Our Wondrous World

Class 3

The World Around Us

0335

Prepared by
National Council of Educational Research and Training

Published by
State Council of Educational Research and Training
Mizoram:Aizawl

Prescribed for use as a textbook in EVS for Class III by the State Council of Educational Research and Training (SCERT), Mizoram, Aizawl

Vide Notification No. M.17021/2/2025-EDN
Dated Aizawl, the 7th November, 2025

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First Edition : **2026**

Copies : **15610**

Price : **₹ 75/-**

Published by :
THE DIRECTOR
STATE COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING (SCERT)
MIZORAM, AIZAWL

Printed at : **Mizoram Government Press**
Aizawl, Mizoram

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a [1]**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the [2][unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

---

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)



Foreword

Education is a dynamic process that continually evolves to meet the changing needs of society and learners. In keeping this view, the National Council of Educational Research and Training (NCERT) developed high-quality textbooks that uphold the principles of the National Curriculum Framework (NCF) 2023 and promote competency-based learning.

The State Council of Educational Research and Training (SCERT), Mizoram which is the Academic Authority for Elementary Education in the state, contextualized and adapted these textbooks to suit local needs, culture, and environment of our state. This adaptation seeks to make the content more relatable and meaningful for students in Mizoram while maintaining the academic rigour and pedagogical integrity of the NCF 2023. I express my sincere gratitude to NCERT, New Delhi for sharing the copyrights for adaptation and translation of these textbooks.

I extend my sincere appreciation to teacher educators, subject experts, teachers and all other stakeholders involved in development of the textbooks. Their collective efforts have ensured that these textbooks truly represent the spirit of education for all while nurturing curiosity, creativity, and critical thinking among learners.

It is my hope that these textbooks will serve as effective tools for both teachers and students in enhancing teaching-learning process and in realizing the broader goals of the National Education Policy (NEP) 2020.

Aizawl
7th November, 2025

(CAROLINE ZORAMTHANGI)
Director, SCERT
School Education Department
Government of Mizoram



About the Textbook

The National Curriculum Framework for School Education (NCF-SE) 2023 has identified The World Around Us (TWAU) as a core curricular area at the Preparatory Stage of School Education for Classes 3–5. The National Education Policy (NEP) 2020 and the NCF-SE 2023 emphasise the need for integrating a holistic and multidisciplinary approach to learning in this subject area. Thus, the nature of this subject area has been recommended as integrated and interdisciplinary. Both the above policy documents advocate experiential learning, exploration and discovery as an essential component of the Preparatory Stage curriculum.

Based on the above policy perspective, a textbook titled *Our Wondrous World* for Class 3 has been designed and developed. *Our Wondrous World,* as the title suggests, evokes curiosity and promotes experiential learning, exploration, investigation, discovery, and critical thinking through hands-on activities and open-ended inquiries. This subject integrates science, social sciences and environmental education. The book emphasises real life experiences to deepen understanding and foster problem solving and critical thinking skills as children explore their surroundings with joy and curiosity. The design of the chapters for each unit provides opportunities for the young minds to think independently, reflect on their observations and answer open-ended questions. This provides opportunities to children to do away with rote memorisation and encourages children to actively engage with their surroundings, fostering a sense of curiosity and inquiry. This approach follows a progression from known to unknown, local to global, simple to complex, concrete to abstract and familiar to unfamiliar in the development of concepts and skills.

This textbook has three broad components. The first component is the selection of content and skills for expected learning. The second component is the presentation of content in a manner that is interactive for children. It assists teachers in transacting concepts and skills. The presentation of the text includes various age-appropriate pedagogical approaches such as play-based, theme-based, toy-based and inquiry-based to make the transactional processes child-centric and enjoyable.

The third component is the selection of assessment processes and tracking the progress of children's learning. We all know



that children also learn through picture reading, discussion, experimentation, solving puzzles and riddles, sharing experiences, and expressing thoughts and ideas through drawing and writing. To lighten the burden of assessment, instructions have been given to assess learning through such activities. For effective and meaningful assessment, class-wise learning outcomes and competencies have been identified in each subject, and teachers should assess learning accordingly.

All the three components related to the approach of this textbook can be understood by this example—in the chapter 'Food We Eat', children learn about traditional cuisines like *haakh* (a kind of green *saag* which is popular in Srinagar). This instance arouses curiosity about the variety of foods in their own region and the different regions of our country. This exploration integrates various subjects as we try to understand the ingredients used to cook the particular food item, learn about the regions where these foods originated from and their cultural practices. Children examine how food reflects cultural practices across India. Such an interdisciplinary approach deepens children's understanding, and helps them make rich connections across subjects, themes, and concepts.

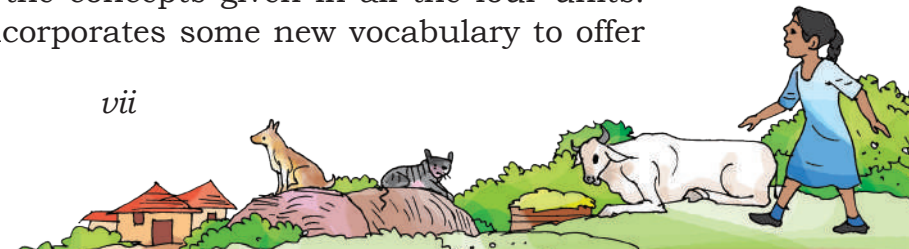
Our Wondrous World is structured in four units concerning themes involving the world around children. The structure of each unit follows a coherent format designed to engage children effectively.

Each chapter of the units feature an interactive-cum-dialogue or story-cum-narrative approach to the concepts and skills being taught. For instance, in Unit 2, the theme 'Getting to Know Plants' presents an interactive dialogue between children who are exploring a garden and discovering different types of plants, parts of a plant, and the need to take care of the plants for balanced and harmonious living.

The presentation of the content in each chapter is child friendly, and encourages active participation of the children in the learning process. The self-explanatory illustrations aim in developing observation and critical-thinking skills of the children. An effort has been made that the level of language and concepts in the book are age-appropriate and relate to different regions of our country.

At the beginning of each unit, a concept scheme for each chapter is given that will help to target the desired competencies and expected learning outcomes.

The language used in the book is simple and clear, ensuring that children can easily grasp the concepts given in all the four units. However, the book also incorporates some new vocabulary to offer



a gentle challenge and expand children's language skills, e.g., by introducing terms like 'transparent', 'opaque' and 'translucent' within the context of learning about materials and their properties. It has been explained through illustrations and descriptions to help children understand these words in relation to real-world objects.

Furthermore, each chapter has an inbuilt assessment idea that helps in tracking the progress of children and tailoring learning-teaching strategies accordingly. These assessment ideas include activities like drawing a sketch from home to school, creating a *rangoli* using materials from nature, discussion points, matching traffic signs, labelling certain pictures, conducting simple experiments to observe plant growth, or answering open-ended questions about the functions of different parts of a plant.

'Let us reflect' is a section in which children get an opportunity to summarise the learning from the chapter.

The activities given in the book are suggestive in nature. Teachers are free to create additional activities besides what is given in the book, without putting any kind of pressure on the children, and see that they connect the children with their local environment. Through *Our Wondrous World,* we have endeavoured to offer our children dynamic and engaging learning experiences.

We hope that this book will open doors to understanding the wonders of nature and lead to better learning-teaching of this important interdisciplinary subject.



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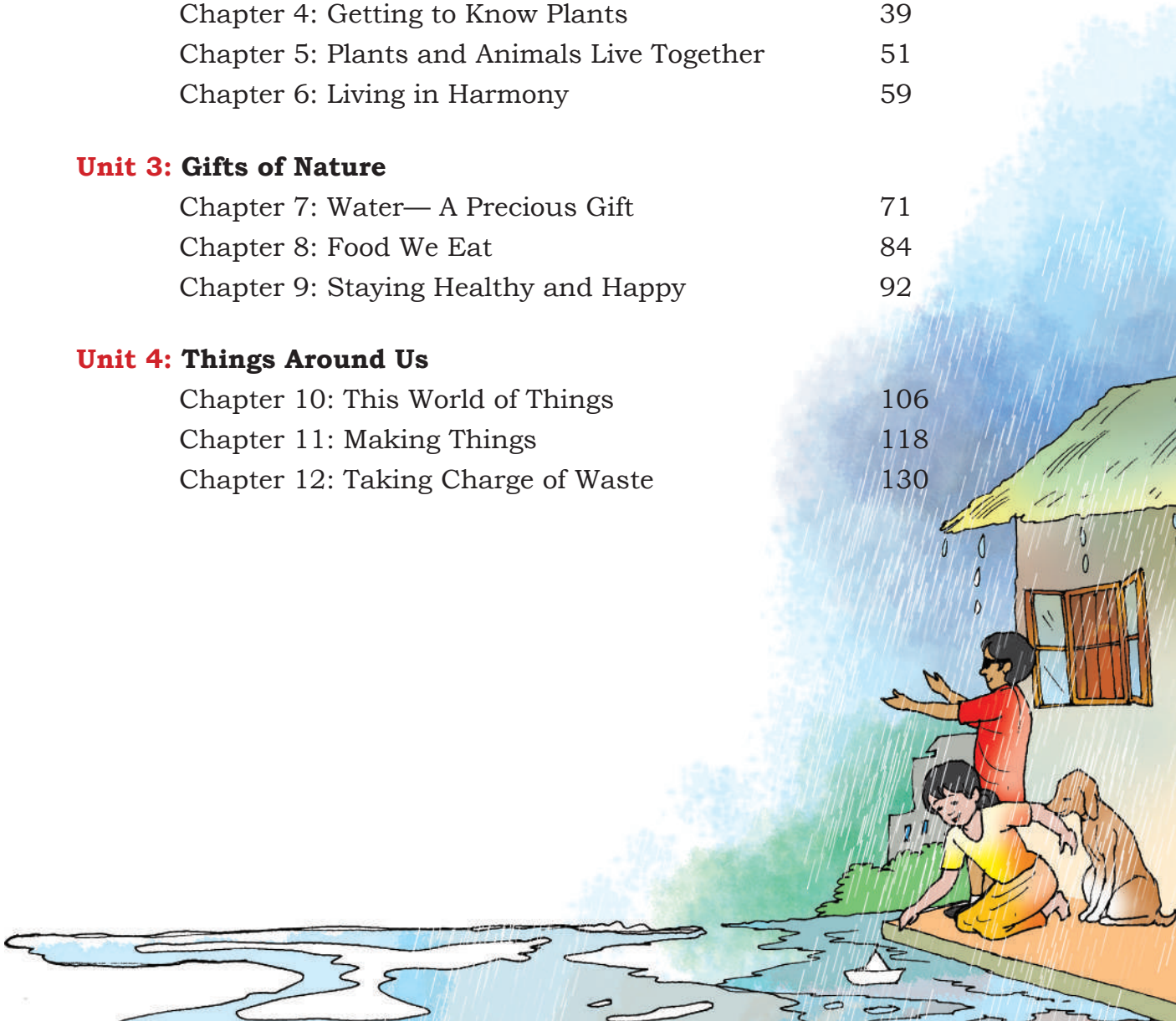
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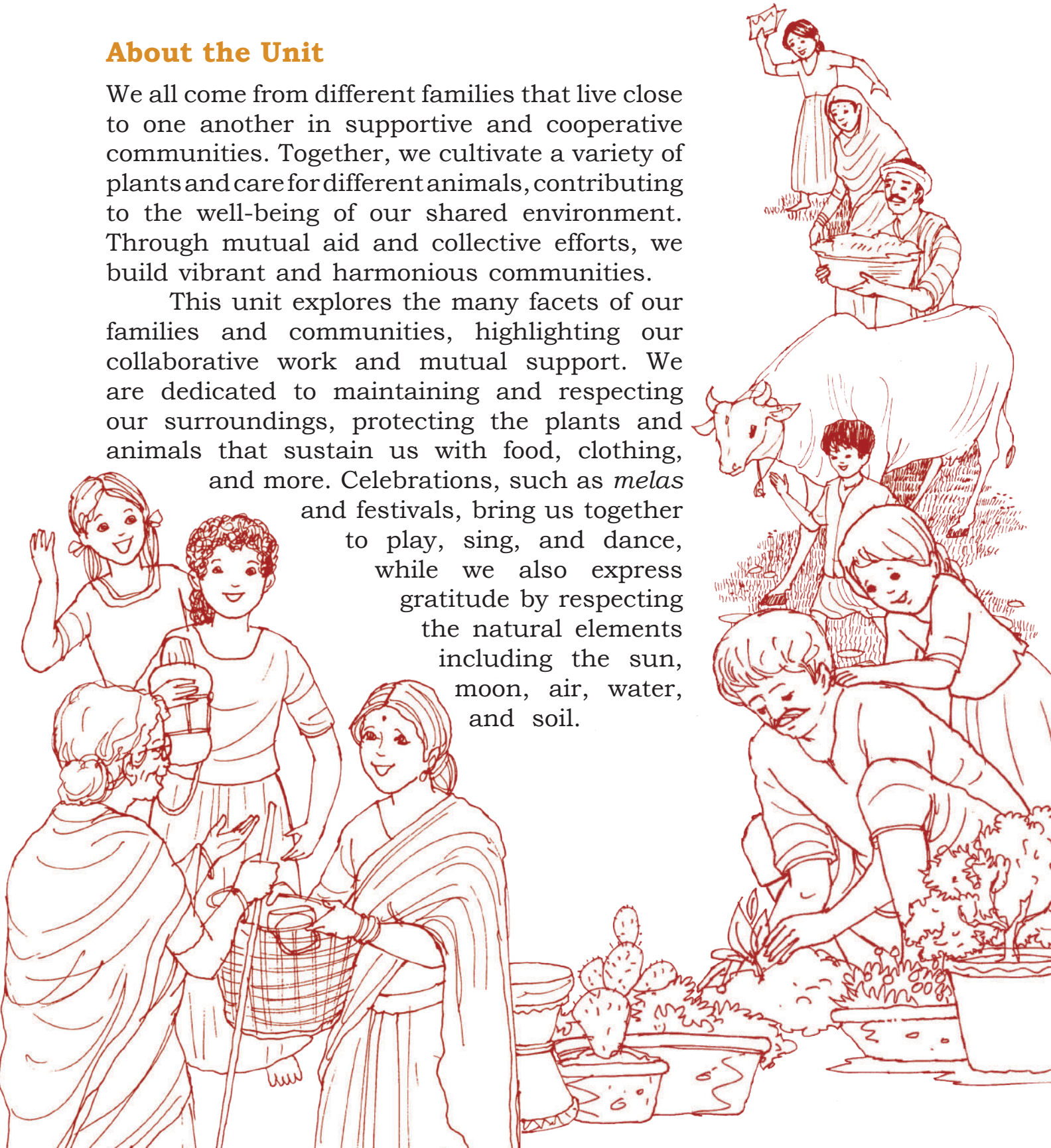
Unit 1

Our Families and Communities

About the Unit

We all come from different families that live close to one another in supportive and cooperative communities. Together, we cultivate a variety of plants and care for different animals, contributing to the well-being of our shared environment. Through mutual aid and collective efforts, we build vibrant and harmonious communities.

This unit explores the many facets of our families and communities, highlighting our collaborative work and mutual support. We are dedicated to maintaining and respecting our surroundings, protecting the plants and animals that sustain us with food, clothing, and more. Celebrations, such as *melas* and festivals, bring us together to play, sing, and dance, while we also express gratitude by respecting the natural elements including the sun, moon, air, water, and soil.



Note to the Teacher

This book has four units. Each unit has three chapters. The first unit is about 'Our Families and Communities'. The key concepts covered in these chapters are listed below.

Chapter 1: Family and Friends shows the various members within a family, their interconnected relationships, the mutual support they provide, and the inherent joy of coexisting harmoniously.

Chapter 2: Going to the *Mela* presents the relationship between near and far families and their joyful activities. Families enjoy visiting the *mela*, where they explore various materials, encounter different people, engage in activities, and enjoy the fun-filled atmosphere together. They also find out how all families in a community help each other and stay happy.

Chapter 3: Celebrating Festivals shows a variety of food, dresses, and cultural practices that people enjoy during festivals. People of all ages take part in community festivals with great joy and celebrate the festivals together.





- Collect relevant, local and no cost learning teaching materials (LTM) for activities. Ask the children to bring photographs of their families prior to commencing Chapter 1 for sharing and discussion.
- Collect common traffic signs, photographs of local food, dress, and toys etc., to show the children.
- Visits and Visitors: Plan visits to, gardens, fairs if any, traffic parks, local police stations, clinics, markets, etc. Invite resource persons, e.g., police persons, fire fighters, doctors, parents with a pet, grandparents, etc., in case visits are not possible.

Chapter 1

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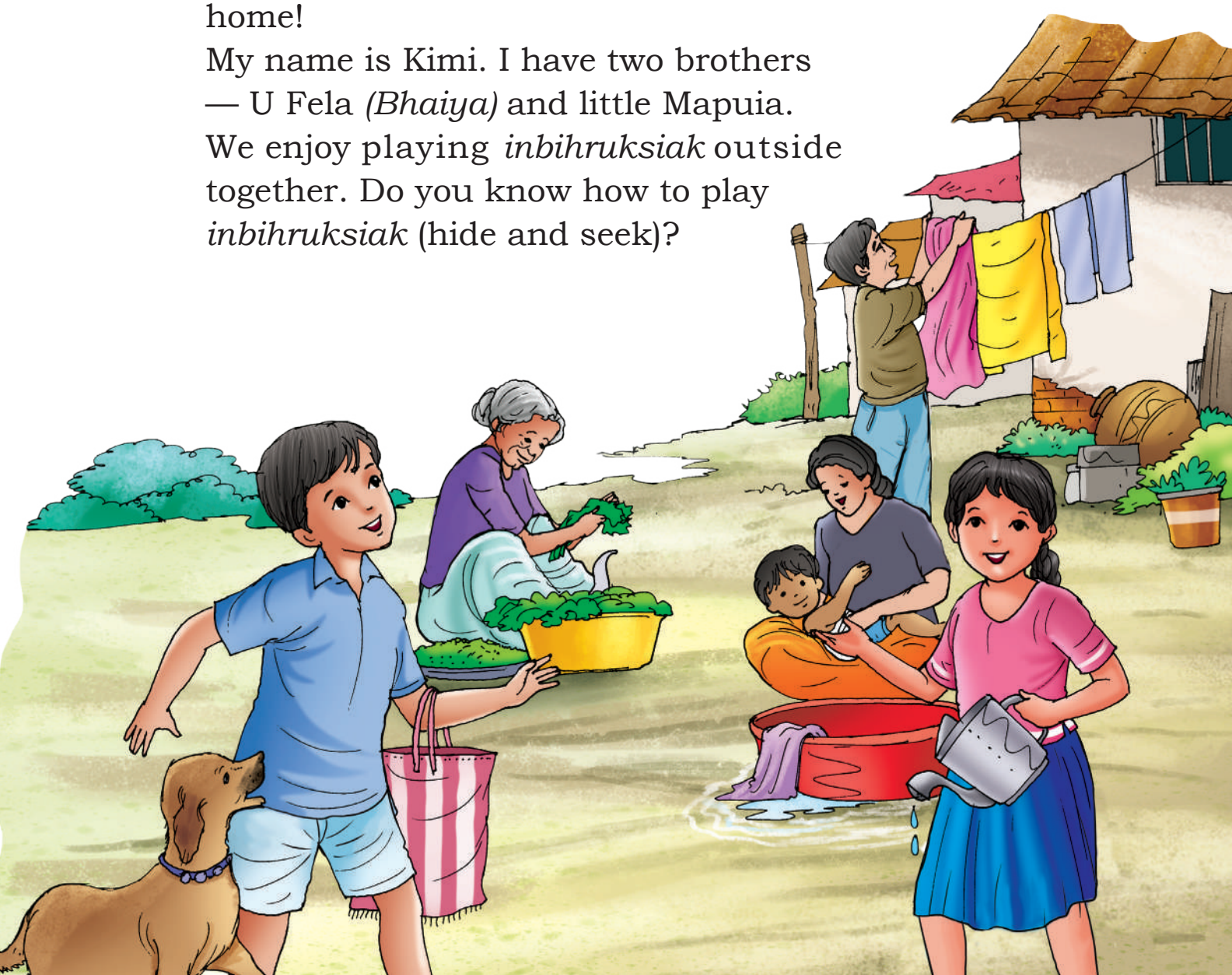
Family and Friends

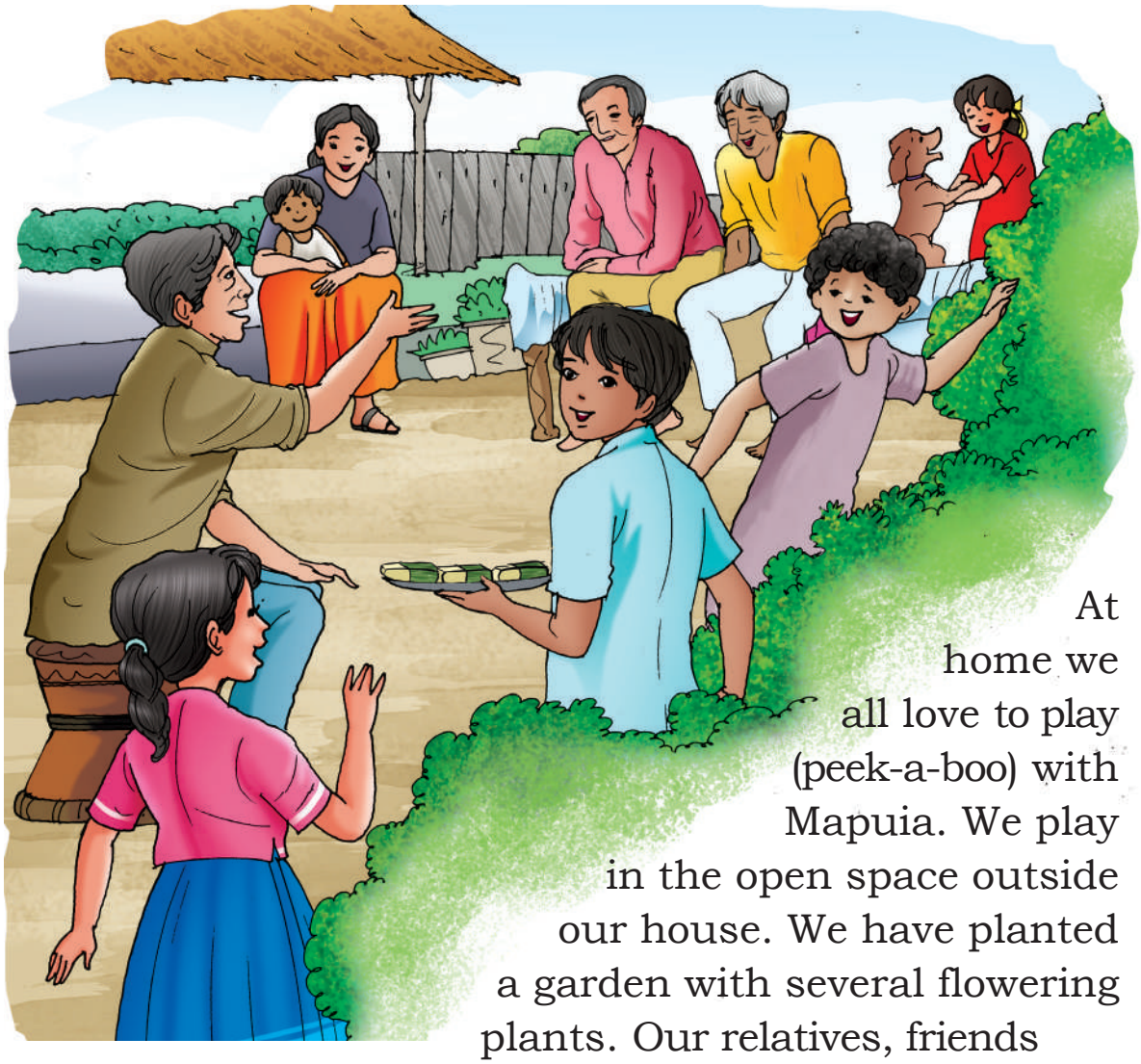


Playing Together

Chibai! (Namaste!) Welcome to my home!

My name is Kimi. I have two brothers — U Fela *(Bhaiya)* and little Mapuia. We enjoy playing *inbihruksiak* outside together. Do you know how to play *inbihruksiak* (hide and seek)?





At home we all love to play (peek-a-boo) with Mapuia. We play in the open space outside our house. We have planted a garden with several flowering plants. Our relatives, friends and neighbours also visit our garden. They sit, talk, share jokes and laugh together. Sometimes, when my father and mother are tired after a hard day's work, they sit and relax here too. All of us enjoy spending our evenings together.



**Peek-a-boo is a game played with a young child, which involves hiding and suddenly reappearing, saying 'peek-a-boo!'*



Singing Together



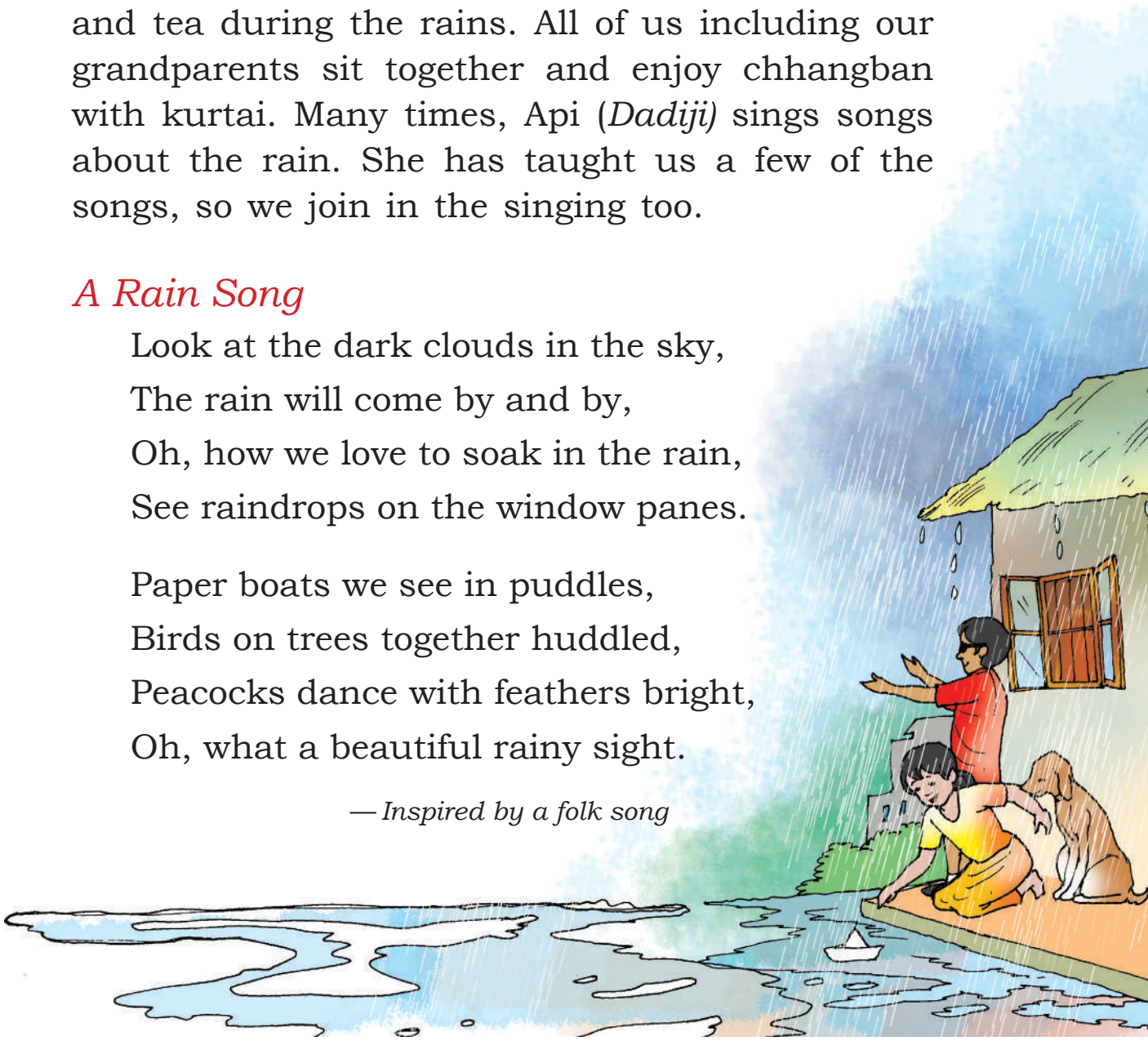
On rainy days, we sit under a small shelter we have created in the garden. It is great fun to sit outside when it rains. We sing songs and play games like snakes and ladders. My mother and grandmother, whom we call Api (*Dadiji),* make chhangban and tea during the rains. All of us including our grandparents sit together and enjoy chhangban with kurtai. Many times, Api (*Dadiji)* sings songs about the rain. She has taught us a few of the songs, so we join in the singing too.

A Rain Song

Look at the dark clouds in the sky,
The rain will come by and by,
Oh, how we love to soak in the rain,
See raindrops on the window panes.

Paper boats we see in puddles,
Birds on trees together huddled,
Peacocks dance with feathers bright,
Oh, what a beautiful rainy sight.

— *Inspired by a folk song*





Discuss

- Who are the members in Kimi's family?
- What do and your family members do when it rains?
- Can you think of a rain song and sing it with your friends in the class?

Write

Write the names of your family members in the table below:

Name	Relationship with you	You call them (you address them as)
Mamuani	Mother's sister	*Nutei*

Laughing Together





Apu (grandfather) has taught U Fela and me games that he used to play with his friends when he was our age. He joins us in some of our games too! Buanga joins us and runs around, barking and wagging his tail with joy. Buanga has a special place in our home. He is a member of our family. Our friends love to play with him too.

U Fela and Kimi never hurt Buanga. They share their food with Buanga.





Do you know what games your grandparents used to play when they were young?

Types of Families

Families are big,
Families are small,
Families are different,
And we love them all.

There are parents in a family,
And children too,
And of course grandparents,
And others too, can you tell who?





Families are people,
Who care about you,
My family is special,
And yours is too!



Would you call Kimi's family a big or a small family?



A family can have a few or many members. If you look around in your neighbourhood you will find many types of families.

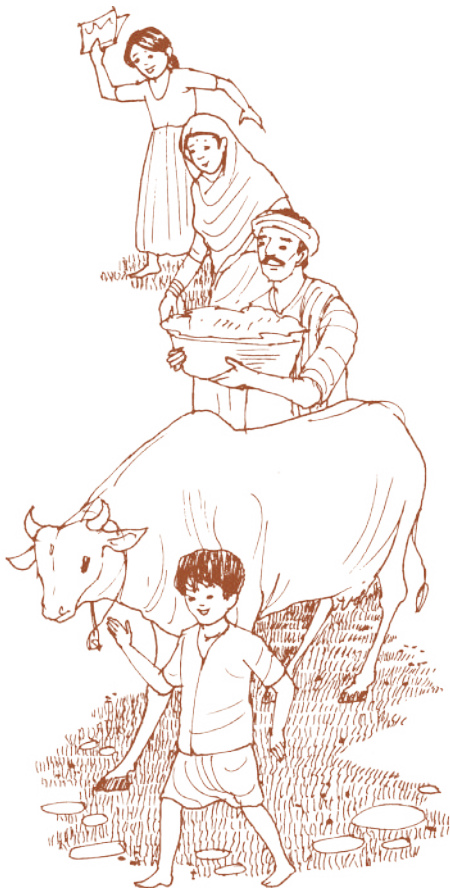


- What games do you play with elders and other members of your family?
- Which animals come to your home or your neighbourhood?
- Have you ever shared food with the animals who come to your home? Share your experience.
- Why do you think we should not hurt or tease animals?



Our family members, friends, neighbours and relatives love us, care for us and support us. There can be parents (mother and father), grandparents (*Dadiji* and *Dadaji*), brothers and sisters (like U Fela and Kimi) and other elders in a family.

Everyone loves each other and takes care of each other. Families also love and care for animals, trees and plants. Animals like cows, buffaloes, dogs, parrots, cats and goats can also be part of a family. We should be loving and caring towards animals the way Kimi and U Fela are towards their pet, Buanga.



Helping Each Other

Activity 1

Tick and colour the activities that you see in your family.















In our homes we do many activities together. I have long hair. Api brushes my hair and braids it in the morning before I leave for school. She hums a song while she is doing this. It makes me happy to listen to her. I have learnt many songs from her. My parents help each other in all the housework, from cooking and cleaning to shopping for groceries.

My *Apu* loves gardening. U Fela *(Bhaiya)* and I help our parents and grandparents with some of their work everyday. U Fela *(Bhaiya)* helps in cleaning and chopping vegetables while I help my *Apu* in the garden.







One of our closest friends is Mawii. She and her mother, Nu *Hlui* (mother's close friend who is like a sister), live near our house. Nu *Hlui* is an excellent cook. She makes delicious cakes and special dishes for us during festivals. She and Mawii join us in all the festivals at our house.



Mawii is very good at making *bawhtah*. She uses different coloured papers On some occasions, she uses old newspapers too.

I love to help her.

Draw

You can draw some more pictures to show how your family members help each other.





We all learn many things from our family members and neighbours.

- What all have you learnt from your family and from whom?
- Has anyone learnt anything from you?



Activity 2

Collect different coloured papers and create a *bawhtah.*



Discuss

- How do you help your family?
- Some people in the family need special care and support like grandparents, small children or someone who is sick. How do you help them?



Write

- Who is the oldest person in your family?

_____

- Who is the youngest person in your family?

_____

- Who is the tallest person in your family?

_____

- Do you have any members in your family who do not live with you? Who are they and where do they live? How often do you meet them?

_____

_____

Note to the Teacher

Explain to children that a *bawhtah* can be made using a variety of materials.

Activity 2 should be done in the classroom under supervision.



In a family, we take part in the day-to-day work of the home just like Kimi and U Fela do. Our family also includes relatives who may not live with us. They are related to us through our parents (mother or father).



- In Kimi's family everyone does some work.
- Who does what work in your family?
- Find out and fill in the table.

Work	Who does it?
Cooking food	
Watering plants	
Mending things (repairing household items, sewing buttons, etc.)	
Cleaning the house	
Buying things from the market	

You may add to the list other work that your family members do in your home.

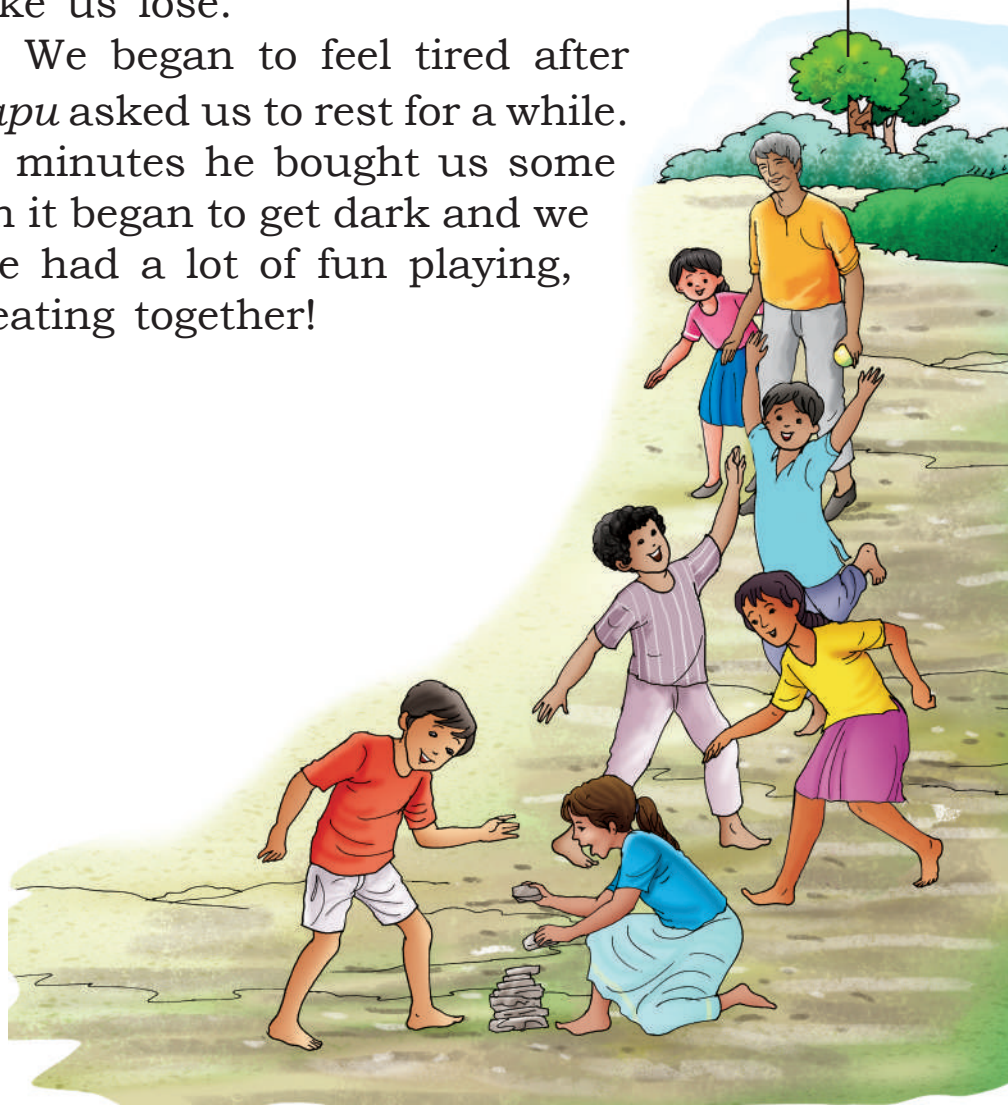


Fun with Family and Friends

It was a holiday! We all went to the park with our *apu*. When we reached there many of our friends were playing *pitthoo*. Rema, Rinki, Rohit, Ronnie and Thari were calling out to each other to run fast and place the stones quickly.

We joined them and made two teams. *Apu* brought a ball. He hit the stones and scattered them all! We ran to pile the stones as fast as we could. Rohit, Rema and Ronnie tried to hit us with the ball to make us lose.

It was fun. We began to feel tired after some time, so *apu* asked us to rest for a while. After about 20 minutes he bought us some ice cream. Soon it began to get dark and we went home. We had a lot of fun playing, laughing and eating together!





Let us reflect

A. Write

1. How do family members show their love and care for each other?
2. What games do you play with your friends?

B. Draw

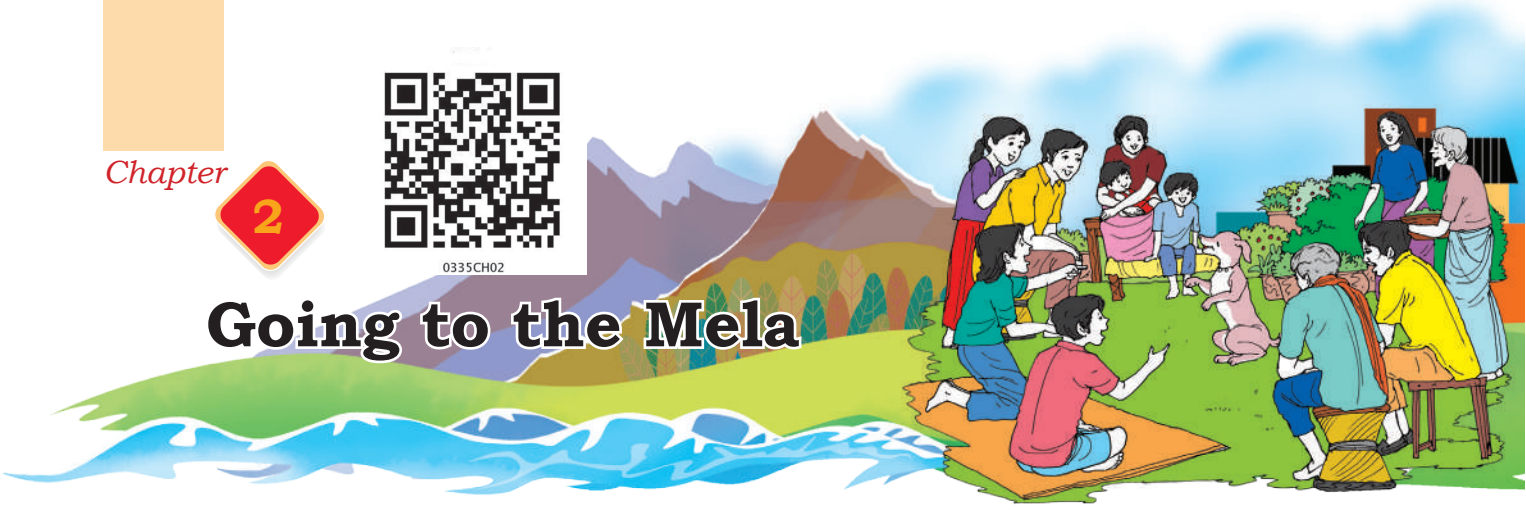
Draw some of the happy moments you enjoy together with your family.



Chapter 2

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Going to the Mela



Preparing for the Mela

The *mela* has finally come to town. Nita and Radha are getting ready to go to the *mela*. There is a lot of excitement. The *mela* is a little far from home; so they need to take a bus.

"What's happening? You all seem to be very busy?" asked *Dadiji*.

"We are going to the mela, *Dadiji*. Please come with us!" requested Nita and Radha.

"Mela! Oh yes, your mother asked me to come along, too. I would have loved to. But you know my legs hurt," said *Dadiji*.

Nita's father joined the conversation. "We have a lot of people with us. Our neighbours, Sneha and Rohit, as well as Mohan *Chacha* (Paternal uncle) and his family. They are arriving by train today. Don't worry! We will take care of you."

Dadiji smiled and answered, "Alright, I will come. Have you filled up your water bottles?"







"Oh yes, *Dadiji!* Our special bag is ready too," Nita replied. The children jumped with joy. Everybody was very happy that *Dadiji* had agreed to come.

Nita's father called out to their neighbours asking them to be ready on time.

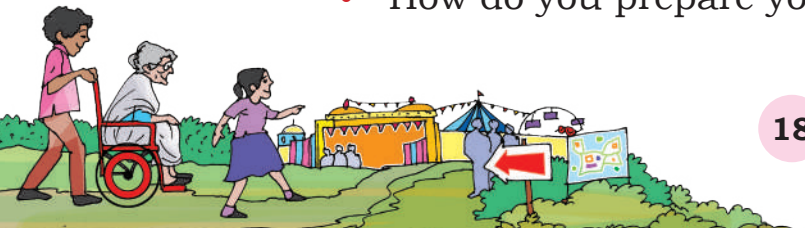
In the meantime, Mohan *Chacha* called them to say that they would meet Nita and her family directly at the *mela*. They would take a city bus and then an autorickshaw to reach the *mela* ground.

"Wow! There are so many of us. What fun we are going to have!" exclaimed Radha.



Discuss

- What do you think was in the special bag that Neeta and Radha's family carried?
- How do you prepare yourself for a trip?



On the Way to the Mela



Sneha and Rohit are not just Nita's neighbours; they are close friends too. They are also getting ready to go to the *mela*.

"Sneha, get ready quickly. Nita's family will be arriving soon," said their mother.



"I am almost ready, *Ma*. I am just making sure that I have taken everything I need with me," Sneha added.

"It's time to leave. Nita's family is here," announced her father.

Soon after, they all left for the *mela*. Nita held





Dadiji's hand and led her slowly to the bus stop. They walked carefully on the road keeping an eye on the vehicles moving in both directions.

Bus number 401 slowly came to a halt. The conductor and Nita's father helped *Dadiji* get on the bus. There was a seat reserved for older people. *Dadiji* sat comfortably in it.

Everyone boarded the bus and sat all around *Dadiji*. Rohit's father insisted on buying the tickets for everyone. "Five full and four half tickets please," he said to the conductor. He told the children to sit on their seats and not jump around. He also asked them not to put their hands or head out of the window for their safety. The bus went through the city and finally reached the big ground where the *mela* was being held.



Discuss

- What transport do you take to travel within your city/town/village?
- Why should safety measures be followed when travelling by bus, car or while riding a bicycle?

Write

Describe briefly any trip that you have taken with your friends, neighbours or family.





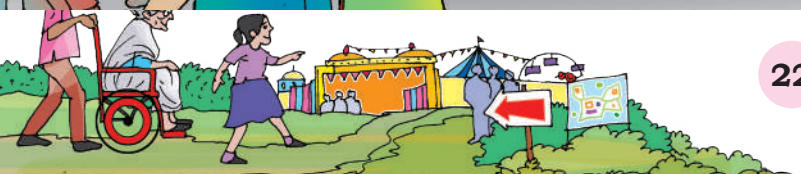


At the Mela

Both the families reached the big parade ground where the *mela* was being held. Mohan *Chacha* (uncle) and his family also got down from an autorickshaw.

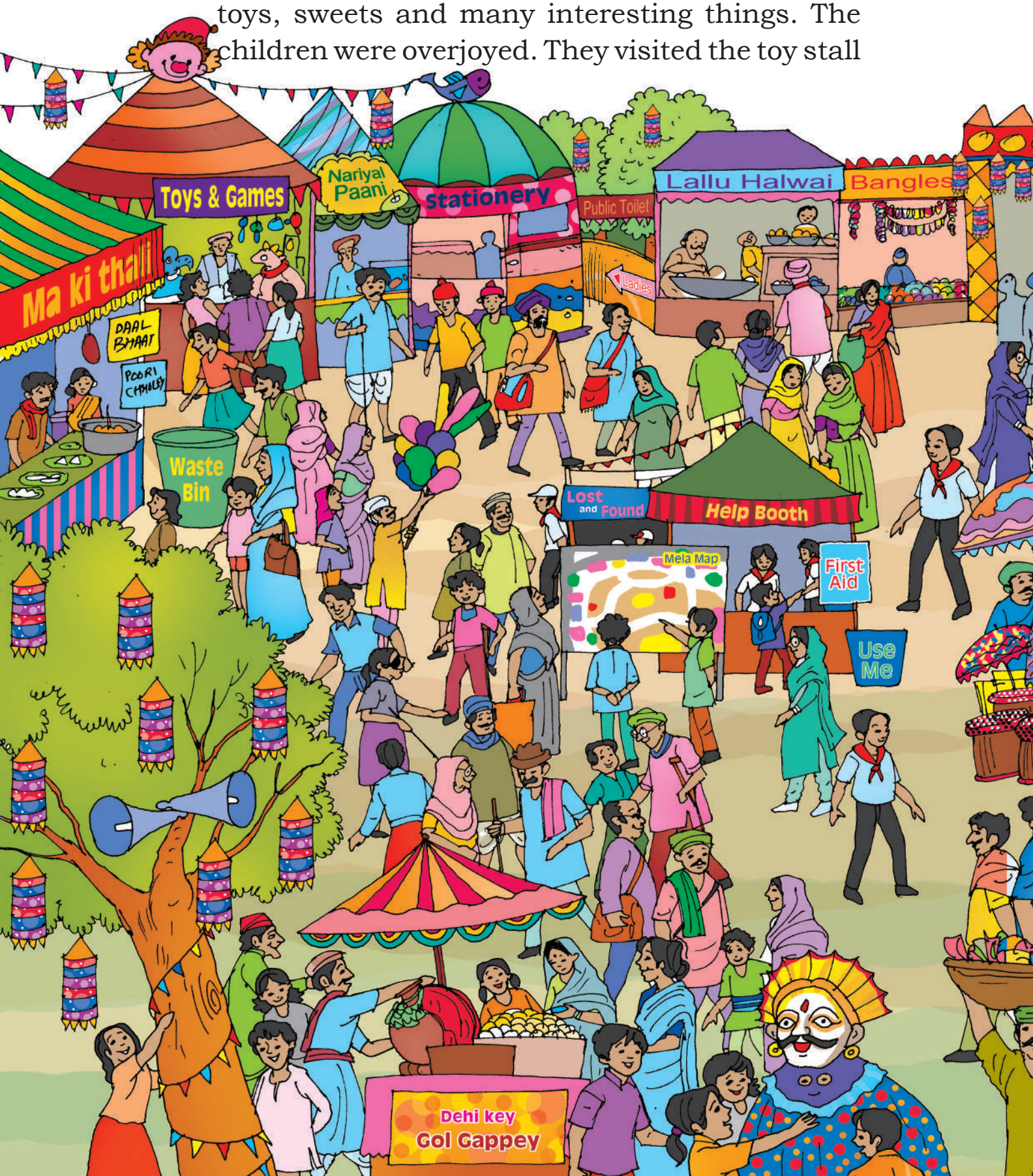
At the entrance, there was a map of the *mela* ground showing the various stalls and their locations. An ambulance, police jeep and fire engine were parked next to it. There was also a 'Lost and Found' booth with volunteers. Mohan *Chacha* and





Rohit hurried to get a wheelchair for *Dadiji*.

As they entered, they saw stalls with games, toys, sweets and many interesting things. The children were overjoyed. They visited the toy stall



from where they bought spinning tops, puppets, *virmep* and dolls. The children then took a ride on the merry-go-round and the giant wheel. Sneha and Radha bought bangles and other trinkets.





"Let us go and see the magic show now," said Nita. They also then enjoyed the magic show!

Mohan *Chacha* called out to the children, "You have had a lot of fun; now let's have something to eat. But before you eat you need to wash your hands properly." The children went to the water point and washed their hands. They all ate *pani puri, chaat, chhole kulche,* hot *jalebis* with *rabri, kulfi* and many other delicious things. After eating, they made sure they put all the waste in the dustbin.



As they were leaving the *mela*, *Dadiji* exclaimed, "Look children! Who is accompanying the police officer?"

All the children answered together, "*Dadiji*, it is a police dog!"



Do you know?

Kumbh *Mela* is the world's biggest festival. It is the largest gathering of mankind and is held on the banks of rivers Ganga, Yamuna, Godavari and Shipra. It is held once every 12 years in Haridwar, Prayagraj, Nashik and Ujjain.

Highlight: Aizawl Day is celebrated every year in the month of February.



Write

- What is the purpose of the 'Lost and Found' booth?

- What is the role of the police dog?

- Have you ever been to a *mela*? What are the things you liked most in the *mela*?

Discuss

Sharing Experience

Imagine yourself in place of Nita, Radha, Sneha and Rohit. Share with the class the interesting things you would do in the *mela*.



Find out

- Talk to the elders in the family and find out how *melas* were different when they were young.
- Why are fire engines and ambulances present in a *mela*?



Let us reflect

A. Discuss in the class

1. How can we care for our elders?
2. What kinds of vehicles do we see around us?
3. How can we ensure safety during travel?

B. Match the pictures with the words

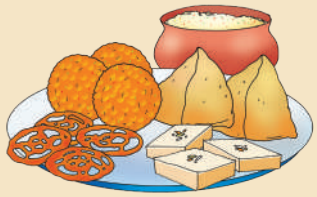
Pick a suitable word from the list, match it with a picture, and write the word below the picture. One has been done for you.



Volunteer

















Firefighter

Halwai/Confectioner

Toy seller

Puppeteer

Bangle seller

Volunteer

Police officer

Medical attendant

Mehendi artist



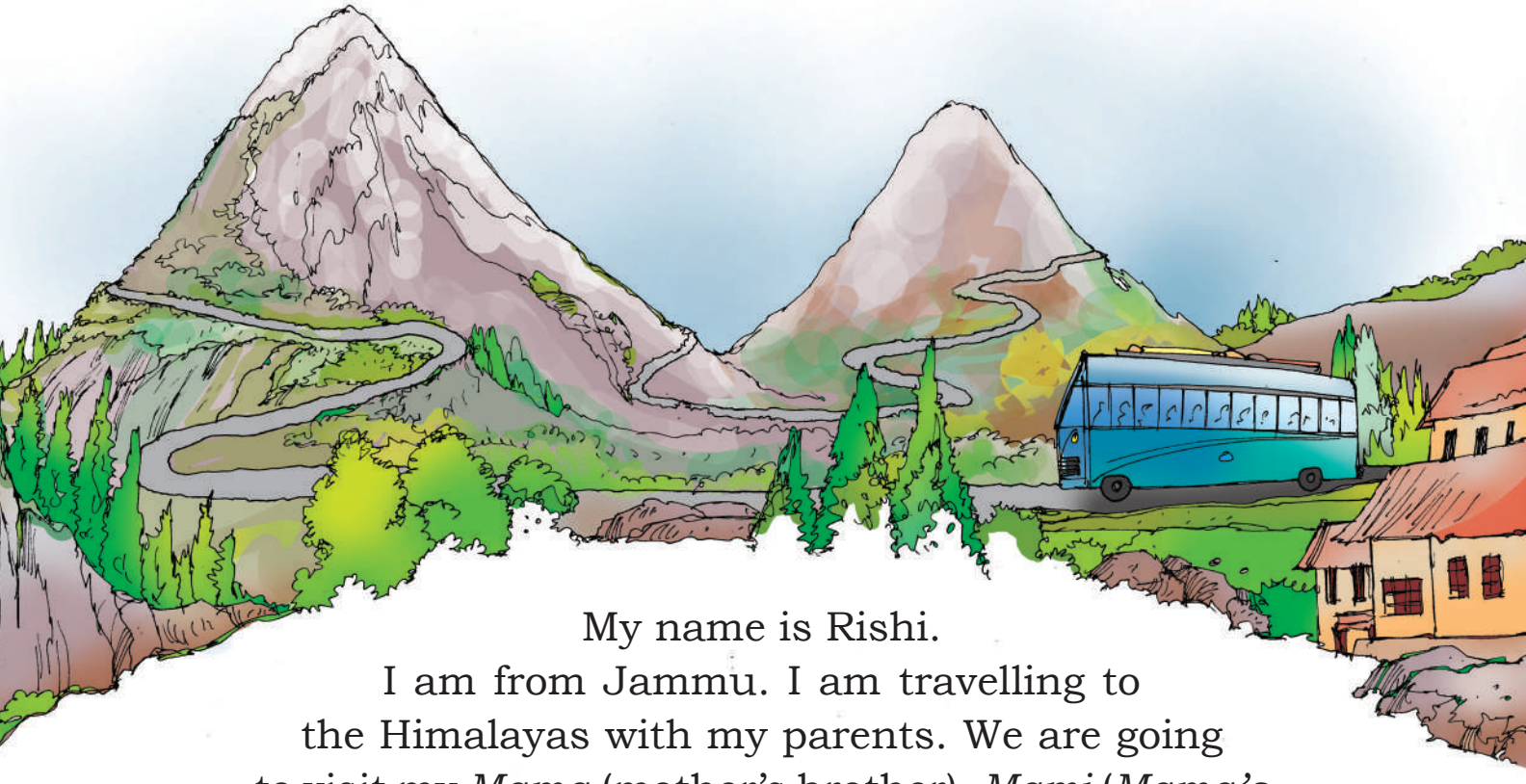
Chapter 3

0335CH03

Celebrating Festivals



Festival of Flowers



My name is Rishi.

I am from Jammu. I am travelling to the Himalayas with my parents. We are going to visit my *Mama* (mother's brother), *Mami* (*Mama's* wife) and my cousins, Chiya and Nonikaa. They live in a small village near the mountains. We are travelling by bus. I am enjoying the bus ride and the view outside the window is beautiful. The roads have hairpin turns and the hills are covered with colourful flowers. Far off, I can also see a variety of tall trees.



Discuss

- Have you ever travelled in a bus? If yes, share the experience with your classmates.
- What types of trees and flowers did you see during your trip?
- What safety measures should you take while travelling?
- What safety measures should you take while riding a bicycle and while walking on the road?



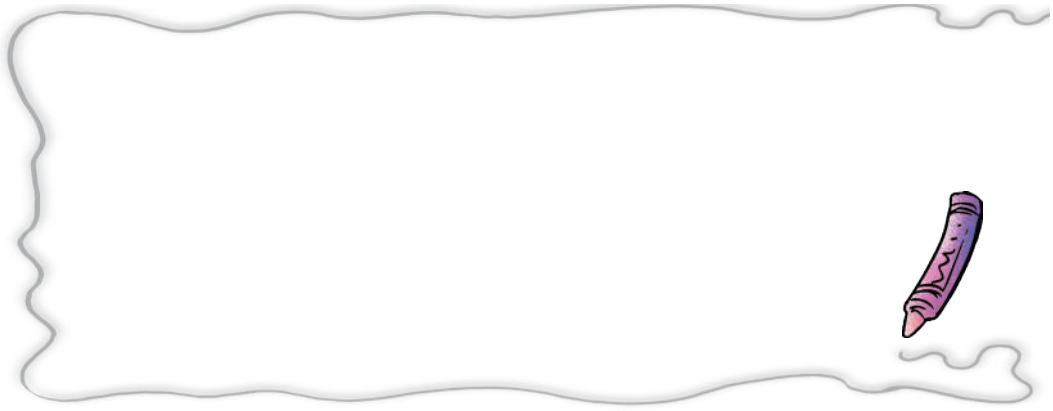
Activity 1

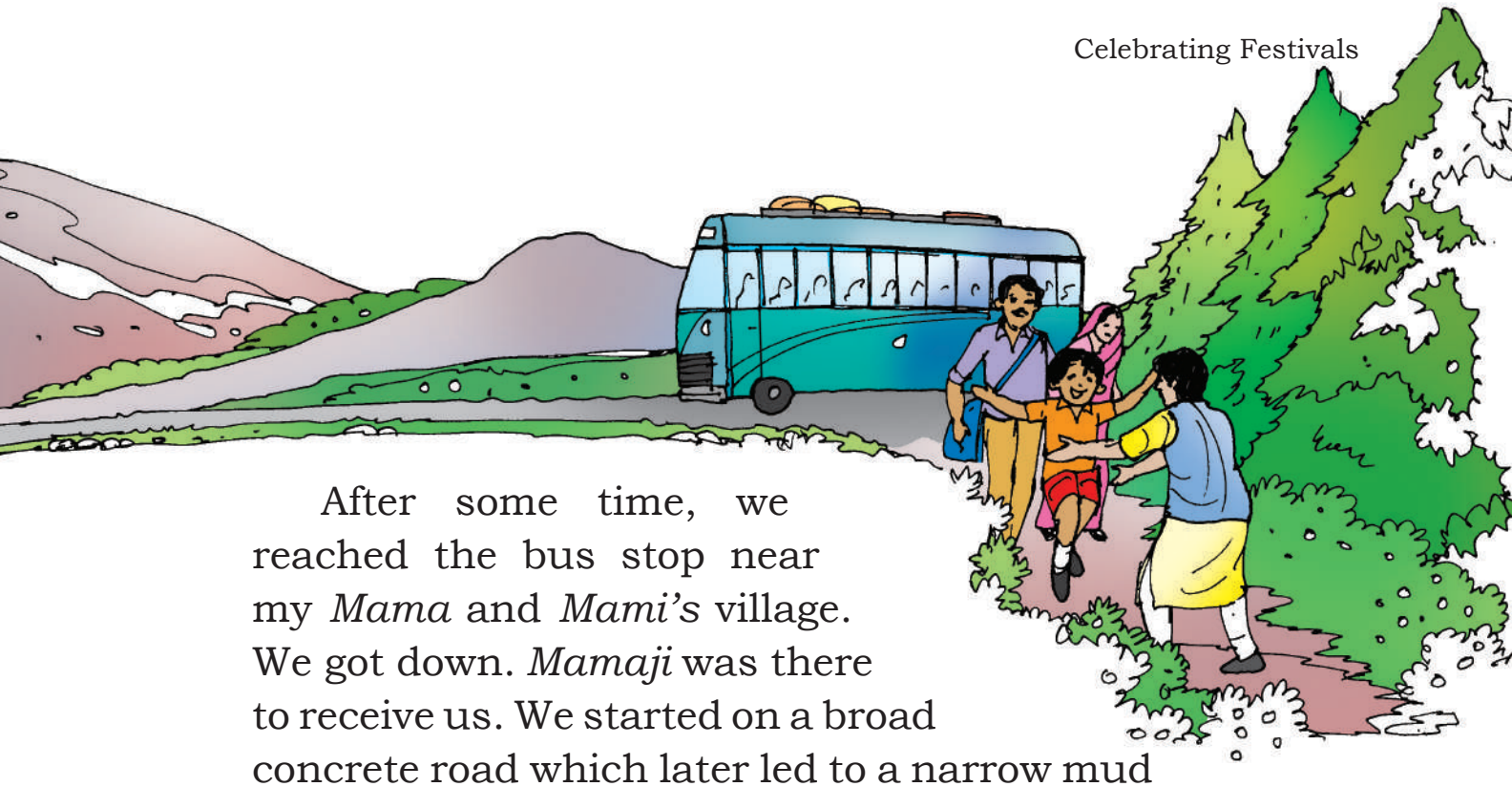
Match the Column A signboards with their meanings in Column B.

Column A	Column B
	No Parking
	No Horn Please
	Speed Breaker
	No U-Turn
	Men at Work
	School Ahead

Draw

You would have observed many signboards on the road. Draw and label any three road signboards that are not listed above.

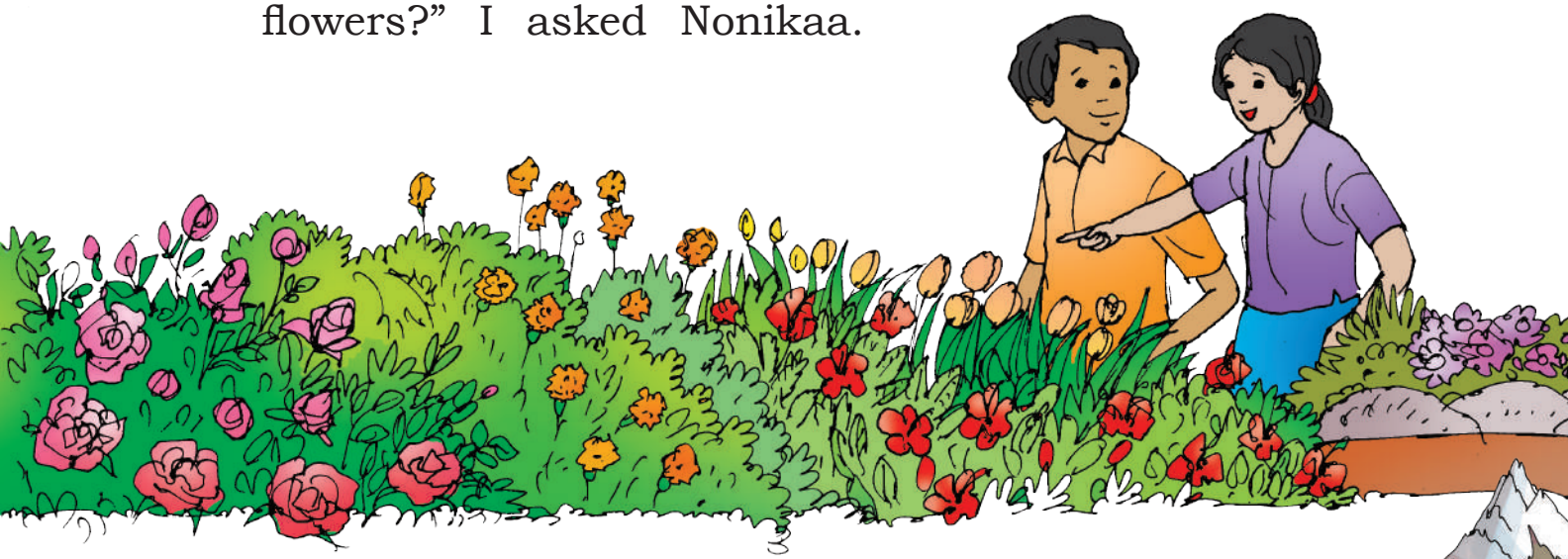


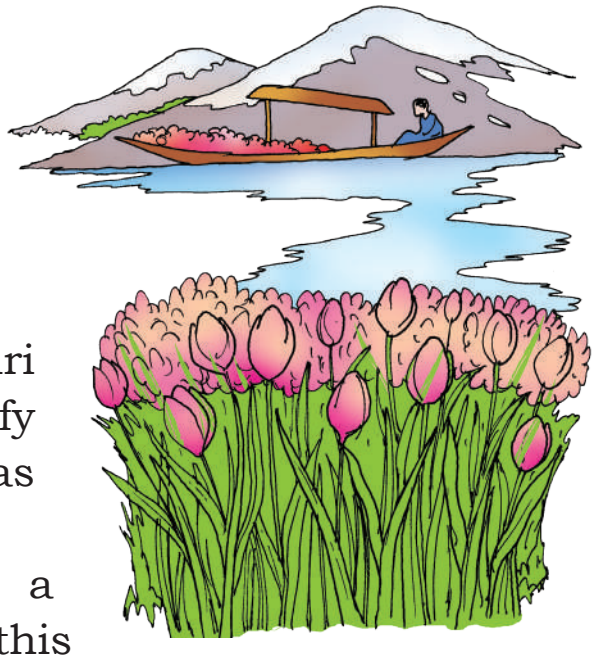


After some time, we reached the bus stop near my *Mama* and *Mami's* village. We got down. *Mamaji* was there to receive us. We started on a broad concrete road which later led to a narrow mud road closer to their house.

As we entered the main gate, I could see a row of colourful flowers in their garden. I could recognise and name a few of them like rose, marigold and hibiscus. However, I was amazed by the beauty of the flowers which was unlike anything I had seen before.

"Please can you tell me the names of these flowers?" I asked Nonikaa.





Pointing to a flower, Nonikaa said, "This flower is a tulip."

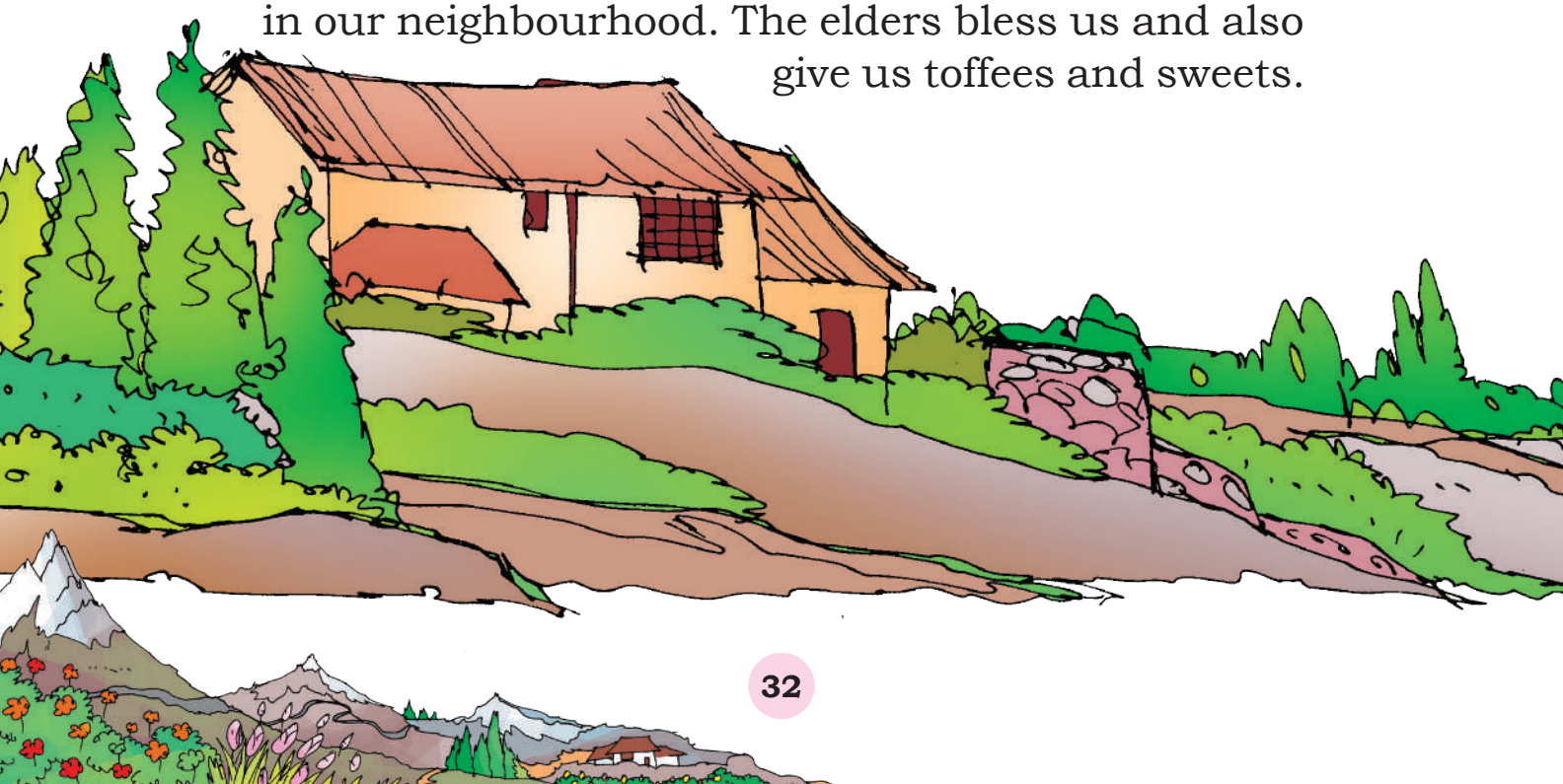
Mami then called the children in for lunch.

All of them had a Kashmiri dish *haakh* (a kind of leafy vegetable) with hot rice. It was really tasty!

"Do you know we have a Kashmir tulip festival at this time of the year?" said Nonikaa over lunch.

"We too have lovely red flowers that bloom in spring at our place. They are called *buransh* (Rhododendron)", I said.

I told Chiya and Nonikaa about the spring festival that we celebrate at our place. I shared with them how we place mustard and *buransh* flowers at the doorstep of each home in our neighbourhood. The elders bless us and also give us toffees and sweets.



Chiya said excitedly, "My friend Unni from Kerala celebrates a festival called *Vishu* at this time. They use a lot of yellow *amaltas* flowers, fruits and vegetables to make *Vishu Kani**."



Mami joined in and said, "Spring is a celebration of nature. After the harsh winters, the sun shines brightly and we see

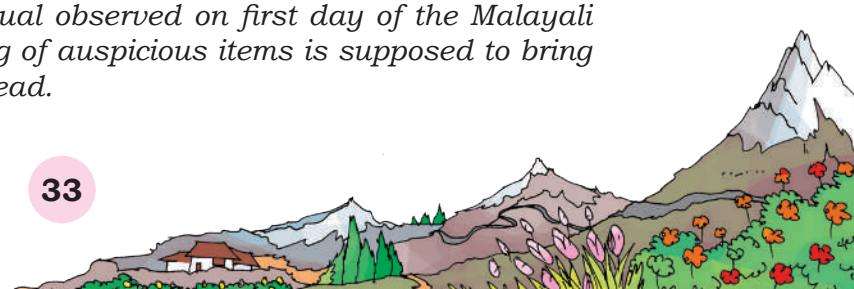


flowers blooming around us, the grass growing and the new leaves in the trees."

I shared with *Mami*, Chiya and Nonikaa how happy I feel when I see the beautiful and colourful flowers around me.

We returned home after a few days. It was a wonderful vacation and visit with family!

**Vishu Kani is an auspicious ritual observed on first day of the Malayali new year. At sunrise the sighting of auspicious items is supposed to bring fruitful and prosperous year ahead.*



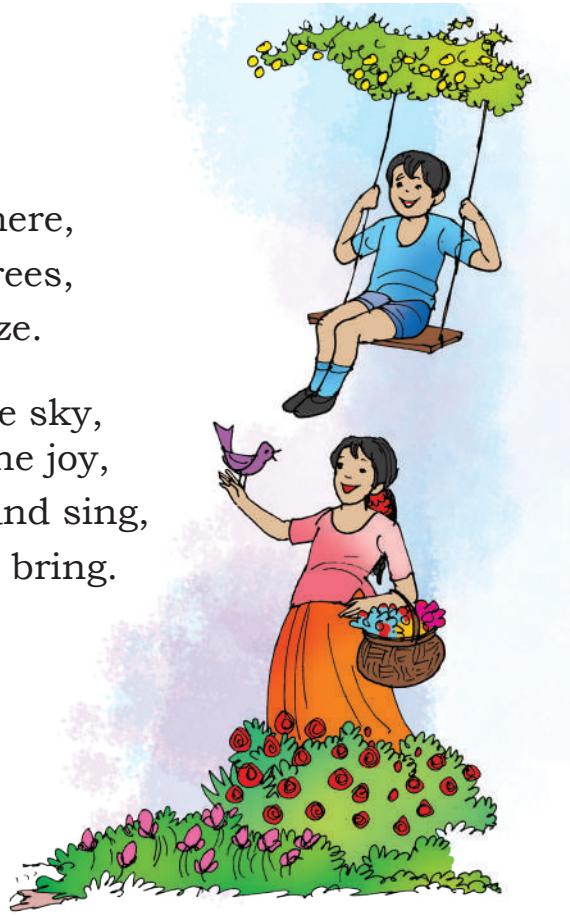
Activity 2

Sing and Enjoy!



Oh! Spring is in the air,
Happy children are everywhere,
New leaves appear on the trees,
As flowers sway in the breeze.

The sun shines bright in the sky,
Squirrels and birds share the joy,
Spring is here, let's dance and sing,
Hope and cheer to all it will bring.



Write

1. Ask your elders about the names of festivals celebrated in your locality for each of the seasons given below.
2. Make a list of the special food prepared during these festivals.

Seasons	Festivals	Special food prepared
Spring		
Summer		
Monsoon		
Winter		





- Do you think everyone celebrates festivals with a variety of special food and new clothes?
- Are there any mountains, rivers or streams close to where you live? Have you ever visited relatives in a far away place? How does it feel there?

Let us reflect

A. Discuss

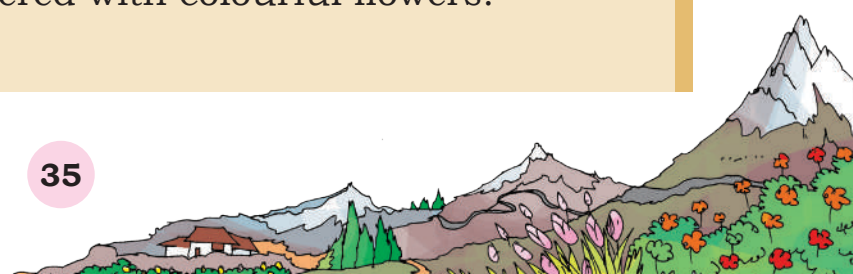
1. What are the different modes of transport used during travel?
2. How can one be safe during travels?
3. What special foods are prepared during festivals?
4. How do festivals and celebrations bring us together?
5. Do you feel happy spending time in nature?
6. Have you ever been to any festival in Mizoram? Share your experience with your friends.

B. Write

1. Name any two relatives you have visited recently.
2. How do you spend time with your cousins and relatives?
3. What are the two flower festivals celebrated in Mizoram?

Fill in the blanks

1. Chiya and Nonikaa live in a small village near the _____.
2. The bus went along the _____ roads where the hills were covered with colourful flowers.



3. Rishi and his family walked to his *Mama's* house through a narrow _____ road.
4. The red flowers that bloom in spring are called _____.
5. _____ is a kind of leafy vegetable eaten with hot rice.

C. Draw

Take a chart paper and draw signboards for the following. You can use any image and colour of your choice for creating the sign boards. Explain what you have created.

- School library
- Toilet
- Assembly
- Drinking water point
- Playground
- My classroom
- Stairs



Do you know?

The most majestic mountains in the world lie in the northern areas of India and are known as **the Himalayas** (meaning 'home of snow'). The highest mountain peak in the world is **Mount Everest** and it lies in our neighbouring country, Nepal. The height of Mount Everest is about 8,848 metres!



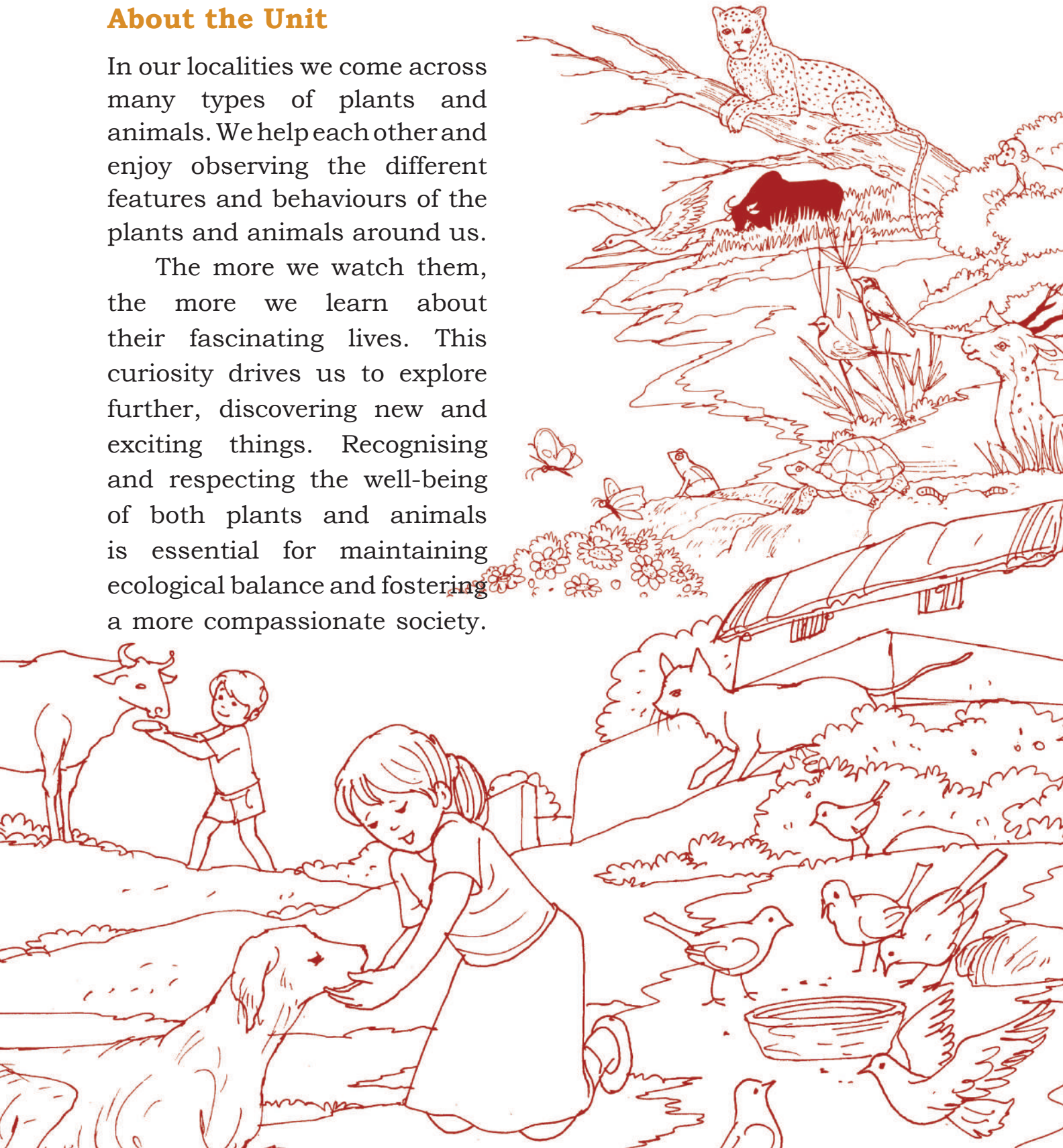
Unit 2

Life Around Us

About the Unit

In our localities we come across many types of plants and animals. We help each other and enjoy observing the different features and behaviours of the plants and animals around us.

The more we watch them, the more we learn about their fascinating lives. This curiosity drives us to explore further, discovering new and exciting things. Recognising and respecting the well-being of both plants and animals is essential for maintaining ecological balance and fostering a more compassionate society.



Note to the Teacher

This unit is about 'Life Around Us'. The key concepts covered in these chapters are listed below.

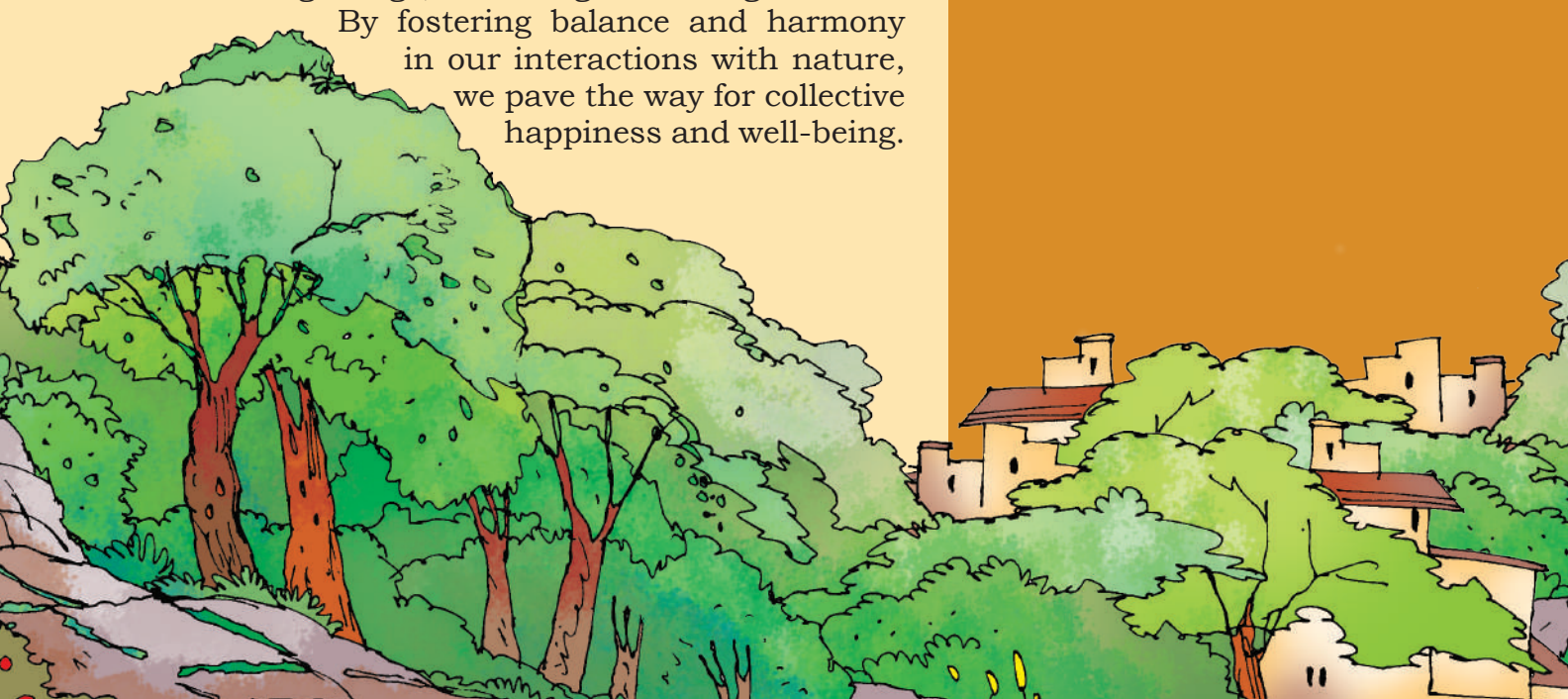
Chapter 4: Getting to Know Plants introduces us to the diverse range of plants that thrive in our surroundings. Through observation, individuals become familiar with their physical features, importance, and diversity. They harness their creativity by utilising their leaves, flowers, fruits, and other parts of the plant. Additionally, they explore the essential requirements for a plant's survival and take proactive steps to nurture them, ensuring they receive the necessary care and sustenance.

Chapter 5: Plants and Animals Live Together shows the relation between plants and animals, by exploring their innate ability to support each other through observation. Individuals explore the diverse range of animals in their surroundings, studying their habits and habitats. Emphasising harmony, they prioritise nurturing the soil, animals, and plants, fostering a balanced coexistence within the shared ecosystem.

Chapter 6: Living in Harmony shows us that we are all deeply connected to plants and animals. Some of these plants and animals reside near our homes, while others dwell at a distance. It is essential to extend kindness to all living beings, nurturing and caring for them. By fostering balance and harmony in our interactions with nature, we pave the way for collective happiness and well-being.



- Have a display of animal mobiles, masks hanging from the ceiling; create animals and green areas using miniatures of animals and potted plants.
- Prepare flash cards of animals, birds, insects, flowers, and plants.
- Keep handy authentic and age-appropriate short videos and films, storybooks and poems related to the above concepts.
- Visits and Visitors: Plan a visit to a nature park, farm, animal shelter, or plant nursery, or visit professionals working there who can talk to the children.



Chapter 4

0335CH04

Getting to Know Plants



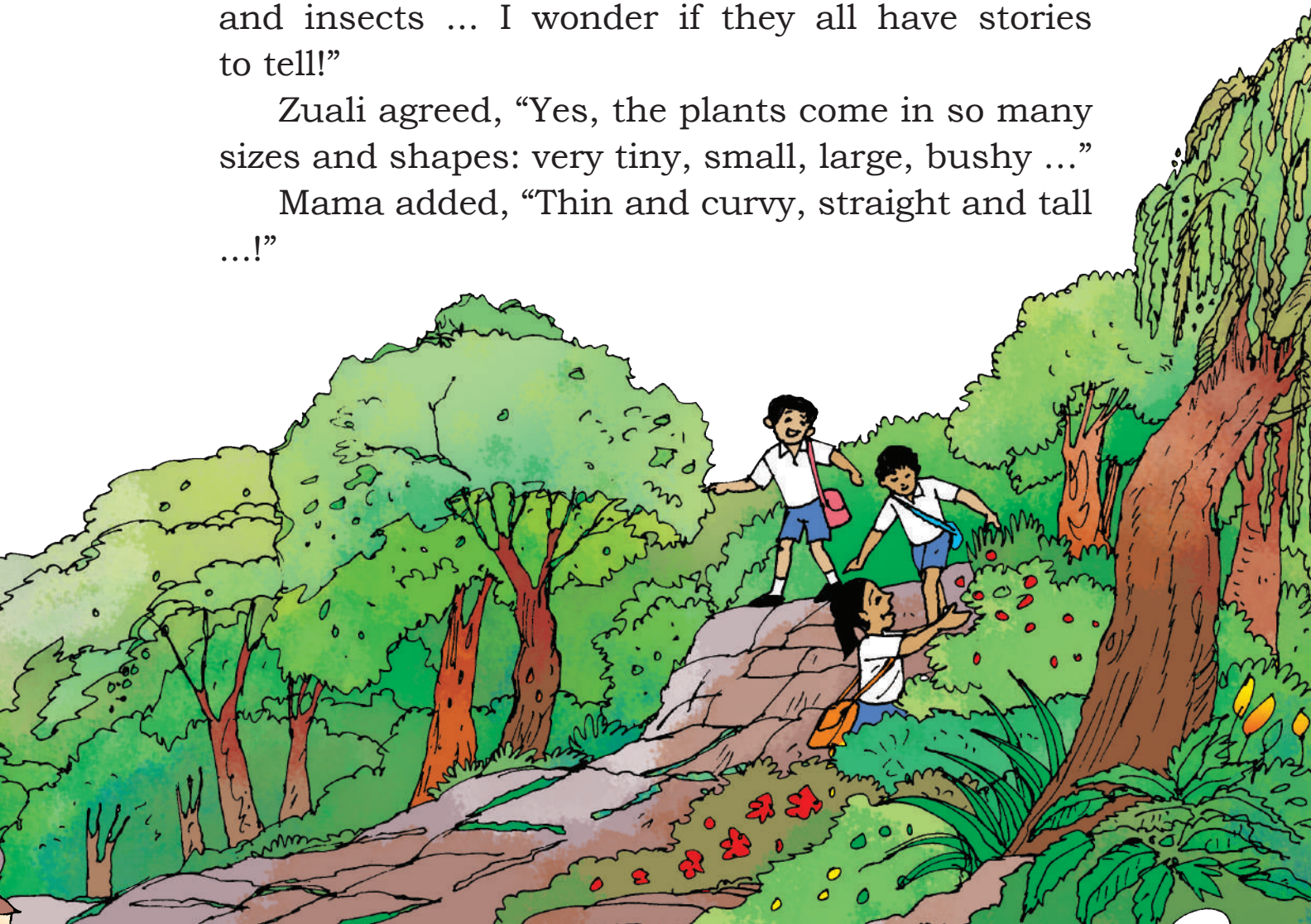
So Many Kinds of Plants

Hriata, Zuali and Mama walk to school every day. On the way they see beautiful flowers, mountains and streams.

One day, Hriata exclaimed, “Isn’t nature just amazing? There are so many kinds of plants, birds and insects ... I wonder if they all have stories to tell!”

Zuali agreed, “Yes, the plants come in so many sizes and shapes: very tiny, small, large, bushy ...”

Mama added, “Thin and curvy, straight and tall ...!”



Hriata said, "Some leaves are rough and some smooth. I love to touch and smell them."

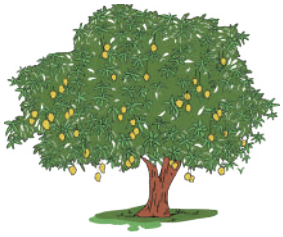
Zuali said, "Look, this *Lenhmui* tree has nice thick and shiny leaves! Isn't it your special tree, Mama?"

Mama agreed, "Yes, it is! You remember its tiny white flowers? And remember the little green fruits, which in a few days turned red and then purple? We enjoyed plucking the ripe purple fruits from the tree!"

Zuali smiled, "It's such fun to walk under the cool shade of these trees."

Trees have a big trunk of wood and many branches that spread out with leaves on them. Trees have roots that go deep down into the soil.

Trees



Mango



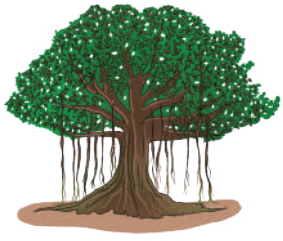
Coconut



Indian rose chestnut



Jackfruit



Banyan



Cherry blossom (Tlaizawng)



Peepal (*Hmawng*)



Queen's crape myrtle(Chawnpui)

Write

Write the names of trees that you can recognise. Try to remember where you have seen these trees. Which of these trees have you seen near your home or on your way to school?

Shrubs



"All plants don't grow tall like trees. Look at this plant with pretty red flowers. It doesn't have a big trunk like a tree," said Hriata.

"Instead, it has many brown, woody stems," added Mama.

"These bushy-looking plants are called **shrubs**. Our *tulsi* plant at home is a shrub," informed Zuali.

> **Shrubs** are medium-sized plants with several woody stems and branches growing close to the ground.



Hibiscus



Rose



Holy Basil (*tulsi*)



Curry leaf

Do you know?

The pulses (*dal*) we eat — *toor* (pigeon peas), *masoor* (red lentils), *moong* (green gram) and *urad* (black gram) — are all seeds of shrubs.



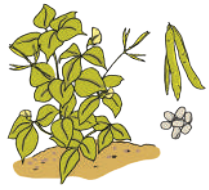
Toor



Masoor



Moong



Urad

Write

- Write the names of some shrubs. Have you seen any of the shrubs shown in the pictures above?
- Do you know what they are called in your mother tongue?

Herbs and Grasses

"We have mint and tomato plants at home. Their stems are soft and green", said Mama.

"My grandmother told me that plants with tender stems that do not become woody are called **herbs**", added Hriata.

Zuali pointed to the grass, "Look at all these different grasses. They too have soft, green stems. Their leaves are long, thin and flat."



"You're right Zuali! Do you think grasses are types of herbs too?" enquired Hriata.

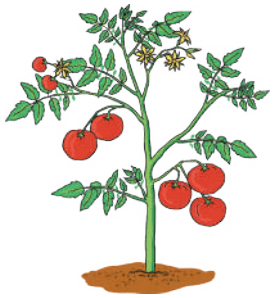
Herbs are smaller plants with soft stems that do not become woody. Grasses are types of herbs.

The leaves of **grasses** are thin and flat and their stems are hollow. Watch for different kinds of grasses around you. How many kinds do you notice?

Herbs



Mint



Tomato

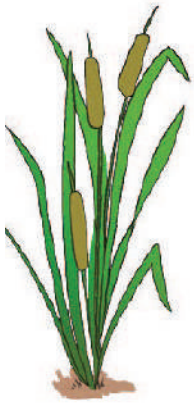


Coriander



Mustard

Grasses





Wild Grasses





Pampas

Do you know?

The grains you eat — paddy (rice), wheat, *bajra, jowar, ragi,* etc., are seeds of large grasses!


Paddy


Wheat


Bajra


Ragi


Jowar

Sugarcane and bamboo are tall grasses. Bamboo is a special kind of grass, which stays alive longer than just a year.


Sugarcane


Bamboo

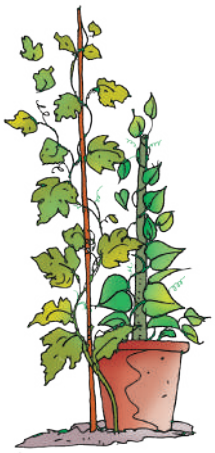
Write

Write the names of some herbs that you have seen and where you have seen them.

Climbers and Creepers

"Look! There is a vine winding up this tall tree!" exclaimed Mama.

Hriata agreed, "Wow yes! My friend George has a money plant in his house. I was surprised to see how it spreads upwards. It looks like it is slowly climbing the wall."

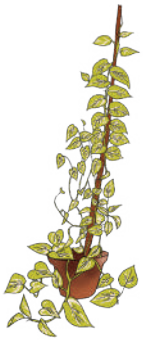


Zuali explained that the money plant has a long and thin stem. It cannot stand up by itself. If it finds nothing to climb on, it just creeps and spreads on the ground.

"The pumpkin plant is also like a creeper too. I saw it spreading its branches on the ground," said Mama.

Climbers and Creepers have thin and flexible stems. The plants that grow by climbing on other plants for support are climbers and the plants that grow by creeping along the ground are creepers. Some climbers even take their food from the plant on which they climb.

Climbers



Money Plant



Jasmine

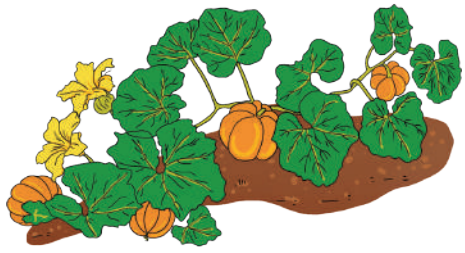


Bottle Gourd

Creepers



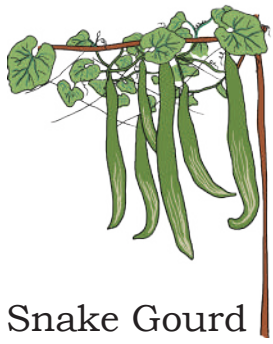
Watermelon



Pumpkin

Guess

- Is this a creeper or a climber?



Snake Gourd

Write

- Write the names of some climbers or creepers that you have seen and where you have seen them. Are any of them in the pictures given on page 53? What are they called in your language?
- Name these plants in your language. Say if they are a tree, shrub, climber or creeper.

Marigold (*Banthi* in Telugu)	***Neem*** (*Bevugida* in Kannada)	***Jujube* or *bawrai*** (*Boroi* in Manipuri)

Activity 1

- Stand, in groups of two to four, next to any tree or shrub that is in or near your school.
- Now look around, as far as you can see. Remember to look down near your feet as well!
- How many kinds of trees, shrubs, herbs, grasses, climbers or creepers can you spot?

Note to the Teacher

Use the local names of various locally available plants. The difference between creepers and climbers may be demonstrated by showing children the real plants. Remember that some plants can behave either like climbers or creepers depending on the structural support available to them.

Activity 2

- Observe the leaves in your surroundings.
- Draw, colour and label them in your notebook.
- Describe their colour, shape, size, texture and smell to your friend in the class.
- What statements can we make about leaves after doing this activity?

"Leaves smell different from each other. I have noticed that *tulsi*, coriander, curry leaves, mint and lemon grass all have wonderfully different smells," Mama told Zuali.



Zuali told Mama, "Have you ever rubbed a mango leaf and smelled it? I love the smell."

Mama added, "This conversation reminds me of the lovely smell of mangoes! My brother is not able to see but he can immediately smell any fruits nearby, like mango, pineapple, jackfruit, guava or *Lenhmui*."

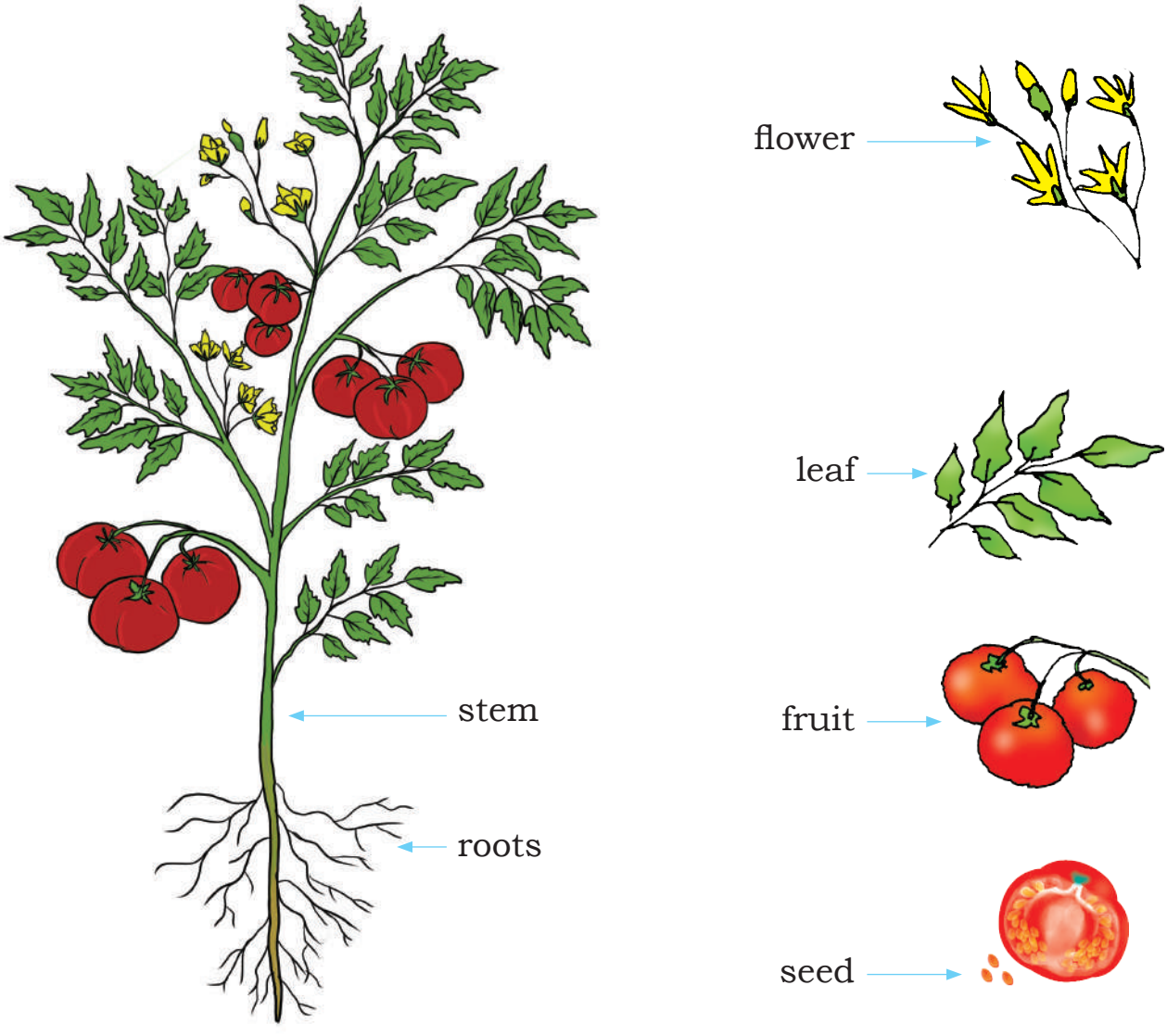
Activity 3

Blindfold yourself while your friend gradually brings a fruit close to you. From how far can you recognise the fruit with your eyes closed? Now repeat the same experiment with pieces of cut fruit. Was it easier to recognise cut fruit by the smell rather than the whole (uncut) fruit? Which fruit could you smell from farthest away? Try this experiment at home too.

Parts of a Plant

While learning about plants we used the names of many parts of plants, like roots, stems, leaves, flowers, fruits and seeds. Let us now look at a picture of a tomato plant and carefully observe the different parts.

- What are the parts of a plant?
- Mark different parts of the plant and label them.



Tomato plant

Activity 4

Get to know Barks

Bark is the hard outer covering of a tree trunk. Touch and look carefully at the bark of a tree. Do you see any animals, insects or plants on it? Press a sheet of paper on the bark. Gently move a crayon or a pencil repeatedly on it. See what you have!

Write the name (or description) of your tree on the reverse of the paper. Now collect all the papers of your friends and see if you can guess the tree just by looking at its bark pattern.



- Did you notice any other animals, birds and insects on the plant?
- What were they doing?

Do you know?

- Sugar is produced from the sugar cane stem.
- Bamboo is the tallest grass.
- Rafflesia seen in Mizoram is the biggest flower and is as big as an umbrella.



Rafflesia Flower

Let us reflect

A. Discuss

1. What would happen if there were no plants?
2. How does the root help a plant to grow?
3. What is the role of the stem?

B. Write

1. List the names of plants that you have seen in your school, park or near your home. Identify what types of plants they are — tree, shrub, herb, grass, climber or creeper.
2. Which particular part of the plant helped you to identify the type of the plant?
3. Describe your favourite plant. Why is it your favourite?

C. Draw

Draw different types of leaves you have seen around you.



Chapter 5

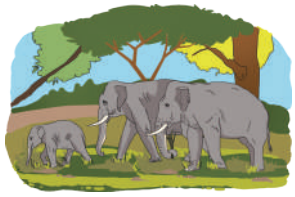
0335CH05

Plants and Animals Live Together

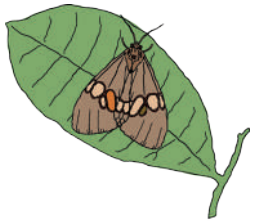
In Chapter 4, we saw lots of plants. Have you noticed that where there are plants, there are animals too? Look carefully and you will find that there are lots of animals living on, around and even underneath the plants that you see!



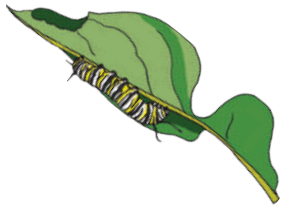
Here are some pictures of animals living together with plants. Which of these animals do you recognise from the pictures? Which of them have you seen before? Which of these animals live under the ground?



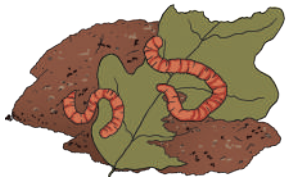
Elephants feeding on grass



A moth resting on a leaf



A caterpillar chewing a leaf



Earthworms on leaves and soil



A tailorbird singing



A woodpecker on a tree trunk



Ants building their nest using leaves



A colourful stink bug on a leaf



A frog resting on a leaf



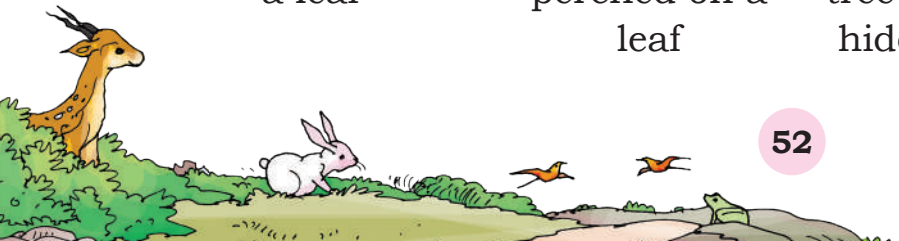
A butterfly perched on a leaf



Squirrels using tree hollows to hide and rest



A barbet using a tree hollow for nesting



Discuss

Which of the animals (birds and insects) shown on page 63 have you seen before? Describe where and how you saw them. Use your fingers, hands and arms to show how small or big these animals are!

Find out

Why do these animals choose to live near plants?

Life in the Soil

Stand on the soil next to a plant. If you are comfortable, remove your footwear.

What colour is the soil under your feet?



Activity 1

Pick up a little soil near your plant friend with your hands.

- How does it look and feel?
- Is it dry, damp, rough, smooth, hard or grainy?
- Did you find any leaves or insects in the soil?
- Now smell this soil and remember it.

My soil felt	Rough ☐	Smooth ☐	Hard ☐	Grainy ☐			
My soil had	Nothing ☐	Leaves ☐	Small stones ☐	Insects ☐			



Repeat the above activity a day after it rains. Remember to pick up the soil from the same place. Did you find any differences in the look, feel and smell of the soil?

Pick up a little soil from another place, far away from any plants. Is it different from the soil that you collected earlier? In what ways?

Examine the soil more carefully. What small things do you notice in it?

Soil is the topmost layer of the Earth's surface. Soil is made from rocks that have broken up into tiny pieces, as well as old leaves, roots, stems and living and dead animals like insects.



Soil has many insects and other creatures living in it! Some you can see, and some are too small to see. On the top layer of soil and moving around between the grass and leaves you might find insects like ants, termites, small beetles and grasshoppers.



When it rains and the soil is wet, other creatures like earthworms and millipedes may appear too. You may also find more grasses and other plants growing in the soil.

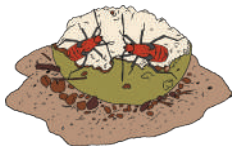
Discuss

In the monsoons, you may find many more plants and animals around. Where did these new plants and animals come from? Why could you not see them earlier?

Activity 2

Stand near your plant friend and look around. How many different animals can you spot? Describe them in words and fill in the table. You may use the given pictures if needed.

I saw ... (Describe)	It was on ...	What was it doing?
A small hopping insect	The grass	Jumping aound
A thin plant that curls	Another plant nearby	Nothing
A black bird		



Red bugs on a rotting fruit



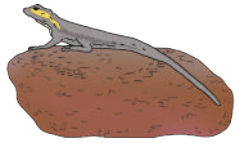
Blue flying insect



Ants on leaves



Butterfly on Lantana flowers



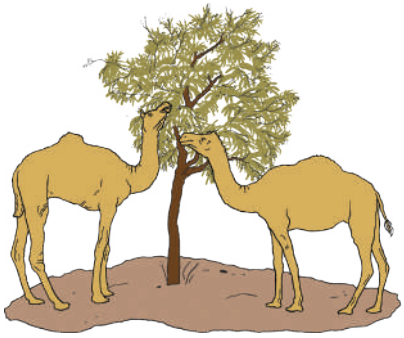
Garden lizard on a rock

Note to the Teacher

Some insects wait for the rains to emerge from the soil. Seeds of plants may remain in the soil for long periods and sprout when it rains or they are watered.

Do you know?

Animals, birds and insects use different parts of plants for food, shelter and resting.



Camels eat leaves of plants



Birds like owls use hollows in the trees to bring up their young ones





Squirrels and crows use twigs from plants to build their nests and to bring up their young ones



Monkeys love eating the fruits of plants





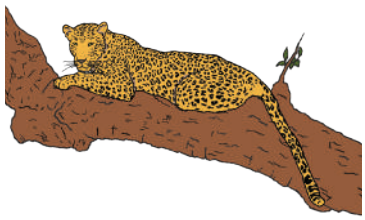
Sunbirds and butterflies drink nectar from different flowers



Tailorbirds stitch leaves of plants to build their nests







Bats and leopards use the branches of trees to rest and for shelter



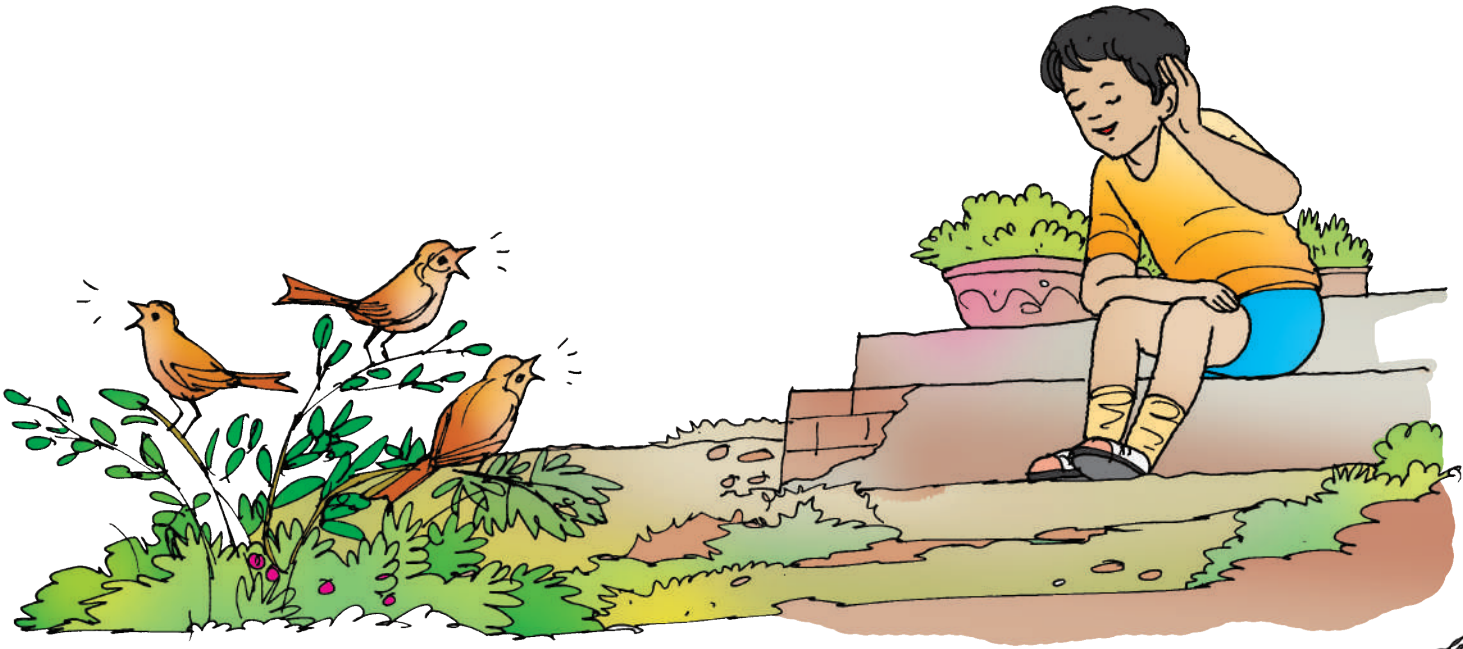
Caterpillars munch on different leaves of plants for food

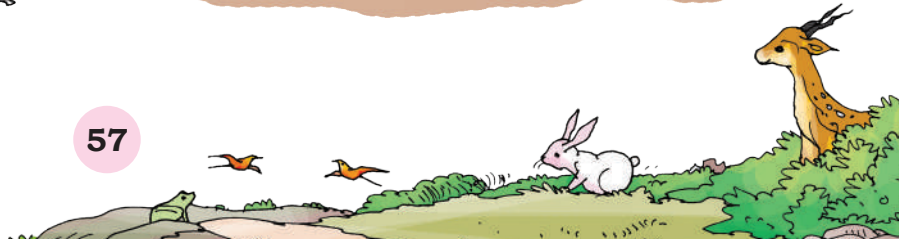
How many of these animals have you seen? Watch out for them!

Activity 3

Sounds of Birds

- Close your eyes and try to listen to the sounds of birds.
  Do you hear any bird sounds?
  Can you see which birds are making these sounds?
- Cup your ears with your hands as shown in the picture and point your face towards the direction of the bird sound. Can you hear the sound more clearly?





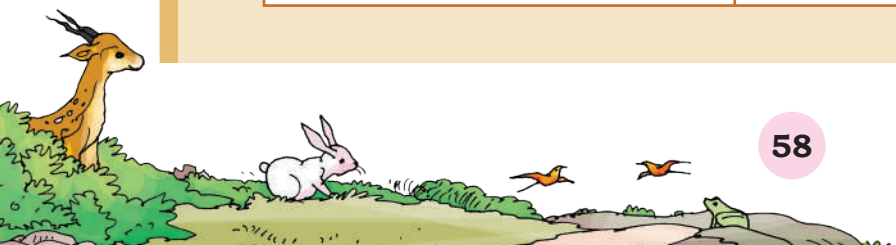
Let us reflect

A. Discuss

1. What was the colour and texture of the two soil specimens that you collected during the previous activity? In which month did you pick them up? Did they smell different and can you describe the smells?
2. During which month did fresh new leaves appear on the plant that you were observing?
3. Which animals, birds and insects did you notice around plants?
4. Recall and write about how animals, birds and insects rely on plants. Which one was your favourite example?
5. What is soil made up of?

B. Write

Names of two animals that you observed near or on plants.		
Describe the shape, size and colours of these animals.		
Guess why these animals were staying near these plants.		
What other interesting things did you notice about these animals?		



Chapter 6

0335CH06

Living in Harmony



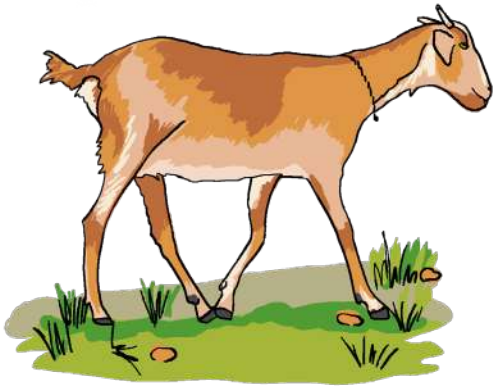






















Discuss

- Do any of these animals, birds, insects and plants live with you in your house?
- Do you and your family take care of them?



Find out

- Are there any animals, birds and insects that you have spotted that are not in the picture given on page 59?
- Try to find out their names and write them in the table given below. One example has been done for you.

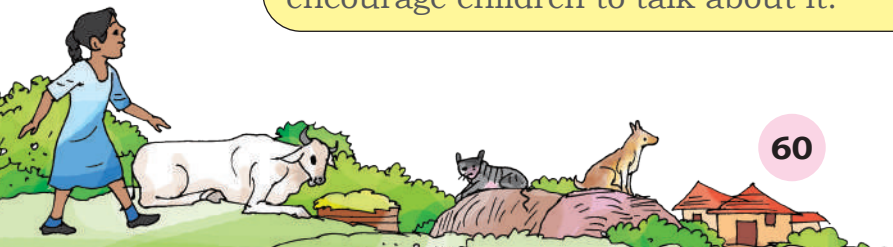
Name of the animal	Place where you have seen them
Monkey	Tree

We bring some animals and plants into our homes. Some may just have started living there. Sometimes we share our home with them happily, but sometimes we do not like them in our home.

- Discuss with elders in your family which animals and plants they kept at home when they were young. Ask them to share any story about these animals and plants.

Note to the Teacher

Collect information from all the children, summarise the list and encourage children to talk about it.



Discuss

Discuss in Pairs

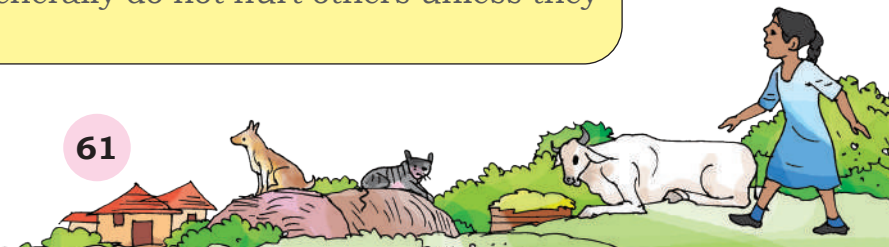
- Which are the uninvited animals, birds and insects that visit your home?
- Why do you think they come to your homes?
- How do you feel about their presence in your home?
- Which of them do you like?
- What do you do when you do not like them?

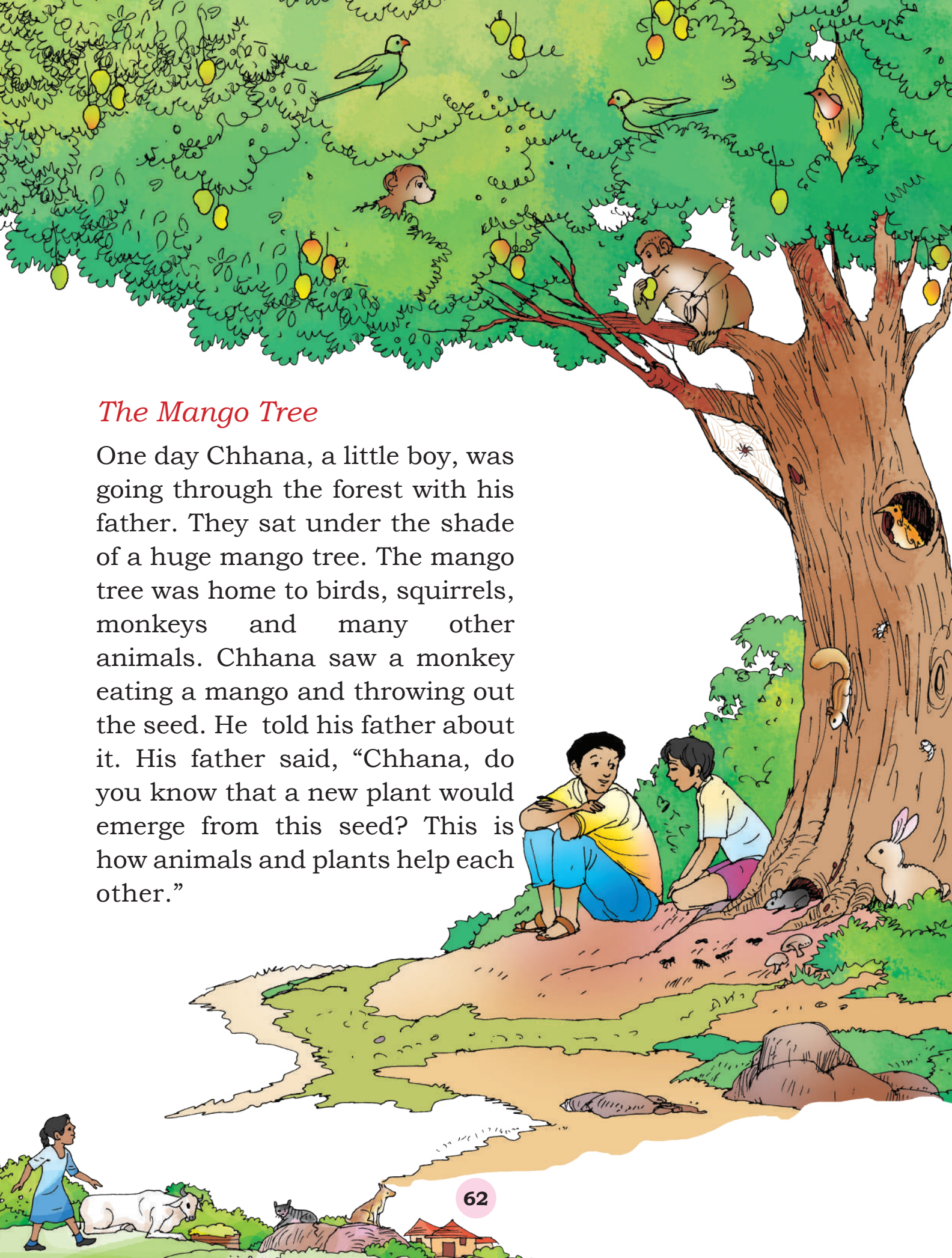
We take care of some animals and plants in our homes by giving them water, food and shelter.



Note to the Teacher

Emphasise on not hurting animals even if we do not like or are scared of them. Animals generally do not hurt others unless they feel threatened by us.



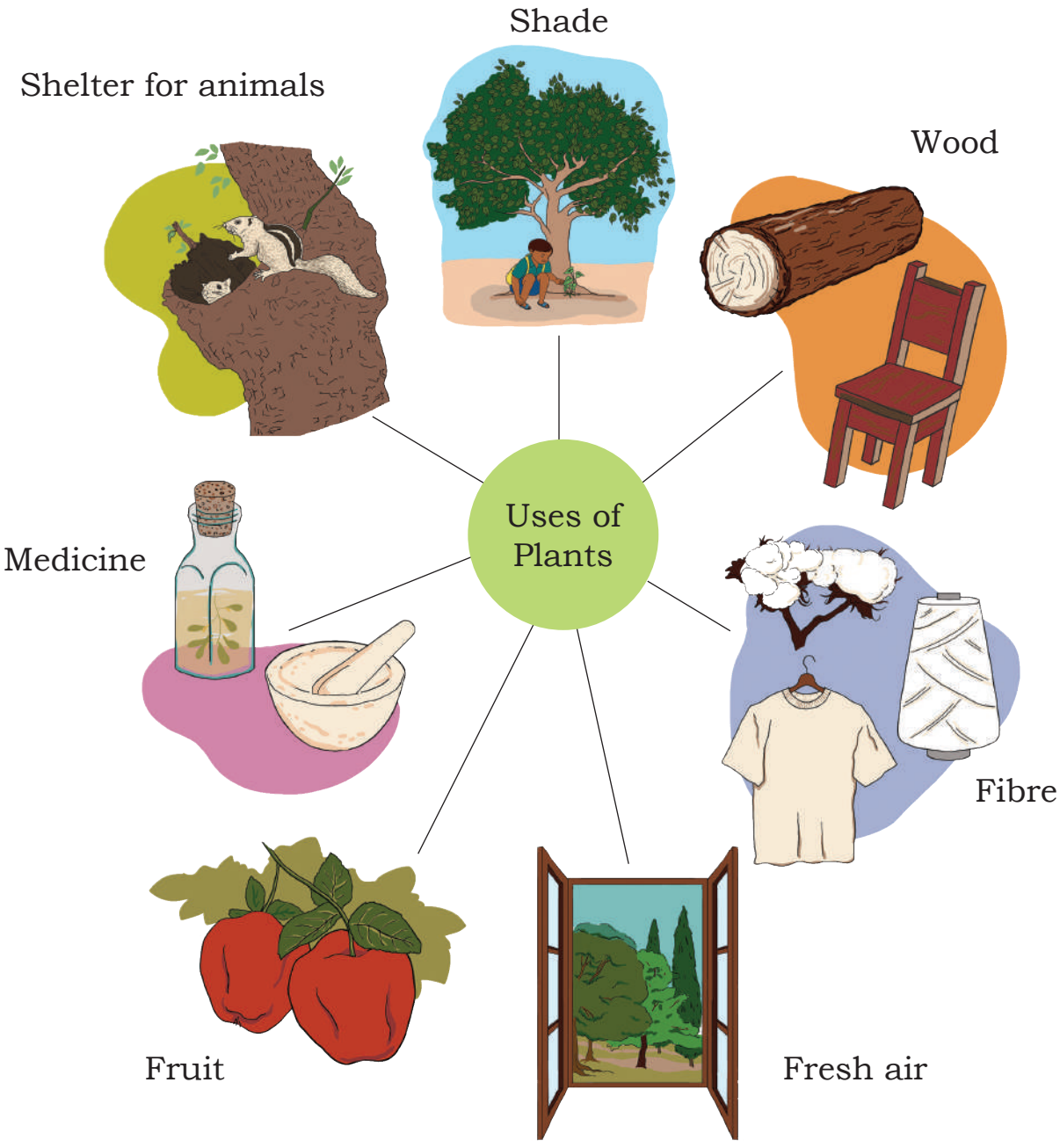


The Mango Tree

One day Chhana, a little boy, was going through the forest with his father. They sat under the shade of a huge mango tree. The mango tree was home to birds, squirrels, monkeys and many other animals. Chhana saw a monkey eating a mango and throwing out the seed. He told his father about it. His father said, “Chhana, do you know that a new plant would emerge from this seed? This is how animals and plants help each other.”

Chhana ran to pick up a mango that dropped from the tree. He said, "Look! I too have got a mango." "Not only fruits, we get vegetables and many other things from plants," said Chhana's father.

"Oh yes, I now remember that you had told this to me earlier. We get medicines, fibre for clothes and wood for our houses from plants."





Discuss

- How are we dependent on plants and animals?
- How do plants help animals?
- How do animals help plants?
- How do you look after plants and animals in your surroundings?
- How do animals and plants depend on us?



Do you know?

Thousands of trees are accidentally planted by squirrels. They bury nuts and then forget where they hid them. Like this, many animals and plants maintain harmony and balance in various ways.

We Need Each Other

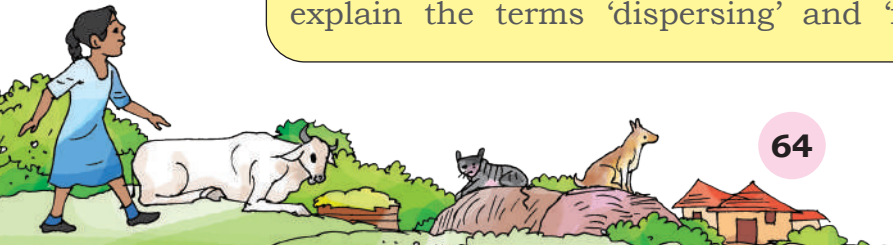
Just as we provide care, protection, food and shelter to animals and plants, we get lots of things from them too.

For example, from cows, buffaloes and goats, we get milk and loving company. That is why we respect these animals so much and we treat them with kindness, care and compassion.

Animals and plants also depend on each other for food and shelter. Animals help plants by dispersing seeds and making the soil fertile through their waste. This helps plants to grow and spread near and far. We also depend on plants and animals for food, shelter, clothing and companionship.

Note to the Teacher

After collecting all the points, consolidate, summarise, and explain the terms 'dispersing' and 'fertile' in simple words.



Activity 1

Get to Know an Animal

- Observe the animals around you.
- Choose any animal that you see often, such as a goat, cow, dog, cat or bird like a crow, pigeon, sparrow, parrot or duck.
- Observe it closely whenever you get a chance. You can also keep a bowl of water and some grains for it.

Write

Write a short description of the animal or bird—

- Name and describe the animal or bird that you have chosen.
- When and where did you first see it?
- Was it there alone or with its friends?
- Describe its movement.
- What sounds did it make?
- Did you see it eating, sleeping, talking to its friends or maybe fighting sometimes?
- Did it do anything that surprised you or made you laugh?
- Share your story with your classmates.







Activity 2

Busy, Busy, Busy and Clever Ants!

You may do this activity near your plant friend, in your classroom or at home. Bring small amounts of three types of food from your kitchen:

- Sweet like sugar or jaggery (kurtai);
- Fried like a *papad* or *potatoes*;
- Boiled or cooked like bread or rice .

Keep these three types of food on the floor in a straight line with one foot distance between them.



Make a Guess

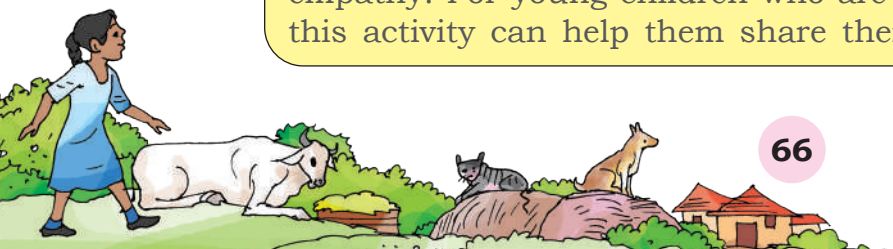
- Who will come for the food?
- Which will be their favourite food?
- Will any ants come to your food?
- Where would they come from?
- Will all the ants look the same?
- What food item will they go to first?
- How many ants will come to the food?
- What will they do with the food?

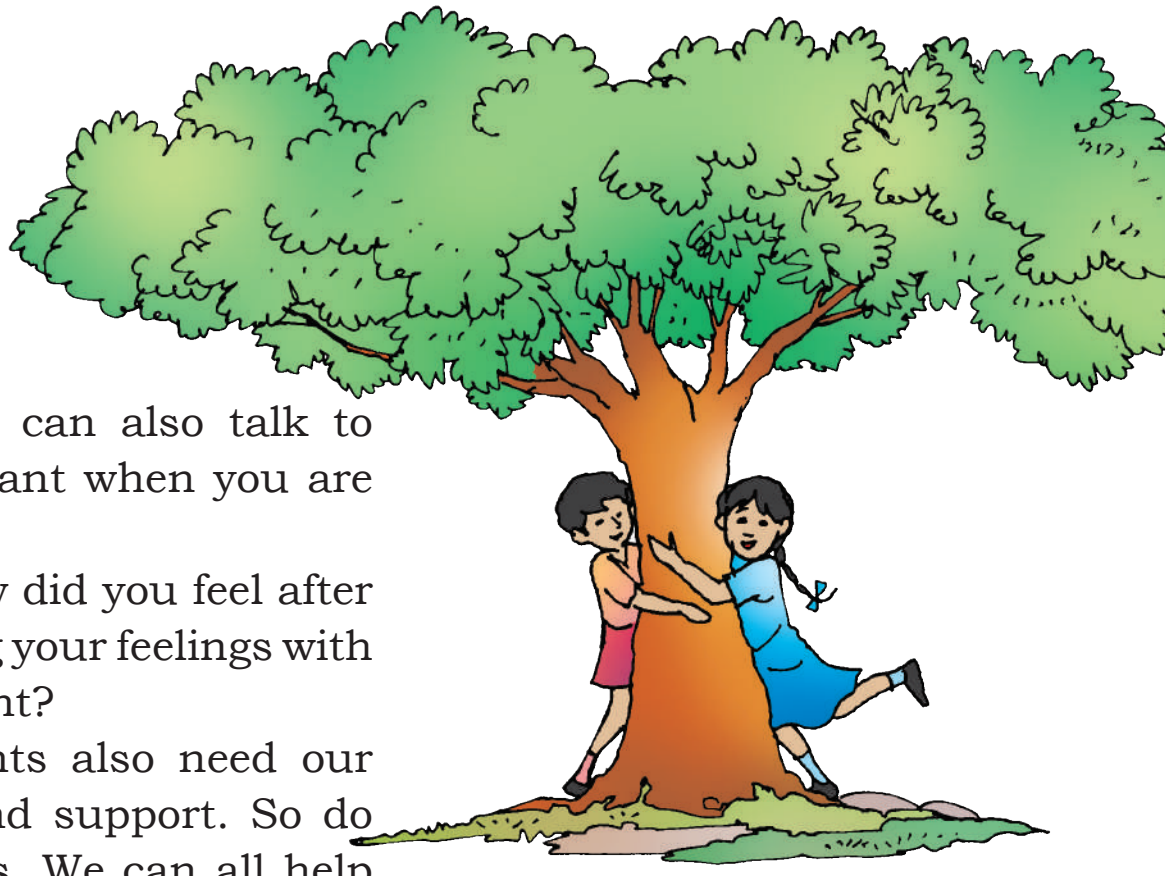
Visiting your Plant Friend

When you are feeling sad, upset or angry you can go to your plant friend and talk to it about how you are feeling.

Note to the Teacher

Young children should be encouraged to make friends with a tree. It is a very powerful and effective method for developing empathy. For young children who are more reserved and quiet, this activity can help them share their feelings.





You can also talk to your plant when you are happy!

How did you feel after sharing your feelings with the plant?

Plants also need our care and support. So do animals. We can all help each other.

Activity 3

Guess Who I Am ?

Sit in pairs. One of you will think of the name of an animal, bird, insect or tree and whisper it in the ear of your partner. Make sure you don't say it too loud! Your partner will have to act and move like the animal, bird or insect and the class will have to guess it! You can switch roles after this.

For example:

- John's friend Ali whispered 'Frog' into his ear. What do you think John did?
- Remi's friend Ruati whispered *'Peepal tree'* into her ear. What do you think Remi did?



Let us reflect

A. Discuss

1. How are we dependent on plants and animals?
2. How should we care for plants and animals in our environment?
3. How do plants and animals depend on us?

B. Write

1. Complete these sentences with the names of plants, birds, animals or insects:
   a. I like looking at _____ because _____
   _____
   b. _____ make me laugh because _____
   _____
   c. My friend _____ likes _____ because _____
   d. I would like to take care of _____ because _____
2. a. Which is your favourite animal, bird, insect or plant among those you have named above?
   _____
   _____
   b. Why do you like it?
   _____
   _____
   c. Write down the names of all the animals, birds, insects that you have seen or learned about from the smallest to the largest.
   _____
   _____



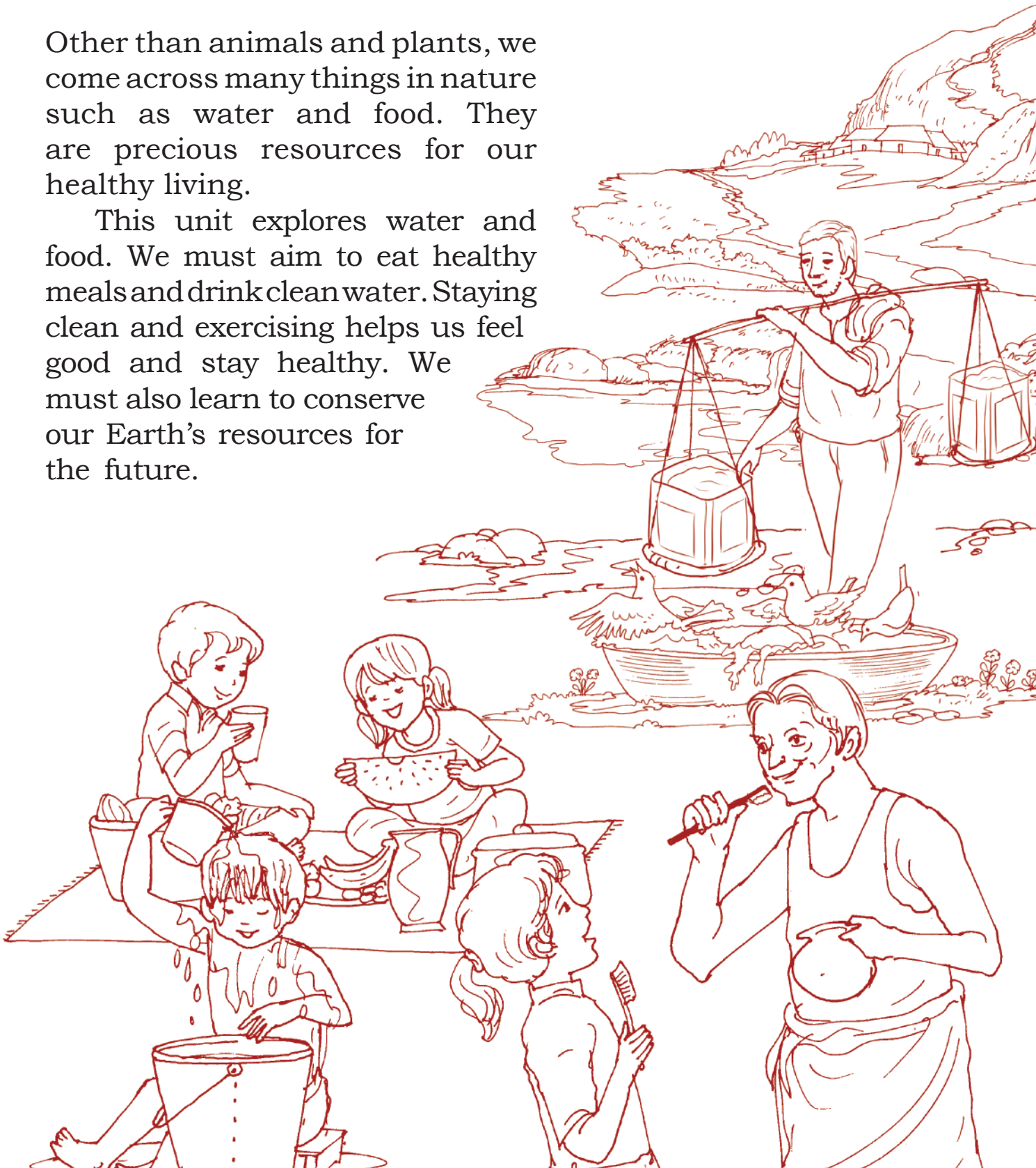
Unit 3

Gifts of Nature

About the Unit

Other than animals and plants, we come across many things in nature such as water and food. They are precious resources for our healthy living.

This unit explores water and food. We must aim to eat healthy meals and drink clean water. Staying clean and exercising helps us feel good and stay healthy. We must also learn to conserve our Earth's resources for the future.



Note to the Teacher

This unit is about 'Gifts of Nature'. The key concepts covered in these chapters are described below.

Chapter 7: Water — A Precious Gift highlights how rainfall provides us with the precious gift of water, which is then stored in different ways. We ensure the cleanliness of this water and distribute it to households. Each household stores water for daily use, employing it in numerous ways. However, challenges arise regarding both the quality and quantity of water. To address these issues, we implement various measures aimed at conserving water resources.

Chapter 8: Food We Eat helps us understand the vital role of food in maintaining our health. We consume a diverse range of foods obtained from various sources. Each food item provides essential nutrients that benefit our bodies in unique ways. Our various cultures possess valuable knowledge about the nutritional value of different foods and offer guidance on making healthy dietary choices.

Chapter 9: Staying Healthy and Happy emphasises the importance of maintaining cleanliness and good health. We acquire essential principles of hygiene and cleanliness, ensuring tidiness in our homes and surroundings. Regular exercise becomes a part of our routine, promoting both physical fitness and emotional well-being. By understanding and following the established rules and regulations of our environment, we protect ourselves from potential harm.





- Plan a 'Food *Mela*' in the class; try to display a variety of food items, e.g., grains, spices, fruits, vegetables, etc.
- Organise an exhibition on a variety of containers and vessels used to store water; you can display pictures too.
- Keep handy authentic and age–appropriate short videos and films, storybooks and poems related to food, water, cleanliness and healthy habits.
- Visits or Visitors: Plan a visit to different sources of water in your neighbourhood with safety. Invite a *yoga* instructor to demonstrate *yogasanas* for good health; invite a health practitioner to talk to the children about maintaining cleanliness and hygiene; invite parents and community members to share and talk about their traditional cuisines during the food *mela*.

Chapter 7

0335CH07

Water– A Precious Gift



Rain, Rain, Come Again!



What comes down,

But never goes up?

Watch the sky every day for a week. Will it rain? Your guess may be right on some days, and on some days it may be wrong.

Are there any clues that help you guess if it will rain? Ask an elder about how they guess. Write down the clues.

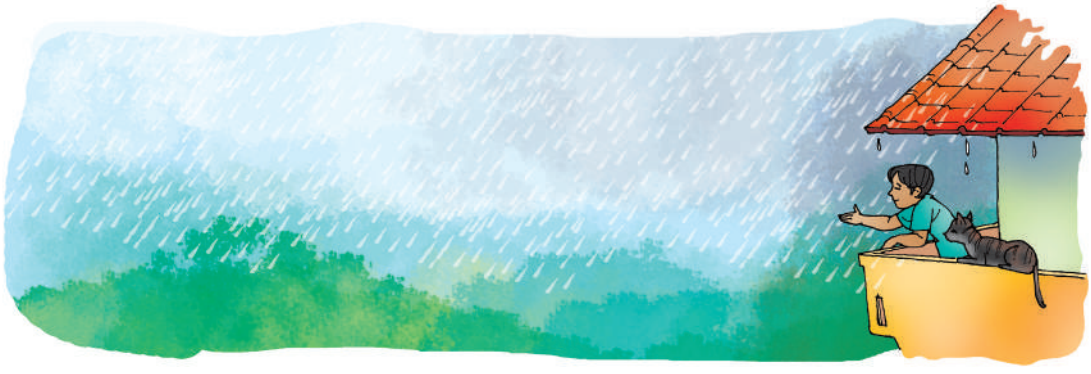


I think it will rain today because …
(write at least 2 clues)



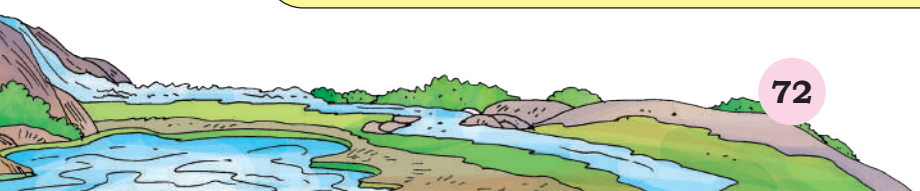
I think it will not rain today because …
(write at least 2 clues)

Here Comes the Rain!



Note to the Teacher

The first part of this chapter can be done whenever it rains in your area. Children may freely observe, question, make guesses, discuss, draw and record their observations.



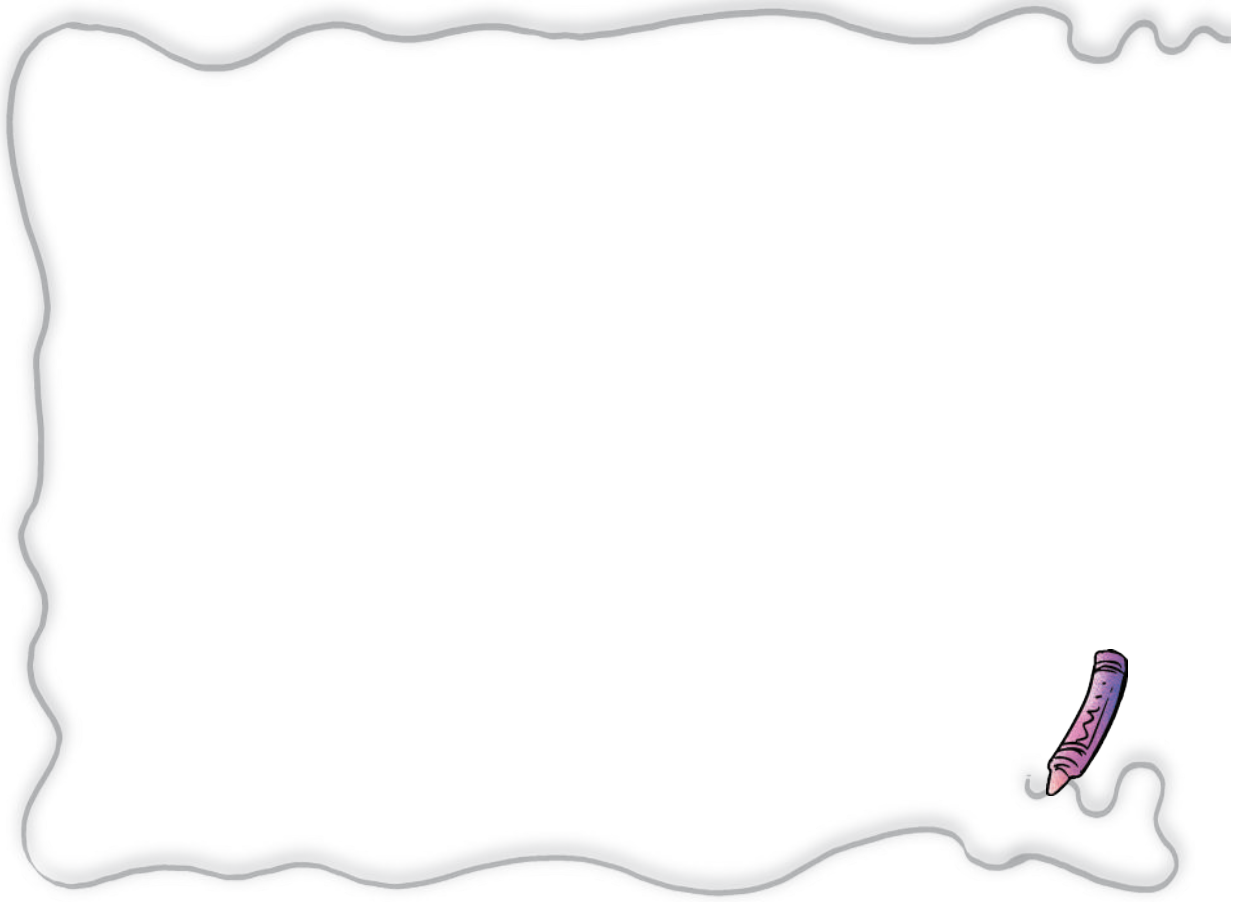
Activity 1

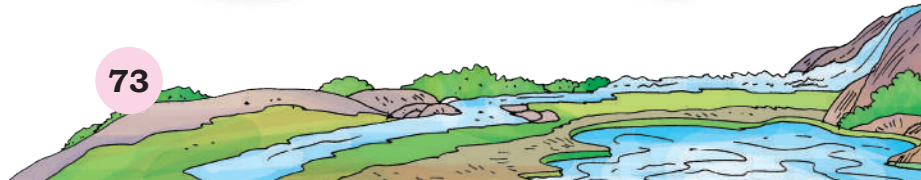
Ask yourself as many questions as you can about the rain.

- Is it a heavy rain or a light one?
- Are the raindrops big or small?
- Do they come down fast or slow?
- Is the rain so heavy that you do not see the water drops, but only lines or sheets of water?
- Is the rain falling straight down? Is it slanting or changing its direction? Guess why.
- Collect the rainwater in a vessel. Does it look clean or dirty?

Draw

- Draw a picture of the rain that you observed.







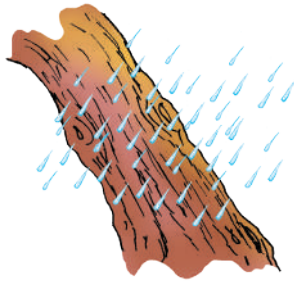
- Do you think it will rain again today? Or tomorrow? Why do you think so?
- Did it rain only in your area or in other nearby places as well? Make a guess, then ask and find out.
- Find some songs about the rain or make up one, in your language or any other. Sing some songs about the rain.
- Did the rain make you happy? Did it make everyone happy?

What happened to the rainwater?



When it rained, a lot of water fell to the ground. Where did all this water go?

Here is the rain falling on different surfaces. Imagine what happens to the rainwater on different surfaces.



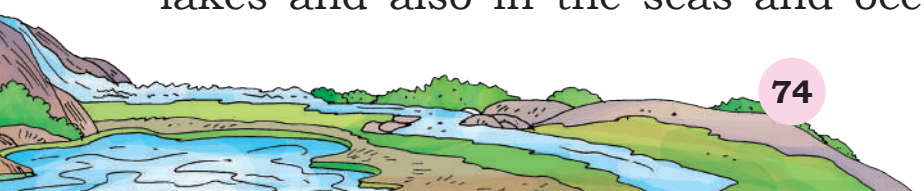
Does the rainwater get absorbed into the soil, collect in puddles or flow away? Have you ever wondered whether it joins a small stream or a river?

What happens after the rain stops and the sun comes out? What happens to all this water? Make your own guesses.



When rainwater gets soaked into the soil, it may slowly flow under the soil to join a stream or a pond. Some of the water gets stored under the ground between the rocks and the soil. The water in our wells comes from this underground water.

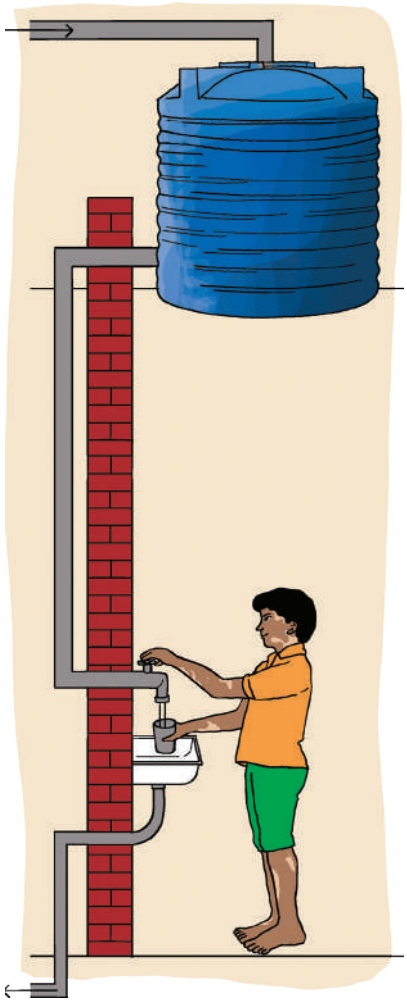
Water flowing in a stream later joins rivers. Some of the water gathers in puddles, ponds and lakes and also in the seas and oceans.





- Is there a stream, spring water, river, pond or lake near your village or city? Find out its name and some information about it. Visit it and draw its picture. Draw any trees, birds or animals that you see around it.
- Find a poem about a river and sing it in the class.
- When does it rain in Mizoram?

Water is a Precious Gift!



Water is a gift that falls from the sky. This gift reaches our homes in special ways.

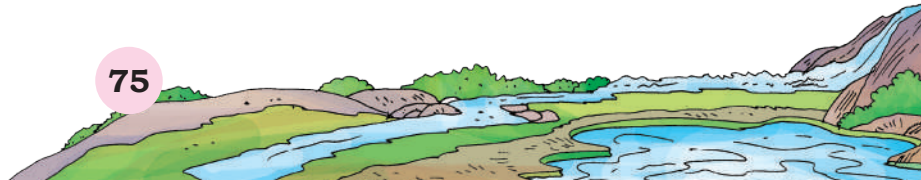
How do we care for this gift? How do we store it? What do we do with it? Let us go indoors and find out.

On most days, Vena and Rini get water from the taps at home. At school too, they get water from taps.

All these taps get water through pipes. From where does the water come into these pipes? Vena and Rini followed the pipes and found that there was a tank on the roof. Now they are puzzled with how the water came into the tank in the first place.

Note to the Teacher

The water cycle will be introduced only in Class 4. For now, let children notice that water remaining on hard surfaces gets dried up in the sun. Rainwater that sinks in the soil is most important, as it recharges our sources of water and helps plants grow.

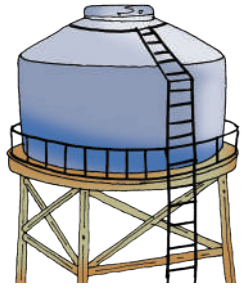


Discuss

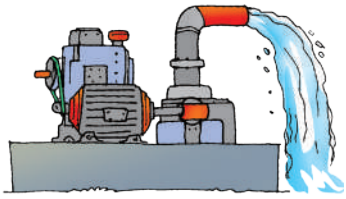
Where do you get water from?



Do you get water from a tap? If yes, ask the elders in your home from where the water comes into the tap. They may tell you about a tank high up on the terrace or some distance away.

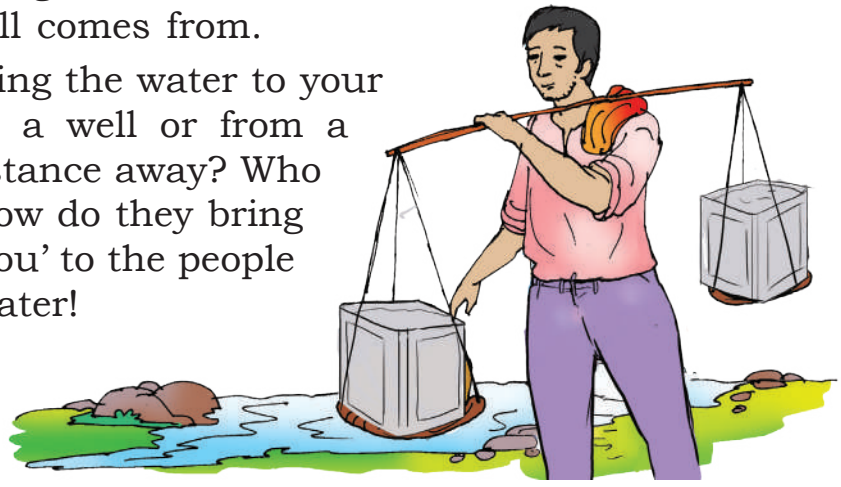


Did you find out about any tanks where the water is stored? How did water reach those tanks? Are there some bigger pipes which bring the water to this tank? Where do these pipes come from?



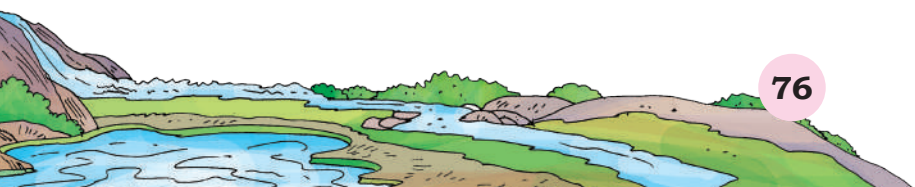
Do you get water from a well or a borewell? Observe how water is drawn from the well. It could be using a pulley or a hand pump or an electric pump. Guess again where the water in the well comes from.

Does someone bring the water to your home from a tap or a well or from a river or lake some distance away? Who carries this water? How do they bring it? Say a big 'thank you' to the people who bring you the water!



Find out

- Do you get water delivered in a tanker? If yes, find out where the tankers bring water from. Does your water come from a spring water, well, river or lake near your village or city?
- Do you know anyone who faces difficulty in getting water every day?
- How do you store\collect rain water in Mizoram?



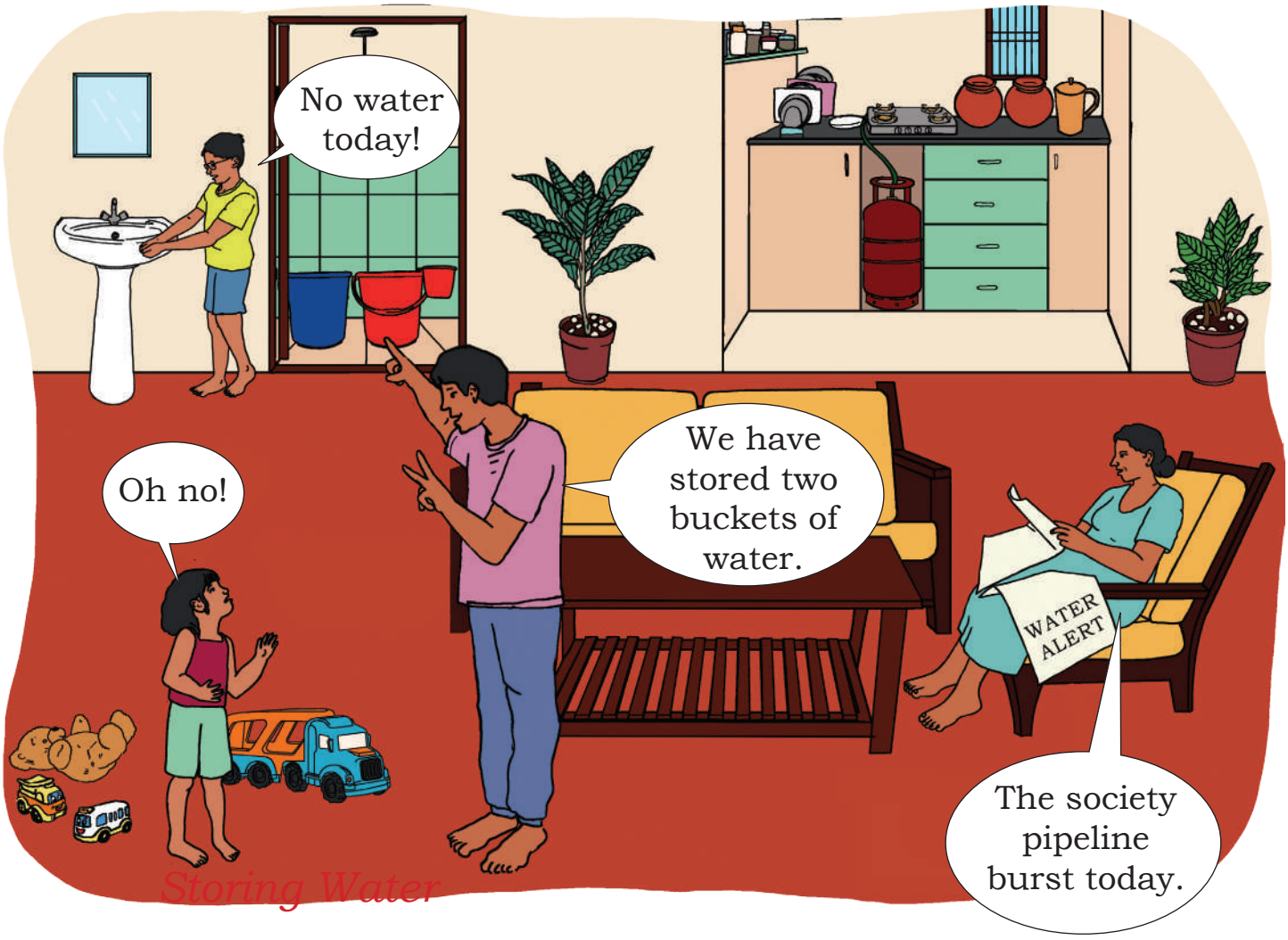
Water in Our Daily Lives

Write

- List all the activities you can think of for which we need water.
- How many mugs of water do you need to brush your teeth? How much water do you use to take a shower?

Have you ever faced a situation when you did not get any water? What did you do then?

One day it happened to Vena and Rini too. Do you know what they did?



Storing Water



Ask your grandparents or any elder:

- How did they get water? Did they use water in the same way as you do?
- How did they store water?
- Write a short story about what you found out.

Storing Water

When we know that we do not get water all the time then we store it. In some places, people do not get running water through taps and pipes in their homes. They have to bring the water from a river or well. Sometimes it is delivered through water tankers and stored at home.

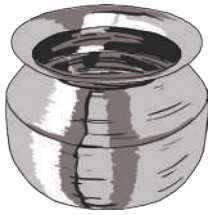
Many years ago, there were no pipes or taps anywhere in the world. So people learned to make containers or vessels to store water. Here are some vessels that we use now-a-days for storing water at home. They are made of different materials.


Clay pot


Plastic basin


Barrel

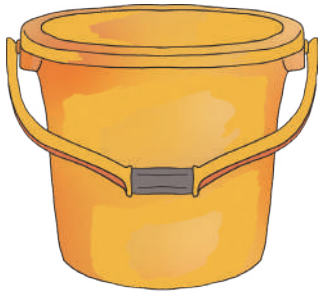

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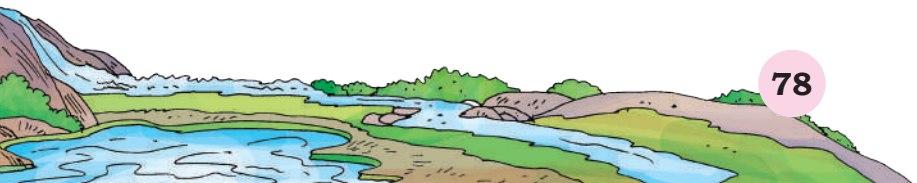

Steel pot


Aluminium pot


Glass bottle


Plastic bottle

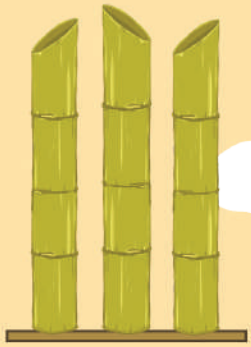

Plastic bucket

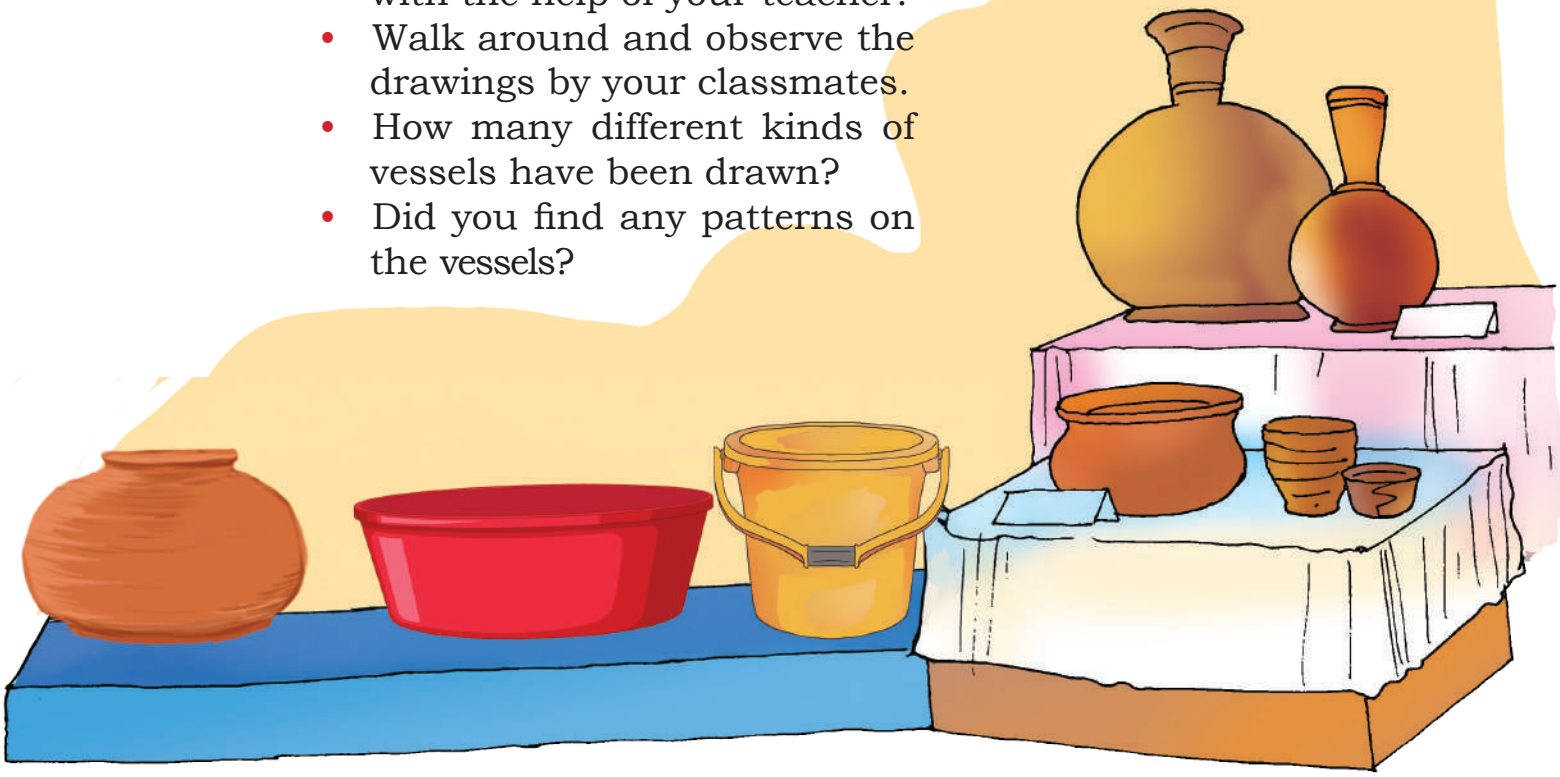


Activity 3

Put up an exhibition

- Identify different vessels used to keep water in your home.
- Ask the elders in your family what types of vessels they stored water in.
- Were they different from what we use now?
- Did the vessels have different names?
- On a separate sheet of paper draw a picture of any vessel that you find interesting and write its name in your language.
- Put up an exhibition of these pictures in your classroom with the help of your teacher.
- Walk around and observe the drawings by your classmates.
- How many different kinds of vessels have been drawn?
- Did you find any patterns on the vessels?

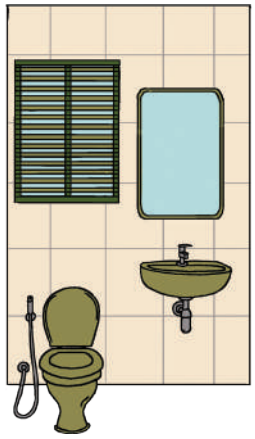


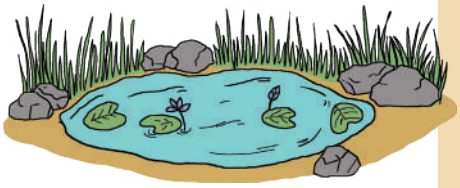


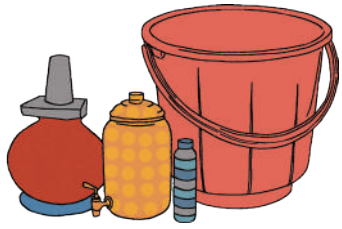
Stop for a Moment and Think!

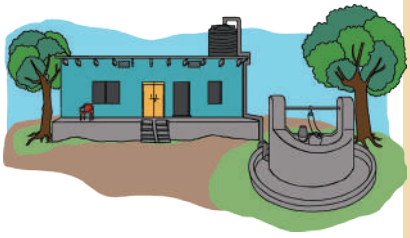


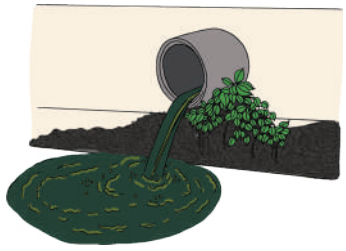
- Water comes down to earth as rain.
- It slowly fills up our many sources—streams, rivers, ponds, lakes, wells, groundwater, etc.
- From these sources we bring water to our homes in many ways.
- We store it in many ways.
- We use it in many ways.
- What happens to water after we use it?







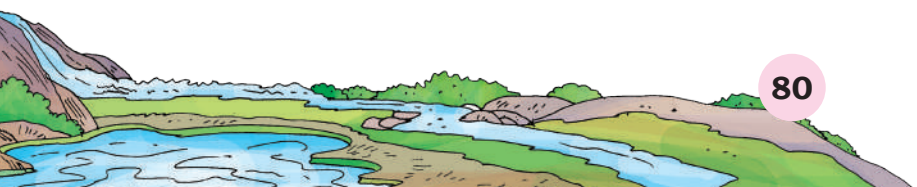




Water helps us in keeping things clean. This is very important for our health. But after we use it, the water becomes dirty. We cannot use dirty water for drinking or cooking. But we can reuse the waste water for watering our plants or for flushing toilets.

Let us strive to reduce our use of water and reuse water whenever possible.

We should not add too much soap and other such chemicals in water. Let us take care of this precious gift from the sky!



Every Drop Counts

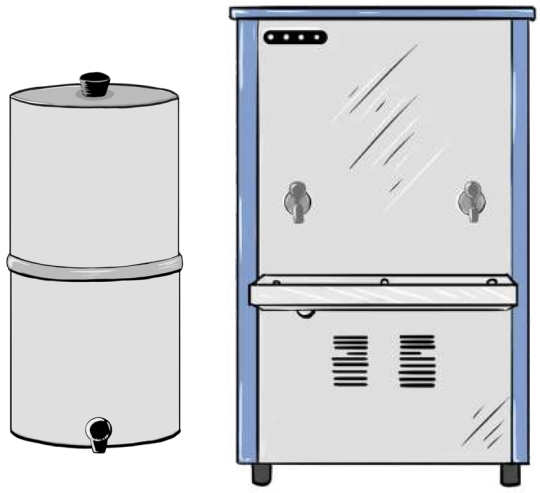
Water is considered sacred because it is absolutely essential for our survival. We cannot live more than 3 days without drinking water.

In some places, where it rains very little and there are no big water bodies, people have to walk for long distances to get water.

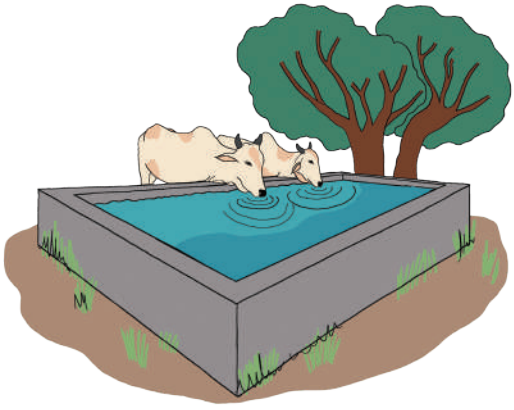
Don't you think everyone must get clean drinking water anywhere, anytime?

Take Action

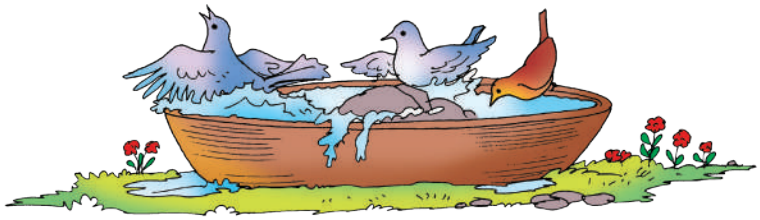
Offer clean drinking water to whoever comes to your door. It could be people who provide us postal or sanitation services. In many places, there is a tradition of keeping pots of water outside homes so that anybody feeling thirsty can have water. This is particularly so in the hot summer months.



AMC providing free drinking water



Drinking water for animals in a tank



A birdbath

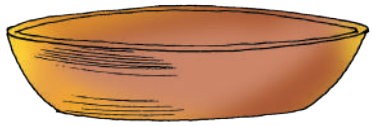
#In Mizo society, it is a common practice to keep filters or buckets of water outside our homes, so that anybody who is thirsty can have water.



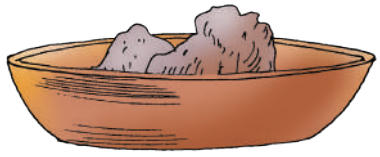
Activity 4

Prepare a birdbath — offer water to birds in the hot summer months.

A birdbath contains water in a shallow plate for birds to drink and cool down.



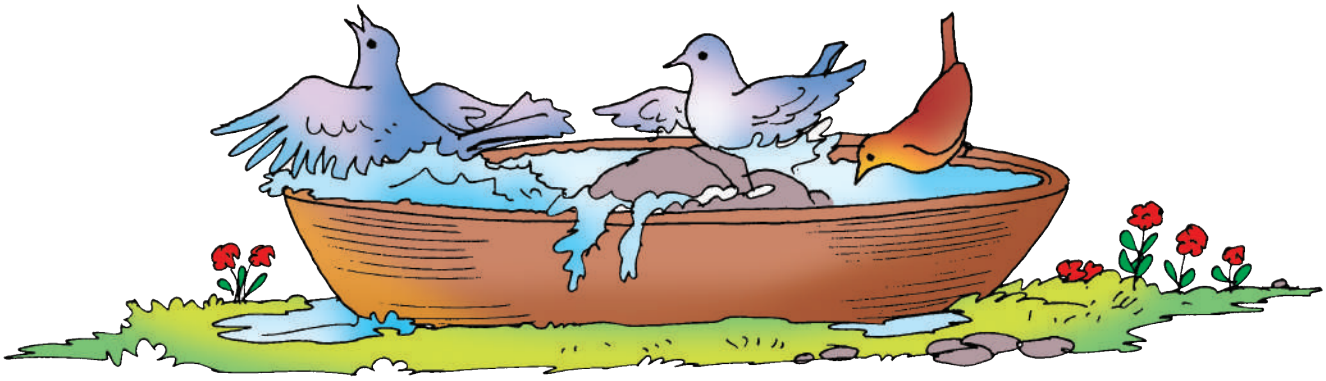
- Take a shallow and wide container (an old big bowl or a base of an old pot or a bucket, less than 10 cm deep)



- Keep some stones in it for birds to perch. You may make the sides sloping by adding some smaller pebbles. Smaller pebbles also help insects to use this water.



- Add fresh water and keep the bowl in your yard, balcony or terrace.
- Change the water frequently.
- Clean the birdbath with a scrubber twice a week. Do not use this scrubber for kitchen utensils; reserve it for the garden.



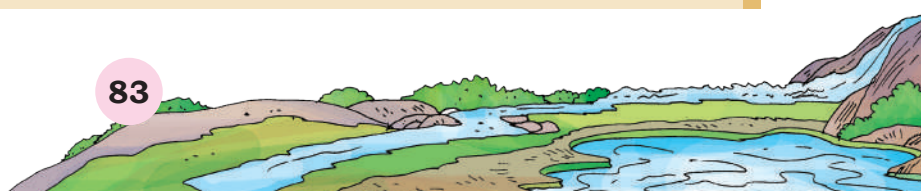
Let us Reflect

A. Write

1. You waited for rain and watched how raindrops fell to the ground. You collected rainwater and observed if it was clean or dirty. You saw what happened to the rainwater that fell in different places. Now write a few lines on your observations of the rain.
2. You found out the name and some information about a stream, river, well, pond or lake near your place. Write it in a few lines: Is this water used for drinking? If yes, how is this water carried to your home? If it is not used, why not? Was it used in the past?
3. Do you find spring water in your locality? Count them.
4. Is water always available? If yes, why? If no, give reasons.

B. Discuss

Water is very precious. We should be cautious about how we use it. We should not waste even a drop of water. Discuss among yourselves and list the activities in your house or outside, due to which water gets polluted or wasted. How can we avoid wastage of water? Think of three solutions with your group and write them in your notebook.



Chapter 8

0335CH08

Food We Eat



Activity 1

What is your favourite food? Share your reasons.

We all like to eat and drink different things. Some of these food items are sweet, some are sour, some are spicy and some are bitter. We eat fruits, we eat vegetables and we eat rice, dal or *roti*. We drink milk, *lassi* or juice. Have you wondered why we eat and drink?

Do you know?

Chhappan bhog is special food prepared on festivals and auspicious occasions in honour of guests, friends, and family. It contains 56 varieties of food items representing a harmonious blend of six tastes: sweet (*meetha*), spicy (*teekha*), astringent (*kasaila*), sour (*khatta*), salty (*namkeen*) and bitter (*karva*).

Find out

Talk to the elders in your family and discuss in the class: Why do we need to eat and drink?

Story of Shirin — the Runner

Shirin was in Class 3. She used to run very fast. She ran faster than everyone in the class. One day,

Note to the Teacher

Ask children about their favourite food items. Write the names of these food items on the board and encourage the children to speak about them.

during a sports event in the school, Shirin met a runner who was a champion and had won many medals. Shirin asked the champion, "How can I run like you and win medals?"



The champion told Shirin that she could also become a champion if she practised a lot and ate healthy food. Shirin said, "I practise a lot, but I often fall sick." The champion asked, "What do you eat?" Shirin said, "I like only rice and potatoes." The champion laughed and said, "Shirin, it is good that you eat rice and potatoes, but you must eat a lot of other things as well, to have a strong and healthy body."



"Eat different kinds of vegetables and fruits. Eat things made from different kinds of grains, like rice, *ragi*, *jowar*, wheat, *bajra* and many others. Eat pulses (*dal*) and nuts. It is always good to eat food cooked at home."

Shirin followed the champion's advice. She practised harder and started eating a variety of food items cooked at home. She understood the



value of a balanced diet. After a few months, she could run faster than before. She felt energetic and healthy. Recently, she won a medal for her school in a running event.

Discuss

Why do we need to eat healthy food?
Discuss why it is unhealthy to eat street foods and frozen foods

Activity 2

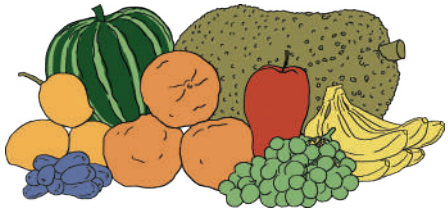
Tick the food items you eat regularly from the pictures given below.



☐ Vegetables



☐ Salads



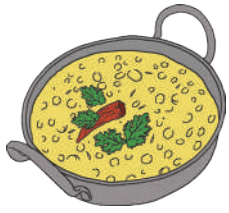
☐ Fruits



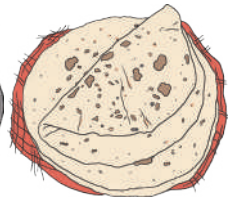
☐ Sweets



☐ Rice



☐ *Dal*



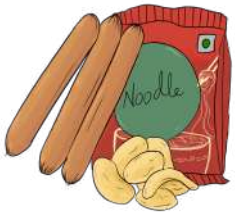
☐ *Roti*



☐ *Paneer*



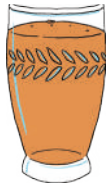
☐ Milk



☐ Frozen and snacks



☐ *Lassi*

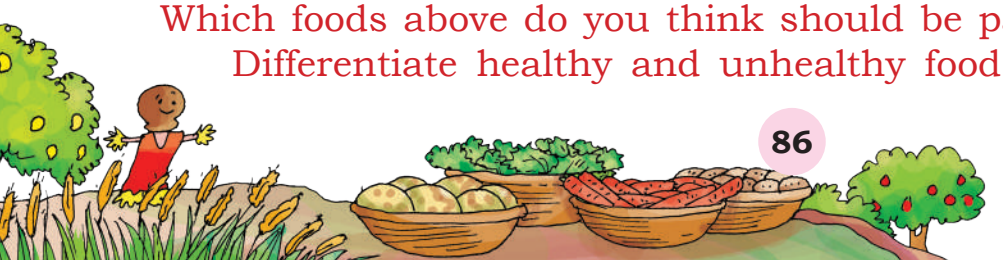


☐ Juice



☐ Soft Drinks

Which foods above do you think should be part of a balanced diet? Differentiate healthy and unhealthy food. Discuss.



We Eat Different Things

Elders in our family cook different foods during summer and winter. When it is hot, we love to eat *kulfi* or ice-cream and drink lassi. In winter, we eat warm food, soups and stew and enjoy hot drinks. We get different fruits and vegetables in different seasons. We get mangoes and melons in the summer and plenty of apples in the winter.



Make a list of seasonal fruits and vegetables available in your place.

Fruits	Vegetables	Seasons

In different parts of our country, people eat a variety of delicious foods. Are there some dishes that you have heard about but have not tasted yet? You, your friends or family members may have travelled to different places and found different types of foods eaten there. Someone you know may be staying in another part of the country and eating some food items different from what you eat. Find out the names of these foods and discuss them with your friends.



Name these drinks in your language.



Tender Coconut Water



Mango Juice



Lassi



Sugarcane Juice



Orange Juice



Lime Water

During the summer, the weather is hot. We sweat a lot. When we sweat, we lose water from our body. That is why, in the summer we drink more water, buttermilk, *nimbu pani* (lime water), *lassi*, sugarcane juice or tender coconut water.

We also sweat when we play or do any physical activity. We should drink water frequently.

How often do you drink water?

Our body needs a lot of water. We cannot live without water. That is why we often say, 'water is life'.



- Do you know which foods are grown in the fields? Write a few names of such crops.
- Discuss and write down in what form some of these foods are cooked.

Where does food come from?

We eat different parts of plants. Some examples are given below. Put a tick (✔) against the items that you eat.

Leaves



☐ Lettuce



☐ Fenugreek (*Methi*)



☐ Cabbage



☐ Mustard



☐ Coriander (*Dhaniya*)

Fruits



☐ Guava



☐ Passion fruit

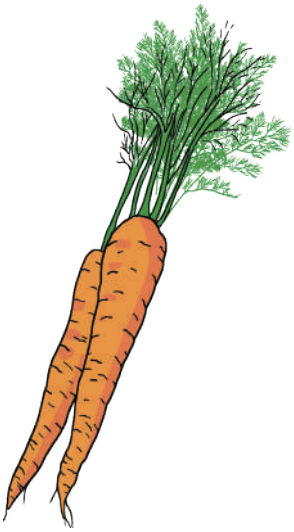


☐ Apple

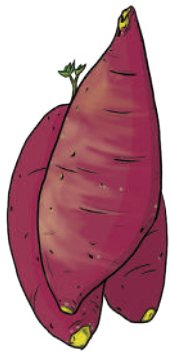


☐ Mango

Roots



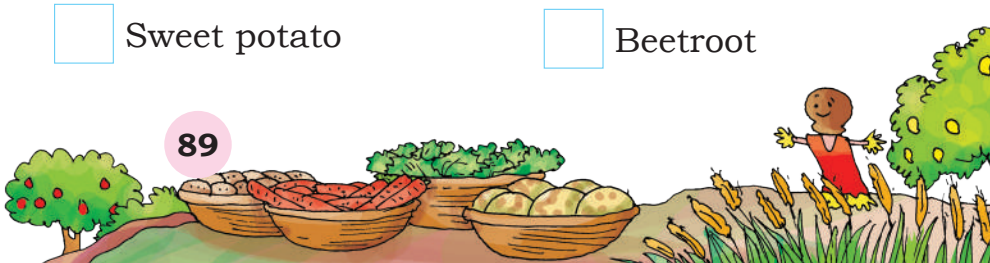
☐ Carrot



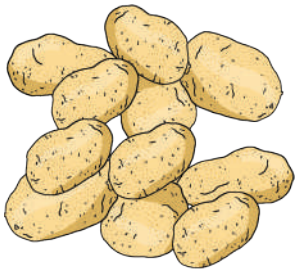
☐ Sweet potato



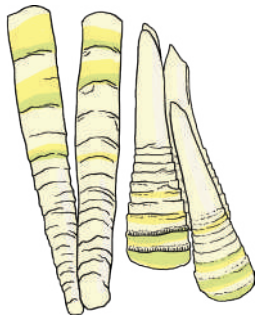
☐ Beetroot



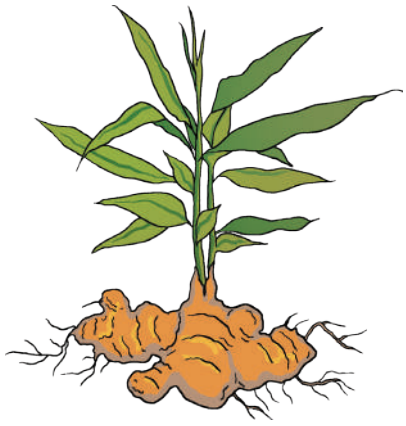
Stems



☐ Potatoes



☐ Bamboo shoots

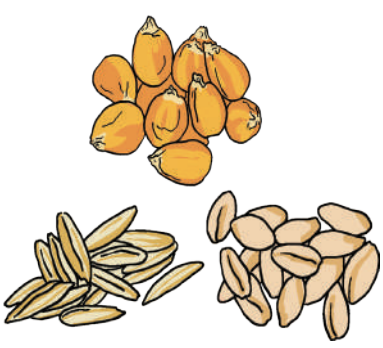


☐ Ginger

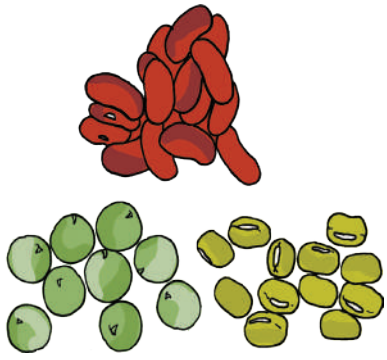


☐ Onion

Seeds



☐ Grains



☐ Pulses



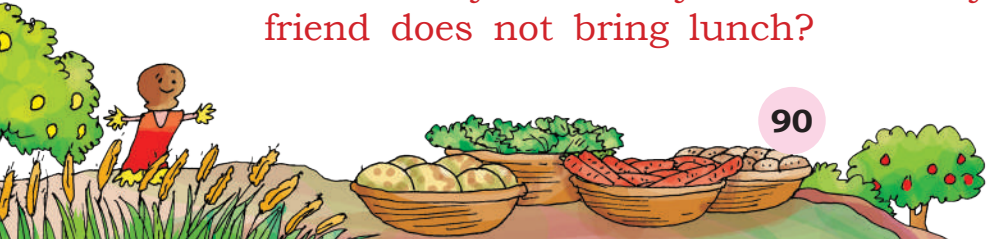
☐ Dry fruits

Some people also eat things that are taken from animals, such as milk, curd, *ghee*, cheese, *paneer*, honey, eggs and meat.

Puzzle Time

Two of our most commonly used ingredients are neither obtained from plants nor from animals. Name at least one of these ingredients.

Would you share your food with your friend if your friend does not bring lunch?



Let us reflect

A. Discuss

1. Why do we need different kinds of food?
2. Why do we eat seasonal foods?
3. How can you tell if a food is healthy or unhealthy?
4. Why is it important to avoid wasting food? Can you think of some ways to reduce food waste at home?

B. Write

1. List the fruits and vegetables eaten in your family.
2. Write the recipe of your favourite dish.
3. Write a name of a food item that includes both plant and animal based ingredients. For example, *lassi* includes yogurt/curd which is prepared from milk (animal based ingredient) and sugar which is prepared from sugarcane (a plant based ingredient).

C. Draw

1. Draw three plates or *thalis* with various food items in your notebook.
2. In these plates draw and label food items that you eat in the morning, afternoon and at night.

D. Eating together

Bring any fruit to the class. Prepare a fruit *chaat* or salad with the help of your teacher. Share it with your friends.

E. Think

Imagine you suddenly have a guest visiting your home. What kind of food would you serve them and why?



Chapter 9

0335CH09

Staying Healthy and Happy



We know that we must be healthy so that our bodies and minds can work properly. Here are some simple habits to keep our bodies clean and free from diseases. These habits keep our bodies and minds healthy and happy.















Clean and Bright



Ask yourself these questions.

- Did I brush my teeth today?
- Did I take a shower?
- Did I comb my hair?
- Did I wash my hands with soap?
- Are my nails trimmed and clean?

Daily Routine

Write

Write down the activities that you do every day, from the time you wake up, till you go to sleep. Your list should include the activities below. Remember that you do some of these things more than once in the day:



- Take a shower
- Wash your hands with soap
- Brush your teeth
- Drink 6–8 glasses of water
- Eat food
- Sleep well for at least 8 hours total
- Play outside

Check your list for these activities

- Do you brush your teeth twice in the day — once after waking up and once before going to bed?
- Do you rinse your mouth every time after eating food?
- Do you wash your hands with soap after using the toilet and after coming home from outdoors?
- If your answer to any of these questions is "No", think and discuss how you can make it a habit. Is there anything that makes it difficult for you to follow these routines?



How do we Brush our Teeth?

Mami's *Apu* (grandfather) uses twigs from a *neem* or *charcoa*l to clean his teeth. "*Apu*! How come you don't use a toothbrush like us?" asked Mami.



Apu laughed and said, "Well, every day I get a fresh twig from the trees nearby. I chew it to make a brush and remove food particles stuck between my teeth. It gives my gums a good massage too. You should try it sometime!" Mami found the *nee*m twig to be too bitter, but the *charcoal* tasted better. "I might start using *charcoal*, *apu!*" exclaimed Mami.



Ask your grandparents or any elderly person in your neighbourhood — What did they use to wash their hair, body and clothes and clean their teeth when they were young? Can these things be found now?



Do you know?

The modern idea of brushing teeth came from the Indian hygiene tradition of *datun* — using twigs of certain plants including *neem*, *karanj*, *babool*, etc., to clean our teeth.

Activity 1

Making a home-cleaner using orange and lemon peels

We use many cleaning agents at home to remove dirt and germs from surfaces like kitchen slabs, furniture and bathrooms. Find out what home-cleaners are used in your home. You can also make your own eco-friendly cleaner! Here is what you need:

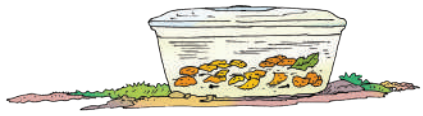






- Peels of 8–12 oranges or lemons, enough to fill a half-litre transparent container.
- Ten whole cloves (*lawngpar*) or 2–3 bay leaves (*tejpatta*) (optional)
- Two cups of white vinegar, enough to cover the peels or spices.

Now put all these ingredients in a half litre transparent container and close the lid. Keep the container in a sunny area for about two weeks, occasionally shaking the mixture. Strain the liquid after two weeks and your all purpose cleaner is ready! You can mix a cup of the liquid in one bucket of water to clean floors and bathrooms.

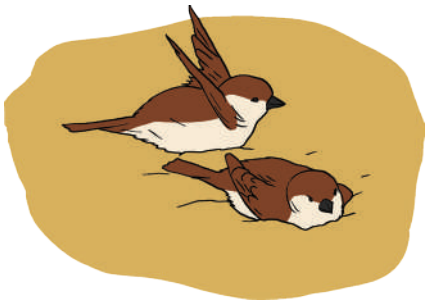


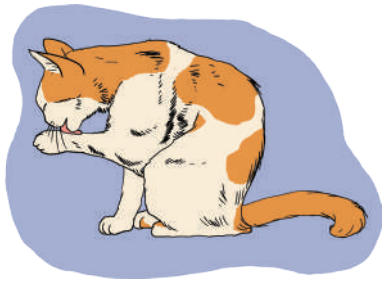
Note to the Teacher

You can discuss that routines may vary based on where we live and access to resources like water.

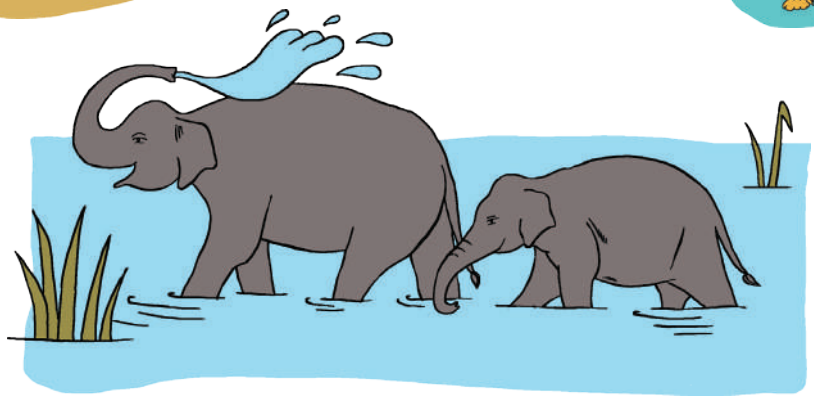
We have some traditional methods for cleaning. This includes natural cleaning alternatives such as, *Hlingsi* or *Chingal* for the hair and some safe and effective recipes for household cleaning.











Animals like to keep themselves clean too!

Have you ever seen monkeys sitting and grooming each other? This is a way in which they keep their bodies free from insects. You may have also seen birds using their beaks to clean their feathers. Next time do observe different ways in which animals and insects around you might be cleaning themselves.

Playing Outdoors and Indoors too

Have you noticed that, after running fast to catch your friends in a game, you are breathing faster and deeper? Maybe your cheeks are a little red and you are feeling a little warm and start sweating. This is because exercise makes our heart work harder and better. Exercise is good for the body. There are many ways to exercise and keep ourselves fit.



Activity 2

Hop, skip, jump!



Try the following moves:

- Walk like a duck.
- Jump like a frog.
- Run like a cat.

Which moves did you enjoy the most?

Take a skipping rope and count as you jump. Do this with your friends and see who can jump the maximum number of times.

Then, invite a friend to start jumping after you skip 10 times or after you say a short poem as you skip. For example:

I like *alu*,

I like *papad*.

I want _____

(name of a friend)

To jump with me!



What other games do you play with a skipping rope? Teach and learn from your friends.

Note to the Teacher

The body requires mainly three types of exercises — strengthening the cardio-respiratory system; adding strength to the muscles and bones; and maintaining or enhancing body flexibility.



Hriata's grandmother cannot move much because of the pain in her knees. But she still walks around the house a little and loves to play chess with Hriata. She says that both the mind and body should be active.

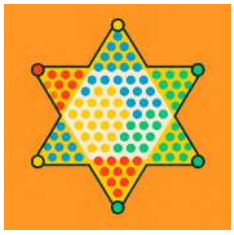


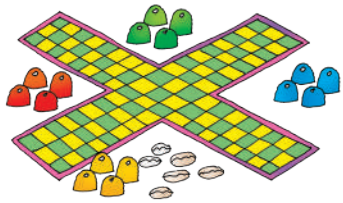
Name the Game!

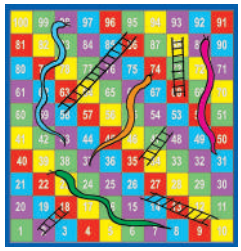
What types of games do you like to play outside your home?

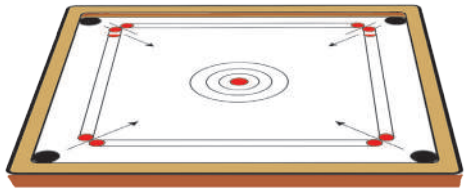


Can you identify the games shown here? Have you played them before?











I Spy!



Can you find the names of all the games hidden here? Are any of these your favourites? One has been done for you.

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



Playing Safely

It is important to be safe while having fun. Which of the following places is considered a safe area to play? Why or why not?



A busy road

☐ Safe

☐ Unsafe



A park

☐ Safe

☐ Unsafe



A schoolground

☐ Safe

☐ Unsafe



A roof without railings

☐ Safe

☐ Unsafe



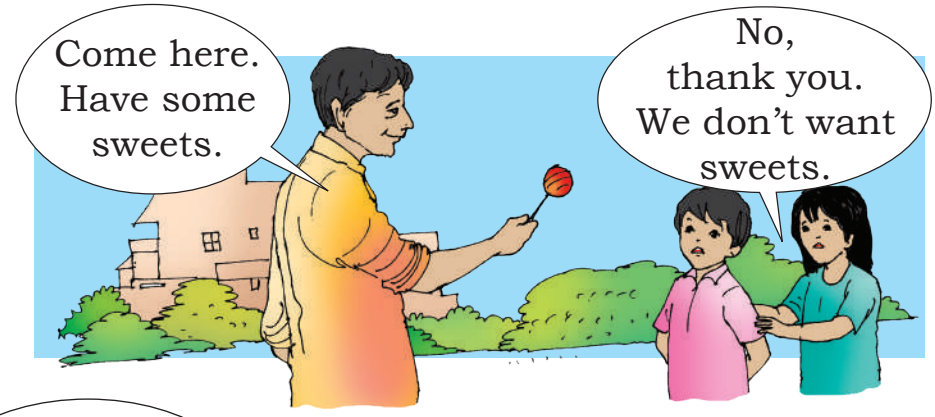
A construction site

☐ Safe

☐ Unsafe



In public spaces, there may be strangers. Do not interact with strangers unless you are with your parents or any other adult you trust.







We should pay attention to our surroundings when playing.

Note to the Teacher

You may encourage children to be careful when they come across new people. Parents may use a pre-decided password if they need to send a new person to pick-up their children.



Let us reflect

A. Write

Make your weekly health table.

What makes you feel sleepy, hungry or tired? Feelings are the body's way of telling us that something is amiss. We all have different needs. We should each know what is good for our body and mind. For this, track your activities for a week and observe how you feel.

Day	Did I brush my teeth twice?	Did I use the toilet in the morning?	Did I take shower?	How much time did I sleep?	What did I have for break-fast?	How long did I watch TV or play on the phone?	How long did I play out-doors?	How did it make me feel? (Good, okay, not so good, bad)
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								
Sunday								

Note to the Teacher

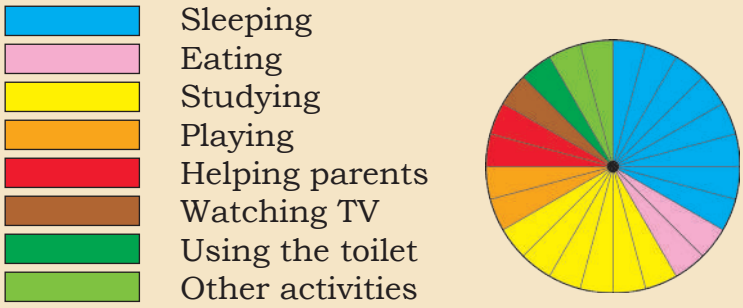
You may encourage children to find patterns and make connections between good sleep, diet and exercise and feeling good. Also discuss whether children find any of the healthy activities difficult to follow regularly. Completing the table is a form of assessment for the chapter.



B. Draw

Draw a big circle in your notebook and divide it into 24 slices. Imagine that each slice is one hour of the day. Now colour these slices differently based on the number of hours you spend doing different activities in one entire day of 24 hours.

For example, Mami spends 8 hours sleeping, 2 hours eating, 6 hours in school or studying at home, 2 hours playing outside, 2 hours helping her parents at home, 1 hour watching TV or playing on the phone, 1 hour in the toilet and 2 hours on other activities. This is what Mami's circle looked like.



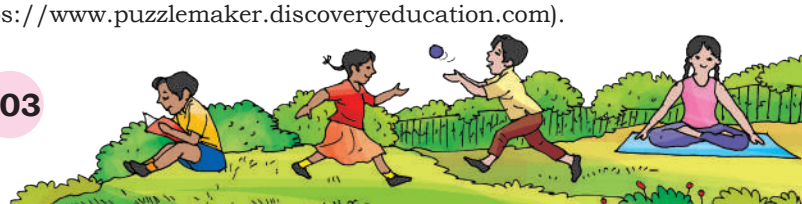
C. Discuss

Think of one activity you would like to do at least twice a week to improve your stamina. It could be running, jumping, climbing stairs or anything else. Discuss it with your friends and try doing such activities together.

Note to the Teacher

One simple way to divide a circle into 24 parts by hand (approximately, without using a protractor) is to first divide it into four quarters, then divide each quarter into 3 equal parts. At this point, there would be 12 equal sections. To make 24 sections, divide each section into two equal parts. This intuitive drawing exercise would also later connect with fractions and proportions, as well as drawing a clock and the *Ashok Chakra* on a flag.

Answers to the 'I Spy' puzzle (Page 116)—badminton, basketball, cricket, football, gymnastics, hockey, kabaddi, khokho, tennis, volleyball (Reference: https://www.puzzlemaker.discoveryeducation.com).



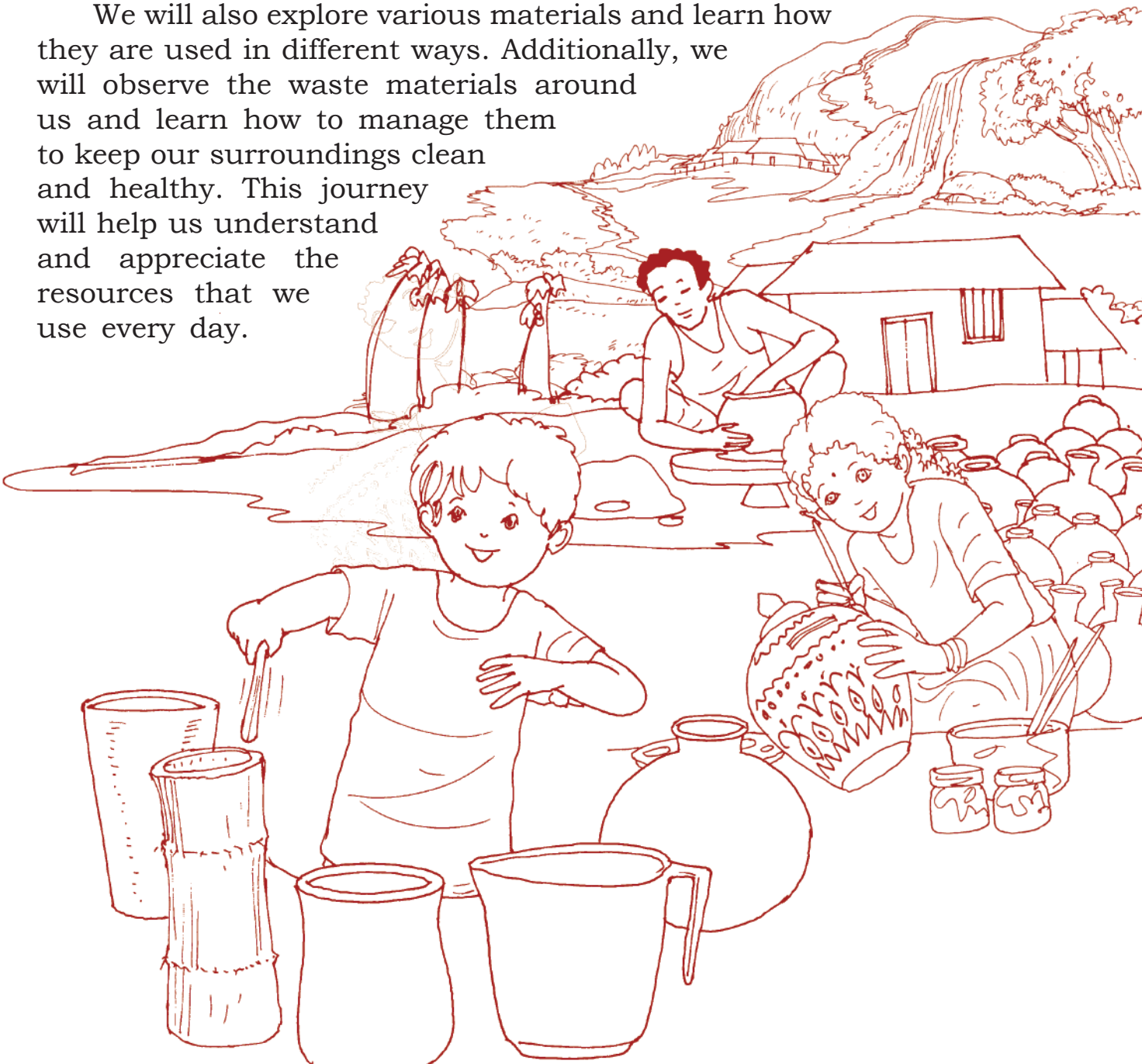
Unit 4

Things Around Us

About the Unit

In this unit, we will explore the many things that we make and use to live comfortably. We will observe these items, learn what they are made of, and discover where they come from. We will delve into the natural resources that provide us with these materials.

We will also explore various materials and learn how they are used in different ways. Additionally, we will observe the waste materials around us and learn how to manage them to keep our surroundings clean and healthy. This journey will help us understand and appreciate the resources that we use every day.



Note to the Teacher

This unit is about 'Things Around Us'. The key concepts covered in these chapters are described below.

Chapter 10: This World of Things helps us to explore the things around us, observe things closely to see what they're made of and where they come from and learning which things come from nature and which are made by people. Moreover, we explore the diverse properties of various materials.

Chapter 11: Making Things helps us to learn about different materials and how they are used. We discover how houses are constructed using natural resources and how people introduce new designs and styles. Moreover, we discuss the importance of always adhering to safety rules.

Chapter 12: Taking Charge of Waste emphasises the importance of putting trash in designated areas and sorting it correctly. We also describe the value of reusing and recycling. Furthermore, we explore ways to maintain cleanliness and safety in our homes and neighbourhoods.



The use of newspapers or old cloth for gift wrapping is an eco-friendly practice that reduces waste and conserves resources. By creatively utilising such items, we not only reduce our waste but also add a personalised touch to our gifts.



- Collect and display a variety of things made of different materials (metal, wood, glass, plastic, clay, etc.).
- Visits and visitors: Organise a visit to a tailor, weaver, carpenter, local toy maker, etc., or invite them to the school to talk to the children.
- Organise an activity for the children to make a dustbin (each for dry and wet waste) in the class from waste materials.
- Demonstrate the segregation of waste into dry and wet (e.g., after lunch). Ensure children wear gloves and masks.



Chapter 10

0335CH10

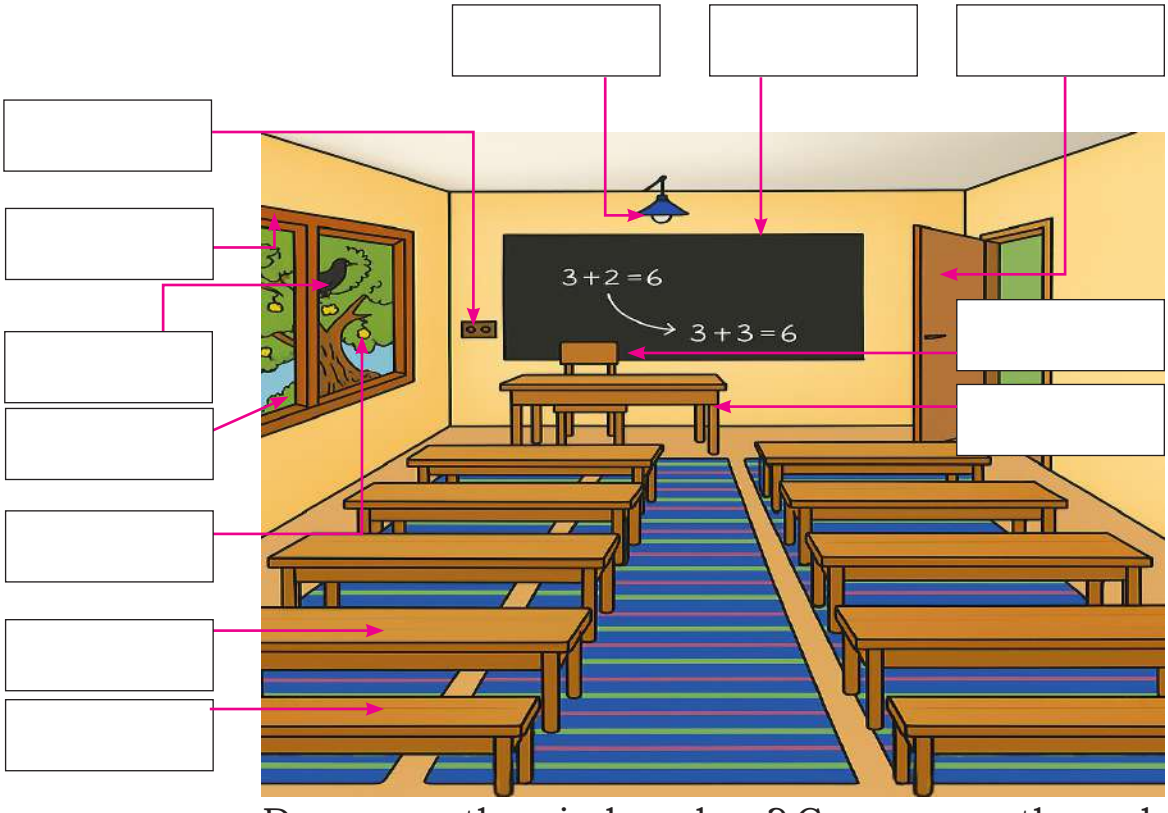
This World of Things



Let's Take a Look Around Us!

Kimi reached school early. Sunlight shone through the windows and the classroom looked bright and beautiful. Kimi wanted to capture this scene in a picture. Here is what she drew.

Can you name the things that Kimi has drawn? Write in the boxes given.



Do you see the window glass? Can you see through it? Why or why not?

Activity 1

Understand your Classroom

Draw a picture of your classroom in your notebook. Label the things that you have drawn.

Kimi is curious, "Where have all these things come from? Who has made them? What are they all made of ?" she thought.

Let us help Kimi find out.

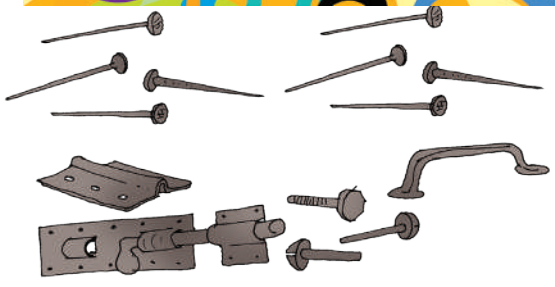
The table and chair are made of wood. Where do we get wood from?

The hinges, nails and latches of the door are made of some metals.



Do you know?

Metals are carefully extracted from certain rock and sediment (called 'ore') dug up from inside the Earth.



Note to the Teacher

Show the children some common metals around you such as iron, copper, aluminium, gold, silver, mercury in a thermometer or alloys such as steel, brass and bronze. Alloys are mixtures of metals.



Activity 2

Spot the Metals

Find as many things or parts of things, that are made of metals. Which metals do you recognise around you? If you do not know the name of the metal, ask your friends or an elder. Make a list of these metals in your notebook.

Find out

What are other things in the classroom, such as, mats, bulbs and electric switches, made of?

See-through Materials!

Kimi was sitting at her desk. She could see a tree laden with beautiful flowers. She reached out to touch them. Her hand touched the glass pane. At first, Kimi did not notice the windowpanes. They were made of glass and she realised that she had been able to see the flowers and trees through the glass. Glass is like that!



- Does your window have a glass pane?
- Can you see through it?
- What do you see?



Activity 3

Seeing through things



Collect a few small objects of different materials from your surroundings like bottles, papers, cloth and utensils, etc. Look at a light bulb or a candle flame through them. You can see through some objects very clearly, you can partially see through some others, while you cannot see through some objects at all. Order these objects from those you can see through very clearly, to those you cannot see through at all.



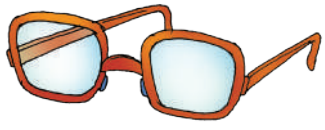


See through clearly	See through partially	Cannot see through at all

Take care!

Never look at the sun continuously — through any object or directly. It will harm your eyes.

Things that you can see through are called transparent. Most kinds of glass are transparent. Name one more material that is transparent.





You can see through glass, but you cannot see through wood. Materials that you cannot see through are called opaque.

Glass is transparent but wood is opaque.



Some things are in between — that is, you can see through them only partially. They are called translucent. Find some materials that are translucent.



Activity 4

Let us colour the world!



Collect two or three see through bags, bottles or thin cloth of different colours. Look at a sheet of white paper through them.

- Does the colour of the paper appear to change?
- Does white paper appear different when you look at it through thin blue plastic or glass? Or, thin yellow plastic or glass?
- Do the colours of different objects appear to change? How did a blue object look through thin yellow plastic?
- Have you earlier experienced looking through coloured transparent objects? Try to recall such experiences.



What is it made of?

Let us return to Kimi's classroom.



Chain Game

- In the table below, Kimi has grouped objects according to the materials that they are made of. Her list of objects is in the first column of the table. The names of the materials are in the second column.
- The third column of the table is for you to complete. Here write the names of some objects you have seen that are made from that material. Some objects around you may be made from materials not in this list, e.g., clay and rubber are missing in Kimi's list. Use one of these to add an additional row in the table.

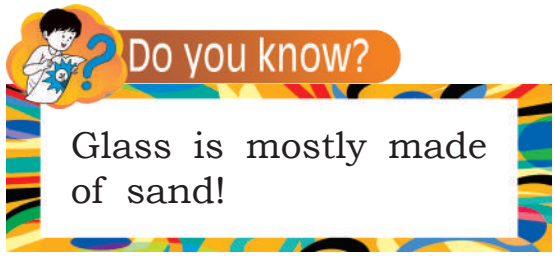
Kimi's list	Name of the material	Objects made of this material which are in your classroom or home
Table, chair, door	Wood	For example, pencil
Door hinges, nails,	Metal	
Windowpanes, light bulb	Glass	
Electric switches	Plastic	

Where do all these materials come from? Can you locate their source?

For example, Wood — Tree

Metals — _____

Cloth — _____







Talk to your Grandparents

- In their childhood, were these things made of the same materials?
- Are there new materials now that they might not have seen before?
- Are there any materials that they saw in their childhood that are not in use now? Why?

Different materials may look different. Are they also different in other ways? Would you be able to recognise some material even with your eyes closed?



- What material is your spoon made of?
- Is it made of metal, wood or some other material? Can you guess?
- Which of these words or phrases describes the spoon?

Smooth	Rough	Dull	Shiny
Feels cold to the touch			







Activity 5

Knock on it and it will speak to you!
Orchestra

Take a metal spoon and at least five objects made up of different materials—wood, metal, plastic, cloth and glass. Gently tap the spoon on each of them. Listen to the sound that each of them makes. Make your own words to describe all these different sounds.

Try to capture those sounds in words, like ting-ting, dhum-dhum, dub-dub, ...

Now compose your own beats.



Ting, Ting, Thak, Thak
Ting, Thak, Ting, Thak!

Does it Bend?

Kimi's table is made of wood. What else is used to make tables? Can we use fabric or rubber to make a table? Why or why not?

Wood is hard and rigid while fabric is soft and flexible. The flexibility of fabric makes it more suitable to make clothes and curtains. Imagine if clothes were made of wood!

Write

Odd Pairs

List five objects and pair them with a material that is not suitable for it! Explain why these materials will not work to make these objects. One example is done for you.



S. No.	Objects	Material	Reasons
1.	Umbrella	Paper	Paper will tear if it gets wet in the rain
2.			
3.			
4.			

Does it Flow?

In her 'Odd Pairs', Kimi playfully wrote, "Walls — can't be made of water."

We don't make walls of water because they will fall. What else could happen to water walls? We need 'solid' things such as stones, bricks or wood to make walls. Things that do not change their shape are called 'solid'.

Water does not keep its shape — it flows. Air flows too, but in a different way. If you pour water into a cup it stays there. Water is a 'liquid'. Air does not stay in a cup, it just floats in and out. That is because air is a gas.

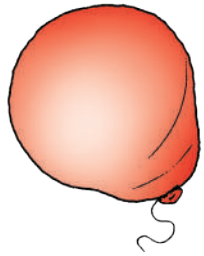
So objects can be classified as solids, liquids and gases.



Solid



Liquid



Gas

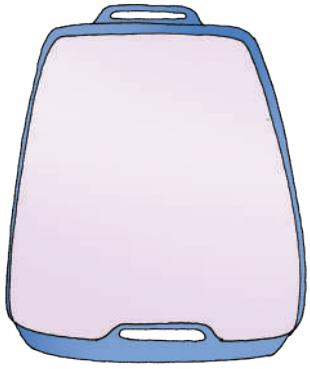


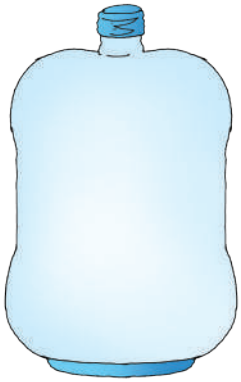
Activity 6

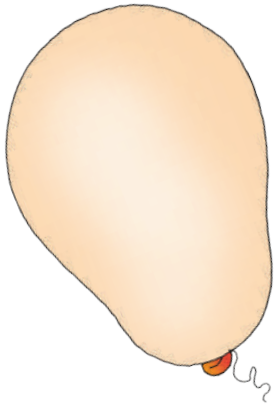
Let's group them another way!

Here are the names of some objects: ink, a stone, smoke, ice, steam, a spoon, honey, a bottle, a bag, water.

If it is a solid, write its name on the tray; if it is a liquid, write its name in the bottle; if it is a gas, write its name in the balloon.







Add some of your own objects in the tray, bottle and balloon.

Some objects could be confusing, such as sand or a sponge or clay. Identify more such objects and write names of at least three of them.

Note to the Teacher

Materials like rubber, fibre and wax could be naturally produced by plants and animals, but similar materials are also made artificially. For example, bees produce wax for their honeycomb, but very similar wax can be made from petroleum. Petroleum is a liquid found deep underground. Petrol, rockel, diesel, etc., are extracted from petroleum. Petroleum-based materials, such as petrol, plastic, rubber or paraffin wax, create 'non-biodegradable' waste. This concept is just touched upon in Class 3, and details are left to later classes.



Natural — Artificial



Kimi drew a picture of a mango tree with a mango growing on it and a bird sitting on it. The tree, mango and bird are not made by humans but occur naturally in nature. Things that exist naturally are called 'natural'. Natural things may be alive, like plants and animals, or not alive, like rocks, water and air.

Things that are made by people are called 'artificial' like clothes, shoes, tables, etc.

List out five things in each group.

- Natural: _____
- Artificial: _____

In the next chapter we will further explore how things are made.



Have you seen trees around you that bear flowers and fruits at special times of the year? If you have ever eaten a ripe mango or seen mangoes in the market or watched a mango tree through the year, try to guess— at what time of the year did Kimi draw her picture? Could it be around January or around June?



Let us reflect

A. Write

Things around us are made of different types of materials. Write down the names of three materials we commonly see around us.

_____

B. Discuss

Suppose you find a shining spoon. You don't know if it is made of metal or whether it is made of some other material and then painted with shiny paint. How would you find out?

C. Draw

Draw three natural and three artificial things.

D. Do it

Match the pairs

Transparent	Thin cloth
Translucent	A plate
Opaque	A glass used in spectacles



Chapter 11

Making Things

You must have seen or used a shawl for keeping warm in winter. You have also seen a piggy bank made from clay, a *puan* (weaved by hands), bag, cup (*kulhad*) and so many such things at home and around you.

Have you ever wondered?

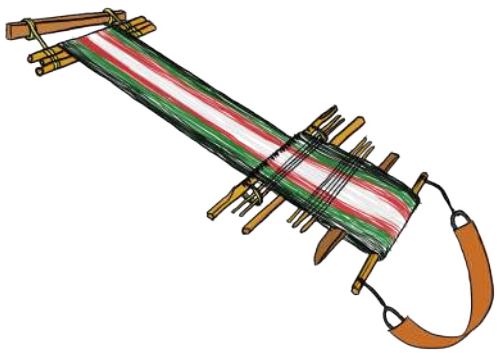
- What are these things made of?
- Who has made them and how?



A Weaver's Family

In a village in Serchhip district, Sangi used to watch her grandmother preparing herself to weave puan. Her grandmother would boil the cotton/ thread, hung it outside to dry and spin it on a 'hmui'. She then mound the thread around the wooden bars called 'puan bang'. Then she checked if the threads were lined up (en rem) and start to weave. She used 'khawhthei' to insert the weft from side to side and beat the fabric using 'themtleng'.





Sangi's grandmother knew how to make different designs on a puan. This time, she used 'siniar zeh' design using different colours of threads. Not only



grandmother but Sangi's mother and aunt also knew how to weave a puan.



Discuss

- What are puan used for?
- Do you know what kinds of designs used when weaving puan?
- Do you know the different tools used for weaving puan?
- What other things do weavers weave beside puan?



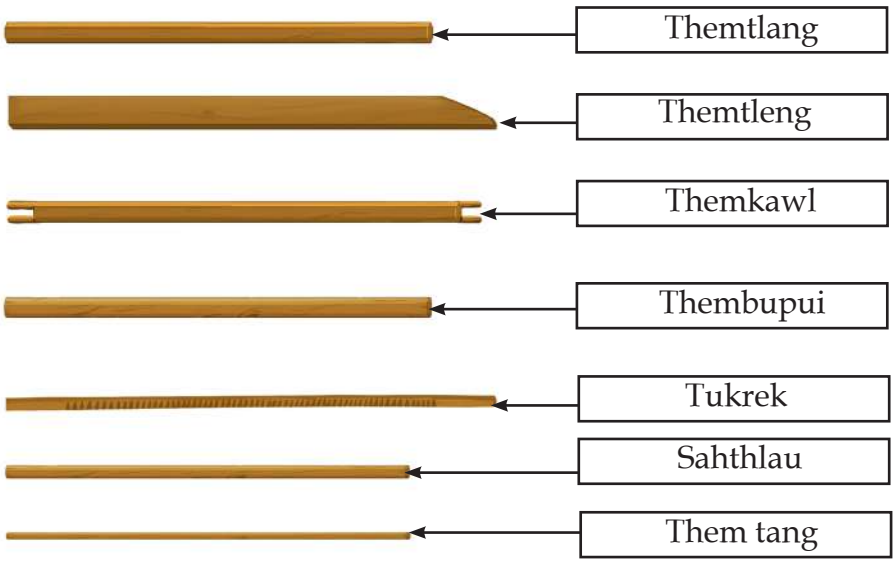
Activity 1

- Visit a potter/weaver/tailor/furniture workshop in your neighbourhood with your parents or elders in the family.
- Observe how they work.
- Have you wondered how they make such beautiful things?
- Which of the products made by them do you use at home?
- Draw some of the products that you have seen at the place you visited in the box given below.



Sangi was too young to use the thembu. But she helped her grandmother in tying the ends of the puan. Her favourite pattern was sawhthing par. She loved helping her grandmother by stictching 'puan tlâng' and decorating the puan tlâng with beads which adds beauty to the puan. Sangi was always excited to help her grandmother.





In what ways do you help your parents and grandparents?

Activity 2

- **Design your own puan.**
- **Write different names of Mizo traditional puan.**



Activity 3

Arrange the images in the correct order by numbering them from 1 to 5.

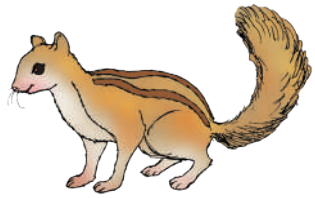
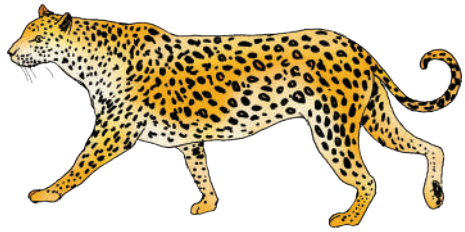






Patterns in Nature

Patterns can be found everywhere in nature, be it spots on a leopard or stripes on a squirrel. Many artists who paint on pots get ideas for their art from nature. Patterns can be formed using shapes and colours from nature.



You must have seen patterns on plants and animals around you. For example, if you observe the leaves on the branches of a tree like the *neem*, you will find a pattern. Similarly, patterns can also be seen on some animals like the zebra, peacock, cat, tiger, butterfly, fish, etc.

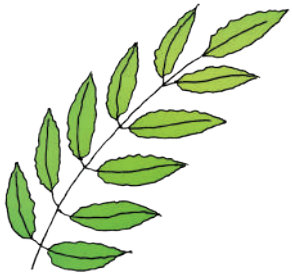


Activity 4

The following are some patterns with repeating shapes and lines.

Look around for patterns on plants.

Draw any pattern of a leaf in the given box. Give an example of your own.



Look around for patterns on animals.

Draw an animal which has patterns on its body.



Look around for patterns on things.

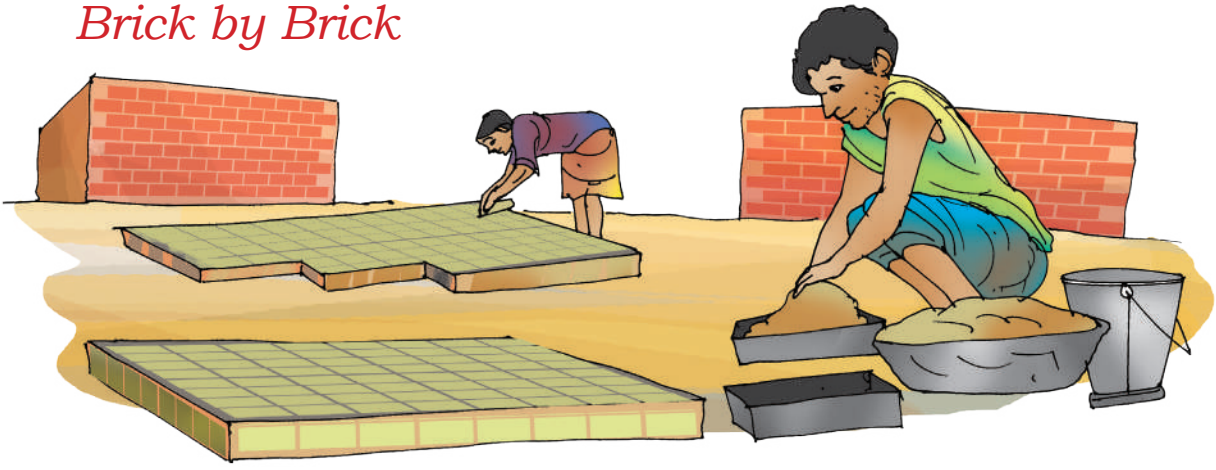
Draw a pattern in the box.





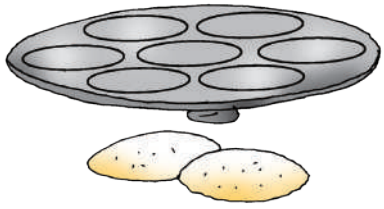
By now, you are familiar with the process of weaving puan. Let us read about bricks.

Brick by Brick

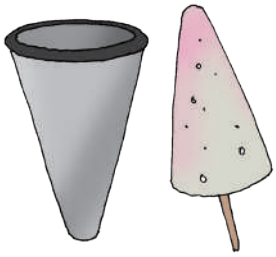


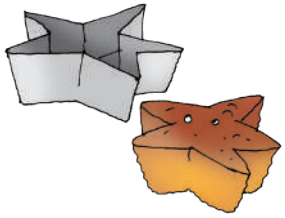
- Where have you seen bricks?
- Have you ever seen how bricks are made?

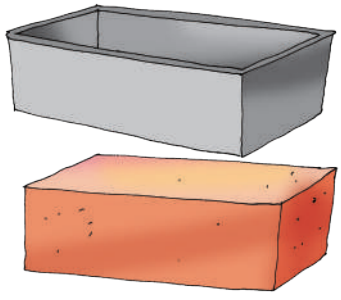
Bricks are also made of mud. You must have seen *idli*, cake, *momo* or *kulfi* moulds. Similarly, bricks are also prepared in 'moulds' to give them their shape. A brick becomes hard after it is baked in the kiln. Bricks are used for construction of buildings such as houses, schools, and hospitals.







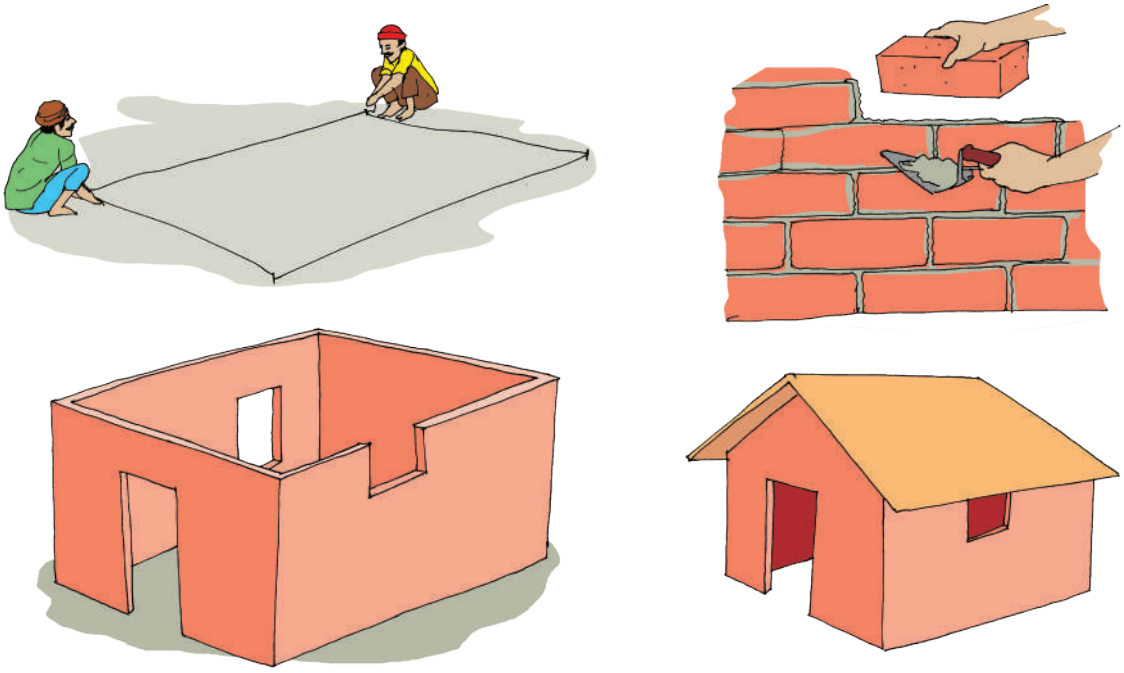




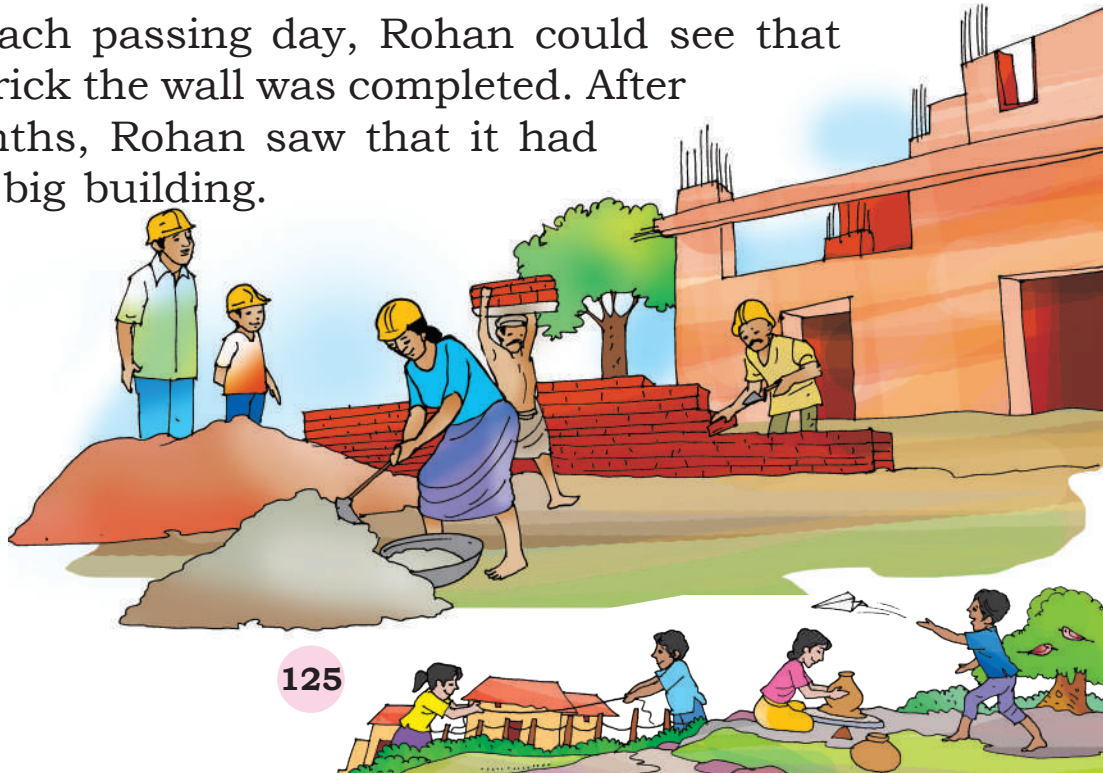


Rohan and his father live in Jaipur. Rohan loves to see houses being built. He is amazed at how his father and his co-workers can construct such tall and beautiful buildings.

Rohan's favourite pastime is watching brick walls getting built. He had been watching one particular wall being built.

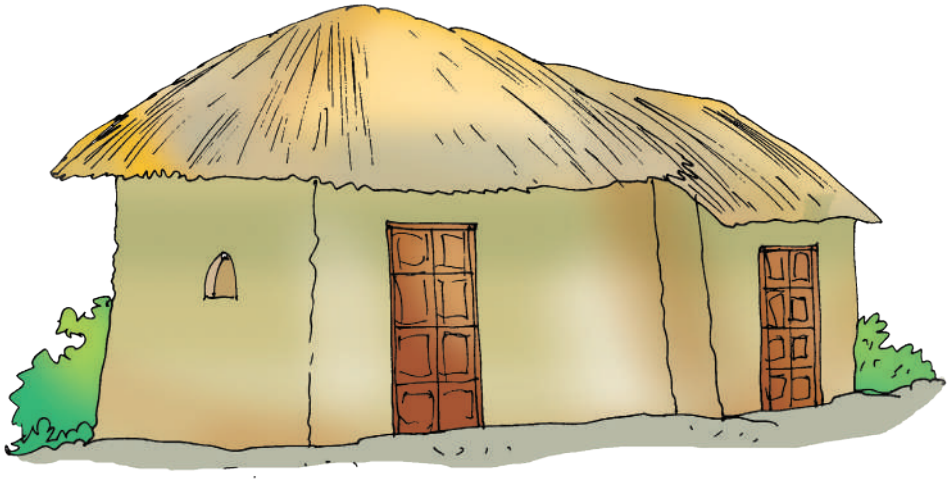


With each passing day, Rohan could see that brick by brick the wall was completed. After a few months, Rohan saw that it had become a big building.



Discuss

- Are all houses made of bricks?
- What do you think are other materials used to build houses?



In some warm areas of our country, people make traditional mud houses to keep them cool inside. People use natural materials like grass and wood. Instead of cement, many people use cow dung to make smooth walls and floors. Cow dung keeps the heat out and stops insects from entering the house.

Write

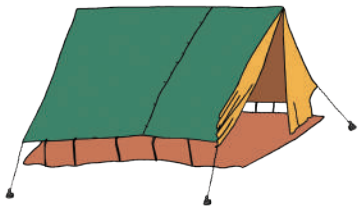
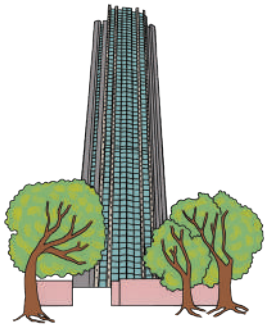
1. Why do you think mud houses are better for the environment?

2. Look around at the houses in your neighbourhood. What are the houses made of?



Activity 5

Look at the pictures below. Guess the name of each type of house. Fill it in the given table below.

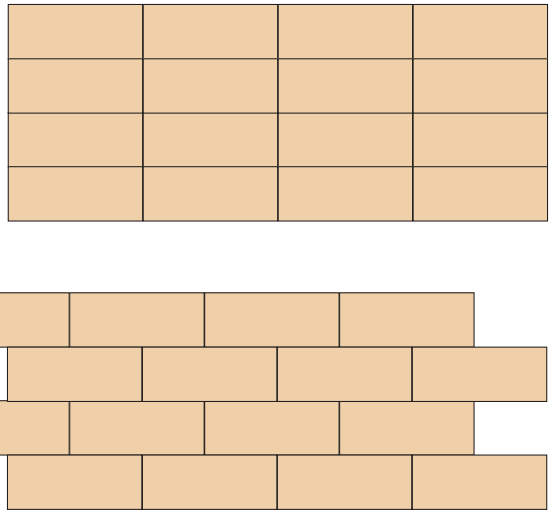
Pictures of houses	What is this type of a house called?	What are these houses made of?
		
		
		
		
		



Activity 6

Make a Wall

Make some bricks using a matchbox mould, small paper boxes, clay or *atta (dough)*. Stack them in these two arrangements shown in the drawing.



- Which one is sturdier ?
- Which one falls more easily when pushed?

Safety First

Rohan's father follows all the important safety rules while working. For example, he always wears a helmet with a strap, a safety vest and sturdy footwear.



Discuss

- Are there any safety rules at home?
- Do you have any safety rules at school?



Let us reflect

A. Write

1. What is the process of weaving Mizo puan?
2. How do artists get ideas for their arts?
3. What is a kiln used for?
4. What are houses made of?
5. You may also try to find videos on YouTube that show the process of things being made. Write down the steps in as much detail as possible.

B. Draw and colour any three different kinds of houses.

C. Discuss

1. Why do we have different kinds of houses?
2. Why do people wear helmets at construction sites?
3. What would happen if there were no patterns in nature?

D. Interview

1. Interview someone who makes dresses, crafts/ furniture/toys in your locality. Share the information in the class.
2. Find out how some commonly used objects like pencils, erasers, pens and notebooks are made. Ask your elders.



Chapter 12

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Taking Charge of Waste

National Cleanliness Day

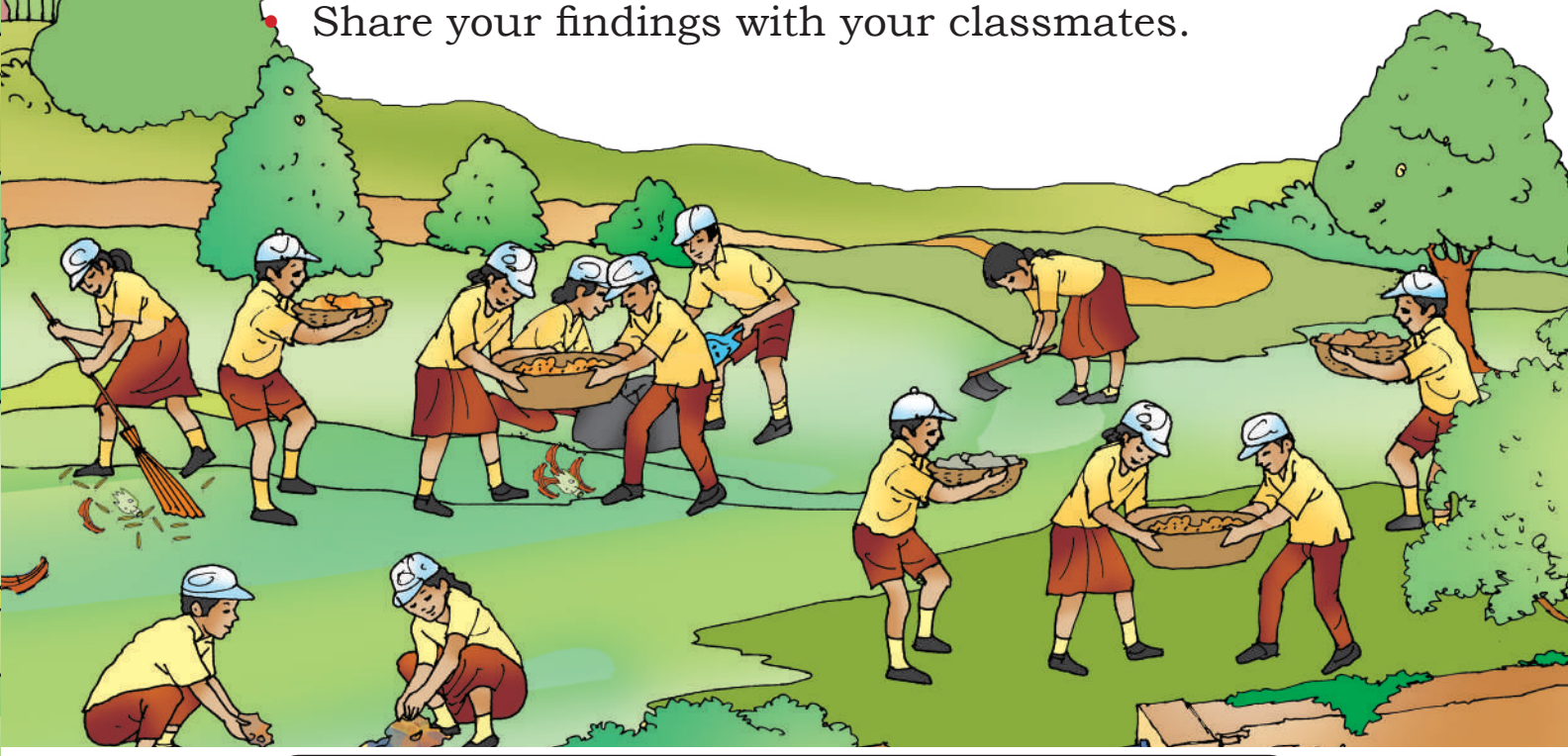


Discuss

- What are the children and the teacher doing in the picture?
- Why are they cleaning the park?
- Have you ever seen piles of waste lying around your home or school?
- Have you ever thought about how this waste is created?

Activity 1

- Recall different activities that you and your elders do during the day. How do these activities create waste? Finally, what do we do with the waste?
- Share your findings with your classmates.



Note to the Teacher

Remind children of some examples of common waste-producing activities, e.g., packaged products, take-away food, plastic and decorations.



How is Waste Created?



In our everyday activities, we create a lot of waste. We dispose of old clothes, tins, bottles, paper, peels of vegetables and fruits, plastic wrappers, pencil shavings, old batteries and so many other things.

We try to throw the waste away but sometimes we see that it ends up in garbage piles.

How do you feel about it?

Do you think we can do something about it?

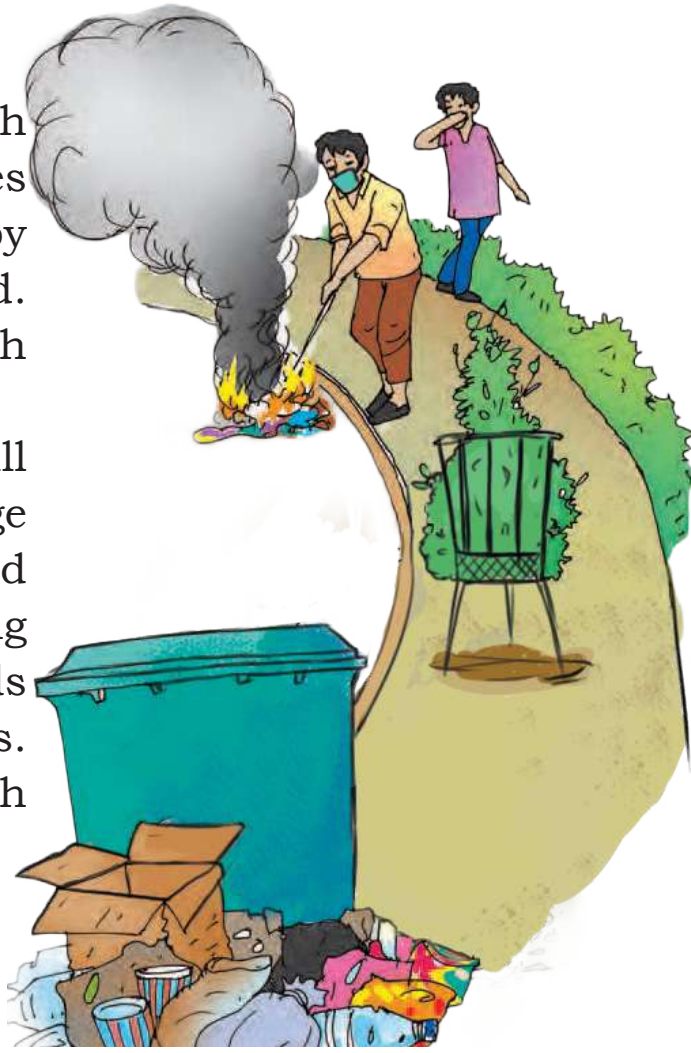
Managing Waste

We need to learn to manage waste. Managing waste is in our own hands. Each one of us has to learn to manage waste. We can learn from people and places that are managing their waste well.

Let us see what they do and how they do it!



Ways to Manage Waste



Very often, you will find trash on the roadside, near houses and yards. Animals can die by eating plastic mixed with food. Some people burn plastic which releases harmful gases.

People start falling ill because of all the garbage around them. Puddles and wastewater can be seen flowing through the roads. This leads to an increase in mosquitoes. This can cause diseases through their bites. The wastewater may carry germs that cause other diseases.

But in some places, people have worked very hard to clean their houses and surroundings. We will learn how they do this in the following sections.

Activity 2

Observe your surroundings.

Discuss

- How clean are the surroundings of your school?
- Do you find waste lying in or outside your classrooms or on the school grounds?



Draw

Draw or paste a picture of a locality. Identify the places where there is garbage or wastewater or smoke by circling them in red. Try to find out how the waste gets there.

If you belong to a place that manages its waste well, ask the elders how it is done. Share your findings in the class.

Now let us talk about those people who manage waste well.

Reduce



Many people avoid food and drinks packed in wrappers or plastic bottles and use cloth bags in place of plastic bags to reduce waste.

Have you ever tried doing this?

REDUCE the amount of waste you create is the first rule they follow.

Activity 3

How can you help in reducing waste?



Be a part of the Cleanliness Drive by sharing your old toys and books with those who need them but cannot afford to buy them.



In what other ways can you help?

The more things we buy, the more things we throw away and the more waste gets created. We should try to buy things that we need and use them until they are not usable anymore.

We can try to create as little waste as possible.

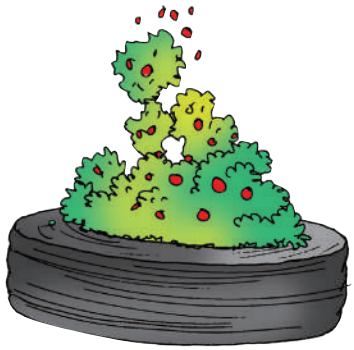
Reuse

The second thing many people do is that they REUSE things instead of throwing them away. Our grandparents did not throw away old clothes. They made quilts and bags from old clothes. Sometimes, they also give old clothes to those who are in need of clothes.

The use of newspapers or old cloth for gift wrapping is an eco-friendly practice that reduces waste and conserves resources. By creatively









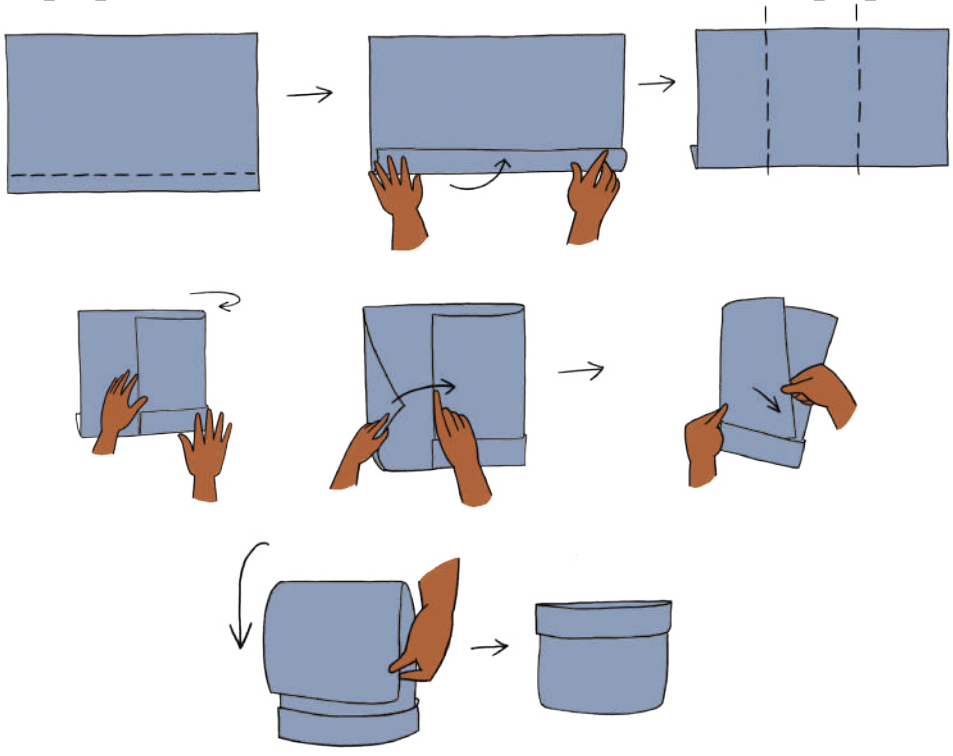
utilising these items, we not only reduce our waste but also add a personalised touch to our gifts.

Activity 4

How can you REUSE things to reduce waste?

You can reuse paper that has been used on one side for rough work. Instead of buying water bottle, reuse a bottle made of a safe material like steel or copper by refilling it.

You can make toys or decorative things using old newspapers, old calendars, bottles, boxes, etc . Here is one such idea. All you need is some newspaper. No scissors! No Glue! Just paper!



Steps to make a paper bag

Note to the Teacher

You can make a number of things using newspapers and other waste material. Refer to http://arvindguptatoys.com/ for ideas.



Activity 5

Create an item using waste material that you can give as a gift to someone.

Show your Gratitude!

You can give this to the person who helps to keep the locality or home clean. Tell them that you have made this so that you can reduce waste and their workload. Do not forget to say a big 'Thank You' to them.

A Place of Pride

Many of the villages and cities mentioned below had garbage littered all around them. But now they are perhaps the cleanest areas in the country. How did the people of these places change their surroundings?





Today, let's take a tour of a village called Silluk in Arunachal Pradesh. As we enter the village, we notice clean roads. There is no trash lying on the roadsides or in corners or open spaces. The streets, lined with trees, feel as if we are walking in a garden! This village has received an award for managing its waste in the best possible way. It is called a 'zero waste village'.

Like Silluk there are many more villages in our country that are a model for waste management practices. Chhota Narena was one of the first villages to become waste-free.

Several other towns and cities, such as Indore and Mysuru, stand out for being clean cities. Mawlynnong village in Meghalaya is the cleanest village in all of Asia.

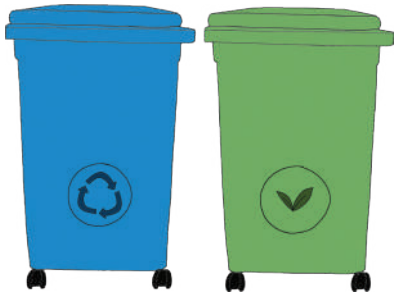




- Ask your elders, if there is any village, town or city that they know about, which is known for its cleanliness. You can share the information you learn from your elders in your class.
- Find out from your parents or teachers about the *Swachh Bharat Mission.*



Separate Different Types of Waste

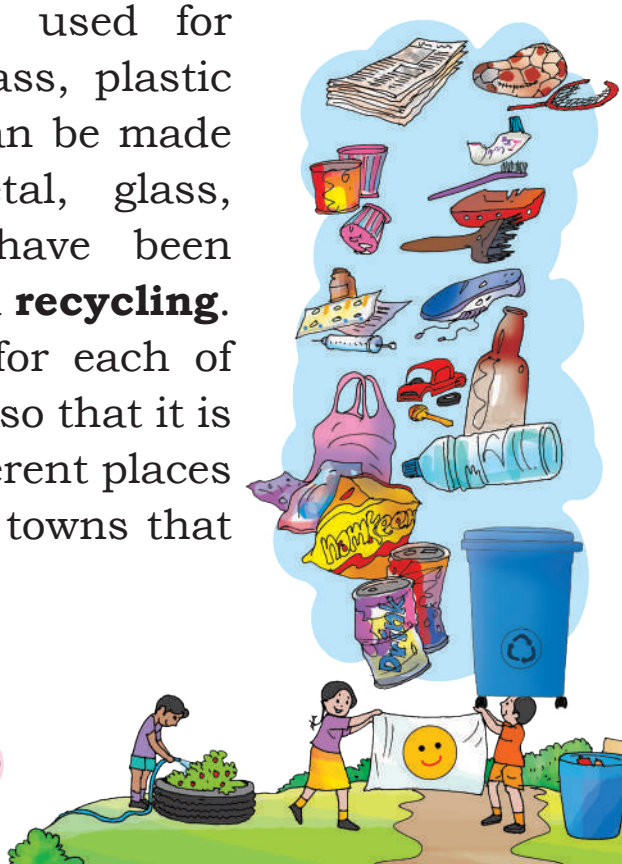


If you look around, you will notice dustbins of two colours. These could be placed in your school, local market, park or at a bus or sumo stand, railway platform or at a *mela*. Why are these two kinds of dustbins used? Let us read on to learn what we put in these dustbins.



The green dustbin is used for things like dried leaves or branches, fruit peels, vegetable waste or egg shells. These materials rot easily and mix with the soil. Waste in the green dustbin can be added to soil where it gets converted into compost food for plants and for tiny animals that live in the soil.

The **blue dustbin** is used for things made of metal, glass, plastic and paper. New objects can be made from materials like metal, glass, plastic or paper that have been thrown away. This is called **recycling**. Some villages have bins for each of these materials separately so that it is easier to send them to different places for recycling. Villages and towns that



separate and recycle their waste are able to keep their surroundings clean. They manage waste effectively.

Activity 6

Separate Your Waste

Two dustbins are drawn below. Write the names of the waste material which will go into each of them.

Plastic bottles, leaves, onion peels, light bulbs, rotten fruit, paper, eggshells, used plastic milk packets, cloth.



Each one of us can help to keep our home, neighbourhood, school, city and country clean.

Note to the Teacher

You can use this activity to additionally explain that sharp or potentially harmful things like broken glass, needles, etc., should be wrapped in cloth and paper so that sanitation workers are not harmed while handling them.



Write

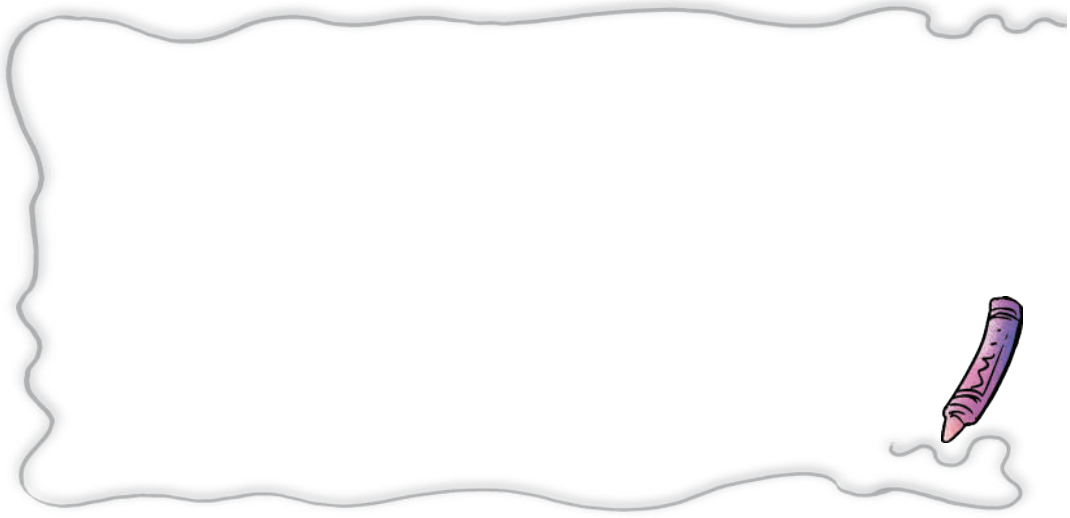
- List the things that you can do to keep your home and classroom clean?

  I can keep my room tidy.

- Make a list of tools you have seen being used in your school or neighbourhood for cleaning.
- Have you ever observed the tools that are used in your home for cleaning? Make a list of these tools.

Draw

Draw pictures of these tools in the box given below.



Keeping our Surroundings Clean

When you celebrate National Cleanliness Day (30 January) take a pledge to always keep yourself and your surroundings clean. Remember not to create too much waste, manage your waste and dispose off waste properly to build a cleaner and greener world.

Our aim needs to be: **Want not, Waste not**.



Let us reflect

A. Discuss

1. How is waste created?
2. How can we manage waste?

B. Write

1. To avoid use of plastic bags and bottles, look at your home and school closely. List all the items of plastic material and write how these could be replaced by other safe materials.
2. Name three things in your school and home that you would put in the green dustbin and three things that you would put in the blue dustbin.

C. Draw in your notebook

1. Make a poster to show a village or town that is managing its waste well. Give your poster a suitable title.



D. Enact in pairs

You can be a clean town and your partner a dirty town. Engage in a short conversation talking about how you feel about being the way you are.

E. Think, Reflect and Share

1. Imagine you are having a birthday party at your home. What are some of the ways in which you can try to have a zero-waste birthday party? For this, first think about what kind of waste may be created in the birthday party and how you can avoid or reduce it.
2. Have you seen waste in nature? What do you think happens to the waste of animals, dried leaves and so on in a forest?



