


VASUDHAIVA KUTUMBAKAM
WE, OUR WORLD - 3
Environmental Studies

CLASS III



 NAME _____
SCHOOL _____



Vasudhaiva Kutumbakam

We, Our World - 3



EVS – PART II

‘Vasudhaiva Kutumbakam – We, Our World’

Third Edition published in 2024

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Preface

पृथिव्यापस्तेजो वायुराकाशमिति भूतानि ।(Nyaya Darshanam,1.1.13)

Vedic knowledge states that everything in this universe, including our body, is made of five basic elements, also known as the Pancha bhoothas - Prithvi (Earth), Aapa (Water), Teja (Fire / Energy), Vayu (Air) & Aakasha (Space). We therefore need to understand the environment around us in our eternal journey of self-discovery.

Numerous teachers with their rich and vast experience have compiled the existing knowledge on above aspects, in this series, “Vasudhaiva Kutumbakam- We, Our World” to help the students understand the world holistically. The content has been carefully curated, so that it reflects the rich cultural diversity of our motherland Bharat enabling the children to intuitively understand the unifying values that bond the citizens of this great land together. The book, thus, will help children gain skills required for the 21st century and be a universal citizen with a passion for following the Indian values.

The text book has been written in such a way that it builds curiosity, a spirit of experimentation and discovery. Formal descriptions and definitions have been kept to the minimum. The lessons proceed as conversations & stories to sensitise children to aspects of communication and build empathy. Also, assessment modules have been consciously kept to the minimum to encourage teachers to frame questions that suits the perspective of the students. It is also suggested that the evaluation be continuous and comprehensive. Children should be credited not only for the answers that they give to the questions asked, but also for the thoughtful questions that they raise in the class room in the context of the lesson, and the activities that they engage themselves in, to apply their learning.

There is no copyright on the content of this book. One can seek permission and print all or only certain chapters of the book. However, no unauthorized modification is permitted in any chapter. Considering the social orientation of the organisation, we have consciously kept the cost affordable without compromising on quality of paper/ print. Also, the e-copy of the entire book will be downloadable for free from our website, davchennai.org/publications/



This edition of the book could have not only omissions, but also areas of improvement. We request the reader to excuse us for the omissions, but please do bring to our notice any feedback for correction and improvement in subsequent editions. We will remain grateful to you for your support and feedback.

Lastly before signing off, we would like to express our profound gratitude to God Almighty for the guidance and encouragement in this endeavor. As it is rightly said, “We do not inherit the Earth from our ancestors, we borrow it from our children”. Hence let us teach our children to be grateful for all that we have, empathise with God’s creations and accept the responsibility of preserving it well for the future generations.

माता भूमिः पुत्रोऽहं पृथिव्याः ।

“Earth is my mother and I am her child”. (Atharva Veda 12.1.12)

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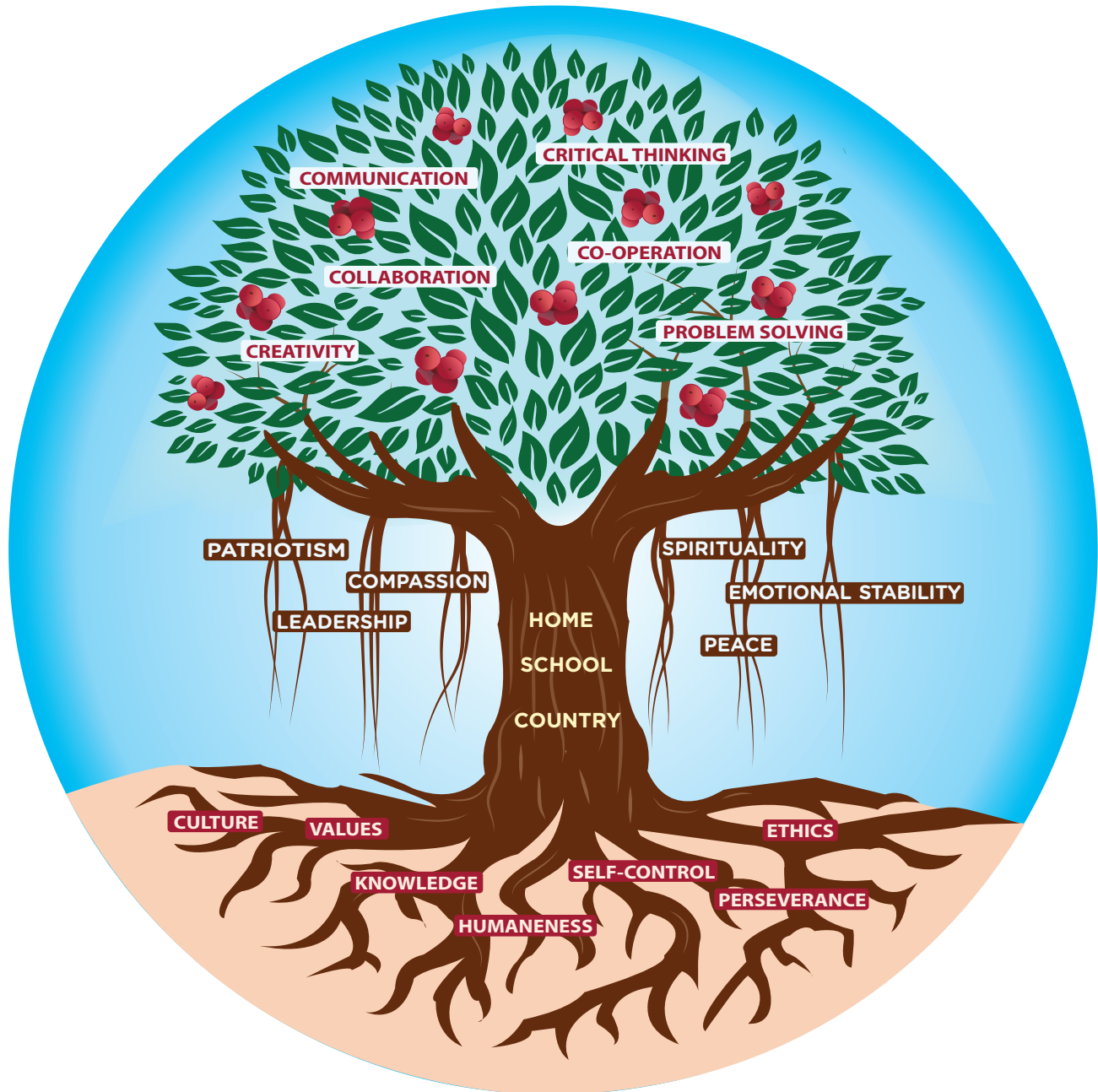
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The Learning Tree



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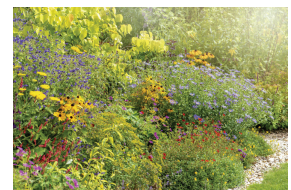
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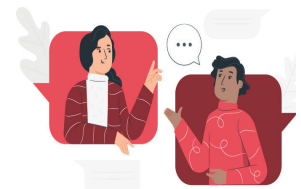
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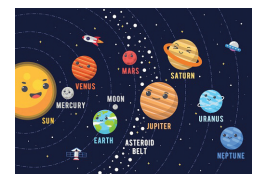
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Neighbourhood and the work we do



Expected Learning Outcomes

Students

- understand the various aspects of a neighbourhood.
- **know the need for public places in a locality.**
- recognize the four directions.
- **represent the locality as a sketch.**
- list the various landmarks in a neighbourhood.
- **value the importance of different types of work.**
- appreciate the work of community helpers who provide services to us.
- **know what latitudes and longitudes are.**
- understand what ATM and CDM stand for.
- **understand the postal system.**
- locate state/s and capital/s mentioned in the chapter on a political map of India.



Who am I?

Brown shirt, brown pant, brown shoes and brown cap is our garb.

Any burglar, within minutes we would grab.

I am a _____.

White coat with a metal chain.

Serving you a lot of respect we gain.

We are there to help you get fine

We pray you don't visit us again.

I am a _____.

Unclean at dusk and clean at dawn with a wand in our hand, all the dirt is gone.

I am a _____.

Remove my first and last letter, I remain.

Take away all my letters, I still remain. Who am I?

I am a _____.



Shruti's family stays in Lucknow, Uttar Pradesh. Rahul's family was staying near them a few years ago and had moved to Sitapur. Rahul has come to visit Shruti at her home. Shruti enters the house after her evening play.

Shruti: Hey Rahul! What a pleasant surprise! I am glad you came over.

Rahul: Hello Shruti! How are you?

Shruti: I am good. I was playing with my new friends who live in the house that you used to. Initially I was a little hesitant but now we are good friends.

Rahul: Nice to know you've made new friends. Even I was anxious when we moved out of here. My mother also fell sick. But, Rajeev and his parents helped us to tide over those difficult times. Helpful neighbours make us feel comfortable in a new setup. Rajeev is my best friend now.

Maa: It's very important to be friendly with our neighbours. They are the ones who help us immediately in an emergency.

Shruti: Did you notice that a lot of changes have happened in our neighbourhood?

Rahul: Yes, I see more houses in our area and also a park at the end of the road. Shruti, tell me more about the changes that have happened in this neighbourhood.

Shruti: We used to go to a school that was far away. Our mothers used to take turns to drop us and pick us up from school. How I enjoyed those rides! But now we have the school very close to our house. I walk to school.

Rahul: Where is your new school Shruti? Can you show me the way to the school?

Shruti: Sure, Let me open the Google maps on my mother's mobile phone to show you that.

Shruti requests her mother for the phone to show Rahul the way to school. She chooses 'maps' on the phone and keys in her school's name.

Shruti: Oh!... Maa, It says "You are offline".

ACTIVITY

Do you play in the evenings?

Name any two outdoor games you play with your neighbours.



Ponder

Which is better?

- Going to school by car (or)
- Walking to school. Why? Discuss.



Maa: That's the bane of technology. There seems to be a power cut and hence no wi-fi connection. But there is a time-tested method to know a location.

Shruti: Time-tested method? What is it? That sounds interesting. Please teach us.

Maa: We can draw a sketch with landmarks to indicate the location. Let me quickly draw one for you to see.

Maa draws a sketch using directions; she also mentions the landmarks on the way.

Shruthi: Maa, that's fascinating But I don't know how to find out the directions.

Maa: Let's see how to do it. What time of the day is it?

Shruthi & Rahul: It's evening.

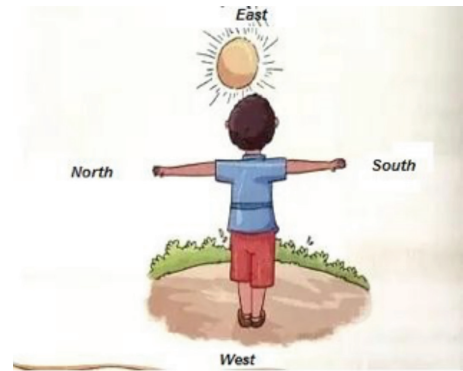
Maa: In which direction is the Sun now?

Rahul: In the west.

Maa: Where would it be in the morning?

Shruthi: In the east.

Maa: You already know two directions, the east and the west.



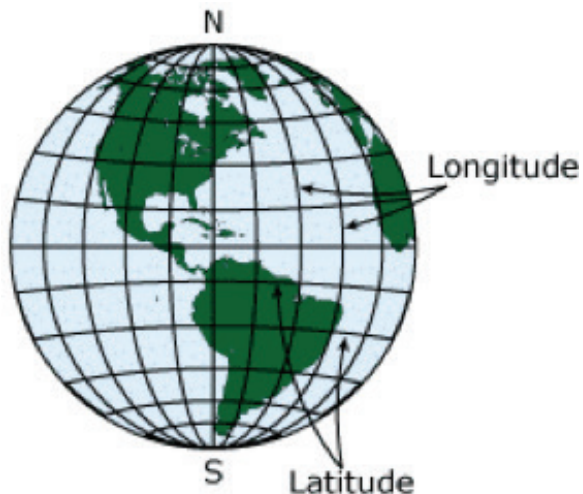
Rahul: That's so easy, how do we find out the other two directions?

Maa: Now stand facing the east and stretch your hands. Your right hand points to the south and the left hand points towards the north.

Shruthi: It sounds so simple and easy, Maa. How does a google map tell us the position of any place?

Maa: Google maps use latitudes and longitudes to locate any place on the Earth.

 **Enrichment**
What is GPS?



Rahul: What are latitudes and longitudes?

Maa: Longitudes are the imaginary lines that run North-South on the Earth.

Latitudes are the imaginary lines that run West-East of the earth. They help to know the location of a place precisely.



ACTIVITY

Look at the picture and complete the sentences that follow. (Assume that the boy is facing the west)



In which direction is the

- School _____
- School bus _____
- Home _____

Maa: Children, I have some work in the bank. From there I shall be going to the vegetable market. Do you want to come along?

Rahul: Yes chachi (aunt in Hindi) I would love to. Shall we, Shruti?

Shruti: Mom, can we go to the park after you complete your work?

Maa: Sure.

Rahul: I think I know the way to the bank. Shall I draw a sketch and show it?

Shruti: (pleasantly surprised...) You remember the place Rahul! Please draw the sketch. I will show you where the park is.



A sketch



Rahul: Chachi, I see an ATM, almost near all the banks. I have seen my parents withdraw money there.

Shruti: Maa, what does ATM mean?

Maa: It means **A**utomated **T**eller **M**achine.

Shruti: I like the way money comes out of it!

Maa: You can withdraw money from an ATM at any time using the card, provided by the bank for the purpose. There is no fixed time for it. You can also check the balance in your account. If there is a CDM, you can also deposit money.

Rahul: What is a CDM?

Maa: It is **C**ash **D**eposit **M**achine. We can deposit cash using it.

Half an hour later...

Maa: I have finished my work in the bank. Let's buy vegetables and then go to the park.

On their way, they hear a loud siren... and Shruti starts praying

Rahul: Shruti, why are you praying now?

Shruti: Didn't you see an ambulance pass by? I prayed for the patient inside it. There is a hospital nearby where the sick and injured are given medical care.



Enrichment

1. What are the other services offered by the banks?
2. How is money counted in CDM?



List a few things that you buy

- Everyday
- Once a week
- Once a month
- Once a year

(Take the help of your parents if need be)



Enrichment

List the people who help us in a hospital.

ACTIVITY

Let us find!	
All India Emergency Helpline Numbers	
Police Control Room	
Child Helpline	
Medical Helpline	
Ambulance Helpline	
Fire Service	

Rahul: Praying for others is really a great quality. I too shall follow it.

Maa: It is important to be compassionate towards fellow human beings. There are a few phone numbers you need to know to call an ambulance/ a police station/ a fire station in case of an emergency.



ACTIVITY

Draw and colour a fire engine

TASK

List a few people who help you everyday



Think About

What do you want to be when you grow up? Why?

Rahul: I understand. Sometimes even when we are unable to open the contacts on the mobile it says, “Emergency Numbers only”. I now realise how important it is to know those emergency numbers.

There is a fire station near my house. I have a friend Ravi, whose father is a fireman in this station. One day, he came to our school with his team in their fire engine. We had a mock drill to understand, what should be done in case of a fire accident. They also taught us how to put out small fires.

Shruti: Rahul, did you see the new Police station there? My friend Radha’s father, is an inspector in that station. Radha often talks about her father. She takes pride in the fact that her father helps and rescues people in distress. I also want to be a police officer when I grow up.



Remember:

- You must treat everyone with respect and dignity.
- Each of us have a duty to perform.
- If all of us perform our duty well, the world will be a better place.



Maa: That's an appreciable thought Shruti.

They reach the park.

Rahul: The plants and trees here are so beautiful. They give us fresh air. There are also trails for walking and biking. Let us go inside, chachi. I cannot wait to be on the swing and see-saw.

Maa: Okay, I will take a walk while you play. Park is a great place to spend our leisure time. Play safe and please do not move out of my sight, do not speak to strangers or accept anything from them.



Rahul and Shruti play for a while...

Shruti: Maa, I am tired. Shall we go home?

They start homewards. They see people selling colour powder outside the park.

Shruti: Maa, When is Holi? A lot of people are selling colour powder here.

Maa: Holi, the festival of colours, is the day after tomorrow.

Shruti: Last year we celebrated Holi in March, but this year why is it in February?

Maa: Holi is celebrated on the full moon day in the month of Phalguna according to the Hindu calendar. It matches with February-March of the Gregorian calendar.

Rahul: Why do we celebrate Holi, chachi?

Maa: Holi signifies the victory of good over evil. The celebrations begin the night before with the burning of Holika (representing evil). The next morning people smear colours or spray colour water on each other. In the evening, they visit family and friends.



Enrichment

Traditionally, the bright flowers of spring are boiled in water to make colours for Holi. Red hibiscus, red roses, beetroots, carrots, marigold, turmeric etc. are used to make colours. The colours thus got are environment friendly and safe on the skin.



Shruti: Rahul, can you stay with us for Holi? We shall celebrate it together this year. Shall we get the colours too, maa?

Maa: Shruti, we shall make some colours at home. These are artificial colours and not good for our health.

Shruti: Sure, I am thrilled.

When they reach home, Shruthi's papa (father in Hindi) had returned from work.

Papa: Hello Rahul, how are you?

Rahul: I am fine chacha (uncle in Hindi). We went around the neighbourhood and also enjoyed playing in the park. Shruti told me about her friend's father who is a policeman. She told me that she wants to become one. But I want to become a soldier in the Indian Army. I will be proud to wear the uniform and serve our country.

Papa: I am glad you both are thinking of choosing such noble professions. Do you know why it is important to work?

Shruti: Yes papa, to earn money. We need money to pay our bills, to pay rent, to travel, to buy food and to lead a comfortable life.

Maa: Yes. In addition to that, we also learn new things, develop new skills and knowledge, and make friends with people we meet in our job.

It also gives us personal fulfilment. We need to work not only to earn money, but also to serve the community.

Papa: You can choose any profession of your choice. But, whichever profession you take, you should give it your best. Sincerity and hardwork, combined with devotion helps one succeed.

Rahul: Oh! Now I understand. Thank you for explaining this to us.

Papa: Let us go to the nearest temple now?

Rahul: Sure chacha. I used to go with my dad every day when I was here.

Shruti: My friend Peter says he goes to the church every Sunday.

Papa: Each of us follow different faiths and our places of worship are different. But **"We are Indians first"**. Come on, let us go.

Rahul: Hey Shruti Look! You forgot to tell me about the new post office.

Shruti: I forgot about it, because we hardly write letters now Rahul, we either call each other or send messages over the phone. We also send E-mails to communicate with each other.





Enrichment

Religion	Place of worship
1.	
2.	
3.	
4.	
5.	

Rahul: I agree with you Shruti, but last week my father showed me the letters that his grandmother had written to him, when he was in the hostel.

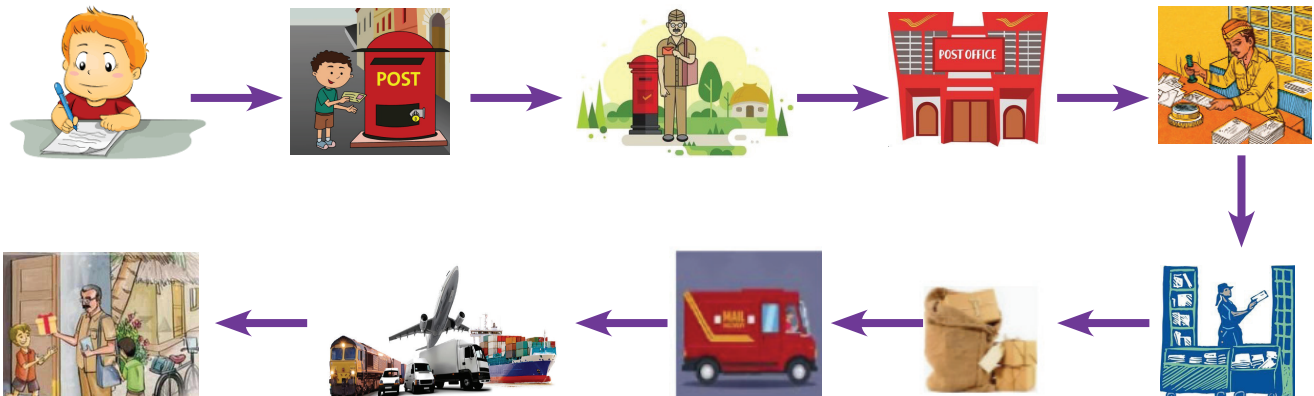
I was so moved to see the letters in her handwriting.

Maa: You are right Rahul. Hand written letters are lasting memories. A post office not only delivers the letters, but also helps

us send money, through money orders. Money orders can reach people even in remote areas, where there are no banks. We can also save money in a post office like how we do in banks. In fact, there are schemes in the post office that are better than the one's offered by the banks.

Rahul: Like a bank manager, do we have a post office manager too?

Maa: Good question Rahul. He is called the "Post Master". He is incharge of the post office.



Shruti: How do the letters that we drop in post boxes reach their destination?

Maa: The letters are collected from the post boxes by post men and taken to the nearest post office. They are then sorted using the PIN code written on the "To Address". The letters are then transported to the post office that is closer to the destination by trains or aeroplanes. The letters are sorted again using the PIN code and sent to the destination post office.

The post man collects them and delivers to the address written on the envelope.



Enrichment

- The cost of the postage stamp is the amount that you pay for the delivery of your letter.



Shruti: That's interesting.

Rahul: Thank you chacha, chachi, for an informative tour of the important places in the neighbourhood.



Ponder

- Why is PIN code an important part of your postal address?



Enrichment

1. Who is a post man?
2. What is Speed Post?
3. What is the PIN code for your area?

Identify the city from the PIN Code:

- 100047
- 600035
- 400023
- 200058

ACTIVITY

Draw a post box

From the QR code learn more on people in various professions who make an impact in our day to day life.



SUMMARY

- The four directions are East, West, North and South.
- Google maps use latitudes and longitudes to locate any place on the Earth.
- We can withdraw money from an ATM and deposit money in CDM.
- Hospital is a place where the sick and injured are given medical care.
- Policemen help and rescue people in distress.
- Parks have a lot of plants and trees giving us fresh air.
- A post office not only delivers the letters, but also helps us send money, through money orders and we can also save money in a post office.
- Bank, Hospital, Park, Fire station, Post office, Police station are some of the important places in our neighbourhood.





I. Who am I?

- I keep the neighbourhood safe.
- I deliver letters at your doorstep.
- I mend shoes.
- I make furniture.
- I represent my client in the court of law.

II. Name the place we go to

- Board a train _____.
- Buy stamps _____.
- Study and play _____.
- Refer, borrow and read books _____

III. Fill in the blanks

- Sketch uses _____ to indicate the location.
- Google maps use _____ and _____ to locate any place on the Earth.
- Holi is a festival of _____
- Post master is incharge of _____

IV. Answer the following

- Name the four directions. How can we find directions with the help of rising sun?
- What are latitudes and longitudes?
- What is a neighbourhood? Name a few places you generally find in your neighbourhood.
- How do we celebrate Holi?
- How are letters delivered by post office?
- What are the services provided by the Post office?



V. Think and Act

It's Diwali time. Children are enjoying fire works with their friends. Suddenly some sparks fall on a thatched roof nearby. It catches fire. List the steps, to help the affected people.

1. _____
2. _____
3. _____
4. _____

VI. Creative Corner

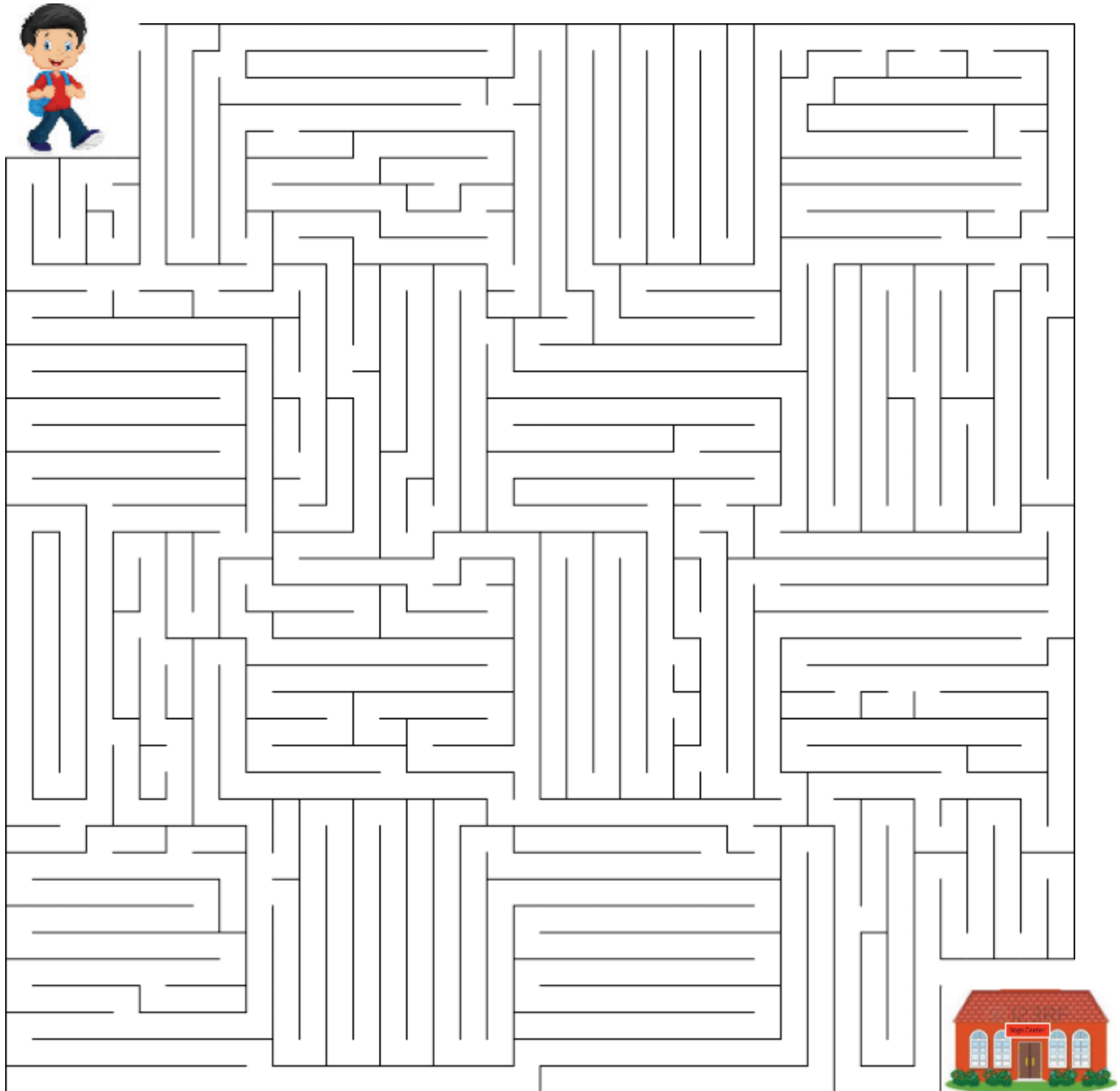
1. Draw a sketch of your neighbourhood and indicate the important landmarks.
2. Make a greeting card to wish people who help you everyday, on the occasion of Deepavali. Try to get their postal address and send it to them from the nearest post office/ post box. Record how you felt when you did this in your diary.
3. Maintain a gratitude journal to thank people who help you every day.

VII. Map activity

On a political map of India mark Uttar Pradesh and its capital.



VIII. Rahul has to go to the newly opened Yoga Centre in his neighbourhood.
Help him to find his way.



9 Shelter



Expected Learning Outcomes

Students:

- know the importance of shelter.
- know the different types of houses.
- appreciate the need to have a comfortable home.
- understand the need to keep the house clean.
- understand that animals too need a shelter.
- empathise with people who do not have a shelter.
- locate state/s and capital/s mentioned in the chapter on a political map of India.



It's Game Time

Help the Rabbit and the Duck to find their Home.

- I live on land and also swim in water. I carry my home on my back. I am a _____.
- I make my home by spinning, but people remove it when they clean their houses. I am a _____.
- I hide into my home when cats chase me. I nibble at your food. I also spread diseases. I am a _____.



Twins Abhinandha and Asha have joined class IV of a well-known school in Pune. Their father, an army officer has been transferred to Pune from Kashmir. Since they are new to the school, they are trying to make friends with their classmates. One day during their recess time, the students interact with each other.

Abhinandha: Hello Varun! I am Abhinandha. My twin Asha and I have joined the school today. We both come from a Kendriya Vidyalaya in Srinagar.

Varun: Srinagar! In Kashmir! I have heard that Kashmir is a beautiful valley bordered by the Himalayas and is an exciting place too. It's interesting to meet someone from there. Can you tell me more about Kashmir, the life of Kashmiris, the places of interest to visit, etc.?

Asha: Sure! We would enjoy sharing all that we know and have experienced of Kashmir. I will start with the "Dal lake", which is known as "Srinagar's Jewel". It is the second-largest lake in the Union Territory of Jammu & Kashmir and is the most visited place by tourists. Houseboats are one of the best features of Dal Lake.



Kumari: Houseboats? What are they?

Abhi: Boats that serve as houses are boat houses or houseboats. For some Kashmiris, it is their regular home. An interesting fact is that the houseboats have postal address too!



Enrichment

- Dal means lake in Kashmiri
- "Wular Lake" is the largest freshwater lake in Jammu & Kashmir.

Varun: Really? Would there be enough place to live on houseboats? What about their daily supplies? Would they go shopping on a boat?

Asha: Let me answer your questions one by one. Houseboats are of different sizes, like how our houses are. They too have a living room, kitchen, bedrooms, restrooms, and all that you expect in a house. On Dal lake, the shops too are on boats. The shopkeepers move around the lake in their boats to sell their wares. Alternatively, they use Shikaras (long boats) to go back and forth the shore from the houseboat to buy what they need.



Varun: That's really interesting. Shopping on Dal lake should be a unique experience. I live in an apartment in this densely populated city. Shopping quite often is not very enjoyable.

Abhinandha: I also saw that this city has tall buildings with multiple floors and many houses in each of them. How do you find living in an apartment? I have not lived in one yet.

Varun: Apartment buildings have a lot of houses or apartments in them. Some of them have a play area like what ours has. Some have a park, a library, a gymnasium, and also a clubhouse where we can have small celebrations. There are some apartment complexes which may not have any of these.



Apartment complex

Aakash: We are all blessed to live in a house that protects us from bad weather and social disturbances. We also have a kitchen, a bedroom and proper restrooms.

Last year, I happened to go to a remote village with my mother. She went there to help the villagers who were mostly poor. They lived in kutcha houses. The roof of these houses were made from dried palm leaves, or coconut leaves or straw. The leaves were woven in a pattern to form the roof. Walls of such houses were built of mud.



Kutcha house

Abhinandha: Oh! Life should be difficult for them. Did they have a kitchen and a toilet in their houses?

Aakash: No Abhinandha, they do not have the resources to avail even these basic facilities. My mother being an IAS officer was there to help them build toilets.

Varun: That's great work. When I grow up, I would also work to make the lives of the poor and the underprivileged better.

Asha: Did the village have only kutcha houses?

Vijay: No, it also had a few independent houses or bungalows. Independent houses can be single or multi-floored structures. They sometimes have a front yard, back yard, and a garden.

Asha: Do birds and animals also have homes like us, I wonder.



Bungalow



Vijay: Of course, they have Asha. They live in homes made by themselves. Bees live in hives and the birds in their nests. Domestic animals are nurtured in farms and homes, by us.

Asha: Where do animals like lions and elephants live?

Vijay: Wild animals live in the forests. Some or part of these forests have been converted into wildlife sanctuaries or national parks, so that these animals are safe and are also in their natural habitats. Last year we went on a school tour to the Mudumalai National park.



Varun: It was indeed a very interesting tour. It was an awesome sight to see elephants moving about in the wilderness and deer happily grazing in the grassland. It was very pleasant to see them resting under a tree.

Vijay: The tiger we spotted that day! I still remember the ferocity in its eyes !

Varun: Yes, What Vijay says is very true. when we were going in a jeep, we saw a tiger moving behind the trees. Suddenly we saw it walk past our jeep onto the other side, to a pond. It was a bone-chilling experience to meet the tiger eye to eye.

Kumari: We were so thrilled by the entire visit that we are not able to stop talking about it even today.

Abhinanda: We have never been to a sanctuary, we have seen such animals only in the zoo.



Enrichment

Where is Mudumalai National Park located?

Name a few other animals that you can spot in Mudumalai.



Varun: I feel that by keeping animals and birds in a circus or a zoo we are forcing them to live a life that's not natural to them, as they are confined to an enclosed space.

Akash: I too agree with Varun as I'm sure, all of us here would.

Rani: Let me tell you about the stilt houses in which we lived in Mizoram before my parents came here due to a change of job. They are houses that are built ten to twelve feet above the ground on strong bamboo pillars. The floor of such houses are made of wood. They also have sloping roof so that rainwater does not stagnate on the roof.



Stilt house

Asha: Yes Rani, even in Kerala where my achachan lives, the houses have sloping roofs as it rains there almost every day.

Rani: In my native place Rajasthan, there is very less rainfall. So the houses have thick walls and flat roofs as summers are very hot and winters are very cold.

Akash: Talking of Mudumalai, I also recollect seeing a beehive.

Akash: The forester showed us anthills too, which are infact snakes' habitat. I am sure snakes that live in forests have more space to move around than the ones kept in snake parks or zoos.

Asha: Very true Akash.

Rani: There were many birds too. The forest officer was able to name the bird by looking at the nest. It was interesting to note that birds make their own nest. They do this to keep their eggs



Ant hill

ACTIVITY

Draw a Bee Hive



Ponder

Our apartments are also built on pillars, but concrete pillars. Are they also stilt houses? Discuss.



Enrichment

Name the Seven sisters of the North East.



safe until they hatch and the baby bird learns to fly. I found the nest of a weaver bird very interesting. It had a small entrance which leads to a large area to keep its eggs safe and warm. They take care of their young ones until the young ones can take care of themselves.

Asha: Isn't it a wonder? Birds and animals take care of their young ones like us humans.

Homes to....



Eagle



Woodpecker



Weaver bird



Sparrow

The school bell rings.

Abhinandha: There goes the bell. Let us get back to our class. It was an enjoyable and educative sharing of information amongst us. Thank you, friends!

S U M M A R Y

- Boats that serve as houses are boat houses or houseboats.
- Dal lake in Kashmir has many house boats.
- Apartment buildings have a lot of houses in them. Some of them have a play area, a park, a library, a gymnasium, and also a clubhouse.
- A house protects us from bad weather and social disturbances.
- The roof of Kutcha houses are made from dried palm leaves, or coconut leaves or straw. Walls of such houses are built of mud.
- Independent houses can be single or multi-floored structures. They sometimes have a front yard, back yard, and a garden.
- Animals live in homes made by themselves. Bees live in hives, birds in their nests, domestic animals are nurtured in farms and homes. Wild animals live in forests.
- Stilt houses in Mizoram are built ten to twelve feet above the ground on strong bamboo pillars. The floor of such houses are made of wood. They also have sloping roof so that rainwater does not stagnate on the roof.
- In Rajasthan, there is very less rainfall. So the houses have thick walls and flat roofs as summers are very hot and winters are very cold.
- Birds make their own nest. They do this to keep their eggs safe until they hatch and the baby bird learns to fly.





I. Fill in the blanks

1. The jewel of Srinagar _____.
2. The stilts of houses in Mizoram are made of _____.
3. In Kerala, the houses have _____ roofs as it rains there almost every day.
4. The wall of kutcha houses are made of _____.
5. Man: _____ :: Bird: Nest.
6. Ant: Anthill :: Spider: _____
7. IAS stands for _____
8. These materials in the below picture are used to build a house. Name them.



9. Whose house is this?





II. Who am I?

1. I am snow white in colour, I can survive in extreme cold climate

2. I live/jump on the trees, and I have a big tail. _____
3. I am the national animal. _____

III. Choose the correct answer

1. Which among these houses is not built on land?



(a)



(b)



(c)



(d)

2. Circle the odd one:

(a) Villa (b) Mansion (c) Bungalow (d) Tent

3. Our homes provide _____

(a) Safety (b) Comfort
(c) Protection from harsh climatic conditions (d) All of these

4. Which insect hovers around if your house is unclean?

(a) wasps (b) houseflies (c) ants (d) honey bees

IV. Answer the following

1. Describe the houseboats found in Kashmir.
2. Where do you find kutcha houses? Name some of the materials used to build these houses.
3. What are stilt houses? Where do you find stilt houses?
4. Why are houses in Kerala different from those in Rajasthan?
5. Differentiate between an apartment and an independent house.



V. Art Integrated Activity

1. Make a model of the house, you would like to live in.
2. Observe the nests of a few birds. Make a model of them using natural materials. Hang it on a nearby tree, to serve as a house for birds.

VI. Creative Writing

1. Which part of your house do you like the most and why?

VII. Map activity

On a political map of India mark Jammu and Kashmir and Mizoram and their capitals.



10

Water - Elixir of Life

- Part 2



Expected Learning Outcomes

Students

- know about dams and their purpose.
- **understand the effects of floods.**
- explain the causes and effects of water pollution.
- **enumerate the water pollutants.**
- understand the need to prevent water pollution.
- **identify objects that float and sink in water.**
- locate state/s and capital/s mentioned in the chapter on a political map of India.



In this picture, Arti is being performed on the banks of a river. Do you wonder why?

Find out the river banks where it is performed.

Who Am I ?

RIDDLE TIME

- This letter of the alphabet holds more water -----
- I always fall, but I'm never hurt.

- I can be used to douse fire.

- I run without feet.



School Bell Rings.

It is 9.00 a.m. on a cool winter day. Mr.Narendra, the adhyapak enters the classroom.
The students stand up and chant the Gayathri Mantra.

Students: Namaste acharya!

Adhyapak: Namaste students. Let us start the class with a thought for the day

Adithya: आ नो भद्राः क्रतवो यन्तु विश्वतः ।

Aano bhadra krtavo yantu vishwatah

It means, “Let noble thoughts come to me from all directions.”

Adhyapak: Great one, Adithya. It is indeed important for all to keep your eyes and ears open to knowledge. Now, let us see if you can solve this riddle.

Children: (happily)... We shall try, acharya.

Adhyapak: Alright, Listen to this.

*It always runs, yet cannot walk,
Often murmurs, but does not talk.
Has a bed, but does not sleep,
Has a mouth but never eats.*



What is it?

Varsha: Water

Deep: Sea

Aarav: River

Adhyapak: It is indeed the river. Rivers have played a significant role in our history as great civilisations flourished along the river beds. Today, let us learn more about rivers.

Anamika: But we have already learnt about water, acharya.

Adhyapak: Of course, you have learnt. Let us quickly do a recap of what you have already learnt. Divit, explain how do we get rain.

You can also write about the process in the space below.



Adhyapak: Good, where does this rainwater go?

Deep: It is absorbed by the soil and stored as underground water.

Manasa: It fills lakes and ponds. It also flows as rivers and streams

Adhyapak: Good summary. What steps can we take to avoid water scarcity?

Adithya: We can adopt Rain Water Harvesting.

Adhyapak: Good. Today let us explore other ways of conserving water.

Look at this picture. What do you see?

Rishi: Is it a dam, acharya?

Adhyapak: It is. Dams are important structures built across rivers to provide water for irrigation and to generate electricity. They are used to store water and divert it along the required path to the agricultural fields for irrigation.



Krishna Raja Sagar Dam

Adithya: Acharya, I have been to Krishna Raja Sagar Dam during my last vacation when I visited my dhoddamma (mom's sister – Kannada) She said it was built over river Cauvery by the efforts of Maharaja Krishnaraja Wodeyar IV. It is in Mysore.

Adhyapak: Correct. He facilitated the construction. But do you know the architect who designed this?

Adithya: Yes acharya. I learnt that it was designed by an eminent Indian Engineer Sir. M. Visvesvaraya.

Adhyapak: He was also a great scholar. He was the recipient of India's highest civilian award the BHARAT RATNA in 1955.

Aryan: I have been to the famous Brindavan Gardens adjoining the Krishna Raja Sagar Dam.

I enjoyed the colourful dance of the musical fountain.

Adhyapak: Mysore and Mandya districts of Karnataka get water for irrigation and drinking from the Krishna Raja Sagar dam.



Enrichment

Sir M Visvesvaraya served as the Diwan of Mysore during the period of 1912-1918.



There is a science museum in Bangalore in his name.



Brindavan Gardens



Adithya: I also visited Tala Cauvery during that trip acharya.

Adhyapak: Tala Cauvery is located on Brahmagiri hills in Coorg district, Karnataka. It is the place where River Cauvery originates. It is a place of reverence to many.


Manasa: I have been to Kallanai in Tiruchirappalli. My baabhai (*father's younger brother in Telugu*) said that it is an ancient dam built across the River Cauvery.

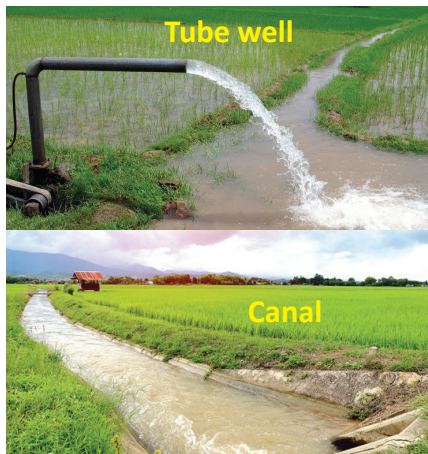


Kallanai Dam

Adhyapak: Correct Manasa. This dam was constructed by King Karikala Chola. He was the greatest among the early Chola kings in South India, who ruled around 120 C.E (common era). This was not for storing water but to divert the river water into canals to facilitate irrigation in the fields of the region. It is called a check dam.

 **Enrichment**
What are crops?

 **Enrichment**
Kallanai Dam, also known as Grand Anaicut. It is also the fourth oldest dam in the world. What does Kallanai mean?.



Sudhakar: Acharya, in my village I have seen my thathayya (*grandfather in Telugu*) irrigate crops using very big pipes coming out of the well. What are those pipes called as?

Adhyapak: They are tube wells. Huge motors are used to draw water from tube wells to irrigate the fields, through small canals.

Aarav: So the entire field is irrigated using tube wells?

Adhyapak: Aarav, farmers cannot be solely dependent on monsoon for irrigation. So, they make use of different sources of water to irrigate the crops - wells, tube wells, dams and more.

Dams have sluices that are opened when water is required for irrigation. Generally, dams help prevent flooding. But each dam can hold only a certain level of water. If the water level rises above the limit the sluices of the dam are opened to protect the walls from being damaged. This can sometimes lead to flooding.

Driti: Will such flooding not affect the crops?

Adhyapak: Yes, it will destroy crops.



Aditya: Will floods affect aquatic plants and animals, acharya?

Shikar: Aquatic?

Ananya: Plants and animals that live in water are called aquatic organisms.

Adhyapak: The flood may bring the aquatic animals to the terrestrial region. Thus it puts them in danger.

Manasa: We learnt about fresh water and salt water bodies. Can the aquatic animals live comfortably in both?

Adhyapak: Excellent question Manasa. The answer is NO. Sea and ocean, contain a large quantity of salt. Animals adapted to live in salt water

will not survive in freshwater. Many species of fish, seals, seahorses, octopus, dolphins, seals and whales are well adapted to live in salt water.

The freshwater habitats are ponds, lakes, rivers and streams. It supports animals like fishes, frogs, salamanders, ducks, swans and cranes.

 **Enrichment**
What is a flood?
What causes floods?



Shikar: Acharya, I know that Ooty lake is a fresh water lake. I have been there for boating. I saw many ducks swim in water. In some parts of the lake, I also saw some empty water bottles, plastic covers and chocolate wrappers floating in the water. Do they pollute water?

Adhyapak: Good observation Shikar, when they are dumped in water, it causes water pollution.

Abdul: Pollution!!! What is that acharya?

Adhyapak: It is the contamination of water sources by substances like sewage, chemicals etc.



Garbage dumped in water source



Dumping of unwanted things in water causes water pollution. It makes water unfit for consumption.

Manasa: These pollutants are also harmful to aquatic plants and animals. Aren't they acharya?

Adhyapak: Yes, the plastics we throw can choke the animals to death.

Rishi: Do oceans and seas also get polluted in same way acharya?

Adhyapak: Yes. Apart from those they also get polluted by oil spills and garbage disposed from ships.

Aruni: Acharya, then how do we save these aquatic animals from being affected?

Adhyapak: We should not litter water bodies, we should not wash clothes or bathe animals in rivers or lakes. We should not let sewage into water bodies. We should conserve water as it is essential for our existence.

Deepan: Is that the reason my patti worships water? In Kumbakonam where the river Cauvery flows they celebrate Adiperukku. It is celebrated to mark the onset of the farming cycle, when the river is in full flow.

Shikar: I know of a festival celebrated in Prayagraj where the three rivers Ganga, Yamuna and Saraswati meet. It is called the Kumbh Mela. People from all over the world visit Prayagraj for this festival.

Adhyapak: But one should remember that we should not pollute the water bodies while we worship them.

Ananya: Acharya, during my trip to Andaman I enjoyed water sports. Coral safari was the best. I could enjoy seeing corals, different types of fish and many people snorkelling and swimming under water. The ride was adventurous.

Samrat: I have always wondered how ships float on water?

Adhyapak: Objects that are heavier than water sink in water. Objects that are lighter than water float in water.

Ashutosh: Acharya I find it interesting that our rivers have feminine names like Ganga, Yamuna, Saraswati, Cauvery, etc? Why is it so?



Enrichment

Oil Spill – The oil from ship or a tanker spilt on oceans and seas causes harm to aquatic life and the environment.



Adiperukku



Kumbh Mela



Adhyapak: That's a good observation

परोपकाराय वहन्ति नद्यः ।

Paropakaraya vahanthi nadhyaha,

Rivers flow for us and not for themselves, like a mother who showers unconditional love on her children. The human civilisation originated alongside the rivers. Let us remember this,

पृथिव्यां त्रीणि रत्नानि जलमन्नं सुभाषितम् ।

Prithivyam trini ratnani jalam annam subhashitam I

Water, food and wise sayings are the only three gems on Earth.

School bell rings

Children: Namaste and thank you acharya.

S U M M A R Y

- Great civilisations flourished along the river beds.
- Rainwater is absorbed by the soil and stored as underground water. It fills lakes and ponds. It also flows as rivers and streams.
- We can adopt Rain Water Harvesting to avoid water scarcity.
- Dams are important structures built across rivers to provide water for irrigation and to generate electricity. They are used to store water and divert it along the required path to the agricultural fields for irrigation.
- Krishna Raja Sagar Dam was built over river Cauvery by the efforts of Maharaja Krishnaraja Wodeyar IV and designed by eminent Indian Engineer Sir. M. Visvesvaraya.
- Tala Cauvery is located on Brahmagiri hills in Coorg district, Karnataka. It is the place where River Cauvery originates.
- Kallanai dam was constructed by King Karikala Chola. It is called as a check dam as it was not for storing water but to divert the river water into canals to facilitate irrigation in the fields of the region.
- Plants and animals that live in water are called aquatic organisms.
- Many species of fish, seals, seahorses, octopus, dolphins, seals and whales are well adapted to live in salt water.
- The freshwater habitats are ponds, lakes, rivers and streams. It supports animals like fishes, frogs, salamanders, ducks, swans and cranes.
- Dumping of unwanted things in water causes water pollution. It makes water unfit for consumption.



Enrichment

Name the only river that has a masculine name in India



- Ocean and seas also get polluted by oil spills and garbage disposed from ships.
- Kumbhmela is a festival celebrated in Prayagraj where the three rivers Ganga, Yamuna and Saraswati meet.
- Objects that are heavier than water sink in water. Objects that are lighter than water float in water.



I. Choose the correct answer

1. Adi perukku is a festival celebrated on the banks of the river _____
 a) Ganga (b) Cauvery (c) Yamuna (d) Saraswathi
2. This condition occurs when there is very little rainfall.
 a) flood (b) drought (c) earthquake (d) famine
3. This floats on water
 a) cork (b) scissor (c) screw (d) stone

II. Fill in the blanks

1. Tala Cauvery is located on _____ hills.
2. Krishna Raja Sagar Dam is constructed across the river _____
3. Plants and animals that live in water are called _____
4. Kallanai was built by _____.
5. Allahabad is now known as _____.
6. Materials like plastics dumped in water cause _____
7. Objects that are heavier in water _____ and objects that are lighter than water _____ in water

III. Answer the following

1. List the uses of dam.
2. What are aquatic organisms? Give two examples.
3. Why did Karikalan build Kallanai across Cauvery?


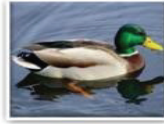






4. Name some animals that live in a) salt water b) fresh water
5. What are the causes and effects of water pollution?

IV. Make a poster that highlights the effects of water pollution.

V. Complete the activities

Tick (✓) the plants and animals that live in water

 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>
 <input type="checkbox"/>	 <input type="checkbox"/>	 <input type="checkbox"/>

Objects	Floats/Sinks in Water
 Paper Clips	
 Chopsticks	
 Plastic Spoon	
 Keys	
 Pencil	
 Coins	
 Paper towel tube	
 Cucumber	
 A lock	
 Rubber bands	
 Cotton balls	
 Popsicle sticks	

VI. Map activity

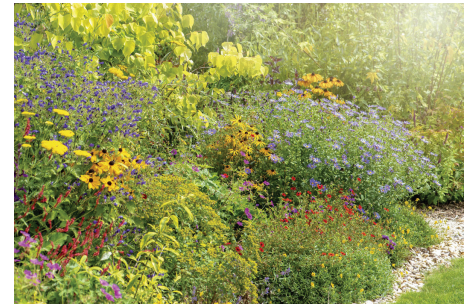
On a political map of India mark Karnataka and its capital.



11

Plants

- Part 2



Expected Learning Outcomes

Students

- know why we preferred to settle down near river banks
- understand how we started farming.
- know how agriculture helped us to settle down in a place
- list the steps in agricultural practices.
- appreciate that a farmer needs to follow a time frame for all agricultural activities
- know what manure is and understand how to convert vegetable matter into manure.
- know the parts of a seed.
- know the conditions required for germination
- understand the steps in germination.
- locate state/s and capital/s mentioned in the chapter on a political map of India.

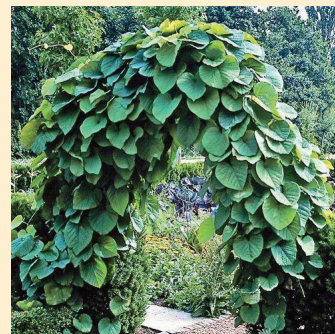


Plants do not move.

They are _____ (living /non living) things.

Terrestrial plants with weak stems can be either a _____ or _____

Do plants grow in water? _____
If yes, name any two.



Anand and Aarthi receive their grandparents.

Anand: Namaste thatha and paati!

Arthi: Nice to meet you thatha and paati.

Both bow down to take the blessings of their grandparents

Thatha and Patti: God bless you, children.

They freshen up and settle down in the balcony to start a conversation with the grandchildren.

Arthi: Thatha, we were inspired seeing the garden, when we came to visit you. We now have a small kitchen garden.

Thatha: Fabulous! You children have kept up your promise. Do you know how we, human beings started growing plants?

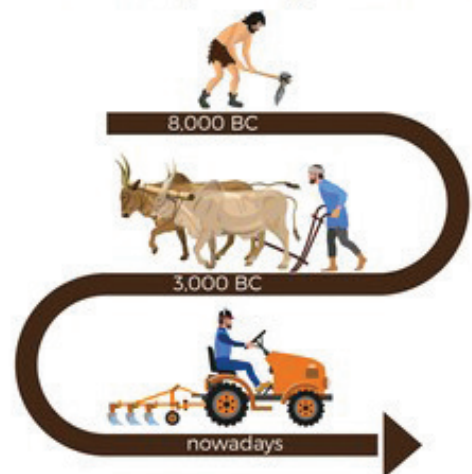
Anand: No, thatha. Can you please explain?

Thatha: Early humans, our forefathers were food gatherers for a long time. They were moving from one place to another gathering fruits and roots of plants that could be eaten. They ate the fruits and threw away the seeds. Over the years, they realized that the seeds they threw away grew into new plants. Thus, the food gatherers became producers.

Anand: Their observation made them farmers. They also started settling down in one place, rather than moving from one place to another.

Thatha: Good inference. We need to water the crops, if we have to grow them in a particular place. We did not have irrigation systems earlier.

History of agriculture



Enrichment

1. Are you observant of what is happening around you?
2. Who are nomads? Why were we nomads once upon a time?



Thatha: So, early men settled near the rivers, known as river banks, so that they have enough water and fertile soil for agriculture. The Indus valley and Nile valley civilizations flourished because of this.

Arthi: Why did people move away from river banks?



Enrichment

1. The Indus River contributed to the name Hindustan
2. Know at least 2 facts about the Indus Valley Civilization

ACTIVITY

Name two		
	SUMMER	WINTER
Crops		
Fruits		
Vegetables		

Thatha: With growing population it became important to find ways and means to increase food production. So we moved to different geographical locations. We observed the nature around us, we understood that seasons repeated regularly and plants grew well in specific seasons.

This made us understand that we need to grow different plants in different seasons. That is when we became an agricultural society. We started sowing seeds to grow crops. Do you want to know how seeds germinate?

Anand: Amma used to do it during 'Dussehra' to make parks for the festival display. But I am not able to recall.

Thatha: We shall look at it step wise. The first step is to soak the seeds in water.

Arthi and Anand: Soak them in water! For how long thatha?

Thatha: We will soak them tonight and observe them tomorrow morning. You may use the green gram seeds which are bigger, so that it is easy to observe.

Children followed the instructions of thatha and soaked the seeds, overnight. The next day thatha asked the children to check which was softer-the soaked or the dry seeds.

Anand: Thatha, the soaked seeds are softer. I also see that there are two parts to each seed now. I see a seed cover over the seed.

Thatha: Good observation children. The seeds have absorbed water, and swollen up, keep them in a warm, dark place for a day.

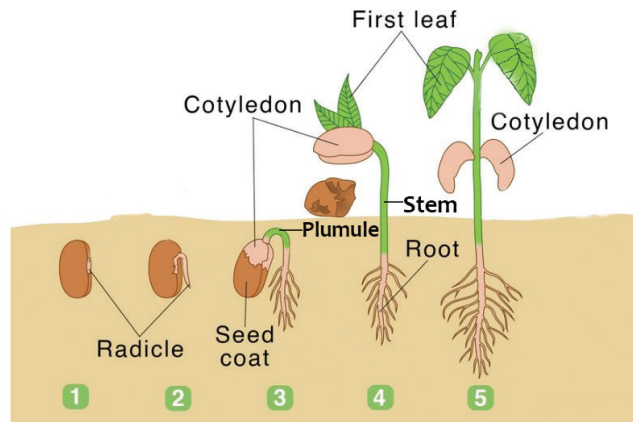
After a day, children see the sprouts on the seeds.

Thatha: Observe the direction of the sprouts, children.

Arthi: The sprouts point downwards, why is it so?



Seed Germination



Thatha: The part of the plant that emerges first is called the radicle and it grows into the root. You will see a plumule emerge soon. That grows into a shoot.

Anand: I see the two-halves of the seed on the plumule.

Thatha: Good observation Anand. They are known as seed leaves. They make food till the plant is able to make its own food.

Arthi: So a seed has some food stored for the small plant.

Thatha: Yes children. The part of the seed that stores food for the baby plant is called a cotyledon. Now can you tell me the parts of a seed children.

Anand: A seed has a baby plant, food for the baby plant and is kept covered by a seed coat.


Thatha: That's good Anand. Children, you have observed germination, the process by which the seed grows into a plant.

Arthi: Now I know that seeds need water, air and warmth for germination.

Anand: Don't seeds need sunlight for germination?

Thatha: Some seeds like geranium and lettuce need sunlight but most seeds don't. But all seedlings need sunlight to grow.

Anand: I have heard of ploughing what are the other farming activities?



Enrichment

- Ploughing of field
- Sowing the seeds
- Irrigating at right intervals with correct quantity of water.
- Transplantation (for some crops)
- Weeding
- Application of manure
- Harvesting at the right time
- Storage
- Transportation to markets

Farming activities



Thatha: Farming requires a series of activities.

It is a long process and the farmer needs to do it at the right time, he cannot do it earlier or later even by a day. Sowing seeds is as important as ploughing and irrigation.



Ponder

What would happen if a farmer delays his harvest?

Some crops like rice need transplantation. Weeding, which is the removal of unwanted plants that grow with the crops has to be done alongside. The crop has to be harvested at the right time and stored carefully, until it is sold in the market.

Arthi: It is indeed a long process.

Anand: Now I understand why festivals are celebrated around the harvest season. It is to help the farmer relax and enjoy his produce, before he starts the cycle of work again to feed the world.

Thatha: Good Anand. I appreciate your empathy. Remember, if the rains fail or there is an unexpected attack by pests, the hardwork of the farmer does not yield fruit. However, a farmer is very hopeful and continues his work in the next season. We need to learn this grit and hope from them and continue to do our work, though we may have set backs in between.

Anand: What is manure thatha?

Thatha: Manure enriches the soil and keeps the soil fertile. It is made of dried leaves and animal wastes like the dung of animals.

Plant and animal waste that decay in the soil is rich in nutrients and is called the humus. These help to enrich the soil.

Arthi: We produce a small amount of it from the peels of fruits and vegetables, dried leaves and flowers that we get from the garden. They are dumped in a compost pit to decay and then used as manure.

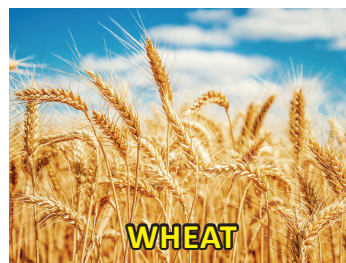
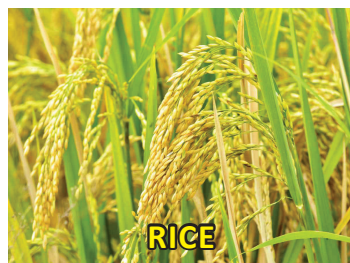
Thatha: Yes. Sometimes we also add earthworms to it. This process is called Vermicomposting.

Arthi: Thatha, in the southern part of our country, I see rice crops but not wheat. Why?



Enrichment

Why is earthworm called the friend of a farmer?





Think About

How do you feel when you see questions in your exam for which you do not know the answers?

Anand: We discussed this earlier. Each crop needs a particular climatic condition and soil kind. The soil and climate are suitable for growing rice in Tamil Nadu, Andhra Pradesh and West Bengal. Major wheat-producing states are Uttar Pradesh, Punjab and Madhya Pradesh.

Thatha: You have understood the point well Anand. Our farmers not only grow major food crops like rice and wheat, they also grow fruits and vegetables.

Arthi: Only then we can have a balanced diet.

Thatha: That is true. We need to understand that farmers are the most important people for any country. Their hard work and toil alone can keep us hunger-free. Remember, no amount of money will bring food to your plate if farmers don't work in the fields. We need to treat them with respect and help them earn a good livelihood.

Anand: How can we help them thatha?

Thatha: Farmers put in their hard work. Now, most of the activities on the farm are done by machines. When you grow up you can think of inventing more machines that could make their work easier.

Remember, the climate around the world is going through drastic changes. We need to reduce pollution as much as possible, so that such climatic changes do not affect the yield.

Arthi: Thatha, my teacher was also talking about crops like jowar, bajra and ragi. She told us that they are millets.



Enrichment

Mark on the political map of India any 2 regions where millets are grown.

TASK

Find out the names of the millets in your mother tongue

Millet	Vernacular Name	Millet	Vernacular Name
Pearl Millet		Little Millet	
Finger Millet		Barnyard Millet	
Foxtail Millet		Sorghum	
Kodo Millet		Proso Millet	



Thatha: Yes Arthi. They are tolerant to both drought and high temperatures. They can also be grown in arid regions where water is scarce. They do not require fertilizers and pesticides. They are highly nutritious too. When we attained independence we did not have enough food grains to feed our people but now we have become self sufficient in producing food grains.

Arthi: Yes thatha, recently I read in the newspaper that we have enough food grains and we are helping other countries, who have a food shortage.

Thatha: I'm happy that you follow the news every day. Soldiers and farmers are the ones who help a nation to hold its head high in the world. Our former Prime Minister Shri Lal Bahadur Shastri rightly said "Jai Jawan, Jai Kisan". A country should respect its soldiers who keep their country safe from foreign invasions and the farmers who keep its citizens hunger-free.

Arthi: I am going to join the armed forces. My teacher told me that recently the Government of India has decided to recruit women soldiers too for long services. I don't know what it means, but I want to join the Indian Army to serve the country.

Anand: I am going to become a scientist to help farmers with practises and tools to make their work easier and give them a better yield. Since there is shortage of water and climate changes happening, I will also try to help farmers identify crops that need less water and can withstand extreme weather conditions.

Thatha: That is good, you should also follow the following practices to protect the environment.

Walk or cycle to school

Reduce the use of plastics

Plant as many trees as possible

And above all 'DO NOT WASTE FOOD'



SUMMARY

- Early men were food gatherers for a long time and gradually they became food producers. They settled near river banks, so that they get enough water and fertile soil for agriculture.
- The process by which the seed grows into a plant is called germination.
- The part of the plant that emerges first and grows into a root is called the radicle.
- The part of the plant that emerges into a shoot is called the plumule.
- The part of the seed that stores food for the baby plant is called cotyledon. They are known as seed leaves.
- Seeds need air, water and warmth for germination. Some seeds like Geranium and lettuce need sunlight to germinate whereas most seeds don't. All seedlings need sunlight to grow.
- The removal of unwanted plants from the field is known as weeding.
- Manure enriches the soil and keep the soil fertile. Natural manure is made of dried leaves and dung of animals.
- Plant and animal waste that decay in the soil is rich in nutrients and is called the humus. These help to enrich the soil.
- Adding earthworms to a compost pit along with fruit and vegetable peels, dried leaves, and flowers is called vermicompost.
- Each crop needs a particular climatic condition and soil kind to grow.
- Rice grown states are Tamil Nadu, Andhra Pradesh and West Bengal. Major wheat-producing states are Uttar Pradesh, Punjab and Madhya Pradesh
- Millets are tolerant to both drought and high temperatures. They can also be grown in arid regions where water is scarce. They do not require fertilizers and pesticides.



I. Fill in the blanks

1. Early men settled near _____
2. The part of the seed that stores food for the baby plant is called _____
3. Removal of unwanted plants from the field is known as _____
4. Adding earthworms to the compost pit is called _____



5. The slogan “ Jai jawan, Jai Kissan” was coined by our former Prime minister _____

II. Name the following

1. The part of the seedling that grows into a shoot is _____
2. The process by which the seed grows into a plant is _____
3. Farmer’s friend _____

III. Give two examples for each of the following

1. Civilisations that developed near river banks _____, _____
2. Plants that need sunlight for germination _____, _____
3. Plants that need transplantation _____, _____
4. Rice producing states in India _____, _____
5. Wheat producing states in India _____, _____
6. Two millets _____, _____

IV. Answer the following

1. How did the early humans start growing plants?
2. What is germination? Name the materials required for germination of a seed.
3. List the steps in farming.
4. What is a manure? How can we prepare natural manure at home?
5. Enumerate the reasons how millets are beneficial to the environment, farmers and the people.
6. What are the few practices that you can follow to protect the environment?

V. Create a “Green Corner” in your school. Nurture the plants. Maintain a diary of it.

VI. Creative corner

Design a greeting card for a farmer on the ‘Harvest Festival’ that you celebrate.



12

Animals

- Part 2



Expected Learning Outcomes

Students

- know that animals live in groups.
- know the collective names of animals.
- understand the benefits of living in a group.
- understand the adaptations of animals that live in desert and in very cold regions.
- understand that animals are better than us in sensing danger.
- understand the need to protect sanctuaries.
- know what migration is.
- understand why animals migrate.
- locate state/s and capital/s mentioned in the chapter on a political map of India.



Spot six differences



Priya, Mano, Teja and Leka were playing in the park. Their ball fell into a bush. Teja ran to pick up the ball. But he came back without the ball as he saw a lot of ants near the bush. All of them ran to the bush.

Priya: Hey! Look! There are so many ants! Where are they going so fast?

Leka: If you observe carefully, they seem to stop and talk to each other.

Mano: How do they talk to each other? Are they going to their house? How do they know where their house is?

Priya: They are moving in a line.

Teja: Yesterday while I was eating biscuits in my house, a few pieces fell on the floor. I immediately pushed it close to the wall so as to not get caught by my mother for littering the place and I went to play. My mom called me in a while and scolded me for littering the place. I was wondering about how my mother came to know. My mom then showed me how I had got caught. I saw a line of ants carrying those biscuit pieces into a tiny hole.

Leka: Ants have a powerful sense of smell. That is how they found the biscuit pieces lying in your room.

Mano: They identify their group members by their smell.

Teja: Wherever there is spilled food, we can easily spot a group of ants.

Mano: Do ants live in groups?

Priya: Yes. Ants always live in large groups called colonies. Each colony has one queen ant, many male ants and worker ants.

Mano: Oh! I never knew this. What do all these different types of ants do?

Priya: Each member of the colony has a specific work to do.

Leka: Interestingly, the queen ant has wings.

Mano: Do they look like bees?

Teja: No, they are different. I have seen a beehive on a tree near my house. There were so many bees hovering around the hive.



Enrichment

The Queen ant of the colony lays eggs.

The worker ants collect food, guard and also repair the damaged parts of the colony.



Leka: Insects like bees and wasps also live in large groups.

Mano: Do we then call it a colony of bees? What do we call a group of wasps?

Leka: No, it is called as a swarm of bees and a swarm of wasps.

Priya: Many animals live in groups. Animals like elephant, zebra, lion, cow and sheep also live in groups.

They are referred to as a Herd of elephants, Pride of lions, Pack of wolves, Shoal/ School of Fish, Flock of birds, etc.,



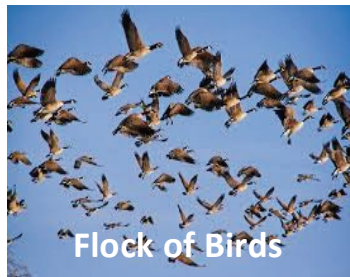
Honey Bee



Bee Hive



Swarm of wasps



Flock of Birds



Pride of Lions



School of Fish



Pack of Wolves



Herd of Elephants

T A S K

Find the collective names of these animals.

Rats	
Hyenas	
Frogs	
Crows	
Owls	
Otters	

Priya: I have also read that the male elephants live with their herd till they are 14 or 15 years old. Then they leave their herd and move around alone.

Leka: The oldest female elephant leads the herd. She takes special care of young ones and helps the herd to find food and keeps them away from

danger. The younger ones look upon her for their needs.

Priya: Oh. It is like a joint family, like how we live with our grandparents.



Teja: My parents too look to my grandparents for help and advice many times.

Leka: Yes. What you say is correct. When we live in a joint family we have many people to care for each other.

Mano: In my house we share our work, I help my grandparents and parents. I wash my plate and put all the things back in the right place after using them.

Priya: Nowadays most of us stay in nuclear families where we have only parents to take care of us.

TASK

Are you in a nuclear or joint family?



If you are in a joint family, discuss the role played by your grandparents. Talk about how people in a joint family help, share and care for each other.

If you are in a nuclear family, discuss how you share the work with your parents.



Teja: I will call chacha to get the ball.

Mano: I have always seen him with a dog.

Teja: His dog doesn't let anyone enter his house. It allows only family members and friends. It starts barking at strangers.

Mano: I am scared of chacha's dog when it is barking.

Leka: How does the dog identify chacha's friends?

Priya: Dogs have a powerful sense of smell. That is why they are used by the police to catch thieves and to detect bombs.

Dogs can also be trained to help visually challenged people. They can help them cross the road and also move around safely wherever they go. Such dogs that help people with special needs are called service dogs.



Teja: Oh... that is so nice. Dogs are the best friends of humans.

Mano: Chacha, do animals also sense natural disasters like earthquakes?



Chacha: They do Mano. Many animals like dogs and cats have a sharp sense of hearing. They can hear sounds that we cannot hear.

Priya: Animals communicate not only to convey about approaching danger but also to lead their fellow animals to find food.



Enrichment



Cat's whiskers act as the sense organ of touch. They help the cat to avoid bumping on objects and help in finding its way in the dark.



Enrichment

How do bees help us?

Chacha: Animals like honey bees, use special dance movements to communicate to its hive members, the direction and distance of the presence of flowers with nectar. Aquatic animals like dolphins use high pitched sounds to communicate.

As they were playing, Priya was excited about the vacation and started telling her plans.

Priya: We have planned to visit Rajasthan for this vacation. I am thrilled that I would be going on a camel ride.



Dolphin

Chacha: Great! India's largest desert is the Thar desert. It is also known as the Great Indian desert.

You know children, desert is a large area covered with sand. They receive very little rainfall or sometimes no rainfall at all. During the day it is very hot and at night it is very cold.



Enrichment

Cold deserts are covered with snow. Example Spiti and Lahaul in Ladakh.

Teja: I always wonder how camels can walk in the desert sand so easily!

Mano: How can camels live in such conditions?

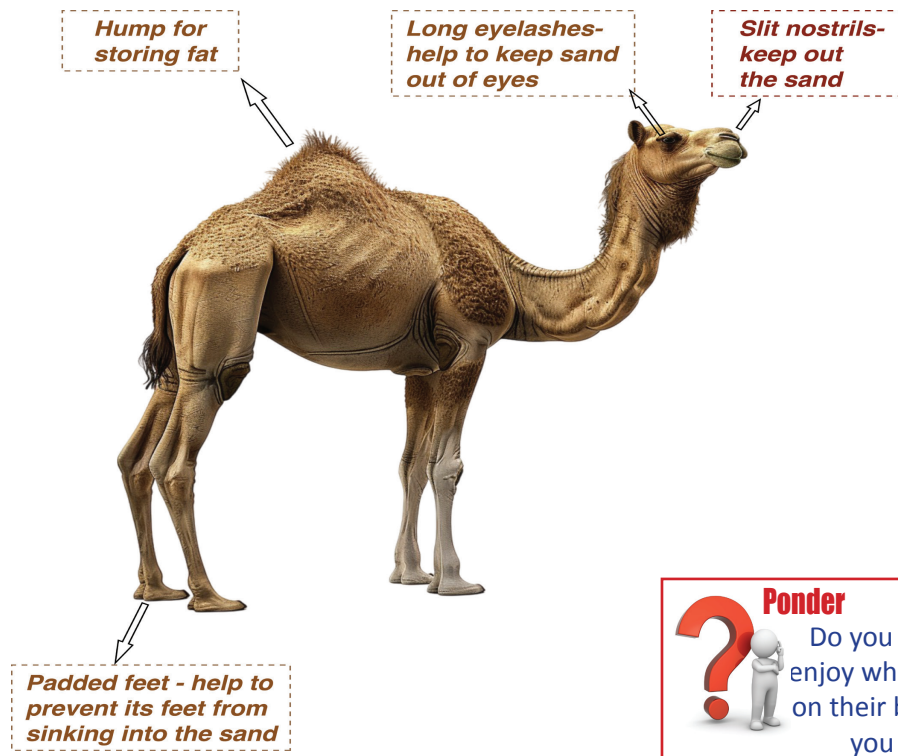
Chacha: Animals have certain body features that help them to live comfortably in their habitats. Such features are called **adaptations**. Camels have the following adaptations which make it easier for them to live in the desert.



Enrichment

Write the names of animals that live in	
Deserts	Cold Regions





Leka: Oh... It is so nice. We have planned to visit Sikkim. My mother says that there are plenty of yaks there.

Chacha: Sikkim is a high mountainous region; it is very cold there. It also starts snowing during the peak winter season. Yaks have adaptations to live in such weather conditions.



Yak



Adaptations of Yak	Use
Rough tongue	Scraping plants found on rocks and hard surfaces.
Strong hooves and horns	To break the ice and walk through it.
Fur	To protect from extreme cold and keep them warm.

Teja: I want to visit a bird sanctuary. I know that there is one in Vedanthangal, Chennai.

Chacha: Chennai is a coastal plain that is warm and humid for most part of the year. But during the months of December and January, Chennai has a pleasant climate.



Teja: Many birds travel from very far off places to visit Vedanthangal near Chennai during this time of the year, some come from as far away as Russia and Australia.

Leka: Oh! Why do they travel to Chennai from such far away places?

Chacha: They travel from very cold countries to escape the harsh winter. Birds move to these places to find enough food and to lay eggs.

Teja: Do only birds move to different places to escape from harsh winter, chacha?

Chacha: Not only birds, many animals also move from one place to another to escape from harsh winter.

This long-distance movement of animals regularly in a particular season is known as Migration.

Priya: Do aquatic animals also migrate?

Chacha: Whales travel to cold parts of the ocean for feeding and move to the warmer waters to give birth to young ones.

Enrichment



- Vedanthangal is a bird sanctuary near Chennai.
- More than 40000 birds from various parts of the world visit the sanctuary during the migratory season every year.
- Birds from Russia, Siberia, Sri Lanka, Burma, Bangladesh, Australia, etc., visit this sanctuary.
- They come here to build nests and produce young ones.
- Birds stay in the sanctuary for 6 to 7 months.





Enrichment

Many birds return to the same tree during every migratory season. Find more about migration.



As it was getting dark, chacha asked the children to get back to their home safely.

Chacha: Priya and Leka, enjoy your vacation. After your return, do share your experience with your friends.

Lekha: Sure chacha, We will.

The children leave and chacha too leaves with his dog.

SUMMARY

- Ants have a powerful sense of smell. They identify their group members by their smell.
- Ants live in large group called colonies. Each colony has one queen ant, many male ants and worker ants. The queen ant has wings.
- Insects like bees and wasps also live in large groups.
- Male elephants live with their herd till they are 14-15 years old. The oldest female elephant leads the herd.
- Dogs have a powerful sense of smell. They are used by police to catch thieves and to detect bombs.
- Dogs are trained to help visually challenged people to cross the road and move around safely wherever they go.
- Dogs and cats have a sharp sense of hearing.
- Animals communicate not only to convey about approaching danger but also to lead their fellow animals to find food.
- Insects like honey bees use special dance movements to communicate to its hive members.
- Aquatic animals like dolphins use high pitched sounds to communicate.
- Deserts are large area of land covered with sand. They receive very less rainfall.
- India's largest desert is Thar desert. It is also known as Great Indian desert.
- Animals have certain body features that help them to live comfortably in their habitats. Such features are called adaptations.



- Yaks have adaptations to live in cold weather conditions and camels have adaptations to live in a desert.
- The long distance movement of animals regularly in a particular season is known as migration.
- Birds travel from very countries to escape the harsh winter, to find enough food and to lay eggs.
- Whales travel to cold parts of the oceans for feeding and move to the warmer waters to give birth to young ones.



I. Give one word for the following

1. The movement of animals from one place to another to escape from harsh climate. _____
2. A landform that is covered with sand and has hot and dry climate. _____
3. This insect communicates with its family members by dancing. _____
4. An animal that has thick fur and is found in mountainous regions.

5. Certain body features that help animals to live comfortably in their habitat

II. Solve the riddles

1. I am an animal with long neck and can reach the leaves of tall trees. _____
2. I am an animal with fan like ears that helps me to listen to even the slightest sound around me. _____
3. I am an insect. I live in tiny holes in the walls. I identify my family by smell.

4. I am an animal with yellow and black stripes on my body. These stripes help me to hide behind tall grass and hunt my food. _____

III. Fill in the blanks

1. Ants identify their group members by their _____
2. Male elephants leave their herd when they are _____ years old.
3. Dogs that help people with special needs are called _____
4. Aquatic animals like dolphins use _____ sounds to communicate.



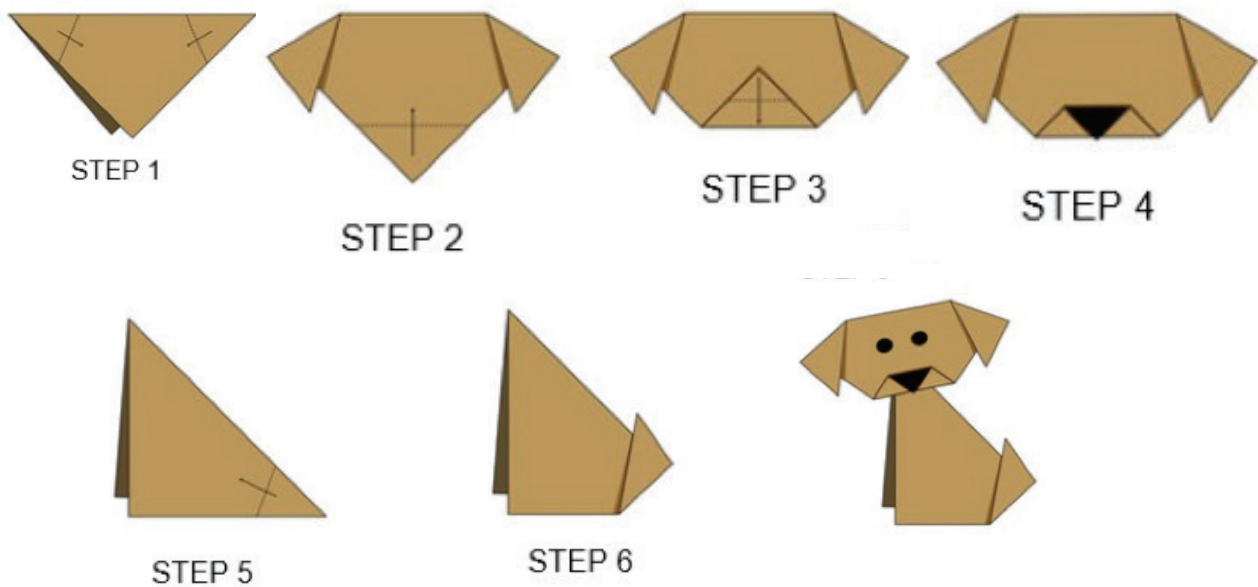
IV. Match the following

- | | | |
|---------------------|---|-------------------------|
| 1. Chennai | - | high mountainous region |
| 2. Vedanthangal | - | cold desert |
| 3. Thar desert | - | coastal plain |
| 4. Lahaul and Spiti | - | bird sanctuary |
| 5. Sikkim | - | hot desert |

V. Answer the following

1. How does the sense of smell help ants?
2. Dogs are friends of humans. Justify
3. Camels can live in a desert comfortably. Give reasons
4. Yaks live in cold regions comfortably. How?
5. What is meant by migration? Explain with an example.

IV. Activity



V. Map activity

On a political map of India mark Sikkim and its capital.



13

India, that is Bharat

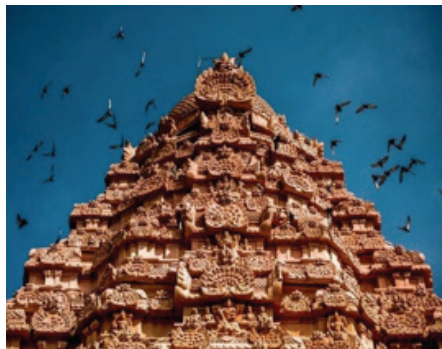
- Part 2



Expected Learning Outcomes

Students

- know the special features of the Thanjavur temple.
- know the system of Education and Judiciary during Chola period.
- describe the features of Kumbhalgarh Fort.
- appreciate the resilience of Rana Pratap.
- understand Ayurveda as an ancient science.
- know about the contributions of Charaka and Sushruta to medicine and surgery respectively.
- take pride in the vast knowledge of our ancestors in art, architecture, medicine and literature.
- locate state/s and capital/s mentioned in the chapter on a political map of India.



What tools could have been used to carve stones so delicately in olden days?



Shashank enters the room running towards his dada (grandfather in Gujarati) with excitement.

Shashank: Yay!!! Dada, exams are over. Finally it's holiday. I wish we travel during vacation this year.

Dada: Where do you want to go Shashank?

Shashank's dadi (grandmother in Gujarati) enters the room.

Dadi: I hear vacation plans being discussed. Shashank, do you remember the places that we visited last year?

Shashank: Yes dadi! I remember very well our visit to Brihadeeswarar temple in Thanjavur last year. A huge magnificent structure built more than thousand years ago. But I don't remember the king who built it.

Dada: It was King Raja Raja, a Chola king. The Chola kings ruled a thousand years ago.

Shashank: Chola King?

Dada: Yes. The Chola Kings ruled almost the entire part of the southern India and some parts of the present-day Odisha. Parts of Sri Lanka, Indonesia, Malaysia and southern part of Thailand were also under their rule. They were one of the longest ruling dynasties in Indian history.

Shashank: They built it 1000 years ago?! What is the temple built of?

Dadi: The temple is built of granite. The '**Periya Kovil**' as it is also called, meaning **magnificent**, stands tall true to its name.

The **Nandi (Bull)** in the temple is carved from a single piece of granite and weighs around twenty tons.



Periya Kovil

A marvellous feature of the temple is that the shadow of the temple tower is not cast on the ground. The tower is visible from anywhere in Thanjavur.

Shashank: They should have had great civil engineers like my **mamaji (mother's brother in Gujarati)**. Did they have schools and colleges like what we have now?

Dadi: We do not know much about their system of education. However, there were two higher institutes of learning for Vedas and one for medicine.



Shashank: Wow! dadi, I remember that you said, art too was given a lot of importance.

Dadi: Yes. Arts such as drawing, painting, sculpting, dance and music were not taught in formal schools. People who were interested, learnt the skills from expert artists and artisans by observing and working with them. Do you remember the sculptures on the temple walls, depicting different dance poses?

Shashank: Yes dadi, mata (mother in Gujarati) told me that it was Bharatha Natyam. I understand that dance too was a popular art form then.

Dadi: You are right. The two languages Sanskrit and Tamil flourished during the Chola reign. The literary work “Periya Puranam” was compiled during that period. Ramayanam was written in Tamil by Kambar during the same period. This period was also called the “Golden age of Tamil literature”.

Shashank: Were they good rulers dada?

Dada: Absolutely. Cholas were great rulers who cared for their people. They had a good judicial system. Petty issues were settled by committees in the villages. The rest were tried in the king’s court known as ‘Dharmasanam’, which also had learned members.

Shashank: What was the main occupation of the people dada?

Dada: That’s a brilliant question Shashank. The people of the Chola period were good artisans, musicians, dancers, poets and administrators. They also excelled in trade. They traded with people in the far East like the Japanese. They also had trade links with China, Burma, Malaysia, Greece, Egypt, Arabia and Sri Lanka. They were excellent ship builders too.

Shashank: That’s amazing. I thought all these came in only when the British came to India.

Dada: We were one of the best nations, before we came under the foreign rule. It was truly a golden period, our land lost its treasures of rich architecture, arts and skills of trade only after centuries of rule by foreigners.

Dadi: We have recollected our earlier trip. This year, we are planning to spend our holiday at Udaipur in Rajasthan. Have you heard of that place Shashank?

Shashank: I have heard of ‘Jaipur’. My teacher said that it was the capital of Rajasthan and also known as the pink city. Is Udaipur another name for Jaipur dadi?



Enrichment

The medical school and hospital of the Chola period found by historians was called “Adhura Salai”. It was a 15-bed hospital with a physician, surgeon and nurses at service. They followed Ayurveda and Siddha systems of medicine.





Lake Pichola

Dadi: That's a good guess. But It is not. Udaipur is also in Rajasthan. It is known as the 'Venice of the East', as it has a large number of lakes and palaces. There is a palace in the middle of Lake Pichola, which would be a sight to watch!

Shashank: I am excited dadi. When are we leaving? What else are we going to see there?

Dadi: Your pita (father in Gujarathi) is also planning to take you to see the "Great wall of India".

Shashank: "Great Wall of India"! What is it?

Dadi: It is about 90 km from Udaipur. It is one of the longest walls of the world. It is so wide that eight horses can walk side by side, at a time on the wall.

The wall protected the fort of Rana Pratap, along with temples of Hindus, Buddhists and Jains, acres of fertile land and also its inhabitants.



Kumbhalgarh Fort (Great Wall of India)

Maha Rana Pratap, the Rajput king ruled from here. He was a great general and a brave warrior who with his meagre army offered a stiff resistance to the Moghul invasion.

He fought bravely to maintain the dignity and honour of our mother land.

Shashank: Dada, I am inspired by Rana. I will also be a brave soldier

and protect my mother land. Where else are we going dada?

Dada: We will look for some more places around Udaipur, before we firm up our plan. You can also speak to your friend Vimal, who is from Udaipur and find out about few more places.



Shashank: I will do that dada. He is also in the program on yoga along with me. Dada, I have been wanting to share with you that I am going to perform an asana that goes by my name '**Shashankasana**'.



Dada, I have a doubt. I do yoga every day. So, can I eat junk food and still stay healthy?

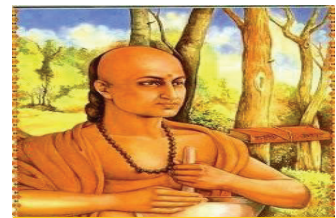
Dada: No dear, "You are what you eat". Our ancestors rightly said **food is medicine**. We should consume nutritious food to stay fit. This is highlighted even in Ayurveda.

Shashank: Ayurveda? Is it one of the four Vedas?.

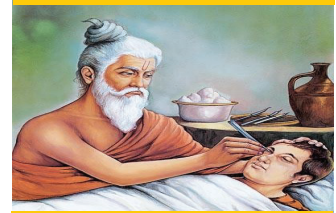
Dada: The four Vedas are the Rig, Yajur, Sama and Atharva. But, some consider Ayurveda the fifth Veda.

"Ayurveda" is one of the oldest **medical systems**. It originated in India and is in practice even now. It tells about how the life style that we follow, can make us either sick or healthy. It also prescribes herbal remedies, if we fall sick.

Charaka is regarded the father of medicine in Ayurveda. He wrote **Charaka Samhita** which has detailed descriptions of human anatomy, symptoms of diseases and ways of treating them.



CHARAKA



SUSHRUTHA

Shashank: Were they doing surgeries too, dada?

Dada: Very much Shashank. Sushruta is regarded the father of surgery in Ayurveda. We have records to say that he conducted surgeries for cataract and for fixing of prosthetic limb. His book '**Sushrut Samhita**' talks about the kinds of surgeries that he performed and the instruments he used for them.

Shashank: Amazing dada. Back then did they have medical colleges to train for all this?

Dada: Not like what we have now. We had the system of Gurukula where knowledge and skills were passed on from the Guru to the Sishya by way of "**Sabdha Pramaan**". The sishyas stayed with the Guru in the Gurukul until they were ready to face the world, equipped with knowledge.

Shashank: What is "**Sabdha Pramaan**"?

Dada: It's learning by hearing and committing it to memory. Almost all the learning of those days happened that way. That could be the reason why we do not have manuscripts for many things that dates back in time.



Shashank: That is interesting. Did the students have fixed learning hours?

Dada: Since the sishyas stayed with the Guru they had the opportunity to learn at any time of the day. They learnt not only through **Sabdha Pramaan** but also by observing the Guru who was an embodiment of knowledge and virtue.

Shashank: Dada, dadi, It was exciting to know of our glorious past. I understand that evidences of our rich heritage was lost due to various foreign invasions. But we are regaining our glory.

I watched on the television channels that we were able to produce vaccines for COVID-19 ourselves. We also created an awareness for the vaccine in every nook and corner of the country and were successful in vaccinating a large proportion of the population. I shall work for our country to become the fountain of knowledge like it was earlier. **Jai Hind!**

SUMMARY

- Brihadeeswarar temple in Thanjavur was built more than thousand years ago by King Raja Raja, a Chola king.
- The Chola kings were one of the longest ruling dynasties in Indian history.
- Brihadeeswarar temple was built of granite. It is also called as The 'Periya Kovil' meaning magnificent.
- The Nandi (Bull) in the temple is carved from a single piece of granite and weighs around 20 tons.
- A marvellous feature of the temple is that the shadow of the temple tower is not cast on the ground.
- The two languages Sanskrit and Tamil flourished during the Chola reign.
- The literary work "Periya Puranam" was compiled during that period. Ramayanam was written in Tamil by Kambar during the same period. This period was also called the "Golden age of Tamil literature".
- Cholas had a good judicial system. The king's court was known as 'Dharmasanam'.
- "Great wall of India" is about 90 km from Udaipur. It is one of the longest walls of the world.
- The four Vedas are the Rig, Yajur, Sama and Atharva.
- "Ayurveda" is one of the oldest medical systems.
- Charaka is regarded as the father of medicine in Ayurveda. He wrote Charaka Samhita.
- Sushrutha is regarded as the father of surgery in Ayurveda. He wrote Sushrutha Samhita.
- "Sabdha Pramaan" means learning by hearing and committing it to memory.





I. Fill in the blanks

1. Brihadeeswara temple is built of _____.
2. The two languages _____ and _____ flourished during the chola reign.
3. The king's court in chola kingdom was known as _____
4. One of the world's oldest medical systems known to us is _____.
5. Learning by hearing and committing it to memory is known as _____.

II. Choose the correct option

1. Ramayanam in Tamil was written by Poet_____.
a. Kambar b. Vyasa c. Valmiki d. Thiruvalluvar
2. Chola period was also called the _____ age of Tamil literature
a. Bronze b. Iron c. Golden d. Stone
3. Great wall of India is about 90 km from _____
a. Raipur b. Udaipur c. Nagpur d. Bijapur
4. International Yoga Day is celebrated on_____.
a. 21st June b. 10th June c. 15th June d. 01st June

III. Identify the following

1. Brihadeeswara temple was built by this king _____
2. The longest ruling dynasty of India _____
3. The Rajput king who offered a stiff resistance to Moghuls with his meagre army _____
4. Father of Ayurvedic medicine _____
5. Father of surgery in Ayurveda _____

IV. Answer the following:

1. Elaborate the marvellous architectural features of Brihadeeswarar temple.
2. Why is Chola period called as the golden age of Tamil literature?
3. Describe the features of the "Great wall of India".



4. List a few facts about Ayurveda.
5. Write about the contributions of Charaka and Sushruta in the field of Ayurveda.
6. Explain how learning was imparted in the ancient 'Gurukula' system.

V. Creative writing

1. Write a few lines about a place that you visited recently.

VI. Map activity

On a political map of India mark a) Tamil Nadu and its capital b) New Delhi



14

Travel



Expected Learning Outcomes

Students

- know how early man travelled.
- understand the role of wheels in helping us travel.
- know the different modes of transport.
- observe the speed of different vehicles
- know the difference in the cost of travel by different modes.
- understand the importance of safety in travel
- know what an island is.
- understand the differences between a boat and a ship.
- know the places of interest in Lakshadweep islands.
- locate state/s and capital/s mentioned in the chapter on a political map of India.



How do you travel to the following places?

1. School.
2. Nani's house.
3. The zoo.
4. Your friend's house.
5. Your mami's house which is in another city.



Arjun, Sowmya and Bharat are siblings and are in class VIII, V and III respectively. They live in Madurai, Tamil Nadu. It is summer holidays and their paati (grandmother in Tamil) has asked them to clean the book shelves. They decide to do it, though grudgingly!

Arjun: My friend Vinod has gone to Kodaikanal for vacation. But we have to clean these old book shelves when it is so hot and humid!

Sowmya: Yes anna! (elder brother in Tamil) Even my friend has gone to Munnar. Hope we would also go to a cooler place to enjoy the vacation.

Bharat: But I like being at home and playing with you both.

Arjun: (smilingly) You are a sweet brother!

Sowmya: Hey look at this, we have a book on Time Machine here.

They read the book together.

Bharat: This boy is lucky. How I wish we can travel in time!

Arjun (looking at the big cardboard box in the corner): We can too. Come let's build a time machine.

All three set to work together excitedly and build their own time machine.

Sowmya: This looks fabulous. Let's get inside.

They all go inside the huge cardboard box and work on the knobs and buttons, wear cardboard helmets...

Arjun: Bharat, you go first. Where shall we go?

Bharat: My EVS teacher taught us about how early men lived. I am really curious about them. Can we please go to the time when early men lived on the Earth?

Arjun: Good idea! Let us go to the early age then!

They close their eyes and imagine that they have travelled in time.

Sowmya: Look over there! Two men are walking at a distance.



Enrichment

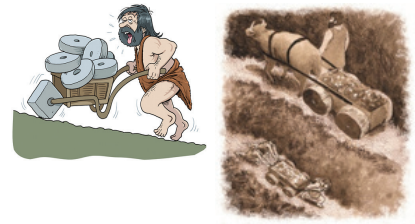
- Name the author of the book "Time Machine".
- Name a book that you want to read.



Arjun: They seem to be going to their cave.

Sowmya: I see a cave at the hill over there.

Bharat: Do they have to walk all the way? Don't they have even a bicycle?



Sowmya: No Bharat. Wheels were invented later. The wheel changed the way people travelled and transported things.

Arjun: Not a day can pass without us using some sort of wheel. Wheels are indeed a great invention.

Bharat: I always enjoy playing with tyres. I like the game where I pretend to drive. Anyway no one permits me to drive a car. Let me take the wheel of the 'Time Machine'. Let's travel back in time.



Ponder

- Can wheels be of a shape other than a circle?
- Name a few things that work because of wheels.

(Shaking the cardboard box) The ground is rumbling. Oh no! Look, a herd of mammoths is walking towards us. Let us move away.

Arjun: Good we escaped. How big the mammoths were!

Sowmya: How difficult it must have been for the early men to walk on foot for long distances. They should have braved the animals that lived in the forest then.

Arjun: I could see huge trees, different kinds of animals moving around. Oh! It was really interesting.

They come out of the time machine (card board box).

Arjun: Shall we go in the time machine again to see how our grandparents lived?

They get into the box again and imagine going to their village.

Bharat: Let us get started. We are in paati's village now.

Arjun: See paati walking to school. How long does she have to walk to reach the school?

Sowmya: She told me once, that she had to walk 5 km every day to reach school.

Bharat: Luckily, our school is close by. We need not walk that far.



Arjun: But see, the roads are not crowded, vehicles are very less and the place looks less polluted. Also see paati does not seem to be carrying a water bottle with her to school. But she always told us that her school was also from 8:30 am to 3:30 pm.

Bharat: Oh, look! Paati is drinking water directly from the tap.

Sowmya: Looks like paati's school had RO water.

Arjun: I don't think so. Let us get it clarified from paati.

Sowmya: Let us come out of the time machine and do a little bit of cleaning. Paati will share some more interesting stories if we complete the work.

Bharat: Now let me land the time machine smoothly like how pilots land the aircraft.

Children pretend coming out of the machine. They then start doing their chores talking excitedly among themselves.

Arjun: Appa told me once, that our city roads are nowadays congested unlike the roads that were about 50 years ago. I think from now on we need to walk to school, to avoid crowded roads and reduce pollution.

Sowmya: My teacher has told us about how we can safely walk on the road.

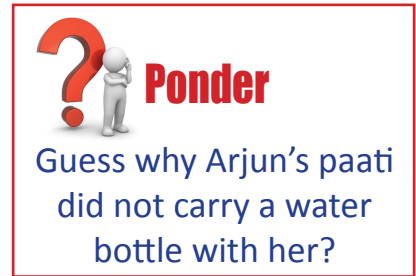
Bharat: Even my teacher told me that we should always cross the road at the zebra crossing.

Sowmya: Good Bharat. We should always use the foot path whenever possible and walk on the extreme right facing the oncoming traffic. Appa will always stop his car whenever the traffic signal shows red. He even switches off the engine. He will switch it on when the signal shows orange and drive when it turns green. We can reduce accidents if everyone obeys traffic rules.

Bharat: My teacher insists that when there is no zebra crossing we need to look to the left, then to the right, again to the left and cross the road when it is clear.

Arjun: Thank you for reminding me of that Bharat. I will also follow it.

Bharat: Akka (elder sister in Tamil), we have good roads to travel on land. But how do we travel across the seas?



Sowmya: Ships, of course!

Bharat: My friend said boats. I am always confused between boats and ships. How are they different?



Row boat



Wooden raft



Odam

Arjun: Ships are much bigger than boats. Ships operate in high seas and move across oceans to transport goods and people whereas boats are used in restricted waters close to shore and also to travel across rivers. Infact, you can carry boats on a ship but not a ship on a boat. Ships have greater facilities for long voyages. Voyages are not possible on boats.

Bharat: You explained it well. Thanks anna! Were boats available in prehistoric times too?

Arjun: They used simple rafts to cross rivers. Sowmya, do you remember we travelled in an odam (boat in Tamil) when we went to paati's village last summer? I enjoyed it and you were very scared.

Sowmya: Yes Arjun! I was very worried about not knowing swimming. I was praying to reach the bank safely! But I liked the row boat ride at Kodaikanal.

Bharat: I liked the tour boat ride we had in River Godavari. It was relaxing. I would like to experience travelling in a submarine.

Arjun: You might get that opportunity, if you join the Indian Navy.

Sowmya: Even to think of becoming a Naval officer in the Indian Navy is exciting.

Bharat: But, what about animals? Do they move from place to place like how we travel?

Arjun: Yes. Animals move from one place to another in search of food and water. I remember reading about migratory birds which travel very long distances to escape harsh winter.

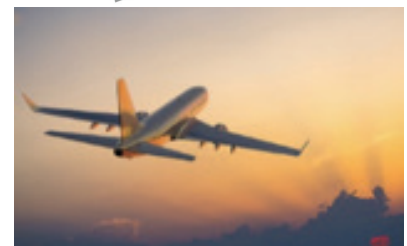
Sowmya: (Sighing) I wish I had wings like those birds. I am feeling hungry. I have no energy to lift another book.

Bharat: I am also feeling hungry akka. My teacher said energy is essential for any work to be done. We eat food to get energy. How do



Ponder

Wearing a life jacket when you go on a boat ride is important. Why?



vehicles get the energy to move from one place to another?

Arjun: That is a good question Bharat. Vehicles get the energy from fuels like petrol, diesel and natural gas. But these fuels pollute the atmosphere. We are now experimenting on using solar energy and electrical energy to run vehicles.



They hear paati's footsteps.

Paati: I thought you were cleaning the cupboards. But it looks like you were playing longer than cleaning.



Arjun: Sorry paati. We assure you the place will be spic and span by evening.

Paati: Ok, shall we have our lunch now?

After lunch they sit together for a chat. Appa (father in Tamil) joins them.

Appa: I have some exciting news for you all. I have got the necessary permission to visit the Lakshadweep Islands. I have booked tickets for all of us.

TASK

How many days prior to your journey by train, can you book your tickets?

Sowmya: Wow! Appa, is it an island? How do we reach there?

Appa: We will reach Chennai by flight and from there we will take a train to Kochi and then take a ship to Lakshadweep.

Bharat: Appa, where is Lakshadweep?

Arjun: I know! It is group of islands off the Kerala coast. It is the smallest Union Territory of India.

Sowmya: Appa, can't we go to Lakshadweep directly by plane? I like travelling by plane.

Arjun: We do not have a flight to Lakshadweep from Madurai. So, we are going via Chennai.

Appa: You are right. We are flying to Chennai because, tickets were not available to travel by train. Flight tickets are costlier. Had I planned the vacation earlier we could have spent less, for the same journey.

Ponder

Why is bus travel more tiring than train travel?

Arjun: I like train travel. We can walk around, enjoy the company of co-passengers, and see the lush green fields, along the way.



Appa: It is also comfortable and affordable though it is slower compared to air travel.

Sowmya: Probably we can take the bus to Chennai. It could be cheaper.

Amma (mother in Tamil) walks in.

Amma: Bus travel could be very tiring though we have buses with berths these days.

Bharat: Appa, then how about travelling by our car?

Amma: It is better to travel by public transport than a private transport unless it is absolutely necessary.

Sowmya: Yes amma. I agree.

Bharat: Appa, How would we reach the railway station from the airport?



Enrichment

It's better to travel by public transport than private transport. State the reasons.



Appa: We will take the Chennai Metro to go to the railway station, from the airport.

Arjun: I have been wanting to travel by Chennai Metro. My friend who has travelled by it, told me that the ride was very good.

Appa: It sure is Arjun. You will enjoy the metro rail ride.

Bharat: I have not heard of Lakshadweep. What is special there appa?

Appa: I want you to find out. Find the book on travel when you clean the cupboard. Read it together and make a list of places you want to visit in Lakshadweep.

The children are excited. They quickly complete their cleaning and sit together for reading the book on travel.

Arjun: The Lakshadweep islands look very serene. I cannot wait to play on these beaches.

Bharat: I have an idea! Why don't we use our time machine and travel there in our imagination now that we have read about the islands!

Sowmya: Great idea Bharat!



They get inside their cardboard time machine.

Arjun: (Pretending to work on the knobs) Let's first go the Capital of Lakshadweep, Kavaratti and scuba dive!

They imagine that they are under water ...

Bharat: Akka, look at the huge shark!

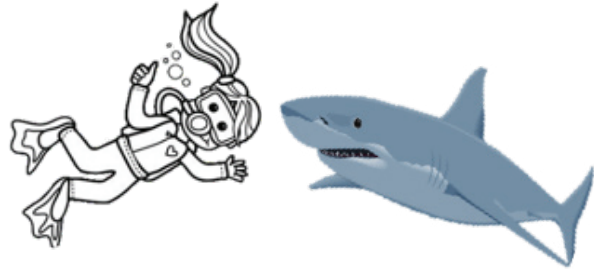
Sowmya: How sharp its teeth are! Let us hide behind these corals...

Bharat: The shark has gone past. We are out of danger. Let's move.

Arjun: Time to go to Minicoy island and watch the colourful race boats! Hurry up.

Bharat: What an awesome line up of boats! How colourful!

Sowmya: Look! The villagers are performing the 'Lava' dance on the shore. Let us observe and learn the steps.



They row an imaginary boat which has a glass bottom

Sowmya: Since we are in a glass-bottomed boat, we can watch the fish for some time.

Bharat: Oh my! barracuda, sail fish, yellow fin tuna, triveli and sharks! This is amazing!

Arjun: Hey turn the boat to the Bangaram island coast. I want to watch the colourful plankton at night on the Bangaram island!

Sowmya: Such a bluish glow on the beach at night, spectacular!

Paati calls the children for evening snacks.



Enrichment

The name Lakshadweep means 'One lakh Islands'. It is an archipelago consisting of 36 islands.



Bharat: Let's get off the boat and climb on to the helicopter which will take us to the airport for our return journey.

Bharat mimics a helicopter sound...

Arjun: (mimicking an adult voice) Last call for passengers to board for travel to Agatti Island. Thank you for visiting Lakshadweep.

The kids pretend to climb down the helicopter waving out to the imaginary captain.

Paati: Good job children. You have spent the whole day indoors. Now go for a cycle ride and come.

The kids happily go out and ride their cycles while discussing their vacation plan and the time machine.



S U M M A R Y

- Wheels are one of the early men's greatest inventions. Wheels changed the way the people travelled and transported things.
- We should always cross the road at the zebra crossing. We can reduce accidents if everyone obeys traffic rules.
- Ships are much bigger than boats and they travel across oceans and seas. They have greater facilities for long voyages.
- Animals move from one place to another in search of food and water. Birds fly long distances to escape winter.
- Energy is essential for any work to be done. We eat food to get energy.
- Vehicles get the energy from fuels like petrol, diesel and natural gas. We are experimenting on using solar energy and electrical energy to run vehicles.
- Lakshadweep is a group of islands off the Kerala coast. It is the smallest Union Territory of India and its capital is Kavaratti.
- Train travel is comfortable and affordable though it is slower compared to air travel.
- People travel by aeroplane, train, car, bus and other vehicles.



I. Identify the mode on which these vehicles can be used. Write 'A' for air, 'W' for water and 'L' for land









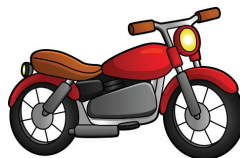




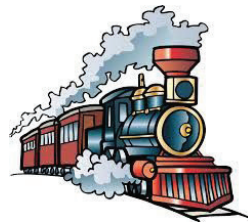


II. Circle the odd one in each group

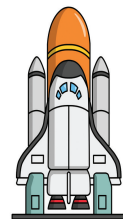
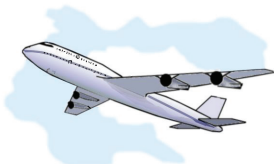
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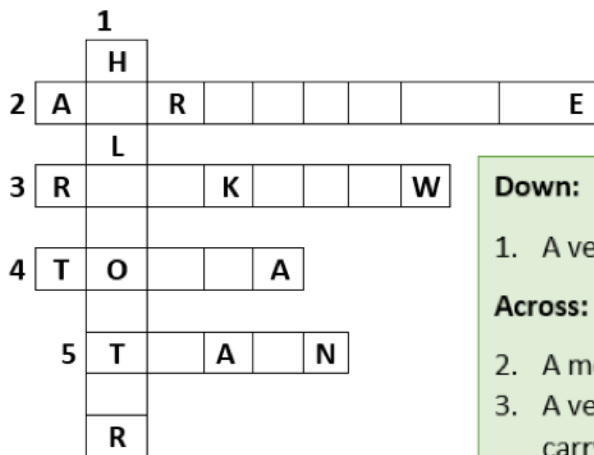
3)



III. Where should I board the following vehicles?

- 1) Flight _____
- 2) Train _____
- 3) Ship _____
- 4) Bus _____

IV. Complete the crossword



Down:

1. A vehicle with rotating blades on top

Across:

2. A means of transport that flies in the sky

3. A vehicle with three wheels used to carry people

4. A cart pulled by a horse

5. A land transport that moves on rails

V. Fill in the blanks:

1. Migratory birds travel long distances to escape from _____
2. The capital of Lakshadweep is _____
3. Minicoy island is famous for colourful race boats and _____ dance.

VI. Answer the following

1. How do vehicles get energy to move?
2. List some of the traffic rules that you should follow.
3. Write the differences between boats and ships.
4. Where is Lakshadweep? Write about few places in Lakshadweep.



VII. Give reason

1. Riding a bicycle is good for health.
2. Wearing a helmet is important when we ride on a two-wheeler.
3. We should put on our seat belts while travelling in an aeroplane or a car.

VIII. Activity time

Identify these special vehicles, speak on any one of them in your EVS activity class.



IX. Know from your parents, how they book tickets to travel. Find out if there are other ways of doing it and list them in your note book.

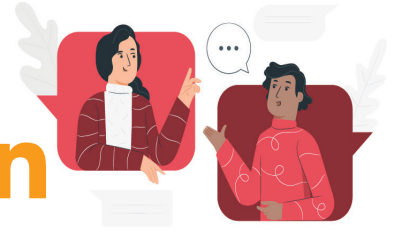
X. Map activity

On a political map of India mark Lakshadweep and its capital.



15

Communication



Expected Learning Outcomes

Students

- know how early men communicated.
- understand the importance of communication.
- know the various means of communication.
- know the difference between landline and cellular phone numbers.
- know the dos and don'ts during an online class.
- know what an area code is.
- understand that computer is a communication device.
- understand how to identify authentic news.
- know why sign language is used.
- locate state/s and capital/s mentioned in the chapter on a political map of India.



Theyank and Vibhavi are excited about going to school on Saturdays. It is a “no book day” for them. They are in the story telling club and Vibhavi has enrolled herself to narrate a story that will help children understand something very important. Theyank is waiting to listen to his friend speak.

The students of class III, assemble in the school auditorium. The activities begin after a Prayer.

It's Vibhavi's turn to tell a story. Let us read the story that Vibhavi shared in the class that day.

Three birds, Peeku the sparrow, Chinnu the parrot and Mimi the crow live in a tree near a mountain. The birds fly out in the morning in search of food. They spend their evenings together around the tree.

Peeku is a quiet bird and gets scared easily. Chinnu is very naughty and Mimi is a very thoughtful bird. Chinnu likes to make fun of Peeku. Chinnu thinks that Peeku likes it because, he does not complain about it.

Peeku feels unhappy when Chinnu teases him, but does not want to tell him about his feelings as he is afraid of losing his friendship.

Mimi wants to help Peeku. He encourages Peeku to speak to Chinnu. Mimi tells Peeku, “Chinnu is our friend.

He will understand if you speak to him” He does not know that he is hurting you by doing this.

Peeku decides to speak to his mother about it. His mother tells him “Speak to Chinnu, he is your friend. Tell him how upset you become, when he teases you. He will realise that he shouldn't be doing it. You can be good friends”

Peeku gathers courage and speaks to Chinnu. In a polite but firm tone he tells Chinnu about how he feels every time he teases him. Chinnu realises that he has been hurting his friend unknowingly and feels sorry for it.

He hugs Peeku and promises not to hurt anyone's feelings.



Adhyapak: That was a short and sweet story. What is the moral of the story Vibhavi?

Vibhavi: A lot of problems can be solved by speaking to each other, the right way.

Adhyapak: You spoke on a very important aspect of life Vibhavi. Thank you children for preparing well for the programme. We'll meet in class on Monday.

Vijay, one of her classmates was so happy listening to the story because he realised that he too could solve his problem with a friend by talking to him.

He reaches home happy, having learnt, how to sort out a problem. The phone rings. He picks up the phone thinking it could be his mother. To his surprise, he finds that it is not his mother's familiar voice, but a different one that he has not heard before.

He does not want to continue the conversation, as the person on the other side was not known to him. He politely informs that his parents weren't available and requests the caller to call later.

Vijay freshens up and gets ready for his online music class.

As he picks up the mobile phone to connect to his class, it rings. His mother's name flashes on the screen. He happily picks up the phone. His mother enquires about his day, reminds him of the dos and don'ts in the online class.

He ponders over how simple it is to search for numbers in the mobile phone to make a call and also know who is calling compared to the landline instrument.



Ponder

How do stories help you?

TASK

- Can you identify people by their voice?
- Try identifying your friends by their voices.



Think About

- Do you enter into a conversation with strangers in the absence of your parents?
- Guess whether Vijay spoke to the stranger on his landline or mobile. Why?

ACTIVITY

List a few do's and don'ts you follow during an online class

- 1.
- 2.
- 3.
- 4.



After he completes his online class, he wonders how people would have communicated earlier and opens a book on 'Communication', which his **pitano bhai** (father's brother in Marathi) had presented him for his birthday.

The book said 'Early men communicated with each other in sign language and also by drawing pictures in the caves that they lived in'.

Vijay is amused and intrigued as to how this could have happened and wants to try out communicating in sign language, when his parents return from work.

As he flips through the pages of the book, he sees telephone instruments of different sizes and shapes.

He comes across a page marked 'Telegram'. He recalls what his father told him about telegram. He goes to the bedroom and fetches the telegram that his grandfather had preserved fondly. The telegram in short said '**Selected. Report to work**'.



Telegram

When he goes into the room, to keep the telegram safely, he finds a few letters, which his mother fondly preserves. Vijay picks them to have one more look at his grand parents' handwriting. He knows that his mother recalls how good she felt every time she received a letter from them.

Enrichment

- How many digits do landline telephone numbers have?
- Who invented the telephone?
- Draw a few telephone instruments of different sizes and shapes

TASK

Try to communicate in sign language with your friend.



Communication by early man

He reads in the book that the telegram was in use until 14th July, 2013 to send urgent messages. With the advent of mobile phones and Short Messaging Service (SMS), telegraphic services were withdrawn.

ACTIVITY

Go to the nearest post office, buy a post card, inland letter, envelope and write a message to your friend. Ask your teacher for the format.



Vijay wonders why we have stopped writing such letters now. He then recollects what his teacher had told in the class about E-mails, SMS and other platforms like WhatsApp that help communicate instantaneously.



Enrichment

What is

- Speed post
- Registered Post?

Vijay hears a knock on the door, peeps through the peep hole, confirms that it is his friend Varun and then opens the door.

Looking at the book in Vijay's hands, Varun also gets interested to read it. They look at the pictures in the books and get to know more about various postal services such as the speed post and registered post.

As they flip through the pages of the book, they get interested in "Area code" of Telephones.

Vijay: Hey Varun! Look at this, we have learnt about PIN code. But this book talks about something called area code for telephones, which I don't know anything about. Are you aware Varun?

Varun: Is it so? Let's read through it, to understand what it is.

They both get engrossed in the book. Let's also peep into their book to know more.

For international calls each country is assigned a country code. The country code for India is "91". For calls between cities inside India STD (Subscribers Trunk Dialing) codes are used while calling to/from a landline number. The Code for Delhi is 011, Chennai is 044. The area code for Dehradun is 0135, Surat is 0261, Puducherry 0413.

Vijay: All these sound very interesting Varun. We always go to the name of the person in contacts in the mobile phone and dial. As most of us use only mobile phones, we do not think about the area codes.

Vijay: How interesting this book is Varun! There is a page here that says "How were long distance calls made"? It looks like there were other ways of doing it.

Varun: Come let's read on.....

They get engrossed in the book again. "People had to book a trunk call and wait for the operator to connect the call. The operator can hear the entire conversation between the two people."



Enrichment

Find the STD Code for

- Kolkata
- Mumbai
- Ahmedabad
- Bengaluru



Vijay: Wow! We now need to just click the call button to make a call on a mobile phone! That is why my grandparents keep telling that we have technology which has made life easier and simpler.

Varun: My father says a computer is also a communication device. How is it Vijay?

Vijay: Look at this page Varun, it tells us about E-mail. E-mail (Electronic Mail) is a message that is sent and received using computers. It is an important form of fast communication that allows people to contact one another and share information all over the world.

Messages can be sent to one individual or to a group of people. But if there is even a small error in the E-mail address, it does not reach the receiver. Nowadays, I see my parents sending E-mails using the mobile phone too.

Varun: Yes, but in the postal mail, the post man somehow finds the addressee, unless there is a major error in the address like an incorrect PIN code. The mail does not get missed for the sake of a dot or a spelling error in the name. So I prefer writing letters.



Vijay: Yes Varun. I am happy that we are able to meet each other in person and discuss like this. We really missed our school, friends and travel during lockdown. I wish that a pandemic would never strike the world again.

Varun: I used to be scared to watch the news on TV every day. I was worried about my family. I did not want my parents to go for work, but they had to go.

Vijay: Since online classes were going on, I had the mobile phone with me. I used to read the posts and forward messages in social media and would get more worried and scared.

Varun: I also used to do that Vijay. But, one day my father told me that I should rely only on the Government media for news and not on other channels or sources.

I was unhappy about it initially. But later I realized that I was feeling better when not looking at social media posts.

Varun: Thank you Vijay. Also, I want to apologise for calling you names the other day. I am truly, Sorry.



Enrichment

The first cellular call was made on a mobile in 1995 in India.



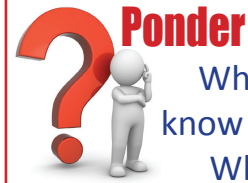
Enrichment

Varun prefers to write letters in a post card or an inland letter for personal communication.
Discuss the advantages of this habit.



Vijay: No problem Varun. We'll continue to be good friends. It is very dark and cloudy outside. It might rain. Let us watch television for some time instead of our usual badminton game.

Just like Chinnu and Peeku, from the story, Varun and Vijay remained good friends. There was a flash news informing that all schools and colleges will be closed the next day in view of a sudden cyclonic storm.



What do you know about SMS/ Whatsapp?

Varun: Oh that's bad. We have games period tomorrow. Now we have to wait till next week for the games period.

As they keep talking, another message flashes on the television, saying that there is no signal due to bad weather. So, they switch off the television.

Vijay: Yes Varun. Hope everyone will be safe during the cyclone. I wonder how children of earlier days would have known if it was a holiday on a rainy day.

Varun: My grandmother once told me that when she was a kid, she and her cousins would be eagerly waiting to listen to the news on the radio to know if it was a holiday. They did not get continuous reporting like the present day. The news would be broadcast only at particular times. In testing times like natural disasters, there would be special news bulletins.



Radio



Vijay: Oh nice. There was no flash news to distract us all the time, then. My grandparents read newspaper regularly. My ajoba (grandfather in Marathi) told me once that even his board exam results were printed only in newspapers.

Imagine all the roll numbers printed in the newspapers.

Varun: Oh, I did not know that!

Vijay: My father listens to music on his transistor while ironing his clothes. Shall we also listen to it as we play some board games?

They switch on the radio and listen to information on Ayurveda followed by songs that they loved listening to.





Enrichment

- Communication between two people is called personal communication. Telephone, email, letters are some of the means of personal communication.
- Mass communication is a method of conveying information to a large number of people at the same time. Radio, television, newspaper, magazines are some of the means of mass communication.

After a game of ludo, Vijay switched on the television again to check if it was receiving signals. In one of the channels they see the news relayed in sign language also in one corner of the screen.

Vijay: Varun, how did I miss seeing this all these days? See, the news channel here relays news in sign language also.

Varun: Vijay, I noticed this once and asked my atya (father's sister in Marathi). She told me that it is relayed especially for people who are hard of hearing. She also told me that those people learn to understand what we speak by observing our lip movement. They also communicate using sign language.

Vijay: Oh! But the world should be very different for them.

Varun: My atya has promised to take me to a school for special children.

I want to spend time with them and understand their world better.

A dance program follows the news on television.

Vijay: Do you know what dance form this is Varun? In our Annual Day event, we had a Manipuri dance program. Do you remember what our teacher told us about it?

Varun: I remember her telling that it is Manipuri from Manipur, one of the north eastern states. We have 7 states in the north-eastern part of the country, popularly known as the seven sisters.

Vijay: I am able to recollect it now Vijay. But this dance is not Manipuri. It is different from what we saw in school.

Varun: The art form depicts a variety of emotions through gestures and facial expressions.

Vijay: Varun, that is an interesting observation.



Enrichment

Do you know anyone with a special need? How do you help them?



Varun: Look at the expressions on the dancer's face. Don't you think we are able to understand what is conveyed, even though we are not able to understand the song?

Vijay: How amazing our art forms are. May be the emojis have their origin here.

Observe the Mudras in the QR Code and try to do them yourself.

Try to learn five more Mudras and share them with your friends.



As they watch the program, admiring and discussing what the dancer was trying to communicate, the program concludes with an announcement that the performance was by the Odissi dancer, Sonal Mansingh.



Enrichment

Identify the state where Odissi is a popular dance form.

Varun checks his watch, gets ready to leave. His father arrives to pick him up.

Varun: It is getting late. I will see you tomorrow then. Be safe. Bye Vijay.

Vijay: Bye Varun. You too. Stay safe!

SUMMARY

- A lot of problems can be solved by speaking to each other.
- Sending and receiving information is called communication.
- Early men communicated with each other in sign language and also by drawing pictures in the caves that they lived in.
- With the advent of mobile phones and Short Messaging Service (SMS), telegraphic services were withdrawn.
- E-mails, SMS and WhatsApp help to communicate instantaneously.
- Technology has made our life easier and simpler.
- E-mail (Electronic Mail) is a message that is sent and received using computers. It is an important form of fast communication that allows people to contact one another and share information all over the world. For sending and receiving e-mail, internet connection is required.
- People who are hard of hearing and unable to speak, communicate using sign language. They understand what we speak by observing our lip movement.
- Writing letters, e-mail, telephone conversations are some of the means of personal communication.
- Radio, Television, Newspapers, Internet are some of the means of mass communication.
- Dancers communicate a variety of emotions through their facial expressions and gestures.





I. Choose the correct answer

- 1) Early men communicated using_____.
 - a. Sign language
 - b. Letters
 - c. Spoken language
 - d. Braille
- 2) Choose the correct mail id of xyz.
 - a. xyz@bihi.com
 - b. xyz.bcd bihu.com
 - c. xyz@abcabc
 - d. xyzabc*bihi.com
- 3) Which of the following is not a means of mass communication
 - a. Radio and television
 - b. Landline telephone
 - c. Newspaper
 - d. Television
- 4) Which of the following is not a personal communication?
 - a. Letters
 - b. Telephone
 - c. Email
 - d. Newspaper
- 5) Which of the following is/ are audio visual mode of communication?
 - a. Television
 - b. Computer
 - c. Radio
 - d. Magazine

II. Fill in the blanks

1. SMS stands for _____
2. The telephone number for a landline is of _____ digits and for a mobile it is _____ digits.
3. We can connect with everyone throughout the world with the help of _____.
4. Post card and inland letters are sold in _____.
5. Visually challenged people can read with the help of _____
6. Popular dance form of Odisha is _____

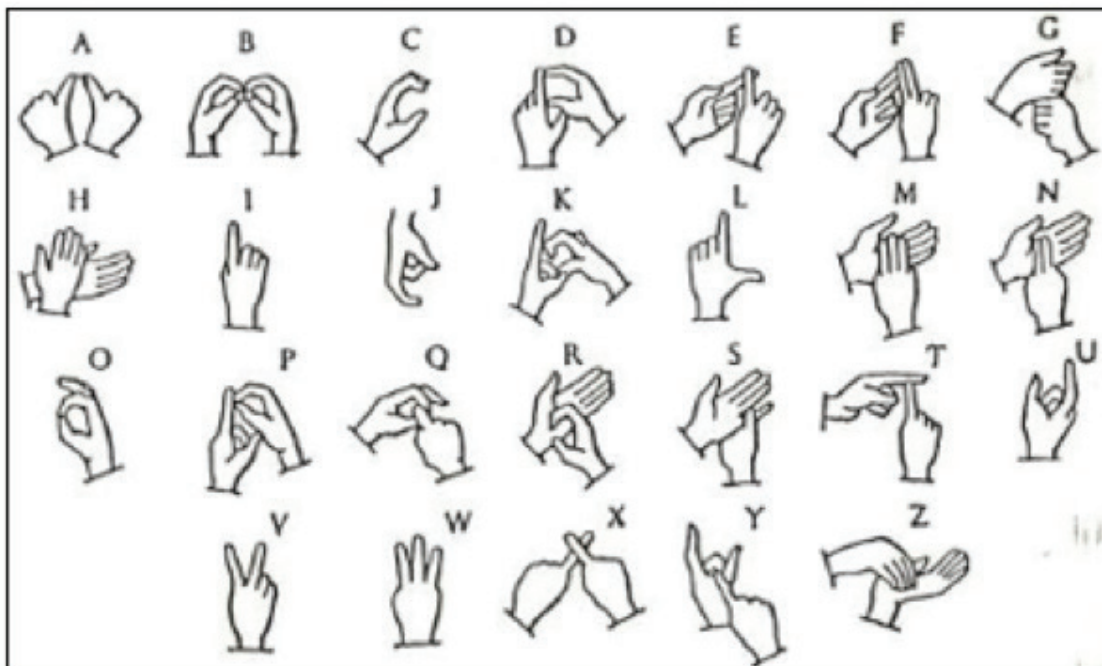


III. Answer the following

1. How did early men communicate?
2. Telegram is not used anymore – Why?
3. How is computer a communication device?
4. What is the difference between an E-mail and a postal letter?
5. Why are area codes necessary for telephones?
6. Name the states in the eastern part of India that are called seven sisters

IV. Write the postal address of 4 members of your family who do not stay with you

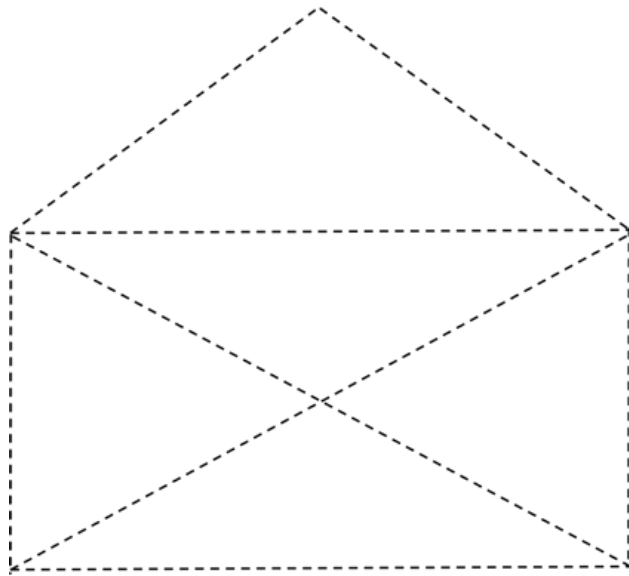
V. Decode the word by identifying the alphabets from the sign



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VI. Draw the envelope without overlapping the lines, and in one stroke



VII. Creative thinking

Try to enact a story as a team, using only sign language.

VIII. Map activity

On a political map of India mark Orissa, Manipur and their capitals.



Maya learnt about the Solar System in her EVS class today. Even after school, her mind was fully occupied with the fascinating things that she had learnt that day.

As soon as she reached home, she started to share all that she has learnt with her amma and avva (grandmother in Telugu). After dinner, her atha gave her a big book on stars. She could not take her eyes off it. She dozed off with the book in her hand.

Her eyelids were suddenly bright. She was only able to half-open her eyes and found that the room was very bright. Suddenly she heard a voice. "Oh! I am sorry. Am I too bright for you?". The voice was very new to her. Her eyes slowly got adjusted to the bright light. She got out of the bed and walked towards the window from where the voice was coming. She could not see anyone outside.

The voice started to hum. She realized that it was coming from above. She looked up and saw that a bright reddish yellow ball was beaming at her. She was puzzled and asked "Is it the Sun talking?" "Yes Maya, I am indeed, the Sun. How are you?" Maya stammered and said, "I...I... I am fine. Do you usually talk to people?". "Yes, I do. But people are busy with their lives, they don't really hear me. I saw you were so fascinated about the Solar System and wished to visit the space. So here I am." "Come on out, let's go for a ride." Maya was even more intrigued.

She felt very light and started to float. She could not contain her joy. "Close your eyes Maya, we are going to travel very fast" said the Sun. Maya closed her eyes tightly. She felt like she was on the fastest roller coaster ever.

When she opened her eyes, she was amazed to see the eight planets, each of them of different sizes but all of them spherical like balls. The Sun, which is a star, was at the centre, illuminating them. The planets revolved around the Sun in elliptical orbits. She was reminded of what her avva had shared about the planets.



As if reading her mind, the Sun said, “Yes Maya, your ancestors were very intelligent. Even without any modern equipment, they were able to realise that I am at the center of the Solar system and all the planets revolve around me”. Maya felt proud.

“My friends, please introduce yourself to our little guest”. All the planets started to talk at once just like Maya and her friends in class. “You are reminded of your class, aren’t you Maya?”, the Sun said smilingly, “Let us start from Mercury, the nearest, to me”.



Mercury said: I am Mercury and also called **Budha (in Sanskrit)**. I am the smallest planet and I am made of rocks. I am the planet closest to the Sun. I have no moons.

Venus continued: I am **Shukra (in Sanskrit)**. I am the hottest planet though I am not as close to the Sun as Mercury. I am also known as the “Earth’s Twin” since we are almost of the same size and same weight. I do not have water. I too do not have any moon.



The Earth shared: I am **Prithvi (in Sanskrit)**. I am spherical but slightly flattened at the poles like an orange. Three-fourth of my surface is covered with water. So I look blue when looked at from the space and hence known as the ‘Blue Planet’. I have one Moon and I am the only planet in the solar system where life exists.



Enrichment

How is Earth able to support life?
Why does a year have 365 days?

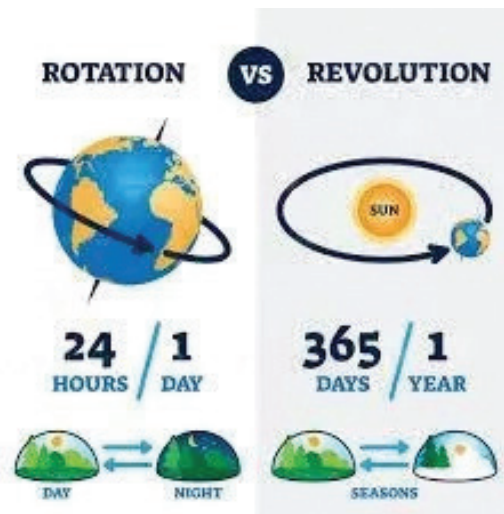


Enrichment

The path taken by the planets to revolve around the Sun is called its ORBIT. No two orbits overlap.

Rotation of the Earth: The spinning of the Earth on its axis is called rotation. The Earth takes about 24 hours to complete one rotation. Hence a day has 24 hours.

Revolution of the Earth: The Earth moves around the Sun in a fixed path, called the orbit. The movement of the Earth around the Sun is called revolution. The Earth takes 365 ¼ days to complete one revolution.





Mars: I am **Mangala** (in Sanskrit). I am reddish in colour and hence referred to as the 'Red Planet'. I am red because my land is of rusty iron. I have two moons. Indians have sent "Mangalyan" to know more about me. I am visible to the naked eye in the night sky.



Enrichment

Get to know more about Mangalyan

Jupiter jubilantly said: I am **Bruhaspati** (in Sanskrit). I am the largest planet. I have many moons.



Saturn sadly said: "I am **Shani** (in Sanskrit).

I am the slowest of all. I am the second largest planet. I am famous for my colourful rings which are made of ice and dust. Jupiter and I are called gas giants as we are composed mostly of gases".



Uranus came in and said: I am bluish green and one of the ice giants. I am the coldest planet and I spin on my sides.



Neptune: I am the farthest planet from the Sun but not as cold as Uranus. I am also blue and known as an ice giant.

A small voice asked the Sun, "May I introduce myself too? Maya always gazes at me from her terrace." "Sure", **said the Sun smilingly.**



Enrichment

The moon is not visible from the Earth every month on a particular day. It is called the _____ day.

Moon softly said: "I am **Chandra** (in Sanskrit). I am the natural satellite of the Earth. I reflect the light of the Sun. I am the brightest object in the night sky, when I am visible. I revolve around the Earth. I have no atmosphere".



Enrichment


- A celestial body that revolves around a planet is called a natural satellite.
- We have sent satellites to the space for various purposes. Such objects are called artificial satellites.
- India's first artificial satellite was named 'Aryabhata' after the renowned Indian mathematician and astronomer.



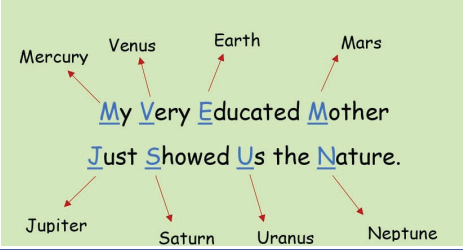
Sun: Thank you my friends. Maya, shall we return to your house now? You can visit us anytime you wish.”

Maya thanked the Sun and was so happy that she could see and listen to the planets and the moon. The planets all beamed at her as she closed her eyes.

Amma: “Maya, wake up. We have to get ready to go to the planetarium.”

 **Enrichment**

Try this mnemonic to remember the order of the planets from the Sun correctly!



Mercury Venus Earth Mars
My Very Educated Mother
Just Showed Us the Nature.
Jupiter Saturn Uranus Neptune

Maya woke up and saw her loving mother. “Amma, I had the most wonderful dream”, said Maya and shared her dream. “That is very interesting Maya”, said her mother.

Maya got so interested in planets and stars that she called her atha (father’s sister in Telugu) who is a space scientist to know more.

Maya: Atha, did amma tell you what happened last night?


(Maya shared her dream with her atha)

Atha: That is interesting Maya, come to the terrace tonight and give me a call. We will see more of them in reality, not in your dreams.

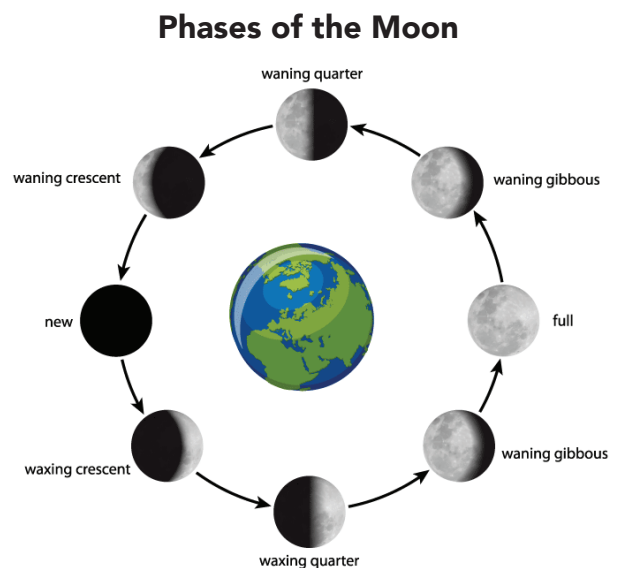
Curious and inquisitive Maya goes to the terrace that evening for a conversation about the night sky. She takes with her a small telescope which she had received from her atha, during her last visit.

The phone rings, Maya excitedly picks up the call and it is from atha.

Maya: Namaste atha.

 **Enrichment**

1. What is a
a) Full moon day?
b) New moon day?
2. Count the number of days between a new moon and a full moon day.
3. Count the number of days between two consecutive new moons and full moons.



Atha: Put your call on speaker, keep your telescope away and we will start watching the sky.

Maya: Yes atha. I always wonder, how you know what I do, even without seeing me.

Atha: You have learnt that the moon is the brightest object in the night sky. Observe the shape of the moon and draw it.



Enrichment

Do you know that the shape of the moon changes every day? Observe the moon for the next 15 days and draw its shape every day.



Enrichment

From time immemorial Indians have been calculating the exact time of sunrise and moonrise and recording it in the almanac.

Maya: It is a clear night and I see a large number of stars. Why don't I see them during the day?

Atha: We see a star that is closest to us during the day. Guess what it is!

Maya: Star during the day? My teachers say all time that we are the stars!

Atha: (Smiling) Ofcourse you are all the stars that shine brightly. Tell me, what lights up the Earth every day?

Maya: The Sun! Is Sun a star atha?

Atha: Sun is the star that is closest to the Earth. It is also a huge star. Can you imagine the size of the Sun? Do you know how far away it is from the Earth?

Maya, 'Solar' means Sun. All the planets revolve around the sun and receive light from it. That is why the Sun, the planets and their satellites belong to the Solar System or the Solar family.

Now we will go back to your question. Why don't we see the other stars during the day?.

Maya: Its still a tough question atha. I will find out from my teacher tomorrow.

Atha: That is a good way to understand. It is time for you to go to sleep now. Put away your little telescope. We will learn from our observations with our naked eye first and then move on to using a telescope. You can use it to see constellations in greater detail.



Enrichment

How long does it take for the sunlight to reach the Earth?



An astronomical telescope is an instrument that helps people to see distant objects in the sky.



Maya: Constellations?! Hope I get them in my dreams today, to ask you more questions tomorrow.

Atha: Good night Maya! Say your prayers before you go to bed and sleep tight.

Maya: Thank you atha.

Maya happily comes to school the next day, eagerly waiting for her EVS period.

The EVS teacher enters the class.

Teacher: Why are the lights switched on today? It's a bright sunny day.

Students: We didn't realise they were switched on acharya.

Maya: Oh! Now I understand why we are able to see only the Sun and not the other stars during the day. The bright light from the sun outshines the other stars.

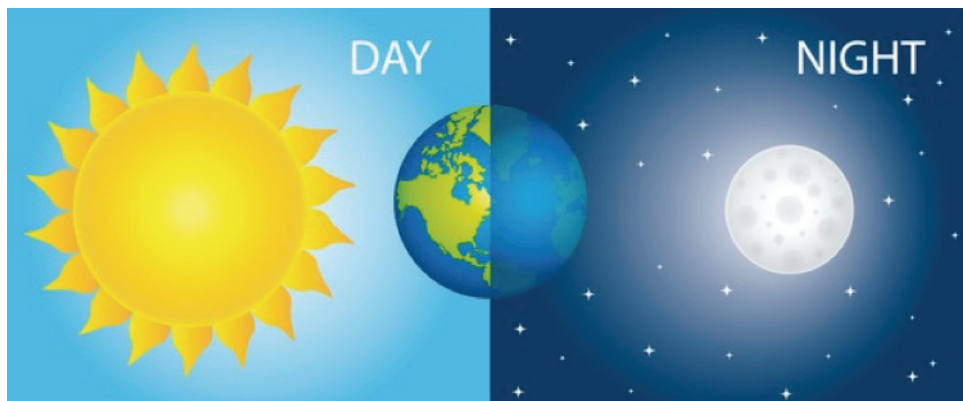
Teacher: You're right Maya.

Prithvi: Why don't we see the sun at night?

Teacher: As the Earth rotates on its own axis one half of it faces the sun and the other is away from the sun. The part of the Earth that faces the sun has day and the other has night. Since the Earth takes 24 hours for one rotation, a day has 24 hours.

Maya: Oh! That is so fascinating.

Teacher: We need a lot of curiosity, thinking and analyzing to understand science.



Maya: Thank you so much acharya.

The bell rings and the teacher disperses the class.

Maya comes home interested in astronomy and wanting to know more.



SUMMARY

- The Sun, Planets and their satellites form the Solar System.
- The sun is a star at the centre of the solar system, illuminating the planets. The eight planets revolve around the sun in elliptical orbits.
- Mercury called as Budha in Sanskrit, is the smallest planet in the solar system and it is made of rocks. It is closest to the sun.
- Venus called as Shukra in Sanskrit, is the hottest planet and also known as “ Earth’s twin”.
- Earth is called as Prithvi in Sanskrit. It is called as the Blue planet as three-fourth of the earth’s surface is covered with water. It has one moon and the only planet in the solar system where life exists.
- The spinning of the earth on its axis is called rotation. The Earth takes about 24 hours to complete one rotation. Hence a day has 24 hours.
- The movement of the Earth around the Sun is called revolution. The Earth takes 365 $\frac{1}{4}$ days to complete one revolution.
- Mars is called Mangala in Sanskrit. The planet is reddish in colour (presence of rusty iron) and hence referred to as the ‘Red Planet’. It has two moons.
- Jupiter is called Bruhaspati in Sanskrit. It is the largest planet with many moons.
- Saturn is called Shani in Sanskrit. It is the slowest and the second largest planet with colourful rings which are made of ice and dust. Jupiter and Saturn are called gas giants as they are composed mostly of gases”
- Uranus is bluish green and one of the ice giants. It is the coldest planet and it spins on its sides.
- Neptune is the farthest planet from the Sun but not as cold as Uranus. It is also blue and known as an ice giant.
- Moon is called Chandra in Sanskrit. It is the natural satellite of the Earth. It reflects the light of the sun.
- Sun is the star that is closest to the Earth and its bright light outshines the other stars.





I. Choose the correct answer

- The farthest planet from the Sun is _____.
 a) Jupiter b) Earth c) Neptune d) Uranus
- Identify the pair of gaseous planets.
 a) Mercury, Mars b) Jupiter, Saturn c) Earth, Venus d) Mercury, Earth
- Which is the largest planet in our Solar System?
 a) Neptune b) Jupiter c) Venus d) Saturn
- 'Mangalyan' was sent to explore _____
 a) Venus b) Moon c) Mars d) Jupiter
- The first artificial satellite launched by our country is _____
 a) Aryabhata b) Aditya c) Chandrayan d) Bhaskara

II. Name the planet

- Planet which is very close to the Sun _____
- Only planet where life exists _____
- Ice giant _____
- Coldest planet in the solar system _____
- Slowest planet in the solar system _____

III Match the following

Rotation	Venus	
Revolution	Star	
Sun	24 hours	
Moon	Uranus	
Hottest planet	3651/4 days	
Bluish green planet	Natural satellite	

IV Fill in the blanks

- The sun is a _____ which is at the _____ of the solar system.
- Planets revolve around the sun in _____ orbits
- Aryabhata was an ancient Indian _____ and _____
- An instrument that helps people to see distant objects in the sky _____
- The Earth takes _____ hrs for one rotation.



IV. Answer the following

1. What is “Solar system”? Name the planets in our solar system
2. Define: (a) a natural satellite (b) an orbit.
3. Differentiate between rotation and revolution.
4. Write about the distinct features of the moon.
5. Why are we not able to see the stars during the day?

V. Give reason

1. Jupiter and Saturn are gas giants.
2. Earth is called “the blue planet”.
3. Venus is called the Earth’s twin.
4. Mars is referred to as ‘red planet’.

VI. Roll the dice. Move through the boxes. Let’s see who completes first. Scan the QR code for the answer



TERM 2 – SAMPLE PAPER

Max Marks : 80

Time : 2 hours

I Fill in the blanks:

(5 x 1 = 5)

1. Google maps cannot be used when there is no _____
2. Dogs that help people with special needs are called _____
3. The part of the seed that store food _____.
4. The capital of Lakshadweep is _____.
5. Adding earthworms to the compost pit is called _____

II Choose the correct answer:

(6 x ½ = 3)

6. The largest fresh water lake in Jammu & Kashmi .
a) Dal b) Pitchavaram c) Wular d) Pichola
7. The vehicle which is used to transport sick and injured to the hospital is _____.
a) Fire engine b) Ambulance c) Police jeep d) Postal van
8. Heavy rains are common in this place. Houses are built 10 to 12 feet above the ground with bamboo stilts. Such houses are found in _____.
a) Rajasthan b) Gujarat c) Ladakh d) Mizoram
9. Identify the pair of gaseous planets _____.
a) Jupiter, Saturn b) Jupiter, Mars c) Earth, Venus d) Mercury, Earth
10. Whales move to colder places for the purpose of _____.
a) Giving birth b) Feeding c) Escape from predators d) Hunting
11. Which part appears first in germination?
a) Root b) shoot c) leaves d) stem

III Match the following:

(6 x ½ = 3)

12	Brihadeeswarar temple		Very cold region
13	Pink city		floats
14	Sikkim		Thanjavur
15	Rajasthan		sinks
16	Cork		Jaipur
17	Iron nail		Very hot region
			Udaipur



IV Name the following:

(6 x 1 = 6)

- 18. The highest civilian award
- 19. A kind of high nutritious crop. It can be grown with less water and do not require fertilizer and pesticides.
- 20. First artificial satellite launched by our country
- 21. This service was withdrawn in Post office with the advent of mobile phones and SMS
- 22. Longest ruling dynasty in Indian history
- 23. The process by which unwanted plants are removed which grow along with the crops.

V Complete the following:

(6 x ½ = 3)

- 24. ATM: Cash withdrawal, CDM: _____
- 25. Mars: _____, Earth: Blue planet
- 26. Man: _____ :: Bird: Nest .
- 27. Aeroplane: airport :: Train : _____
- 28. Pincode: Postal letter :: Area code : _____
- 29. Rice: _____ :: Wheat : Punjab

VI Pick the odd one out:

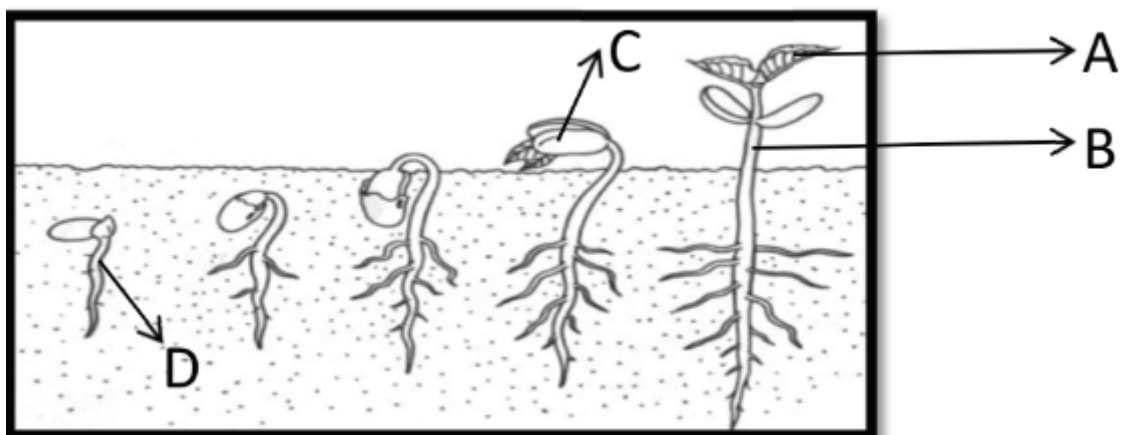
(6 x ½ = 3)

- 30. Mercury, Earth, Mars, Jupiter
- 31. Cycle, Scooter, Car, Bus
- 32. Landline phone, Radio, Television, Newspaper
- 33. Kavaratti, Minicoy, Bangaram, Majuli
- 34. Jowar, Bajra, Ragi, Rice
- 35. Villa, Mansion, Bungalow, Tent

VII Observe the following pictures and answer the questions:

(3 X 2 = 6)

- 36. Label the parts marked as A, B, C, D

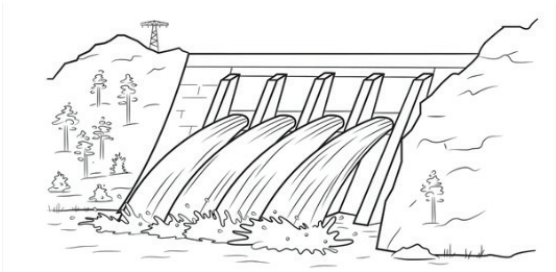


37.



- a) Identify the leader in the given picture.
- b) Write the slogan coined by him.

38.



- a. Identify the structure given in the picture
- b. Mention its two uses.

VIII Answer in short:

(7 x 2 = 14)

39. Why do birds build nest?

40. Classify the below as fresh water and sea water animals.

- a. Octopus b. Crane c. Duck d. Whale

41. Who am I?

- a. Fixes fans and lights
- b. Stitches dresses
- c. Repairs taps and water pipes
- d. Mend shoes

42. Write any four services offered by banks.

43. If you throw a stone in water, it sinks, whereas a wood floats in water. Why does it happen?

44. Define a) natural satellite b) orbit.

45. Expand the following: a. GPS b. STD

IX Answer in brief:

(6 x 3 = 18)

46. How is a ship different from a boat?

47. List any three differences between landline phone and mobile phone.

48. Describe any three features of the Great wall of India.

49. Dogs are friends of humans. Justify the statement by giving three reasons.

50. Write the steps in farming.



51. Read the paragraph and answer the questions below:

Energy is essential for any work to be done. We eat food to get energy. Vehicles get the energy from fuels like petrol, diesel and natural gas. But these fuels pollute the atmosphere. We are now experimenting on using solar energy and electrical energy to run vehicles.

- a. Where do humans get their energy from?
- b. How do vehicles get energy to move?
- c. Why are we experimenting solar energy and electrical energy for running vehicles?

XI. Answer in detail:

(4 x 4 = 16)

52. Camels can live in desert regions comfortably. How?

53. Differentiate between Rotation and Revolution.

54. Write the contributions of Charaka and Sushruta for Ayurvedic medicine.

55. a) State any two advantages of train journey.

b) Draw, colour and label "Traffic Signal"

XI MAP WORK

(3 X 1 = 3)

56. Mark the following places in the political map of India.

- a. Lakshadweep b. Odisha c. Manipur



Political map of India



जीवेषु करुणा चापि मैत्री तेषु विधीयताम्।
“Be compassionate and
friendly to all living beings”



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