

## Chapter 3

# Celebrating Our Diversity

The entire DAV School was beautifully decorated with flags, streamers, flowers and *rangoli* (floor art). The Principal and the Head Girl were greeting the guests. Some students were applying *tilak* and welcoming everyone respectfully. The school band was playing a welcome tune. The atmosphere was filled with fun and gaiety.



The School was organising an Inter-House Celebration and the theme was —**The Indian Culture**. The six houses of the school were ready with their presentations that highlighted the unique diversity of our country. They had carefully selected some special occasions that are celebrated in different parts of our country.

The students had collected the information with the help of their parents, teachers, the library and the internet. They had put in a lot of effort in preparing posters, stage properties, scripts and costumes for each presentation.

The programme was inaugurated with the lighting of the lamp by the Chief Guest. The Principal delivered the welcome speech.

## Ganesh Chaturthi—Presented by Hansraj House

The House Captain narrated that Ganesh or Vinayak Chaturthi is dedicated to the birth of Lord Ganesh, the God of good beginning, knowledge, success, wisdom and remover of obstacles. The festival is celebrated in the month of August or September, mainly in Maharashtra and South India. The curtain rose to show people buying idols of Ganapati. The images were then taken home, worshipped with *kumkum*, flowers, fruits and sweets.



Lord Ganesh

After the celebration, the images were taken out in a procession for *visarjan* (immersion into a river or sea) after a few days. The children chanted *Ganpati bappa moraya, pudchya varshi laukaraya* (Father Ganpati, come again soon next year).



### Do You Know?

The great freedom fighter, Lokmanya Bal Gangadhar Tilak made Ganesh Utsav a public celebration by inculcating a pride for Indian Culture, music, poetry and dance.

## Navratri—Presented by Dayanand House

The Navratri celebration of Gujarat was presented with *Garbha* and *Dandiya Raas*. The girls were dressed in *ghaghra-choli-odhini*, and the boys wore *dhoti-kurtas*.

The narrator explained—Navratri is celebrated for nine nights and Goddess Durga is worshipped. The period is considered an auspicious time to start new ventures. It is celebrated twice a year. In some places, people worship young girls as



Dandiya Raas



Goddess Durga and offer them *puri*, *halwa*, *channe* and other gifts on the eighth day—*ashtami*.

In West Bengal, Durga Puja is celebrated in *Puja Pandals*. After the celebration, the beautifully decorated idols are taken in a procession and immersed in a pond or a river.

### Do You Know?



South Indian states of Tamil Nadu, Karnataka and Andhra Pradesh celebrate *Navratri* as *Bomma Kolu* when they decorate their homes with dolls.

The spectators, who were watching the presentation, clapped when they saw the pond that the children had created with light blue *sarees*!

Navratri and Durga Puja are celebrated as Dusshera in Northern India. The celebrations continue for ten days. The festival ends when the effigies of Ravana, Kumbhakarna and Meghnada are set afire to celebrate the victory of good over evil.



Dusshera



Durga Puja

## Id-ul-Fitr—Presented by Vivekanand House

The House Captain narrated—Id-ul-Fitr is celebrated by Muslims at the end of Ramadan, the ninth lunar month. Ramadan is a month long fasting when Muslims offer *Salat* (prayers), recite Quran, follow good behaviour and donate for the needy. Id-ul-Fitr is a day of joy and thanksgiving. It is also a day of forgiving and forgetting ill-



People offering prayers on the eve of Id-ul-Fitr

feelings towards others. The family elders give '*Idi*'—presents or money to the youngsters as blessings.

A student dressed in *sharara-kameej* and *dupatta* told everyone that the holy book of Muslims, the Quran, came into existence during this month. Prophet Mohammad was chosen by God to be his messenger.

### Do You Know?



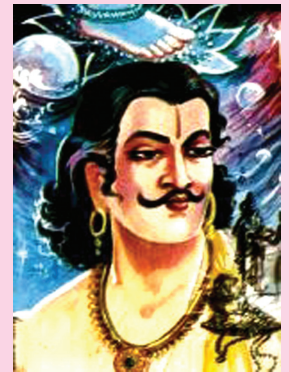
The lunar calendar depends on the movement of moon around the earth and the solar calendar depends on the motion of earth around the sun.

## Onam: The Carnival of Kerala—Gandhi House

A girl dressed in white cotton *saree* with a golden border narrated—Onam is the harvest festival of Kerala. It marks the homecoming of the legendary King Mahabali. It is celebrated in the beginning of the month of Chingam, the first month of Malayalam calendar.

### The Legend of King Mahabali

King Mahabali was a demon king of Kerala. His rule was a period of golden age. People were very happy, prosperous and lived in harmony. His rule came to an end when Lord Vishnu took the *avatar* of a Vamana and pushed King Mahabali deep into the earth to destroy his ego. Because of his love of people, the Lord granted King Mahabali a wish that he could visit his kingdom once a year.



The highlights of Onam are *Pookalam* (floral rangoli), new clothes for the family, and the grand feast called *Onasadya*. It consists of various types of curries (*parippu*, *sambhar*, *rasam*), *kootu*, *pappadam*, *pradhaman*, *paisam*, rice, mango pickle and coconut *chutney*. The Snake-boat races and the famous Kathakali dance attract thousands of tourists to Kerala.

### Do You Know?



*Pulikali* Tiger Dance is a popular feature of Onam celebration where hundreds of men, dressed as tigers, dance to the beat of drums. It takes four hours to paint and decorate each person to look like a lion! The best dancer and decorated lion man are awarded prizes!





## Navroz—Presented by Sarojini House

The House Captain narrated—Jamshed-e-Navroz is a Parsi New Year. It is celebrated on the first day of the first month of Shehenshahi calendar which is followed by followers of Zoroastrian faith. The festival celebrates rejuvenation and rebirth. Parsis clean and decorate their homes with *rangolis* made up of jasmine and rose flowers.

### Do You Know?



Parsis are a small religious community of India. They arrived in Gujarat region from Iran. A major part of Parsi population lives in Mumbai. They are the followers of the Iranian prophet Zoroaster. The holy book of Parsis is *Zend Avesta*.

On Navroz, the Parsis offer their prayers in a Synagogue, the fire temple. They wish ‘*Sal-Mubarak*’ to each other and exchange gifts. The special feast on Navroz includes *faluda*, saffron *pulao* and *ravo* (made of semolina and dates). Fresh fruits, dried fruits and a variety of seeds are also served.

### Do You Know?



Parsis go to the synagogue thrice on Navroz to worship Khorshed and Meher, the two divine beings, who preside over the sun and the moon respectively.

## Marriage Celebrations—Presented by Nehru House

The House Captain narrated—India is a land of diverse cultures and religions. Each region/community has its own unique way of celebrating weddings. Different wedding rituals are followed in different parts of our country. Many traditions are common among different communities. A PowerPoint Presentation displayed wedding celebration in various cultures on a big screen.

A fun-filled presentation showcased various rituals of a **Hindu Wedding** like *mehndi*, *sangeet*, *baraat*, *kanyadaan*, *sindoor*, *seven pheras* and *vidai*. The audience loved the folk dances and songs that were sung at different occasions.

The second presentation showed a **Sikh Wedding**, *Anand Karaj*, at a Gurudwara. The ceremony was presided over by *Bhaiji*—a priest. The hymns

were recited from the *Guru Granth Sahib*, the holy book of Sikhs. The bride and groom went around the *Guru Granth Sahib* four times. The ceremony was very beautiful.

**Christian Wedding** was conducted by a priest in a church. The bride was wearing a beautiful white dress and a white veil. The groom was dressed in a suit. The couple exchanged rings and accepted each other as husband and wife in the presence of family members and friends. The wedding ceremony was followed by reception where the wedding cake was cut by the couple.



Hindu wedding



Sikh wedding



Christian wedding

The marriage rituals may differ but the essence of all weddings is the union of a couple and bonding of the two families.

The Inter-House Celebration came to an end with a lot of appreciation for the students and teachers who had presented the best features of Indian culture in a wonderful way.



## **SOMETHING TO KNOW**

### **A. Tick (✓) the correct option:**

1. Vinayak Chaturthi is dedicated to the birth of Lord—  
(a) Krishna                                      (b) Ram                                      (c) Ganesh
2. Which calendar do Parsis follow?  
(a) Lunar                                      (b) Shehenshahi                                      (c) Solar
3. Which of the following is a ritual in Hindu wedding?  
(a) *Sangeet*                                      (b) *Mehndi*                                      (c) Both
4. *Anand Karaj* takes place in a—  
(a) Mosque                                      (b) Gurudwara                                      (c) Temple
5. The grand Onam feast is called—  
(a) *Onasadya*                                      (b) *Pookalam*                                      (c) *Ravo*

### **B. Fill in the blanks:**

#### **Help Box**

rebirth, Mahabali, Navratri, culture, Ramadan

1. The theme of Inter-House Celebration was—The Indian \_\_\_\_\_.
2. Onam marks the home-coming of King \_\_\_\_\_.
3. \_\_\_\_\_ is considered an auspicious time to start new ventures.
4. Navroz is a symbol of rejuvenation and \_\_\_\_\_.
5. The Quran came into existence during the month of \_\_\_\_\_.



**C. Match the following:**

- |               |                           |
|---------------|---------------------------|
| 1. Synagogue  | (a) Thanksgiving          |
| 2. Navratri   | (b) Effigies              |
| 3. Dusshera   | (c) Fire temple           |
| 4. Pookalam   | (d) <i>Dandia</i>         |
| 5. Id-ul-fitr | (e) Floral <i>rangoli</i> |

**D. Answer the following questions:**

1. What is the importance of participating in school stage programmes?
2. How is Ganesh Chaturthi celebrated in Maharashtra?
3. Mention any three important features of Navratri celebration.
4. How do people of Kerala celebrate the home-coming of their beloved King?
5. "Id-ul-fitr is a day of joy and thanksgiving." Explain.
6. How is Navroz celebrated in India?
7. What is the significance of Dusshera?



Festivals are a time of fun, frolic and family get together. Each festival gives us a message. Write down the value that you learn from your favourite festival.



**Map Skill**

On a political map of India, locate, colour and label the following:

- Maharashtra
- Gujarat
- Tamil Nadu
- Karnataka
- Kerala
- Andhra Pradesh

## SOMETHING TO DO

1. Identify the festival:

(a) Beautiful *Pookalams* are made on the floor. \_\_\_\_\_

(b) Young girls are worshipped on *ashtami*. \_\_\_\_\_

(c) Effigies of Ravana, Meghnada and Kumbhakarana are burnt. \_\_\_\_\_

(d) Month long fasting during Ramadan. \_\_\_\_\_

2. Survey your neighbourhood and make a list of all the festivals that are celebrated. Find out the delicacies (special dishes) associated with each festival. Which is your favourite festival and special dish?

3. Solve the word puzzle with the help of the hints:

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

### Hints:

(a) This festival marks the victory of good over evil.

(b) He presides over the *Nikah*.

(c) It is considered as an auspicious time to start new ventures.

(d) Whose idols are worshipped during Ganesh Chaturthi?

(e) Id is celebrated during this month.

(f) What is a Muslim wedding known as?

(g) A ritual in Hindu wedding.

(h) Where does a Sikh wedding take place?

## Chapter

# 4

## An Ideal Home

Ayesha lives in a small house on the outskirts of a small township of Begampur in Uttar Pradesh. The roads are *katcha* (unsurfaced) and the drains are uncovered. But Ayesha's family keeps their home and surroundings very clean. The entire neighbourhood ensures that the garbage is not thrown in the drains or on the streets.

They have dug a deep pit at a small distance where the garbage is thrown and covered with soil to convert it into **compost**.



Neerad lives in a mansion in village Bhogpur. It is surrounded by a lot of greenery. It is a village of rich farmers but the people throw the waste near their main gates. A huge pile of stinking garbage gets accumulated. The villagers have to cover their nose when they pass the streets. Moreover, flies and mosquitoes breed on the garbage.



### Activity:

- (a) How are the surroundings of Ayesha's house better than Neerad's house?  
Give two reasons:

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- (b) Mention one good point and one bad point of your neighbourhood.

Good point of my neighbourhood is \_\_\_\_\_

Bad point of my neighbourhood is \_\_\_\_\_

We are all responsible for keeping our neighbourhood clean. An ideal neighbourhood requires each and every member to look after his/her house as well as the surroundings.

### Features of an Ideal Home

The size, location or the cost of building a house is not as important as maintaining the house and the neighbourhood. A simple house can be converted into an ideal home, if we take care of the following—

1. **Sunlight:** It brightens our home and keeps the rooms dry. The sunlight keeps the germs away. There should be sufficient windows or *verandas* to get plenty of sunlight.



#### Do You Know?

Sunlight is a rich source of Vitamin D, which strengthens our bones.

2. **Ventilation:** Windows and doors should face each other to allow free flow of fresh air. They also ensure the outlet of dirty air from the home, which is necessary for our health.



#### Do You Know?

An ideal home should have a chimney or an exhaust fan to let the smoke out. This helps in keeping the house free from odour and pollution.

3. **Sanitation:** An ideal home must have proper drainage system to remove the dirty water. The drains should be covered and cleaned regularly to prevent the breeding of flies, germs, mosquitoes and cockroaches. A proper drainage system protects us from diseases like malaria, dengue, cholera, etc. The dustbin should have a lid and it must be cleaned everyday.



### Do You Know?

The drains from bathroom and kitchen should slope for an efficient system of cleaning.

4. **Doors and Windows:** A good house should have two doors. A wooden door and a wire-net(fly mesh) door. The windows should have fly mesh to keep flies and mosquitoes away and allow fresh air.

5. **Water Supply:** An ideal home must have sufficient water supply for bathing, washing clothes, cleaning utensils, wiping floors, etc. The scarcity of water can lead to unhygienic surroundings. Drinking water must be stored in clean and covered vessels. Storage tanks must be cleaned at regular intervals.

6. **Safety:** The doors and windows should have bolts and locks. The main door must have a 'spy eye' to ensure that the door is not opened to the strangers. There should be a wall or fence all around the house to keep animals and strangers out. There should be a proper system of escape in case of a fire or other natural calamity.



### Do You Know?

The doors and windows should have curtains. Curtains help the house look nice and maintain privacy. They also help to keep the flies, mosquitoes and dust out.

7. **Cleanliness:** A house should be kept neat and clean. The furniture and other things should be dusted everyday. Floors should be wiped with disinfectant. Things should be kept in proper places. It keeps the house neat, tidy and saves a lot of time.



**8. Garbage Disposal:** A clean home and a neighbourhood require an efficient system of garbage disposal so that heaps of garbage do not harm the people or the environment. The people must separate those items that can be reused or recycled to reduce the amount of garbage. The garbage should be disposed off from the surroundings on daily basis.



We are all responsible for protecting the natural environment. We should keep fresh plants around our house. We must plant trees in our colony. We should live in harmony inside our home and with our neighbours. The cooperation, sharing and caring creates a friendly environment.



### **Do You Know?**

A house may be big or small, it may be in a village or in a city, but it must be clean, safe and comfortable to live in.



Residents cleaning the neighbourhood



## **SOMETHING TO KNOW**

### **A. Tick (✓) the correct option:**

1. The dustbins must be cleaned—  
(a) Everyday                                      (b) Every week                                      (c) Every month
2. It is the job of \_\_\_\_\_ to keep the surroundings clean.  
(a) Animals                                      (b) Mothers                                      (c) Citizens
3. Our homes need sunlight to \_\_\_\_\_ them.  
(a) Brighten                                      (b) Refresh                                      (c) Both
4. The kitchens and the bathrooms must have a proper system of—  
(a) Workers                                      (b) Drainage                                      (c) None
5. What can be caused by open garbage bins in the streets?  
(a) Fresh air                                      (b) Perfume                                      (c) Foul smell

### **B. Fill in the blanks:**

#### **Help Box**

ideal, dustbin, natural, bolts, germs

1. The sunlight keeps the \_\_\_\_\_ away.
2. A house can be converted into an \_\_\_\_\_ home.
3. Every \_\_\_\_\_ should have a lid.
4. The doors should have \_\_\_\_\_ and locks.
5. We are all responsible for protecting the \_\_\_\_\_ environment.

**C. Match the following:**

- |               |               |
|---------------|---------------|
| 1. Windows    | (a) Doors     |
| 2. Fly mesh   | (b) Trees     |
| 3. Garbage    | (c) Fresh air |
| 4. Plant      | (d) Harmony   |
| 5. Neighbours | (e) Diseases  |

**D. Answer the following questions:**

1. Which two important lessons can you learn from Neerad and Ayesha's neighbourhood?
2. List three dangers that are posed by open garbage heaps.
3. How do you ensure that your home is neat and clean at all times?
4. Which two responsibilities are necessary for children to maintain hygiene in the house?
5. Mention three important features of an ideal home.
6. How can you help in reducing the amount of waste thrown from your home each day?
7. Are clean surroundings as important as a clean house? Give three arguments in favour of your answer.



Each resident has to follow certain rules to maintain a clean neighbourhood. What steps can be taken by the children of your age to make sure that your surroundings do not have a foul smell, garbage heaps, germs and mosquitoes?



On a political map of India, locate, colour and mark:

- Uttar Pradesh
- Punjab
- A state that receives snowfall
- A state close to the sea
- A state in the mountains

### **SOMETHING TO DO**

1. What precautions can your family take while shopping to reduce the amount of garbage?
2. Are the rag pickers performing a socially useful task? How? Give two reasons.
3. The rag pickers face some health hazards. List any two hazards.
4. If you close your windows before sunset you can automatically protect your home from mosquitoes. How do you make your home mosquito free?
5. A beautiful and strong house also requires constant maintenance. What steps are taken to keep your house neat and clean?

House Maintenance	
Daily Basis	<hr/> <hr/>
Monthly Basis	<hr/> <hr/>
Yearly Basis	<hr/> <hr/>



## Chapter 5

# Bricks and Bridges

In Class-III, you have studied about different types of houses found in different parts of India. Let us find out the types of materials used in building houses.

- (a) **Temporary Houses** like huts, tents, tree houses and log cabins are built with mud, thatch, straw, bamboo and wood. A tent is made up of canvas or nylon.
- (b) **Permanent Houses** like bungalows, flats, villas, *havelies* are built with bricks, stones, cement, iron rods, glass, wood, etc.

Lokhan lives in a village Dong across River Lohit in Arunachal Pradesh. It is a hilly area with a very small population. The village receives heavy rainfall. Lokhan's house is made up of mud, bamboo, straw and dry leaves.



Lokhan's house

One day Lokhan's father, Ali, took him to a construction site where he worked as a helper. On the way, they crossed a bamboo bridge. Ali told Lokhan that there was no bridge when he was young. He had to swim across the river to go to the other side.

Lokhan was fascinated when he saw the huge construction site. He asked his father about the building that was under



Bamboo bridge

construction. Different types of materials were lying around and the people were doing different jobs. His father told him that they were building blocks of flats. He also showed Lokhan different building materials like cement, wood, marbles, glass, tiles, iron rods and bricks. Lokhan wanted to know how bricks were made. Ali explained the steps involved in brick making.



Construction site

## Brick Making Process

The main steps of brick making are—

1. **Mining**—Clay is mined and stored in the open to make it soft and remove unwanted oxides.



2. **Tempering**—Clay is mixed with water to make a dough.





3. **Moulding**—A lump of mixture is taken, rolled in sand and put into a metal mould. Sand is used so that the brick does not stick to the mould.



4. **Drying**—The mould is emptied onto the drying area. After every two days, the bricks are turned over for uniform drying. Then they are ready for baking.



5. **Firing**—The bricks are arranged in a kiln for baking. It makes the bricks strong.




Lokhan was surprised to know that the reddish-brown bricks were made in a kiln. They were brought to construction site in trucks.

Ali explained that bricks were also made by machines. The use of modern building materials made the buildings strong and safe. Lokhan compared the building with his small hut in the village, which was easily damaged by strong winds. It got flooded every time it rained. His parents had to repair the hut regularly!

Ali took his son to meet the manager of the construction site. Lokhan was happy to see the manager's son Ayaan. The manager told his son that Ali and Lokhan lived on the other side of river. Lokhan told Ayaan that they had to cross a bamboo bridge. Ayaan had seen many types of bridges but had never crossed a bamboo bridge!

The development in science and technology has made it possible to construct strong bridges across water bodies, mountains, valleys, etc. They help in the easy movement of people, goods and vehicles. Ayaan showed Lokhan the pictures of some bridges in India.



**Do You Know?**  
The early bridges were made by nature like a fallen tree on a river, stream and pond.

### Types of Bridges

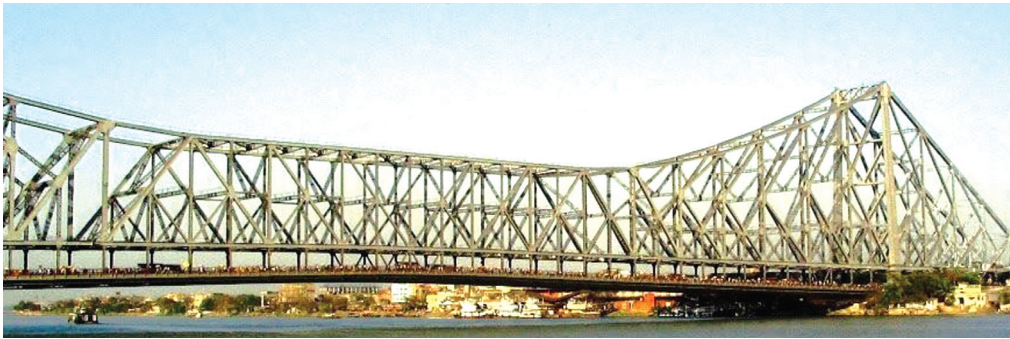
1. **Suspension Bridge**—It can cover a long distance. The earlier suspension bridges were made of wood and rope. But now they are made of steel.



Lakshman Jhula on River Ganga in Rishikesh (Uttarakhand)



2. **Cantilever Bridge**—They support the load through diagonal bracing. It often uses truss (tie up) formations both below and above the bridge.



Howrah Bridge on River Hoogli located in Kolkata (West Bengal)

3. **Cable Stayed Bridge**—It uses short cables that are attached to pillars.



Bandra Sea Link Bridge in the Arabian Sea, Mumbai (Maharashtra)



### Do You Know?

Some other types of bridges are—

(a) Truss Bridge



Rajahmundry Railway Bridge on River Godavari (Andhra Pradesh)

(b) Movable Bridge



Golden Bridge in Bay of Bengal at Rameshwaram (Tamil Nadu)

(c) Beam Bridge



Gandhi Setu in Patna

(d) Arch Bridge



Godavari Arch Bridge in Rajahmundry (Andhra Pradesh)

Lokhan enjoyed learning about brick-making and different types of bridges from Ayaan. He was amazed to see modern methods and materials of constructions. He decided to become an engineer and design some wonderful bridges!



### Do You Know?

Flyovers are the bridges built over roads to ease the movement of traffic.



## **SOMETHING TO KNOW**

### **A. Tick (✓) the correct option:**

1. Lokhan lives in the state of—  
(a) Andhra Pradesh                      (b) Arunachal Pradesh                      (c) Uttar Pradesh
2. The material which helps in making a building strong—  
(a) Straw                                      (b) Mud                                      (c) Cement
3. Bridges help in the easy movement of—  
(a) Vehicles                                      (b) Valley                                      (c) River
4. The house that uses strong material—  
(a) Tree house                                      (b) Stilt house                                      (c) Apartment

### **B. Fill in the blanks:**

#### **Help Box**

kiln, strong, rope, construction, bamboo

1. Lokhan went to a \_\_\_\_\_ site where his father works.
2. Bricks are made at a \_\_\_\_\_.
3. Ayaan has never crossed a \_\_\_\_\_ bridge.
4. The earlier Suspension Bridges were made of wood and \_\_\_\_\_.
5. The development in science and technology has enabled us to construct \_\_\_\_\_ bridges.



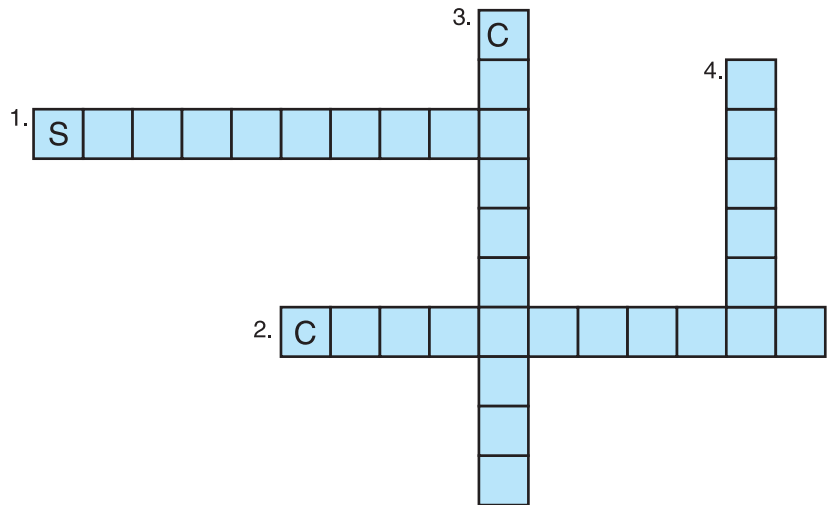
### C. Name the type of bridges as per the given clues:

#### Across →

1. Earlier, it was made up of wood and rope.
2. It uses short cables attached to pillars.

#### Down ↓

3. It uses truss formations below and above the bridge.
4. It is built across a river.



### D. Answer the following questions:

1. List the types of materials used in making a temporary house and a permanent house.
2. Write two benefits of modern building materials.
3. What is a bridge? How is it useful?
4. Briefly explain any two types of bridges.
5. Highlight the differences between the lives of Lokhan and Ayaan.



A Mall is being constructed in Mumbai. People are working day and night to complete the project. Viren, an electrician was standing on an iron ladder with bare feet. While working, he got an electric shock.

1. What precautions Viren could have taken before starting his work?
2. What should you do in such an emergency?
3. What is the importance of awareness and responsibility in performance of our duties ?





On a political map of India, mark the states where the following bridges are located:

- Lakshman Jhula
- Howrah Bridge
- Golden Bridge
- Bandra Sea Link Bridge

## **SOMETHING TO DO**

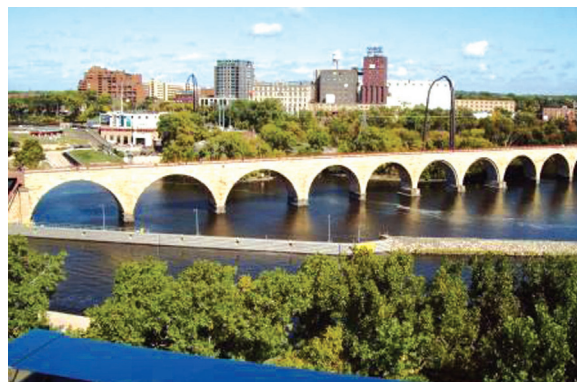
1. Delhi Metro Rail Corporation is working on extending the metro rail network across the city of Delhi. List the people involved in making a metro bridge.

- |              |           |
|--------------|-----------|
| (a) Engineer | (e) _____ |
| (b) Mason    | (f) _____ |
| (c) _____    | (g) _____ |
| (d) _____    | (h) _____ |

2. Identify the types of bridges:



(a) B \_\_\_\_ A \_\_\_\_ bridge



(b) A \_\_\_\_ \_\_\_\_ H bridge

3. Look at some pictures of tools. Name any four tools used by a carpenter, painter, tailor, electrician, mason and plumber.



Carpenter	Painter	Tailor	Electrician	Mason	Plumber
1.					
2.					
3.					
4.					

4. Which type of bridges should be constructed at the following places and why?

	Type of bridge	Reason
(a) Between mountains	_____	_____
	_____	_____
(b) Across a river	_____	_____
	_____	_____
(d) To ease road traffic	_____	_____
	_____	_____

Every time you see a garbage heap you must be wandering where the garbage comes from? Where does it go? Most of the garbage that you see around is created by human beings. Everyday thousands of tonnes of waste is thrown out from our households, offices, factories, playgrounds, schools, etc. The waste material mainly consists of papers, broken glass, metal or plastic goods, vegetable and fruit peels and leftover food. Animals, like cows, buffaloes, horses, camels and dogs, produce waste around us.



In recent time there has been a steady increase in the amount of garbage due to increase in population, industries, widespread use of polythene bags and packaging. The garbage has become a hazard for human beings, animals, birds and the environment. It pollutes the air, the water bodies and the land. It becomes a breeding ground for germs, mosquitoes, flies and rats that cause diseases like dysentery, typhoid, cholera, plague, etc. It also causes foul smell. It is important not to throw waste materials in open areas like outside our house, on the streets, roads, parks, etc.

The two main types of waste materials are—

- A. Biodegradable wastes** are dry leaves, vegetable and fruit peels, eggshells, papers and leftover food items. They can be converted into harmless substances by dumping them in a pit. The pit is covered with soil and converted into compost. It can be used as manure. This will reduce the amount of garbage.



Animal and plant waste can be burnt in a furnace to produce biogas that is used as a domestic fuel. Human and animal waste can be covered with soil in rural areas. In cities, the toilet waste must be washed down the drains and then to the sewage system, where the solid waste is separated and the water is purified.



Biogas plant

**B. Non-biodegradable wastes** are nails, polythene bags, aluminium foil, pins, glass, rubber, plastic pieces, chemicals and construction waste from buildings, bridges, roads, etc. Non-biodegradable waste cannot be converted into harmless substances. But most of it is recyclable.



***Recycling means separating usable materials from the waste and converting them into new products.***

Paper can be recycled to make newsprint, toilet paper, etc. Iron, copper, aluminium, plastic and glass can also be recycled and made into useful items. Recycling protects the environment in the following ways:

- (a) It reduces the amount of waste.
- (b) It conserves our natural resources like timber, water, iron, etc.
- (c) It reduces pollution.
- (d) It saves energy.



## Methods of Reducing Waste

Some of the methods to reduce waste are—

1. Carry a cloth bag in place of plastic bag.
2. Compost bio-degradable material.
3. Use energy-efficient light bulbs.
4. \_\_\_\_\_.
5. \_\_\_\_\_.

Adopt the following slogan in everyday life.



### Do You Know?

*Kabaad se Jugaad* is an organisation that makes and trains people in creating useful and beautiful items from waste materials.



Today most cities, towns, villages and countries face the challenge of having a proper system of collecting, separating reusable items and disposing off the waste.

## Disposing Waste Materials

In earlier times, the population was limited and therefore, the waste was very limited. It was thrown away in vacant spaces, away from homes, offices and factories. But now there are hardly any vacant places available due to increase in population and widespread construction. Hence, the amount of waste is increasing. It is proving to be a threat to the health of human beings, animals, plants, water bodies and air.

There are different ways of disposing of waste. They are **landfills**, **burning the trash** (popular in Japan), **recycling** and making **compost**. But each method has some disadvantages. The landfills require place. Once filled, new sites are required. The waste can be burnt but it pollutes the air and harms the surroundings. All methods of waste disposal are costly and the governments have to spend huge amounts of money on waste disposal. Hence, we must reduce waste and recycle items from the waste. All biodegradable items must be converted into compost.



Landfill Compost

We must remove waste heaps. Each and every person must take care not to litter, spit or urinate in open areas. People must be encouraged to construct toilets in rural areas. In urban areas more toilets must be made. The government must make strict laws to maintain cleanliness in public places.

### Singapore Laws

Littering and spitting in public places is severely punished in Singapore. People who dirty public places are fined, made to clean public roads or public places as a punishment.

India produces about 0.2 to 0.6 kg of garbage per head, per day. In some areas a van or a sweeper collects the garbage from homes, offices, etc. The dustbins at roadsides are also emptied into garbage trucks and taken to landfills.

It is our responsibility to protect our environment. Let us reduce the waste, live in harmony, cooperate with others and follow our duties to maintain clean and beautiful surroundings.



Biodegradable Waste

Non-Biodegradable Waste

Dr. Mehta lives in Keshavpuram. He spends his mornings and evenings in the park. He has built a team of children volunteers who help him in cleaning the park, planting trees, maintaining the swings, etc. His efforts have converted a dirty and barren park into a lush green meeting place for the young and the old. The flowers add to the beauty of the park. Every morning the garbage van collects the trash from the dustbins in the park.

Dr. Mehta believes—Do what you can to save the earth from waste. The greatest mistake is to do nothing. Every little effort counts!

## **SOMETHING TO KNOW**

### **A. Tick (✓) the correct option:**

1. Animal and plant waste can be burnt in a furnace to produce—  
(a) Biogas                      (b) LPG                      (c) Natural gas
2. It is the duty of \_\_\_\_\_ to keep our surroundings clean and green.  
(a) The Government    (b) Citizens  
(c) The people and government—both
3. It is easy to recycle—  
(a) Plastic                      (b) Fruits and vegetable peels  
(c) Both
4. Construction waste can be used for—  
(a) Filling ditches            (b) Building walls    (c) Making pots

### **B. Fill in the blanks:**

#### **Help Box**

environment, soil, compost, clean, rethink

1. Human waste in open fields must be covered with \_\_\_\_\_ in rural areas.
2. Recycling is beneficial for the \_\_\_\_\_.
3. Biodegradable waste can be used to make \_\_\_\_\_.
4. Waste disposal is important to keep our surroundings \_\_\_\_\_.
5. The four Rs to reduce waste are reduce, reuse, recycle and \_\_\_\_\_.



### C. Match the following:

- |                            |  |
|----------------------------|--|
| 1. Biodegradable waste     | (a) cannot be easily converted into harmless substances. |
| 2. Non-biodegradable waste | (b) can be converted into harmless substances.           |
| 3. All living beings       | (c) animals & humans both.                               |
| 4. Recycling will benefit  | (d) produce waste.                                       |

### D. Answer the following questions:

- What is waste? Name three diseases caused by waste materials thrown in open areas.
- Highlight two differences between biodegradable and non-biodegradable waste.
- What are the benefits of recycling?
- Mention any two methods of waste disposal. Which one is the best in your opinion? Give one reason.
- Suggest two ways of reusing waste materials from our homes, school and offices.

### E. Complete the Waste Management Puzzle with the help of clues given.

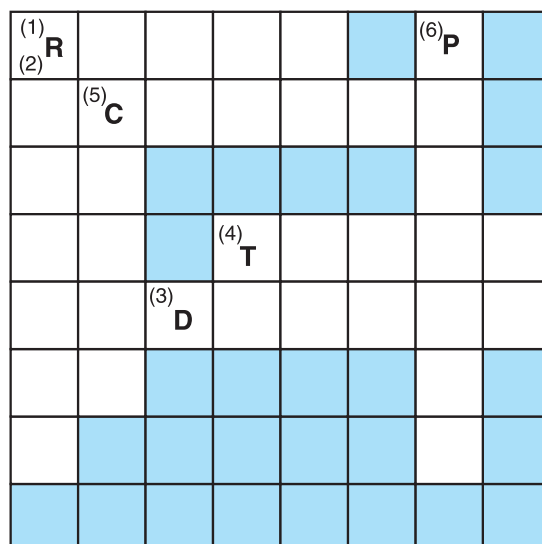
#### Clues

#### Across →

- To use something again.
- To give away something to someone.
- Something useless.

#### Down ↓

- Converting a useless article to a useful one.
- A bag can be used again.
- A \_\_\_\_\_ bucket can be recycled.





A.R. Rehman has become famous all over the world for his contribution to music. What would be your contribution if you are made in charge of waste management in your school?

### **SOMETHING TO DO**

1. List down any four items thrown away as garbage in your house everyday.
2. Can you reduce the waste that your family creates everyday? How?
3. Do you sell any waste materials to the *kabariwala* (trash dealer)? Find out. How much does he pay for—
  - (a) One kilogram newspapers? \_\_\_\_\_
  - (b) One kilogram plastic goods? \_\_\_\_\_
4. Log on to the Internet and find out about any inspiring individual/organisations working in India/abroad on recycling/waste management for saving the environment like NDTV News Channel has taken the project “Save our Tigers”.
5. Where do you throw your household garbage? Do you reuse waste materials? How? Who takes away the garbage from your home? Where does he/she throw it?
6. Start a club in your school that encourages and trains students in environmental protection in the school, at home and in the neighbourhood.
  - (a) Save paper by collecting waste papers from classes, corridors, question-papers, circulars, etc. This paper can be reused or recycled.
  - (b) Start a compost pit in your school, neighbourhood or home.

- (c) Prepare a project for water-harvesting system in your school or neighbourhood with the help of your parents and teachers.
- (d) Start an initiative to share, special tools and seldom used household appliances among neighbours.

## 7. **Project**—Save Environment.

Cover the following points—

- (a) Encourage your family to use public transport, walk or ride bicycles rather than using the car over short distances.
- (b) Save energy by turning off lights, radio and television, when not in use.
- (c) Turn off the tap while brushing your teeth.
- (d) Make use of bucket instead of shower while having a bath.
- (e) Use a cloth bag and refuse polythene bags.
- (f) Donate your old story and textbooks, toys and games to school, daycare, or nearby hospital.

