safe in nests. Baby bird live in nests till they learn how to fly. When they fly, the parent birds also leave the nests and make new nests.

Activity 2 :

Make a list of animals/birds seen around and write the habitat in front of their name:

For Teachers : Guide the students to make above list and identify habitats.

Safety of habitat of animals :

Just as the humans need safe home to live, similarly, animals also need secure habitat for them. Pet animals get safe habitat from their keeper. Habitat of wild animals is safe naturally, e.g. in a dense forest where there is no human interference. Caves, branches of thick trees, holes of trees, burrows dug in earth, etc., provide safety and support to the birds & animals living there.

But due to growing population and human needs, forests are cut at a large scale. The habitat of wild animals is being destroyed. If the cutting of forests continues in the similar manner, the wild animals will not be safe. So, we should try not to cut the trees and grow more and more new trees.

Safe Sanctuaries :

Wild animals move towards villages/cities due to decrease in forests. Villages and cities are not their natural habitats. So, they hide themselves here and there and become man-eater due to non-availability of food. Man also kills them to protect himself. So these wild animals can not find shelter anywhere. Government has kept some regions safe for these wild animals where they get natural environment, like forests. These are big forest areas where there is prohibition of human activities. These areas are called **sanctuaries**. There are many sanctuaries in our country. Here the animals can move and live naturally, and there is restriction to cut trees and to hunt the animals.



- Earth is the living place for many types of animals.
- There is a need of habitat for everyone.
- Different animals select their habitat according to their own natural adaptation.

- Animals living on earth are called terrestrial animals.
- Animals living in water are called aquatic animals.
- The animals living both on land and in water are called amphibians.
- Wild animals either make their own habitat, or live in the habitat of others.
- Pet animals live in the habitats made by human.

Q.2. Fill in the blanks :

(aquatic, teeth, den, Cockroach, Eggs)

- Lion lives in a
- Birds do not have
- of birds are safe in nest.
- Octopus is an animal.
- lives in a moist (damp) and dark place.

Q.3. Tick (✓) the correct and cross (x) the wrong sentences :

- Sea horse lives in water. ☐
- Snakes live in a den. ☐
- Penguin cannot fly. ☐
- Tiger is an aquatic animal. ☐
- The nest of weaver bird is like a hanging bottle. ☐

Q.4. Tick the (✓) correct answer :

(a) **What do the honeybees make to live in ?**

Hives ☐ Beehives ☐ Mound ☐

(b) **Where do the elephants live :**

In den ☐ In water ☐ Under the trees ☐

(c) **Which animal out of the following lives in a den ?**

Bear ☐ Dear ☐ Giraffe ☐

(d) **Which animal out of the following lives in tree cavities :**

Pigeon ☐ Sparrow ☐ Owl ☐

(d) **Which bird out of the following makes nest on trees**

lapwing ☐ vulture ☐ crow ☐

Q.5. Match the Columns :

Horse	web
Sheep/goat	stable
Buffalo/Cow	shed
Spider	hive
Wasp	pen

Q.6. Write the names of a few wild animals.

.....
.....

Q.7. Write the names of a few pet animals.

.....
.....

Q.8. Write the names of a few aquatic animals.

.....
.....

Q.9. Where do the ants and termite live ?

.....
.....

Q.10. With which material spiders make their webs ?

.....
.....



LESSON-15

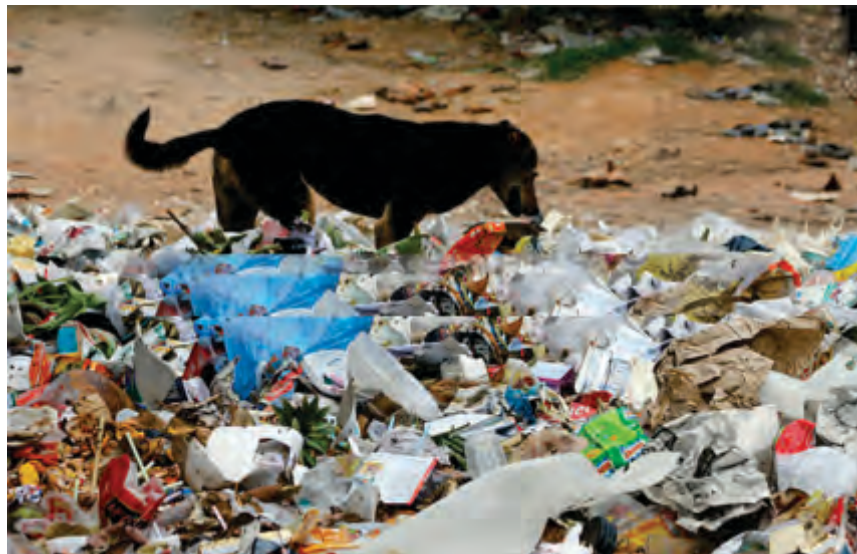


CLEANLINESS OF HABITAT

Cleanliness: In morning assembly today, Headmaster told the students, “Dear Children! cleanliness means to clean and keep hygiene. This cleanliness can be of our body as well as our surroundings.”

As we look good and be safe from diseases by keeping our body clean, similarly, our surroundings look beautiful and diseases also do not spread if we keep clean. So, it is necessary to keep our houses, roads, streets, schools and parks clean.

Garbage: we often keep on throwing pages of books & notebooks, eatables, wrappers of toffees, etc., daily in our classroom and schools. We also keep on throwing many more things like vegetables and fruit peels, leaves of trees, wastage of garden, waste paper, broken utensils, empty cans, wastage of animal sheds, etc. This type of waste material is called **garbage**.



If we produce so much garbage in our schools and homes then think, how much garbage would be produced in our villages, district or in our country. If we do not dispose off this garbage, many diseases will spread.

So, It is a necessity not to pollute the environment and to keep our surroundings clean. We should keep following things in our mind for

cleanliness of surroundings :

1. Always put the garbage in the dustbin.
2. Do not throw garbage in the street.
3. Do not defecate in the open.
4. Clean the drains regularly.
5. Keep our home and school clean.
6. Keep public places like Bus Stand, Railway Station and Parks clean.
7. Grow plants for making our environment clean and healthy.
8. Do not spoil the water resources.



Good Health

Gem of life is the health

If we need this wealth.

Keep in mind some things profound

Clean home as well around.

Wipe your house and dust the rooms

For healthy style and wealthy bloom.

Cleanliness - go, go, go

Defecation open-no, no, no.

End up flies and insects

Keep the disease in the brackets.



HOUSEHOLD WASTE IS OF TWO TYPES:

1. Biodegradable.
2. Non-biodegradable

Biodegradable : It includes paper, leaves, peels of vegetables and fruits, left over food, animal dung and garden waste which degrade automatically after some time.

Non-biodegradable : It includes plastic bags, glass, tin, iron and waste plastic bottles & boxes. Construction waste and ash also are non bio degradable.

For teachers : Let the students separate biodegradable and non-biodegradable things in school and discuss with groups of students, about it..

Effects : There are many bad effects of garbage on health and environment.

1. Garbage gets collected in drains. It results in blockage of drains which produces mosquitoes and houseflies, who spread diseases like Dengue and Malaria.
2. Many types of insects and houseflies are produced in openly dumped garbage which may give birth to dangerous diseases.
It leads to the spread of epidemics (diseases) like Plague, Typhoid, Diarrhoea, Brain Fever, Cholera, Jaundice and many skin diseases.
3. Cattle swallow the plastic bags from garbage dumps which results in their death. The plastic bags obstruct the drainage system. So, the use of plastic bags must be minimised.
4. Plastic bags also decrease the fertility of the soil because it takes hundred of years to decay.

It is necessary to put biodegradable and non-biodegradable waste separately.

Management of Biodegradable waste:

1. Recycling of paper after refining.
2. Leaves, vegetables and fruit peels can be used as animal fodder.
3. Manure can be made by dumping cow-dung (of animals), garden garbage, leaves, vegetables & fruit peels, remains of eatables into a compost pit.

Management of Non-biodegradable waste:

1. Glass, tin, iron and plastic material can be reused after recycling them in factories.
2. Construction waste and ash can be disposed off by making landfills. It should be made far-away from water sources and residential areas.

Q.1. What are the harms of using plastic bags ?

.....
.....

Q.2. Write the names of diseases that spread from openly dumped garbage.

.....
.....

For teacher : Inspire the children to know about the uses of some items of garbage . Is there anything in the garbage from which something useful can be prepared ? Ask the children to find the houses in the village where Gobar-Gas plants are installed to produce Gobar-Gas.



Reduction of Garbage : It is estimated that approximately 300-500 gm of garbage is produced in our houses daily. But if we try, it can be reduced as follows:

1. By minimising the use of plastics.
2. By preparing manure from biodegradable waste.
3. By reusing some used material.
4. By using cloth bags to carry goods from market so that the use of plastic bags may be reduced.
5. By writing on slates, instead of paper.
6. The books could be reused next year by keeping them neat & clean.

Most important fact is that the more we produce the garbage, the more difficult would be for us to dispose it off.

For teachers : Ask the students to collect old glass-bottles, plastic bottles, wool, sheets, greeting cards and more things. Motivate them to make more useful things with such waste materials.

Reuse : Many things out of garbage can be reused :

1. Many things can be repaired and reused.
2. We can make photo frames from C.D.'s or other things.
3. Vegetable and fruit peels can be grinded and added to soil which is very useful for plants.
4. Plants can be grown in empty bottles.
5. Empty cans and bottles can be reused in many ways after cleaning.





Dear students, have you ever been to Chandigarh? There are many beautiful things made from waste and spare material. All this is made by **Sri Nek Chand Ji**, in the **Rock Garden** which is not only a brilliant piece of art but also the best way to use the waste material.



We have come to know that garbage dumped in open is very dangerous for our health. Therefore, we must install dustbins in our homes.



For the teacher :

- Prepare two different coloured dustbins, eg., green and blue.
- Ask the students to collect things which are waste.
- Now select bio-degradable and non-biodegradable items separately.
- Educate students to collect bio-degradable items in green dustbin and non-biodegradable items in blue dustbin. Motivate them to carry on such practice at their homes also.



Things to Remember

- We should keep our houses neat & clean.
- Household waste should be managed properly.
- Bio-degradable and non-biodegradable items should be put separately.
- Most of the waste things can be recycled.
- The dustbins should be kept in houses, parks, schools, hospitals, etc.



Q.3. Fill in the blanks :

(polythene, Dustbins, environment, fresh-air)

- a. Sun light and are necessary things in the house.
- b. Garbage causes harmful effects on health and
- c. We should minimise the use of
- d. should be used to put garbage.

Q.4. Tick (✓) the right and cross (x) the wrong sentence :

- a. Openly dumped garbage causes air pollution. ☐
- b. Garbage should be put in dustbins. ☐
- c. There should be maximum use of plastics. ☐
- d. Plastic bottles can be reused. ☐
- e. Rock Garden is situated in Ludhiana. ☐

Q.5. Tick (✓) the right answer :

- a. **What is included in biodegradable waste ?**

Plastic ☐ Paper ☐ Glass ☐

- b. **What is included in non-biodegradable waste ?**

Leaves ☐ Peels ☐ Polythene ☐

- c. **Which of these is a cause of maximising garbage ?**

Stray animals ☐ Urbanization ☐ Agriculture ☐

- d. **Which garden is made by Sh. Nek chand Ji ?**

Rock Garden ☐ Rose Garden ☐ Nek Garden ☐

e. **What is produced from gobar?**

Paper

Bio-gas

Card-board

Q.6. Match the Column :

(A)

Dustbin
Polythene
Concrete
Lintel
Rock-garden

(B)

Cement
Chandigarh
Roof
Envelops
Dustbin

Q.7. Answer the following questions in brief :

(a) **What is a dustbin ?**

.....
.....

(b) **Write any one use of cleanliness ?**

.....
.....

(c) **What is included in biodegradable waste ?**

.....
.....

(d) **What is included in non-biodegradable waste?**

.....
.....

(e) **Why two different coloured dustbins are used ?**

.....
.....

(f) **What is meant by cleanliness ?**

.....
.....

(g) Why is there increase in garbage ?

.....

.....

(h). What are the harmful effects of garbage ?

.....

.....

(i). How can garbage be managed ?

.....

.....

(j) What should we do to reduce waste ?

.....

.....

Know this

Children ! Do you Know cleanliness clubs are established for

Cleanliness Club

G. P. School, Udekaran

Club Chairman: Gurmmeet Singh
Members Secretary: Dev Simrat Singh

Class I II III
ERAMEET ASHMEET POOJA

IV V
VISHAYDEV AFSHEEN KAUR

Duties and Responsibilities:

Sr.No.	Activity
1.	Cleanliness of school
2.	Cleanliness of surroundings
3.	Cleanliness of bathrooms

Our motto: Neat & Clean
Punjab

Cleanliness Club

DAY	Cleanliness of Bathrooms	Make arrangements of MID DAY MEAL	Cleanliness of the school i.e. rooms & playground
	NAME OF STUDENTS	NAME OF STUDENTS	NAME OF STUDENTS
MON	HARNAM, GOLAB SINGH	SANT SINGH RAVI KUMAR	GURVINDER SINGH RINKU DHAMIJA MANJEET SINGH
TUE	MANDER SINGH SANDEEP SINGH	TEJ KAUR GURPREET	VERPAL KAUR JAGDEV SINGH
WED	VIJAY KUMAR RAJPAL	KOMALPREET RAMU	JARNAIL SINGH SATNAM SINGH
THU	TUSHAR AKASHDEEP	KAJOL NAVDEEP	GURNAIB SINGH GURSHARAN SINGH
FRI	KULDEEP NEELAM	GOPY SINGH HAJINDER SINGH	AMANDEEP KAUR SURINDER CHUGH
SAT	JASHAN RAJANI	AMIT NAGPAL KOMAL	RANJIV KUMAR SHAMJEET SINGH

cleanliness in the school.

The main purpose of the Cleanliness Club is to make children aware of cleanliness. The class students are the members of this club. The chairman and secretary of the club are elected from the children. The teacher incharge is the president of this club.

Following are the responsibilities of cleanliness club :

- To make the children punctual.
- To ensure the cleanliness of their uniform.
- To ensure the cleanliness of the classrooms and school.
- To ensure that all students wash hands before meals.



LESSON-16



WATER CONSERVATION

Dear Children ! do you know how much water is there on the earth ?

About 70% of earth's surface is water-covered. But it is not useful for us. We cannot use all this water for our daily use. Most of water is sea water. There is very little amount of water that we can use. We, unconsciously, cause a lot of damage to the water every day.

In old time, the agriculture had mostly been dependent on rain water, or the wells had been the source of irrigation. Due to insufficient sources of irrigation crops like oats, guar, gram were grown. These crops needed less water.

After green revolution in Punjab, the cultivation of Paddy crop started which needs a lot of water. Tubewells are dug to meet the need of water supply. Due to this, ground water level has been falling rapidly.

Q.1. What was the main source of irrigation in old times ?

.....
.....

International water day is celebrated on 22nd March every year.



Well



Handpump



Tubewell

Due to low water level, most of the handpumps and wells have disappeared. Water Works Authority cleans canal water and supplies it to our homes. Due to an increase in population, urbanisation and industrialization, the demand of water has increased. Due to increasing demand and less supply of water, many people have deployed submersible pumps to draw out water from the deep borwells dug in their homes. As a result, water is



supplied adequately. People are careless in using it. Water is used excessively for brushing, bathing, washing dishes, cars, floors and clothes.

Q.2. How is ground water affected by the cultivation of paddy?

.....
.....

Q.3. What is the main source of irrigation in Punjab, now-a-days ?

.....
.....

Water is a renewable source. We can reuse it. We can save it by using it wisely for domestic purposes.

- Water, left after washing the vegetables, could be used for watering the plants.
- The utensils can be washed with the waste water of RO filter.
- We can use bucket instead of pipe for watering the plants at home.



Although water is the gift of nature to us and it is the basic need of life, yet bills are paid to water works for its supply. Now we are buying the water. So, it is our duty to use water wisely. We should turn off the running taps not in use.

Q.4. Write any one way to conserve water at home.

.....
.....

Activity 1: Enlist the public taps in your village/locality and note how many of them are not turned off after use.

For Teacher : Through this activity, motivate the students to turn off the tap immediately if it is found running without use. They should advise others also to do the same.

We will discuss below a few ways of saving water at home :

Sr.No.	Activity/Work	Wrong Way (Which shouldn't be done)	Right way (Which should be done)
1.	Brushing of Teeth	Keep tap running	Using water in mug
2.	Bathing	Running shower for long time	Use of mug and bucket
3.	Wash hands	Running tap	Half tap opened
4.	Car Wash	Using water with pressure of pipe	Use of mug and bucket
5.	Shaving	Running tap	Use of mug
6.	Cleaning Floor	Extra use of water with pipe	Use of bucket and wiper
7.	Washing Clothes	Running tap	Use of bucket/tub



- Life is not possible without water.
- Water covers about 70% of Earth's surface.
- A meagre part of whole of the water on Earth is drinkable.
- Water should be used wisely.
- Water should be saved in the houses.
- Water is a renewable resource.



Q.5. Answer the following questions in brief :

- a. What measures should be adopted to minimise the use of water in agriculture ?

.....
.....

- b. What is the effect of submersible pumps on the use of water in houses ?

.....
.....

- c. Why can we not use water of ocean ?

.....
.....

- d. What is the proper way of using water while brushing/ bathing ?

.....
.....

Q.6. Tick (✓) the right option :

- a. Without which thing we can not survive ?

Chocolate ☐ Water ☐ Mobile ☐

- b. What percentage of Earth's surface is under water ?

65% ☐ 75% ☐ 70% ☐

- c. Underground water is drawn out with.....

Tubewell ☐ Pond ☐ Canals ☐

- d. How does the ocean water taste ?

Sweet ☐ Bitter ☐ Salty ☐

5. Which crop needs more water ?

Wheat

Peddy

Millet

Q.7. Fill in the blanks :

(water, down, less, save, submersible)

- a. We should water.
- b. There is a little on earth for use.
- c. People deploy pumps in houses.
- d. The crops like gram, millet and guar need water.
- e. The level of underground water is going

Q.8. Tick (✓) the correct and cross (x) the wrong sentences :

- a. Conservation of water is essential. ☐
- b. Submersible pumps are deployed in houses to save water. ☐
- c. The level of underground water is going down rapidly. ☐
- d. We can use the salty water of ocean in houses. ☐
- e. Water is a renewable resource. ☐



LESSON-17



WATER POLLUTION

Dear students, air, water and soil are the valuable gifts given by nature to man. But man does not use these natural resources wisely due to his selfishness. We often read in newspaper and watch on television about pollution. When some unwanted substances get dissolved in the pure water, it becomes dirty. This is called **water pollution**. As we cannot breath in the air polluted with smoke and dust, similarly, polluted water also becomes unuseful to us.

Domestic Use : We use the water daily for many domestic purposes. The water gets dirty after using it for brushing, toilet use, cleansing, bathing, washing dishes and clothes. In villages it is sent to ponds by way of open drains. With this, underground water also gets polluted by way of seepage.

There are many factories where a lot of dirty water comes out during production. This polluted water is thrown into streams and canals without any treatment. e.g. in Ludhiana, 'Budha Nala' is polluted due to drainage of dirty water into it.



Polluted water being thrown into river.



There is an abundant increase in usage due to overpopulation and urbanisation. Some people wash clothes or bathe their animals near the clean water resources. Big cities have come into existence whose polluted water has become a problem. The water gets polluted also with the use of polythene.



Use of Fertilisers and Insecticides in Agriculture

These days, the farmers spray excessive fertilisers and insecticides in their fields for increasing yield. These are very poisonous. They poison the crops as well as the underground water by seeping from fields into the ground. Besides, the air also gets polluted with the mixing of poisonous particles into it.

Q.1. List the activities carried on by people near water sources that pollute the water ?

.....
.....

Activity 1: Try to Find out from Doctor or Staff of nearby Primary Health Centre of your village/city, which diseases are caused by drinking contaminated water and also find the number of patients suffering from these diseases. Note this information in your notebooks and discuss with your friends.

Water Treatment Plant

Dirty and polluted water emerging out of villages/cities can be reused



R.O. Filter



Water treatment plant

after cleaning e.g. water treatment plants are set in some places for the cleaning of sewage water. Water is cleaned with the help of some chemicals and filters, and then it is used for irrigation or other such works.

We should always drink clean water. The water should be boiled and cooled before drinking. The germs inside water get killed after boiling it. Some people also use R.O. Water Filter in their houses to purify the water.

Bad Effects of Contaminated Water :

1. Diseases like Cholera, Dysentery, Diarrhoea are caused due to drinking contaminated water.
2. We get vomiting/loose motions by drinking contaminated water.
3. Our teeth get spoiled by drinking such water.
4. Sources of contaminated water cause foul smell which pollutes the air also.
5. Mosquitoes breed on stagnated water to spread malaria and dengue.

Prevention

Following steps should be taken to prevent water pollution :

1. There should be proper arrangement of sewage in villages and cities.
2. There should be an arrangement of cleanliness of sewage water in villages and cities.
3. Washing of clothes or bathing of animals should be prohibited near water resources.
4. Aware the farmers to use less insecticides.
5. Polythene should completely be banned.

Q.2. Which diseases are spread by mosquitoes ?

.....
.....

For Teacher : Acknowledge the students that they should drink O.R.S. solution in the dysentery.

Activity 2 :

Prepare ORS solution with the help of your teacher.



Cleanliness of Kali Bein

A river known as '**Kali Bein**' is related to **Shri Guru Nanak Dev Ji**. It was completely polluted due to garbage and waste water. **Baba Balbir Singh Ji Seechewal** took the initiative to clean it. He, along with his devotees, took out all the refuse and waste from the river and cleaned it. He planted many trees on the banks of the river. Now the beauty of this river is worth seeing. We also should participate in such works to conserve the water.



- Man must use water wisely.
- We have been adding garbage of our homes to our water resources.
- The spare and dirty water from factories should not be added to streams without cleaning it.
- The spraying of insecticides in the fields also pollutes the water. Their use must be minimised.
- Many dangerous diseases may be caused by drinking contaminated water.
- We should do special efforts to prevent pollution.



Q.3. Fill in the blanks :

(Diarrhoea, cleans, dirty, Kali Bein, urbanisation)

- (a) The water gets after domestic use.
- (b) Due to, there is increase in water utilisation.
- (c) Water Treatment Plant the dirty water.
- (d) can be caused by drinking contaminated water.
- (e) is associated with Sri Guru Nanak Dev Ji.

Q.4. Tick (✓) the right and cross (×) the wrong sentences :

- (a) We are not responsible for water pollution. ☐
- (b) There is a ban on the use of plastic bags. ☐
- (c) Nothing happens due to drinking contaminated water. ☐
- (d) Water is filtered by R.O. filter. ☐

Q.5. Tick (✓) the right answer :

- (a) **Which one of the following is responsible for water pollution ?**

Dust ☐ Polythene ☐ Noise ☐

- (b) **What gets polluted by spraying of insecticides ?**

Air ☐ Water ☐ Both ☐

(c) **Which water body has been cleaned by Baba Balbir Singh Ji Seechewal :**

Ganga River ☐ Kali Bein ☐ Satluj River ☐

(d) **Which disease can be caused by drinking contaminated water ?**

Cholera ☐ Malaria ☐ Dengue ☐

Q.6. Write the answers of the following in brief :

(a) **Write any two reasons of water pollution.**

.....
.....

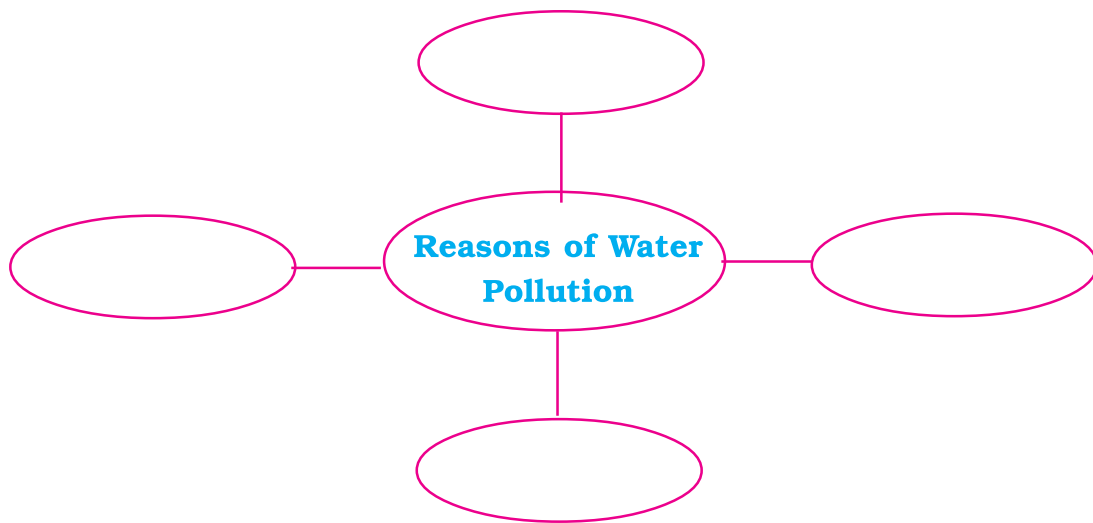
(b) **Name the diseases caused by drinking polluted water.**

.....
.....

(c) **Write two methods of cleaning water.**

.....
.....

Q.7. Mind Mapping



LESSON-18



WATER MANAGEMENT

Students, water is a precious gift of nature. It needs care. We can conserve water by stopping its misuse and minimising the water pollution.

Water Management

Water works department supply water to our homes. Underground water is stored in a big tank with the help of big tubewell, in water works. Where there is no drinkable underground water, the canal water is supplied to the houses after cleaning. Very big treatment plants are implanted with which impurities of water are removed and water is cleaned. Chlorine is also added to water to eradicate the micro-organisms.



Q.1. From where does the water come in big tank ?

.....
.....

Sometimes, the water of water works also gets polluted. Due to leakage of water pipes, contaminated water gets mixed with clean water. So, the people have installed R.O. System in their houses with which water is filtered.

Water and Sanitation Department of Punjab checks the quality of water in schools regularly so that the students get clean drinking water.

**Q.2. Is the water of your school checked ever ?
Who checks it ?**

.....
.....



R.O. System

Water Storage

Maximum areas have been supplied water by Water Works Department. There is not a continuous supply of water in many areas. Water Works Department supplies it at fixed and regular intervals. So, the water needs to be stored.

There are many ways of water storage :

1. Earthen pitchers are used for storage of drinking water in villages; in which water remains naturally cool.
2. Some people construct troughs in their houses or manage open places for animals to drink water.



Pitcher



Water Tank

3. People living in towns/cities keep big water tanks on the roof tops of their houses. From there water is supplied to other places like bathroom, toilet, kitchen, etc.
4. Some people use buckets, tubs, plastic boxes, earthen pots, etc., to store water.

Rainwater Harvesting

To maintain the level of ground water, it is necessary to conserve rain water. Rain water harvesting is the best way to use the rain water, instead of letting it flow in the drains. For conservation of rain water, a drain pipe is attached from roof top to the borewell, from where water is sent under the ground. When it rains, the water goes from the roof tops to the borewells through the pipes. It will help prevent the level of ground water from falling.



RWH

Q. 3. Can rain water be harvested ? How can it be done ?

.....
.....

Activity 1 :

Collect the rain water directly in a bucket and check after sometimes if this water is clear or not.

For Teacher : Clarify to the students that dust particles from air get mixed with rain water. Therefore, the rain water is not directly usable. It should be cleaned before use.

Some Good habits regarding conservation of water

We can conserve water in our daily life through following methods :

1. Use only required amount of water for every purpose (bathing, brushing, washing clothes / utensils)
2. Use water with mug / bucket instead of pipes / shower.
3. The tanks for water storage should be covered.
4. Waste water from R.O. should be put in flowerbeds or used for cleaning purposes.
5. After washing the vegetables, used water should be put into potted plants .

6. Immediately turn off the water tap if found running without use.
7. Use Autocut Switch in houses to stop overflow from the water tanks.



- It is necessary to conserve water.
- Misuse of water should be stopped.
- Water pollution should also be checked.
- The water comes to our homes from the water works.
- We should use rain water harvesting methods for saving rain water.
- People living in different regions store water by different methods .
- Some good habits should be adopted in daily life for the conservation of water.



Q.4. Fill in the blanks :

(shower, flower beds, potted plants, submersible, earthen pitcher)

1. Villagers use for storage of water.
2. Bucket / mug should be used instead of for bathing.
3. After washing vegetables, we can put used water into.....
4. People have installed pumps in their houses.
5. Waste water from RO can be put into

Q.5. Tick (✓) the correct and cross (x) the wrong sentences:

- a. It is necessary to conserve water. ☐
- b. After washing vegetables, the used water should be thrown away. ☐
- c. Unused running tap should immediately be closed. ☐
- d. R.O. system saves the water. ☐
- e. We should keep the the tap running while brushing. ☐

Q.6. Tick the (✓) right answer :

1. What is used to store water in cities ?

Pitcher ☐ Tank ☐ Drum ☐

2. From where is the water pumped out by submersible pump ?

Underground ☐ From canals ☐ from ponds ☐

3. Who checks drinking water in schools ?

Education Department ☐

Water and Sanitation Department ☐

Health department ☐

4. What should be used to stop overflow of tanks ?

Submersible pump ☐

Auto cut switch ☐

R.O. System ☐

5. What type of water is conserved by Rainwater Harvesting ?

Rain water ☐ Pond water ☐ Canal water ☐

Q.7. From where does the water come in our houses ?

.....
.....

Q.8. What is added to water to kill microorganisms in water ?

.....
.....

Q.9. Which method should be applied to store rain water ?

.....
.....

Q.10. Write two good habits for water conservation.

.....
.....

LESSON-19



CHHUCK-CHHUCK RAIL

Everybody in the school was happy today. The Headmaster announced in the morning assembly that school had participated in a competition called 'Green School Programme' and our school will be awarded for the good work. To get this award two student-members and a teacher of the Eco-Club will go to Delhi. On hearing this, everybody became happy.

Government has established 'Cleanliness Club' in schools for creating awareness among students regarding cleanliness of schools and surroundings. Under this, so many activities are performed to connect students with their environment.

Q.1. Why is it necessary to save the Environment ?

.....

.....

Q.2. Which activities are being performed in your school by the cleanliness club ?

.....

.....

Activity 1:

Make a list of Cleanliness Club/Eco Club members of your school.

Name of Club Member	Designation/ Class	Name of Club Member	Designation/ Class



Activity 2:

Children, you must have gone to Bus stand. What is the difference between A Bus Stand and A Railway Station ? Prepare a list of things which are different at Bus Stand and at Railway Station.

Things seen at Bus Stand	Things seen at Railway Station

Next day, a teacher and students reached the railway station to go to Delhi.

The teacher checked for their names in the reservation chart. On seeing a train at the station, Deepak said, “Sir, let us go, otherwise we will miss the train.” The teacher said, “No, as our school has a time-table, similarly, railway department also follows a time-table. The arrival and departure of each train is fixed. The train which we are to board will arrive after half an hour. Look at the time table.”

Train No	Train name	Start date	Train type	Source	Destination	Rescheduled by	Rescheduled time
11449	JBP-JAT EXPRESS	22 Dec 06:30	MAIL EXP	JBP	SVDK	1.30 hrs	08:00
12029	SWARNA SHATABDI EXPRESS	22 Dec 07:20	SHATABDI	NDLS	ASR	1.40 hrs	09:00
12054	ASR-HW JAN SHATABDI EXP	22 Dec 06:55	JANSHATABDI	ASR	HW	3.20 hrs	10:15
12486	ANVT-JBNSUPERFAST EXPRES	22 Dec 07:30	SUPERFAST	ANVT	JBN	45 min	08:15
12497	SHANE PUNJAB EXPRESS	22 Dec 06:40	SUPERFAST	NDLS	ASR	3.50 hrs	10:30
12523	NJP-NDLS BI-WEEKLY EXP.	22 Dec 08:15	SUPERFAST	NJP	NDLS	1 hr	09:15
12719	ASR-NED SACHIHAND EXP	22 Dec 05:35	SUPERFAST	ASR	NED	1 hr	06:35
12842	COROMANDEL EXP	22 Dec 08:45	SUPERFAST	MAS	HHW	7.45 hrs	16:30
12862	KZJ-VSKP LINK EXPRESS	22 Dec 02:30	SUPERFAST	KZJ	VSKP	2 hrs	04:30
12898	BBS-PDY S/F EXP	22 Dec 12:00	SUPERFAST	BBS	PDY	2.30 hrs	14:30
14825	DEE-FZR INTERCITY EXPRESS	22 Dec 06:45	MAIL EXP	DEE	FZR	5.15 hrs	12:00
14649	SARYUYAMUNA EXP	22 Dec 07:15	MAIL EXP	JYG	ASR	1.15 hrs	08:30
14674	SHAHEED EXP	22 Dec 11:55	MAIL EXP	ASR	JYG	3.05 hrs	15:00
14707	RAHAPUR EXPRES	22 Dec 09:30	MAIL EXP	BKN	BDTS	2.40 hrs	12:10
15209	SHC-ASR JANSEWA EXP	22 Dec 08:45	MAIL EXP	SHC	ASR	2.25 hrs	11:10
15210	ASR-SHC JANSEWA EXP	22 Dec 06:35	MAIL EXP	ASR	SHC	3.25 hrs	10:00
15708	ASR-KIR EXPRESS	22 Dec 07:15	MAIL EXP	ASR	KIR	5.15 hrs	12:30

Sample of Railway Time-Table

There was a great rush at the station. After some time, the train arrived. Everybody picked up his luggage. As soon as the train stopped, they boarded it. Teacher took out the ticket and checked the seat numbers. Pritpal got the top most berth, Deepak got the middle one and the teacher got the lower berth. They put their bags under the lower berth. Deepak was wondering, how all three of them would travel on a single ticket. Teacher smiled at him, and satisfied him showing the ticket.

For the Teacher : Arrange a rail ticket and help the students to fill up the following information :

1. Age _____
2. Fare _____
3. Date of Travel _____
4. No. of Passengers _____
5. Seat No. _____

*Earlier, ticket booking could be done only on Reservation Counters established by Indian Railways, but now tickets can be booked online from home. Fare can also be paid by e-payment.

They sat near the window and the train started. Suddenly Pritpal remembered the instructions of his teacher about diary writing. He took out his diary and started writing. 'Electric poles, trees and buildings are appearing to be running backwards. It is difficult to look at these things for long time.'

Deepak was interested in watching the crops and trees, which could be seen up to a quite long distance. It fascinated him.

It's true! Everyone likes greenery. It is quite fearful to imagine earth without greenery.

Think, If there are no trees on this earth, how will it look ?

"Why the train has stopped ? Who is speaking so loudly outside ? OK, it is a station. There was written 'Bathinda Junction' just in front of us, in capital letters. I have heard about Bathinda city but what does the word junction mean ? Yes, the teacher might be knowing about it."

For teacher : Tell the students about Railway Junction.

The teacher was reading a book. The sound of train was quite charming but when it was crossing over a river-bridge, its sound totally

changed. It was a bit horrifying. Yes, I observed another thing, when the train was crossing over the bridge, some people were throwing coins into the river’.

‘It appeared from the noise that the train is approaching the station. Many passengers have started collecting their luggage. Unlike in bus, in train nobody alerts about the station. The passengers have to be careful themselves. The teacher is saying that the train is about to reach. We should also collect our bags. So, I’ll write rest of it later in my diary.’

‘Railway station of Delhi was very big as compared to the one in our city. There were many people. It was hard to count number of people getting in and out of the train. Once again our tickets were checked at the gate by the ticket checker. But tickets were checked by the ticket checker in train too. We came out of the station with great difficulty. Now we were to reach the hostel. We hired an autorickshaw and reached the hostel. Autorickshaw puller charged the fare according to meter reading.’

‘From there, we walked to Metro Railway Station near New Delhi Railway Station.’

‘**Delhi Metro** is a cheap and easy mean of transport for people living in the Capital and its neighbouring areas. Metro Station is fully air-conditioned. There is a good arrangement of security and cleanliness.’

‘We purchased ticket from ticket-counter. All of us got a token in the form of ticket on showing which the automatic machine led to the opening of gate to move towards platform. We reached our destination travelling by metro train. From there, we reached hostel by Metro Feeder Bus.’



Metro Train

'I feel good on reaching hostel. There are many students who have come from far away places to participate in this programme. Abdul has come from Shimla and Alice from Goa. We all were friends now. At first, it was very difficult to converse with each other. But now we are able to understand each other easily. I read out my diary and all liked it'.

How did you like the travelling experience noted by Pritpal in his diary? Now if you go somewhere during the holidays, you must write your diary.

After listening to the diary, Abdul said, "We have also come here by train but there were many tunnels on the way from Shimla to Kalka. Some of them were very long and whenever the train passed through them, it became all dark for a while. Thank God ! the lights in the train were on. We saw from the window that there were big mountains on one side and deep gorges on the other. The train, we boarded is called Himalayan Queen but my father calls it Toy-Train. Let me show you its picture."



Toy Train

Prestigious Institute UNESCO, which protects World Heritage, has given the status of World Heritage to the 'Himalayan Queen' on 10th July, 2008. Shimla-Kalka train service was opened to general public on 9th Nov. 1903. This 96.57 km rail track consisting 103 tunnels (now 102) and 800 bridges was constructed in only three years. A local resident named Baba Balkhu had presented his world level Engineering skills before public to complete this work.

Looking at the picture, Alice said, “Its compartments are very small ! just like toys. Seeing this picture, I remember my travel by ferry. Let me read out a few pages of my diary.” Alice said, ‘When we go to see my maternal uncle (Mamaji) we go by a boat called ferry. Many people can sit in it. To reach the railway station, we at first have to take a ferry and then an autorickshaw. It takes a lot of time from Panaji to Delhi. We had reached Delhi from Panaji via Mumbai, Gandhi Nagar and Jaipur. Our teacher told us that the route of our train had been changed due to some repair works which had been going on the actual route. This new route was longer’.

Children!, You know that in countries like Japan, high speed trains run. They are called Bullet Trains. These trains run at a speed of 500 km/ hour. In India, Indian Railway has also planned high speed bullet train from Mumbai to Ahemadabad. Its work is under progress. After completion of the project in 2023, this train will cover the distance of 508 km in two hours and seven minutes.

Alice told, ‘Rajasthan is entirely different from Goa. Goa is on the bank of sea. We see water all around. In Rajasthan, it is sand everywhere. As if it were a ‘Sea of Sand’. Some people were seen riding over the camels. I read in my book that camel is the best animal to travel in a desert. It’s flat and padded feet help it walk over the sand. Water is not easily available there.



Camel can live without food and water for many days. At Jaipur Railway Station, the voices of 'Dal Bati Choorma', were heard. I came to know later that it was the traditional food of Rajasthan. A little girl was singing sweetly, 'Padharo Mhare Des...'. An old man accompanying her, was playing an instrument called 'Sarangi'. It appeared to me that she would be of my age. I wanted to ask about her class. I guessed that she was not a school going girl. Her sweet voice appeared to me like a lullaby, that's why I felt sleepy. We all were asleep. Finally we reached Delhi."



- Cleanliness Clubs are established in schools for creating awareness regarding cleanliness of schools and neighbourhood.
- Every train has a fixed schedule of departure and arrival which is called Time-Table.
- Ticket can be booked online from home also.
- Metro Rail has been developed for Delhi and its neighbouring cities.
- The train running between Kalka and Shimla is called 'Himalayan Queen.'
- In countries like Japan, high speed trains run which are called Bullet Trains. These trains have a speed of 500 km/hour.



Q.3. Fill in the Blanks :

(Himalayan Queen, Cleanliness clubs, online)

- (a) Now in the era of Information & Technology, booking of tickets can be done from home.
- (b) have been established in schools for creating awareness regarding cleanliness of schools and neighbourhood.
- (c) is the name of train running between Kalka and Shimla.

Q.4. Which animal is the most suitable animal for a desert ? What are the main features of this animal ?

.....
.....

Q.5. What is meant by a ferry ?

.....
.....

Q.6. What are the specialities of a bullet train ?

.....
.....



Scene of A Railway Crossing

Q.7. Some people keep on crossing the railway gate while it is closed for the train. Is it right to do so ?

.....
.....

LESSON-20



KNOW YOUR CURRENCY

Preeti has collected some coins and currency notes and now she is arranging them in a sequence. Then she will arrange these coins in an album. Many of these notes and coins are given to her by her cousin, Mandeep. Let us see, how she has arranged these notes in her album.



Look at the notes carefully, which out of these are part of Indian currency. Try to find out which notes are of which country.

Mandeep feels that it will be better for Preeti to arrange Indian currency and foreign currency separately.

Can you help Preeti in identifying Indian and foreign currency ? You can read the name of country over currency notes.

Mandeep told Preeti a few special things about Indian currency notes so that she might be able to solve this task of recognition.



“This is a two thousand rupees note. Bhartiya Reserve Bank in Hindi and Reserve Bank of India in English is written on it. The colour of this note is dark pink. There is a picture of Mahatma Gandhi in front and Mangalyaan on backside. It also bears Swatchh Bharat Logo on it. Two thousand Rupees is written in many languages over it,” Mandeep told Preeti.

Mandeep said, “Let’s find how many languages are written on a ten rupee note ?,” Preeti showed her ignorance by making faces.



Ok, I tell you, besides Hindi and English, value of ten rupee note is written in other languages. So, 17 languages are written on a ten rupee note. How many languages can you read out of these?” Mandeep asked preeti smilingly.

A picture of five hundred rupee note is given below.

Observe and answer the following questions.



Q.1. How many languages are written on a five hundred rupee note ?

.....

Q.2. Picture of which historical monument is printed on a five hundred rupee note ?

.....

“Preeti, do you know that like notes, coins are also a part of currency. There is great importance of coins in our daily life. These are also known as Mini Currency,” asked Mandeep.



Q.3. Out of the above coins, how many coins can you identify ?

.....

Q.4. What is marked on these coins besides their price ?

.....

Can you see three lions on a five rupee coin ? This is the National Emblem of India. It is called called '**Trimurti**'.

Now, a special symbol has been designated to the Indian currency. This symbol is marked on the new notes and coins.



Symbol of Indian currency

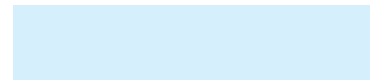
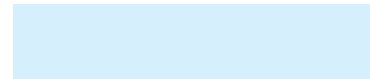
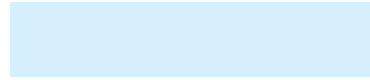
Like Preeti, many people have the hobby of coin collection. It is called **Numismatics**. We should keep our currency neat & clean. We should not write any thing on the notes.

Sometimes, keeping in mind the Monetary Policy of country, the currency in use is changed to a new currency. This is called Demonitization. Demonitization was implemented in India on Nov. 8, 2016.

Look at the currency notes given below :

Write down their value in the boxes given in front of them.





Q.5. Whose picture do you see on Indian notes ?

.....

.....

Q.6. Can you see any other number besides price on these notes ?

.....

.....

Q.7. Can two notes have identical numbers ?

.....

.....

Q.8. Write down the name of bank written on Indian Currency Note.

.....

.....

LESSON-21



HOUSES AND BRIDGES

Raju was going to Agra to visit Taj Mahal with his grandfather. He started his journey from Amritsar and moved via Delhi. He sat by the window in the compartment of train. Train started making loud noise. Raju was feeling very happy by seeing different sights. He was feeling very surprised to see small villages, big cities, buildings, canals, streams and long bridges.



Big Building



Masons making the building

Suddenly, he saw a huge glass building. He asked Grandfather, “Has this building been built by a single person ?”

Grandfather told him that many skilled workers work together to construct such a big building. These skilled workers are called Craftsmen.

Raju – Dada ji, tell me about every craftsman who helps to construct the building.

Grandfather – My son, listen, I will tell you about all craftsmen who construct the house.

1. **Architect** : This craftsman is an engineer. He draws the colourful map of a building on a paper. Now-a-days this work is done with the help of computer. Architect guides the other craftsman till the completion of house.

2. **Mason** : A mason constructs buildings using bricks. He does plastering and flooring using of stones, cement and tiles. He uses tools like trowel, hammer, plumbline and cutter.
3. **Labourer** : These persons play an important role in the construction. They help all types of professionals. They hand over the tools, machines, bricks, cement, gravel, sand, etc., to them.
4. **Electrician** : He fits the electric wires and switches in the house so that fans, airconditioners, bulbs, refrigerators, television, etc., can work. He uses tools like tester pin, plier, screwdriver and drilling machine.
5. **Plumber** : He fits pipes lines for sewage and water taps in the building. He uses wrench, drilling machine, Plier, cutter etc.
6. **Carpenter** : He makes wooden doors, glass & net windows, cupboard, bed and sofas. Now-a-days, aluminium and plastic is used instead of wood. He uses tools like saw, hammer, router plane and measuring tape.
7. **Painter** : He makes the building beautiful by painting it from inside and outside. They paint with the help of a brush and a roller.

Activity 1:

Write the names of different types of Professionals after seeing the picture.



Raju – Dada Ji, it means different types of material are used to construct a building.

Grandfather – Yes, bricks, soil, mud, water cement, sand, gravel, iron, steel, stone and wood are used on large scale to build a house.



Raju

– Dada Ji, How are bricks made ?

Grandfather

– Son, bricks are the basic need to construct houses. In old times, kutcha houses were made with the help of unbaked bricks. Now, pucca houses are made with baked bricks. First of all, dough is made by mixing water with clay. Then bricks are made by putting this soft soil in a frame. After drying in sun, bricks are baked at a very high temperature, in a kiln.



The water present in bricks, evaporates after heating. The soil particles stick to each other and become hard. Thus, bricks are baked in kilns. Coal is used for baking the bricks. Due to this, poisonous gases are released with smoke, which results in air pollution. So the trees are planted around the kilns. It minimises the air pollution. Now-a-days, cement bricks are used instead of bricks baked in Kilns.

Activity 2:

Motivate the students to prepare bricks from soil with the help of an empty matchbox.



1. Take an empty match stick box



2. cutout the base from the box carefully to make mould



3. Prepare wet clay similar to dough



4. Fill the wet clay dough in the mould.



5. Take it out from mould and let it dry in sun



6. Prepare toy building with these bricks.

Cement : It is a fine powder made from gypsum. It makes the building strong. It is applied on bricks after mixing sand and water into it. A mixture of cement, gravel and water is called **Concrete**. It hardens after some time. It is used for making floor, pillars and roof tops. Iron rods are used in cemented beams or pillars.

Q.1. Make a list of things used to make Pucca house.

.....

Q.2. What does a mason do ?

.....

Q.3. How can the air pollution caused by smoke of kilns be lessened ?

.....

Q.4. Tick the (✓) right answer :

a. Which tool is used by a mason to check the verticality of the wall?

Hammer	☐	Plumbline	☐
Measuring Tape	☐	Trowel	☐

b. What happens to mixture of cement, gravel, sand and water when kept for some time ?

Weakens	☐	Softens	☐
Hardens	☐	Brittle	☐

c. Which apparatus is used by a electrician for testing the current ?

Plier	☐	Tester pin	☐
Screw driver	☐	Bulb	☐

d. From what material the bricks are made up ?

Wet clay	☐	Sand	☐
Straw	☐	Dust	☐

Bridges

The superfast train slowed down suddenly while crossing a river bridge, Raju was surprised to see such a big and long bridge made up of iron frame.

Raju – Dada ji, “Why are bridges made ?”

Grandfather – The bridges are made to connect two edges of rivers, lakes, ponds or canals for transportation. Have you ever seen a bridge ?

Raju – Yes, Dada ji, I have seen a bridge built on the canal situated in the way from home to school. Why are different types of bridges built in our country ?

Grandfather – My son, the land of our country is not plain. Some where the land is hilly and somewhere there are rivers. So different kinds of bridges are required to carry on the transportation.

A person sitting next to them described in detail about different types of bridges and showed them pictures also with the help of search tool in his mobile phone.



Bamboo Bridge :

These types of bridges are made by general public in hilly areas. These are helpful in crossing small drains and hills. These are made with the help of bamboo and strings (ropes) tied to the trees from the corners. These are made for walking purpose only. These types of bridges are found in Assam.



Clapper Bridge :

For making these types of bridges, some stones are kept like beams and some like pillars on other stones so that water keeps flowing easily and so does the transportation. These types of old bridges are found in England.



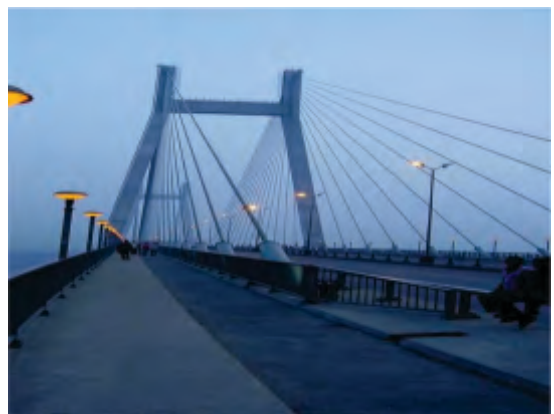
Concrete Arch Bridge :

These types of bridges are made up of cement, lime and bricks. They are built like an arch of a house roof. These are the oldest bridges. Mahatma Gandhi Setu is an arch bridge situated in Patna, the Capital of Bihar.



Suspension Bridge :

These bridges are made with the help of thick steel wires. Strong poles are erected on both sides of bridge to support these wires. These poles bear the weight of the whole bridge. This type of bridge is constructed, in Allahabad (Uttar Pardesh), on the river Yamuna.



Movable Bridge :

These types of bridges can move upwards and downwards. They can be in two parts. These parts are pulled upward for the passing of ships and boats. Then they are pulled down after passing of the ship and so the transportation. Pamban bridge of Rameshwaram city, in Tamilnadu, is such type of bridge.



Pantoon Bridge :

These types of bridges are made by joining many empty drums. Light transportation is started after keeping wooden planks on drums. These are made by Army (military), for public during floods.



Cantilever bridge :

This bridge is made by joining iron cantilevers which are supported on sides only. Railway bridges are made like this. Hawrah bridge is also a cantilever bridge.



Tunnel :

In hilly areas, tunnel is made by cutting across the mountains for transportation. The Jawahar Tunnel made in Jammu Kashmir is 2850 m. long.



Raju felt happy. Grandfather thanked the gentleman for this information.

Raju - Uncle, small bridge made on the drain of our home also works like a bridge. I will share the knowledge given by you with my friends and parents.

- Raju** – Dada ji, There is a big bridge built on a road near our house, but no water flows there.
- Grandfather** – My son, underbridges, overbridges or flyovers are made in big cities to control vehicular traffic or to minimise the traffic.



Under bridge



Fly over bridge

Q.1. Match the Columns :

(A)

Mason

Carpenter

Painter

Architect

Electrician

Plumber

(B)



Activity 3 :

Build an over bridge to pass over the flower beds in your home or school. Make a list of items required to build it.



- Bricks, cement, iron and sand are needed to build a house.
- Many masons and labourers build buildings and bridges by working hard day and night.
- Bricks are baked in a brick-kiln.
- The smoke coming out of brick-kilns pollutes the air.
- Bridges are made for movement of vehicles.

Q.6. Which bridges have you seen ? Write the name of places where you have seen the bridges.

.....
.....

Q.7. What is the need to construct fly overs ?

.....
.....

LESSON-22



COMPUTER : A UNIQUE MACHINE

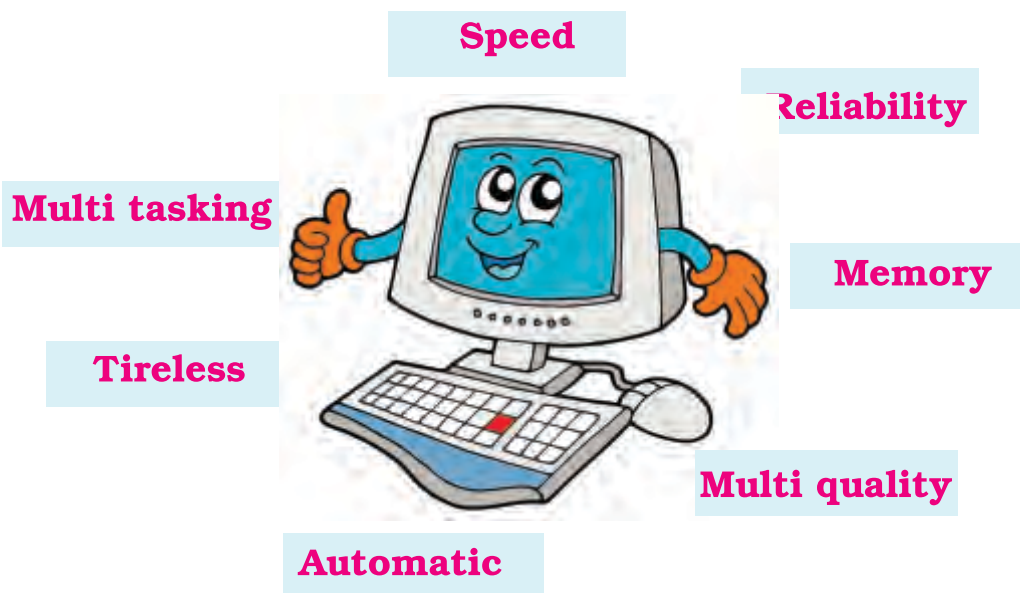
Computer :

Computer has made our day-to-day tasks very easy, and it also helps us performing many tasks in much quicker way.



Computer : A unique machine :

Yes, It is true that computer is just only a machine, but it is very unique in itself as compared to other machines. Following features has made it very unique.



1. **Speed :**

Computer is a speedy device. It saves our time. Computer can solve a problem in microseconds, which a man solves in hours.



2. **Reliability**

Computer is very much reliable. It never gives wrong results, if provided with right instructions.

3. **Memory :**

Computer has a very sharp memory. It stores, retrieves and processes a large amount of data.



4. **Multi-Tasking and Multi-Quality:**

One computer has been able to perform various functions. List of functions performed by computer is increasing day by day. It can perform multi tasks at one point of time.

For teacher : Multitasking means to be able to perform many tasks at once and multi quality means able to perform different tasks. Help the students understand the difference between multi tasking and multiquality.

5. Automatic :

Computer is also an automatic machine. On providing instructions, it can work by its own, or we can say that it works like a robot which works without the help of human beings.



6. Tireless Machine :

Computer is able to perform functions continuously without getting tired.



Q.1. Fill in the blanks :

(unique, forget, fast)

- Computer is a machine.
- Computer does not stored information.
- Speed of computer is very

Q.2. Tick (✓) the right and cross (×) the wrong statement :

- a. Computer works very slowly. ☐
- b. Computer performs one task at one time. ☐
- c. Computer is a tireless machine. ☐
- d. Computer can store vast amount of information. ☐
- e. We cannot trust computers. ☐

Q.3. What is a Computer ?

.....
.....

Q.4. List the advantages of computers.

.....
.....

What can we do with Computer ?

Dear students, in last part of the chapter we have learnt, why computers are different from other machines. This fabulous machine can also become your friend, if used properly. We can use computer for various purposes while sitting at home or school.



1. For playing games :

You can play your favourite games on computer. You can also install new games of your choice in computers.



2. For painting and drawing :

You can use computer for drawing. In this way you can express your creative skills, and there is no expenditure on paper, colours, etc.



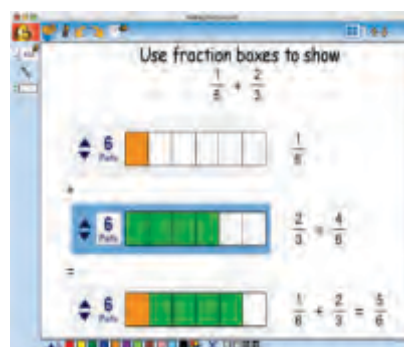
3. For Typing :

You can type on computer. You can write letters, documents, etc.' to send them to anyone within seconds.



4. For Calculations :

You can do calculations of Mathematics very easily with the help of computers. There is no risk of any error.



5. To Listen Songs :

If you are getting bored of reading or work, you can listen to your favourite songs on computer. All types of music are available on Internet.



6. To Watch Movies :

On computer, you can watch not only movies, but also enjoy the songs.
Now a days you can watch T.V. Programmes on computer.



7. For Searching :

With the use of computers you can search interesting information related to your field.



Q.5. Fill in the blanks :

(friends, search, drawing)

- Computer can become your best
- There is no need of paper for on computer.
- Students can their favourite information.

Q.6. Tick (✓) the right and cross (×) the wrong statement:

- a. We can play games on computers. ☐
- b. We cannot watch movies on computers. ☐
- c. We cannot do calculations on computer. ☐
- d. Computer can be used for typing. ☐

Q.7. List the functions you can perform with the help of computer.

.....
.....

Q.8. Fill your favourite colours in the pictures.

