2.6 How Glass is Made

Glass is one of the most beautiful substances that we see around us. Just take a look around yourself and see how many things you can find that are made of glass – light bulbs, bottles, jars, glasses, reading glasses, marbles, windowpanes – to name just a few. Where does this glass come from?

How glass is made



The glass that is used to make so many everyday things is a man-made material. Can you guess what it is made from? It may seem unbelievable, but this clear, transparent and smooth looking material is

actually made from sand!

Glass is made by heating a mixture of clean white sand and chemicals like soda and lime. The mixture is heated in a furnace till it turns into hot, liquid glass. When it cools down, it becomes stiff and hard.

How glass is shaped

Once glass has become cold, stiff and hard, it is not possible to shape it. Glass is brittle. That means it breaks easily. It has to be shaped into different articles when it is still hot and soft.

Very hot glass is more like a liquid – you can pour it, mould it, roll it, press it or even blow it to make a variety of shapes.

Hot liquid glass is poured into moulds and hardened to make articles of various shapes and sizes. It can also be rolled out to make flat sheets of glass. In another process, molten glass is floated on a bed of molten metal to make very flat glass sheets of even thickness. Gobs of hot liquid glass can be blown into bottles, bulbs, glasses and other objects. Liquid glass can also be drawn out into very thin fibres or glass wool.

Some properties of glass

Glass has many useful properties. It is transparent – you can see through it. It is strong and hard. You can put a lot of load on it. It is impermeable – it does not allow water or other liquids to pass through and it doesn't get soggy or stained itself. Glass has no effect on the food, water or other substances stored in glass containers. In other words, it doesn't impart a smell, or taste to them. Ordinary glass has a smooth surface and it can be washed easily. And last but not the least important is the fact that it looks beautiful. No wonder then, that it is used to make so many things.

Coloured Glass

Ordinary glass is colourless but it is possible to produce coloured and transparent glass by using different combinations of chemicals in the glass making process. Glass can be given many beautiful colours — blue, violet, turquoise, ruby red, pink, amber, orange, deep yellow, purple, amethyst, dark green, even black and white!





Stained Glass

Coloured glass is used to make beautiful pictures, especially in windowpanes. Such windows are known as 'stained glass windows'. They are seen mostly in churches. Coloured glass can also be used to make beautiful sculptures or decorative articles. It is also possible to paint on glass using special chemicals and processes.



Glass can be recycled!

Another unique feature of glass is that it is 100% recyclable. Old glass can be used to make new glass any number of times. Recycling glass in this manner is much cheaper than making new glass from raw materials. It requires much less heat, and a lot of energy is saved. If you recycle even a single glass bottle, you save enough energy to power a colour TV for about 20 minutes. So, the next time you throw away a glass bottle, think ! Glass is valuable.

POINTERS

1. Find the following lists from the passage and copy them.

- * Everyday things made of glass
- * What you can do with hot liquid glass
- * Names of colours

2. Guess the meaning of the following words from the passage:

* molten * transparent * impermeable * impart * recyclable

3. Write short notes on the following using suitable diagrams.

- * How glass is made
- How glass is shaped
- * Some properties of glass

4. Find out how paper and plastic are recycled.

5. Prepare a poster each to urge people to -

(a) Use glass carefully - 'Handle Glass with Care!' (b) Recycle glass.

VERBS

You may have used words like jump, walk, swim, hunt, roar, purr, play, etc to complete the above sentences. All these words show action. Such words are known as **verbs**.

A verb is a word or a group of words that shows action - for example, pour, mould, roll, press or blow.

Can you think of some verbs that we use very often?

*cooo *go *gioo *taoo *maoo *broo *coo *jooo *reoo *wrooo

Some verbs tell us what is happening or has happened or will happen, etc. even when there is no one to 'do' it. For example:

- It rained.
- It **became** dark.

Some verbs describe a state, for example :

- She was tired.
- He is happy.
- The rabbit **has** red eyes.

A sentence usually contains one or more verbs.

A sentence with a verb expresses a complete thought or idea.

Now, try to make complete sentences in English or in your mother tongue.

What do you find?

Read any paragraph from the passage.

Can you find any sentence without a verb?

Beautiful! This place is so beautiful!

2.7 Ad'wise' Customers

You must have seen 'ads', that is, advertisements on TV and in many other places. Advertisements are given by owners of different companies to tell people about their products. Their aim is to make people buy those products.

Advertisements are designed in such a way that people are impressed when

they see them. They feel like buying the product – that is what the owners want! But is the advice in the ads always good for you? You must think about it carefully.

You must act like a wise customer, and decide what to buy, how much to buy and what not to buy!

What the ad says:

Feeling happy? **Krispy Krunchy!**



Feeling sad?

Krispy Krunchy!



Feeling tired?

Krispy Krunchy!



Lost the match?

Krispy Krunchy!



Won the cup?

Krispy Krunchy!



Day and night,
Krispy Krunchy!



Now and then **Krispy Krunchy!**



For you and me Krispy Krunchy!



Every time!

Krispy Krunchy!

Only for ₹5!

Get one pack
free on 5!

My Teacher says:

We see many types of chips, wafers and other snacks in the market. We get them in attractive packets or pouches. These snacks are usually fried foods that contain a lot of salt and spices. They are good to taste — but not so good for your health if you eat them all the time.

Growing children need a balanced and nourishing diet that includes different types of cereals, pulses, fresh vegetables, fruits, nuts, milk, etc.

Dal rice,
peanuts,
bananas,
beans, yoghurt
are my
favourites.

POINTERS

1. Enact the advertisement :

Seven children wait in different places, striking a suitable pose as shown in the ad. The character 'Krispy Krunchy' comes in dancing. He goes near every child, singing the words shown in the ad. He offers a Krispy Krunchy piece to every child.

The child eats it and begins to smile and clap. At the end, the character faces the class, shows a big pack of Krispy Krunchy and presents the last few lines.

2. Discuss the following questions after you have seen a presentation of the 'ad'.

- What does the ad tell you?
- How many times is the name Krispy Krunchy repeated in the ad? Why?
- What would happen if you never ate Krispy Krunchy?
- What would happen if you ate proper meals like rice and dal or dal-roti?
- What would happen if you never ate fruits and vegetables?
- 3. Present the information in the box 'My Teacher says'.

 Translate the box 'My Teacher says' into your mother tongue.

What the ad says:

Didi, Didi, Look at this! My new dress for the party. Where's yours?

No party for me!



Bitia Rani, Tap, tap, tap! My new shoes for the party. Where are yours?

No party for me!



Bitia Rani, Ting, ting, ting. Choose new bangles for the party.

No party for me!



What's the matter? Why are you sad?

My skin is so dark. I feel so bad. No party for me!



Is that all? Don't worry. Solve your problem with **Hemagauri**.





₹ 10 off on every 100 gm tube or bottle -

Hurry! Offer closes on 1 April.

My Teacher says:

Who says black is not beautiful? The colour of your skin has nothing to do with your beauty. It's more important to be healthy, neat and tidy if you want people to like your looks.

You should eat well, exercise well, sleep well and drink enough water to get a healthy, glowing skin. Never feel bad about the colour of your skin or your natural looks.

Be careful when you try fairness creams. They may have side effects.

Mía, let's go out and exercíse to get a glowing skín. My fur coat is always clean and shiny.

POINTERS

- 1. Enact the ad by playing the roles of Didi and her relatives. One more child acts as the salesman of 'Hemagauri' and presents the text given in the pink speech bubbles.
- 2. Discuss the following questions after you have seen a presentation of the 'ad'.
 - Why does Didi say 'No party for me!'?
 - Can you become fair in five days? How long will the effect of the cream last?
 - Will you love your brother or sister only if she's fair?
 - Think of the people you like.

 Do you like them because they have a fair (white) skin or because of some other qualities? List those qualities.

Open Book Test: 1. A Note For Teachers

An open book test is one where children are allowed to/are expected to refer to their textbook at the time of taking the test. An open book test can reduce the burden of 'memorizing' facts, information, definitions, etc. from the book and children can face the test in a more relaxed, stress-free atmosphere.

At this stage, English is not a 'content' subject – the focus is not on remembering

Please DO NOT allow readymade answer keys, bazaar notes, etc. at the time of OBT- open book test

the actual events that are described in a story or poem or passage, but on **the way language is used** to describe the events - the persons, places, processes, etc. Children may memorise the facts or descriptions included in the

textbook and then 'reproduce' them at the time of examination, but that is not enough. Our goal is to enable them to come up with similar or even 'new' descriptions on their own. An open book test can provide opportunities for doing that.

Here, the passages in the textbook are not seen as an 'end' in themselves. They serve as models, specimens or resources. What we want to assess is the extent to which children have learnt to use or handle these resources.

Many of the exercises, activities and games are designed to show the students how to use language texts as resources for

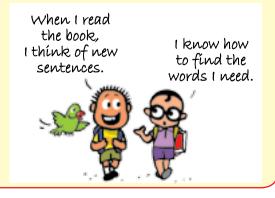
- learning on their own
- learning along with their friends
- and learning with the help and support of their teacher.

The texts and the activities serve a dual purpose. They introduce children to new words and also to strategies of learning new words; they introduce different patterns of sentence construction and also demonstrate To prepare for an open book test, let your students browse through the textbook frequently. The more familiar they are with the texts, the easier the test will be for them. Otherwise, they will waste a lot of time just trying to locate the exact reference.

how to frame similar sentences; they present language in specific contexts and also show how use language appropriately in different contexts.

If these are our goals, what we should assess is whether students have learnt to use the textbook resources as per our expectations. Our assessment strategy should

be changed accordingly. We should make the resources (textbook) available to the students for reference at the time of the test, and design tasks to see how they are handling the resources. Activities, games, projects, etc. would become a necessary part of this assessment. As a result, they would get the time and attention they deserve in the teaching - learning process, too.



A few sample tasks and activities for an 'open book test' are given here. The teacher may add many other meaningful and innovative tasks to this list.

Open Book Test: 2. Some Suggestions

Design your own test!

- * Discuss the topics for writing short notes, letters and compositions. Make a list of at least 10 topics for each.
- * Discuss and list some challenging tasks for the test.

 The tasks should not be too easy or too difficult.
- * Discuss what questions should be used for a closed book test words or sentences for dictation, etc.

Involve the students in setting the question for the open book test.

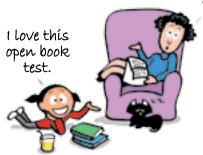
Allow the children to choose any of these topics at the time of the test.

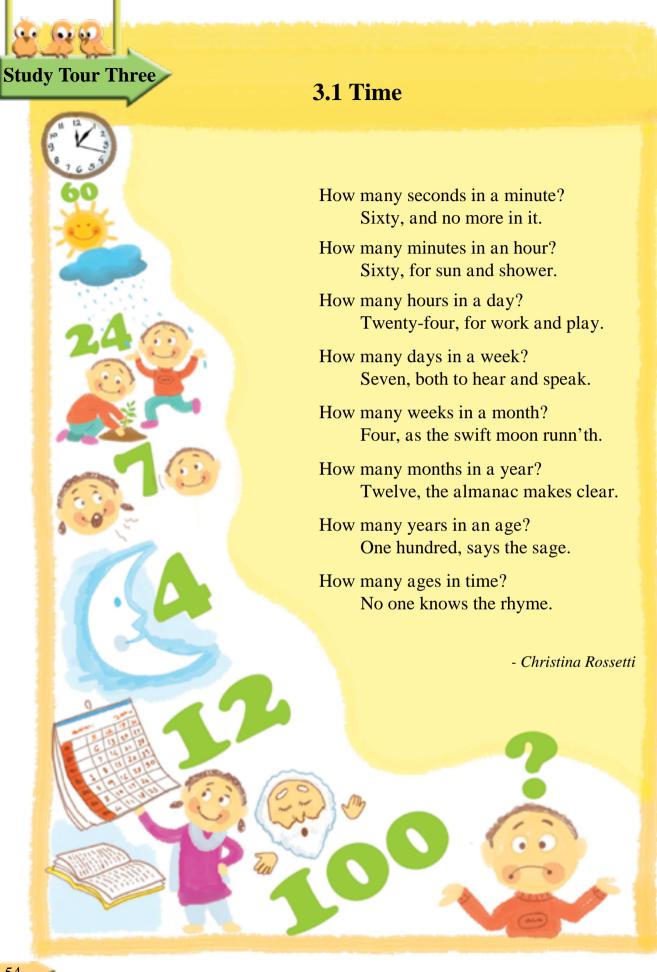
Allow the children to choose the words, sentences in advance.

Some tasks for an open book test:

- * Copy the given sentences or paragraph from the book without making any mistakes.
- * Read the following description. Find and write the page number on which such a picture is given. Add one more suitable line to the description.
- * Read the passage on page and draw a suitable flowchart / tree diagram / chart / picture, etc.
- * Read the passage and label the picture on page (The picture in the book should not have labels.)
- * Read the following lines and find the poem in the book. Write the next line/s.
- * Read the following passage. Find a similar passage in your textbook and list the difference in the two passages.
- * Read the dialogue on page...... and write a suitable but different response.
- * Find suitable:
 - (a) adjectives for given nouns
 - (b) nouns for given adjectives
 - (c) verbs that go with the given nouns
 - (d) nouns that go with the given verbs
 - (e) suitable adverbs for the given verbs, etc.

But it's not easy. You have to know your book very well.



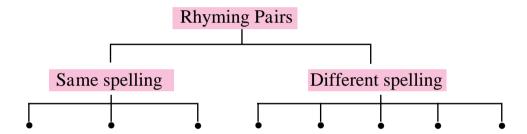


- **swift**: moving quickly
- almanac/almanack: a book that gives information about important days and dates, phases of the moon, the daily time of the rising and setting of the sun, the moon, other
- planets, and stars etc. An almanac gives this information for the whole year.
- runn'th: runneth, old form of 'runs'.
- sage: wise man

POINTERS



- 1. Form pairs to read the poem aloud. One person reads the question (the first line in each stanza) and the other one reads the answer. Practise doing this and then present the poem in a pair.
- 2. List the rhyming words or phrases from the poem. Then put each pair into two groups as follows -



- 3. List all the words related with 'time' from the poem.
- 4. Write other chains of 'How many' questions and answers.

Example: 'How many milligrams in a decigram?'

milli - centi - deci - metre / litre / gram - deca - hecto - kilo

- 5. The poem contains some idiomatic pairs two words that are often used together -
 - * sun and shower
- * work and play
- * hear and speak

Now join the words in 'A' and 'B' using and / or to make more idiomatic pairs.

	A	
day	left	more
now	life	sooner
here	north	trial
read	east	yes
bread	back	on
up	give	in
high	make	black

	<u> </u>	
night	right	less
then	death	later
there	south	error
write	west	no
butter	forth	off
down	take	out
low	break	white

3.2 The Magic Herb



'Knock! Knock! Knock!' Someone was knocking on the door of the inn. It was already getting dark outside.

"Who's there?" the innkeeper called from within.

"I am a poor, tired merchant. I want to spend the night at the inn," said the man outside.



The innkeeper was not pleased to hear that the man was poor. But all the same, he opened the door and brought him inside. The merchant wore simple garments and carried only a simple cloth bag on his back.

"I have spent a long, tiring day at the market. I don't have the energy to walk back to my village. Please prepare a simple dinner for me," requested the merchant.

The innkeeper just nodded and went back to the kitchen.



"Ugh! What's the point in serving such beggarly customers! He calls himself a merchant, but look at his clothes! Look at his bag! His shoes are all worn out. He has to carry his merchandise himself. Cannot afford a servant! Cannot afford even a good meal!" He began to complain to his wife.

"You are right!" said his wife. She was as greedy and unkind as her husband.

"We cook a meal for him, give him a place to sleep, and what is he going to pay in return? Just a couple of coins maybe! Why did you take him in? Drive him out."



"No, no!" said the innkeeper.
"That is not good for our reputation.
But I have an idea – a very clever idea! I have this magic herb. I bought it long ago. Whoever eats this herb forgets something. We will cook a good meal for this fellow and add the magic herb to it. Then he is sure to forget some of his merchandise here tomorrow."

"Yes, what else can he forget? He has just his merchandise with him. Maybe he will forget all of it and leave it behind here. It will surely be ours tomorrow!"

So that's what the greedy couple did. They cooked a tasty meal for their customer and added the magic herb to it. The poor merchant did not suspect anything. He thanked the innkeeper for the good meal and went to bed.



The next morning, as soon as the innkeeper and his wife woke up, they went to the merchant's room! But alas! The merchant was not there. The room was empty.

"What's this? There's no one here. And where's the bag of merchandise? That, too, is gone!"



"Let's check. The magic of the herb is quite strong. He must have forgotten something. He must have left something behind!"

The innkeeper searched in every nook and corner of the room but he couldn't find anything. "How come he forgot nothing? I can't believe it!" said he.

Suddenly the wife slapped herself on the forehead. "We were so foolish! He has certainly forgotten something! HE HAS FORGOTTEN TO PAY US!"

The innkeeper never used the magic herb again!



- A Japanese folk-tale

- inn: a small hotel
- **beggarly**: like a beggar, very poor
- merchandise: goods for sale, things that a merchant sells
- afford: have enough money for something
- **reputation**: people's opinion what they think someone / something is like
- **suspect**: doubt something, think that something is wrong

POINTERS

1. Answer the following questions:

- (1) Who was knocking on the door of the inn?
- (2) Why was the innkeeper not pleased?
- (3) What did the merchant request?
- (4) Why did the innkeeper not drive the merchant away?
- (5) What was the speciality of the magic herb?
- (6) What did the merchant forget?
- 2. Form groups. Convert the story into a play. Read your play aloud.
- 3. Describe the merchant and the innkeeper with the help of the story and using your own imagination.
- 4. The 'k' in 'knock' is silent. It is not pronounced.

Write two other words with a silent 'k'.

Underline the silent letter in the following words.

- * write
- right
- * wrist
- * palm
- school

- * scissors
- * pitcher
- * listen
- * rhyme
- * hour

Don't say Pad-dy. One 'd' is silent.



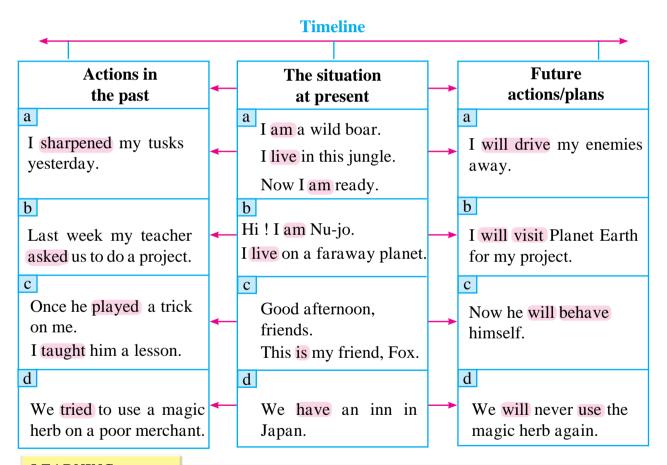


walk talk dodge badge

5. Read what the following characters are telling you now.

- (a) 'I am a wild boar. I live in this jungle. I sharpened my tusks yesterday. Now I am ready. I will drive my enemies away.'
- (b) 'Hi! I'm Nu-jo. Last week my teacher asked us to do a project. I will visit Planet Earth for my project. I live on a faraway planet.'
- (c) 'Good afternoon, friends. This is my friend, Fox. Once he played a trick on me. I taught him a lesson. Now he will behave himself.'
- (d) 'We have an inn in Japan. We tried to use a magic herb on a poor merchant. We will never use the magic herb again.'

Let's rearrange their sentences properly on the timeline -

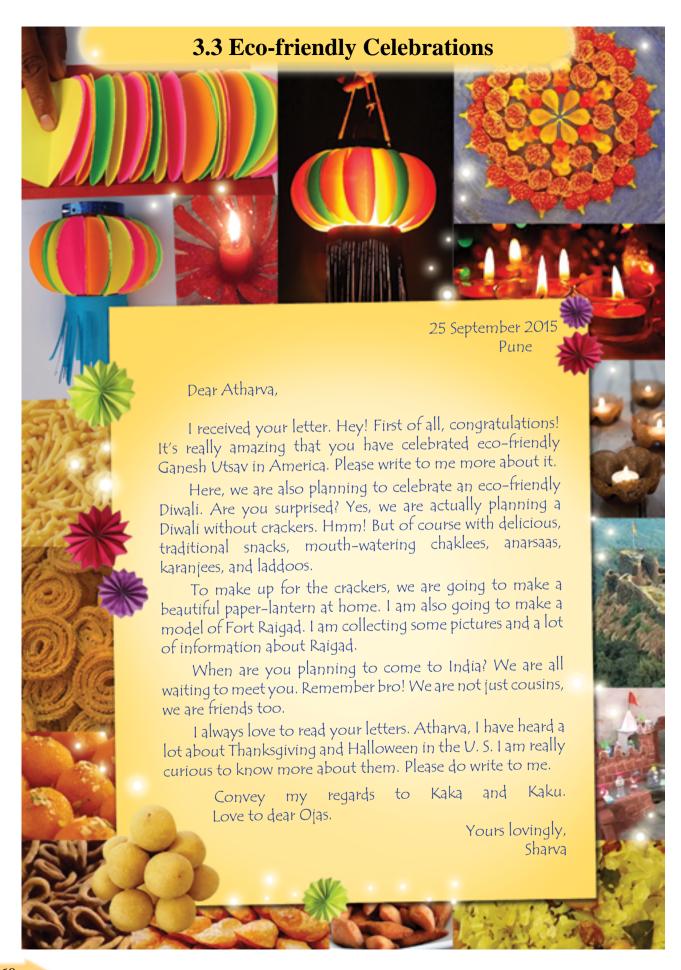


LEARNING about

LANGUAGE

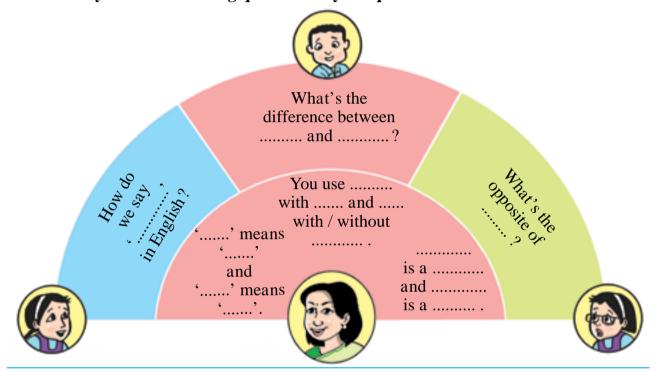
TENSES: The past, the present and the future

Note the verbs in the sentences in the three columns. In the 'past' column, they have different forms — sharpened, asked, played, taught, tried. In the 'future' column, the verbs have 'will' before them. The different forms of verbs that show the 'time' of the action are called tenses. Guess the present tense of 'taught' and the past tense of 'is', 'have' and 'live'.



POINTERS

- 1. Guess the meaning of * amazing * celebrated * crackers * paper lantern.
- 2. List the important points from each paragraph of the letter.
- 3. List the festivals we celebrate (any 5) and the important parts of their celebration.
- 4. Quiz the Teacher (as shown on page 40.)
 You may add the following questions to your quiz.



5. Discuss the following:

- (a) Which festivals do we celebrate on a large scale?
- (b) Choose any one festival and decide which parts of the festival are eco-friendly and which are not eco-friendly. (See page 63.)
- (c) What can we do to celebrate festivals in an eco-friendly way?
- 6. Think of a modern festival and new ways of celebrating it, for example A Reading Festival.

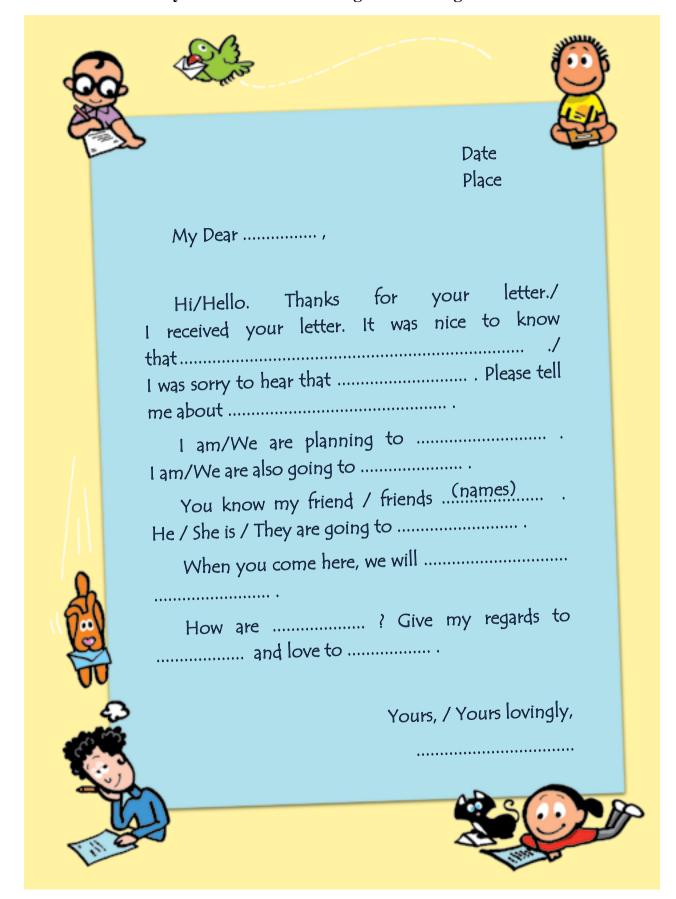
7. Read the following sentences :

- * We are going to make a beautiful paper lantern at home.
- * I am going to make a model of Fort Raigad.

Note that the phrases 'We are going to', 'I am going to' show future plans. Complete the following sentences meaningfully.

- * My grandmother is going to

8. Write a letter to your friend / cousin using the following format.



9. Read and remember:

Eco-friendly: Eco-friendly means not harmful to the environment. When something is eco-friendly, it is good for the earth, for human beings and all other living things on earth. It does not pollute or damage air, water, soil or land.

In what ways can you do something that is eco-friendly? How can you be an eco-friendly person yourself? To be eco-friendly, you use resources like food, water, electricity carefully, without wasting them. You avoid using toxic chemicals and materials like plastic. You help to grow more trees and care for the animals in your neighbourhood.

Celebrate Holi with Natural Colours

Grate a couple of medium sized beetroots and soak them in a little water. After a while, you will get a beautiful dark pink-red colour. Add it to a bucketful of water.

Keep the petals of the *palas* (flame of the forest) flowers in water for a few hours. You will get a very pretty orange colour. The red *jaswand* (hibiscus) flowers will give a deep red colour.

Dry the petals of *zendu* (marigold) flowers – in shade. Then you can powder them to get a dry colour powder. You can add this powder to water, to get a wet colour.

Dry the leaves of neem, mint, coriander, spinach, etc. in shade to get a dry green powder. If you crush or grind the fresh green

leaves you get a green paste. If you add the paste to water, you get green water!

Talk to your mother to find out what other things in the kitchen can give you safe natural colours!

3.4 At the Science Fair

MARBLING

'Hello, I'm Bhumika. I'm going to show you an interesting process of coating paper - The process is called marbling.

For this, we need the following:

- a bucket, some water
- kerosene or turpentine
- oil-paints (red, blue, yellow, etc) and a brush
- white sheets of paper

Now I will explain the procedure:

First we need to fill this bucket three fourths (3/4) – up to here – with water.

The oil-paints are thick. We dilute the paints with a spoonful of turpentine or kerosene. Stir it nicely to get a good mixture.



Now I will use the brush, take a few drops from each of the oil-paints and sprinkle them gently on to the water.

The paint floats on water. I'll use the brush again to twirl the colours and make different shapes and designs on the surface of water. Isn't it interesting? The next step has to be done very carefully.

I will keep this drawing paper gently on the surface of the water and press it a bit.

Yes, now let us lift the sheet out of the bucket like this. Hey! What do we see? Such beautiful colours and shapes and designs! We will keep the sheet of paper away till it dries.

Do you want to try marbling a sheet of paper? Let me help you. No? Ok. Thank you for watching my presentation.

Oil doesn't dissolve in water, but floats on its surface. We use this property for marbling.

POINTERS

- 1. Learn to present the process of marbling. Do so with a demonstration, if possible.
- 2. Read the following fractions:

$\frac{1}{2}$: one half	$\frac{3}{2}$: three halves	
$\frac{1}{3}$: one third	$\frac{2}{3}$: two thirds	l want
$\frac{1}{4}$: one fourth	$\frac{3}{4}$: three fourths	I want eight five eighths eighths of the cake.
$\frac{1}{5}$: one fifth	$\frac{2}{5}$: two fifths	five eighths eighths of the cake.
$\frac{1}{9}$: one	$\frac{7}{4}$: seven	

- 3. Find 3 nouns, 3 pronouns and 3 prepositions from the passage.
- 4. Form pairs. Write a set of (step-by-step) instructions for marbling paper.
- 5. With the help of your teacher or parents, collect other simple craft activities and learn to present at least one of them.
- 6. Prepare a poster for your marbling activity.

MAGIC WATERING CAN

'Good morning! I am Tanmay. I love to water my plants and my plants love water! They want showers every day! But we cannot waste water. That is why I have made this magic watering can for them!

To make the magic watering can, we need:

an empty tin with a lid, a nail and a hammer.

This is how I made the can:

I made a hole in the bottom of the tin using the nail and the hammer. Then I took the lid and made many holes in it. I was very careful not to hurt myself.



The magic watering can is now ready for use!

Now, see how I use my magic can:

I put a finger on the bottom hole, and fill the can with water. Then I put the lid on the tin and turn the tin upside down, without removing my finger.

See, now I will remove the finger. The shower starts. When I close the hole with my finger, the shower stops.

Would you like to try this magic?

It is because of air pressure that the water starts falling down from the can. And when it stops, that is also due to air pressure – the pressure of the air outside the can.

POINTERS

- 1. Present the process of making and using a watering can.
- 2. Complete the following sentences in at least two different ways, using your imagination.
 - (a) I was very careful not to
 - (b) Would you like to?
- 3. Read and translate the following sentence.

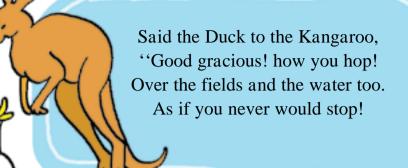
'I love to water my plants and my plants love water!'

Here, water is used first as a verb and then as a noun.

Find other words that are used as a noun and as a verb.

- 4. Form pairs. Write a set of step-by-step instructions for -
 - (a) Making a magic watering can
 - (b) Using a watering can.
- 5. With the help of your teacher and parents, collect other simple science experiments and learn to present at least one more experiment.
- 6. Prepare a poster on your 'Magic Watering Can'.

3.5 The Duck and the Kangaroo

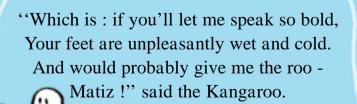


"My life is a bore in this nasty pond,
And I long to go out in the world beyond!

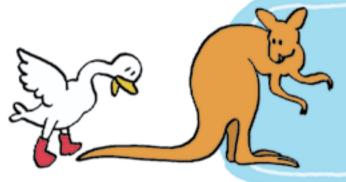
I wish I could hop like you!"

Said the Duck to the Kangaroo.

Said the Kangaroo to the Duck,
"This requires some little reflection:
Perhaps on the whole it might bring me luck.
And there seems but one objection.



Said the Duck, "As I sat on the rocks
I have thought over that completely.
And I bought four pairs of worsted socks
Which fit my web-feet neatly.



Said the Kangaroo, "I'm ready!

All in the moonlight pale;

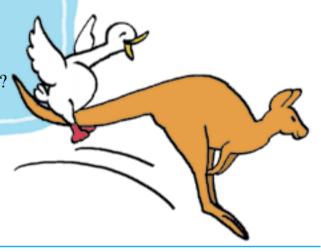
But to balance me well

dear Duck, sit steady!

And quite at the end of my tail!"

So away they went with a hop and a bound.

And they hopped the whole world three times round:
And who so happy, O Who,
As the Duck and the Kangaroo?



- 'Good gracious!': an exclamation, words used to show surprise or other strong feelings
- **bore (noun)** : something that is dull, not interesting
- **long** (**verb**) : wish for something, want something very much
- reflection: thinking
- **objection**: reason for not doing something
- **roo- matiz**: The poet's funny way of saying rheumatism which is a disease.
- worsted: special woollen fabric
- **bound** (noun) : big jump

POINTERS

- 1. Form groups of three. Play the roles of the narrator the Duck and the Kangaroo and read the poem aloud with proper pauses and intonation.
- 2. Read aloud the following words. Note the difference in the long and the short vowel sounds.
 - fit-feet
- bit-beat
- hit-heat
- sit-seat

- pick-peak
- chick-cheek
- tick-teak
- lick-leak

Find other pairs of words with long and short sounds.

Example: pen-pain,

- 3. Put the following events in the order in which they took place.
 - (a) The Duck told the Kangaroo about his wish.
 - (b) The Duck was bored.
 - (c) The Duck lived in a pond.
 - (d) The Kangaroo agreed to take the Duck with him.
 - (e) The Kangaroo thought about it.
 - (f) The Duck decided to talk to the Kangaroo.
 - (g) The Duck and the Kangaroo travelled round the world three times.
 - (h) The Duck bought four pairs of socks.
- 4. Use other words in place of the highlighted words to make meaningful sentences.
 - How you hop!
 - As if you would never stop!
 - I long to go out in the world.
 - I wish I could hop like you!
 - Who so happy, O Who, as the Duck and the Kangaroo?

I could whístle líke How you you! bark!





1 wish

5. Tourists and Citizens:

Prepare the following placards. Let different children stand in different places to create a make-believe town in the classroom. Other children play the roles of (a) citizens and (b) tourists.

The tourists enquire about the route to different places in the town and the citizens guide them.

They may also exchange more information about the places.

- gardenbankschoolold palace
- hospitalmuseumzoocollege
- factory
 library
 art gallery
 laboratory
- stadiumtheatreold market place

You may use your imagination to give names to the above places.



ADVERBS

Read aloud the following sentences:

- * I have thought over that completely.
- * The socks fit my feet <u>neatly</u>.
- * Balance me well.
- * Sit steady.
- * So they went <u>away.</u>

The underlined words are known as adverbs.

An adverb is a word that tells us something more about a verb, for example, * Sprinkle them gently. * Stir it nicely.

An adverb may give us more information about:

- → an adjective : 'You are too kind'.
- → another adverb: 'They ran <u>very</u> fast.'

Many adverbs end with '-ly'.

3.6 NEWSFLASH!

• Match the pictures, the headlines and the news items.

Α

Rio de Janeiro, Tuesday, 8 March 2016: This is a heartwarming story of the friendship between a penguin and a 71 year old Brazilian man called Joao Pereira de Souza. Joao is a retired bricklayer who lives in Proveta, a fishing village close to the coast of Rio de Janeiro. One day in 2011, he found a four month old Magellanic penguin on the beach near his house. The penguin was starving and was covered in oil. Joao brought him home. Over a week, Joao gently cleaned the penguin's feathers and fed him sardines (fish) till the bird was stronger. After that Joao tried to release him in the sea but every time the bird swam back to his home.

Joao named the penguin Dindim. Dindim stayed with Joao for nearly 11 months. In February, he got new feathers and coat. One day,

he disappeared. People thought Dindim had left Joao's house.

Imagine Joao's surprise when a few months later, Dindim walked up to him on the beach and returned home with him. For the last five years, Dindim has been following this routine. He goes away towards the end of January and returns in June. Where does he go? Magellanic Penguins swim thousands of kilometres to go to their breeding spot on the southern coast of Argentina and Chile. Every year Dindim makes the trip South, and swims back home to stay with Joao again.

You are not allowed to keep wild animals as pets in Brazil. But in this rare case, it is Dindim the Magellanic penguin who chooses to stay with his human friend every year!

В

Ahmadabad, Feb 15, 2016:

A team of Indian and German scientists working near Bhuj in the Kutch region of Gujarat had found a big fossil of a dinosaur in a hill in Lodai village. On Saturday, they found a few more fossils. The new fossils include skull, jaw and some teeth of dinosaur. Their work of excavation or digging very very carefully still goes

on. It will take some time to take the fossils out. A sample of the fossils found earlier has been sent to Munich, Germany for further testing.

The fossils show that the dinosaur may have been 10-15 metres long. It was carnivorous (the meat eating type.) It lived 135 million (1.35 crore) years ago. This could be the oldest dinosaur fossil found in this century.

Fossil remains of other dinosaurs have been found earlier in the same region. Scientists think that at least 13 species of dinosaurs roamed this region once upon a time – more than one hundred million (1 crore) years ago. Later on, due to a meteor strike, or volcanic eruption or some such reason all these animals were destroyed.

MORE DINOSAUR FOSSILS FOUND IN KUTCH

GRAVITATIONAL WAVES DETECTED FOR THE FIRST TIME

Dindim swims 8000 km every year to meet his friend

February 11, 2016: For the first time in history scientists have detected 'Gravitation Waves'. Many people believe that this could be the greatest discovery of this century. It was made possible by the Advanced LIGO Project (Laser Interferometer Gravitational-wave Observatory) set up for this purpose. The LIGO project includes two identical wave detectors located about 3000 kilometres away from each other.

Einstein, the great man of Science had guessed long ago that these waves exist but in those days there was no way to prove that. After nearly a hundred years, he has been proved right by a group of about 900 scientists working on the project in many nations –including India.

Gravitational waves are ripples in the fabric of spacetime that travel outward from their source. They are generated in certain gravitational interactions. On 11 February 2016, the LIGO Scientific Collaboration and Virgo Collaboration team announced that they had made the first observation of gravitational waves caused by two black holes colliding against each other about one billion light years ago. Detecting the ripple or wave is a remarkable accomplishment.

FOUNDI GRAVITATIONAL WAVES

When the and who came have demonstrate Gravitational Wave Primaryland (SA)

When the and who came have demonstrated access, a large features of considerational waves, a large features of considerational waves, a large features or considerational waves, a large features or considerational waves, a large features or consideration or co

4

Dindim travels up to nearly this point every year to meet his human friend. 2

1. Discuss the following questions and then try to answer them in English.

- (1) From what sources do people get news?
- (2) What could be the meaning of 'headline'?
- (3) Why is a date given with any news item?
- (4) How do we get news from other parts of the world so quickly?
- (5) What is the difference between the news we read in newspapers and the news we see on TV?
- (6) What makes 'news'?

Collect five interesting news items with pictures or photographs.

2. Read the following statements. Tick the ones that are 'news' and put a 'x' mark against those that are not news.

- Meera went to school today.
- Meera reached Mt. Kalsubai in record time.
- Mayank got a birthday gift from his sister.
- Mayank won the first prize in a national swimming competition.
- Aseem found his missing pen.
- Aseem found a 200 year old coin.
- Ambika bumped into her sister in the kitchen.
- Ambika had an accident in the city square and broke her leg.

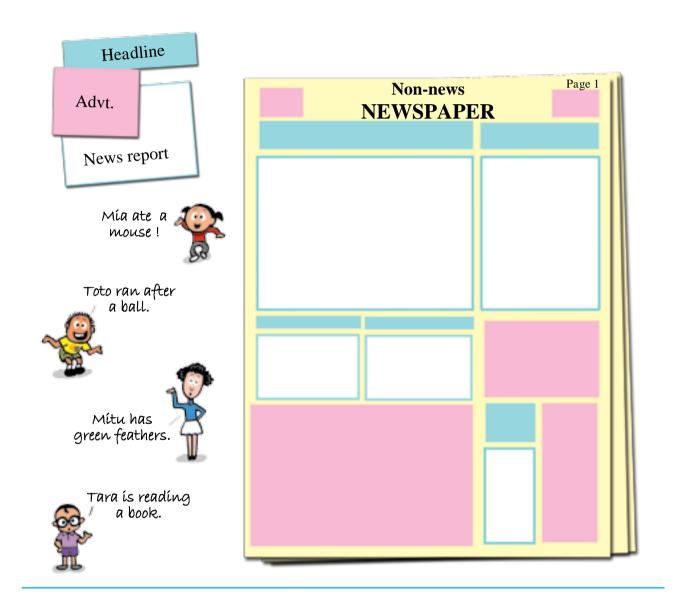
North
East
West
South
NEWS

Note that we do not use 'a' with the word 'news'.

We can say 'any news', 'no news' but not 'a news'. We have to say 'a piece of news', 'a news item', etc.

3. Just for Fun!: Make groups of 5. Publish a 'non-news' newspaper for your group. Each member should write at least one different headline, one news item and one advertisement. Draw a picture or give a photograph for your news items or advertisement. Remember your items should not have any news value.

You may write the advertisement using a mix of English and your mother tongue.



4. Be a Reporter:

Form groups of 5. In each group, prepare 1 short news bulletin in English. Your news bulletin should have at least 4 news items of about 4-5 lines each. Choose one 'news anchor'. The others will be reporters giving news from different places. Each group should present the bulletin as it might be presented on TV. You can collect news items or make up imaginary news.

3.7 The Man who Never Lied



The one special thing about Mamad was that he never told a lie. It's not very easy to do that. But Mamad was a wise man. He kept his eyes open to what was going on around him and chose his words carefully. He became famous as the man who never lied. Even people who lived twenty days away knew about him.

When people told the king about Mamad, the king was not ready to believe it.

"Bring this man to me!" he said. So Mamad was brought before the king.

"Mamad, is it true that you never tell a lie?"

"Yes, Your Majesty."

"And you will not tell a lie in future?"



"Never, Your Majesty."

The king looked at Mamad thoughtfully. "Hmm! Be careful. Sometimes we don't even know how the lie gets on our tongue."

Some days passed. The king called Mamad again. When Mamad came, the king was just coming out of his palace. There were many people around him. He was going on a hunt.

The king called Mamad over to him. "Mamad, I am going on a hunt and then to my summer palace." The king spoke as he walked towards his horse. He held the horse's mane and put his left foot in the stirrup. Then he turned to Mamad and said, "Now run to the summer palace, and tell the queen to prepare a big feast for me and my people — including you. Hurry!"

Mamad turned around and hurried to the summer palace. When he left, the king began to laugh. "I am not going anywhere today. Just wait till Mamad tells this lie to the queen!"

The next day, the king went to this summer palace. "Did Mamad tell you to prepare a feast for me yesterday? It was a lie."

"Mamad gave me your message yesterday." The queen answered. "Mamad said, 'Maybe the king will come here by noon, maybe he won't'."



'And what does that mean? Tell me for sure.' I told Mamad, but Mamad said, 'I can't tell you for sure. I don't know whether the king put his right foot in the stirrup or whether he put his left foot on the ground again after I left.' So we just waited for you yesterday but you didn't come."

When the king heard this, he was taken aback. He agreed that Mamad was really a wise man who only spoke what he saw with his own eyes – nothing more, nothing less!

- An African folk-tale

- **kept his eyes open**: watched carefully
- famous: very well-known

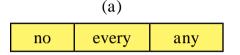
• was taken aback: was surprised or shocked

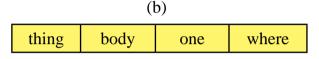
POINTERS

- 1. Read the story on page 76 aloud after the teacher.
- 2. Listen carefully while the teacher reads the story on page 77 aloud. Read aloud the last word in every sentence together.
- 3. Say whether the following sentences are true or false.
 - (1) Mamad became famous as the man who lied.
 - (2) The king did not believe that Mamad never lied.
 - (3) The king told Mamad to be careful.
 - (4) Mamad saw the king riding his horse.
 - (5) Mamad did not give the king's message to the queen.
 - (6) Mamad told a lie to the queen.
 - (7) The king agreed that Mamad was a wise man.

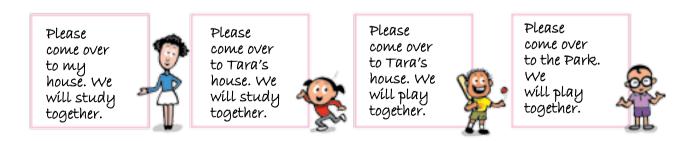
- 4. Find the opposites of the following from the lesson.
 - * truth
- foolish
- always
- * past
- * tomorrow
- more

- 5. Discuss the meaning of the following sentences.
 - * Even people who lived twenty days away knew about him.
 - * Sometimes we don't even know how the lie gets on our tongue.
 - * Maybe the King will come here by noon, maybe he won't.
- 6. Form as many words as possible by combining one word each from (a) and (b). Translate the words you make.





- 7. Read the following:
 - * care → careful → carefully
 - * thought → thoughtfully
- 8. Write any simple message for your friend.
- 9. Form groups of 5-6. Write down a simple message. Each person in the group passes on the message orally to the next one after making one change in it. See how the message changes till it reaches the last person.



10. Find the past tense forms of :

Tell, keep, choose, live, become, look, pass, call, walk, turn.



A nobleman in a faraway land once caught a nightingale and put him in a cage. No bird likes to be shut up in a cage. The nightingale began to plead:

"Please set me free. If you let me go, I will tell you the secret of happiness".

The nobleman was rich but not happy. He wanted to know the secret of happiness. So he let the bird go.

"Listen," said the nightingale, "This is the secret of happiness: Never cry over spilt milk. And never trust idle words".

The nobleman didn't think much of the secret. "This is just a silly piece of advice!" He exclaimed.

The nightingale flew a little higher and said, "Too bad you let me go. I have rare diamonds under my wings. Now you won't get any of them!"

Now the nobleman was really very angry and very unhappy. "Oh, no! How stupid of me! You wicked bird, you nasty bird! Wait till I catch you again." he began to wail.

"Don't be so upset, My Lord," said the nightingale. "It was kind of you to let me go. That's why I gave you a good piece of advice. Think over it. The first thing I said was 'Don't cry over spilt milk'. I am already far away from you. You can't catch me again. Then why make yourself unhappy about it? Secondly, how can an ordinary bird like me have diamonds under his wings? Those were just idle words of mine. It's a mistake to trust such words! Use my bits of advice and be happy. Farewell".

The nobleman watched as the bird flew away.

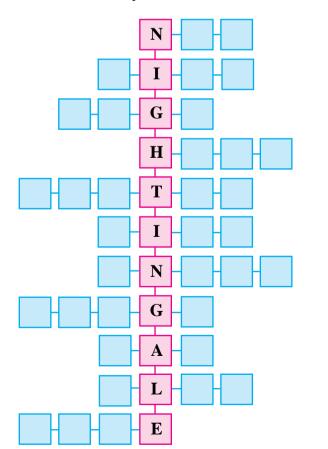
- **nobleman**: person with a high rank like a lord
- **plead**: give reasons and request, appeal
- **cry over spilt milk :** 'It's no use crying over spilt milk' is a 'proverb' or saying. It means you should not feel unhappy about a mistake or something bad that has happened.
- A similar proverb is 'What's done cannot be undone!'
- idle words: words which have little meaning.
- rare: not common, not easy to get
- wail: cry with sorrow, making long sounds
- **be upset**: feel bad
- farewell: goodbye

POINTERS

- 1. Read the story and say whether the following statements are true or false.
 - (a) No bird likes to be shut up in a cage.
 - (b) The nobleman was rich and happy.
 - (c) The nobleman did not set the bird free.
 - (d) The nobleman didn't think much of the secret.
 - (e) The nightingale had rare diamonds under his wings.
 - (f) The nobleman believed that the nightingale had diamonds.
 - (g) The nightingale flew away.



2. Solve the following puzzle. The letters in the pink boxes form the name of the bird in the story. Use the letters given on the right and the letter in the pink box to make words from the story.



 \mathbf{W} O

D B R

 $\mathbf{E} \ \mathbf{C} \ \mathbf{A}$

 $\mathbf{G} \mathbf{U} \mathbf{E}$

MSAER

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A V G

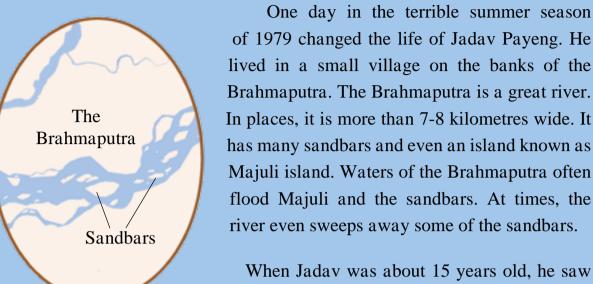
3.	The nightingale gave the nobleman two bits of advice. Form groups and discuss each of them. Can you think of a story/event/any experience related to each? Write it down. Try to find similar sayings or proverbs in your mother tongue. Never cry over spilt milk. Never trust idle words. Read aloud the last speech of the nightingale with proper intonation.				
4.					
5.	Use the given words in place of the highlighted words and translate each sentence you make. • The bird flew a little higher. (much, a lot, just a little)				
	 I never trust idle words. (often, always) 				Now, drop the high-
	• The bird flew away. (up, down, left, right, far away)			lighted word and	
6.	Try to collect at least 20 proverbs or sayings in English.				
7.	Us	se some other s	suitable word/words i	n place of the hi	ighlighted words at every step.
(a)	• If you let me go, I will tell you the secret of happiness.				
	• If you let me go, I will tell you				
	• If you let me go, I will you .				
	•	If you let me	,I will you		If you let me sleep, I will give you something.
(b)	• How stupid of me!				
	• How of me!				How nice of her!
	•	How	f !		
(c)	• The nobleman watched as the bird flew away.				
	•	The nobleman	n watched as the bird	away.	
	•	The nobleman	watched as the	away.	The baby clapped
	•	The	watched as the	away.	when the cat jumped down.
	•	The	as the	away.	ŭ '

- 8. What bits of advice do you often get from your family and friends? Write down 3 of the bits in your mother tongue. Try to translate the bits into English.
- 9. Note the plurals: man-men, nobleman noblemen, woman-women, child-children.

as the

The

4.2. Molai's Kathoni



When Jadav was about 15 years old, he saw a terrible sight. On one of the sandbars, thousands of snakes lay dead. They had been washed ashore with the flood. With no trees to protect them, they had all died in the scalding sun. Jadav was simply horrified. He sat down and wept. There and then he found his mission — to turn the sandy barren land green with trees! For more than 30 long years, Jadav Payeng toiled on the dry, barren area and





grow it.

Jadav Payeng's family and friends called him Molai. At first, Molai worked in a Forest Department scheme to plant trees. For some reason, that work stopped. All the other labourers left – but not Molai! He decided to carry on the work all by himself. He went to the forest department officers and the elders in his village.

"Molai, nothing grows on the sandbars.

Don't waste your time," many of them advised.

But someone told him to try growing bamboo.

The forest department people gave him some saplings. Early next morning, Molai went to the island and planted his first tree carefully. After that, he

visited the island every day, watering and tending the plants with love. The plants began to grow. With them, Molai's hopes also grew. He began to look for more saplings and other types of trees – he brought silk cotton saplings next. To his delight, they took root on the island. Part of the island was now dotted with green.

Molai now spent all his time on the small island. Every day, without fail, he watered the plants, made fences around them, gave support to the saplings. He even carried good soil in his little boat and spread it near the plants.

Let us make this planet more beautiful to live in.



Someone told him that red ants are good for the soil. They would make the sandy soil fertile. Molai then carried heaps of them to the island. He was not put out by the ant bites. He also took different types of grasses there. The green patches on the island became thicker and bigger.

For months and years, Molai worked all alone on the small patch of the island. He lived in the company of trees. He spoke to them. Maybe the trees understood his language – his words of affection. They responded by growing vigorously.



With trees came birds, insects and animals. They liked the place. Unknowingly, they brought many more seeds to the place. The place began to get rich with different forms of life. Even then, Molai did not abandon his work. The forest now became a second home for him. People in that area named it Molai's Kathoni – Molai's forest.

Today, Molai's Kathoni covers an area of nearly 1500 acres. And with Molai's efforts it is growing every day. It houses thousands of different trees and plants and birds and animals including deer, apes and even rhinos and tigers. To cap it all, a herd of about a hundred elephants has started visiting the forest every year.

They stay there for about three months. The elephant visits show that the whole forest is in very good health. Molai is a happy man today.

All this was not just smooth sailing. Apart from the hardships Molai had to suffer on the island – working there in heavy rains

and scorching heat – he had to face opposition from the people, too. He never thought of 'stealing' from his forest, but others did. He had to guard his island against

You will have to cut me before you cut the trees.

poachers. When people wanted to cut down the trees, he stood up in their defence like a rock. "You will have to cut me before you cut the trees!" he warned.

When the elephants came, they caused a lot of damage on the way. They destroyed the rice fields and huts — even Molai's own hut was destroyed. People wanted to beat up Molai because it was his forest that invited the elephants. Molai was not afraid. He was firm in his resolve to create and protect a 'green cover' for the land. In the end, most people left the area. They shifted the village to make way for the elephants.



Molai keeps cattle for his own living. Luckily, he has full support from his family. They help him in his work in all possible ways. Molai's children will carry on his work. People outside Molai's own tribe didn't know about Molai's work. One day, a photographer roaming in that area found Molai working in his forest and guarding it. When he came to know that Molai had grown the My family supported me. forest single-handedly, he was greatly impressed. He They did not ask told the media – newspapers, TV channels, etc – for anything in about Molai's single-handed achievement. The Forest return. Department was impressed, too. They decided to help Molai in his work. The Government honoured him with the Padma Shri award. Molai now wants to spread his message throughout the country – each one of us should plant and grow at least two trees. The trees will take care of the carbon dioxide we produce throughout our life and give us enough oxygen to breathe! Are you ready to help? Today, I am the happiest man in the world.

1. Underline the words you find difficult in the story:

- (a) Try to guess their meaning from the context.
- (b) List 10 of the words you find difficult. Look them up in a dictionary. Present the meanings in the classroom.
- (c) Form groups of 5-8. Compare the lists of difficult words, and their meanings. List the words whose meanings are not clear to the group and ask for your teacher's help.

2. Find answers to the following questions from the passage :

- (1) What terrible sight did young Molai see?
- (2) What did many of Forest Department people and village elders advise?
- (3) What trees did Molai plant at the beginning?
- (4) Apart from the saplings, what else did Molai carry to the island?
- (5) What other things came to the island with the trees?
- (6) How much area does Molai Kathoni cover today?
- (7) What do the elephant visits show?
- (8) What hardships did Molai suffer on the island?
- (9) What did the elephants destroy?
- (10) What does Molai keep for his own living?
- (11) What is Molai's message to the world?

Now, number the paragraphs in the passage

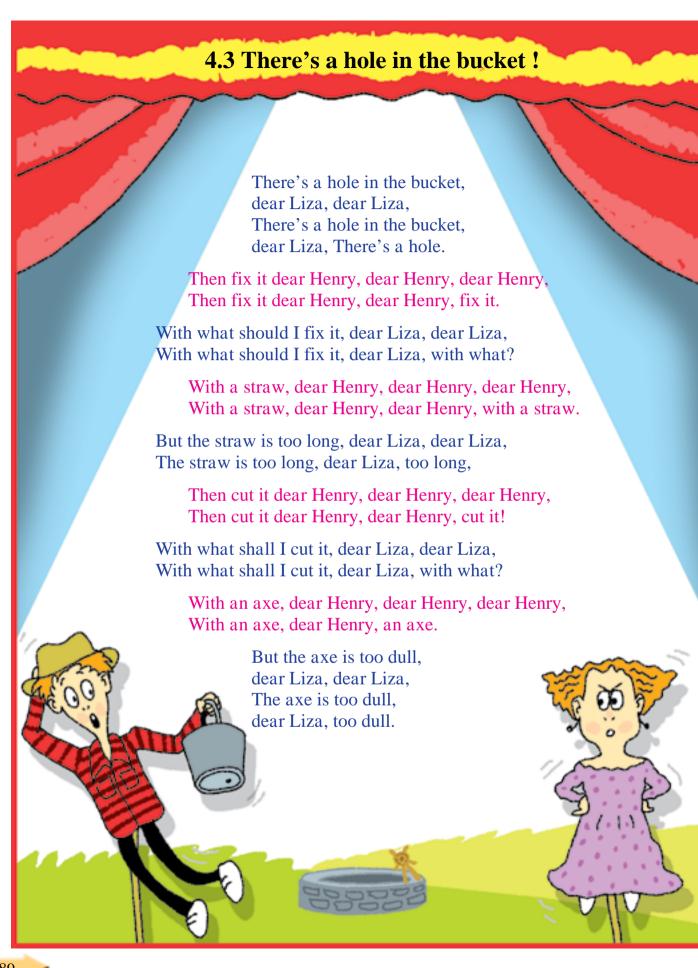
➤ Against each of the questions above, write the number of the paragraph in which you found the answer.

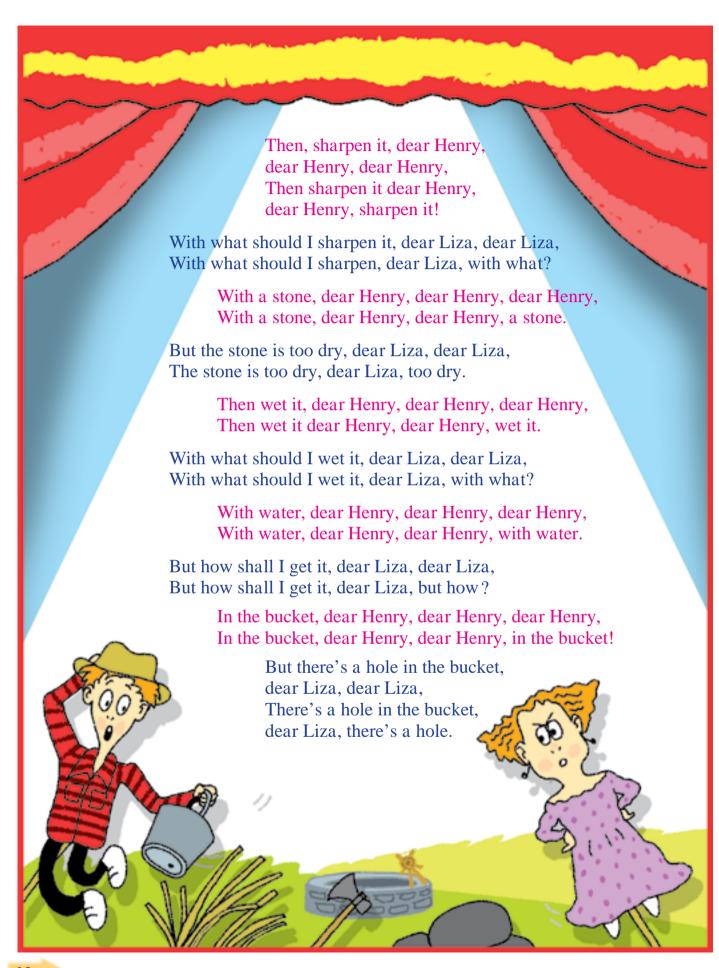
and/or

Against each paragraph, write the number/s of the questions based on it.

- 3. Write short notes on the following.
 - The Brahmaputra
 - Molai Kathoni
 - Elephants come to Molai Kathoni
 - The world comes to know about Molai Kathoni
- 4. Copy the quotations from Jadav Payeng (Molai) in good handwriting and display them in your classroom.
- 5. Prepare posters on 'Plant at least two trees each!'
- 6. Find the names and locations of at least 10 different trees in your surroundings.

 Write one or two lines about each of them.
- 7. Imagine the following situations and write simple speeches or dialogues with the help of the passage. (Any 2.)
 - (a) Molai talks to himself after he sees the dead snakes.
 - (b) Molai talks to the forest department people about his wish.
 - (c) Molai talks to his village elders about his wish.
 - (d) Molai's friends advise him about growing plants on the island.
 - (e) The villagers quarrel with Molai about the elephants.
 - (f) Molai's family tell him they support him.
 - (g) Molai talk to the trees and plants in the forest.
 - (h) The photographer tells the media (reporters) about Molai.





POINTERS

- 1. Present the song of Liza and Henry in the classroom.
- 2. List the objects and actions mentioned in the poem.
- 3. Rewrite the song in the form of a simple dialogue between Henry and Liza.
- 4. Present the story line of the poem in the form of a circular flowchart.
- 5. Write the plural forms of the following nouns: * hole * axe * stone * bucket.

 Note these plurals: * activity-activities * story-stories * fairy-fairies.
- 6. Form pairs. Make a list of ten everyday problems and their solutions.

LEARNING about LANGUAGE

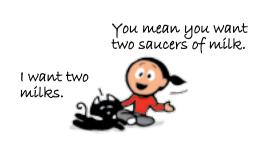
COUNTING AND MEASURING

Note that we can count holes, axes, stones, etc. That is why, they have plural forms. But we cannot 'count' materials like water, milk or straw. Therefore, usually, we do not say waters, milks or straws.

We measure these materials and say 'a bucket of water', 'a cup of milk', 'a spoonful of sugar', etc. We can also say 'two litres of oil', 'half a litre of milk', 'one kilo of sugar', etc.

We say 'pieces of cloth', 'slices of cake', 'a loaf of bread' rather cloths, cakes or breads.





4.4 Fantastic Shops



24 Carrots

'Hi! I am Saras the Sasa!
I set up the shop because
I love carrots! I just can't do
without carrots.

Welcome to my shop - 24 Carrots! We have 24 mouthwatering, delicious, nutritious carrot-based foods – loaded with vitamin A, B and C.

My dearest wish is to make the whole world eat carrots.

Have you ever seen a rabbit wearing glasses? No!

That's because we eat carrots and greens - in my case, more carrots than greens!'



I'll have a dozen carrot cakes and a box of carrot halwa. How much would

that be?

That will be

Can I have cold carrot juice, please?



Here's a glass of Chilled Carrot juice!



Do you have Delhi carrots?



Under the banyan tree, On Sase Farm, Green Valley, Western Ghats. Sorry, Madam. We get them only in the winter months.





Jamie Jellyfish's

Underwater Marine Curio shop

'I am Jamie Jellyfish. I live right at the bottom of this coral reef.

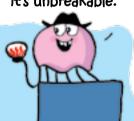
My house is just behind my shop. Or, you could say my shop is at the front of my house. And both are very very beautiful.

Can you see around you? Just look at the beautiful corals, the colourful sea-weeds and shells.

Most of the deep-sea fish come to me for curios to decorate their homes, jewels for themselves and toys for their children.

Come inside and take a look.'

Can I have a coral paper weight, please?



Certainly. Here's a nice little one and



it's unbreakable.



Would you

happen to

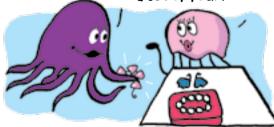
have potted

Oh, we have a large Variety. Take your pick.

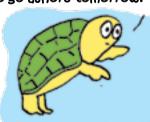


Can I try this pink shell bracelet?





Look, I desperately need an air-proof watch. I've to go ashore tomorrow.



Have a look at this. It's the latest digital one!



A-1, Coral Reef, Deep Blue Sea, Near Ocean Islands

Hello. I'm Guna-aji.

Do you know how old I am?

No, I better not tell you. You won't believe me.

Enough to say I've seen your great-great-great-grandfather when he was a small kid.

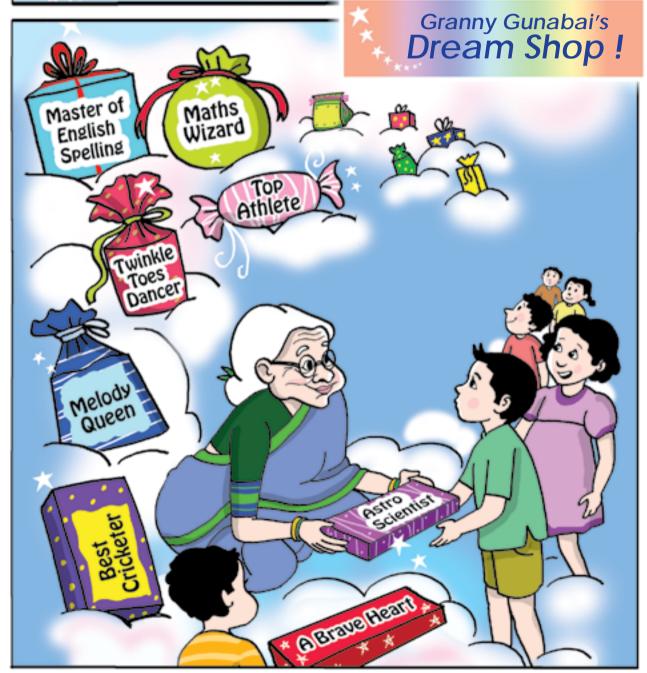
I love children and I know what they dream of. That's why I opened the shop

exclusively for children. I make your dreams come true.

But my charges are steep. Your word of honour is what I need. Take whatever you like but make a promise.

And remember, if you break your promise, my goods will come back to me!

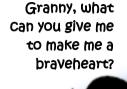




Here's a set of My English books! But you must give me your promise that you will read the books and do all the activities.



Here's a packet of self-confidence.
But you must promise me to believe and achieve.





I never laugh at my young friends. Here is a package to help you reach the stars and beyond. But give me your word of honour that you will always love and respect nature.

Cloud Nine, Beyond the Horizon, Fantasy Land.

- **right**: Here, it is used in the sense of exactly.
- curios : small, interesting things or objects
- **unbreakable**: one which does not break
- seaweed: a plant that grows in the sea
- take your pick: Take anything you like.
- **desperately**: A desperate person is a person who needs something very much. 'I desperately need ' means 'I need very much'.
- latest : newest
- **delicious**: very tasty

- **nutritious**: good for your body and health, something that helps your body to grow
- **greens**: green vegetables
- **exclusively**: only
- **steep**: very high
- **cloud nine**: When one is on cloud nine, one is very happy.
- top my class: get the highest marks or grades in my class
- **braveheart**: a very brave person

POINTERS

- 1. Read aloud the speech given by -
 - Saras the Sasa
- * Jamie Jellyfish
- * Guna-aji
- 2. List the goods displayed in each shop.
 Add a few more suitable goods to each shop.
- 3. Draw simple maps to show the location of each shop.
- 4. Enact the conversations.
- 5. Note the following from each shop:
 - How the shopkeeper introduces herself/himself
 - * The goods in the shop what is sold in the shop
 - * Location of the shop
 - * Conversations in the shop

Now use your imagination to present a 'fantastic shop' of your choice using the above points. Some options are given below:

- a flying shop
- * a shop in a tree
- * a super power shop
- 6. Copy the sentences which have the word 'just'. Translate them into your mother tongue.
- 7. Write an advertisement for any one of the fantastic shops.



- 8. Hold an exhibition of different shops in your classroom.
- 9. Complete the following sentences using different endings.
 - * I'll have a dozen!
- * I just can't do without!
- * My dearest wish is to make!
- * I desperately need!



4.5 A Book Review George's Secret Key to the Universe

George's Dad is an ardent environmentalist. In fact, both his parents are convinced that modern inventions of science and technology have caused a lot of damage on the earth. They are committed to the cause of saving the planet. They use a bicycle instead of a car. There is a ban on TV and computers in their house. They don't buy things like bread and biscuits. They eat only vegetarian and home cooked food. They even use candles to light the house to avoid using electricity. Poor George has to suffer a lot of jeering and ridicule from his friends because of all this.

Actually, George doesn't think that either the TV or the computer is a bad thing. He has tried to tell his parents that it's possible to save the earth using the computers and the internet. But no! In their house, there can't be ANY discussion on that issue. George always likes to know 'why'. But who is to answer his questions? His parents think that he is still too young to understand global issues.

One day, however, George unexpectedly acquires a new friend and next door neighbour - Annie. Annie's father Eric is a brilliant scientist and ever willing to answer all of George's questions. Eric has built a super super intelligent computer named Cosmos. Cosmos has incredible powers. It can literally open windows on the universe and take you to any planet, star, comet and even to a black hole! And of course Cosmos can also bring you back from there. However, Cosmos depends entirely on the information that is fed into it by people like Eric who do the research and thinking that can make Cosmos work.

Science can be used for a good cause and a group of good scientists like Eric have vowed to use it for people's welfare. Unfortunately, there is one odd angry scientist who wants to use science for his own selfish motives. He is planning to steal Cosmos and all of Eric's research so that he can establish his own rule on another planet. It so happens that only George can do something to overcome the wicked plans of the nasty scientist. If you want to know what adventures he undertakes and what strategies he has to use to stop the power hungry scientist, you have to read the novel, 'George's Secret Key to the Universe'.

The author of this wonderful adventure is Lucy Hawking. The story of the novel is imaginary but it also includes plenty of charts, photographs, boxes that give you hard facts about our solar system, galaxies, space and the whole universe. This information has been presented in a very simple, easy to understand manner by none other than Stephen Hawking, who is said to be one of the greatest scientists of our times. His achievements are all the more astounding as he is a victim of many physical ailments. He has to use a wheelchair to move about and uses a computerised voice system in order to 'speak'. The story of Stephen Hawking's triumph over his physical disabilities is itself an inspiring adventure.

The book includes very attractive and expressive sketches drawn by Garry Parsons.

It is true that excessive use of science and technology can give rise to certain problems. But turning away from technology is not the solution. That is why the Hawkings have given an important message in this book - more research, more studies and a commitment to use them not for selfish gains but for the welfare of the entire living world!

•••

- **Universe:** Here, it means a system of stars, planets, etc.
- **ardent**: very enthusiastic, working hard for something
- environmentalist: a person who feels strongly that our environment must be protected
- are convinced : are sure
- committed: pledged to do something

- cause: work
- suffer a lot of jeering and ridicule : face a lot of teasing
- issue: important problem
- global: about the whole world/earth
- **brilliant**: very intelligent
- literally: actually, in reality
- vowed : promised

- **establish his own rule :** be the king or master (of)
- astounding: wonderful, extra-ordinary
- **victim**: a person who has to suffer from something, who is harmed or hurt
- **triumph**: victory
- gains: benefit, profit
- welfare: health, happiness, safety, etc.
- excessive: more than necessary

POINTERS

1. Answer the following questions:

- (a) What do George's parents do to save the planet?
- (b) What planet do we live on?
- (c) Does George agree with his parents? Write what he thinks.
- (d) Who is George's friend and neighbour?
- (e) Who is Eric? What does he do?
- (f) What can Cosmos do?
- (g) What does the nasty scientist want?

2. Name the following with the help of the passage.

- 1. The book that is reviewed
- 2. The author of the book
- 3. The person who has presented the information in the book
- 4. The person who has drawn pictures for the book

3. Read the following:

- * expect → expected → unexpectedly
- * fortune → fortunate → unfortunately
- * able → ability → disabilities

4. What are the various things we find in the universe? List them from the passage.

5. Write an informal letter from George to his parents. In the letter, George tells his parents what he thinks.

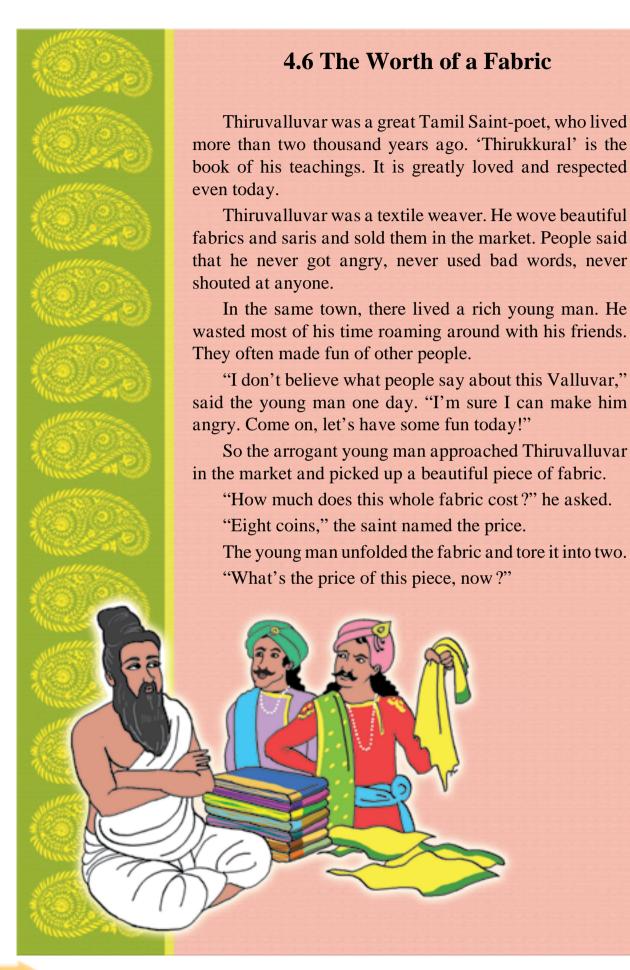
6. Hold debates on the following issues in your mother tongue and then write the main points in English.

- * Is science and technology good for us? * Can we avoid electricity?
- * What are the major problems in today's world?

7. Note the following points which are used to write a book review.

- Name of the book
 Name of the author
- Name of the illustrator or artist who draws pictures
 What the book is about
- * Your opinion about the book

Using the above points, try to write a simple book review on any book of your choice in about 10-12 lines.





"Four coins," the Saint answered politely.

The youth was taken aback. 'Why doesn't the man get angry?' he thought. He then tore the half pieces into half again.

"And now?"

"Two coins!" was the answer.

Now it was the young man who became impatient and agitated. He tore the pieces into half again and again, saying, "And now? What's the price now?"



Thiruvalluvar calmly went on reducing the price to half every time.

At last, the fabric was reduced to rags. So, Thiruvalluvar said in a quiet tone, "Now this fabric has become worthless. I will not name any price for these rags."

The young man did not know what to say. But he was proud of his riches. So he offered to pay eight coins to the Saint. For the first time, Thiruvalluvar smiled but he refused to take the money.

"Young man, now this fabric is of no use. It has become worthless. Why? Because no one will be able to wear it now."



"Do you know, the fabric was not made in a day. Many people have toiled to make it. The farmer who grew cotton in his field worked hard for months through sun and rain. He picked cotton from each boll and gave it for spinning. Then someone else carded the cotton and spun it into long, uniform threads. The threads were dyed carefully so that they took on these lovely colours. My wife and I wove the threads together, putting in beautiful designs. We thought, some day, someone will like this fabric, will be happy to

wear it. Then all our work would have been rewarded. When you destroyed the fabric, you destroyed all the love and labour that went into its making. Money cannot bring it back."

The softly spoken words touched the young man's heart. Now he was really ashamed of himself.

"And do you know," Thiruvalluvar went on to say, "I can weave another fabric like this, but our life is also like this fabric. If you tear it apart with hasty, thoughtless actions, it will be destroyed. And you will not get it back again."

Thiruvalluvar's words opened the young man's eyes. There and then he decided to give up his idleness and bad habits.

- **boll**: pod of the cotton plant
- **spinning**: process of making yarn or thread out of cotton wool
- carded : cleaned and combed cotton to remove seeds
- spun: past tense of 'spin'
- **rewarded**: when one is rewarded, one gets what he has worked for
- idleness : laziness

POINTERS

- 1. Read the story silently.
- 2. Write a short note on Thiruvalluvar using the information given in the story.
- 3. Read aloud the speech in which Thiruvalluvar explains how the fabric was made. Present the process in the form of a chart.
- 4. Choose any one of the objects we use daily and find out how it is made. Present the information in the form of a chart.
- 5. Retell the story in your mother tongue.
- 6. Collect with the help of your teacher, stories about the lives and message of Saints that lived in Maharashtra.

4.7 Play by Day and Night



Bring the hoop, and bring the ball, Come with happy faces all;

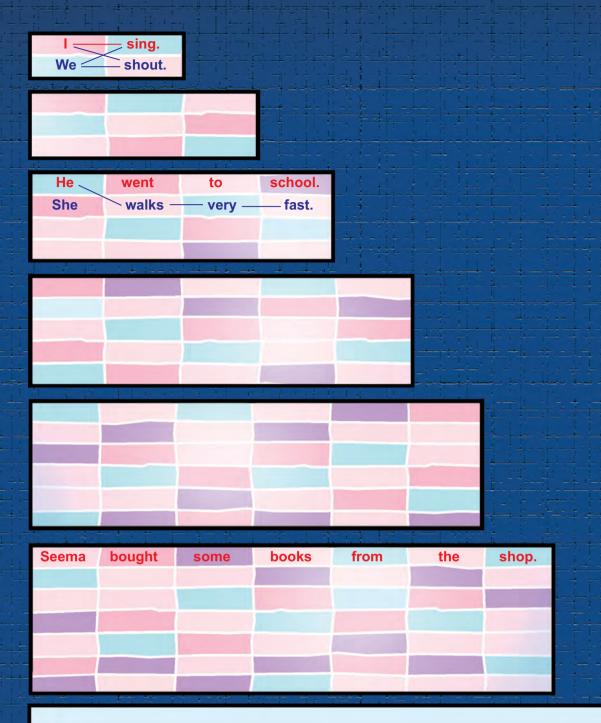
Let us make a merry ring, Talk and laugh, and dance and sing

Quickly, quickly, come away, For it is a pleasant day.

Girls and boys, come out to play The moon does shine as bright as day.

Leave your supper and leave your sleep
And come with your playfellows into the street.

Come with a hoop, come with a call, Come with a goodwill or not at all.



Two to Seven – A Game for Two or More Players: The game begins with the first player writing a two-word sentence in the top row of the first table. The next player writes another sentence below that. Then you work out how many other meaningful sentences you can make by considering words in the neighbouring boxes (going left to right, straight up or down as shown). For every meaningful sentence, a player gets one mark. In this way, players write sentences turn by turn. Each sentence must have as many words as there are boxes in that row. Also, you should not repeat a word. See how far you can reach from two up to seven!



Maharashtra State Bureau of Textbook Production and Curriculum Research, Pune.