

Exploring Society: India and Beyond

Social Science Textbook for Grade 6



0681

एन सी आर टी



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NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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Foreword

The National Education Policy 2020 envisages a system of education in the country that is rooted in Indian ethos and its civilisational accomplishments in all domains of human endeavour and knowledge while at the same time preparing the students to constructively engage with the prospects and challenges of the twenty-first century. The basis for this aspirational vision has been well laid out by the National Curriculum Framework for School Education 2023 across curricular areas at all stages. Having nurtured the students' inherent abilities touching upon all the five planes of human existence, the *pañchakośhas*, in the Foundational and the Preparatory Stages has paved the way for the progression of their learning further at the Middle Stage. Thus, the Middle Stage acts as a bridge between the Preparatory and the Secondary Stages, spanning three years from Grade 6 to Grade 8.

This framework, at the Middle Stage, aims to equip students with the skills that are needed to grow, as they advance in their lives. It endeavours to enhance their analytical, descriptive, and narrative capabilities, and to prepare them for the challenges and opportunities that await them. A diverse curriculum, covering nine subjects ranging from three languages — including at least two languages native to India — to Science, Mathematics, Social Sciences, Art Education, Physical Education and Well-Being, and Vocational Education promotes their holistic development.

Such a transformative learning culture requires certain essential conditions. One of them is to have appropriate textbooks in different curricular areas as these textbooks will play a central role in mediating between content and pedagogy — a role that will strike a judicious balance between direct instruction and opportunities for exploration and inquiry. Among the other conditions, classroom arrangement and teacher preparation are crucial to establish conceptual connections both within and across curricular areas.

The National Council of Educational Research and Training, on its part, is committed to providing students with such high-quality



textbooks. Various Curricular Area Groups, which were constituted for this purpose, comprising notable subject-experts, pedagogues, and practising teachers as their members, have made all possible efforts to develop such textbooks. This textbook of Social Science closely follows the vision of the NCFSE 2023. It innovates in minimizing the text by focusing on core concepts and major developments. These are also conveyed through abundant pictures, drawings, maps and other graphics, which are brought to life by a pleasant and attractive overall design. The textbook seeks to keep students engaged through a variety of exercises, occasions for reflection, activities and projects, all of which invite them to explore and discover by themselves. The selection of five themes takes care of the important requirement of maintaining a multidisciplinary perspective. Cultural rootedness, another requirement, is thus not limited to the theme ‘Our Cultural Heritage and Knowledge Traditions’, but pervades the other themes as well. It is hoped that students and teachers alike will find using this textbook an enjoyable and enriching experience.

However, in addition to this textbook, students at this stage should also be encouraged to explore various other learning resources. School libraries play a crucial role in making such resources available. Besides, the role of parents and teachers will also be invaluable in guiding and encouraging students to do so.

With this, I express my gratitude to all those who have been involved in the development of this textbook and hope that it will meet the expectations of all stakeholders. At the same time, I also invite suggestions and feedback from all its users for further improvement in the coming years.

31 May 2024
New Delhi

Dinesh Prasad Saklani
Director,
National Council of
Educational Research and Training



Letter to the Student

Dear Student,

You have now entered the Middle Stage, about to explore new subjects. One of them is Social Science. You had a brush with it earlier, but from this Grade 6 onward you will discover more of this world of ours, beginning with our country, India. We have done our best to make this textbook stimulating:

- Whenever possible, we have used your immediate environment — the world as you know it — as a starting point.
- We have tried to keep the text to a minimum by focusing on the ‘big ideas’ — ideas you will encounter in your life for sure. Ideas that will help you understand India and the world.
- We have encouraged you to reflect on these ideas or important facts — to explore, discover, think, create, ask questions and propose answers. Rote learning is not the goal of good education; understanding and reflection are.
- We have included more illustrations than ever before, as they often convey a message better than long explanations. They also make the textbook more lively and pleasant to browse through.
- We have selected five main themes — you will see them in the Table of Contents. This has enabled us to combine in a single theme inputs from several disciplines — whether history, geography, political science or economics. This brings us closer to real life.
- Finally, we have given some emphasis to understanding India’s foundations. India is a young nation but an old civilisation. The former would not exist without the latter.

Preparing this textbook has been a labour of love. If you have felt attracted to a few pages here and there, to some picture

or map, if you have felt tickled by a question or a challenging quotation, we will feel rewarded. We hope you will enjoy this journey of discovery. It's about all of us, yourself included!



We need to add an important detail. In this textbook, every part of it — text, side box, image or map — can be subject to evaluation and assessment. There are, however, five exceptions:

- *The quotation or quotations* on the first pages of chapters. Some are straightforward, others offer deep thought. Do not worry if you do not understand them at the first reading; they are meant to stimulate you or inspire you.
- *Wherever we have mentioned in the text, “You need not remember this”.*
- *The diacritical signs on some Sanskrit words* — do look at ‘Your journey through this book’ in the next few pages to understand what we mean.
- *The Introduction* (page 1).
- *The Glossary* (at the end of the textbook).

No evaluation should bear on these five aspects.



Your journey through this book

This textbook has been written with care and love for you, our Grade 6 learners. This year you will be studying Social Science for the first time. This field helps us to understand ourselves, the land and the people around us. How did people live in the past? What does our country, India or Bharat, look like? What do her mountains, rivers, and plains look like? ... and so many other such questions.

This new textbook has many features, which we hope you will find interesting and fun too. As you flip through it, you will see colourful illustrations, including pictures, maps and drawings of many kinds. Let us give you a quick tour of the book and its features. Your Teacher will also guide you through it.

Each chapter begins with an **inspiring quotation** from a renowned person or text. Read it and let it stay with you. Some of these quotations are profound thoughts. Don't worry if you do not understand right away; you can return to them later, and they can also be discussed in the class. Here's an example —

Oh, grant me my prayer, that I may never lose the bliss of the touch of the one in the play of the many.

— Rabindranath Tagore

... The principle of unity in diversity which has always been normal to [India] and its fulfilment the fundamental course of her being and its very nature, the Many in the One, would place her on the sure foundation of her Swabhava and Swadharma.

— Sri Aurobindo

The **main text** is written in simple language. You will learn about people and places in India and beyond.

Technical words are explained in the margin right next to the text. They are also listed in the **glossary** (or mini-dictionary) at the end of the textbook. In addition, we have included a few words you may not be familiar with. Do consult the glossary often.

- **Geologists** (Fig. 2.1) study the physical features of the Earth, like the soil, stones, hills, mountains, rivers, seas, oceans and other such parts of the Earth.
- **Palaeontologists** (Fig. 2.2) study the remains of plants, animals and humans from millions of years ago in the form of **fossils**.
- **Anthropologists** (Fig. 2.3) study human societies and cultures from the oldest times to the present.
- **Archaeologists** (Fig. 2.4) study the past by digging up remains that people, plants and animals left behind, such as tools, pots, beads, figurines, toys, bones and teeth of animals and humans, burnt grains, parts of houses or bricks, among others.

Fossils: Impressions of footprints, or parts of plants or animals that are found preserved within layers of soil or rocks.

‘**The Big Questions**’, just two or three, give you an idea of what you are going to explore in the chapter.

The Big Questions ?

1. *What are the different types of activities that people engage in?*
2. *What is their contribution to our everyday lives?*

As we move through the chapter you will find some sections called ‘**Let’s explore**’,

LET'S EXPLORE

Do you know the term for a society where people select their leaders? How do you think people can benefit from such a situation? What could happen if they live under leaders that they did not choose? (*Hint: Think back to what you’re learning in the theme ‘Governance and Democracy’!*) Write your thoughts in a paragraph of 100–150 words.



‘Think about it’ which propose activities, in-text exercises, or will invite further reflection.



THINK ABOUT IT

Have you ever seen old coins, books, clothes, jewellery or utensils in and around your house? What type of information can we gain from such objects? Or from old houses or buildings?



DON'T MISS OUT

Many of our institutions have mottos inspired by the wisdom of our ancient texts. The Government of India's motto, for example, is *Satyameva Jayate*, which means "Truth alone triumphs". The Supreme Court's motto is *Yato Dharmastato Jayah*, or, "Where there is dharma, there is victory."

‘Don't miss out’ brings out intriguing or fun facts that will trigger your curiosity.

At the end of every chapter, **‘Before we move on’** sums up some of the core ideas that the chapter tried to convey. A choice of exercises, questions or projects follow.



Before we move on ...

- Family is the foundation of human society. Ideally, members of a family support each other in their many duties and tasks.
- Community, a bigger unit, also implies that people do their best to support each other. 'Community' can be defined in several ways and there are many kinds of community.
- Ultimately, communities are interdependent.

Finally, on the first page of every chapter, you will find a **QR code** leading you to interesting videos, puzzles, games, stories, and so on, which are related to the content of the chapter and will lead you to further explorations. Do scan it, or take an adult's help to scan it, and browse through the material.

Your Teacher will be with you on this journey of exploring this textbook. We hope you will read parts of it with your

parents or guardians too. Maybe you can try out some of the activities with them!

We wish you an enjoyable journey through Social Science and its rich insights into human life and society.



A note on the pronunciation of Sanskrit words

Since this textbook is in English, we use the Roman alphabet. But we will also encounter some words in Sanskrit and a few other Indian languages. The Roman alphabet cannot make their pronunciation clear without some additional marks or signs, such as dashes, dots or accents, called 'diacritical signs' or 'diacritics'. You can ignore all these signs if you wish, and you don't need to remember them. However, as we are using only a few simple signs, you will find it easy to get used to them. You will also find that they help you pronounce Sanskrit words fairly correctly.

Here is how they work:

- A short dash (called 'macron') over a vowel makes it long. For instance, *dāna* is pronounced 'daana'; *līlā* is pronounced 'leelaa'; *sūtra* is sootra.
- *śh* and *ṣh* are pronounced similar to 'sh' in 'shall' (there is a slight difference, since they correspond to श and ष in the Devanagari script; see next point). So *śhāstra* is pronounced 'shaastra'; *kṣhīra* is 'ksheera'.
- Consonants with a dot below them (*ḍ ṭ ṣh* and *ṇ* mainly) are pronounced by hitting the tongue on the roof of the mouth; without a dot, they are pronounced with the tongue on the teeth. Examples of consonants pronounced with the tongue hitting the roof of the mouth: *Āryabhaṭa*, *gaṇa*, *paṭhana* (studying), *pīṭha*, *goṣṭhī* (association, assembly), *dhanādhyā* (rich), *aṇu* (atom).
- Finally, *r̥* is the Devanagari letter ऋ. We choose to write it as *r̥i*, although in some parts of India it is also pronounced as *ru*. So we write 'Ṛig Veda', for instance.

For those who wish to know the precise correspondence between the Devanagari alphabet and the Roman script in our system, the tables of short and long vowels are as follows:

Devanagari	Roman script
अ	<i>a</i>
इ	<i>i</i>
उ	<i>u</i>
ऋ	<i>ṛi</i>
ए	<i>e</i>
ओ	<i>o</i>
आ	<i>ā</i>
ई	<i>ī</i>
ऊ	<i>ū</i>
ऌ	<i>ṛi</i>
ऐ	<i>ai</i>
औ	<i>au</i>

And the table of consonants:

Guttural	क	ka	ख	kha	ग	ga	घ	gha	ङ	ṅa	ह	ha
Palatal	च	cha	छ	chha	ज	ja	झ	jha	ञ	ña	य	ya
Cerebral	ट	ṭa	ठ	ṭha	ड	ḍa	ढ	ḍha	ण	ṇa	र	ra
Dental	त	ta	थ	tha	द	da	ध	dha	न	na	ल	la
Labial	प	pa	फ	pha	ब	ba	भ	bha	म	ma	व	va
Sibilants	श	śha	ष	ṣha	स	sa						

Note: Our pronunciation guide is an adaptation of what is known as the International Alphabet of Sanskrit Transliteration or IAST system.

Constitution of India

Part III (Articles 12 – 35)
(Subject to certain conditions, some exceptions
and reasonable restrictions)
guarantees these

Fundamental Rights

Right to Equality

- before law and equal protection of laws;
- irrespective of religion, race, caste, sex or place of birth;
- of opportunity in public employment;
- by abolition of untouchability and titles.

Right to Freedom

- of expression, assembly, association, movement, residence and profession;
- of certain protections in respect of conviction for offences;
- of protection of life and personal liberty;
- of free and compulsory education for children between the age of six and fourteen years;
- of protection against arrest and detention in certain cases.

Right against Exploitation

- for prohibition of traffic in human beings and forced labour;
- for prohibition of employment of children in hazardous jobs.

Right to Freedom of Religion

- freedom of conscience and free profession, practice and propagation of religion;
- freedom to manage religious affairs;
- freedom as to payment of taxes for promotion of any particular religion;
- freedom as to attendance at religious instruction or religious worship in educational institutions wholly maintained by the State.

Cultural and Educational Rights

- for protection of interests of minorities to conserve their language, script and culture;
- for minorities to establish and administer educational institutions of their choice.

Right to Constitutional Remedies

- by issuance of directions or orders or writs by the Supreme Court and High Courts for enforcement of these Fundamental Rights.

Constitution of India

Part IV A (Article 51 A)

Fundamental Duties

It shall be the duty of every citizen of India —

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- *(k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.**

Note: The Article 51A containing Fundamental Duties was inserted by the Constitution (42nd Amendment) Act, 1976 (with effect from 3 January 1977).

**(k) was inserted by the Constitution (86th Amendment) Act, 2002 (with effect from 1 April 2010).*



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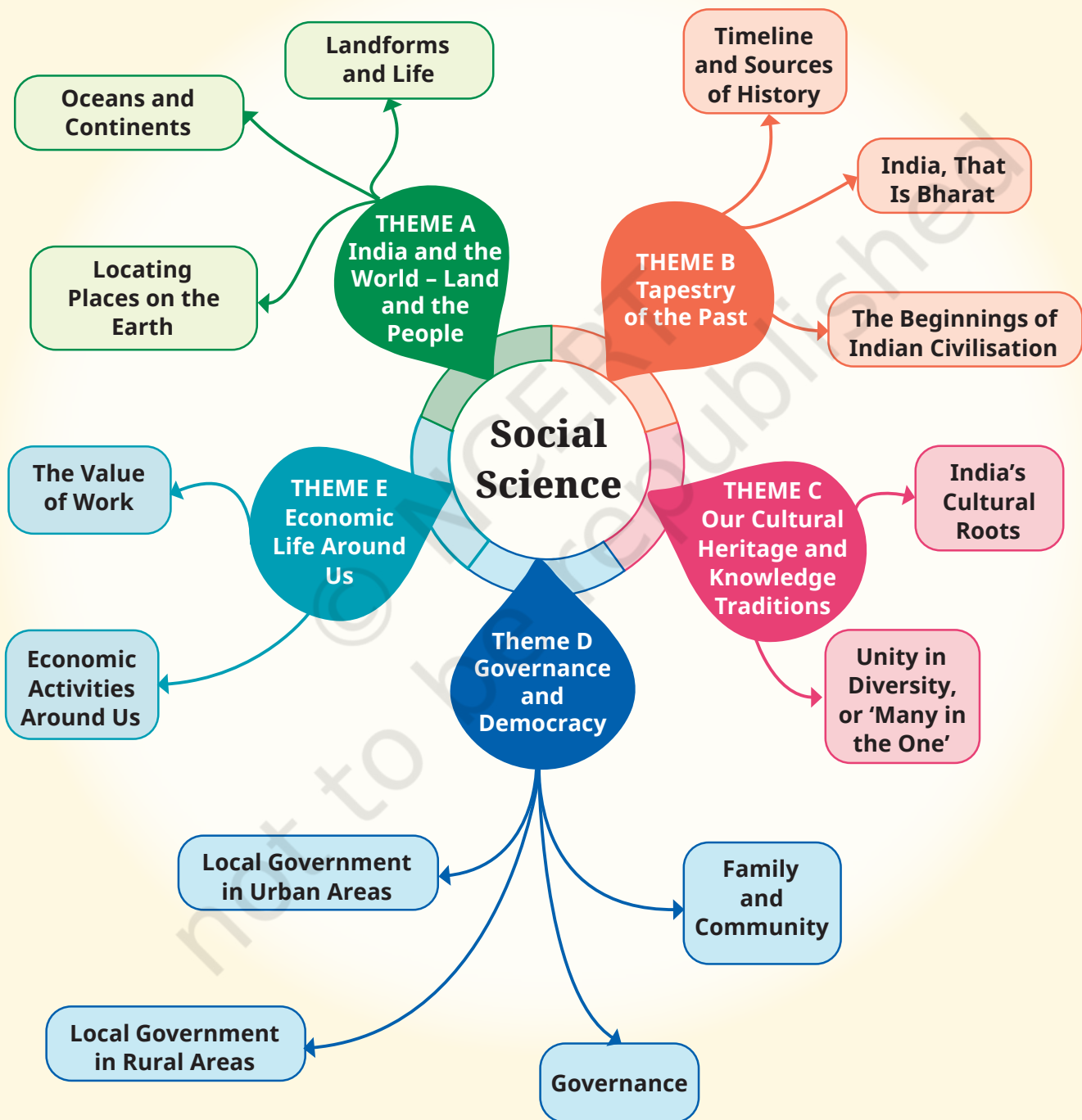
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Vasudhaiva Kutumbakam:
The whole world is a family

Introduction

Why Social Science?





LET'S EXPLORE



- Observe the picture above. What do you notice?
 - Where does the water in the lake come from?
 - Who made the road and why?
 - What could be the activities of people living in the small house? What could be their history? Their future?
- Write down your answers and discuss them with your classmates.
- Now, looking at the picture on the facing page, what questions come to your mind? Write them down.
- How do you propose to find answers to the questions related to these two images?

How are our questions above relevant to Social Science?

We live in the 21st century (if you do not know what this figure really means, you will soon learn about it). Everyone agrees that it is a particularly challenging time for humanity. On



the one hand, there is rapid progress in technology, which is changing our lives in many ways. On the other hand, the world is witnessing multiple wars, armed conflicts and rising social tensions, and our planet's natural environment is under great stress. We live in an age of great possibilities but also great challenges.

The world over, more and more people wonder, “How do we solve the problems facing humanity? How can our societies learn to live in peace and harmony? How can we protect this beautiful Earth which we all share — and protect it not only for ourselves but also for all the species that live on it?”

These fundamental questions are simple, but the answers are not. They cannot be simple, because human societies are very diverse and complex. If we wish to find answers to such questions and help build a better future, we first need to understand our world, and human societies in particular. That is what Social Science is all about.

You may wonder whether this is a ‘science’ like, say, physics or chemistry. It is not. The discipline does use scientific

methods wherever possible (you will see a few examples in this textbook), but its focus — human society — is, again, too diverse to allow the kind of set procedures and fixed results the sciences come up with.

Social Science has many subdisciplines: geography, history, political science, economics, sociology, anthropology, archaeology, psychology and a few more. You need not feel intimidated by all these terms! While you will study some of these subdisciplines in the Secondary Stage, in the Middle Stage we have avoided this classification. Instead, we have opted for five broad themes. Let us briefly look at them. *(Note that the mind map at the start of this Introduction includes chapters of both parts of this textbook.)*

Theme A – India and the World: Land and the People

This first theme includes the basics of the geographical world around us — some of the main features of our planet and the way to represent them on a map. Why is this theme important, when today we can get excellent maps on a mobile phone? Because it deals with much more than maps. It also asks how geographical features — oceans, mountains, rivers, etc. — have shaped entire civilisations throughout their histories. It is also, in India's case, about how its natural setting has contributed to giving this ancient civilisation a unique identity.

Theme B – Tapestry of the Past

A tapestry is a large piece of canvas-like cloth usually kept as a wall hanging, with pictures and designs on it — sometimes a historical narrative. Our tapestry is where we will be painting scenes from the past, beginning with India's past. But why should we be at all concerned with the past? Because it is the key to understanding the present, and the chapters in this theme will often make this connection

clear. The past is a major source for our identities — it helps us understand who we are and where we come from. The past is still with us, in other words. And since history is unfortunately not all about happy developments, it is useful to understand where people, governments or rulers went wrong, and why. Only then can we hope to avoid repeating those errors.

Theme C – Our Cultural Heritage and Knowledge Traditions

It has often been said that India has a rich and ancient culture. True, but what are its main characteristics? Its guiding principles? How has it manifested itself in India's history? And how can it help us to deal with issues of our times? These are some of the questions that this theme is exploring, with the objective that every student should understand some of the cultural foundations of our civilization and learn to appreciate their value.

Theme D – Governance and Democracy

Citizens of any country should know how their political system functions. India, as the world's largest democracy, has an elaborate system working at different levels. What are its chief characteristics and components? How do the citizens participate in the overall governance? What are their rights and also their duties or dharma? Are there different systems in other countries, and, if so, of what type? How are different countries supposed to interact? By studying this theme, we can become more responsible citizens, understand how the organs of the government function, and learn to have a say in the policies that affect us all, whether locally or nationally.

Theme E – Economic Life Around Us

No family can be happy without the essentials of daily living — at least food, clothing, shelter, access to water in a

first stage; in a second, livelihood for adults and access to education for the younger ones. Similarly, no country can develop harmoniously without a sound economy. But how does an economy work, especially in a huge country like India? What exactly is money? Where does it come from? How can it be increased? What economic activities can people engage themselves in? How are natural and human resources best managed? This theme will lay down some of the important concepts and practices that will enable us to answer these questions.



You will notice that there are many questions in the preceding paragraphs. This is as it should be — Social Science is also about the art of asking the right questions. Only then can we start looking for the right answers. This also explains the presence of ‘Big Questions’ at the start of each chapter in this book.

You may also be intrigued to find a game of chess and some ancient Tamil poetry in chapters that apparently deal with geography; a discussion on the uses of the sari in a chapter on cultural heritage; the concept of *sevā* and the mention of festivals in chapters focusing on economics. This is deliberate. We believe in bringing elements from diverse fields together (you will learn later that this is called ‘multidisciplinarity’). This enriches our perspective. Indeed, life constantly mixes numerous elements together, so why should we not?

By now, it should be clear that although Social Science makes constant use of the past, it seeks to make sense of the present so as to help us prepare a better future. It is an exploration and an adventure.

Locating Places on the Earth

The globe of the Earth stands in space, made up of water, earth, fire and air and is spherical. ... It is surrounded by all creatures, terrestrial as well as aquatic.

— Āryabhaṭa (about 500 CE)



The Big Questions ?

1. What is a map and how do we use it? What are its main components?
2. What are coordinates? How can latitude and longitude be used to mark any location on the Earth?
3. How are local time and standard time related to longitude?



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Imagine that you are visiting a city for the first time. How would you find the places you want to visit? You might ask a local person for help, or you might look at a map of the city. In previous grades, you learnt a little about maps, and in this chapter, we will study them in more detail.

Let us play a game. Examine the map of this small city (Fig. 1.1). Imagine that you just got off a train at the railway station, and you want to visit the bank marked on the map. Which way would you go? Are there other possible ways? Can you locate the public garden, the school and the museum? If you want to proceed from the bank to the market, which way will you go? This is where a map comes in handy!



Fig. 1.1. A map of an imaginary small city.

A map is like a treasure guide; it shows you where things are and how to get to them. Notice the four arrows in the top right corner of the map; we will soon see how they point to some specific directions and make maps even more helpful.

LET'S EXPLORE

- On the map in Fig. 1.1 given on page 8 —
1. Mark the hospital.
 2. What is the meaning of the blue-coloured areas?
 3. Which is farther away from the railway station — the school, the Nagar Panchayat or the public garden?
- As a class activity, form groups of three or four students each. Let each group try to draw a map of your school and some of the streets or roads that lead to it, and a few neighbouring buildings. At the end, compare all the maps and discuss.



A Map and Its Components

From this simple example, we understand that a map is a representation, or a drawing, of some area — it may be a small area (a village, a town, etc.), a bigger area (say, your district or state), or a very large area like India or even the whole world. In a map, you look at the surface as if you are viewing it from the top.

An **atlas** is a book or collection of maps.

As you will discover, there are several kinds of maps —

- **physical maps**, which mainly show some natural features such as mountains, oceans and rivers (see an example in Fig. 5.2 in this textbook)
- **political maps**, which show details of countries or states, boundaries, cities, etc. (for instance, a map of India with all its States, Union Territories and their capitals)
- **thematic maps**, with a specific kind of information (examples include Fig. 6.3 and Fig. 8.1 in this textbook).

In addition, there are three important components of maps—**distance**, **direction** and **symbols**. You have already

experienced the first two while navigating the map in Fig. 1.1. Let us now define them more precisely.

Have you ever wondered how a huge place can fit on a small piece of paper? It is all thanks to the map's **scale**. Let us go back to our map of a small city (Fig. 1.1). Each centimetre on the map, as printed here, represents a certain distance on the ground — let us suppose it is 500 metres; we say that the scale is 1 cm = 500 m. Now, turn to the map of India in Fig. 5.2 in Chapter 5 of this textbook. The scale is represented in the bottom left corner by a ruler with '500' written above its length and 'km' on the side. It simply means that this ruler, which measures 2.5 cm in the printed map, corresponds to 500 kilometres on the ground.

So, the actual **distance** between two points represented on the map depends on the scale that the map is using.

LET'S EXPLORE



- Draw a simple map of a school's playground. Let us assume it is a rectangle, 40 m in length and 30 m in width. Draw it precisely with your ruler on a scale of 1 cm = 10 m.
- Now measure the diagonal of the rectangle. How many centimetres do you get? Using the scale, calculate the real length of the playground's diagonal, in metres.



Let us return to the four arrows at the top right of the small city's map. They point to four **directions**, which are north, at the top, and, moving clockwise, east, south and west. These are called the **cardinal directions**, also **cardinal points**. Other than these, intermediate directions are also used — northeast (NE), southeast (SE), southwest (SW) and northwest (NW). Most maps simply have an arrow marked with the letter 'N', which points to the north direction.

LET'S EXPLORE

- Consider the map of the small city again. Identify the correct and incorrect statements in the list below:
1. The market is north of the hospital.
 2. The museum is southeast of the bank.
 3. The railway station is northwest of the hospital.
 4. The lake is northwest of the apartment blocks.
- Taking your school as the starting point, do you know approximately in which cardinal direction your home is located? Discuss with your teacher and your parents.

Symbols are another important component of maps. Our map has small drawings of actual buildings and a few other elements, but there would not be enough space on the map of a large city or a country to draw them all. Instead, a symbol is used to represent these features — symbols for different kinds of buildings (for instance a railway station, a school, a post office), for roads and railway lines, and for natural elements such as a river, a pond or a forest. In that way, numerous details can be shown in the limited space available on a map.

To make maps more easily understood by a variety of users, map makers use specific symbols. Different countries use different sets of symbols. The Survey of India, a government body, has fixed a set of symbols for maps of India (or parts of India). A small selection of them is shown in Fig. 1.2 on page 12.

LET'S EXPLORE

Draw a rough map of your locality or your village, including your home, school and a few other important landmarks. Show the cardinal directions and use a few of the symbols shown in Fig. 1.2 on page 12 to mark some important features.



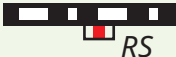

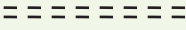
















Railway Line: broad gauge, metre gauge, railway station			
Roads: metalled, unmetalled			
Boundary: international, state, district			
River, well, tank, canal, bridge			
			
Temple, church, mosque, chhatri			
			
Post Office, Post & Telegraph Office, Police Station	<i>PO</i>	<i>PTO</i>	<i>PS</i>
Settlement, graveyard			
Trees, grass			

Fig. 1.2. A selection of symbols commonly used in maps.

Mapping the Earth

Mapping the Earth is a little more difficult because our planet is not a flat surface. It nearly has the shape of a sphere. (We say ‘nearly’ because it is not a perfect sphere, but is slightly flattened at the poles. However, in practice, we will consider it to be spherical.) Representing a sphere accurately on a flat sheet of paper is not possible. To understand why, peel an orange in such a way that you have just three or four large pieces of the skin; then try and flatten them on a table — you will see that you cannot do it without tearing them at the edges.

Now, consider a **globe**, which is a sphere on which a map is drawn. This may be a map of the Earth, the Moon, the planet Mars, the stars and constellations in the sky, etc. The physical object, like the one shown in the drawing on the next page, is a sphere that is generally made of metal, plastic or cardboard.

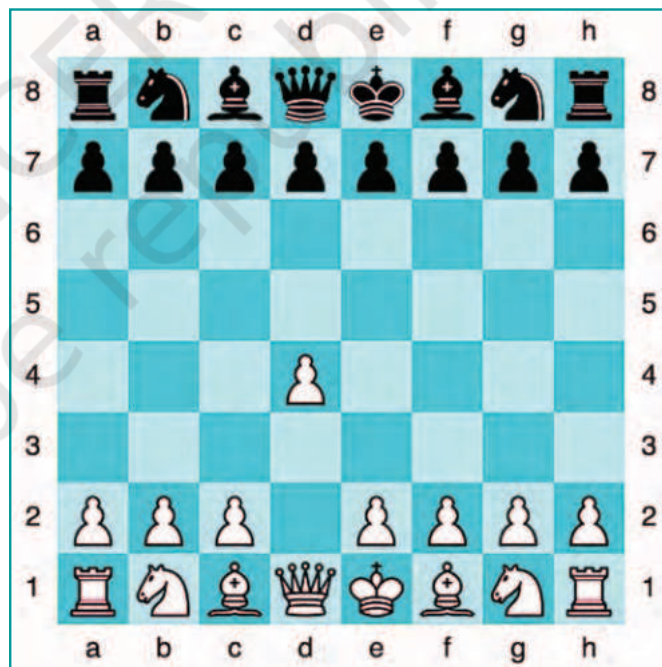
Here we will study the globe representing the Earth's geography. Because the globe and the Earth have the same spherical shape, a globe will better represent the geography of the Earth than a flat map. Let us now explore some of its features.



a) Understanding coordinates

Imagine a big market in a city or town, with neat rows of shops, all the same size. You want to meet a friend at a stationery shop inside the market. But your friend does not know where the shop is. So you would give directions like, "Meet me at 6 pm at the 7th shop in the 5th row from the entrance." This will allow your friend to precisely determine your location.

Now, consider a chessboard. To record moves by advanced players, letters are placed alongside the main pieces (from 'a' to 'h', see the image) and numbers (from 1 to 8) in between the two sides. This simple system allows players to mark each square and record every move. Here, the white side has just opened the game by moving the queen's pawn two squares forward (a very common opening). So, the pawn is said to have moved from d2 to d4.



LET'S EXPLORE

Using the same terms, write down your move if you play black and respond with the same move.



The system used in these two examples may be called a system of **coordinates**. Thanks to their two coordinates, the stationery shop as well as the chess square on the chessboard can be precisely determined.

A similar system of coordinates is used in the world of maps to determine the location of any place on a map. Let us see how this system works.

b) Latitudes

Let us return to the globe. It is easy to identify the North Pole and the South Pole on it. Rotate the globe; while it rotates, the fixed points at the top and bottom are the two poles. Halfway between them is the Equator; note the circle marking it (see Fig. 1.3).

Imagine that you stand on the **Equator** and travel towards one of the poles; your distance from the Equator increases. **Latitude** measures this distance from the Equator. At any point of this travel, you can draw an imaginary line that runs east and west, parallel to the Equator. Such a line is called a **parallel of latitude** and it draws a circle around the Earth. Again, it is easy to note on the globe that the largest circle is the Equator, while the circles marked by the parallels of latitude grow smaller as we move northward or southward (Fig. 1.3).

Latitudes are expressed in **degrees**; by convention, the Equator is latitude 0° (zero degree), while the latitudes of the two poles are 90° North and 90° South respectively; this is noted 90°N and 90°S .

There is a connection between latitude and climate. Around the Equator, the climate is generally hot (it is also called 'torrid'). As you travel away from the Equator towards one of the two poles (in other words, as your latitude increases), the climate becomes more moderate (or 'temperate'). And closer to the North or South Pole, the climate grows colder (or 'frigid'). You will learn in Science why this is so, and

also why we experience different seasons in the course of a year.

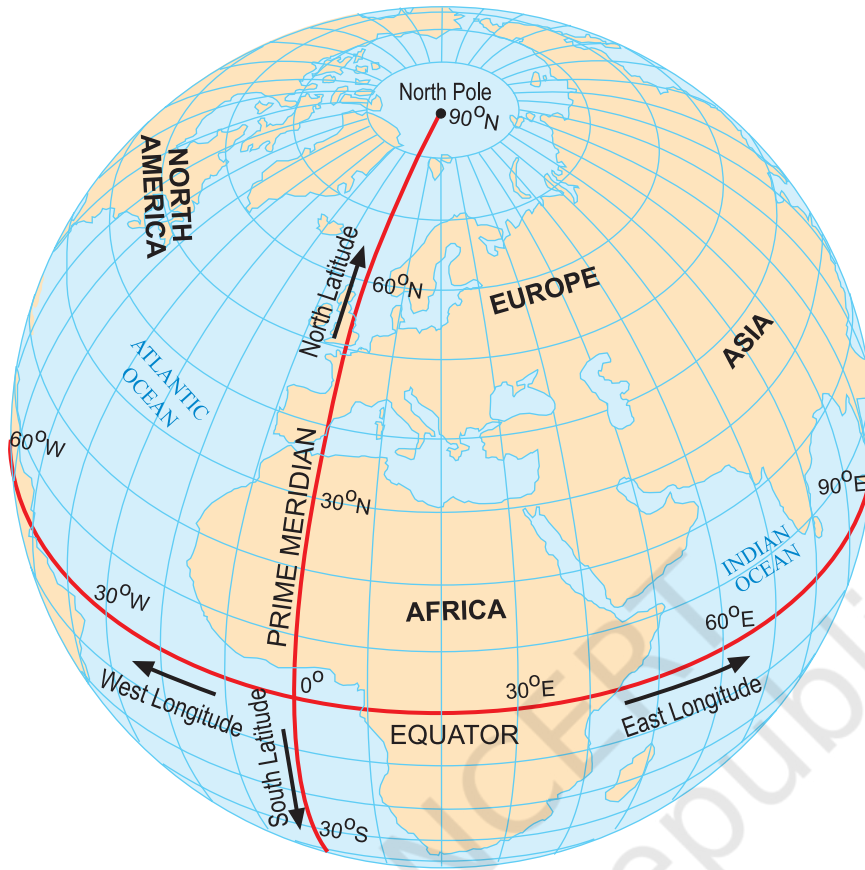


Fig. 1.3. This globe shows both parallels of latitude and meridians of longitudes

c) Longitudes

Imagine now that you travel from the North Pole to the South Pole by the shortest possible line. Observe the globe: you will see that instead of passing through Europe and Africa, you could just as well pass through Asia — the distance would be the same. These lines are called **meridians of longitude** (Fig. 1.3). They are all half-circles running from one pole to the other.

You will also learn in Science that the Earth spins on its axis. To put it simply, let's place a desk lamp a little away from our globe, focused on it, and imagine that this is

the Sun illuminating the Earth. Slowly rotating the globe eastward, we can note that for some places on the Earth it is morning, while for others it is mid-day, evening or night — when it's breakfast time in one country, it's lunchtime in another and in a third country people are fast asleep! That is why by measuring the longitude of a place, we will also be measuring the time at that place. Let us see how.

To measure longitudes, we need to define a reference point called the **Prime Meridian** (Fig. 1.3 on page 15). It is also called Greenwich Meridian because, in the year 1884, some nations decided that the meridian passing through Greenwich, an area of London in England, would become the international standard for the Prime Meridian. It is marked as 0° longitude.

Just as latitude is a measure of the distance from the Equator if you travel towards one of the poles, **longitude** is a measure of the distance from the Prime Meridian if you travel along the Equator. Longitude, too, is measured in degrees. Westward or eastward, it increases in value from 0° to 180° , with the letter 'W' or 'E' added. For instance, using round figures, New York's longitude is 74°W , while Delhi's is 77°E and Tokyo's is 140°E .



DON'T MISS OUT

As you can see on the globe of meridians of longitudes, 180°W and 180°E are the same longitude; so this longitude is noted 180° , omitting the letter W or E.

Latitude and longitude together are the two **coordinates** of a place. With them, you are now able to locate any place on Earth! You can now understand a statement such as "Delhi lies at 29°N latitude and 77°E longitude" (these values are rounded off, not exact).

Fig. 1.3 on page 15 shows the parallels of latitude and the meridians of longitude together on the globe as blue lines.

All these lines together constitute a **grid** for the globe; they are also called grid lines.

LET'S EXPLORE

If the globe or atlas in your class has well-marked latitudes and longitudes, try to note down approximate values for the latitude and longitude of (1) Mumbai, (2) Kolkata, (3) Singapore, (4) Paris.

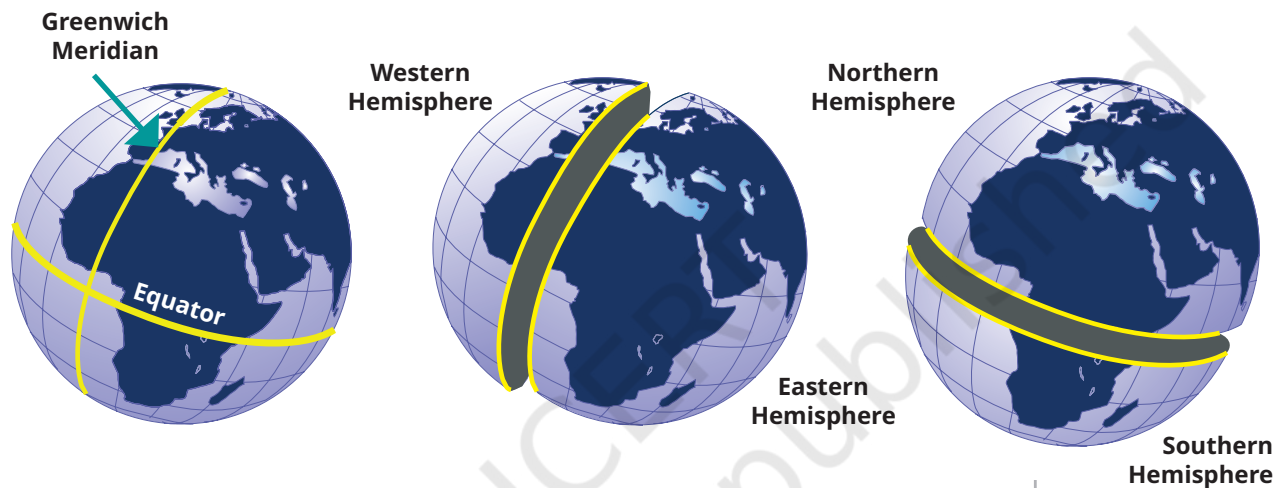


Fig. 1.4. This sketch shows how the Prime Meridian divides the Earth into the Western and Eastern Hemispheres, while the Equator divides it into the Northern and Southern Hemispheres.



DON'T MISS OUT

The Greenwich Meridian is not the first prime meridian. There were others in the past. In fact, many centuries before Europe, India had a prime meridian of its own! (Fig. 1.5) It was called *madhya rekhā* (or 'middle line') and passed through the city of Ujjayinī (today Ujjain), which was a reputed centre for astronomy over many centuries. Varāhamihira, a famous astronomer, lived and worked there some 1,500 years ago.

Indian astronomers were aware of concepts of latitude and longitude, including the need for a zero or prime meridian. The Ujjayinī meridian became a reference for calculations in all Indian astronomical texts.

The map shows a few ancient Indian cities close to the Ujjayinī meridian. Some are very close to it, while others are a little away. That is because measuring longitude required accurate timekeeping, which was not as precise then as it is today.

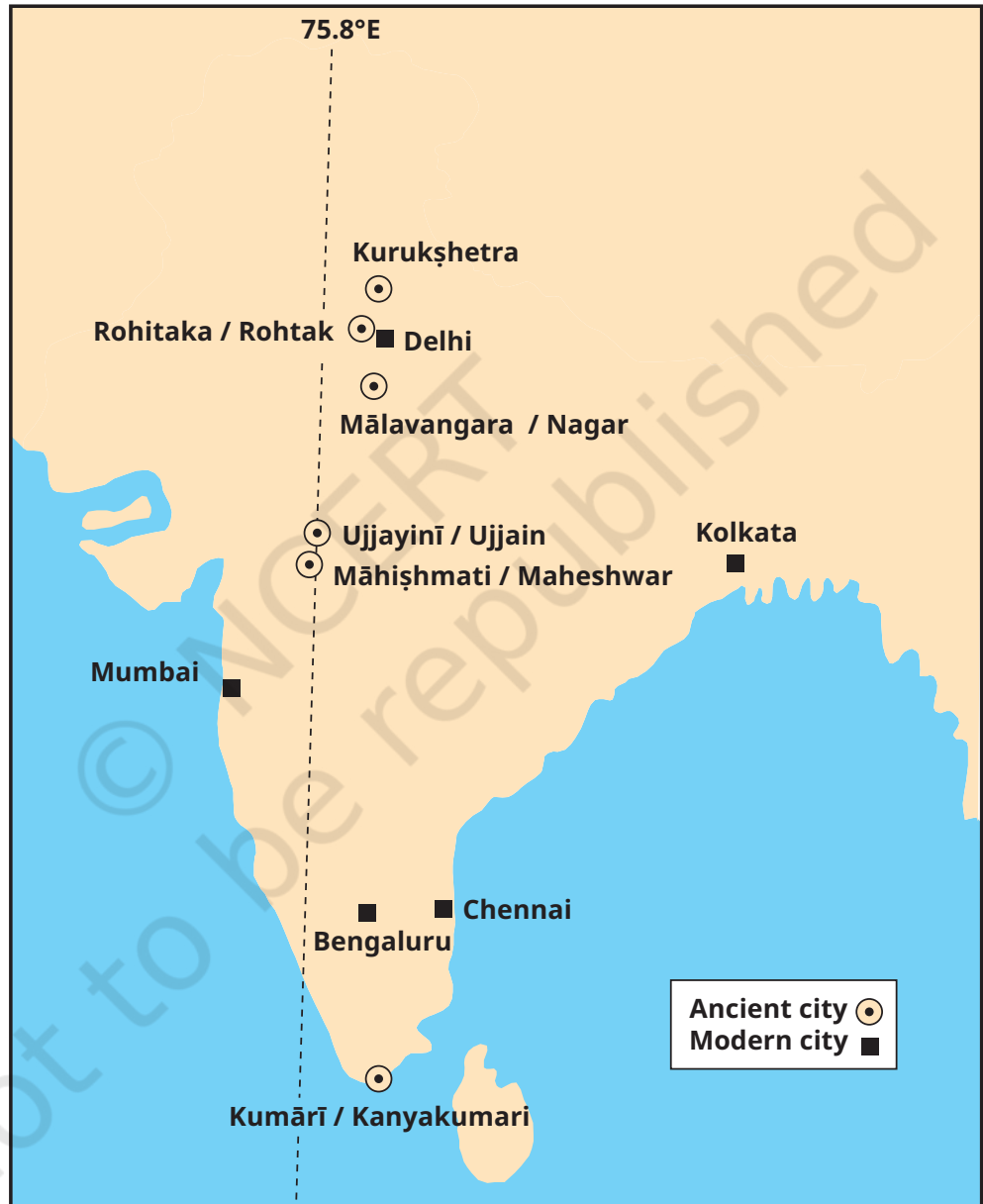


Fig. 1.5. The Ujjayinī prime meridian used in ancient Indian astronomy. Cities marked with a circle are mentioned in astronomical texts as being on this meridian (the modern name is given after the oblique bar).

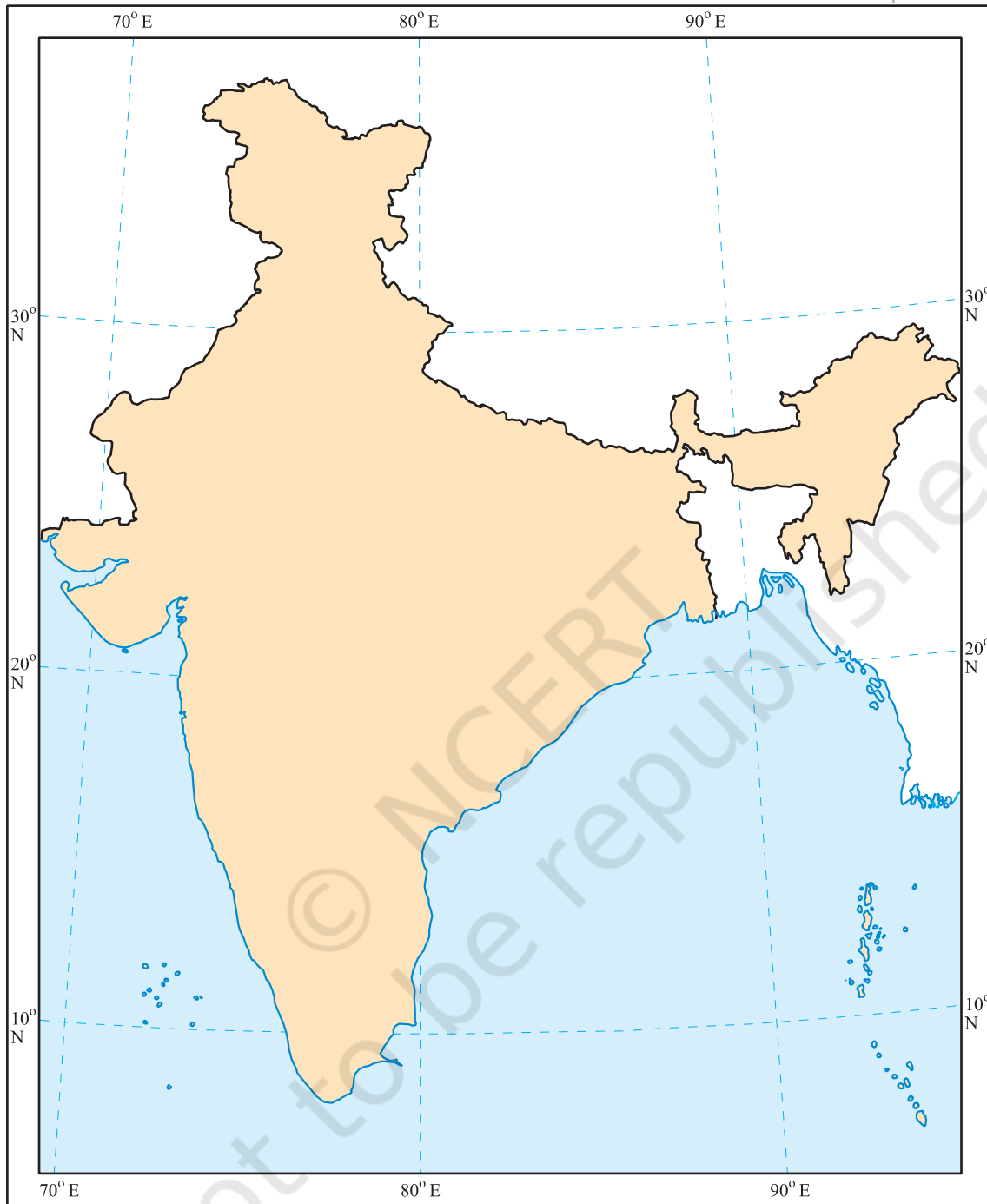


Fig. 1.6. This map, published by the Survey of India, shows the country's outline along with a few parallels of latitude and meridians of longitude. India's latitudes extend approximately from 8°N to 37°N, and longitudes approximately from 68°E to 97°E. (The two colours have been added.)

Understanding Time Zones

Let's make the globe rotate again from west to east — that is how our planet spins around its axis, making a full turn every 24 hours. A full turn is 360° , so this means 15° per hour ($15 \times 24 = 360$). Let us now mark the meridians of longitude every 15° . Moving eastward from the Prime Meridian, we get 0° , 15°E , 30°E , 45°E , and so on every 15° up to 180°E . It is the same as adding one hour of **local time** with each meridian — if it is 12 pm or noon at Greenwich, it is 1 pm local time at 15°E , 2 pm at 30°E , and so on. But going westward, it is the other way round — 11 am local time at 15°W , 10 am at 30°W , etc.

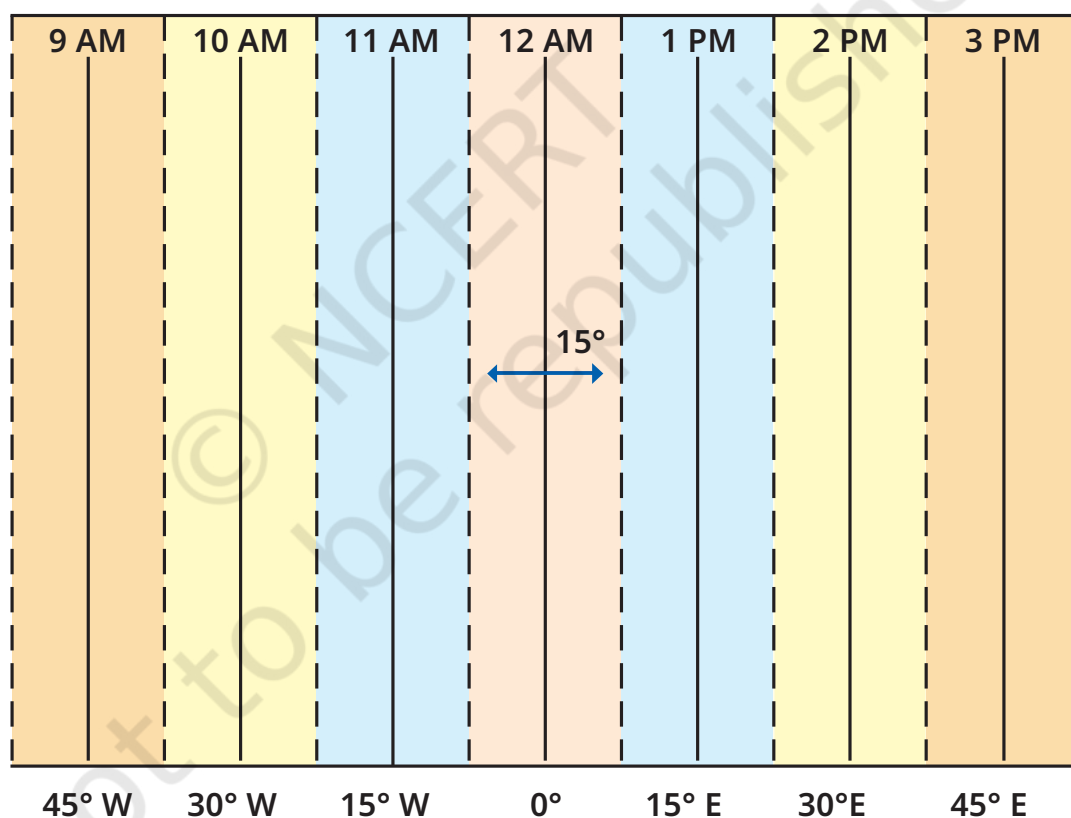


Fig. 1.7. This graph shows longitudes at the bottom and the local time at the top, with reference to the Prime Meridian at 0° . Each colour is a zone of 15° centred on a meridian.

LET'S EXPLORE

Two friends, one sitting in Porbandar (Gujarat) and the other in Tinsukia (Assam), are speaking on the phone late afternoon. The latter remarks that the sun has set in Assam and it's now dark. The former is surprised and says, "But it's still full daylight here!" Explain why. And, as a class activity, calculate the difference in local time between those two cities. (*Hint: for now, consider the difference in longitude between Porbandar and Tinsukia to be 30°; later, you can find out the precise value.*)

The same method can be used to calculate the local time of any place on the Earth. But it would not be convenient for a country to use many local times! That is why most countries adopt a **standard time** based on a meridian passing through them. Indian Standard Time (IST) is 5 hours 30 minutes (also noted 5.5 hours) ahead of the local time at Greenwich (called **Greenwich Mean Time** or GMT).

LET'S EXPLORE

Return to the two friends sitting in Gujarat and Assam. Use this example to explain the difference between local time and standard time.

All these standard times are organized in time zones, which broadly follow the zones of 15° in the graph (Fig. 1.7). But let us consider the world map below (Fig. 1.8). We can see that the lines dividing the time zones are not fully straight. This is because they have to respect each country's standard time and, therefore, tend to follow international borders. The numbers written inside some countries are the numbers of hours to be added to GMT to get their standard times if they have a positive sign, or subtracted from GMT if they have a negative sign.

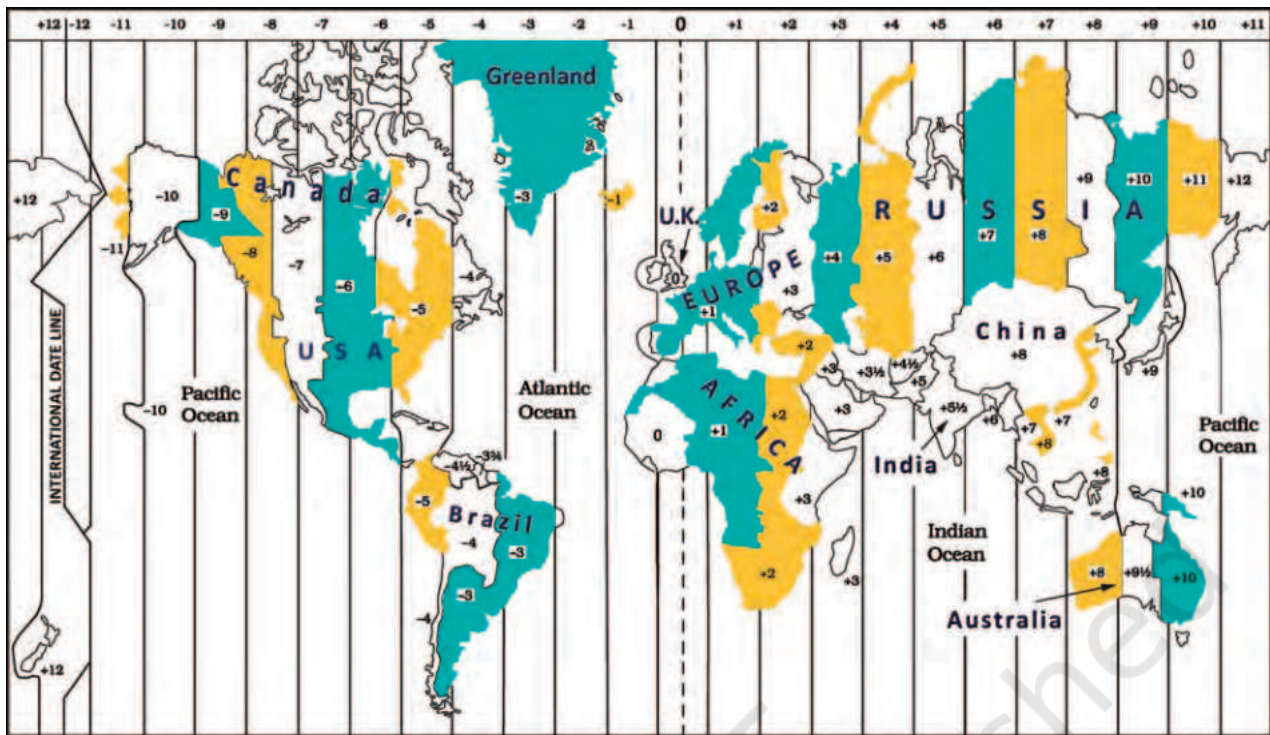


Fig. 1.8. A world map of the time zones, showing the standard times (with respect to GMT) for a few countries. (Note that international borders are approximate, not exact.)



DON'T MISS OUT

From the above explanation, it may seem as if every country has one standard time. That is not always the case. Some countries, like Russia, Canada or the USA, are too large to have a single time zone. The USA has six time zones and Russia has 11 — which means that travelling across Russia from east to west, you will need to readjust your watch 10 times to align with the local time!

Similarly, the globe in Fig. 1.9, centred on India, shows standard times with respect to GMT for a few countries.

Finally, while the Prime Meridian was fixed at Greenwich, the opposite line — at approximately 180° longitude — is called the **International Date Line**.

As you can see on the map, the +12 and the -12 time zones touch each other at this line. If you cross it by ship or plane, you need to change the date in your watch. If you cross it



Fig. 1.9 A few time zones (with respect to GMT) in Africa and Eurasia.

travelling eastward, you subtract a day (say, from Monday to Sunday); if you cross it travelling westward, you add a day (from Sunday to Monday). We said that the International Date Line is ‘approximately’ at 180° longitude, as it deviates in places to avoid dividing some countries into two different days!

Before we move on ...

- Maps are a very useful tool to represent an area of the Earth, whether small or large. The main components of maps are distance, direction and symbols.
- Every place on the Earth has a location which can be precisely defined with the help of a grid of latitudes and longitudes — imaginary lines running from east to west (parallel to the Equator) and north to south (from pole to pole) respectively.



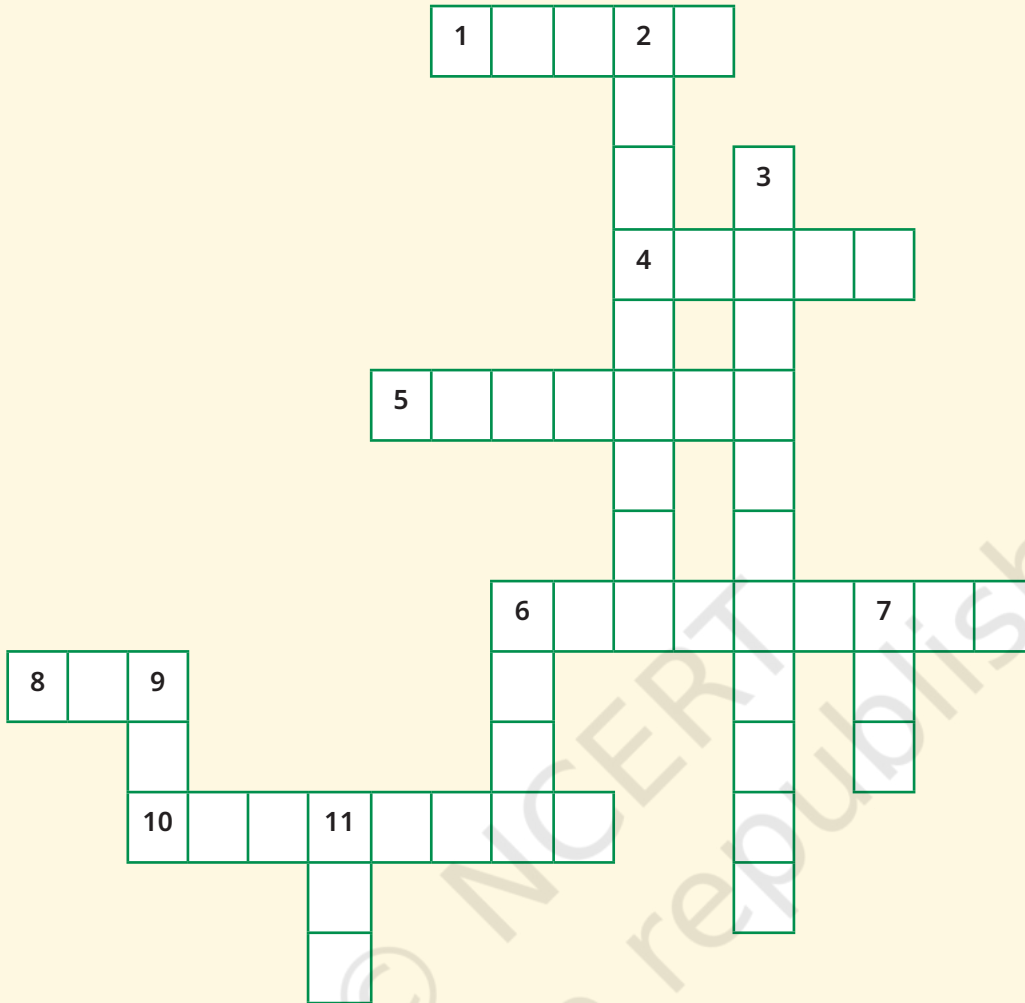
- Longitude also marks the time and defines the time zones.
- The International Date Line is located approximately at 180 degrees longitude, opposite the Prime Meridian. Crossing the International Date Line changes the date by one day.

Estuary:
The place where a river meets the sea.

Questions, activities and projects

1. Returning to page 10 and to Fig. 5.2 in Chapter 5 of this textbook, taking the scale to be 2.5 cm = 500 km, calculate the real distance from the **estuary** of the Narmada River to the estuary of the Ganga river. (*Hint: round off your measurement on the map to an easy number.*)
2. Why is it 5:30 pm in India when it is 12 pm or noon in London?
3. Why do we need symbols and colours in the map?
4. Find out what you have in the eight directions from your home or school.
5. What is the difference between local time and standard time? Discuss it in groups, with each group writing an answer in 100 to 150 words. Compare the answers.
6. Delhi's and Bengaluru's latitudes are 29°N and 13°N; their longitudes are almost the same, 77°E. How much will be the difference in local time between the two cities?
7. Mark the following statements as true or false; explain your answers with a sentence or two.
 - All parallels of latitude have the same length.
 - The length of a meridian of longitude is half of that of the Equator.
 - The South Pole has a latitude of 90°S.
 - In Assam, the local time and the IST are identical.
 - Lines separating the time zones are identical with meridians of longitude.
 - The Equator is also a parallel of latitude.
 - Solve the crossword below.

Locating places on Earth



Across

1. Lets you squeeze a huge area into your map
4. A convenient sphere
5. The longest parallel of latitude
6. The place the Prime Meridian is attached to
8. So convenient to find your way
10. A measure of the distance from the Equator

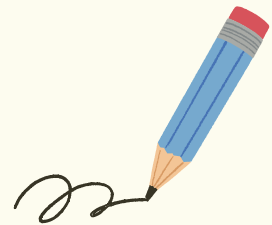
Down

2. A measure of the distance from the Prime Meridian
3. These two together allow us to locate a place
6. What latitudes and longitudes together create
7. The time we all follow in India
9. These two are poles apart
11. An abbreviation for a line across which the day and date change

Noodles

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*'Noodles' is our abbreviation for 'Notes and Doodles'!



Oceans and Continents



The ocean is everything. It covers seven-tenths of the terrestrial globe. Its breath is pure and healthy. It is an immense desert, where man is never lonely, for he feels life stirring all around. ... The ocean is the vast reservoir of Nature. The globe began with the ocean, so to speak, and who knows if it will not end with it. ...

— Jules Verne (1870)



The Big Questions ?

1. *What are oceans and continents? What are their names and their distribution?*
2. *In what ways do oceans and continents impact life on Earth, including human life?*



Fig. 2.1 The Earth seen from space (photograph by the Lunar Reconnaissance Orbiter). The view is centred on the Pacific Ocean, with Africa to the left, India and part of Asia at the top, Australia to the right, and Antarctica at the bottom.

Let us return to our globe and rotate it gently. Or look at the picture of the Earth seen from the Moon. What is the most widespread colour you see? Blue, obviously, but what does it represent? You must have guessed the answer — it is ‘water’. This means that most of the Earth’s surface is actually covered with water — almost three-fourths of the surface, in fact. That is why, when seen from outer space, the Earth appears mostly blue. Indeed, early astronauts lovingly called the Earth the ‘blue planet’.

The largest water bodies we see on the globe are called ‘oceans’.

But in the picture of the Earth (Fig. 2.1), you can see at least one other colour, brown. This colour is that of land, which covers a little over one-fourth of the globe. A large body of land is called a ‘**landmass**’, and a large continuous expanse of land is called a ‘**continent**’.

Both oceans and continents play a vital role in shaping the climate of the Earth. They affect all aspects of life, including all plants and animals, and therefore, human life too. We see their impact throughout our history and culture, and in our daily lives.



DON'T MISS OUT



The emblem of the Indian Navy contains the motto *Sam noh Varunah* (pronounced ‘*Śham no Varuṇah*’), which means, “Be auspicious to us, O Varuna.” This is an invocation to Varuṇa, a Vedic deity associated with the oceans, the sky, and water in general.

The Distribution of Water and Land on the Earth

As it happens, oceans and continents are not distributed equally between the Northern and Southern Hemispheres.

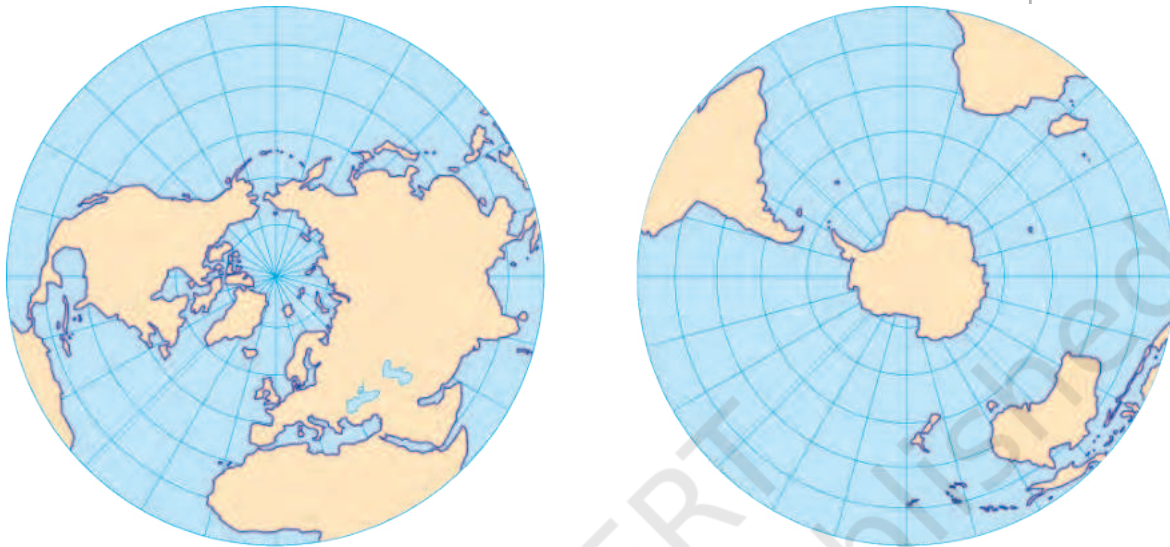


Fig. 2.2. Maps of the Earth as seen from above the North Pole (left) and above the South Pole (right).

Let us examine the two maps in Fig. 2.2. Here too, the blue areas consist of oceans, along with their smaller extensions, which have various names — ‘sea’, ‘bay’, ‘gulf’, etc.

LET'S EXPLORE

- What are the circular lines in each map called? And do you know what the lines radiating out of the two poles are called? (*Hint: you studied them in the previous chapter, but here they are presented differently.*)
- Which hemisphere holds more water?
- What do you think could be the approximate proportion of water to land in the Northern Hemisphere? And in the Southern Hemisphere? Discuss in groups.
- Are all the oceans connected with one another, or are there separations between them?

Definitions for these terms are in the Glossary at the end of this textbook.





Coral reef



A star fish on a sea anemone



Ocean Life

Shark



Sperm whale, mother and baby



Dolphins



Shallow coral reef with colourful tropical fish



Algae



Emperor penguins



Bonaire sea turtle

The oceans together hold most of the water available on the planet. But this seawater is salty and unfit for consumption by most land animals, including humans. On the other hand, freshwater makes up a very small proportion of the planet's water resources; it is found in glaciers, rivers, lakes, in the atmosphere and also underground (the last is called 'groundwater').



THINK ABOUT IT

- ◇ If there is such abundance of water on the planet, why is there so much talk of 'water scarcity' or a 'water crisis'?
- ◇ What ways of saving water are you aware of? Which ones have you seen practised at home, at your school, and in your village, town or city?

Oceans

On the world map in Fig. 2.3 on page 32, we can observe five oceans — the Pacific Ocean, the Atlantic Ocean, the Indian Ocean, the Arctic Ocean and the Southern (or Antarctic) Ocean.

Although we have listed five oceans, it is clear from the map that they are not really separate. The lines that divide them on the map are no more than conventions — the natural world does not follow such boundaries. Seawater, for example, constantly flows across different oceans, sustaining a rich diversity of **marine** life. Many plant and animal species can be found across multiple oceans.

The marine **flora** includes tiny plants called algae and all kinds of seaweeds; the marine **fauna** consists of thousands of species of colourful fish, dolphins, whales, and countless mysterious deep-sea creatures. Each part of the ocean, from the sun-lit surface to the dark depths, has its own diverse life forms.

Marine:

Related to or found in the oceans and seas.

Flora:

The plant life of a particular region or period of time.

Fauna:

The animal life of a particular region or period of time.

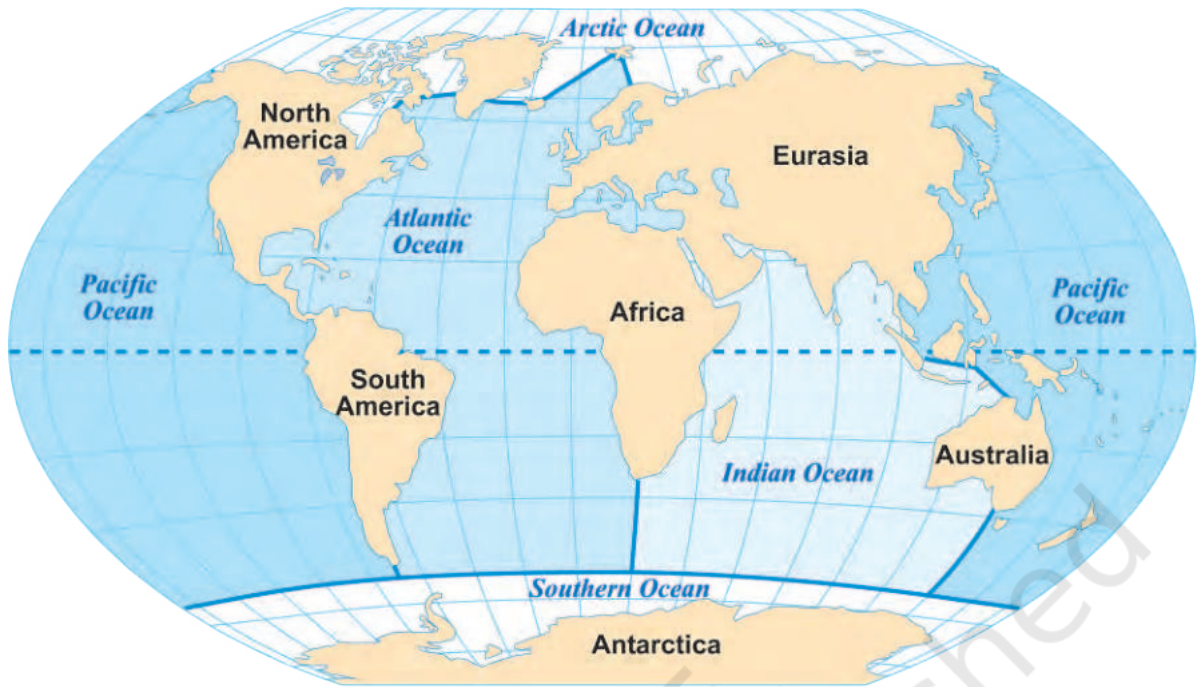


Fig. 2.3. A world map showing the five oceans, their conventional boundaries, and the continents

LET'S EXPLORE

Locate the five oceans and, in the table below, mark the hemisphere or hemispheres they belong to.

	Northern Hemisphere	Southern Hemisphere
Pacific Ocean		
Atlantic Ocean		
Indian Ocean		
Southern Ocean		
Arctic Ocean		

It is visible on the map that the Pacific Ocean is the largest of all, followed by the Atlantic Ocean. The Indian Ocean is the third largest, while the Southern Ocean is the fourth. The smallest one is the Arctic Ocean.



DON'T MISS OUT

- ◆ As the map of oceans makes clear, the main limits of the Indian Ocean are Asia to the north, Africa to the west and Australia to the east, apart from the Southern Ocean in the south.
- ◆ On either side of India, we find two parts of the Indian Ocean — the Arabian Sea to the west and the Bay of Bengal to the east.

Fig. 2.4 (on the right). This map of India is the same as Fig. 1.6, but with the addition of the Arabian Sea and the Bay of Bengal. Also marked are India's two major groups of islands (see subsection on 'Islands' further below).

Oceans and disasters

Returning to the picture of the Earth at the start of this chapter, you may have noticed white shapes across the globe. Did you guess what they are? They are large masses of clouds. Such clouds bring rain to the continents; for instance, the monsoon rains we in India expect every summer originate in the ocean — without such rains, our agriculture and all life will suffer. But oceans often also give rise to storms — violent events with extreme rainfall or very strong winds, such as cyclones, which can cause widespread damage to coastal regions of the world. A tsunami is another natural disaster that originates in the ocean. It is a huge and powerful wave generally caused by a strong earthquake or a volcanic eruption at the bottom of the ocean. Tsunamis can travel thousands of kilometres and submerge coastal areas, causing widespread damage.





DON'T MISS OUT

- ◇ On 26 December 2004, India and another 13 countries around the Indian Ocean were struck by a powerful tsunami caused by an earthquake in Indonesia. More than two lakh people lost their lives. In India, the Andaman and Nicobar Islands (see Fig. 2.4 above, and also the subsection 'Islands' further below) and the coasts of Tamil Nadu and Kerala were severely affected and suffered much damage and loss of life.
- ◇ Such tsunamis are rare but very destructive. Luckily, they can often be detected before they hit a coast. Many countries collaborate in such 'early warning systems'. There is, in particular, an Indian Ocean Tsunami Warning System, to which many countries, including India, contribute. This helps to take measures to protect lives and property.
- ◇ Events that lead to loss of life and property are handled under **disaster management**. India has its own 'National Disaster Management Authority' to deal with all kinds of disasters (we will see more examples in the next chapter).

Continents

Continents are visible on the map of oceans (Fig. 2.3). How many can you count? The answer is not so simple, as they can be counted in several ways. Depending on our choice, we may list any number of continents between four and seven! Here is why:

- North America and South America are generally considered to be two continents; but if seen as a single landmass, they can also be considered as one.
- Europe and Asia are generally considered as two continents, although the map makes it clear that they form a single landmass. For historical and cultural reasons, Europe's evolution has been very different

from Asia's, which is why they can be seen as two continents. Geologists, however, often regard them as a single continent called 'Eurasia'.

- Africa and Eurasia are generally regarded as two continents, but sometimes as one.

Let us summarise the different counts in a table:

Count of continents (in alphabetical order)	
Four continents	Africa-Eurasia, America, Antarctica, Australia
Five continents	Africa, America, Antarctica, Australia, Eurasia
Six continents	Africa, Antarctica, Australia, Eurasia, North America, South America (<i>this is reflected in Fig. 2.3 on page 32</i>)
Seven continents	Africa, Antarctica, Asia, Australia, Europe, North America, South America

In practice, the last list of seven continents is the one most widely adopted and used.

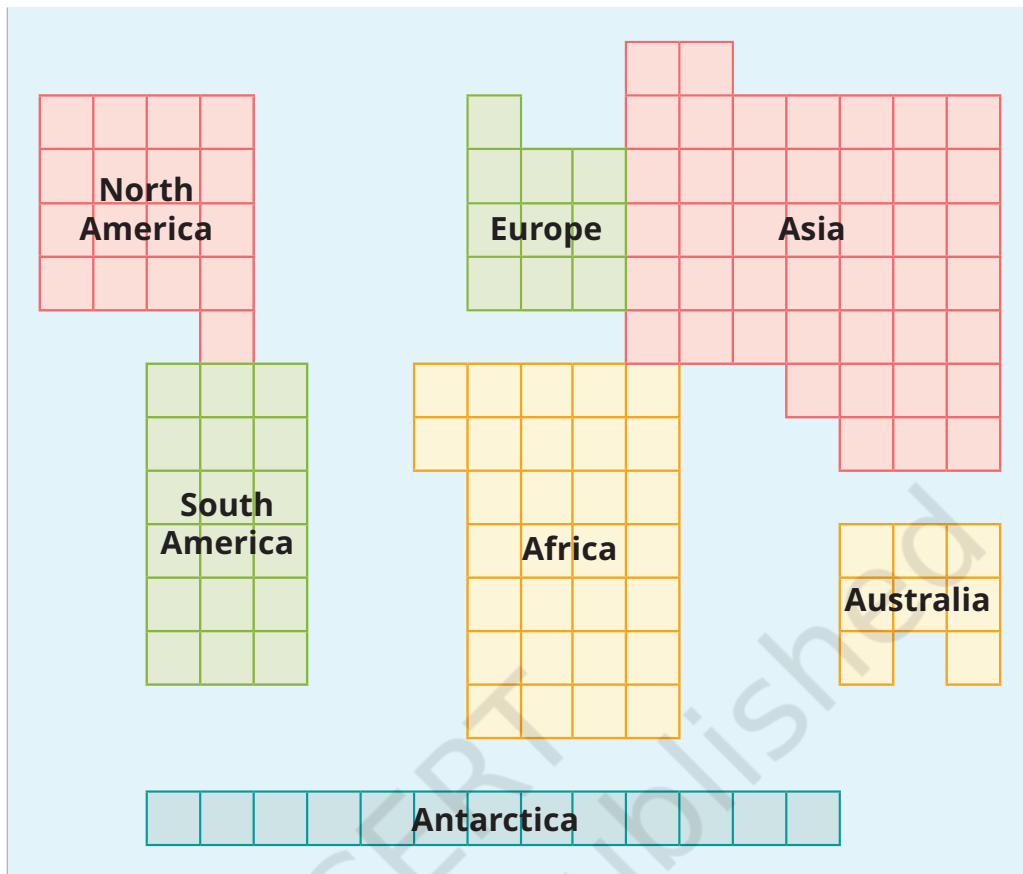


DON'T MISS OUT

You may have seen the five Olympic rings, one of the symbols of the Olympic Games. They symbolise the gathering of sportspeople from all over the world. The rings were chosen to represent five inhabited continents — Africa, America, Asia, Australia and Europe.



Now let us look at the diagram on page 36, which is based on the list of seven continents. It does not show their actual shapes, but their relative sizes.



LET'S EXPLORE

- Counting the numbers of squares, name the largest continent and the smallest.
- Which one is larger — North America or South America? Africa or North America? Antarctica or Australia?
- Re-colour the diagram by having a single colour for Europe and Asia and rename the result as 'Eurasia'. Compare its size with South America's.
- Write down the list of continents from the smallest to the largest.

Islands

If you have carefully observed the two maps earlier in this chapter (Fig. 2.2 and 2.3), you may have noticed that

the continents do not include all landmass. Some smaller pieces of land are left out; surrounded by water on all sides, they are called **islands**. (Continents are also surrounded by water, but because they are so large, they are not considered islands.)

There are lakhs of islands on the planet, of very different sizes.



DON'T MISS OUT

- ◇ Greenland is the largest island in the world (locate it on a globe or a map). You would have to add the areas of the 10 largest states of India to reach its size.
- ◇ India has more than 1,300 small islands! Those include two major groups — Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep Islands in the Arabian Sea (see Fig. 2.4).
- ◇ Since 1981, the Indian Antarctica Programme has been exploring Antarctica, a continent with a very cold climate and harsh environment (see the white expanse at the bottom of Fig. 2.1, which is mostly ice). In 1983, India established its first scientific base station there, called 'Dakshin Gangotri' (two more bases were established later). About 40 teams of Indian scientists have conducted research in this faraway region, especially on the evolution of climate and environment. The settlement where the scientists live has a library and even a post office!

Oceans and Life

Oceans and continents are vital parts of the environment and affect most aspects of our lives, even if we do not notice it. We have mentioned that oceans send rain to the continents; this is part of the Earth's water cycle, which you will further study in Science. Without oceans, for

instance, there would be no rainfall! The Earth would be a desert. Moreover, more than half of the world's oxygen is produced by the oceans' flora, which is why they are called 'the planet's lungs'. The oceans, therefore, play a crucial role in regulating the climate and sustaining life on Earth.

Oceans have deeply impacted humanity in many other ways. From early times, people have used oceans and seas to migrate to other regions, to trade in all kinds of goods, to conduct military campaigns, and as a source of food through fishing. Oceans have also nourished the cultures of coastal people all over the world. Almost all of them have tales and legends about the sea, sea gods and goddesses, sea monsters and treasures from the sea — the oceans' dangers but also their blessings.



DON'T MISS OUT

The United Nations has designated June 8 as World Oceans Day to “remind us all of the major role the ocean plays in everyday life. It serves as the lungs of our planet, a major source of food and medicine and a critical part of the biosphere.” Scientific studies have shown how the oceans are polluted by human activity — we throw several million tonnes of plastic waste into the oceans every year, choking marine life. There are several other forms of pollution. As a result, the marine environment is under threat. Overfishing (excessive fishing) is another cause for the decline of marine life. It is our collective responsibility to protect oceans for the future of the planet and of humanity.



Before we move on ...

- The Earth's surface has vast water bodies called 'oceans' and large landmasses called 'continents'. Oceans are interconnected. Continents may be counted in various ways; the most common count is seven.
- The Northern Hemisphere has more land than the Southern Hemisphere.

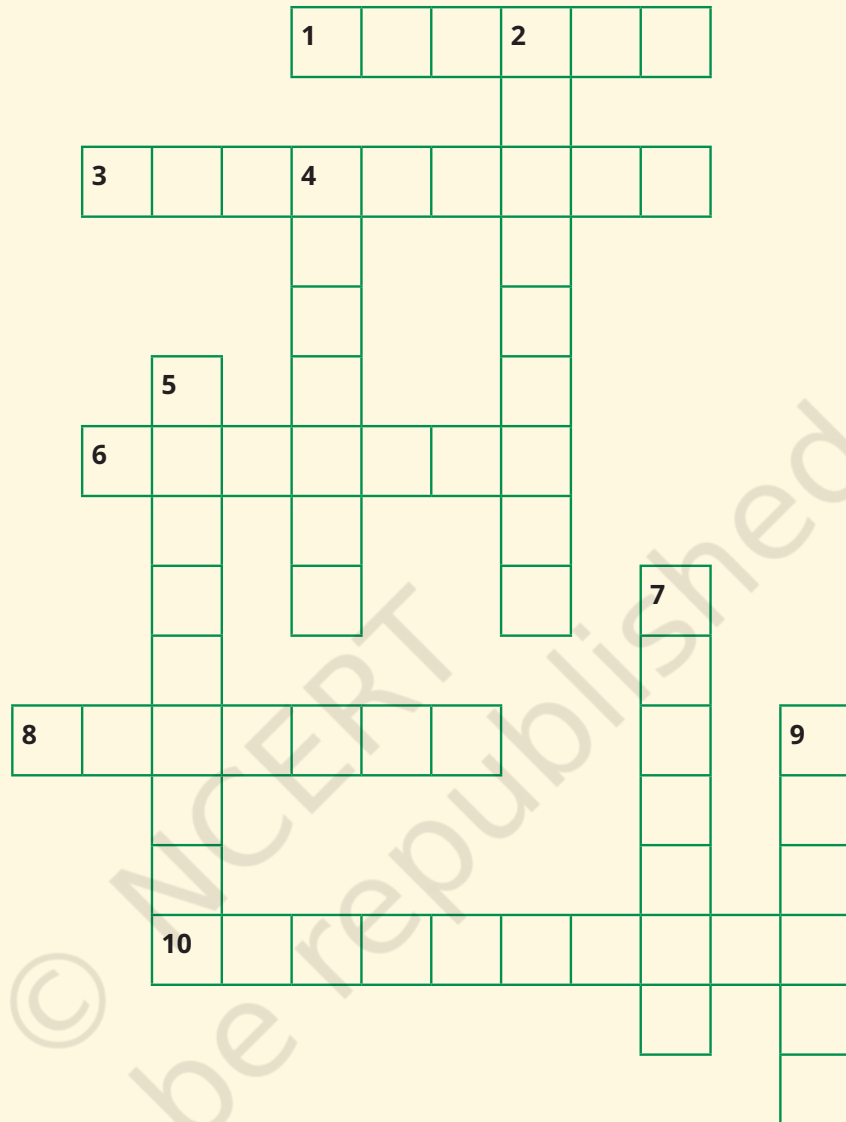
- Oceans support all kinds of marine life and play a critical role in the world climate. They are now seriously affected by human activity and need our collective protection.

Questions, activities and projects

1. Explain the following terms:
 - (a) Continent
 - (b) Ocean
 - (c) Island
2. Let us draw – Without looking at the maps in this chapter, draw the continents free hand on a sheet of paper and colour them. Then compare your drawing with the map of oceans and continents in the chapter.
3. Let us do – On the outline map of the world given below, label all the continents and oceans.



4. Solve this crossword



Across

1. Abundantly produced by the oceans
3. A large expanse of landmass
6. A large continent of which India is a part
8. A major source of pollution of the oceans
10. The coldest continent

Down

2. The largest island on Earth
4. A huge destructive wave from the ocean
5. The smallest continent
7. The largest body of water on the Earth
9. A landmass (but not a continent) surrounded by the sea or ocean

Landforms and Life

Free from the burden of human beings, may the Earth with many heights, slopes and great plains, bearing plants endowed with varied powers, spread out for us and show us her riches! ... The Earth is my mother and I am her child.

— Atharva Veda, Bhūmi Sūkta ('Hymn to the Earth')



The Big Questions ?

1. What are the major types of landforms and their significance to life and culture?
2. What are the challenges and opportunities of life associated with each landform?



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Altitude:
The height
of an object
above
sea level.
Examples:
the altitude
of a
mountain,
the altitude
of a bird
or plane in
flight, the
altitude of a
satellite.



Introduction

Humans, like most mammals, live on land. Land, as you may have noticed, has many forms and features; its appearance changes a lot from one region to another. Suppose that you are travelling by road from the region known as Chhota Nagpur in Jharkhand, reach Prayagraj in Uttar Pradesh, and go on to Almora in Uttarakhand. On the way, you will see very different landscapes. In fact, you will encounter three major landforms, which we will now explore.

LET'S EXPLORE

- As a class activity, form groups of four or five students and observe the school's surroundings. What kind of landscape do you see? Will the landscape change a few kilometres away? Or within some 50 kilometres? Compare with other groups.
- In the same groups, discuss a journey that any of you has made through a region of India. List the different landscapes seen on the way. Compare with other groups.

A landform is a physical feature on the surface of our planet Earth. Landforms take shape over millions of years and have a significant connection with the environment and life. They can broadly be divided into three categories — **mountains, plateaus and plains** (Fig. 3.1).

These landforms have different climates and are home to a variety of flora and fauna. Humans have adapted to all landforms, but the number of people living on different kinds of landforms varies throughout the world.

Mountains

Mountains are landforms that are much higher than the surrounding landscape. They can be recognised by a broad base, steep slopes and a narrow summit. Depending on their height, some mountains are covered with snow. At lower **altitudes**, the snow melts every summer and turns

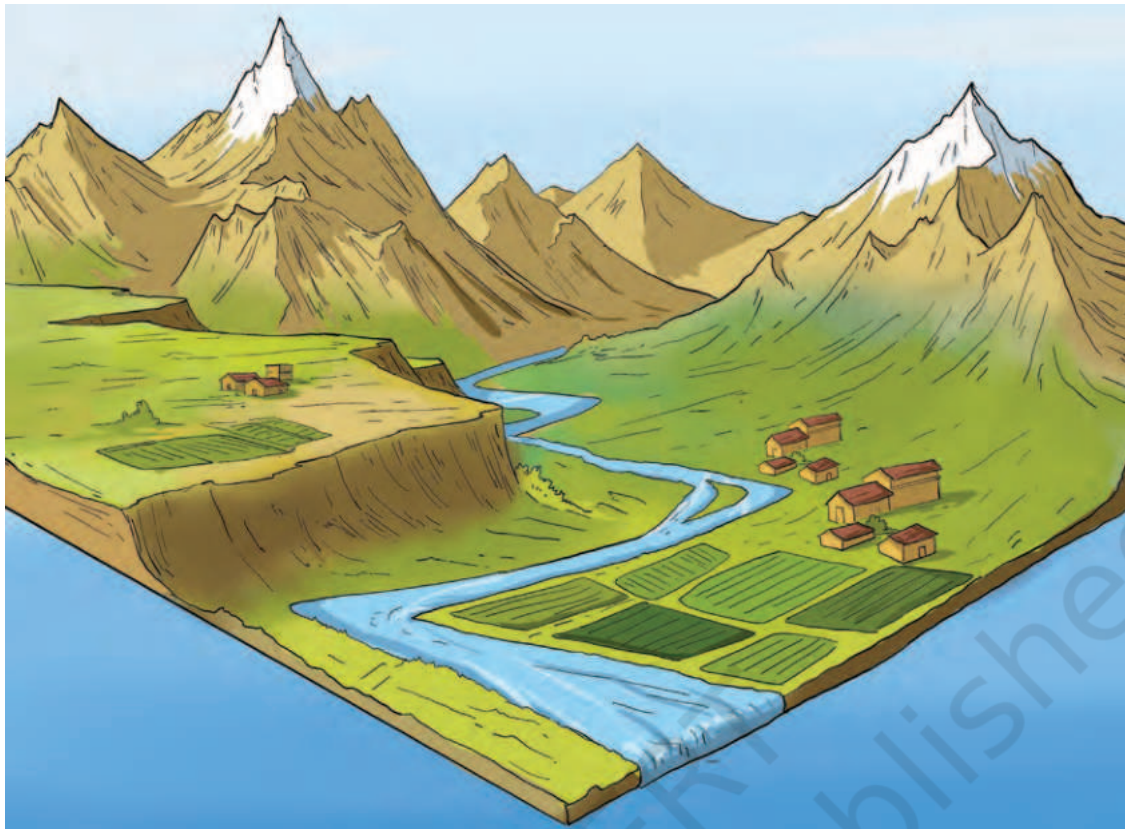


Fig. 3.1. This drawing illustrates three landforms — mountains in the background (two of them snow-capped), a plateau on the left and a plain in the foreground, with a river emerging from the mountains.

into water that feeds rivers. At high altitudes, the snow may never melt, leaving the mountain permanently snow-capped.

Other highlands with a lower height, less steep slopes and rounded tops are called **hills**.



THINK ABOUT IT

What is snow? Unless you live in a Himalayan region (such as Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Sikkim, Arunachal Pradesh), you may never have seen snow! In the rest of India, most **precipitation** is in the form of rain and hail. But at higher altitudes, if it is cold enough, snow will fall, covering the landscape in a soft and beautiful white blanket. Snow and hailstones are nothing but precipitation of water in a solid state.

Precipitation:

Water from the atmosphere reaching the ground in any form — rain, snow and hail are the most common forms of precipitation.



Mount Everest



Mount Aconcagua



Mount Kilimanjaro



Mont Blanc



Mount Kanchenjunga



Mount Anamudi

Fig. 3.2. Pictures of six mountains of the world

Most of the world's mountains are grouped in **mountain ranges**, such as the Himalayas in Asia, the Alps in Europe and the Andes in South America. Some of these ranges stretch for thousands of kilometres.



Fig. 3.3. A sketch showing the relative heights of six mountains of the world

Fig. 3.2 shows pictures of six mountains of the world. Fig. 3.3 brings them together to give a visual impression of their relative heights from top to bottom. Mount Everest (between Tibet (China) and Nepal) and Kanchenjunga (between Nepal and the Indian state of Sikkim) are the two highest peaks of the Himalayan range. Mount Aconcagua (in South America) is the highest peak of the Andes. Mount Kilimanjaro in eastern Africa is an isolated mountain that is not part of any range. Mont Blanc in Western Europe is the highest mountain of the Alps. Anamudi (in Kerala, also known as 'Anai Peak') is the highest mountain in south India.

Montane forest:

A type of forests that grows in mountainous regions.

Moss:

A small green plant without flowers or true roots, often spreading in a cushion-like cover.

Lichen:

A plant-like organism that generally clings to rocks, walls or tree.

Mountains with tall and sharp peaks, like the Himalayas, are relatively ‘young’, which means that they were formed recently in the Earth’s history — but that is still millions of years ago! Shorter and more rounded mountains and hills, like the Aravalli Range, are much older and have been rounded by erosion. Sometimes, as with the Himalayas, upliftment as well as erosion continue to this day. (You will learn more in Science about such processes and their causes; let us just say here that some mountains of the world, like the Himalayas, are still growing in height.)

Mountain environment

Mountain slopes are often covered with a type of forest called **montane forest**, where conifer trees such as pines, firs, spruce and deodar are common. These conifer trees grow tall and cone-shaped, with thin, pointed leaves. At higher altitudes, the trees give way to grasses, **mosses** and **lichen**.

Here are two verses from a long poem by Kālidāsa, who lived at least 1,500 years ago and is often considered to be the greatest poet of ancient India. The poem, *Kumārasambhava*, begins with an invocation to the Himalayas. (This is a simplified translation from the Sanskrit.)

In the north rises Himālaya, the Lord of mountains, like a living god, who measures the Earth and stretches from the western to the eastern oceans. ...

From it the wind comes down, carrying spray from descending Gangā, shaking the deodar trees, opening the peacocks’ tail feathers and cooling the mountain people after they hunt deer.

Discuss the verses and the following questions in class.

- What are the ‘western to the eastern oceans’? Can you locate them as well as the ‘Lord of mountains’ on Fig. 5.2?
- Why is Gangā mentioned? (*Hint: There could be several reasons.*)



Peregrine falcon



Himalayan tahr



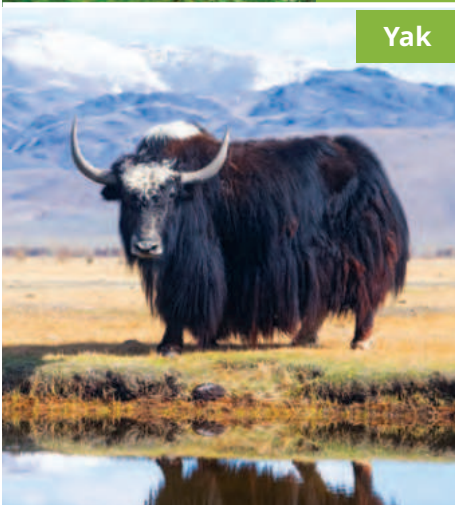
Mountain hare



Golden eagle



Canadian lynx



Yak



Ibex



Grey fox



Leopard



Black bear

Fig. 3.4. A few mountain animals

Deep forests, flowing rivers, lakes, grasslands and caves in the mountains are home to diverse fauna, for instance, the golden eagle, the peregrine falcon, the Canadian lynx, the snow leopard, the ibex, the Himalayan tahr, the mountain hare, the yak, the grey fox and the black bear (Fig. 3.4).



DON'T MISS OUT

'Ganga' is the Indian name of the largest river originating in the Himalayas. In English, 'Ganges' is also used. Nearly 2,500 km long, this river has numerous tributaries (that is, other rivers joining it). Some of them, like the Yamuna and the Ghagara, also originate in the Himalayas. Others, like the Son or Sone, originate from the Vindhya Range to the south of the Ganga plain.



Fig. 3.5. Terrace farming in north India

Terrain:
A piece or stretch of land, from the point of view of its physical features.

Life in the mountains

The mountain **terrain** is usually rugged or rough, and has steep slopes. This means that regular farming can only be practised in some **valleys**. Cultivation is practised on the

slopes by cutting steps into the slope (Fig. 3.5). This is called terrace farming. In many mountainous regions of the world, herding is the preferred occupation over agriculture.

Tourism is often an important source of income for the people living in the mountains. The crisp mountain air and scenic beauty attract many tourists. Some tourists also go to the mountains for sports such as skiing, hiking, mountaineering and paragliding. For many centuries, people have also travelled to these uplands for pilgrimages to holy sites. But an excessive inflow of visitors can also put the fragile mountain environment under pressure; it is often difficult to find the right balance.

Valley:
A lower area between hills or mountains, often with a river or stream flowing through it.



DON'T MISS OUT

- ❖ **Bachendri Pal** started climbing mountains from a young age and led many women's climbing expeditions. She was the first Indian woman to climb Mount Everest in 1984 and was awarded Padma Shri the same year (and Padma Bhushan in 2019).
- ❖ **Arunima Sinha** lost a leg in an accident when she was 31. With Bachendri Pal's encouragement and training, she managed to climb Mount Everest in 2013, and went on to climb the highest peak of every continent, including Mount Vinson in Antarctica! She was awarded Padma Shri in 2015.

LET'S EXPLORE

These images (Fig. 3.6 on page 50) depict a few challenges that people living in the mountains may face. Discuss them in groups in the class and write one paragraph on each. Also discuss why, despite many such challenges, people still choose to live in the mountains.



Flash flood:

A sudden local flood, often caused by a cloudburst.

Landslide:

The sudden collapse of a mass of earth or rock from a mountainside.

Avalanche:

The sudden fall of snow, ice or rocks from a mountainside; often occurs when the snow starts melting.

Cloudburst:

A sudden violent rainstorm.



Flash flood



Landslide



Avalanche



Uncontrolled tourism



Heavy snowfall



Cloudburst



Cold weather

Fig. 3.6. Life in the mountains has definite positives, from pure air to the beautiful scenery. It also involves potential challenges, both natural and human-made, some of which are depicted in these pictures.



DON'T MISS OUT

Many traditional communities around the world consider mountains to be sacred places and worship them. Mount Everest, the highest mountain in the world at 8,849 m, has many names. Tibetans call it 'Chomolungma', which means 'Mother Goddess of the World' and worship the mountain as such. Nepalis call it 'Sagarmatha', meaning 'Goddess of the Sky'. Similarly, Mount Kailash in Tibet is held sacred by followers of Hinduism, Buddhism, Jainism and Bon (an ancient Tibetan religion). Such reverence for mountain summits is also found elsewhere in India, as well as in other parts of the world.

Plateaus

A plateau is a landform that rises up from the surrounding land and has a more or less flat surface; some of its sides are often steep slopes. Like mountains, plateaus can be young or old in terms of the Earth's history. Two examples of plateaus are the Tibetan Plateau, the largest and highest plateau in the world, and the Deccan Plateau. The height of plateaus can vary from a few hundred metres to several thousand metres.



DON'T MISS OUT

- ◇ The Tibetan Plateau has an average altitude of 4,500 m, which explains why it has been nicknamed the 'Roof of the World'! From east to west, it is nearly 2,500 km long — the distance from Chandigarh to Kanyakumari.
- ◇ The Deccan Plateau of central and south India is one of the oldest plateaus in the world, formed through volcanic activity millions of years ago.

Like mountains, plateaus are rich in mineral deposits; they have been called 'storehouses of minerals'. As a result, mining is a major activity on plateaus, where many of the world's largest mines are found. For example, the East

African Plateau is famous for gold and diamond mining. In India, huge reserves of iron, coal and manganese are found in the Chhota Nagpur Plateau.

The plateau environment is very diverse across the world. Many plateaus have a rocky soil, which makes them less fertile than plains (see next section) and therefore less favourable to farming. An exception is that of lava plateaus (that is, formed through volcanic activity), as they often have a rich black soil.

Plateaus are also home to many spectacular waterfalls. The Victoria Falls on the Zambezi River in southern Africa, the Hundru Falls on the Subarnarekha River in the Chhota Nagpur Plateau and the Jog Falls on the Sharavati River in the Western Ghats are a few such waterfalls. The Nohkalikai Falls (Fig. 3.7) drop down 340 metres from the Cherrapunji Plateau (in Meghalaya).



Fig. 3.7. The Nohkalikai Falls emerging from the Cherrapunji Plateau

Plains

Plains are landforms that have an extensive flat or gently undulating surface. They do not have any large hills or deep valleys. They are generally not more than 300 metres above **sea level**.

Floodplains are one type of plains formed by rivers originating in mountain ranges, where they collect particles of rock, sand and silt called 'sediments'. These sediments are carried all the way to the plains, where the rivers deposit them, making the soil very fertile. As a result, these plains are ideal for growing crops of all kinds, and agriculture is a major economic occupation in this landform. Plains also support a variety of flora and fauna.

Sea level:
The average level of the surface of the oceans, also called 'mean sea level'.

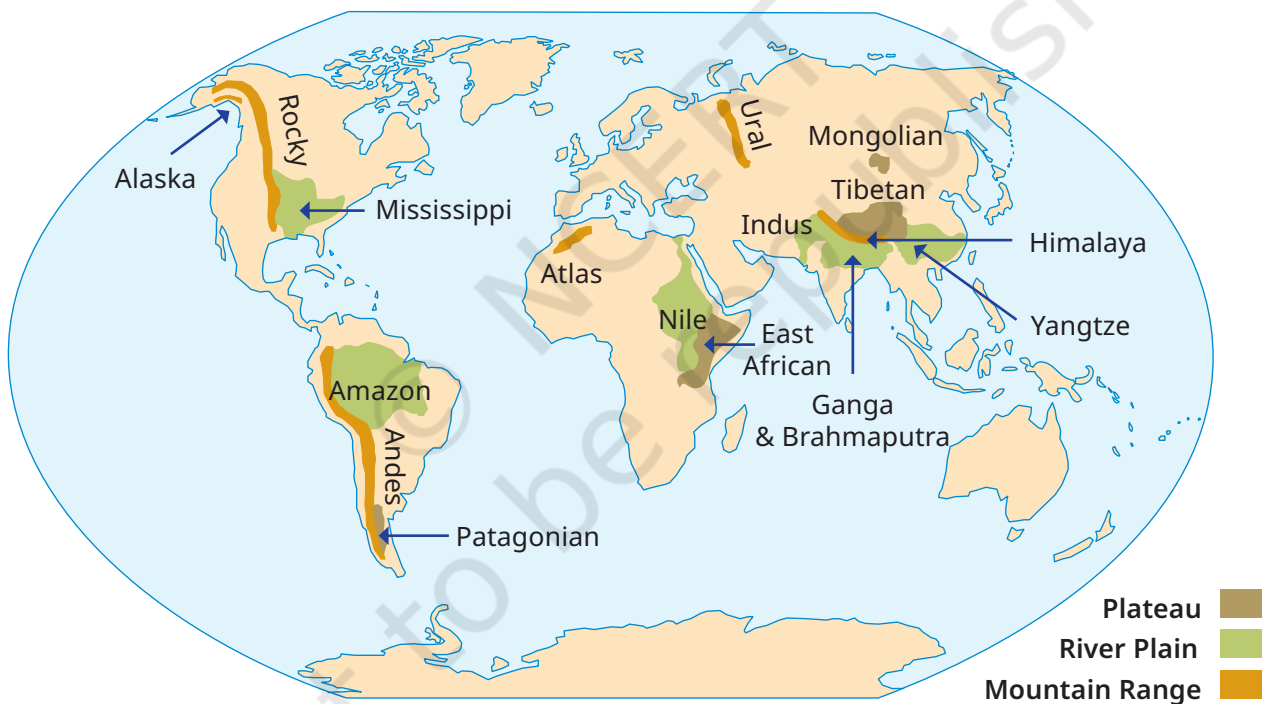


Fig. 3.8. This world map shows a few major mountain ranges, plateaus and plains.

LET'S EXPLORE

Use the colour code in Fig. 3.8 to add a landform to each name. For instance, 'Tibetan plateau', 'Rocky range', 'Nile plain'. (You do not have to remember the names in this map.)



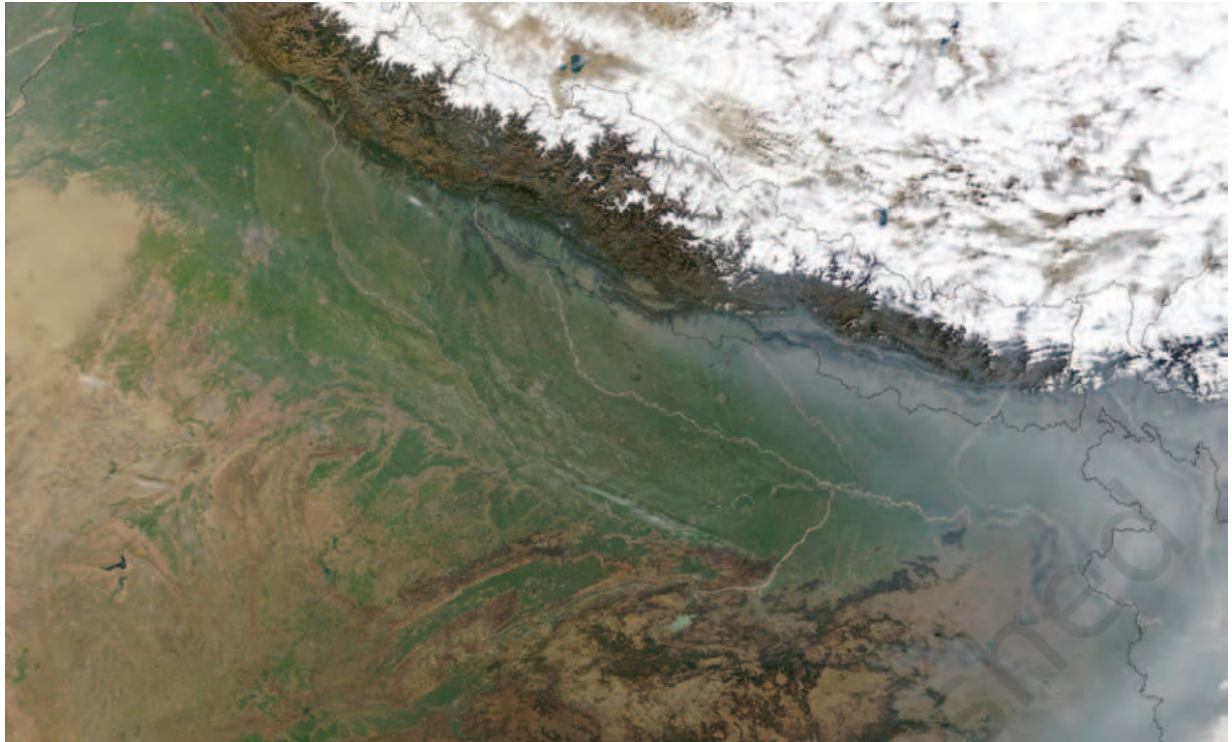


Fig. 3.9. A satellite view of the Ganga plain

LET'S EXPLORE



The picture in Fig. 3.9 has been taken from a satellite. It captures a portion of north India from a high altitude. Observe and discuss the image as a class activity.

- Which colour is the Ganga plain?
- What does the white expanse represent?
- What does the brown expanse at the bottom left of the image represent?

Life in the plains

Thousands of years ago, the first civilisations developed around rivers in fertile plains. In our times too, a large part of the world's population lives in plains.

About 40 crore people, more than one-fourth of the total Indian population, live in India's Ganga plain (often called the 'Gangetic plain'). As with many other plains of the

world, the major occupations of people in this region include river fishing and agriculture. Food crops such as rice, wheat, maize, barley and millets are grown. Fibre crops such as cotton, jute and hemp are also grown in the Gangetic plain. Traditional agriculture has been mostly rainfed (that is, watered through rainfall). In recent decades, however, agriculture has turned to irrigation, with water brought to the fields through networks of canals or pumped from groundwater. While irrigation has increased agricultural production, it has also contributed to the depletion (or decrease) of groundwater. This presents a challenge for the future of agriculture in the region. Some of the other problems affecting the Ganga plains include high population and pollution.

Whether in mountain ranges or plains, rivers around the world have carried immense cultural value. In particular, many communities have considered a river's source and its **confluence** with one or two other rivers to be sacred. In India, numerous festivals, ceremonies and rituals are conducted at such locations.

Because plains have a gentle slope, river navigation is easy and supports a lot of economic activities. In earlier days, people also used rivers extensively to travel from one place to another. Even today (Fig. 3.10 on page 56), there are stretches along the Ganga where people prefer to use boats to move around!

LET'S EXPLORE

- Can you give examples of river sources or confluences from your region that are regarded sacred by any community?
- Visit a nearby river and observe all activities there, whether economic or cultural. Note them down and discuss with your classmates.

Confluence:
The meeting point of two or more rivers.



→ Name some popular tourist destinations in India and identify the category of landform they are associated with.



Fig. 3.10. River transportation on the Ganga

Resilience:
The capacity to meet challenges and difficulties, adapt to them or overcome them.

In this chapter, we explored the three main landforms. But its surface is very complex and experts often define a few more landforms. One such landform is the desert. Deserts are considered to be large and dry expanses with very little precipitation. Their flora and fauna are also unique. Some deserts are hot, like the Sahara Desert in Africa or the Thar Desert in the northwest of the Indian Subcontinent. Others are cold, like the Gobi Desert in Asia. (Some experts also describe the Antarctica continent as a desert.)

Despite harsh living conditions, humans have adapted to most of the deserts. In India, communities living in the Thar Desert, or migrating through it, hold rich cultural traditions, such as folk songs and legends, related to the desert.

The diverse ways in which humans have made all landforms their home is a testimony to our adaptability and **resilience**.

The five *tiñais* of ancient Tamil Sangam poetry are five landscapes associated with certain specific deities, lifestyles, moods or emotions (such as love, longing, separation, quarrel, etc.). This table only lists the characteristics of the five landscapes and the main human occupations in each:

<i>Tiñai</i>	Landscape	Main occupation
<i>Kuriñji</i>	mountainous regions	hunting and gathering
<i>Mullai</i>	grassland and forests	cattle rearing
<i>Marudam</i>	fertile agricultural plains	farming
<i>Neydal</i>	coastal regions	fishing and seafaring
<i>Pālai</i>	arid, desert-like regions	journeying and fighting

These five *tiñais* constitute a different classification of landforms than the one we have seen, but they reflect a keen awareness of the diverse regions and their characteristics. They also illustrate the deep connection between humanity and the natural environment. *(You do not need to remember the details of the tiñais, but the concepts they reflect need to be understood.)*

Before we move on ...

- Landforms are classified into three main types — mountains, plateaus and plains. They have very different physical characteristics and environments.
- Throughout history, people's lives and activities have been much impacted by the type of landform they have lived in. These landforms are an integral part of culture across the world. Indian culture, in particular, has celebrated them in diverse ways.
- Each landform offers different challenges as well as opportunities.



Questions, activities and projects

1. In what type of landform is your town / village / city located? Which features mentioned in this chapter do you see around you?
2. Let us go back to our initial trip from Chhota Nagpur to Prayagraj and Almora. Describe the three landforms you came across on the way.
3. List a few famous pilgrimage spots in India along with the landforms in which they are found.
4. State whether true or false —
 - The Himalayas are young mountains with rounded tops.
 - Plateaus usually rise sharply at least on one side.
 - Mountains and hills belong to the same type of landform.
 - Mountains, plateaus and rivers in India have the same types of flora and fauna.
 - Ganga is a tributary to the Yamuna.
 - Deserts have unique flora and fauna.
 - Melting snow feeds rivers.
 - Sediments from rivers deposited in the plains makes the land fertile.
 - All deserts are hot.
5. Match words in pairs:

Mount Everest	Africa
rafting	roof of the world
camels	rice fields
plateau	desert
Gangetic plains	river
waterway	Ganga
Mount Kilimanjaro	tributary
Yamuna	climbing

Timeline and Sources of History

History is “an unending dialogue between the present and the past ... between the society of today and the society of yesterday. ... We can fully understand the present only in the light of the past.”

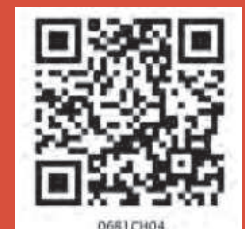
— E.H. Carr



National Museum, New Delhi. Such museums preserve objects from the past, such as statues, coins and ornaments, all of which help us understand our history.

The Big Questions ?

1. *How do we measure historical time?*
2. *How can various sources help us understand history?*
3. *How did early humans live?*



How Do We Learn About the Past?



THINK ABOUT IT

- ◆ What is the earliest memory you can recollect? Do you remember how old you were at that time? Those memories together are a part of your past, maybe going five or six years back.
- ◆ How do you think understanding the past will help us understand the present world?

History: The study of the human past.

You will discover in Science that the Earth has a very, very long **history**, of which we humans occupy only a tiny part — the most recent one.

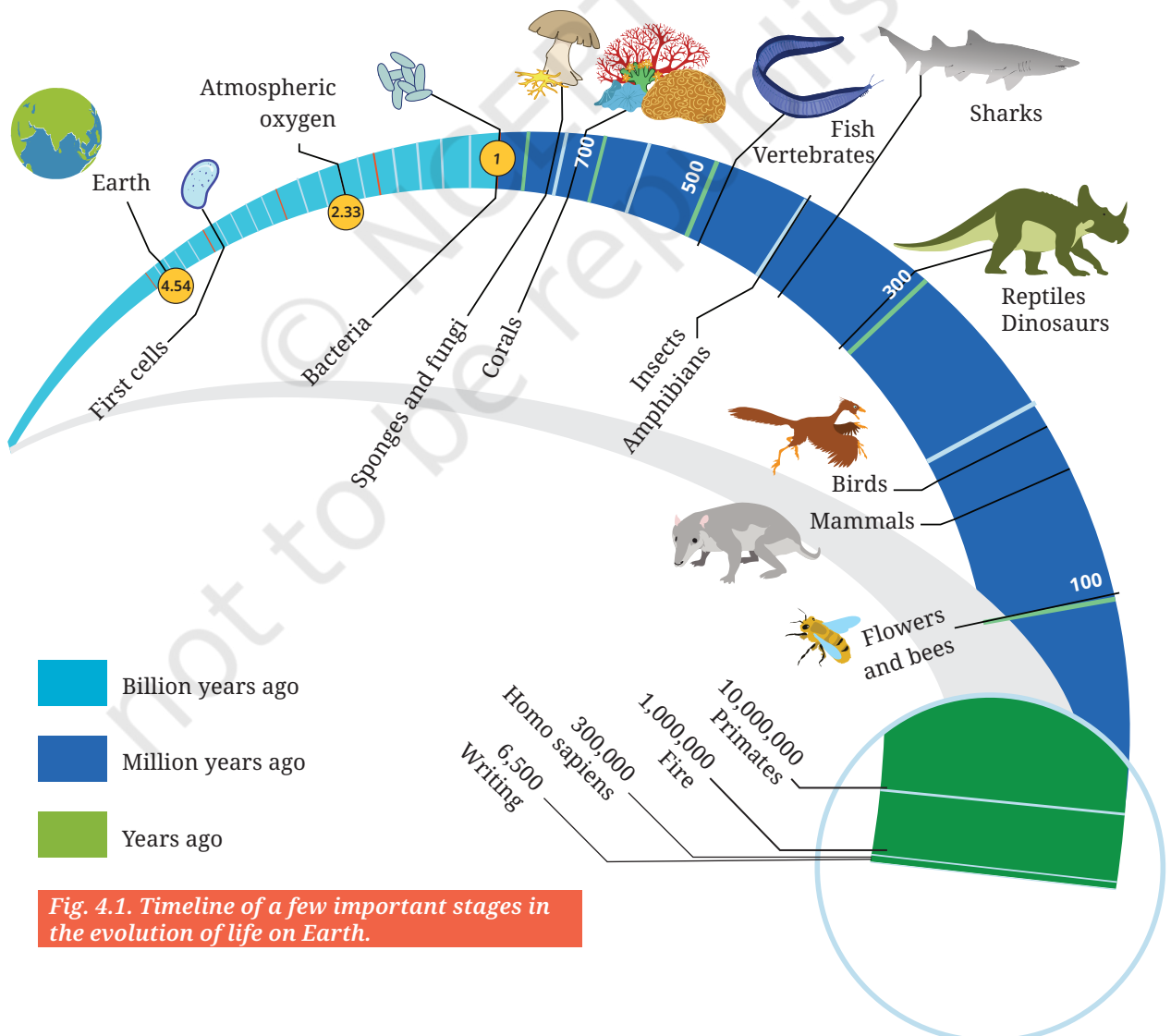


Fig. 4.1. Timeline of a few important stages in the evolution of life on Earth.

Many people study the history of the Earth. Some of them are trained to uncover the secrets left beneath the Earth's surface and help us learn about its past — and also our past.



Fig. 4.2.1: Geologists



Fig. 4.2.2: Palaeontologists



Fig. 4.2.3: Anthropologists



Fig. 4.2.4: Archaeologists

Observe these four pictures and the activities involved. From top left:

- **Geologists** (Fig. 4.2.1) study the physical features of the Earth, like the soil, stones, hills, mountains, rivers, seas, oceans and other such parts of the Earth.
- **Palaeontologists** (Fig. 4.2.2) study the remains of plants, animals and humans from millions of years ago in the form of **fossils**.
- **Anthropologists** (Fig. 4.2.3) study human societies and cultures from the oldest times to the present.
- **Archaeologists** (Fig. 4.2.4) study the past by digging up remains that people, plants and animals left behind, such as tools, pots, beads, figurines, toys, bones and teeth of animals and humans, burnt grains, parts of houses or bricks, among others.

How Is Time Measured in History?

Each society and culture has had its own ways of measuring time. Major events, such as the birth of an important person or the start of a ruler's reign, have often marked the beginning of a new **era**. At present, the **Gregorian**

Fossils: Impressions of footprints, or parts of plants or animals that are found preserved within layers of soil or rocks.

Era: A distinct period of time.

Gregorian calendar: The calendar now used the world over; it has 12 months adding up to 365 days, and a leap year every four years. However, century years — for example, 1800, 1900, 2000 — are leap years only if they are multiples of 400; so in the three centenary years above, only 2000 is a leap year.

Auspicious: favourable or bringing luck; for instance, 'an auspicious beginning'.

calendar is commonly used worldwide; side by side, Hindu, Muslim, Jewish, Chinese and other calendars are also used for calculating the dates of festivals and other **auspicious** events.

In the West, the conventional year for Jesus Christ's birth has generally been taken to be the starting point for this calendar. Years are counted forward from this point and used to be marked with 'AD' (an abbreviation for a Latin phrase that refers to the years after Jesus' birth). However, this is now called the **Common Era** or CE across the world. For example, 1947, the year India gained independence, can be written as 1947 AD (sometimes AD 1947) or 1947 CE. Similarly, the years before the conventional date for the birth of Jesus are counted backward and used to be marked with BC (or Before Christ). They are now called **Before Common Era** or BCE. For example, 560 BCE is an approximate year of birth of Gautama Buddha (whom we

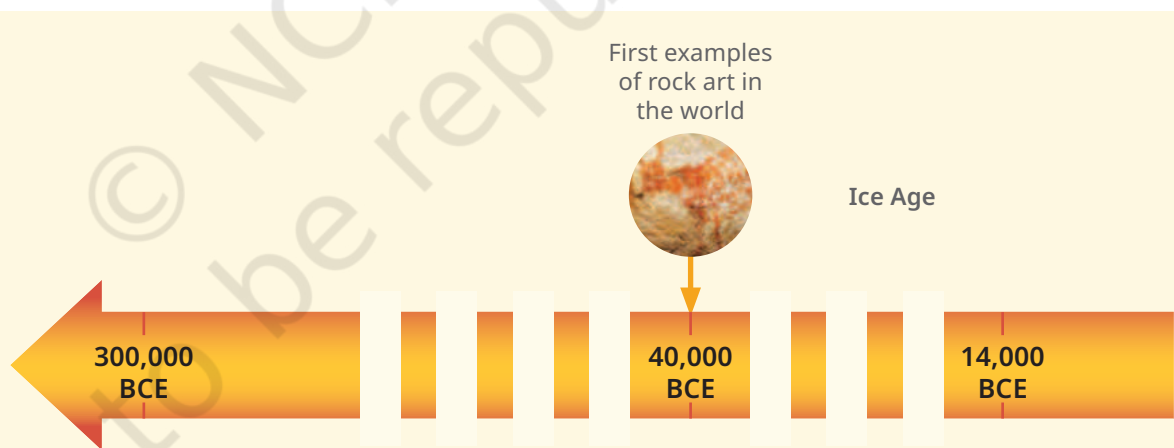
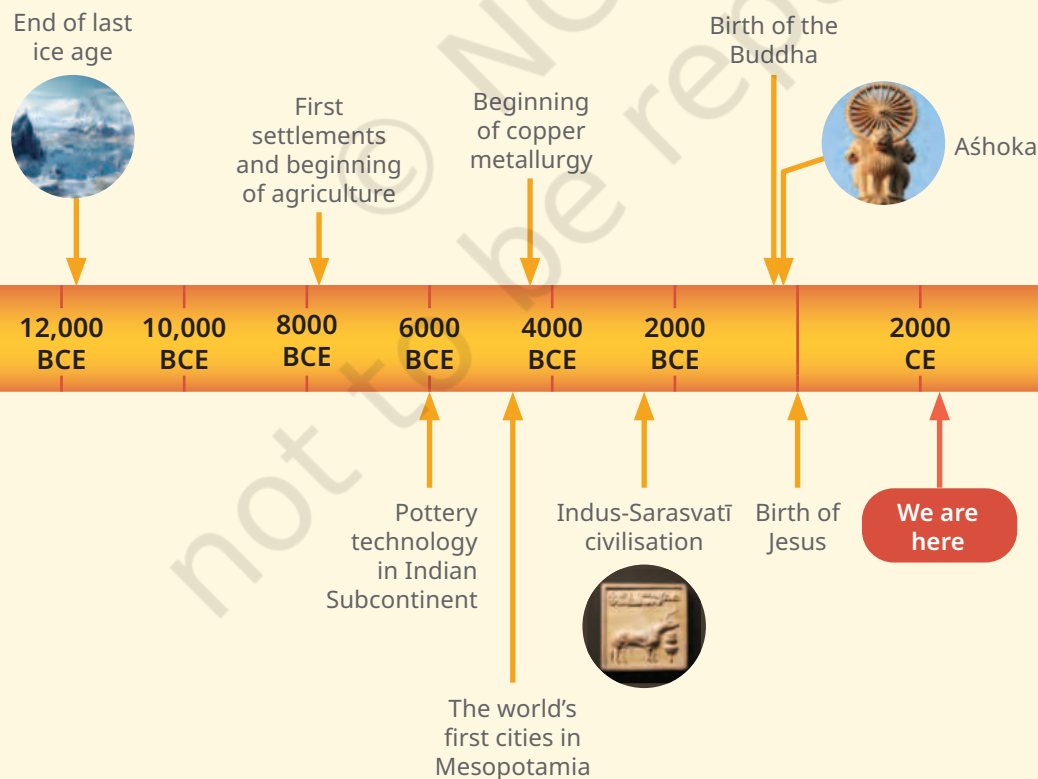


Fig. 4.3. Timeline of some main events since 300,000 BCE

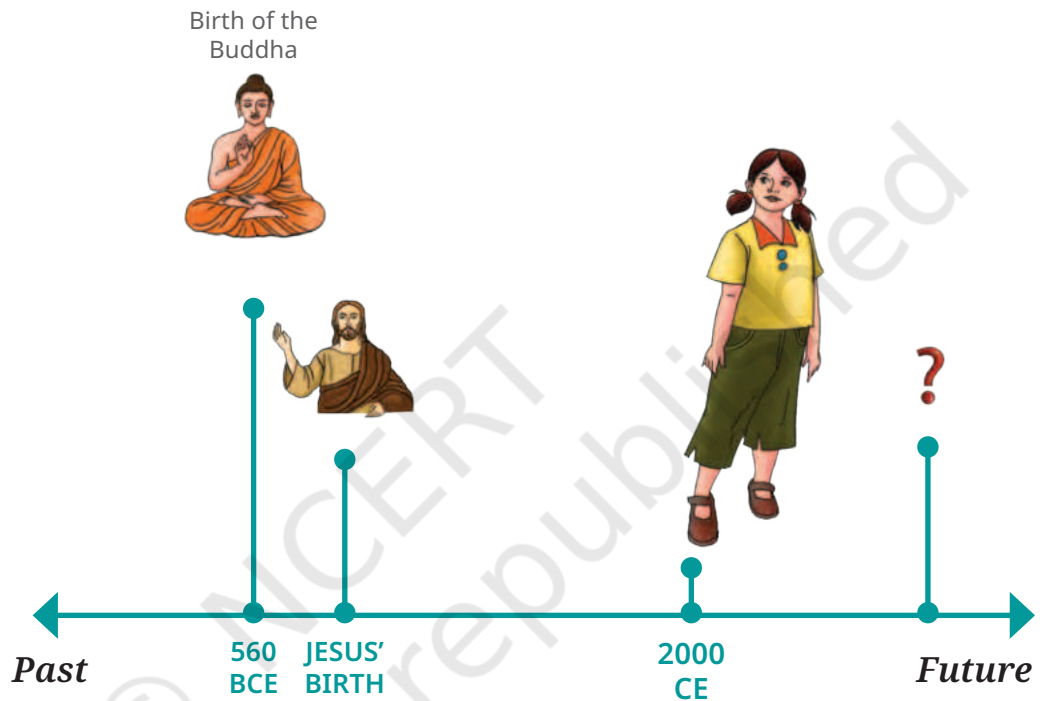
will meet in Chapter 7). Can you calculate how many years ago that was?

LET'S EXPLORE

- Such calculations are simple, but there is a catch. In the Gregorian calendar, there is no 'year zero'. The year 1 CE follows immediately the year 1 BCE. Draw a simple timeline marking every year from 2 BCE to 2 CE; you will see that because of the absence of a year zero, only 3 years have passed between those two dates.
- So to calculate the number of years between a BCE date and a CE date, you should add them but subtract 1 — in the above case, $2 + 2 - 1 = 3$.
- Practice a few examples with your classmates. For example, to return to the question about the Buddha, suppose we are now in the year 2024 CE, then the Buddha was born $560 + 2024 - 1 = 2,583$ years ago.



A **timeline** (see Fig. 4.3 on pages 62 and 63) is a convenient tool to mark such events, as it shows a sequence of dates and events covering any particular period. It runs from the beginning of humanity to the present, with a few important landmarks. Note that the dotted portion marks a skipped period; otherwise, this timeline would have to be almost 3 metres long!



A timeline also helps in understanding the order in which historical events take place. For example, even without looking at dates, you can now see that the birth of Buddha occurs before that of Jesus.



DON'T MISS OUT

Along with a year and a decade (a period of ten years), we often use other terms to understand longer durations of time. Two of these are quite commonly used when learning about history.

1. **Century:** It is any period of 100 years. In history, specific centuries are counted every 100 years starting from the year 1 CE. For instance, we are currently in the 21st century CE, which runs from 2001 to 2100.

The centuries BCE are calculated beginning from the year 1 BCE and keep going back in time. For example, the 3rd century BCE would include the years 300 BCE to 201 BCE.

2. **Millennium:** It is any period of 1,000 years. In history, specific centuries are counted every 1,000 years from the year 1 CE. For instance, we are currently in the 3rd millennium CE, which began in 2001 CE and will go up to 3000 CE.

As with centuries, millenniums BCE are also calculated beginning from 1 BCE and go backwards. So the 1st millennium BCE would include the years 1 BCE to 1000 BCE.

In the timeline given on pages 62 and 63 (Fig. 4.3), can you mark the beginning of the 8th millennium BCE? (*Note: In English, the plural of 'millennium' is 'millenniums' or 'millennia'; both are correct.*)

LET'S EXPLORE

Create a timeline stretching from 1900 CE to the current year and place the dates of birth of your grandparents, parents, siblings and yourself. Also, mark the years that the 20th century CE begins with and ends with.



DON'T MISS OUT

Do you know how calendars have been traditionally made in India? Many Indian calendars rely on the positions of the sun and the moon to define the months of the year. A *pañchānga* is a book of tables which lists the days of each month along with related astronomical data; for instance, it precisely predicts events like solar and lunar eclipses, times for sunrise and sunset, etc. *Pañchāngas*, still widely used in India, often also give weather predictions for the year, dates and timings of festivals, and more.



Source of history: A place, person, text or an object from which we gather information about some past event or period.



What Are the Sources of History?

LET'S EXPLORE

Can you collect information about at least three generations of your family on your mother's and father's sides? Create a family tree with your parents, grandparents and great-grandparents. Find out their names, what they did for a living and where they were born. Also, write the sources from where you got this information.

Relation	Name	Occupation	Place of birth	Source of information
Grandparents (paternal)				
Grandparents (maternal)				
Great-grandparents (paternal)				
Great-grandparents (maternal)				

How did you find details about your family's past? Did you rely on things like photographs, diaries, ID cards or memories from your parents and relatives?



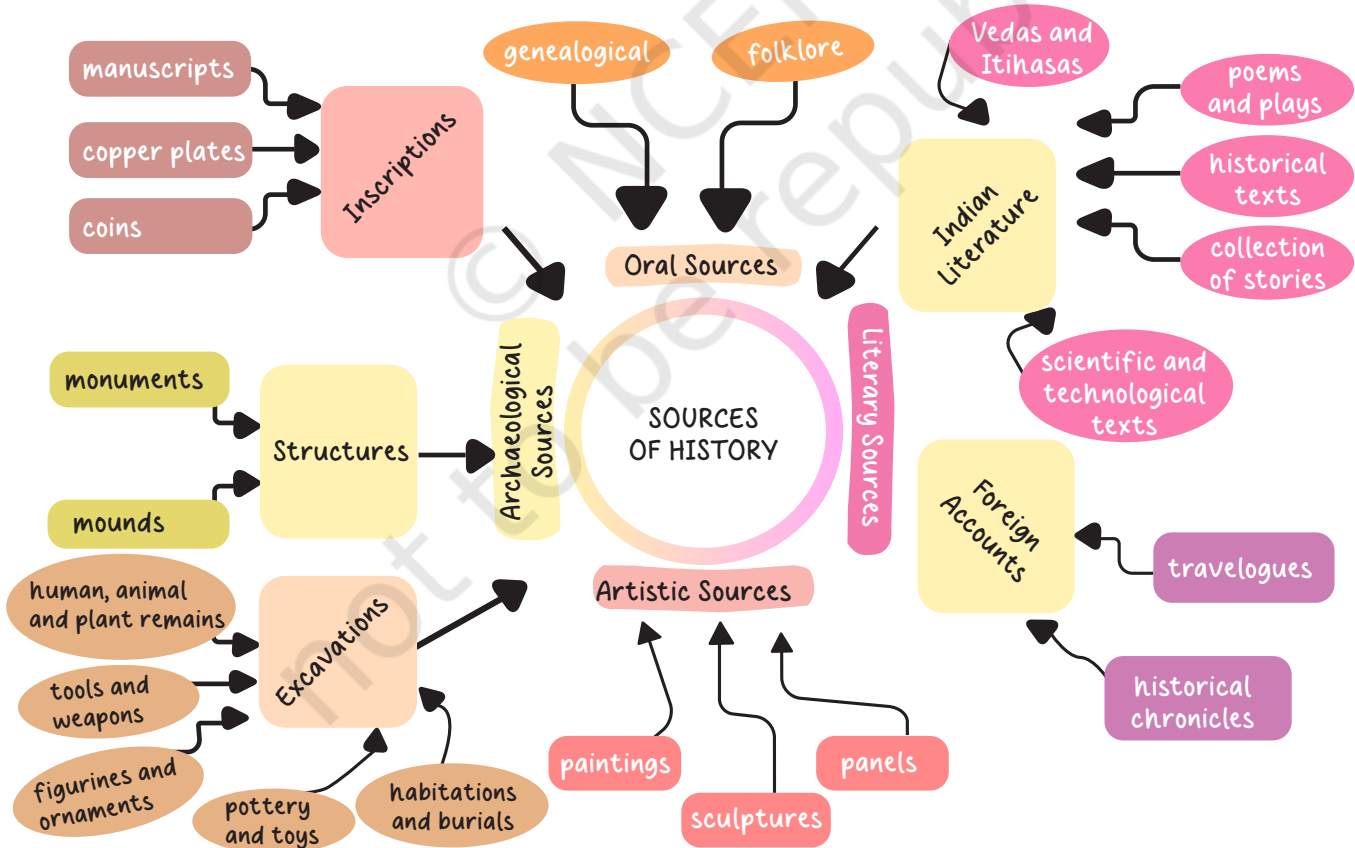
THINK ABOUT IT

Have you ever seen old coins, books, clothes, jewellery or utensils in and around your house? What type of information can we gain from such objects? Or from old houses or buildings?



Every object or structure tells a story and is like a piece in a jigsaw puzzle. The objects that you see around your house convey something of the history of your family. Similarly, we can put together historical events through a variety of sources. But keep in mind that in the case of history, quite a few pieces of the puzzle may remain missing!

Observe the figure at the bottom of the page. It brings together the main sources of history. You do not need to



Historian: A person who studies and writes about the past.

Genetics: The branch of biology that studies how, in plants, animals or humans, certain features and characteristics get passed down from one generation to the next.

remember them all now; we will use some of them as we go along. When **historians** study, say, a king or queen of 1,500 years ago, an ancient monument, a war or some items of trade, they take great care to gather information from as many sources as they can find and consult. Sometimes, the sources confirm each other (the jigsaw pieces match); at other times, sources may give contradictory information (the jigsaw pieces don't match), in which case they need to decide which source they can trust more. That is how they try to re-create the history of the period they are studying.

Who contributes to all these sources of history? Historians themselves, but also archaeologists, epigraphists (who study ancient inscriptions), anthropologists (who study human societies and their cultures), experts in literature and languages, and some more. In addition, in the last 50 years or so, scientific studies have been contributing more and more to the reconstruction of the past. For example, studies of ancient climates, chemical studies of excavated materials and studies of the **genetics** of ancient people have provided fresh insights, which supplement the more usual sources. And when historians study recent history (which usually means the last two or three centuries), another source is newspapers; for the last few decades, electronic media (television, the internet, etc.) can also be consulted.

LET'S EXPLORE

There are a few images of different sources of history on the next page. Who and what do you think the objects show? Write down in the boxes next to the images any information that you get from these objects.





Handwriting practice area with three horizontal dashed lines.



Handwriting practice area with three horizontal dashed lines.



Handwriting practice area with three horizontal dashed lines.

The Beginnings of Human History

Modern humans (*Homo sapiens*) have walked the planet for about 300,000 (three lakh) years. This appears to be a very long time, yet it is only a tiny fraction of the Earth's history. Let us have a quick look at our early history.



LET'S EXPLORE

In the above picture, look at some activities of early humans in a rock shelter. Which ones can you recognise? Give a brief description for each.

Early humans faced many challenges from nature and lived in bands or groups to help each other. They were constantly seeking shelter and food, and were mainly hunters and gatherers; this means that they relied on hunting and collecting edible plants and fruits for their survival. Our early ancestors also had certain beliefs about the natural elements and possibly also some notion of **afterlife**.

Afterlife:
A life
that begins
after death.

These groups lived in temporary camps, rock shelters or caves, and communicated with each other using languages that are now lost. They used fire and started making objects that made their lives easier, like improved stone axes and blades, arrowheads and other tools. Aspects of their life are visible in rock paintings found in hundreds of caves all over the world. Some of those paintings depict simple figures or a few symbols; others are more detailed and represent scenes with animals or humans. In time, these early humans learned to make simple ornaments such as stone or shell beads, pendants made of animal teeth, and sometimes exchanged them with other groups.

The First Crops

Over long ages, the Earth's climate has gone through many changes. At certain times, it was very cold and much of the Earth was covered with ice — this is called an 'Ice Age', as you will learn in greater detail in Science. Later, when the climate warmed up, this ice partly melted, and the resulting waters swelled the existing rivers and eventually drained into the oceans. The last Ice Age lasted from over 100,000 (one lakh) years ago to around 12,000 years ago.

Afterwards, living conditions improved for humans; in many parts of the world, they started settling down and cultivating cereals and grains. They also domesticated animals such as cattle, goats, etc. With more food available, these communities grew in size and number, and often settled down near rivers. This was not only because of the availability of water, but also because the soil would be more fertile there. It made the process of growing crops easier.

LET'S EXPLORE

Observe the scene on the next page. It depicts an agricultural community from a few millenniums ago. List the main activities you can identify.





THINK ABOUT IT

- ◆ Both in this earlier picture of a rock shelter and in this one, men and women are given certain roles. While they may appear to be 'natural', they are not necessarily correct and do not cover all situations. For instance, in a rock shelter, women may have helped prepare colours for painting the rock or may have done some of the painting. In both scenes, men may have done some of the cooking or may have helped take care of children.
- ◆ Keeping in mind that we have only limited information, think about such roles and situations, and discuss in class.

As communities grew, so did their social complexity. Leaders or ‘chieftains’ were responsible for the well-being of the people, and everyone collectively worked towards the community’s **welfare**. For example, there was no sense of individual ownership; the lands were collectively sowed and harvested.

As time went by, **hamlets** grew into sizeable villages that exchanged goods — mostly food, clothing and tools. Slowly, networks of communication and exchange were established among those villages, and some of them grew into small towns. New technologies appeared — for example pottery, for making pots and other clay objects; and the use of metal (copper first, iron later), which helped make durable tools, objects of daily use and ornaments.

We will see in Chapter 6 how this stage prepared for the emergence of what is called ‘civilisation’. For now, it is important to remember that this early progress of humanity had to face many challenges. At some critical times, humanity could have almost disappeared, as some earlier species did. We will never know those early humans to whose courage and persistence we owe our existence today.

Before we move on ...

- We have explored some ways to learn more about our pasts. The concept of a timeline helps us understand the sequence of historical events at different times.
- There are different ways of measuring time: years, decades, centuries, millenniums.
- Sources of history are many; they help us reconstruct and interpret historical events.
- We have also had a brief look into the lives of early humans and how human societies grew more complex in time.

Welfare:
Health, prosperity and well-being.

Hamlet:
A small settlement or small village.



Questions, activities and projects

1. As a project, write the history of your family (or village if you live in one), using sources of history at your disposal. Ask your teacher to guide you.
2. Can we compare historians to detectives? Give reasons for your answers.
3. A few exercises with dates:
 - Place these dates chronologically on the timeline: 323 CE, 323 BCE, 100 CE, 100 BCE, 1900 BCE, 1090 CE, 2024 CE.
 - If King Chandragupta was born in 320 CE, which century did he belong to? And how many years was that after the Buddha's birth?
 - Rani of Jhansi was born in 1828. Which century did she belong to? How many years was that before India's Independence?
 - Turn '12,000 years ago' into a date.
4. Plan a visit to a nearby museum: the visit should be prepared with some prior research on the kind of exhibits the museum holds. Keep notes during the visit. Write a brief report afterwards, highlighting what was unexpected / interesting / fun about the visit and the exhibits.
5. Invite to your school an archaeologist or a historian and ask them to speak on the history of your region and why it's important to know it.

India, That Is Bharat

In India at a very early time the spiritual and cultural unity was made complete and became the very stuff of the life of all this great surge of humanity between the Himalayas and the two seas.

— Sri Aurobindo

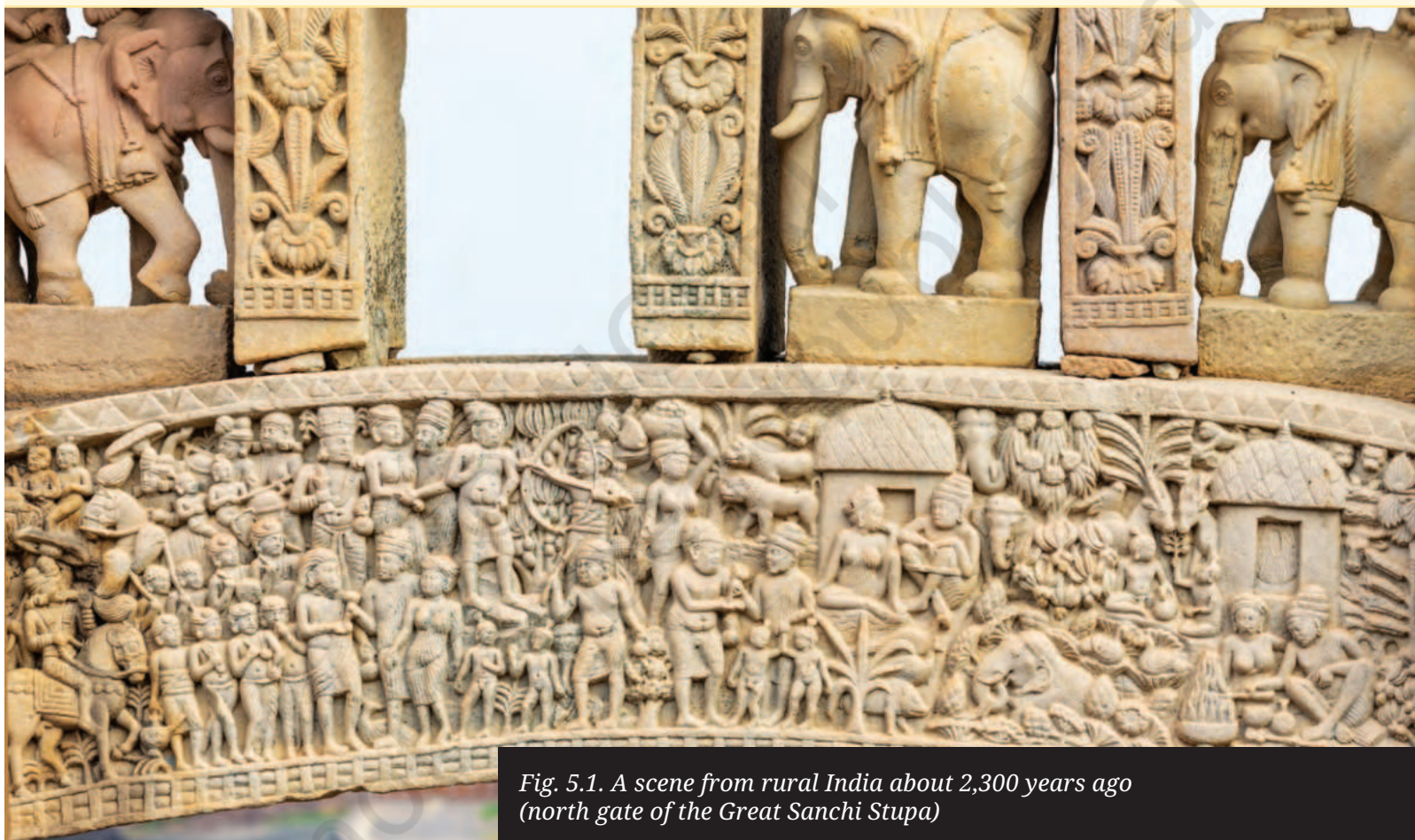


Fig. 5.1. A scene from rural India about 2,300 years ago (north gate of the Great Sanchi Stupa)

The **Big**
Questions ?

1. *How do we define India?*
2. *What were the ancient names for India?*



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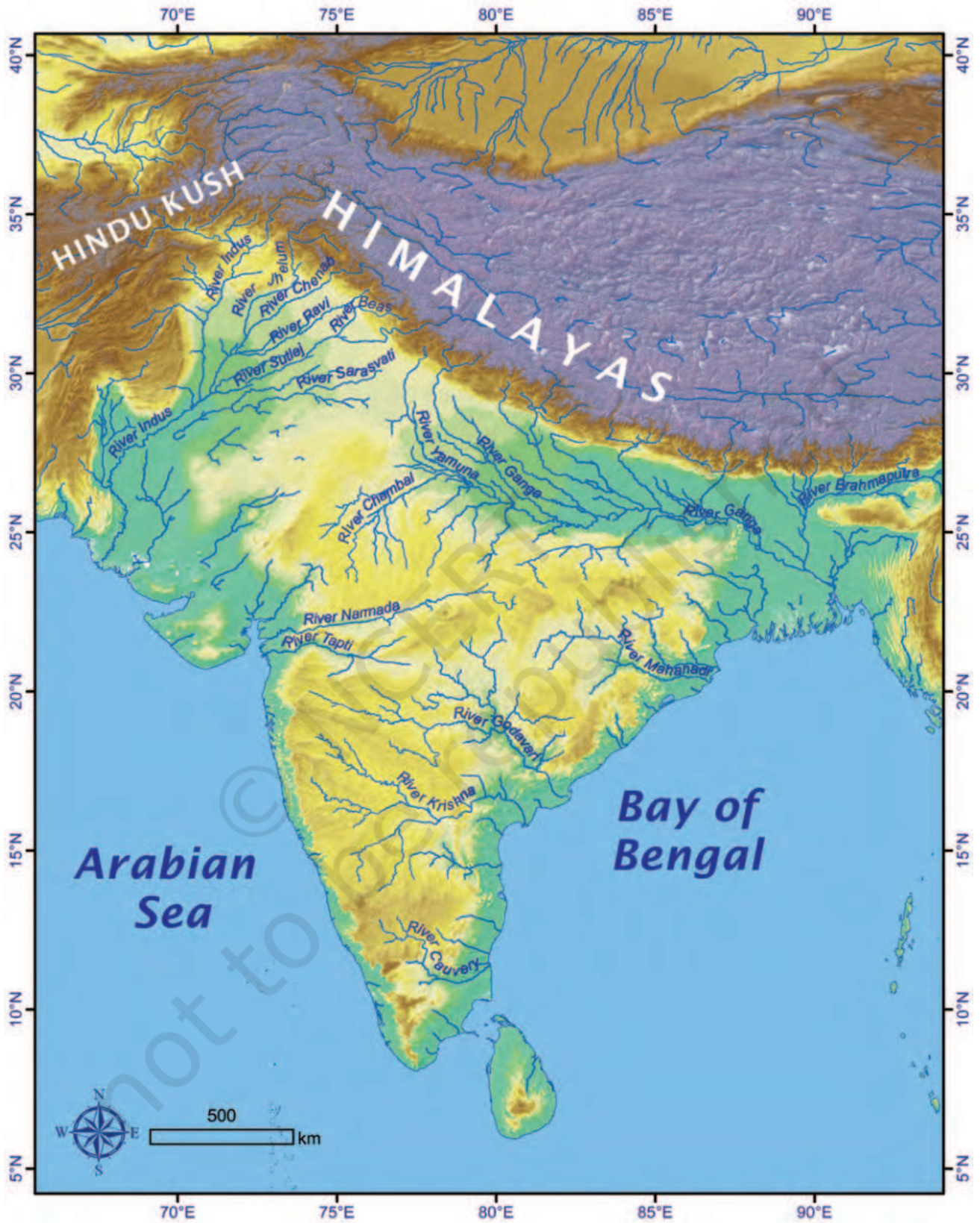


Fig. 5.2. A physical map of the Indian Subcontinent, with some of its rivers.

Today, the India we know is a modern nation, with defined borders, defined states and a known population. However, it was very different 500 years ago, 2,000 years ago or even 5,000 years ago. This region of the world, which we often call the ‘Indian Subcontinent’, has had many different names and shifting boundaries. We can learn about India’s past and evolution from many different sources. Let us explore.



THINK ABOUT IT

Consider the physical map of the Indian Subcontinent at the start of the chapter. What are its natural boundaries that you can make out?

In the course of history, India has been called by many names—both by its **inhabitants** and by visitors from outside. These names come to us from ancient texts, accounts of travellers and pilgrims, and inscriptions.

Inhabitants:
People who live in a particular place.

How Indians Named India

The R̥ig Veda is India’s most ancient text; as we will see in Chapter 7, it is several thousand years old. It gives the northwest region of the Subcontinent the name ‘Sapta Sindhava’, that is, the ‘land of the seven rivers’. The word ‘Sindhava’ comes from ‘Sindhu’, which refers to the Indus River, or at times to a river in general.

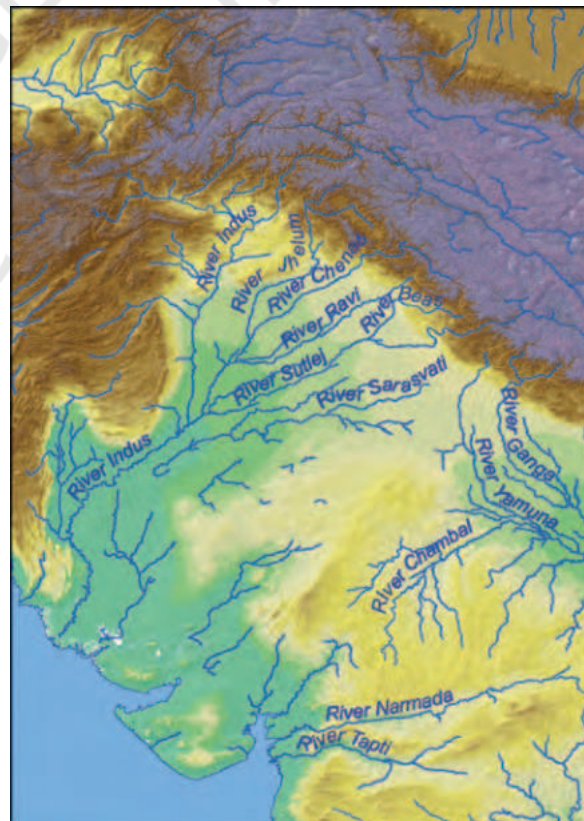


Fig. 5.3. The northwest region of the Indian Subcontinent

Moving on in time, we see names for other parts of India appear in the literature. The Mahābhārata is one of India's most famous texts (we read about it in the theme 'Our Cultural Heritage and Knowledge Traditions'). Interestingly, it lists many regions, such as Kāshmīra (more or less today's Kashmir), Kurukṣhetra (parts of Haryana today), Vanga (parts of Bengal), Prāgjyotiṣha (roughly today's Assam), Kaccha (today's Kutch), Kerala (more or less today's Kerala), and so on.

LET'S EXPLORE



Do you recognise the names of any regions given in the map (Fig. 5.4) on page 79? List the ones that you have heard of.

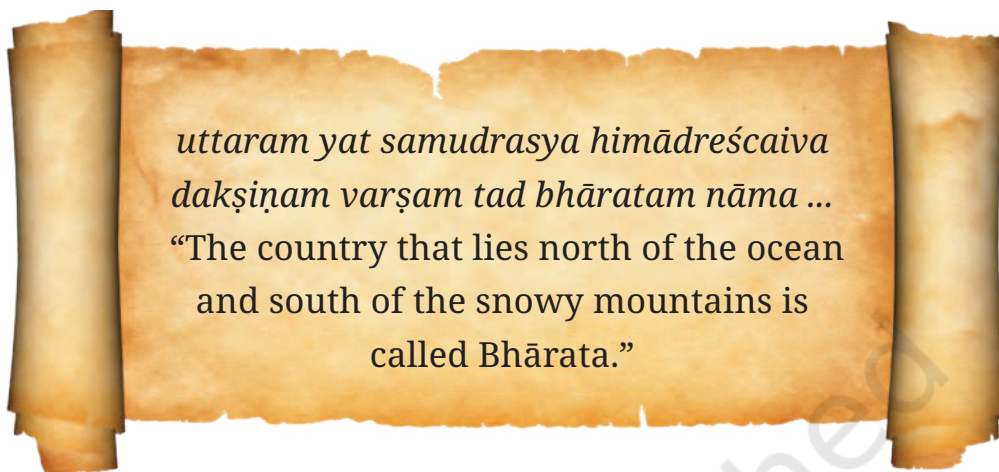
But when do we come across a name for the entire Indian Subcontinent? Because ancient Indian texts are difficult to date, this is not an easy question to answer. The Mahābhārata uses the terms 'Bhāratavarṣha' and 'Jambudvīpa', and scholars generally agree that this long poem was written from a few centuries BCE onward.

The first term, 'Bhāratavarṣha', clearly extends to the entire Subcontinent, and the text includes the names of numerous rivers and peoples. 'Bhāratavarṣha' means 'the country of the Bharatas'. 'Bharata' is a name that first appears in the Ṛig Veda, where it refers to one of the main Vedic groups of people. In later literature, several kings named 'Bharata' are mentioned.

The second term, 'Jambudvīpa', means 'the island of the fruit of the jamun tree'. This is indeed a common tree native to India, also called 'jambul tree', 'Malabar plum tree', etc. 'Jambudvīpa' came to mean the Indian Subcontinent.

In fact, we get a good clue from an Indian emperor — his name is Aśhoka and we will meet him later; for now, we can take his date to be about 250 BCE. As we will see, he left us many inscriptions. In one of them, he used the same

A few centuries later, 'Bhārata' became the name generally used for the Indian Subcontinent. For instance, in an ancient text called the *Viṣṇu Purāṇa*, we read:



This name, 'Bhārata' remains in use even today. In north India, it is generally written as 'Bharat', while in south India, it is often 'Bharatam'.



THINK ABOUT IT

Have you identified the 'snowy mountains'? Do you think this brief description of Bhārata is correct?

It is interesting to note that different parts of the country adopted a similar definition for India. For instance, a poem of ancient Tamil literature, from about 2,000 years ago, praises a king whose name is known “from [Cape] Kumari in the south, from the great mountain in the north, from the oceans on the east and on the west...” You can now recognise ‘the great mountain in the north’, and it should not be difficult to identify ‘Cape Kumari’. It looks like ancient Indians knew their geography well!



DON'T MISS OUT

The Indian **Constitution**, which was first written in English, uses the phrase 'India, that is Bharat' right at the beginning. Similarly, the Hindi version of the Constitution mentions the same as '*Bhārat arthāth India*'.

LET'S EXPLORE

In this reproduction of the first page of the original Constitution of India in Fig. 5.5 (page 82), can you make out the phrase 'India, that is Bharat'?

How Foreigners Named India

The first foreigners to mention India were the Persians, the ancient inhabitants of Iran. In the 6th century BCE, a Persian emperor launched a military campaign and gained control of the region of the Indus River, which, as we saw, was earlier called 'Sindhu'. So, it is no surprise that in their earliest records and stone inscriptions, the Persians referred to India as 'Hind', 'Hidu' or 'Hindu', which are adaptations in their language of 'Sindhu'. (Note that in ancient Persian, 'Hindu' is a purely geographical term; it does not refer here to the Hindu religion.)

Based on these Persian sources, the ancient Greeks named the region 'Indoi' or 'Indike'. They dropped the initial letter 'h' of 'Hindu' because this letter did not exist in their Greek language.

Sindhu → Hindhu → Indoi/Indike

The ancient Chinese also interacted with India. In several texts, they refer to India as 'Yintu' or 'Yindu'. This word also originally comes from 'Sindhu', in the following manner:

Sindhu → Hindhu → Indu → Yindu

Constitution:

A document that spells out the basic principles and laws of a nation. The Indian Constitution, which will be studied in Grade 7, came into force in 1950.

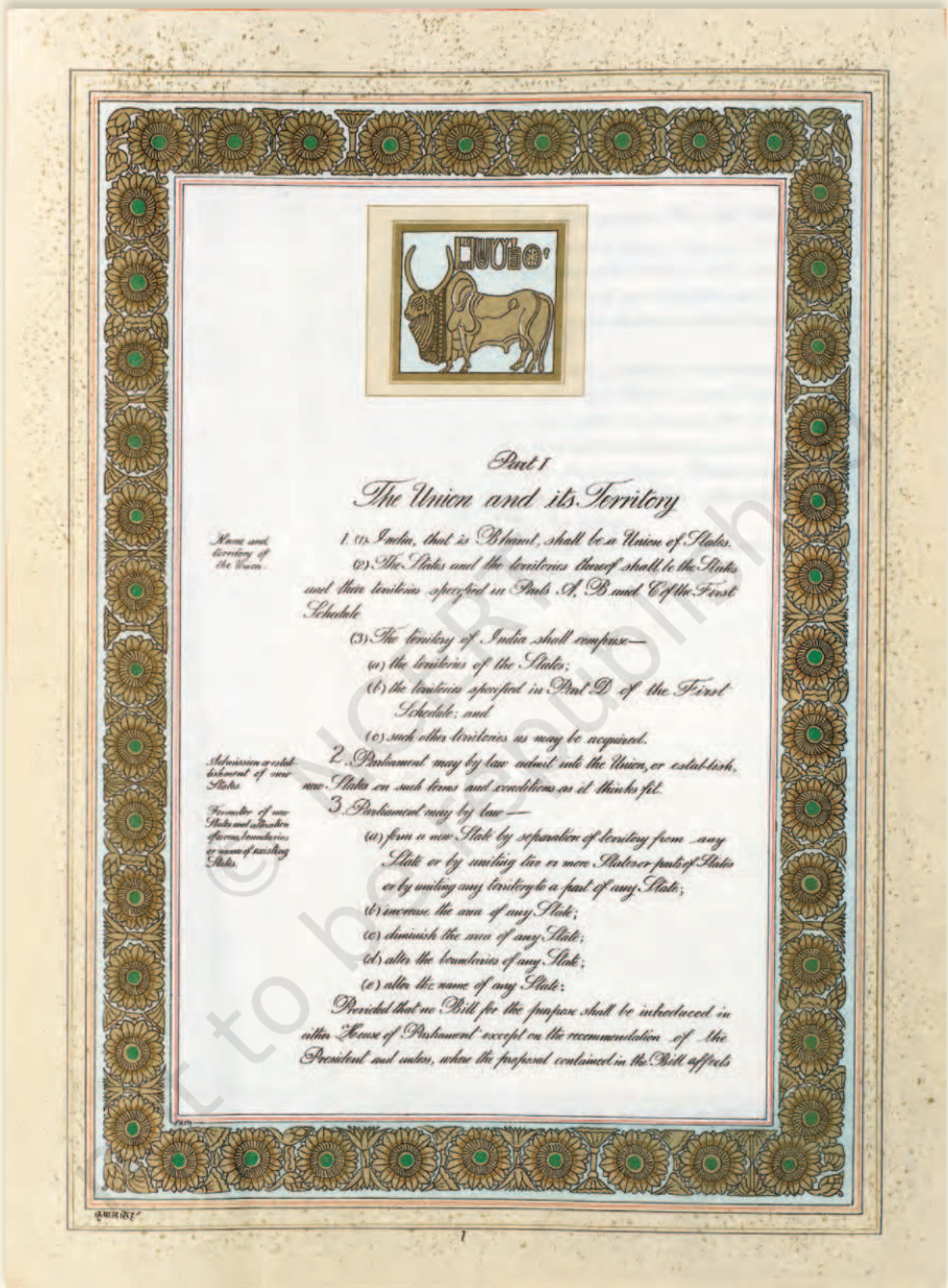


Fig. 5.5. First page of the Constitution of India (source: Reprint of the original Constitution of India, Ministry of Culture, Government of India, 2000)



DON'T MISS OUT

Xuanzang (formerly spelt Hiuen Tsang, Hsuan Tsang, etc.) travelled from China to India in the 7th century CE. He visited many parts of India, met scholars, collected Buddhist texts, and returned to China after 17 years. There, he translated the manuscripts he took back with him from Sanskrit into Chinese. Several other Chinese scholars visited India over the centuries.

Another Chinese word, also derived from 'Sindhu', was 'Tianzhu'; but this word could also be understood as 'heavenly master'. This reflects the respect the ancient Chinese had for India as the land of the Buddha.

You are probably quite familiar with a more recent term, 'Hindustān', but you may not know that it was first used in a Persian inscription some 1,800 years ago! Later on, this became the term used by most invaders of India to describe the Indian Subcontinent.



LET'S EXPLORE

Can you complete this table of the many names of India?

Persian	
Greek	
Latin	India
Chinese	
Arabic & Persian	
English	India
French	Inde





Before we move on ...

- India is an ancient land, which has had many names in the course of its history.
- The names given by the ancient inhabitants of India include 'Jambudvīpa' and 'Bhārata'. The latter became widespread in time and is the name of India in most Indian languages.
- Foreign visitors to, or invaders of, India mostly adopted names derived from the Sindhu or Indus River; this resulted in names like 'Hindu', 'Indoi', and eventually 'India'.

Questions, activities and projects

1. Discuss what could be the meaning of the quotation at the start of the chapter.
2. True or false?
 - The R̥g Veda describes the entire geography of India.
 - The *Viṣṇu Purāṇa* describes the entire Subcontinent.
 - In Aśhoka's time, 'Jambudvīpa' included what is today India, parts of Afghanistan, Bangladesh and Pakistan.
 - The Mahābhārata lists many regions, including Kashmir, Kutch, and Kerala.
 - The term 'Hindustān' first appeared in a Greek inscription more than 2,000 years ago.
 - In ancient Persian, the word 'Hindu' refers to the Hindu religion.
 - 'Bhārata' is a name given to India by foreign travellers.
3. If you were born some 2,000 years ago and had the chance to name our country, what name or names might you have chosen, and why? Use your imagination!
4. Why did people travel to India from various parts of the world in ancient times? What could be their motivations in undertaking such long journeys? (*Hint: There could be at least four or five motivations*)

The Beginnings of Indian Civilisation

The most ancient civilisation of India, known variously as the Harappan, Indus or Indus-Sarasvatī Civilisation, was indeed remarkable in many ways. ... [It showed how] a well-balanced community lives — in which the differences between the rich and the poor are not glaring. ... In essence, the Harappan societal scenario was not that of ‘exploitation’, but of mutual ‘accommodation’.

— B.B. Lal

The Big Questions ?

1. What is a civilisation?
2. What was the earliest civilisation of the Indian Subcontinent?
3. What were its major achievements?



Fig. 6.1. The North Gate entrance to Dholavira's 'Castle' area.



Metallurgy: Includes the techniques of extracting metals from nature, purifying or combining them, as well as the scientific study of metals and their properties.

What Is a Civilisation?

At the end of Chapter 4, we saw the first human groups settling down, practising agriculture, developing some technologies (such as construction, **metallurgy**, transport) and moving towards ‘civilisation’.

What, then, is civilisation? In general, the term is used for an advanced stage of human societies. To be precise, we will consider here that a ‘civilisation’ should have at least the following characteristics:

- some form of **government and administration** — to manage a more complex society and its many activities
- **urbanism** — town-planning, the growth of cities and their management, which generally includes water management and a drainage system
- a variety of **crafts** — including the management of raw materials (such as stone or metal) and the production of finished goods (such as ornaments and tools)
- **trade** both internal (within a city or a region) and external (with distant regions or other parts of the world) — to exchange all sorts of goods
- some form of **writing** — needed to keep records and to communicate
- **cultural ideas** about life and the world, expressed through art, architecture, literature, oral traditions or social customs
- a productive **agriculture** — enough to feed not just the villages, but also the cities.



THINK ABOUT IT

Which of the above characteristics do you think is the most fundamental — that is, a characteristic essential to the development of all others?

LET'S EXPLORE

For each characteristic in the list above, can you make a list of professions or occupations that might exist in such a society?



It is easy enough to see that all these characteristics are present in most societies in the world today. But when did civilisation begin, in the sense we have now defined?

Civilisation began at different times in different parts of the world. In the region known as Mesopotamia (modern Iraq and Syria), that happened about 6,000 years ago, and the civilisation in ancient Egypt followed a few centuries later. You will learn about these and a few more civilisations in a later grade. In many ways, humanity would not have reached its present stage without the enormous contributions and advances of those ancient civilisations.

For now, however, we will only look at the Indian Subcontinent, and its northwest region is where our story begins.

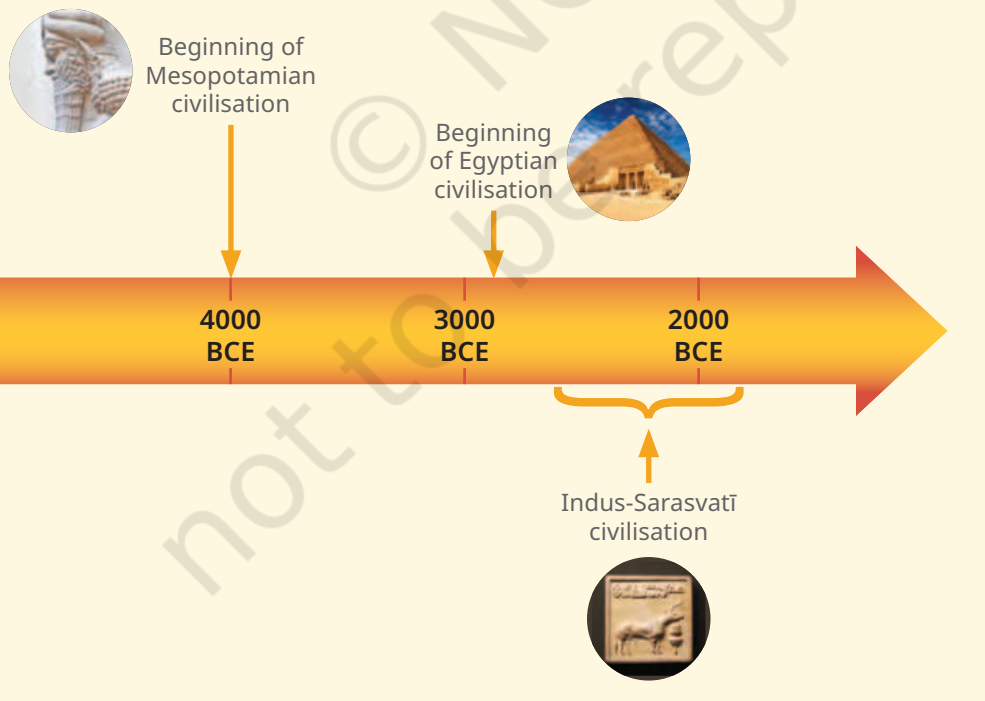


Fig. 6.2. Timeline showing the period of the Indus-Sarasvatī civilisation, from about 2600 to 1900 BCE.

Tributary:
A river that flows into a larger river (or lake). For instance, the Yamuna is a tributary of the Ganga.

From Village to City

The vast plains of the Punjab (today divided between India and Pakistan) and Sindh (now in Pakistan) are watered by the Indus River and its **tributaries**. This made those plains fertile and, therefore, favourable to agriculture. A little further east, a few millennia ago, another river, the Sarasvatī, used to flow from the foothills of the Himalayas through Haryana, Punjab, parts of Rajasthan and Gujarat (see Fig. 6.3). In this whole region, from about 3500 BCE, villages grew into towns, and with increasing trade and other exchanges, those towns further grew into cities. This transition happened around 2600 BCE.

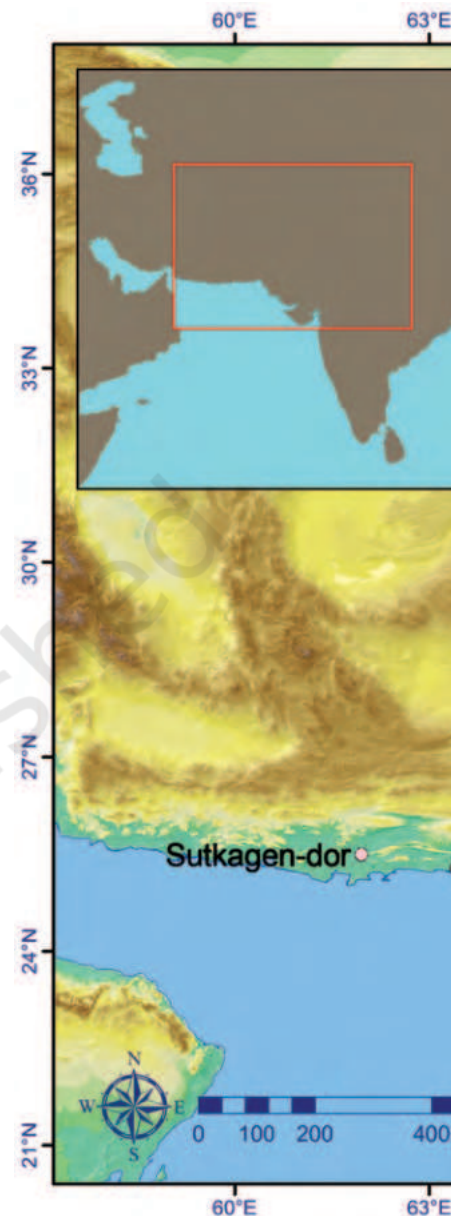
Archaeologists gave this civilisation several names — ‘Indus’, ‘Harappan’, ‘Indus-Sarasvatī’ or ‘Sindhu-Sarasvatī’ civilisation. We will use all these terms. Its inhabitants are called ‘Harappans’. It is one of the oldest civilisations in the world.



DON'T MISS OUT

Why are the inhabitants of this civilisation called ‘Harappans’ today? That is simply because the city of Harappa (today in Pakistan’s Punjab) was the first of this civilisation to be excavated, way back in 1920–21, over a century ago.

This development is also called the ‘First Urbanisation of India’.



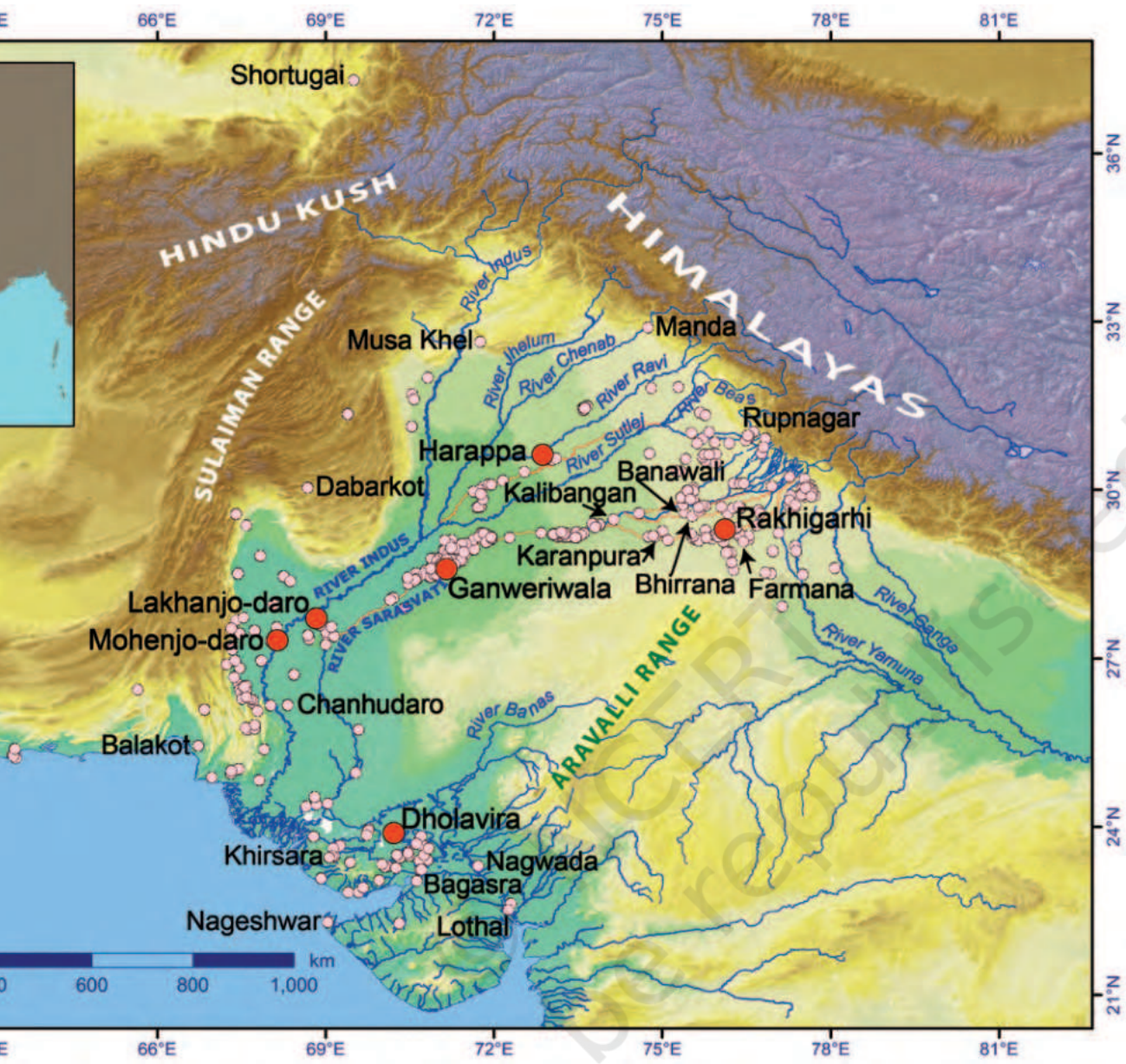


Fig. 6.3. Map of some of the main settlements of the Indus-Sarasvati civilisation. Notice the natural boundaries formed by the mountain ranges (in brown colour).

LET'S EXPLORE

Some of the important cities of this civilisation are marked in the map (Fig. 6.3). As a class activity, can you try to match these cities with the modern states or regions in the table on the next page?



Harappan city	Modern state / region
Dholavira	Punjab
Harappa	Gujarat
Kalibangan	Sindh
Mohenjo-daro	Haryana
Rakhigarhi	Rajasthan

The Sarasvatī River

The map (Fig. 6.3 on page 89) shows the Indus (or Sindhu) and its five main tributaries; important cities grew along those rivers, such as Mohenjo-daro and Harappa. But there are also many sites along the Sarasvatī River, which today goes by the name of 'Ghaggar' in India and 'Hakra' in Pakistan (hence the name 'Ghaggar-Hakra River'). This river is now seasonal, because it flows only during the rainy season.

The Sarasvatī River is first mentioned in the R̥g Veda, an ancient collection of prayers which we will read about in Chapter 7. In this text, Sarasvatī is worshipped both as a goddess and as a river flowing 'from the mountain to the sea'. Later texts describe the river as drying up and eventually disappearing.

Town-Planning

Harappa and Mohenjo-daro, now in Pakistan, were the first two cities of this civilisation to be discovered; their identification goes back to 1924, a century ago. Several sites followed in the Indus plains, which is why the civilisation was initially called 'Indus Valley civilisation'.

Later on, other major cities, such as Dholavira (in Gujarat), Rakhigarhi (in Haryana), Ganweriwala (in the Cholistan desert of Pakistan), and hundreds of smaller sites (such



THINK ABOUT IT

You may have come across the term 'Indus Valley civilisation' and noticed that we have not used it. A look at the map (Fig. 6.3 on page 89) explains why the term 'Valley' is obsolete, as we now know that the civilisation extended much beyond the Indus region.

as Lothal in Gujarat), were discovered, some of them excavated. Such discoveries continue even today! It is interesting to note that the Sarasvatī basin includes not only two major cities — Rakhigarhi and Ganweriwala — but also several smaller ones (Farmana in Haryana, Kalibangan in Rajasthan) and a few towns (Bhirrana and Banawali, both in Haryana); indeed, the map (Fig. 6.3 on page 89) makes clear the high density of sites in that region.

The larger Harappan cities were built according to precise plans. They had wide streets (Fig. 6.4 and 6.5 on page 92), which were often oriented to the cardinal directions. Most cities seem to have been surrounded by **fortifications** and had two distinct parts — the 'upper town', where the local **elite** probably lived, and the 'lower town', where common people lived.

Some large buildings seem to have been used for collective purposes — for instance, warehouses where goods to be transported were stored. Individual houses of various sizes lined the streets and smaller lanes. Interestingly, the quality of construction was the same for small and big houses. All those buildings were generally made of bricks.

The purpose of some of the structures remains a matter of debate. This is the case of the famous 'Great Bath' in Mohenjo-daro (Fig. 6.6 on page 93), a small but elaborate tank which measured about 12 x 7 metres and had waterproofing materials (such as natural bitumen, a form of tar) applied on top of carefully laid-out bricks. The tank

Fortification: A massive wall surrounding a settlement or city, generally for protective purposes.

Elite: Here, the word refers to the higher layers of the society, such as rulers, officials, administrators, and often priests.



(Top) Fig. 6.4. A wide street at Kalibangan (Rajasthan), in the lower town area.

(Right) Fig. 6.5. Housing area in Dholavira, with perpendicular streets, in the middle town (Dholavira had three distinct zones, not two as in other cities). Also, in this city, the foundations of most buildings were made with stones.



was surrounded by small rooms, one of which contained a well; there was a drain in one corner of the tank to empty it from time to time and refill it with freshwater.



Fig. 6.6. Mohenjo-daro's Great Bath

What was the purpose of such a structure? Archaeologists have proposed several possible interpretations — a public bath for people; a bath for the royal family only; or a tank used for religious rituals. The first interpretation is now ruled out because it turns out that in this city, most houses had individual bathrooms.

LET'S EXPLORE

Have a debate in class about the last two interpretations. Can you think of any others? Remember that in this case, we do not have any other source of history — no inscription, no text, no traveller's account.



Water Management

The Harappans gave much importance to water management and cleanliness. They often had separate areas for bathing in their homes; these were connected to a larger network of drains (Fig. 6.7), which generally ran below the streets and took the waste water away.



Fig. 6.7. Drainage system at Lothal (Gujarat)

In Mohenjo-daro, people drew water from hundreds of wells made of bricks. But in other regions, it may have been

from ponds, nearby streams or human-made **reservoirs**. In the case of Dholavira (in the Rann of Kutch in Gujarat), the largest reservoir measured 73 metres in length!

Reservoir: A large natural or artificial place where water is stored.

LET'S EXPLORE

As a class activity, measure the length of your classroom, a school corridor or a playground with the help of any measuring tape. Compare these lengths with the length of the largest reservoir in Dholavira.

At Dholavira, at least six large reservoirs were built with stones or even cut into the rock (Fig. 6.8). Most of them were connected through underground drains for efficient water harvesting and distribution.



Fig. 6.8. A large reservoir cut in the rock at Dholavira, measuring 33 metres in length



THINK ABOUT IT

Imagine the large number of workers required to build such a network of reservoirs. Who do you think organised their work and gave them precise instructions? How do you think they were paid for their labour? (*Hint: there was no money at that time in the way we have today.*) Since the reservoirs needed to be cleaned from time to time, was there some local authority to manage their maintenance? What clues do we get from all this about this city's ruler and municipal administration?

Use your imagination and discuss with your teacher. Archaeologists also discuss these questions, and the answers are not always final!

What Did the Harappans Eat?

The Harappans created many of their settlements along the banks of large or small rivers. This is a logical choice, not just for easy access to water, but also for agriculture, since rivers enrich the soil around them. Archaeological findings have shown that the Harappans grew cereals like barley, wheat, some millets, and sometimes rice, in addition to **pulses** and a variety of vegetables. They were also the first in Eurasia to grow cotton, which they used to weave into clothes. They made farming tools, including the plough (Fig. 6.9), some of which continue to be used by modern-day farmers.

Pulses:
A category of crops that includes beans, peas and lentils (dal).



Fig. 6.9. A small clay model of a plough (from Banawali in Haryana)

This intense agricultural activity was managed by hundreds of small rural sites or villages. Then as now, the cities could survive only if enough agricultural produce from rural areas reached them on a daily basis.

The Harappans also domesticated a number of animals for meat consumption and fished both in rivers and in the sea. This is known from the large numbers of animal and fish bones found during excavations.

What did Harappan cooking pots contain? Scientific examinations of clay pots have provided some answers, both expected ones (dairy products) and surprising ones — such as remains of turmeric, ginger and banana. Clearly, their diet was quite diverse!

LET US EXPLORE

Imagine you cook a meal in a Harappan house. What dish or dishes would you prepare, based on the data given above?



A Brisk Trade

The Harappans were engaged in active trade, not only within their own civilisation (other cities nearby or far away), but with other civilisations and cultures within and outside India. They exported ornaments, timber, some objects of daily use (Fig. 6.11 on page 98), probably also gold and cotton, and possibly some food items. The most favoured ornaments were beads of carnelian (Fig. 6.10 on page 98), a reddish semiprecious stone found mostly in Gujarat. Harappan craftspeople developed special techniques to drill them, so a string could pass through them, and to decorate them in various ways. They also worked conch shells into beautiful shell bangles, which requires sophisticated techniques as shell is a hard material.

What the Harappans imported in exchange of the exported goods is not so clear. It probably included copper, since this metal was not so common back home.



DON'T MISS OUT

The Harappans mastered the art of working copper, a soft metal. If tin is added to copper, the resulting metal is bronze, which is harder than copper. The Harappans used bronze to make tools, pots and pans, and, as we will see later, some figurines.



Fig. 6.10. Harappan beads of carnelian beads excavated at Susa (present-day Iran)



Fig. 6.11. Harappan ivory comb (about 7 cm long) found on the coast of Oman

To conduct such a trade, they used land routes and rivers, and the sea for more distant destinations — this is the first intensive maritime activity in India. Indeed, quite a few Harappan settlements are located in the coastal regions of Gujarat and Sindh. Lothal, a small settlement in Gujarat, has

a surprisingly huge basin measuring 217 metres in length and 36 metres in width — the length is just a little more than that of two football grounds! This basin must have been a dockyard, that is, a structure used to receive and send boats for further transportation of goods.

Such elaborate trade requires traders to be able to identify their goods — and also each other! This seems to have been the chief purpose of thousands of small seals, which have been excavated from many settlements. These seals



Fig. 6.12. The huge dockyard at Lothal

were generally made of steatite, a soft stone that would be hardened through heating. They measure only a few centimetres and generally depict animal figures with, above them, a few signs that are part of a writing system. But that system and the symbolic meaning of the animal figures are yet to be understood. What is certain is that they somehow relate to trade activities.



Fig. 6.13-1, 6.13-2, 6.13-3. (Left to right) Harappan seal showing a unicorn; Harappan seal showing a bull; Harappan seal showing a horned tiger

LET'S EXPLORE

Looking at these three Harappan seals with some writing signs, what goes through your mind? Would you like to suggest any interpretations? Let your imagination run!



The Lives of the Ancients

Archaeologists have unearthed many objects made and used by Harappans.

Objects
of daily
use

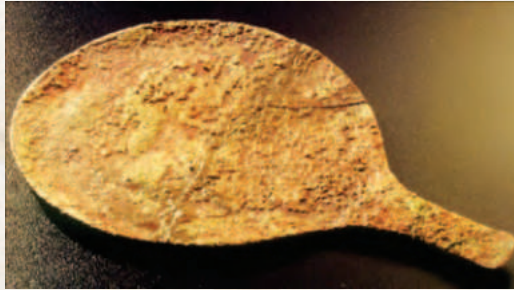


Fig. 6.14-1 (top), 6.14-2 (right). A bronze mirror; a terracotta pot (both from Dholavira)



Fig. 6.14-3 (top), 6.14-4 (right). A few stone weights; a bronze chisel (both from Dholavira)



Fig. 6.14-5, 6.14-6. A gamesboard engraved on a stone, about 25 cm in length (from Dholavira); a terracotta whistle, about 4 cm in length (from Karanpura in Rajasthan). Harappans designed many games and toys to keep both adults and children amused!

Cultural
and
symbolic
objects



Fig. 6.15-1, 6.15-2, 6.15-3. A statuette of a figure often called 'Priest King' (although it is not known who this figure was); a seal showing a swastika; a seal depicting a three-faced deity seated on a raised platform, surrounded by powerful animals



Fig. 6.15-4, 6.15-5, 6.15-6. The 'Dancing Girl', a bronze figurine from Mohenjo-daro (it is 10.8 cm high); a terracotta figurine seated in a 'namaste'; a design on a pot which seems to tell the story of the thirsty crow, who finds a clever way to drink water at the bottom of the pot (from Lothal).



THINK ABOUT IT

- ◇ Looking at the objects on pages 100 and 101 — or any other pictured in this chapter — can you make out what activities or aspects of life were important for the Harappans?



LET'S EXPLORE

- Complete the story found on the Lothal pot. How was such a story remembered for more than 4,000 years, in your opinion?
- Consider the 'Dancing Girl' figurine. What do you make of the attitude the figurine expresses? Observe her bangles covering an entire arm, a practice still visible in parts of Gujarat and Rajasthan. Where else in this chapter can you spot bangles worn in this manner. What conclusion should we draw from this?

The End or a New Beginning?

Around 1900 BCE, this Sindhu-Sarasvatī civilisation, despite all its achievements, began to fall apart. The cities were abandoned one by one. If any inhabitants remained, they adopted a rural lifestyle in the changed environment — it appears that the earlier government or administration no longer existed. Gradually the Harappans scattered over hundreds, if not thousands, of small rural settlements.



THINK ABOUT IT

The Harappans returned to rural settlements because a rural lifestyle gives easier access to food and water than an urban lifestyle. Then as now, cities depended on villages to provide food, and sometimes water.

What caused this decline? Archaeologists have proposed many factors. Long back, it was thought that warfare or

invasions may have destroyed the cities, but there is no trace of warfare or invasion. Indeed, the Harappans do not seem to have kept any army or weapons of war; as far as the evidence goes, it seems to have been a relatively peaceful civilization.

Two factors are currently agreed upon. First, a climatic change which affected much of the world from 2200 BCE onward, causing reduced rainfall and a drier phase. This would have made agriculture more difficult and could have reduced food supply to the cities. Second, the Sarasvatī River dried up in its central basin; suddenly, cities there, such as Kalibangan or Banawali were abandoned. There could have been other factors, but these two remind us of how much we depend on climate and the environment for our well-being.

Although the cities disappeared, much of the Harappan culture and technology survived and was passed on to the next phase of Indian civilisation, which we will explore in a future chapter.

Before we move on ...

- The Indus, Harappan or Sindhu-Sarasvatī civilisation is one of the oldest of the world. Its inhabitants, the Harappans, created planned cities with efficient water management, diverse crafts and a brisk trade.
- A productive agriculture brought a variety of crops to the cities.
- The civilisation eventually declined, probably because of climatic and environmental changes; people returned to a rural lifestyle.



Questions, activities and projects

1. Why does the civilisation studied in this chapter have several names? Discuss their significance.
2. Write a brief report (150 to 200 words) summing up some of the achievements of the Indus-Sarasvatī civilisation.
3. Imagine you have to travel from the city of Harappa to Kalibangan. What are your different options? Can you make a rough estimation of the amount of time each option might take?
4. Let us imagine a Harappan man or woman being transported to an average kitchen in today's India. What are the four or five biggest surprises awaiting them?
5. Looking at all the pictures in this chapter, make a list of the ornaments / gestures / objects that still feel familiar in our 21st century.
6. What mindset does the system of reservoirs at Dholavira reflect?
7. In Mohenjo-daro, about 700 wells built with bricks have been counted. They seem to have been regularly maintained and used for several centuries. Discuss the implications.
8. It is often said that the Harappans had a high civic sense. Discuss the significance of this statement. Do you agree with it? Compare with citizens in a large city of India today.

India's Cultural Roots

That which cannot be stolen; that which cannot be confiscated by rulers; ... that which is not a burden as it does not weigh anything; that which, though it is used, only grows every day — that is the greatest wealth of all, the wealth of true knowledge.”

— Subhāshita (Wise Saying)

A rishi (from Hampi, Karnataka) | The Buddha (from Bhutan) | Mahāvira (from Bihar)



The Big Questions ?

1. What are the Vedas? What is their message?
2. What new schools of thought emerged in India in the 1st millennium BCE? What are their core principles?
3. What is the contribution of folk and tribal traditions to Indian culture?



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Spiritual:
Concerned with the spirit or soul (*ātman* in Sanskrit and many Indian languages). Spirituality is the search for a deeper or higher dimension beyond our current personality.

Seeker:
Someone who seeks the truths of this world. This could be a sage, a saint, a yogi, a philosopher, etc.

Indian culture, by any estimate, is several millenniums old. Like any ancient tree, it has many roots and many branches. The roots nurture a common trunk. And from the trunk emerge many branches, which are different manifestations of Indian culture, yet united by a common trunk.

Some of these branches are about art, literature, science, medicine, religion, the art of governance, martial arts, and so on. There are also ‘schools of thought’, by which we mean groups of thinkers or **spiritual seekers** who share similar ideas about human life, the world, etc.

Many archaeologists and scholars have pointed out that some of India’s cultural roots go all the way to the Indus or Harappan or Sindhu-Sarasvatī civilisation (which we visit in Chapter 6). Later on, over time, hundreds of schools of thought emerged in India. We will see here a few early schools, which have shaped India into a country with a unique personality. By understanding them and their roots, we can understand ‘India, that is Bharat’ better.

The Vedas and Vedic Culture

a. What are the Vedas?

The word “Veda” comes from the Sanskrit *vid* which means ‘knowledge’ (hence *vidyā*, for instance). We briefly mentioned the Ṛig Veda in earlier chapters. In fact, there are four Vedas — the Ṛig Veda, the Yajur Veda, the Sāma Veda and the Atharva Veda. They are the most ancient texts of India, and indeed among the most ancient in the world.

The Vedas consist of thousands of hymns — prayers in the form of poems and songs — that were recited orally, not written. Those hymns were composed in the Sapta Sindhava region (which we visit in Chapter 5). It is difficult to say when exactly the Ṛig Veda, the most ancient of the four, was composed; experts have proposed dates ranging from

the 5th to the 2nd millennium BCE. So, for anything between 100 and 200 generations, these texts have been committed to memory through rigorous training and passed on orally with hardly any alterations!

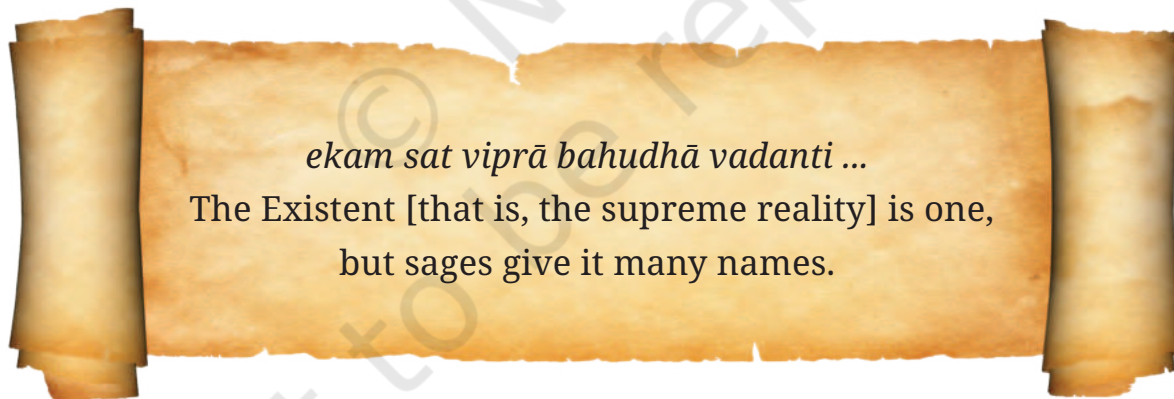


DON'T MISS OUT

This meticulous transmission over thousands of years explains why, in 2008, **UNESCO** recognised Vedic chanting as ‘a masterpiece of the oral and intangible heritage of humanity’.

The Vedic hymns were composed by rishis (male seers or sages) and rishikas (female ones) in an early form of the Sanskrit language. They were addressed in poetical form to many deities (gods or goddesses), such as Indra, Agni, Varuṇa, Mitra, Sarasvatī, Uṣhas, and many more. Together with the seers, these deities sustained *ṛitam*, or truth and order in human life and in the ‘**cosmos**’.

The early rishis and rishikas saw those gods and goddesses as one, not separate beings. As one famous hymn puts it,



ekam sat viprā bahudhā vadanti ...

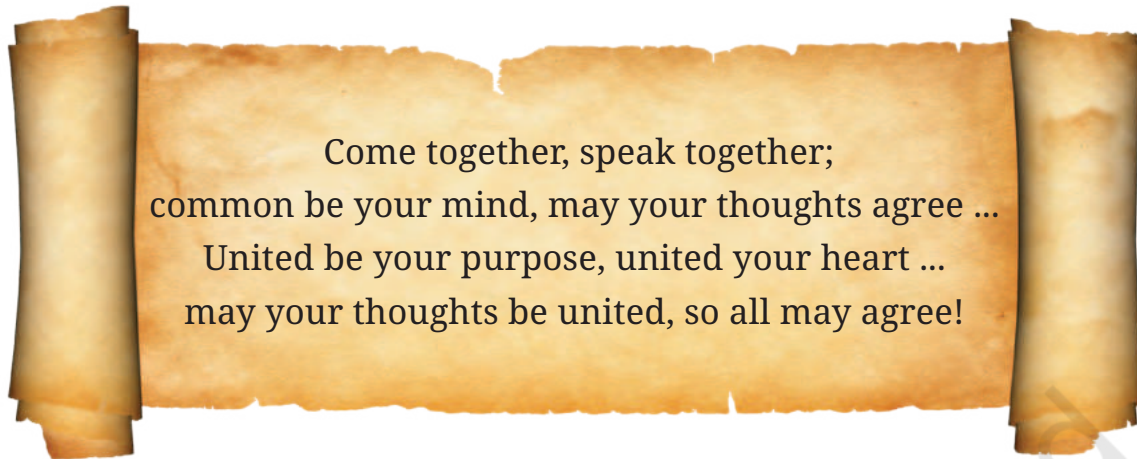
The Existent [that is, the supreme reality] is one,
but sages give it many names.

In this **worldview**, some values were especially important, beginning with ‘Truth’, which was often another name for God. The last mantras (verses) of the Ṛig Veda also call for unity among people:

UNESCO:
UNESCO stands for ‘United Nations Educational, Scientific and Cultural Organization’. It promotes dialogue between people and nations through education, science and culture.

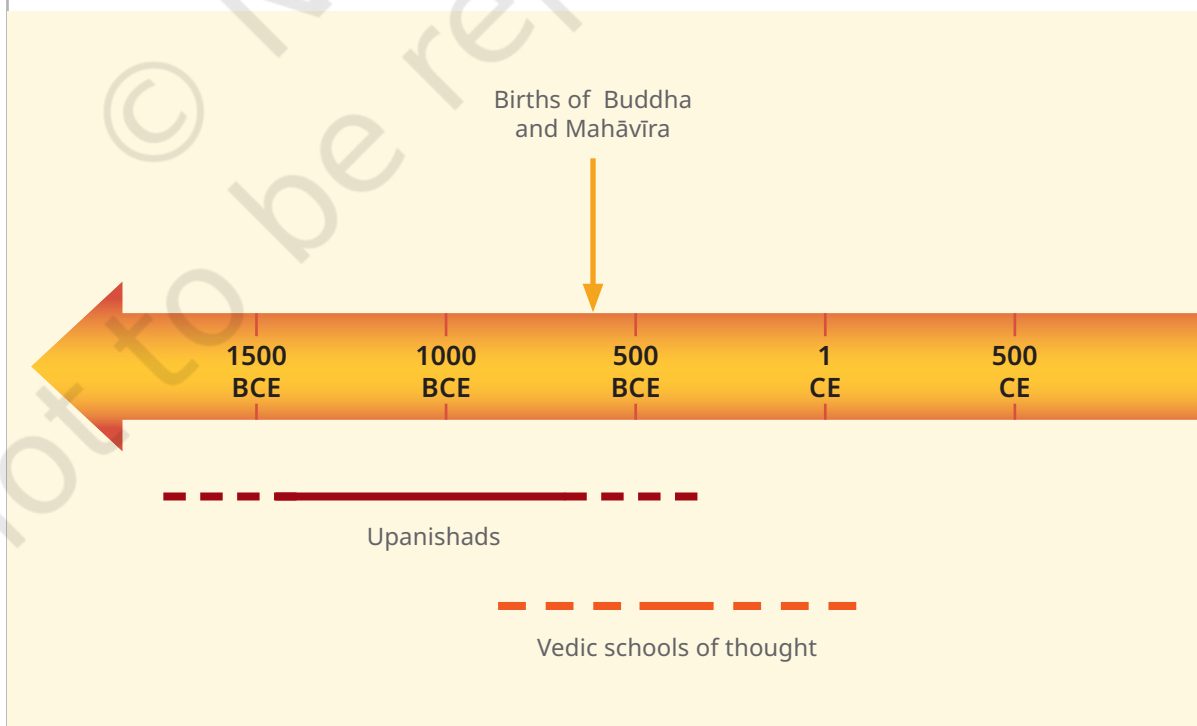
Cosmos:
The world or the universe as an ordered and harmonious system.

Worldview:
A certain view or understanding of the world, its origin, or its workings.



b. Vedic society

Early Vedic society was organised in different *janas* or ‘clans’, that is, larger groups of people. The Ṛig Veda alone lists over 30 such *janas* — for instance, the Bharatas, the Purus, the Kurus, the Yadus, the Turvaśhas etc. Each clan was associated with a particular region of the northwest part of the Subcontinent.



Not much is known of how these *janas* governed their society. The Vedas only give us a few clues through words like *rājā* (a king or ruler), *sabhā* and *samiti*, both of which refer to a collective gathering or assembly.

Many professions are mentioned in the Vedic texts, such as agriculturist, weaver, potter, builder, carpenter, **healer**, dancer, barber, priest, etc.

LET'S EXPLORE

Do you know the term for a society where people select their leaders? How do you think people can benefit from such a situation? What could happen if they live under leaders that they did not choose? (*Hint: Think back to what you're learning in the theme 'Governance and Democracy'!*) Write your thoughts in a paragraph of 100–150 words.

c. Vedic schools of thought

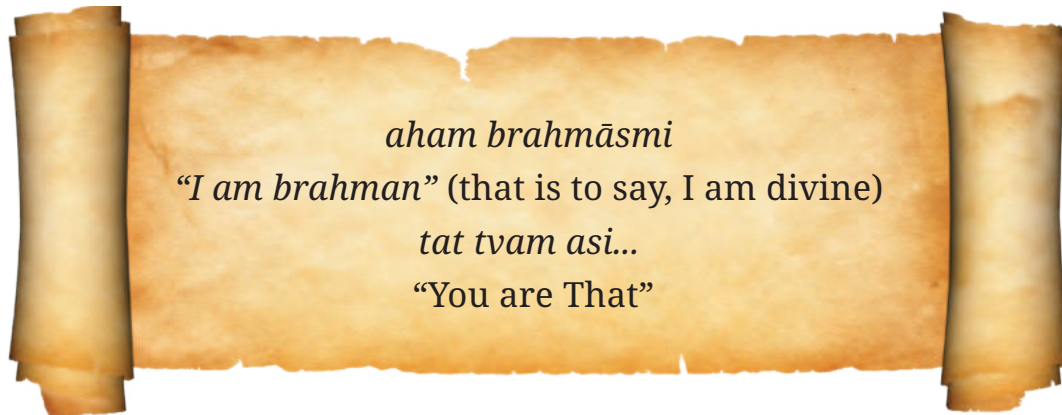
Vedic culture also developed many rituals (*yajña*, often read as 'yagya') directed towards various deities (gods or goddesses) for individual or collective benefit and wellbeing. Daily rituals were generally in the form of prayers and offerings to Agni, the deity associated with fire, but those rituals became more and more complex in the course of time.

A group of texts known as 'Upaniṣhads' built upon Vedic concepts and introduced new ones, such as rebirth (taking birth again and again) and karma (our actions or their results). According to one school of thought, generally known as 'Vedanta', everything — human life, nature and the universe — is one divine essence called *brahman* (not to be confused with the god Brahmā) or sometimes just *tat* ('that'). Two well-known mantras express this in a simple but profound way:

Healer:
Someone who uses traditional practices to relieve or heal diseases.



Consciousness:
The quality or state of being aware, for instance of something within oneself.



The Upaniṣhads also introduced the concept of *ātman* or Self — the divine essence that resides in every being but is ultimately one with *brahman*. It follows that everything in this world is connected and interdependent. This explains a common prayer that begins with *sarve bhavantu sukhinah*, or “May all creatures be happy”, and goes on to wish them all to be free from disease and sorrow.



THINK ABOUT IT

Have you heard or read any other story that conveyed an important message? What values did it teach you?

Early in the 1st millennium BCE, several more schools of thought grew out of the Vedas. One of them was Yoga, which developed methods intended to achieve the realisation of *brahman* in one’s **consciousness**. Together, these schools of thought became the foundations for what we call ‘Hinduism’ today.

Buddhism

Other schools of thought also emerged, which did not accept the authority of the Vedas and developed their own systems. One of them is Buddhism.

About two-and-a-half millenniums ago, a young prince named Siddhārtha Gautama was born in Lumbini (today in

Many stories from the Upaniṣhads tell us the importance of asking questions, whether these questions come from men, women or children.

Śhvetaketu and the seed of reality (*Chhāndogya Upaniṣhad*)

Rishi Uddālaka Āruṇi sent his son, Śhvetaketu, to a gurukula to learn the Vedas. When Śhvetaketu returned 12 years later, his father realised he had become very proud of his learning. So Uddālaka tested him with questions on the nature of *brahman*, which Śhvetaketu could not answer.



Uddālaka proceeded to explain how *brahman*, though invisible, is everywhere, just as the seed of a banyan fruit seems empty when you open it, but already contains the future banyan tree; or just as all kinds of different pots can be made out of the same clay. Similarly, everything around us has emerged from the same essence — *brahman*. He concluded his teaching with these words, “Everything consists of this subtle essence. ... You are That, Śhvetaketu.”

Nachiketa and his quest (*Katha Upaniṣhad*)

Once, a man was giving away all his possessions in a ritual. As his son Nachiketa kept asking him which god he would be offered to, the father became angry and answered, “I give you to Yama” — that is, to the god of death.

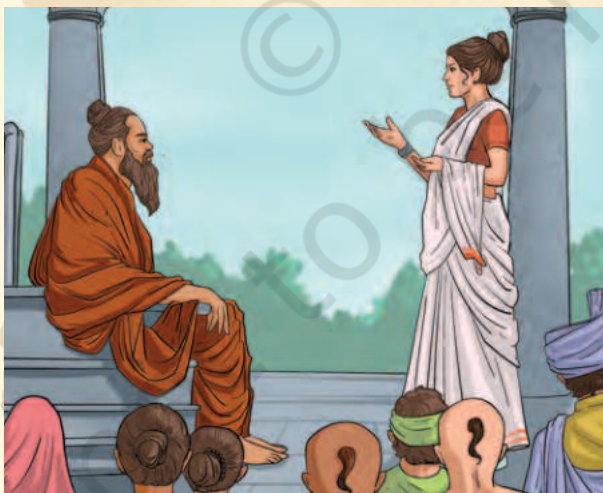
Nachiketa, then, proceeded to Yama’s world and, after a long wait, met the mighty god. One question was on his mind — “What

happens after the death of the body?” Yama tried to avoid answering, but the boy persisted. Pleased, Yama explained that the *ātman*, or self, is hidden within all creatures. It is neither born, nor does it die; it is immortal. Having acquired this profound knowledge, Nachiketa returned to his father, who welcomed him joyfully.



The debate of Gārgī and Yājñavalkya (*Bṛihadāranyaka Upaniṣhad*)

Once, the wise king Janaka announced a prize for the winner of a philosophical debate. Yājñavalkya, a renowned rishi, came to the king’s court and defeated many scholars until Gārgī, a rishika, asked him a series of questions on the nature of



the world, and finally on the nature of *brahman*. At that point, Yājñavalkya asked her to stop asking further questions. Later, however, Gārgī resumed her questions and Yājñavalkya went on to explain how *brahman* is what makes the world, the seasons, the rivers and everything else possible.

Nepal). Depending on the sources they use, scholars have come up with widely different conclusions as regards the precise year of his birth. In Chapter 4, we chose 560 BCE as an approximate year. In any case, it makes no difference to our story here.

As the story goes, then, Siddhārtha Gautama grew up living a protected life in the palace. One day, at the age of 29, he asked to be driven through the city in a chariot, and for the first time in his life came across an old man, a sick man, and a dead body. He also saw an **ascetic**, who appeared to be happy and at peace. Following this experience, Siddhārtha decided to give up his palace life, leaving behind his wife and son. Travelling on foot as an ascetic, meeting other ascetics and scholars, he searched for the root cause of suffering in human life. After meditating for many days under a pipal tree at Bodh Gaya (today in Bihar), he attained enlightenment; he realised that *avidyā* (ignorance) and **attachment** are the source of human suffering and conceived a method to remove these two causes.

Siddhārtha, then, became known as the ‘Buddha’, which means the ‘enlightened’ or ‘awakened’ one.

The Buddha started teaching what he had realised, including the idea of ahimsa, which is generally translated as ‘non-violence’, but originally means ‘non-hurting’ or ‘non-injuring’. He also insisted on a sincere inner discipline. The following saying of his expresses this simply:



Ascetic:
Someone who engages in a rigorous discipline to attain a higher consciousness.

Attachment:
The condition of having a bond with someone or something, usually through sentiment or habit.

Monk:
A man who, giving up the usual life in the world, dedicates himself to religious or spiritual pursuits. A monk usually takes vows, that is, commits himself to follow strict rules for a disciplined life.

Nun:
The female equivalent of a monk.

“Not by water is one made pure, though many people may bathe here [in sacred rivers]. But one is pure in whom truth and dharma reside.

Conquering oneself is greater than conquering a thousand men on the battlefield a thousand times.”

The Buddha founded the Sangha, a community of *bhikṣhus* or **monks** (and, later, *bhikṣhunīs* or **nuns**) who dedicated themselves to practising and spreading his teachings. His influence on India, and indeed the whole of Asia, was enormous, as we will discover later; it is still perceptible today.



This stone panel, some 1,800 years old, shows the Buddha teaching.

LET'S EXPLORE

- Discuss the way the Buddha is depicted in the above panel.
- Can you name some states of India or some other countries where Buddhism is a major religion even today? Try to plot these on a world map.



Jainism

Jainism is another important school of thought that became widespread at the same time, although its roots are said to be much more ancient. Just like Siddhārtha Gautama, Prince Vardhamāna was born into a royal family in the early 6th century BCE. His birthplace was near the city of Vaiśhālī, in modern-day Bihar. At the age of 30, he decided to leave his home and go in search of spiritual knowledge. He practised an ascetic discipline and, after 12 years, achieved 'infinite knowledge' or supreme wisdom. He became known as 'Mahāvīra', or 'great hero', and started preaching what he had realised.



A traditional painting of Mahāvīra

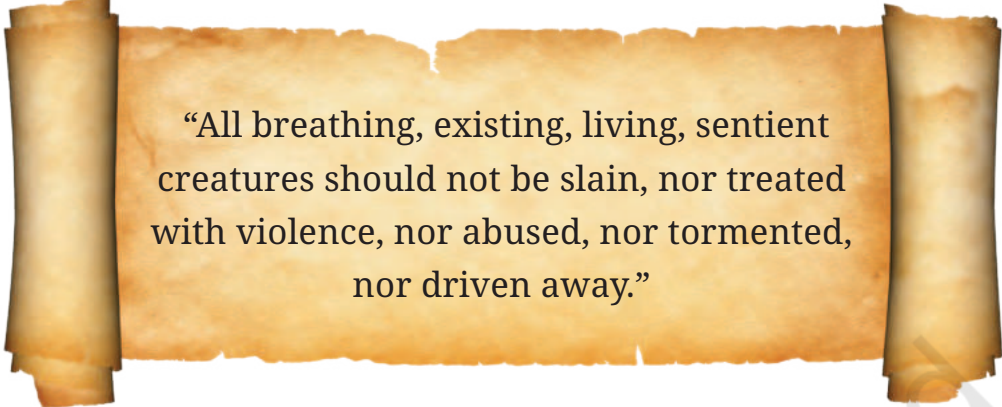


DON'T MISS OUT

The word 'Jain' or *jaina* comes from *jina*, meaning 'conqueror'. This does not refer to the conquest of territory or enemies, but to the conquest of ignorance and attachments, so as to reach enlightenment.

Jain teachings include ahimsa, *anekāntavāda* and *aparigraha*. These ideas, shared to a large extent with Buddhism and the Vedantic school of thought, are central

to Indian culture. The first may be illustrated by this saying of Mahāvīra:

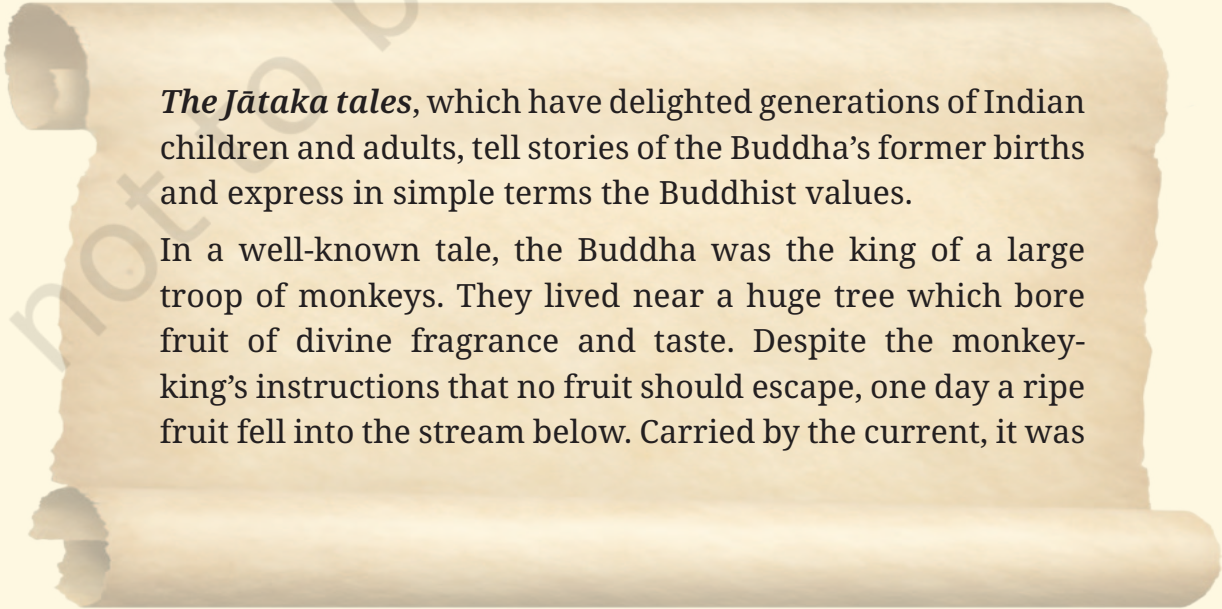


“All breathing, existing, living, sentient creatures should not be slain, nor treated with violence, nor abused, nor tormented, nor driven away.”

Let us define the last two in simple terms:

- *Anekāntavāda* means ‘not just one’ aspect or perspective. That is, the truth has many aspects and cannot be fully described by any single statement.
- *Aparigraha* means ‘non-possession’ and advises detachment from material possessions, limiting oneself to what is truly necessary in life.

Jainism also insists on the interconnectedness and interdependence of all creatures, from humans to invisible organisms, as they support each other and cannot live without one another. Scientists studying nature, flora and fauna, have again and again confirmed this deep truth.



The Jātaka tales, which have delighted generations of Indian children and adults, tell stories of the Buddha’s former births and express in simple terms the Buddhist values.

In a well-known tale, the Buddha was the king of a large troop of monkeys. They lived near a huge tree which bore fruit of divine fragrance and taste. Despite the monkey-king’s instructions that no fruit should escape, one day a ripe fruit fell into the stream below. Carried by the current, it was

caught in a net and taken to the palace. The king was so enchanted by its taste that he ordered his soldiers to locate the tree it came from.

After a long search, they found the tree — and the monkeys enjoying the tree's fruits. The soldiers attacked the monkeys. The only way for the monkey-king to save his monkeys was to help them cross the stream, but they could not do so on their own. Being much larger than them, the monkey-king caught hold of a tree on the other bank and let them use his body as a bridge to cross the stream, although he was severely bruised in the process and eventually died.

The king, who watched the scene from a distance, was greatly moved by the monkey-king's selfless sacrifice. He thought about the role of a king with respect to his subjects.



A stone panel (at Bharhut in Madhya Pradesh) depicting the story of the monkey-king

A Jain story

Rohineya was an extraordinarily skilled burglar who evaded all attempts to catch him. On his way to a city, he accidentally heard a few sentences from a sermon that Mahāvīra was giving about achieving liberation from the ordinary life of ignorance. Reaching the city, Rohineya was recognised and arrested. He pretended to be a simple farmer. A minister devised a clever plan to force him to confess his identity. But Rohineya, remembering Mahāvīra's words, was able to detect the minister's plan and defeat it.

Feeling remorseful, Rohineya approached Mahāvīra, confessed his crimes, returned the stolen treasures, and asked for forgiveness. He became a monk, realised the illusion he was living in and focused on acquiring higher knowledge.

The story illustrates the importance of right action and right thinking, and also illustrates the fact that everyone should have a second chance.



LET'S EXPLORE

Observe the above panel (from a Jain temple in New Delhi). What is striking about it? What messages does it carry?

THINK ABOUT IT

In both Buddhism and Jainism, ahimsa means much more than refraining from physical violence against a person or an animal. It also means refraining from violence in thought, such as having ill feelings towards anyone. If we observe ourselves carefully, we may notice such negative thoughts and learn to turn them into positive ones. Sometimes such negative thoughts are even directed at ourselves!

In both Buddhism and Jainism, monks, and sometimes nuns too, began travelling across the land to spread their respective teachings far and wide. Some of them created new monasteries in faraway places, while others led ascetic lives in caves cut in the rock. Archaeological findings have revealed many traces of those monasteries, sometimes even the names of the monks who lived in the rock-cut caves and slept on the stone beds!



Caves cut into the rock at Ellora (Maharashtra) between the 6th and the 10th centuries CE. Some of the caves are Hindu, others are Buddhist and Jain.



THINK ABOUT IT

In English, Hinduism, Buddhism, Jainism and Sikhism are often labelled ‘religions’. You may notice that we have avoided this term, preferring ‘schools of thought’ and (later in this chapter) ‘belief systems’. This is because there are many aspects to those schools and systems, which we will explore gradually — a philosophical aspect, a spiritual aspect, a religious aspect, an ethical aspect, a social aspect, to name a few. Many scholars agree that the word ‘religion’ is too limiting in the context of the Indian civilisation.

There were yet other schools of thought at the time. For example, one of them, known as the ‘Chārvāka’ school (sometimes also ‘Lokāyata’), believed that this material world is the only thing that exists, and therefore there can be no life after death. This school does not seem to have gained much popularity and it disappeared with time. We mention it to show that there was a wide diversity of intellectual or spiritual belief systems; people were free to choose what suited them.

Although the Vedic, Buddhist and Jain schools had important differences, they also shared some common concepts, such as dharma, karma, rebirth, the search for an end to suffering and ignorance, and many important values. This is the ‘trunk’ of the tree we started this chapter with.

Folk and Tribal Roots

The cultural roots we have seen so far are well documented in many texts. India has also had rich ‘oral traditions’, that is, teachings or practices transmitted through everyday practice, without written texts (this is the case of the Vedas). Among them are numerous folk traditions, that is, transmitted by common people, and tribal traditions, transmitted by tribes.

What is a tribe?

There are many definitions for this social entity. Today, anthropologists usually consider a tribe to be a group of families or clans sharing a tradition of common descent, a culture and a language, living as a close-knit community under a chief and holding no private property.

Interestingly, ancient India did not have a word for ‘tribe’ — tribes were just different *janas* that lived in a specific environment, such as forests or mountains. The Constitution of India uses the terms ‘tribes’ and ‘tribal communities’ in English, and *janjāti* in Hindi.

According to official figures, in 2011 India had 705 tribes spread over most States, amounting to a population of about 104 million people — more than the populations of Australia and the United Kingdom together!

In the 19th century, anthropologists studying tribes often described them as ‘primitive’ or ‘inferior’ to civilised people. With deeper studies of tribal communities and their rich and complex cultures, such biased judgments have been mostly abandoned.

There has been a constant interaction between folk and tribal traditions, and the leading schools of thought such as those we mentioned in this chapter. Deities, concepts, legends and rituals have been freely exchanged in both directions. For instance, according to tradition, Jagannath, worshipped at Puri (Odisha), was originally a tribal deity; this is also the case with various forms of the mother-goddess worshipped across India. Some tribes, on the other hand, adopted Hindu deities long ago, and possess their own versions of the Mahābhārata and the Rāmāyaṇa — this has been well documented from India's northeastern States, all the way to Tamil Nadu.



How have such interactions taken place for so long and so naturally? It is, in the end, because folk, tribal and Hindu belief systems have many similar concepts. For instance, in all three, elements of nature such as mountains, rivers, trees, plants and animals, and some stones too, are regarded as sacred, because there is consciousness behind all of them. Indeed, tribes generally worship many deities associated with those natural elements. For the Toda tribals of the Nilgiris of Tamil Nadu, for instance (one of them is pictured in the image on the right), over thirty peaks of this mountain range are residences of a god or a goddess; those peaks are so sacred that the Todas avoid pointing to them with a finger.



But despite this multiplicity of deities, as with Hinduism, many tribal groups have a concept of a higher divinity or supreme being. For example, several tribes of Arunachal Pradesh worship Donyipolo, a combined form of the Sun and

the Moon who later rose to the higher status of a supreme god. This is also the case of the god Khandoba in parts of central India. In eastern India, the Munda and Santhal tribals, among others, worship Singbonga, a supreme deity who created this whole world. There are many more such examples.

The Indian sociologist André Beteille summed up this situation in these words:

“

“The thousands of castes and tribes on the Indian subcontinent have influenced each other in their religious beliefs and practices since the beginning of history and before. That the tribal religions have been influenced by Hinduism is widely accepted, but it is equally true that Hinduism, not only in its formative phase but throughout its evolution, has been influenced by tribal religions.”

Clearly, the result of this long interaction has been mutual enrichment. In this manner, folk and tribal beliefs and practices also count among India’s cultural roots. We will further develop this point in the next chapter.



Before we move on ...

- The Vedas, India’s earliest texts, gave rise to several schools of thought. Vedanta and Yoga are among the best known.
- Buddhism and Jainism departed from the authority of the Vedas and laid emphasis on some specific values and practices.
- Although these schools had different principles and methods, they also shared some important concepts; they were all looking for the cause of suffering and the means of removing ignorance.
- Tribal belief systems and art have interacted for millenniums with Hinduism. There was free borrowing and giving from every side. Tribal belief systems generally regard the land and its features as sacred; they often have, at the same time, a higher concept of divinity.

Questions, activities and projects

1. If you were Nachiketa, what questions would you like to ask Yama? Write them down in 100-150 words.
2. Explain a few central ideas of Buddhism. Briefly comment upon them.
3. Discuss in class the quotation of the Buddha which begins with “Not by water is one made pure, though many people may bathe here [in sacred rivers]” to make sure that its meaning has been understood by all.
4. Explain a few central ideas of Jainism. Briefly comment upon them.
5. Consider and discuss in class André Beteille’s thought (see page 122).
6. Make a list of popular gods and goddesses in your region and the festivals they are associated with.
7. As a class activity, list two or three tribal groups from your region or State. Document some of their art and belief systems.

True or false

1. The Vedic hymns were written on palm-leaf manuscripts.
2. The Vedas are India’s oldest texts.
3. The Vedic statement *ekam sat viprā bahudhā vadanti* reflects a belief in the unity of cosmic powers.
4. Buddhism is older than the Vedas.
5. Jainism emerged as a branch of Buddhism.
6. Both Buddhism and Jainism advocated for peaceful coexistence and the avoidance of harm to all living beings.
7. Tribal belief systems are limited to belief in spirits and minor deities.

Class activity

1. Stage a small play with Yama, god of death, surrounded by several Nachiketas asking him questions about life.



The banyan tree is an apt illustration for the themes in Chapters 7 and 8, and a fine symbol for Indian civilisation. With its deep root system, massive trunk and branches spreading in all directions, it can extend to a vast area and last for many centuries. It shelters a variety of flora and fauna and encourages its branches, though united at the trunk, to throw fresh roots of their own. Indeed, Hinduism, Buddhism and Jainism regard the banyan tree as sacred.

Unity in Diversity, or 'Many in the One'

Oh, grant me my prayer, that I may never lose the bliss of the touch of the one in the play of the many.

— Rabindranath Tagore

... The principle of unity in diversity which has always been normal to [India] and its fulfilment the fundamental course of her being and its very nature, the Many in the One, would place her on the sure foundation of her Swabhava and Swadharma.

— Sri Aurobindo



The Big Questions ?

1. What is meant by 'unity in diversity' in the Indian scenario?
2. What aspects of India's diversity are the most striking?
3. How do we make out the unity underlying the diversity?




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A Rich Diversity

If you travel through India by train, you will notice not only changing landscapes but also many different types of dresses and food; you will hear different languages, familiar and unfamiliar, and see different scripts on the way. Even within your own region, you will often come across people from other parts of India with different customs and traditions. This is India's rich diversity, and it is usually the first thing that strikes visitors to our country.


With over 1.4 billion inhabitants (about 18 percent of the world's population), such diversity is not surprising! In the late 20th century, the Anthropological Survey of India, a national organisation, conducted a massive survey called 'People of India project' of 4,635 communities across all States of the country. It counted 325 languages using 25 scripts; it also observed that many Indians may be called migrants, in the sense of people not living near their birthplace or with their original community.

LET'S EXPLORE



As a class activity, make lists of (1) the birthplaces of at least 5 classmates and the birthplaces of their parents; (2) the students' mother tongues and other languages known to them. Discuss the results in terms of diversity.

While diversity is indeed beautiful, making sense of it is not so easy. Over a century ago, the British historian Vincent Smith wondered,



“How, in the face of such bewildering diversity, can a history of India be written? ... The answer to the query is found in the fact that India offers **unity in diversity**.”

What is meant by 'unity in diversity'? How shall we perceive and express this unity, or the 'Many in the One'? To answer this question, we will explore a few dimensions of Indian life.

Food for All

Some of you will have eaten food from different regions of India. The number of different dishes and preparations you can taste in India must be in their thousands, if not lakhs! Yet certain food grains are common to almost every part of the country — cereals such as rice, barley and wheat; millets such as pearl millet (bajra), sorghum (jowar), finger millet (ragi); and pulses such as various kinds of dals and

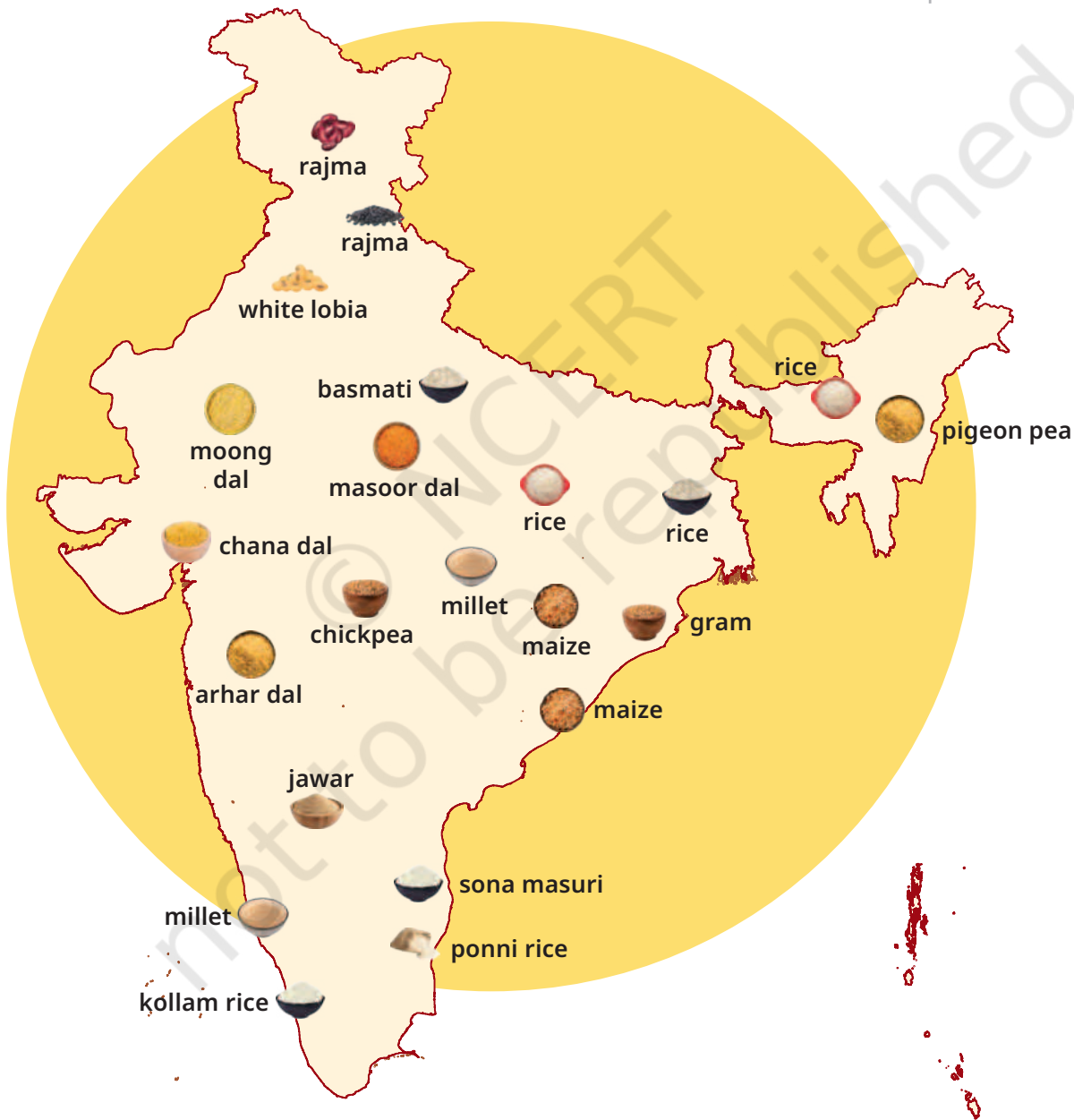


Fig. 8.1. A few examples of cereals and pulses from different regions of India

grams. All these are called ‘staple grains’ because they are the basic food for most Indians (Fig. 8.1 on page 127). Similarly, some common spices such as turmeric, cumin, cardamom and ginger, are also used throughout the country. We could continue this list with some common vegetables, common oils etc.

So we see how the same ingredients (*unity*) can be used in a number of combinations (*diversity*) to prepare an endless variety of dishes!

LET'S EXPLORE



- As a class activity, make a list of ingredients (grains, spices, etc.) that are used in your home.
- Take any one vegetable and think of the number of different dishes you can prepare with it.

Textiles and Clothing



Fig. 8.2. Stone relief of a woman in a sari from Vaiśhali (today in Bihar)

Every region and community in India has developed its own styles of clothing and dresses. Yet, we notice a commonality in some traditional Indian dresses, irrespective of the material used. An obvious example is the plain length of cloth called the sari, a type of clothing worn in most parts of India and made from different fabrics — mostly cotton or silk, but nowadays synthetic fabrics too. Banarasi, Kanjivaram, Paithani, Patan Patola, Muga or Mysore are some of the famous types of silk saris. There are many more kinds of cotton saris. Altogether, this unstitched piece of cloth comes in hundreds of varieties. They are

produced by different methods of weaving (Fig. 8.3 on the right) and designing. Some designs are part of the cloth, while others are printed after the cloth is woven. Finally, there are endless variations in the colours, which are produced from many kinds of pigments.

The sari has a long history. This stone **relief** (Fig. 8.2 on page 128) from Vaiśhali (today in Bihar) goes back a few centuries BCE.

LET'S EXPLORE

Explain how the example of the sari reflects both unity and diversity (in 100-150 words).



Fig. 8.3. A few specimens of colourful traditional Indian textiles.



DON'T MISS OUT

For a very long time, India produced the finest cotton in the world and Indian textiles were exported as far away as Europe. One beautiful type of printed cotton called 'chintz' became so popular in 17th-century Europe that the sale of some European dresses dropped sharply. Eventually, to protect their own products, England and France decided to ban the import of chintz from India!

There are many ways of wearing the sari, as they vary from one region to another or from one community to another. In fact, new ways of draping it are still being invented. But in the end, it is a single dress — the sari. In past centuries,

Relief:
A design that stands out from the surface of a panel (which may be of stone, wood, ceramic or another material).



Fig. 8.4. Women often put the sari to many uses beyond that of a dress (pictures from south India).



several travellers to India marvelled at its simplicity, economy, and the diverse ways in which it is worn. In addition, women often put the sari to many uses beyond that of a dress; the six pictures in Fig. 8.4 above illustrate a few such creative uses.

LET'S EXPLORE

- In the above pictures, can you recognise what a sari has been used for?
- Are you aware of, or can you imagine, more uses for the sari?



→ Following the example of the sari, make a list of different styles you have seen for the dhoti — both as regards the fabric and the uses the dhoti can be put to. What conclusion can you draw?

Festivals Galore

There is an immense variety of festivals in India. You may have noticed that a few common ones are celebrated across India almost at the same time, though they have different names. We will take just one example — Makara Sankrānti, which marks the beginning of the harvest season in many

parts of India on or around January 14. The map shows the different names of similar festivals across India about the same date.



Fig. 8.5. Different names of similar festivals across India about the same date

LET'S EXPLORE

→ What is your favourite festival and how is it celebrated in your region? Do you know whether it is celebrated in any other part of India, maybe under a different name?

→ During October–November, many major festivals take place in India. Make a list of the few main ones and their various names in different parts of the country.

An Epic Spread

Literature offers us another fine illustration of unity in diversity. Indian literatures are extremely diverse (and among the most abundant in the world). Over centuries, despite differences in language, technique, etc., they have shared important themes and concerns. Who has not heard of the *Pañchatantra*, for example? This collection of delightful stories, with animals as the main characters, teaches us important life skills. The original Sanskrit text is at least 2,200 years old, but its stories have been adapted in almost every Indian language. In fact, they have travelled well beyond India, all the way to Southeast Asia, the Arab world and Europe, inspiring new collections of stories on the way — it is estimated that about 200 adaptations of the *Pañchatantra* exist in more than 50 languages! This illustrates how ‘one’ collection of stories has become ‘many’. The most striking case, however, is that of India’s two **epics** — the *Rāmāyaṇa* and the *Mahābhārata*.

These two long Sanskrit poems, which together might fill some 7,000 pages in their original versions, narrate the stories of heroes who fight to re-establish dharma. In the *Mahābhārata*, the Pāṇḍavas, with Kṛiṣhṇa’s help, fight their own cousins, the Kauravas, to recover their kingdom. In the *Rāmāyaṇa*, Rāma, with the help of his brother Lakṣhmaṇa and of Hanuman, defeats the demon Rāvaṇa, who had kidnapped his wife Sītā. These stories contain many shorter ones that focus on values, and constantly ask questions about what is right and what is wrong.

Epic:
A long poem generally narrating the adventures of heroes and other great figures of the past.



Fig. 8.6. A painting depicting a major episode from the Rāmāyaṇa (18th century, Himachal Pradesh)

LET'S EXPLORE

In a class discussion, try to identify the episode depicted in the painting shown in Fig. 8.6 above and important details associated with it.

For more than two millennia, these two epics have been translated or adapted into regional literatures in India and beyond. In addition, there are countless folk versions of them. A few years ago, a scholar conducted a survey in Tamil Nadu alone and counted “about a hundred versions [of the Mahābhārata] that have come down to us in folklore forms.” Imagine what the number might be for the whole of India!

In fact, many communities have their own versions of the Rāmāyaṇa and the Mahābhārata. They have also preserved legends connecting their own history with these epics. This is especially true of tribal communities in many parts of

India, such as the Bhils, the Gonds, the Mundas and many more. Most tribes of India's northeast and Himalayan regions, including Kashmir, have had their own version of one or the other of the two epics, or both. These tribal adaptations are transmitted orally, along with legends on how the heroes of the Rāmāyaṇa and the Mahābhārata (generally any or all of the five Pāṇḍavas, their wife Draupadī, but also sometimes their cousin and adversary Duryodhana) visited the tribes' respective regions.

The anthropologist K.S. Singh directed the 'People of India' project we referred to earlier (see page 126). In the case of the Mahābhārata, he observed, "There is hardly a place in the country which the epic heroes such as the Pandavas, did not visit according to folklores." And the same may be said of the Rāmāyaṇa. Over the centuries, perhaps more than any other texts, these two epics created a dense web of cultural interactions across India and many parts of Asia. Another example of unity in diversity.

To further illustrate the theme of this chapter, we could have continued our journey and turned to more facets of Indian culture. For instance, in India's classical arts, including classical architecture, both diversity and unity are easily noticeable. (You will study these fields through the Art Curricular Area.)

In the end, we should remember that Indian culture celebrates diversity as an enrichment, but never loses sight of the underlying unity which nourishes that diversity.



Fig. 8.7. 'Pañcha Pāṇḍavar', a carved stone in a forest of the Nilgiris, Tamil Nadu, depicting the five Pāṇḍava brothers. The shrine containing this stone is maintained by Irula tribals to commemorate the Pāṇḍavas' passing through the area.



Before we move on ...

- India offers immense diversity in its landscapes, people, languages, dresses, foods, festivals and customs.
- Diversity is easy to perceive in many fields, but there is also an underlying unity.
- India's unity celebrates diversity because diversity does not divide — it enriches.

Questions, activities and projects

1. Conduct a class discussion on the two quotations at the start of the chapter.
2. Read the National Anthem and its translation in the preliminary pages of this textbook. Where do you see the diversity? And where the unity? Write two or three paragraphs on this.
3. Select a few stories from the *Pañchatantra* and discuss how their message is still valid today. Do you know of any similar stories from your region?
4. Collect a few folk tales from your region and discuss their message.
5. Is there any ancient story that you have seen being depicted through a form of art? It could be a sculpture, a painting, a dance performance, a movie ... Discuss with your classmates.
6. Discuss in class the following quotation by India's first prime minister, Jawaharlal Nehru, when he travelled to many parts of India before Independence:

“Everywhere I found a cultural background which had exerted a powerful influence on their lives. ... The old epics of India, the Ramayana and the Mahabharata and other books, in popular translations and paraphrases, were widely known among the masses, and every incident and story and moral in them was engraved on the popular mind and gave a richness and content to it. Illiterate villagers would know hundreds of verses by heart and their conversation would be full of references to them or to some story with a moral, enshrined in some old classic.”

Family and Community

Love and dharma are the flower and fruit of family life.

— Tiruvalluvar

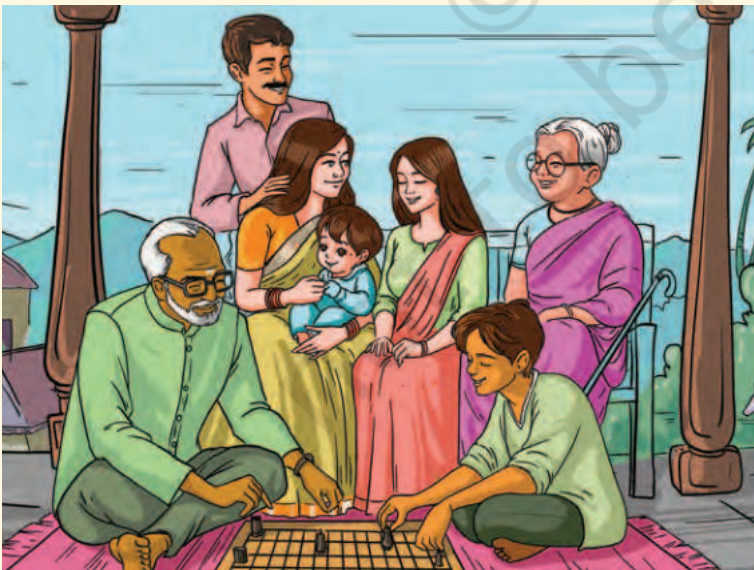
The Big Questions ?

1. Why is the family unit important?
2. What is a community and what is its role?

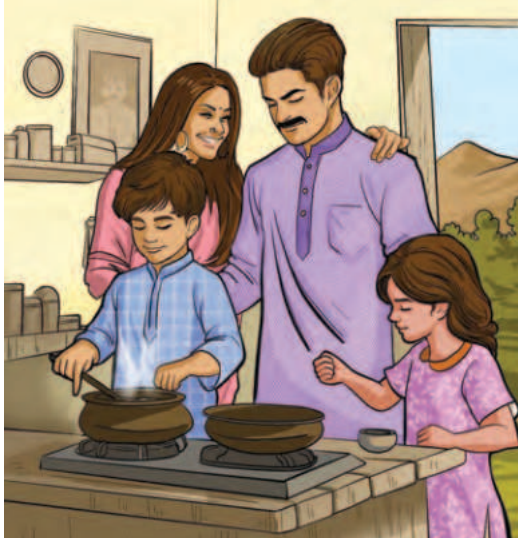


Family

Almost all of us live in a family. The family is the fundamental and most ancient unit of any society. In Indian society today, there are several types of families — from joint families to nuclear families. A joint family has several generations living together — grandparents, parents, uncles and aunts,



Examples of joint families



Examples of nuclear families

brothers, sisters and cousins. A nuclear family, on the other hand, is limited to a couple and their children, and sometimes one parent and children.

LET'S EXPLORE

- What types of families do you see in your neighbourhood? List the type with the number of households for each type.
- What types are more frequent? Why do you think this is so?
- As a class activity, compare with your classmates' findings and discuss.

In English, there are not many terms to describe family relationships; we saw some of them in the first paragraph. Indian languages have many more terms. For example, in Hindi there is *bu*, *tau*, *tai*, *chacha*, *mausi*, *nana*, *nani*, and many more. Some languages, such as Tamil, also have different terms for elder brother / sister or younger brother / sister. But what is the word for 'cousin' in an Indian language? In most Indian languages, you will find that there is no such word! That is because cousins are only 'brothers' and 'sisters'. This emphasises the deep bonds among all the children in the family.

LET'S EXPLORE

- Make a list of all the members of your family you can think of, including a few distant relatives. List their terms in your mother tongue or regional language and try to find the equivalent in English. Two examples are below for Hindi:

Name	Term in Hindi	Description / term in English
Rani	बहन	mother's brother's daughter (cousin) (among other possible meanings)
Sameer	चाचा	father's younger brother (uncle)

- Notice how, quite often, a single word in your mother tongue or regional language requires several words in English to give a precise definition.

Roles and Responsibilities

Relationships among family members are based on love, care, cooperation and interdependence. 'Cooperation' means 'working together'. Each member of the family has a role and responsibility towards other members. For instance, parents are responsible for raising their children to become happy individuals and responsible members of the society. But also, as children grow up, they take on more responsibilities in the home to help other family members — whether parents or a sister or a brother, etc. Through daily practice, children learn to participate in the life of the household. In many homes, children also learn some of the traditions and practices their family has been following for generations.



LET'S EXPLORE



Answer these questions and compare your answers with a few classmates:

- Who in your family decides what is to be bought from the market?
- Who cooks food in your home?
- Who is the oldest person in your family?
- Who cleans the floor in your home?
- Who washes utensils in your house?
- Who helps you to do your homework?

Following our dharma, or doing our duty, has been an important principle of Indian culture. The family is also a 'school', where children learn important values such as ahimsa, *dāna* (giving), *sevā* (service) and *tyāga* (sacrifice). Individuals in the family often give up their own needs to take care of the family's needs.

Let us see one such story.



Shalini lives with her family in a town in Kerala. Her father runs a small business and her mother is a teacher in a nearby school. Shalini has a younger brother. Her grandmother, Acchamma

(father's mother), Chittappa (father's brother or paternal uncle) and her Chitti (aunt or uncle's wife) live with them. They have a daughter, Shalini's cousin, who she calls Chinni. Shalini's uncle has just lost his job and her aunt is a homemaker. The whole family was preparing for the festival of Onam. Acchamma told Shalini's father that his brother was having financial difficulties, so they were not able to buy new clothes for the festival. When Shalini's parents took her and her brother shopping, they bought new clothes not only for themselves, but also for Chittappa, Chitti and Chinni. As a result, Shalini did not get the silk dress she had expected; she had to settle for a simple cotton one. Acchamma explained to Shalini that this is how families support each other and share what they have. Shalini did not mind her simpler dress. She was happy that everyone could get some new clothes.



LET'S EXPLORE

- Draw a simple tree of this family of seven members.
- Why do you think Shalini's parents bought clothes for everyone?
- What would you have done if you were in Shalini's place?

That story was set in Kerala. Let us now travel northeast, to a village in Meghalaya.

My name is Tenzing. I love the mountains we live in, though life is sometimes hard. My father runs a small grocery store. After my mother became busy in a local handicraft cooperative, making our beautiful traditional fabrics, wood carvings and other items for sale to tourists, my father joined in cleaning the house, taking care of our small vegetable garden





and other household chores. Often, he helps my grandmother prepare food for us all.

Grandmother always has all sorts of interesting stories to tell me, with humour and wisdom; no one seems to understand people better than her! Grandfather helps me with my homework and takes me to the school bus stop. He is also actively involved in social work in our colony and is always offering his help to others. For example, when there is a power failure in our area, he goes and registers a complaint at the nearby office. When our neighbours' house got damaged in a storm, he collected some money from the whole neighbourhood to help with repairs.

We are lucky that my parents can take care of our basic necessities like food and clothing. When any special expenses come up, I have often seen that they discuss them together. Mother says that we should always try to save some money for any unexpected needs that may arise in the future.



THINK ABOUT IT

- ◆ Why does Tenzing's father consult his wife for special expenses?
- ◆ How do you feel about his participation in household chores?
- ◆ What roles do the grandparents fulfil?

LET'S EXPLORE

- Create a story of a family somewhere in India, where we see some family values practised. Share it with your class either through writing or drawing.
- Stage a small drama with all your classmates around two or three families. The play you write could include some challenging situations that the families faced, and show how they are resolved.
- In the stories of Shalini and Tenzing, we see examples of joint families. What do you think are the aspects of modern living that make some couples opt for a nuclear family (i.e., living apart from older generations or other relatives)? What could be some advantages as well as disadvantages of the two kinds of families?



Community

Families are connected not only within themselves, but also with other families and the people around them. Such a group of connected people may be called a 'community' (there are other meanings for 'community', depending on the context). Members of a community come together for various reasons, like celebrating festivals and organising feasts, weddings and other events. In some villages, people come together to support each other with agricultural practices like land preparation, sowing and harvesting. Over time, communities often agreed upon some practices on the use of shared natural wealth and resources such as water, grazing lands and forest produce. This is the case with many tribal communities. To some extent, this remains the case in village communities in rural India today. Such practices — we may call them 'rules', though they were rarely written down — have provided communities a secure access to resources. But it also means that all families and

individuals within the community have specific duties to perform. Otherwise, the community will not function smoothly.

DON'T MISS OUT

- ◇ Year after year, the region around the town of Jhabua, in Madhya Pradesh, suffered from an acute water crisis. Following their *halma* (see facing page) tradition of coming together to support any individual or family in times of crisis, the Bhil community decided to plant thousands of trees in hundreds of villages. The Bhils also dug many trenches to conserve rainwater and created other water harvesting structures. They did not get paid for this work but did it as their duty towards their community and the environment. In the *halma* tradition, the objective is to serve Mother Earth. In 2019, Shri Mahesh Sharma of the Shivganga movement was honoured with the Padma Shri award for his transformational work with the Bhil communities.
- ◇ During the Chennai floods of 2015, roads turned to rivers and people could no longer move around. Almost all shops were closed and services interrupted. Many private groups, in particular spiritual and religious organisations, cooked large quantities of food and distributed it to people who needed it.
- ◇ There are many more such examples of people coming together to do something for the benefit of the community without expecting anything in return. Have you heard of any?

The real-life stories above illustrate community in a rural context. Community is also present in an urban context, although it may function a little differently. Let us see an example from another real-life story.



हाला



More than 20 years ago, in an area of Ahmedabad (Gujarat), Kamal Parmar, owner of a small auto-fabrication workshop, noticed a group of underprivileged children on the street. Some had dropped out of school, while others had never been to school. Kamal started giving them tuition from 5:30 to 9:30 pm every day, after his regular work hours. He also provided the kids with a free dinner. Soon, 150 children were attending those classes regularly and were deeply interested in the lessons!

A few teachers from a local school noticed the classes and joined the teaching for a while. One of them observed, “These children don’t get proper benches to sit on, have no ‘silence zone’ classrooms and the vehicles passing by make lots of noise, yet they pay all their attention to what the teachers tell them. This touched my heart. The love and affection I got from them was unbelievable.” Some older children who were attending regular schools also joined as volunteers to teach in Kamal’s classes. One of them remarked, “We went there to teach, instead we learnt a lot from them.”



- Discuss this story in your class. What kind of attitude towards the community does it reveal?
- What values get reflected in Kamal Parmar’s initiative?
- Think about those underprivileged children. Do you think society has been unfair to them?

- What should society do to make sure that all children get access to education?

New types of communities have also emerged in the last 30 or 40 years. Residents' Welfare Associations in many urban areas are examples of communities that make their own rules and regulations. Those could be rules about waste management, cleanliness of common areas, taking care of pets, and so on. People living in the community participate in making such rules and regulations.

Communities are ultimately interdependent. The same Residents' Welfare Associations, for instance, will depend on the trading community for supplies and also on municipal workers to handle waste. In our complex societies, everyone depends on a number of other people and communities.



LET'S EXPLORE

Make a list of all people outside your family that are supporting you through their work in one way or another.

We now understand that 'community' is a flexible concept. A few more examples:

- A *jāti*, or a subdivision of it, is also often called a community.



- A group of people of a particular religion, region, common work or interest, especially a smaller group, may also be called a community; for instance, ‘Mumbai’s Parsi community’, ‘Chennai’s Sikh community’, ‘America’s Indian community’, ‘Kerala’s scientific community’, ‘our school’s art community’, ‘the village’s farming community’, and so on... The list is endless!
- In your school, you may be part of different communities — your class, of course, but also the sports community, the National Service Scheme, the National Cadet Corps, a science or drama club, etc.



LET'S EXPLORE

- What types of communities are you part of?
- Is there a club that you are a part of in school? How does it function?



Before we move on ...

- Family is the foundation of human society. Ideally, members of a family support each other in their many duties and tasks.
- Community, a bigger unit, also implies that people do their best to support each other. ‘Community’ can be defined in several ways and there are many kinds of community.
- Ultimately, communities are interdependent.

Questions, activities and projects

1. What are some of the rules you follow in your family and neighbourhood? Why are they important?
2. Do you think some rules are unfair to a few people in the family or community? Why?
3. Describe several situations that you have observed where community support makes a difference. You can draw or write about these.

Grassroots Democracy – Part 1 Governance

“rājānam dharmagoptāram dharmo rakṣhati rakṣhitah”

“The ruler protects dharma and dharma protects those who protect it.”

The Mahābhārata

“There is no peace without justice;
no justice without equality;
no equality without development;
no democracy without respect to the identity
and dignity of cultures and peoples.”

Rigoberta Menchú Tum

The Big Questions ?

1. What is the meaning of ‘governance’?
2. Why do we need a government?
3. What is the meaning of ‘democracy’? Why is it important?



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Introduction

Human beings have been living in communities for a long time. When a large number of people live together, there can be disagreements and disorder, and rules become necessary to maintain order and harmony in the society.

There are probably some simple rules at home that you are expected to follow. The school where you study has rules too — some for students, others for teachers. In higher classes, students appearing for examinations must follow certain rules. Drivers on the road are expected to obey traffic rules. People employed in all kinds of jobs also need to follow the rules set by their employer, while the employers must also follow rules which they have committed to their employees. What would happen if no one followed those rules? A simple answer is that society would not be able to function.

LET'S EXPLORE

- 
- Describe the two pictures given in Fig. 10.1 on page 151 — what differences do you see between them?
 - How do you connect this with our discussion on rules?
 - What are some of the rules in your school? Who made them?

Who makes the rules and why? How are they made? These are some of the questions we will explore in this chapter. The process of taking decisions, organising the society's life with different sets of rules, and ensuring that they are followed, is called **governance**. The group of individuals or the system that makes the rules and ensures that they are followed is called a **government**. Some of the more important rules are called **laws**.

This does not mean that rules and laws are set once and for all. Just as you might discuss a particular rule at home with your parents, or as a student body might ask the school or

university management to change a rule, citizens also have a say in the laws and rules governing the society. We will see how this takes place.



Fig. 10.1



Fig. 10.2

LET'S EXPLORE

- Can you identify the categories of public service or other activities that are represented in the ten pictures in Fig. 10.2 on page 152?
- What role do you think the government plays in each of these activities?
- Can you think of other aspects of your daily life where the government plays an important role?



Three Organs of Government

All over the world, digital technologies have been transforming the way societies function. In India, till about 30 years ago, people who wanted to transfer money to a distant relative would have to queue up at the Post Office to send a money order after filling up a form; or if they had to send a payment to some business, they would queue up at their bank to obtain a demand draft, which would then have to be sent by post. You have probably never heard these terms ('money order' or 'demand draft'), because today we have digital means of sending across money instantly!

However, this has also created a new class of criminals who, without even leaving their desks, find digital ways of stealing people's money. This has led many governments to pass new laws in order to fight such criminal activities (called 'cybercrime'). Some of those criminals, who believe in robbing innocent people of their hard-earned money instead of using their skills to contribute to the society, have been arrested and convicted in court. They are usually fined as well as jailed for some years.

Through this example, we can see how the three branches or 'organs' of a government work together:

- The **legislature** is the organ that makes new laws (or 'legislates'). Sometimes it also updates or removes

existing laws. This is done by an assembly of representatives of the people. We will soon see how the Indian system works.

- The **executive** is the organ that implements (or ‘executes’) the laws. This includes the head of state (who may be a president, a prime minister or a chief minister), the ministers and any agency responsible for enforcing ‘law and order’. (In our example above, that agency is the cyber police.)
- The **judiciary** is the system of courts which decides whether someone has broken the law and, if so, what course of action should be taken, including punishment if necessary. Sometimes it also examines whether a decision taken by the executive is right, or whether a law passed by the legislature is well conceived and fair to all.



LET'S EXPLORE

Explain how the three government organs are at work in the case of the cybercriminals described above. How do they intervene?

In any good system of governance, these three organs must be kept separate, although they interact with each other and work together. This separation is called the ‘**separation of powers**’ (Fig. 10.3). It is intended to provide a system of checks and balances. This means that each organ of the government can check what the other is doing and restore balance if one organ acts beyond its expected role.

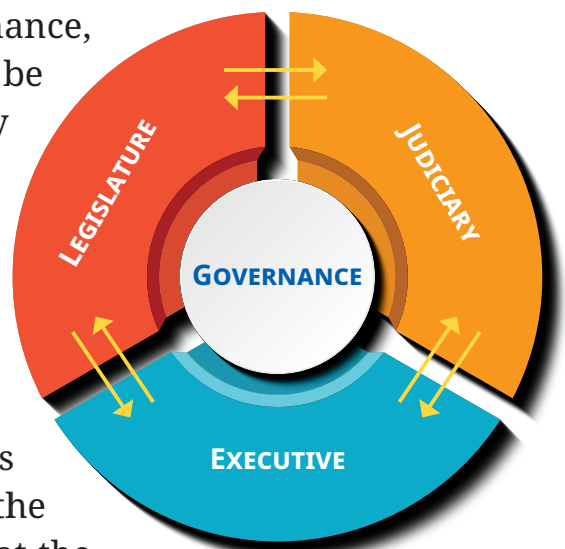


Fig. 10.3

LET'S EXPLORE

As a class activity, can you imagine the sort of disorder we might witness if all three organs were under the control of the same group of people? Can you describe any such real-life situation you may have heard of?



Three Levels of Government

Any government operates at two levels at the least — local and national. In many countries, including India, it functions at three levels or tiers — local, state or regional, and national. Each level deals with different matters. To use a comparison, if a bulb in your home is not lighting up, you will first check the bulb, switch, fuse, etc. If that does not work, you may call an electrician, and if it is found that the problem is not within your home, you may need to go to the Electricity Board and file a complaint. These are also three levels of dealing with a problem.

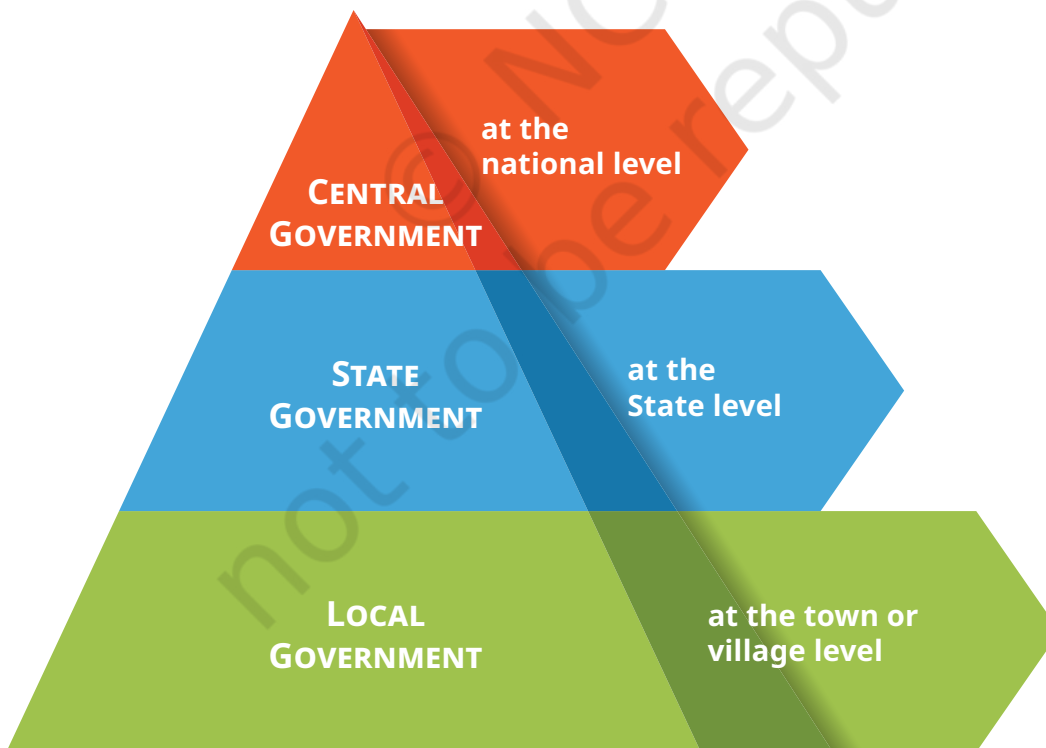


Fig. 10.4

In India, we have local governments, State governments, and Central or Union government (Fig. 10.4 on page 155). Imagine that following heavy rain for a few days, there is a flood in a part of a district. If it is not too severe, the local authorities may be able to deal with it. If it involves several towns and many villages, the State Government will step in and send rescue teams to help affected people. But if it's a massive flood affecting vast areas, the Central Government may also come to help by sending relief supplies, the army, etc. These are the three levels again.



DON'T MISS OUT

Many of our institutions have mottos inspired by the wisdom of our ancient texts. The Government of India's motto, for example, is *Satyameva Jayate*, which means "Truth alone triumphs". The Supreme Court's motto is *Yato Dharmastato Jayah*, or, "Where there is dharma, there is victory."

The table on the facing page provides in summary a general framework of the main functions of the government's three organs at the national and State levels. Their details (including the precise role of the assemblies) will be studied in greater depth in Grade 7. (Local government is not mentioned here as we will look at it more closely in the next two chapters.)



LET'S EXPLORE

- Observe the table (Fig. 10.5). Highlight the functions and responsibilities that affect your life the most.
- Ask two or three adults about their connection or interaction with the government – at what levels does it take place and for what purpose?

	ALL INDIA	STATE LEVEL
Judiciary	Supreme Court of India	High Court

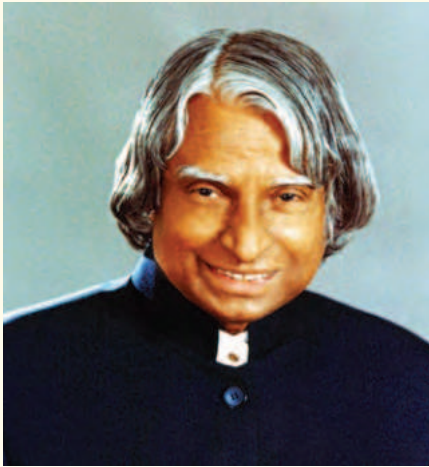
	NATIONAL LEVEL	STATE LEVEL
Legislature	Two houses – Lok Sabha and Rajya Sabha – formulate national laws	One State Assembly or Vidhan Sabha (Note that most States have a single assembly; a few States have two)

	CENTRAL GOVERNMENT	STATE GOVERNMENT
Executive	Led by the President of India (nominal head and Supreme Commander of the Indian Armed Forces), Prime Minister as the executive head	Led by the Governor (nominal head), Chief Minister as the executive head
Functions and responsibilities of the Executive (the list is not exhaustive)	<ul style="list-style-type: none"> • Defence • Foreign Affairs • Atomic Energy • Communications • Currency • Interstate Commerce • Education • Formulation of National Policies 	<ul style="list-style-type: none"> • Police, law and order • Adaptation and implementation of laws made by the Central government at the State level. • Public health • Education • Agriculture • Irrigation • Local government

House:
An assembly where laws are discussed or passed.

Nominal: In name only. It means, in our case, that the President of India and the Governor of a State are not the actual executive heads. They do have certain powers under special circumstances, but normally do not interfere in the affairs of the Central or State government.

Fig. 10.5



Dr. A.P.J. Abdul Kalam

Born in a humble family in Rameswaram, Tamil Nadu, in 1931, Dr. A.P.J. Abdul Kalam was a renowned scientist, nicknamed the ‘Missile Man of India’ for his crucial role in the development of India’s space programme, missile programme and nuclear capabilities.

Dr. Abdul Kalam served as the 11th President of India from 2002 to 2007. Despite his high status, he remained deeply connected to the people, and the youth in particular, through his passion for good education and innovation. He inspired millions with his humility, dedication to social causes and commitment to the nation. He tirelessly encouraged young Indians to dream big and work hard to achieve their goals.

Dr. Kalam showed that even though his position as the President of India was nominal, he could play an important role, impacting countless lives.

Let us meditate on a few of his inspiring thoughts:

“Look at the sky. We are not alone. The whole universe is friendly to us and conspires only to give the best to those who dream and work.”

“To succeed in your mission, you must have single-minded devotion to your goal.”

“If you fail, never give up because F.A.I.L. means ‘First Attempt In Learning’. End is not the end, in fact E.N.D. means ‘Effort Never Dies’. If you get ‘no’ as an answer, remember N.O. means ‘Next Opportunity’. So let’s be positive.”

“Dream is not that which you see while sleeping; it is something that does not let you sleep.”

“If four things are followed — having a great aim, acquiring knowledge, hard work, and perseverance — then anything can be achieved.”

Democracy

You may have noticed that we earlier mentioned ‘representatives of the people’. This is one of the foundation stones of the system of governance adopted by most countries of the world — **democracy**. The word ‘democracy’ comes from two Greek words — *dēmos* meaning ‘people’, and *kratos* meaning ‘rule’ or ‘power’; so ‘democracy’ literally means the ‘rule of the people’.

But can all people actually rule? It is clearly not possible. Imagine there is a problem that your class wants to bring to the attention of your school’s principal — maybe there is something wrong with the classroom, or with the school’s infrastructure, or perhaps you would like to propose a certain date for a field trip. Will the entire class go to the principal? It would clearly not be practical. In many schools, classes have a ‘class monitor’ or ‘class representative’, whom the whole class elected; even if there is none, one representative can be selected for this specific purpose. It will be enough to send the representative to the principal.

It is the same principle at the State or national levels — through elections, people vote for **representatives**, who will be the elected members of their respective assemblies. They are generally called ‘**Members of Legislative Assembly**’ (or MLAs) at the State level, and ‘**Member of Parliament**’ (or MPs) at the national level.

All these members discuss laws, problems and solutions in the assemblies, and, through dialogue and debate, try to convince each other whenever there are different opinions.

Like any modern democracy, therefore, India is a **representative democracy**. It is also the world’s



largest democracy, with some 970 million voters in 2024! In principle, all Indian citizens above the age of 18 have the right to participate in these elections.

Imagine that your class is planning to go for a picnic. There are two possible places, A and B. The class discusses the pros and cons — distance, time, cost, availability of basic facilities, etc. It becomes difficult to arrive at a decision. So your teacher decides that voting can solve the problem. The number of students in favour of place A raise their hands, then the number of students in favour of place B raise theirs. The decision is taken by whichever option gets a larger number of raised hands. (This process is called voting.) This is a case of **direct democracy** where every student's opinion was taken to finalise the place.

The term **grassroots democracy** refers to a system that enables and encourages the participation of ordinary citizens — the base of the pyramid we saw in Fig. 10.4 on page 155. In such a system, the citizens can have a say in decisions which affect them.

We will study more features of Indian democracy in the next two chapters and also in later grades.



Before we move on ...

- No country can run without governance and government.
- A modern government has three organs — legislative, executive and judiciary — which need to work together.
- The Indian government functions at three levels — Centre or national, State and local.
- Democracy is the overall framework for this system. It functions through elected representatives, both at the State and the national levels.

Questions, activities and projects

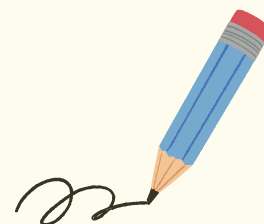
1. Test yourself — What is the meaning of democracy? What is the difference between direct democracy and representative democracy?
2. Recall the three organs of government. What are their different roles?
3. Why do we need three tiers of government?
4. Project: Many of you will remember the lockdown that took place during the COVID-19 pandemic. Make a list of all the actions that were taken at that time? Which tiers of government were involved in managing the situation? What was the role of each of the organs of government?

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*'Noodles' is our abbreviation for 'Notes and Doodles'!



Grassroots Democracy – Part 2

Local Government in Rural Areas

The real India lives in its villages.

– M.K. Gandhi

The Big Questions ?

1. *What are Panchayati Raj institutions?*
2. *What are their functions?*
3. *Why are they important in governance and democracy?*



Let us now see how the government functions at the local level. In this chapter, our focus will be on local government in rural areas; we will move to urban areas in the next chapter.

India is a country of enormous size and diversity. We have about 600,000 villages, 8,000 towns and over 4,000 cities. Our population has crossed 1.4 billion, almost two-thirds of which live in rural areas. How do we govern ourselves in this complex society?

Let us take a trip to Lakshmanpur, a small village in the foothills of the Himalayas. It has 200 houses and a population of about 700, most of whom are farmers. People cultivate



their lands and rear cows or goats. Some have relatives serving in the armed forces; a few younger villagers have migrated to the city in search of jobs. What are the needs of this village — maybe water for the fields, repairing the main road if it got damaged by heavy rains, or maintaining the village’s primary school? How will the villagers take decisions about such matters that affect their daily lives? And where will they get the resources to meet those needs? What will happen if there is a dispute about land or if some of the crop is stolen? Many such questions can arise in a village. Can people run to the State or the national capital for every such issue?

Panchayati Raj System

Like every village in India, the Lakshmanpur people have a system of **local** government called ‘Panchayat’, which refers to a village council. Panchayats bring governance closer to the people, making it possible for them to actively participate in decision-making processes. That is why the Panchayat system, also known as **Panchayati Raj**, is a form of **self-government**. Panchayats play a vital role in addressing local issues, promoting development and ensuring that the benefits of government schemes reach the grassroots level.

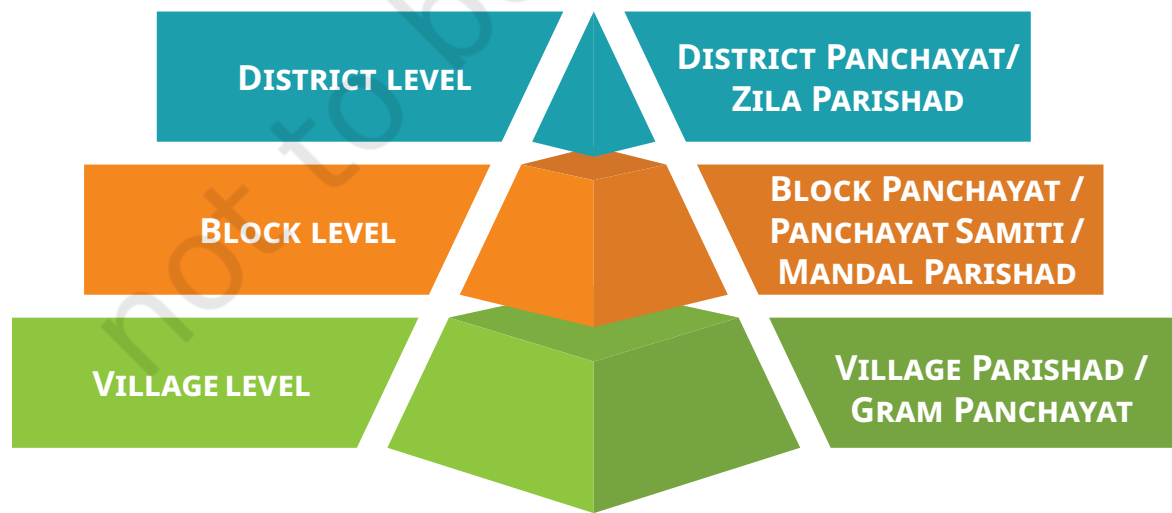


Fig. 11.1

As is clear from the diagram, the Panchayati Raj system works at three levels — from bottom up — the village, the block and the district. This is called a **‘three-tier system’**. Together, these institutions’ responsibilities cover almost all aspects of life in the district, from agriculture, housing, maintenance of roads, management of water resources, education, health care and social welfare to cultural activities.

Gram Panchayat

Let us begin with the base of Fig. 11.1 on page 164 — the Gram Panchayat, which is closest to the people in rural areas. Its members are elected directly by the Gram Sabha, which is a group of adults from a village (or group of neighbouring villages) who are enrolled as voters. In the Gram Sabha, women and men discuss all matters related to their area and take decisions. Each Gram Panchayat elects a head or president called the ‘Sarpanch’ or ‘Pradhan’. In recent years, more and more women have become Sarpanchs.



Exemplary Sarpanchs



Dnyaneshwar Kamble is a transgender person who was elected Sarpanch of Tarangfal village in the Solapur district of Maharashtra in 2017. Kamble's motto is *lok seva, gram seva*, that is, 'Service to the village is service to the public.' Kamble defeated six other candidates to become the Sarpanch.

Vandana Bahadur Maida, a member of the Bhil community from the village of Khankhandvi in Madhya Pradesh, defied

patriarchal norms to become the first female Sarpanch of her village. She convinced women in the village to attend the Sabha meetings and addressed critical issues like education and sanitation, earning recognition far and wide. Vandana's journey shows how women can play a leading role in transforming rural India.



Hiware Bazar, a village in Ahmednagar district of Maharashtra, used to be affected by frequent droughts and poor agricultural yield. After **Popatrao Baguji Pawar** became its Sarpanch, he started applying Anna Hazare's model of rainwater harvesting, watershed conservation and massive tree planting of lakhs of trees, all of which contributed to the recharge of groundwater. With the collaboration of the villagers, Hiware Bazar became a green and prosperous village in a few years. Shri Popatrao Pawar was awarded the Padma Shri in 2020.

The Gram Panchayat is assisted by a Panchayat Secretary who performs administrative functions such as calling meetings and maintaining records. Most Gram Panchayats are also assisted by an officer called 'Patwari' in many parts of India, who maintains the villagers' land records. In some cases, the Patwari keeps maps that are generations old!



THINK ABOUT IT

How do you think can these old maps be helpful for us?
Can they tell us something about the past and the present?

Child-Friendly Panchayat Initiative

Panchayats are supposed to listen to everyone's voice — including the voice of children. The Child-Friendly Panchayat Initiative creates opportunities for children to express their ideas and opinions on matters that concern their wellbeing. Steps are being taken in several States to encourage the participation of children in Bal Sabhas and Bal Panchayats on a regular basis, while village elders try to find solutions to their concerns.

In Maharashtra, for example, a few Bal Panchayats have worked to eliminate child labour and child marriage. They have brought many children back to school. The Bal Panchayat members get together to convince parents and other adults to send their wards back to school, and not to arrange marriages for girls who should be studying.

Several Gram Panchayats have won awards for taking child-friendly initiatives. Here's an example from Sikkim: Sangkhu Radhu Khandu Gram Panchayat, in west Sikkim, has given a lot of importance to children's needs and rights.

The Panchayat has built compound walls for schools to make them safer for children. To ensure that students get hygienically cooked midday meals, the Gram Panchayat has constructed kitchens in the schools. It is for these efforts that Sangkhu Radhu Khandu has been declared a child-friendly Gram Panchayat.

Let us also look at another example from Rajasthan:

The 'Children's Parliament', an offshoot of Bunker Roy's 'Barefoot College' initiative a few decades ago, empowered underprivileged children in Rajasthan's rural areas through education and democratic participation. Children aged 8 to 14 are engaged in governance processes, learning about democracy and social responsibility through night schools and parliament-like elections. The 'Parliament' followed formal procedures, including voter ID cards and campaigning. Elected representatives formed a 'Cabinet', overseeing school management and advocating for community needs. The initiative fostered leadership skills and social awareness, enabling children to challenge societal norms and advocate for change. Children actively addressed issues such as access to education, sanitation and



social equality, contributing to community development. The Children's Parliament initiative received many accolades, including the World's Children's Honorary Award in 2001.

LET'S EXPLORE

As a class activity, let four or five students form a Bal Panchayat and the rest of the class imagine they are the villagers. What issues will the Gram Sabha discuss? What challenges could it encounter? What solutions will it propose?



Panchayat Samiti and Zila Parishad

Similar institutions exist at the block level and the district level, which are above the village level. Their names are listed in the pyramidal diagram we saw in Fig. 11.1 on page 164. The Panchayat Samiti at the block level is the link between the Gram Panchayat and the Zila Parishad at the district level. The members of these institutions are elected by the local people, but they may have other members like Sarpanchs of the villages in the area and local members of the State Legislative Assembly.

The composition of the Panchayat Samitis differs from State to State, but their role in strengthening the participation of local people remains the same. They coordinate matters across Gram Panchayats, for instance, by collecting development plans from all Gram Panchayats and putting them together to present them at the District or State levels respectively. This facilitates the allotment of funds for such development projects and for government schemes such as the Pradhan Mantri Gram Sadak Yojana, which promotes the construction of all-weather roads in rural areas.

At all the three levels, special rules have been made so that disadvantaged sections of the population can make their needs and problems heard. These institutions also have a provision for reserving one-third of the seats for women.



THINK ABOUT IT

Why do you think it is important for the government to pay more attention to the needs and problems of the disadvantaged sections of society?



LET'S EXPLORE

- What similarities and differences do you notice between the governance system at the Central level and at the Panchayat level? (*Hint: refer back to Chapter 10 if required.*)
- If you get an opportunity to meet a few Panchayat members, what questions would you like to ask them? Discuss in small groups to create a questionnaire. Meet some Gram Panchayat members or invite them to your school. Ask them the questions in your questionnaire and write a short report.

Let us remember that the structure and functions of the Panchayati Raj institutions differ a little across States. This is because the States have authority over those institutions. But their objectives are the same — it is to enable villagers to take an active part in the management and development of their villages and the local area.

The *Arthashastra* is an ancient text of governance written by Kauṭilya (later also known as Chāṇakya) some 2,300 years ago. Among other things, it describes how a state should be structured and run, how the economy can be made prosperous, what the duties of the ruler are and how to conduct war. Kauṭilya, an expert in statecraft, also explains how a whole administrative structure should be put in place from the village to the regional capital:

“The king shall establish a *sangrahaṇa* (a sub-district head quarters) for every 10 villages; a *kārvaṭika* (district headquarters) for every 100 villages; a *droṇamukha* for every 400 villages; and a *sthānīya* (provincial headquarters) for every 800 villages.”

In today’s language, what are the names we would give these four categories? Is it not amazing that a similar structure was thought of so long ago?

Before we move on ...

- The local government in rural areas is organised into a three-tier system.
- Democracy in the Panchayati Raj system works both through direct participation of people and through their elected representatives.
- The Panchayati Raj institutions give people in rural areas a measure of self-governance, so they may manage their issues and collaborate in development plans.



Questions, activities and projects

1. Test yourself — without looking at the text above, can you name the three tiers of the Panchayati Raj system? What are the key functions of each of the three tiers?
2. Write a letter to the Sarpanch regarding the issue of plastic bags lying on the roadside in the village.
3. In your view, what type of person should be a Gram Panchayat member?
4. Let us suppose that you study in a village school. The school is located next to a highway and students find it difficult to cross the road when they come to school or leave at the end of the day. What are the options to solve this issue? Which institutions in the Panchayati Raj can help you? What can the students do?

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Grassroots Democracy – Part 3

Local Government in Urban Areas

I desire that ... a full-fledged local body should be immediately formed, ... so that people may know really what is an administration, what are the franchise, what are the powers, what are the rights and what are the privileges in a small sphere, in their own town, in their own villages.

— Rustom K. Sidhwa, Member, Constituent Assembly
(during the Constituent Assembly Debates, 13 October 1949)

Fig. 12.1. The Municipal Corporation of Greater Mumbai (originally 'Bombay Municipal Corporation') was created in 1865.



The **Big**
Questions ?

1. What are urban local bodies and what are their functions?
2. Why are they important in governance and democracy?



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Introduction



Earlier chapters have shown us how, in a democracy, good governance aims to empower the citizens so they may actively participate in their country's functioning, whether it is at the rural, regional, urban, state or national level. This is the broader concept of **participatory democracy**.

We saw the basics of the system in a rural context. Let us now see how it works in an urban scenario. Since the latter is generally more complex

and diverse than the former, it is understandable that the urban governance system needs to be more complex too. We will however limit ourselves here to its basic principles.

LET'S EXPLORE



- Why is a city like Kolkata, Chennai or Mumbai more complex and diverse than a village or a town?
- With your classmates, make a list of diverse communities residing in any city that you are familiar with. How many were you able to list? What else do you observe in the list?

Before we explore governance and administration in urban areas, it helps to take an overall look at the Indian system of governance, from rural to national, as depicted in Fig. 12.2 on page 175. The base of the pyramid is the local level, closer to the people, while the top is the national level. In Chapter 11, we explored the left side of the pyramid; we will now take a look at the right side.

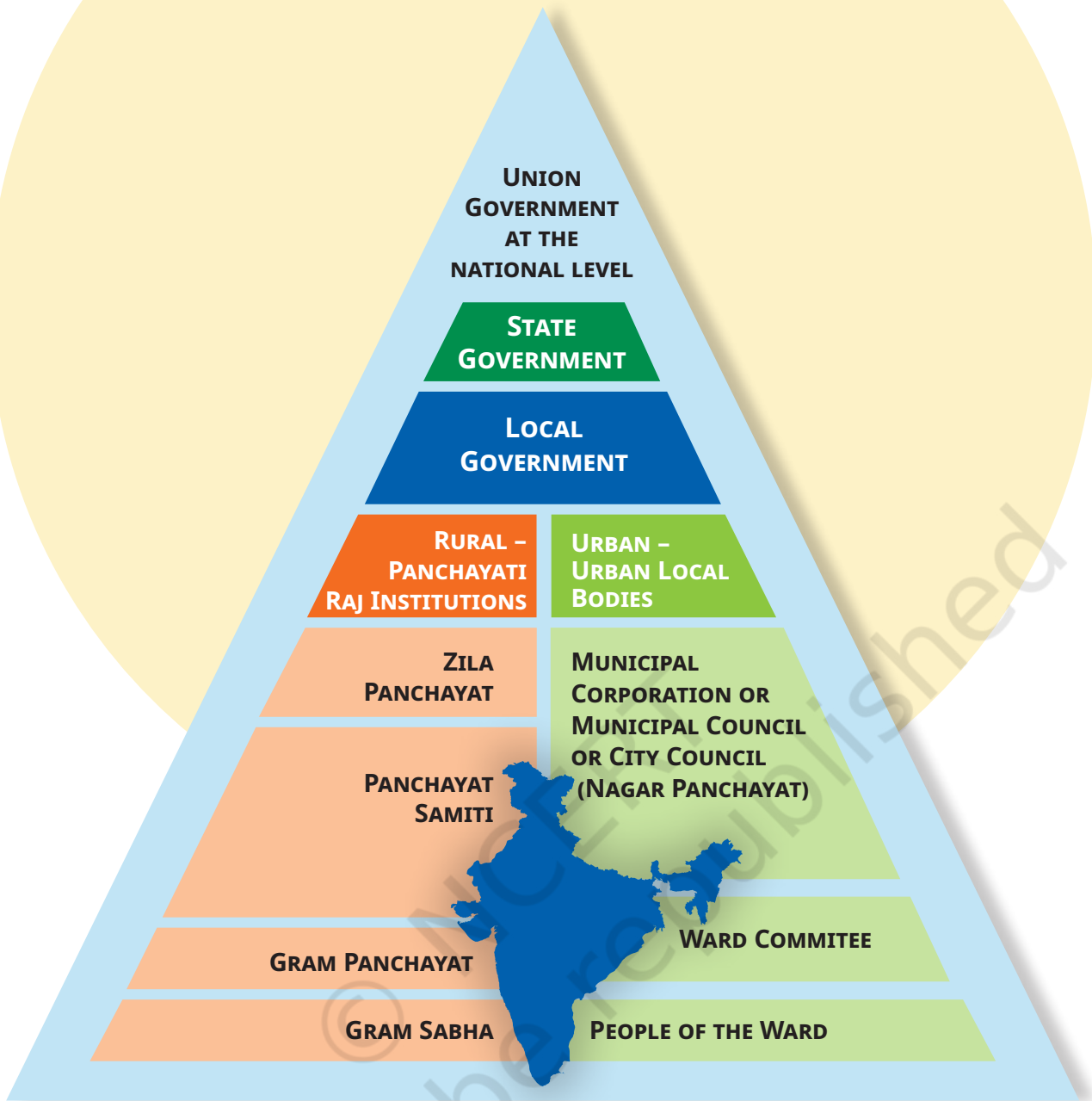


Fig. 12.2

LET'S EXPLORE

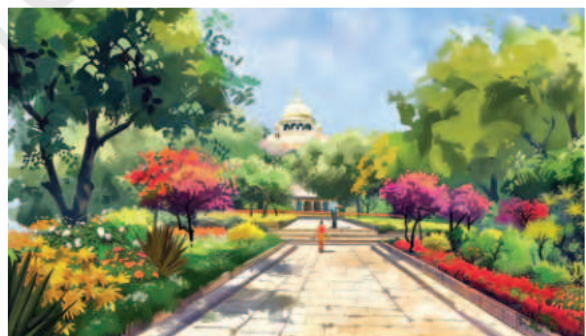
In Fig. 12.2 above, what similarities and differences do you notice between the Panchayati Raj system and the urban local government?

Urban Local Bodies

Local government structures in urban areas are called 'urban local bodies'. They are decentralised, which means that instead of operating under a central authority at the

top, the local communities have a direct say on how their areas are managed or the issues they face. It is a mechanism for citizens living in an area to come together and take decisions about what is best for them.

Cities and towns are divided into smaller units called ‘wards’, and the ward committees facilitate activities such as conducting health camps, organising a campaign against the use of single-use plastics, and so on. They also keep an eye on anything that might go wrong — a water leak, a blocked drain, a damaged road, etc. — and report such problems to the authorities. However, the precise functioning of wards differs from State to State, depending on the rules they make.



Altogether, urban local bodies are responsible for a range of functions — helping take care of the infrastructure, maintaining the burial ground, garbage collection and disposal, checking the implementation of government schemes, collecting local taxes and fines, and so on. They also have some role in planning for the area’s economic and social development. However, for these bodies to be

able to perform their functions efficiently, people living in the city must also perform their duties, which means that they must show care and concern for their area (remember, this is a **participatory** democracy). For instance, if people carefully follow instructions regarding waste segregation, garbage collection becomes easier; or if they notice a water leakage in a street, reporting it promptly will prevent further wastage of precious water.

LET'S EXPLORE

Can you think of four or five more actions that responsible citizens might take to help their area of the city?



Fig. 12.3. The Madras Corporation

The Madras Corporation (now Greater Chennai Corporation), established on 29 September 1688, is the oldest municipal institution in India. The East India Company issued a charter the previous year constituting the town of 'Fort St. George' and all territories within 16 km from the Fort into a corporation. A Parliamentary Act of 1792 gave the Madras Corporation power to levy municipal taxes in the city, which is when the municipal administration properly began.

SERVICES UNDER THE INDORE MUNICIPAL CORPORATION

					
PROPERTY TAX	WATER CHARGES	SOLID WASTE MANAGEMENT	BUSINESS, HOARDINGS, TRADE LICENSES		
					
CRM* — MARRIAGE CERTIFICATE	CRM — FIRE SERVICES	CRM — VARIOUS LICENSES	CRM — WATER TANKER, DEBRIS CLEARANCE		
					
TREE CUTTING & TREE TRANSPORTATION	CRM — GRIEVANCES				
CRM — SERVICES ON REQUEST					
					
Water Tanker	Septic Tanker	Auditorium	Funeral Van	Mobile Toilet	Ambulance

*CRM: Citizen Relationship Management.

(The list of services offered by the Indore Municipal Corporation is simplified here.)

Fig. 12.4. Services under the Indore Municipal Corporation



THINK ABOUT IT

Indore in Madhya Pradesh has been awarded the cleanest city in India under the *Swachh Survekshan* government scheme for seven years in a row. What could have been the role of Indore citizens in this achievement?

As we see, Chennai and Indore have a Municipal Corporation at the top of their urban bodies. Only cities with a population above 10 lakhs have a Municipal Corporation (also called ‘Mahanagar Nigam’) as their highest body. Between 1 and 10 lakhs, the highest body is a Municipal Council (also called ‘Nagar Palika’). Cities and towns with smaller populations have a Nagar Panchayat.

LET'S EXPLORE

- Select a few cities, from your State and from a few neighbouring States. These may include the city you live in or the city nearest to your town or village. How will you find out if they have a Nagar Panchayat, Municipal Council or Municipal Corporation? Draw a table with the names of the cities and the type of urban local body each of them has.
- How do urban local bodies fund their activities? (*Hint: Look carefully at the pictures of the functions performed by Indore Municipal Corporation in Figure 12.4 on page 178.*) Are some of them paid services?

Sameer: Hello! I haven't seen you around here before. Are you new to this village?

Anita: Hello! Yes, I'm visiting my grandparents who live nearby. I am from the city. It's quite different from here!

Sameer: Oh, really? What's it like in the city?



Anita: Well, it's busy and crowded, with tall buildings everywhere. There are so many people rushing around all the time, and it's noisy compared to the quietness here. Also, people are more independent and often don't even know their neighbours.

Sameer: Wow! Here, everyone knows everyone else and pitches in to help each other out — we work together in the fields, celebrate festivals together, and even make decisions as a community.



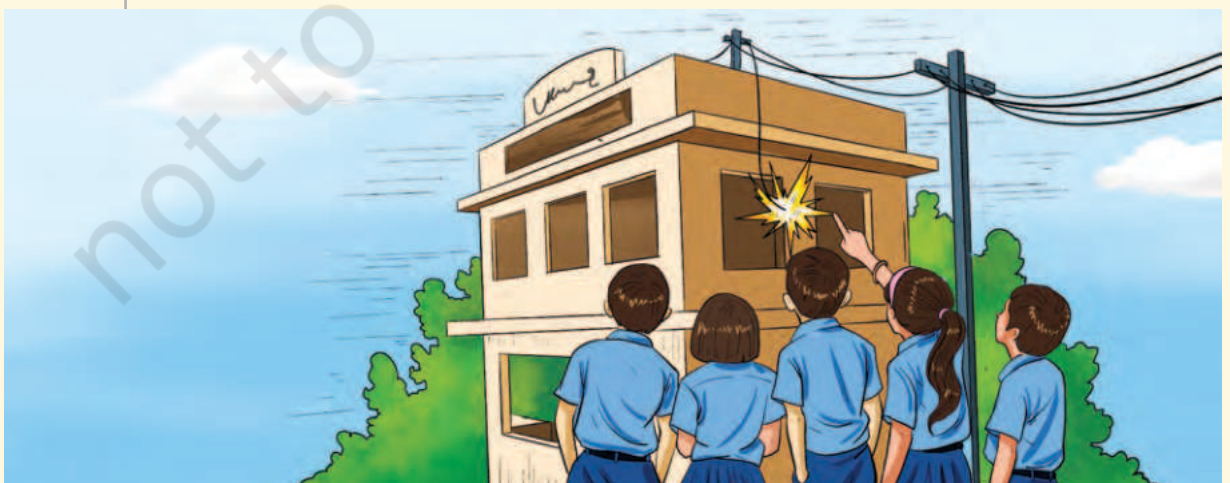
Anita: Well, there's still some sense of community in the city. Just the other day, following heavy rains, a house collapsed two streets away. Dozens of people gathered from all over the place to help clear the rubble and make sure no one was trapped inside.

Sameer: Doesn't the local government help in such cases?

Anita: Yes, it does. In fact, we have local bodies and elected representatives who represent us and our interests.

Sameer: Well, it sounds like our village Panchayat, only bigger. Members are elected, too, but because they all know each other, a lot more people can participate and discuss all kinds of issues that concern the village. Sometimes, even us kids can get heard.

Anita: Really? You are not making that up?



Sameer: Not at all! The other day a few kids noticed that an electricity wire was hanging dangerously low, almost touching the roof of a building. Not only did we report it, but we explained to one of our Gram Sabha members that an electric post should be shifted a little. And it was done!

Anita: Great! I suppose that's how democracy should work. It seems more complicated in the city, but the idea is the same — everyone's voice matters.

Sameer: Yes, it does! Sorry, I must make a move. My mother needs my help for a little shopping. Thanks for telling me about the city.

Anita: And thanks for telling me about your village! I am definitely going to look around.

Sameer: Well, maybe we'll meet again sometime. Bye!

Before we move on ...

- In urban areas, decentralised governance works through different urban local bodies, which fulfil various functions affecting the citizens' lives.
- As with the rural context, urban local bodies have elected members who represent the local citizens.
- The citizens also have duties to ensure that the local bodies are able to perform their functions efficiently.



Questions, activities and projects

1. On your way to school, you and your friends notice that a water pipe is leaking. A lot of water is being wasted on account of the leak. What would you and your friends do in such a situation?
2. Invite a member of an urban local body near you to your class. Discuss with them their role and responsibilities. Prepare a set of questions to ask them so that the meeting is fruitful.

3. Discuss with adult members of your family and neighbourhood, and make a list of their expectations from the urban local bodies.
4. Make a list of characteristics of a good urban local body.
5. What are the similarities and differences between the Panchayati Raj system in rural areas and the urban local bodies?

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The Value of Work

When you are doing any work, do not think of anything beyond. Do it as worship, as the highest worship, and devote your whole life to it for the time being.

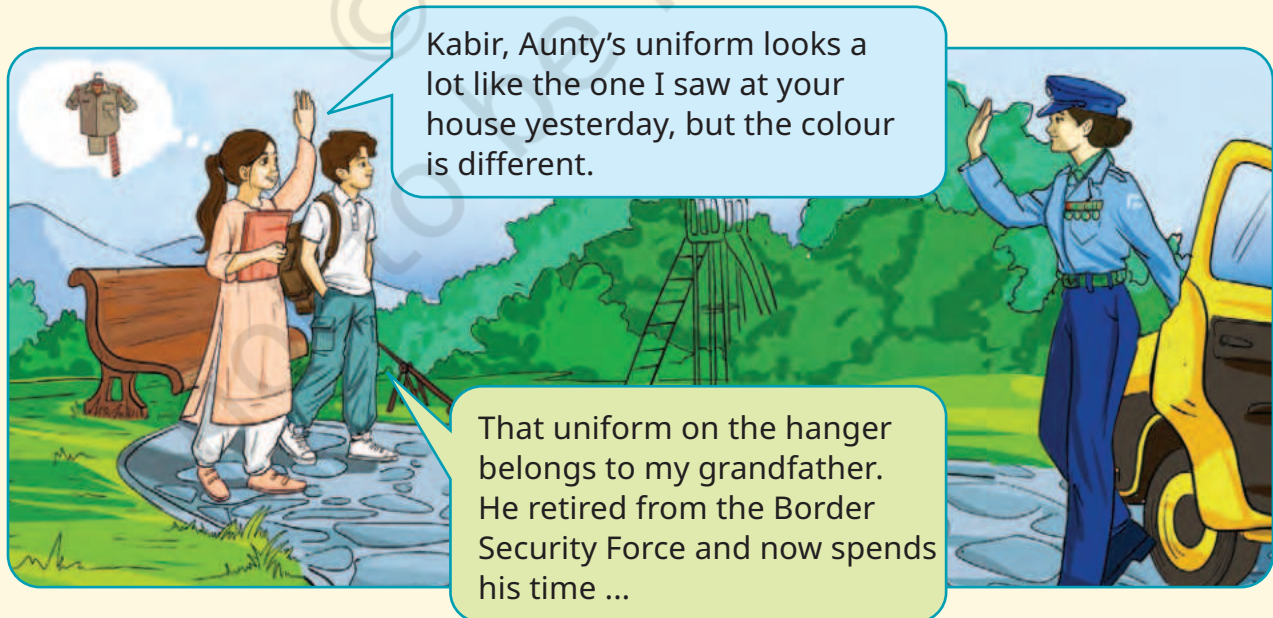
— Swami Vivekananda

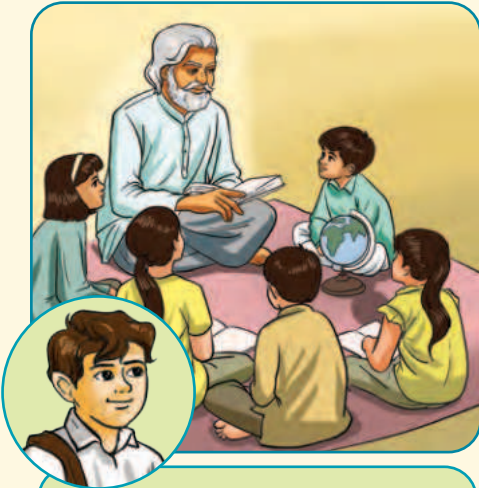
The Big Questions ?

1. What are the different types of activities that people engage in?
2. What is their contribution to our everyday lives?



Anu and Kabir were playing in the park when they saw their neighbour, Geeta Aunty, getting out of a taxi. She was returning home from work and was in her uniform. A pilot in the Indian Air Force, she is the pride of the whole town.





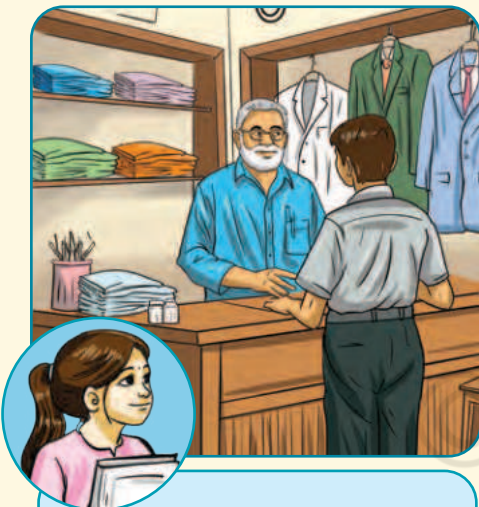
... providing free Geography classes to the neighbourhood kids ...



... tending to our vegetable garden, and ...



... running errands for the home.



My parents run a shop that sells uniforms and other ready-made garments. Appa leaves early in the morning and Maa joins him in the shop after we leave for school.



Maa is usually back by the time we return home from school. She also contributes to a voluntary group that teaches knitting to the women in the community.



Do you remember my elder brother Rohan? You met him when he came to pick me up from school. He is a software engineer and works in a company that makes computer applications. On the weekends he volunteers to teach computer skills to those who have joined the youth development programme of the nearby college.



Wow, Anu, everyone around us does so many things every day!

LET'S EXPLORE

What activities did the people in Anu's and Kabir's story engage in? Mention them in the table given below:



Character in the story	Activities they are engaged in	

Different types of activities, like the ones discussed above, are divided into two groups or categories: *economic activities* and *non-economic activities*.

Economic activities are those that involve money or are performed in exchange for money or **money's worth** for the parties involved. For example, a business person selling school bags in the **market**, a farmer selling produce in the market, a lawyer arguing a case and earning a **fee**, a truck driver transporting goods from one place to another, workers employed in a car manufacturing factory, etc.

Money's worth: The monetary value that a person places on an object based on the benefit that they derive from it.

Market: A place where people engage in the exchange of goods and services. People may exchange goods and services for other goods but in most markets these are exchanged for money.

Fee: A payment made to a person or organisation in exchange for professional advice or services. For example, a fee paid to a doctor and a lawyer.

Non-economic activities are those that do not generate income or wealth but are done out of feelings like gratitude,

*Left to right, top to bottom:
A business person selling
school bags in the market*

*Farmers selling their
harvest in the market*

A lawyer arguing a case

*A truck driver transporting goods
from one place to another*

*Workers employed in a car
manufacturing factory*



love, care and respect. For instance, parents cooking food for the family or helping their children with schoolwork, youth taking care of the grandparents, family members helping in the renovation of the house, etc.

*Left to right:
Parents cooking food
for the family*

*Mother helping her
children with
schoolwork*





Left to right:

Youth taking care of the grandparents

Family members helping in the renovation of the house

LET'S EXPLORE

In the table given on page 185, did you notice the third empty column? Label this column 'economic / non-economic activity'. Now classify them according to the nature of activity.

In Anu's and Kabir's story, Geeta Aunty, the Air Force pilot, receives a **salary**. She serves the country and performs an economic activity too. Anu's brother, Rohan, works for a software company and is given a salary for it. Over the weekend, he also volunteers at the youth development programme of the nearby college, where he teaches computer skills to young adults. This is a non-economic activity.



Salary:
A fixed regular payment generally paid monthly by an employer to an employee.

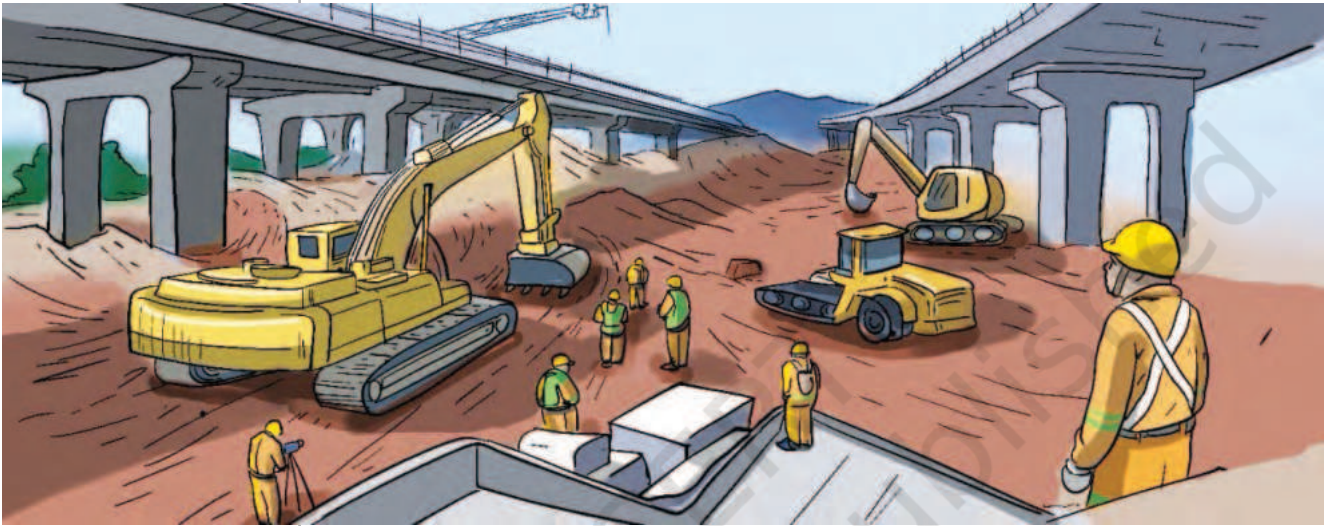


THINK ABOUT IT

- ◇ When Kabir's grandfather voluntarily teaches the neighbourhood kids for free, is that an economic activity or a non-economic activity? How is it different from your teachers teaching you at school? Discuss with your classmates.
- ◇ What are some non-economic activities that are important to you and your family? Why are they valuable?

Types of Economic Activities

Kavya was excited to go to her aunt's house in the village of Kamlapur. On the way, she saw that a highway was being built near the village, and the construction site was abuzz with activity. Large machines, such as excavators and bulldozers, were being operated by dedicated technicians.



This new highway promised to reduce the travel time to the nearest town from five hours to just two hours. Kavya thought that she would be able to visit her aunt more often once the highway was ready, since it would take less time to travel there. Happy with this thought, Kavya ran to greet her aunt and to eat the delicious *jalebis* that she had made. They were joined by Kavya's uncle, who had just returned home from work. He

is a technician in a construction company and operates a bulldozer. He receives a monthly salary for his services.

The next day, Kavya's aunt woke up early to finish her share of the household chores and left for work. She is



employed at the village post office and is paid a monthly salary. In the evening, after her office work, she also conducts online classes to help students prepare for school exams. She charges a weekly fee for these classes.

On the weekend, Kavya visited a local mango orchard with her aunt to have some delicious mangoes.

There she saw Sahil, a farm labourer who was using a tractor to till a farmer's land nearby. He earns a daily **wage** for his efforts. He gets some payment for his work in cash, and the remaining part of the payment in the form of mangoes of equal value. The mangoes that he receives as a part of his work are called **payment in kind**.



Wage:
A payment made by the employer to the worker for a specific period of time.

Payment in kind: A non-cash payment that is received for the work performed.



THINK ABOUT IT

On your way from home to school today, can you recall the various economic activities that people are engaged in? In what ways do you think those people are paid?

As we now understand, economic activities are those that have value in terms of money. Economic activities also add value at each stage of the process of transforming something into another form. This is called value addition.

Let us take the example of Kavya's father, Rajesh, to understand this.



Rajesh is a carpenter who buys wood from a nearby market for ₹600 to make furniture.



He uses special tools and other materials for building the furniture.



Rajesh sells a chair for ₹1,000 each in the market.

The wood for the chair costs ₹600. So, what is the remaining ₹400 (₹1,000 – ₹600) for? It is the monetary value of Rajesh's skill, time and effort, which went into making that chair. Rajesh has added value to the wood by turning it into furniture. From buying the wood to selling the chair, these activities involve payment. They are, therefore, a part of economic activities.

LET'S EXPLORE

Put a ✓ against those activities/professions that you think create monetary value. Can you add two activities and examples of money related value creation to the empty rows at the end?



Activity / Profession	Example of money-related value creation
1. Baker	
2. Tailor	
3. Farmers repairing their tractor	
4. Doctor	
5. Parents cooking dinner for their family	
6. Scientist	
7. Person taking care of a sick grandparent	
8.	
9.	

The Importance of Non-Economic Activities

While non-economic activities may not involve money, the value they generate is important in our lives.

Sevā: selfless service

We see *sevā* in many places such as temples, gurudwaras, mosques and churches. For instance, *langars* or community kitchens at gurudwaras serve food to every visitor for free. These practices foster a sense of satisfaction and gratitude

for what we have, and they are also a way of contributing to society without expecting anything in return.



Temple distributing prasād to devotees



Langar at the Golden Temple



Swachh Bharat Abhiyan

The strength of community participation

The Swachh Bharat Abhiyan is based on the collective efforts of all Indian citizens to keep our surroundings clean. Individually, we keep our homes and surroundings clean. People have also come together to clean up streets, roads, parks and other public places or community areas. Together, these efforts lead to a clean home, neighbourhood, society and nation.

Another example of collective community participation is the celebration of Van Mahotsav (the festival of forests) in India to promote awareness about the value of trees and the conservation



Van Mahotsav

of forests. The initiative brings together members of the community for tree plantation drives.



THINK ABOUT IT

- ◇ Many communities in India have similar practices that involve community participation. Can you identify a few from your area?
- ◇ We celebrate many festivals in India. During these festivals, people gather to organise all the various activities. They decorate the place together and share the food that they cook. Are these non-economic activities? Why do you think they still hold value?
- ◇ Can you identify community programmes that have been undertaken by your school or in your locality? What did you observe during these programmes?

Before we move on...

- In this chapter, we learnt about economic and non-economic activities.
- We also learnt about the value addition that economic activities create.
- We understood how non-economic activities contribute to social welfare, personal wellbeing and enhance the overall quality of life.

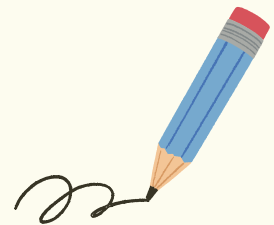


Questions, activities and projects

1. How are economic activities different from non-economic activities?
2. What kind of economic activities do people engage in? Illustrate with examples.
3. There is great value attached to people who are engaged in community service activities. Comment on this statement.
4. What are the various ways in which people are compensated for various economic activities? Give some examples.

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Economic Activities Around Us

CHAPTER 14

The root of prosperity is economic activity, the lack of it brings material distress. The absence of fruitful economic activity endangers both current prosperity and future growth.

— Kautilya's Arthashāstra

The Big Questions ?

1. How are economic activities classified?
2. What differentiates these activities to be grouped into sectors?
3. How are the three sectors interconnected?



Introduction

In Chapter 13, we learnt about two types of activities – economic and non-economic. Activities that create **monetary value** are called economic activities. We also learnt about the importance of non-economic activities. To understand these activities better we will learn how economic activities are classified and what differentiates them in this chapter.

Monetary value: Value of something that can be measured in terms of money.



Economic Sectors:
Broad groups that include various activities that help with the economic prosperity of a nation.

Over the decades, the number of economic activities has increased tremendously. For example, earlier most people were involved in activities such as agriculture, livestock rearing, production of tools, pottery and weaving cloth. As societies progressed, the number of economic activities through which people earn their livelihoods increased vastly.

Today, there are diverse economic activities such as manufacturing computers, mobile phones and drones; working in banks, schools and hotels; driving various types of vehicles for transportation; making furniture; tailoring clothes using machines; creating software; repairing refrigerators and washing machines; etc. Classifying all these activities helps us to understand how they function and the links they have with each other.

The Classification of Economic Activities into Economic Sectors

Some economic activities share similar characteristics and based on this, they can be grouped together or classified into broader groups called **economic sectors**. The three main types of economic sectors are primary, secondary and tertiary economic sectors.

The illustration on the facing page maps out the broad activities under these categories.

A. Primary activities

Those economic activities in which people are directly dependent on nature to produce goods are known as **primary activities** or **primary sector economic activities**.

Primary sector:

The group of activities that involves extraction of raw materials directly from nature such as farming, fishing, forestry, etc.

Classification of economic activities into economic sectors

Primary sector



Agriculture



Mining



Fishing



Raising livestock



Forestry

Secondary sector



Construction



Manufacturing



Water supply



Solar power



Electricity production

Tertiary sector



Healthcare



Trade and logistics



Communication



Banking



Transportation

For example, work involving cultivation of grains and vegetables from agricultural farms, collecting wood from the forests, extracting coal from mines, fish from fisheries, eggs from poultry farms, etc., are all primary sector economic activities.

The most common primary activities are agriculture, mining, fishing, raising livestock, forestry, etc. Below are some of the types of activities within the primary sectors.



Greenhouse farming



Mining



Fish farming (fishery)



Forestry



Raising livestock



THINK ABOUT IT

Can you think of any primary activities that you may have seen in the past? What are the natural resources used in these activities? Name two of them and discuss your experiences with your classmates.

- 1.
- 2.

B. Secondary activities

Economic activities in which people are dependent on outputs of the primary sector and transform them to produce goods are known as **secondary activities** or **secondary sector economic activities**. The secondary sector includes the construction of buildings, roads, etc., and providing utilities like water, electricity, gas and other such necessities. It also includes the manufacturing of products in factories and production units to process raw material from the primary sector into some other form that can be further sold or consumed. Some examples of secondary sector activities include the processing of grains obtained from agricultural fields to make flour in mills, extraction of oil from groundnut and processing of tea leaves to derive tea. Similarly, wood from the forest is converted into furniture and paper, cotton is used to make clothes, and steel from iron ore is used to make automobiles like cars, trucks, etc.

Secondary sector:

The group of activities that involves processing of raw materials derived from primary sector into products for sale or consumption.



Automobile factory



Textile factory



Pharmaceutical factory



Furniture production unit



DON'T MISS OUT

Types of Automobiles	No. of units produced in India in 2022
Passenger vehicles like cars	45 lakhs
Commercial vehicles like trucks	10.3 lakhs
Three wheelers	8.6 lakhs
Two wheelers	2 crores

(Source: Society of Indian Automobile Manufacturers, <https://www.siam.in/statistics.aspx?mpgid=8&pgidtrail=13>)

LET'S EXPLORE



Now that we have seen some examples of secondary sector activities, can you name two more economic activities in the secondary sector?

- 1.
- 2.

C. Tertiary activities

All those economic activities that provide support to people involved in primary and secondary activities are called **tertiary activities** or **tertiary sector economic activities**. These include services that we may not be able to see but which still play a very important role. For example, the driver of a truck transports grains and vegetables from the farm to a factory or the market.

The fruit or vegetable vendors sell the farm produce to household consumers. Similarly, doctors, nurses, teachers, lawyers and pilots provide their services to those who need them. There are technicians who repair and service electronic items including mobile phones and televisions, mechanics who repair vehicles like cars and tractors, and electricians who ensure regular supply of electricity. Their services make our lives easier. Similarly, communication services through mobile and internet, software development, and services at hotels, restaurants, banks, schools, hospitals, airports, shops, **warehouses**, etc. are all examples of tertiary sector economic activities. This sector is also called the **service sector**.

Tertiary Sector:

The group of activities that involves the provision of services which complement both primary and secondary sectors, such as transportation, banking, and management of business.

Warehouses:

Large buildings used for storing products before they are sold, used or rented out to shops.



Software development



Services at restaurant



Services at airports



Retail stores

Interdependence Among Sectors

The three types of economic activities or economic sectors play an important role in the process of conversion of natural raw materials into finished products for final consumption. Let us go on an imaginary excursion to a village in Anand district of Gujarat to study an interesting example where we will understand how the three sectors are interconnected and support each other.

Dairy cooperative: from farm to plate

These days, farmers in Gujarat greet the day with the clinking of milk pails and the happy moos of their best friends, their cows or buffaloes! Cows have a special place in the lives of the farmers and their families. The farmers milk the cows and sell their milk to the **dairy** nearby. At the end of the month, they get paid for the milk based on its quantity and quality. However, this was not the case about 50 years ago.

This is the amazing story of a milk cooperative named Anand Milk Union Limited (AMUL). In the early 1940s, farmers in Anand district would sell milk to the neighbouring villages.

Dairy:
A place
where
milk is
collected
and
stored.

They would have to cycle or walk to nearby villages to sell the milk under scorching heat. As you know, milk spoils or curdles very fast in hot weather. The farmers had to sell the milk quickly before it could spoil. This was a lot of effort for the small amount of money they would earn. So, they depended on people called middlemen, who would buy the milk in bulk at meagre prices from the farmers and sell it in the market. Many times, the farmers felt cheated and harassed by the middlemen.

One day, the farmers collectively approached Sardar Vallabhbhai Patel, a prominent national leader, with their problems. He advised them to form a **cooperative** to become independent and stop relying on the **middlemen**. As a cooperative, the farmers would be able to buy and sell milk as a group, taking care of the entire operation of milk collection, processing and distribution themselves. The farmers took Sardar Patel's advice.



Amul was set up in 1946 under the leadership of Tribhuvandas Patel (lawyer and freedom fighter) and Dr. Varghese Kurien (an engineer who was working at a dairy factory in Mumbai).



Varghese Kurien (left) and Tribhuvandas Patel (right)

Cooperative:

A group of people who voluntarily come together to meet their economic and social needs in a formal way. They own the cooperative and decisions are taken by the members collectively.

Middlemen:

Persons who buy goods from producers and sell them to consumers. The middlemen charge a fee for this service.

Pasteurisation:

A process by which milk is preserved through heating to a specific temperature to kill harmful bacteria.

Factory: Building or group of buildings where goods are manufactured, or various components are put together, to make a final product.

Retail: The sale of goods in small quantities for use by the end consumer rather than for resale.

Export: Goods and services that are produced in one country and sold to buyers or consumers in another country.

This initiative brought farmers, including women, together and gave them control over the production and sale of milk. The milk producers collectively made their own decisions on all matters such as production, **pasteurisation** and sale of milk. The tasks were shared by everyone, which helped raise their income gradually. They did not need the middlemen anymore and became like one big family!



As more and more farmers began to see the benefits of the cooperative, it continued to grow. The quantity of milk that was being collected was so huge that the farmers decided to make other products out of it. They set up a **factory** in Anand, and began to produce butter and milk powder.

Today, the cooperative has a wide range of products made at many milk processing plants and factories all over India. Can you name a few? The products are then transported and sold in both small and large **retail** shops

all over the country. In fact, they also **export** the products to several countries around the world. Is it not amazing?

In this fascinating story, the farmers of this cooperative milk their cows to sell the milk later. This kind of economic activity is called a *primary sector economic activity* because the product (milk) is derived directly from a natural source (cows/livestock).

Milk is then processed and converted from one form (liquid) into another — milk powder, ghee, cheese, butter and many others in the factories. These economic activities are called *secondary sector economic activities*.



What does AMUL do with all the products it makes? It sells them in various places. AMUL uses lorries and trucks, as well as railway, air and shipping services, to transport its products. It has set up retail stores and supplies milk and milk products to other shops in towns, cities and villages all over Gujarat, as well as in different states across India. Here, transportation, trading and retail is a *tertiary activity*.



DON'T MISS OUT

Just like AMUL, there are many other milk cooperatives under brands such as Nandini from Karnataka, Mother Dairy from Delhi-NCR, Aavin from Tamil Nadu, Vijaya from Andhra Pradesh, Kevi from Nagaland, Sudha from Bihar, Verka from Punjab, etc. Can you name one cooperative around you that has helped groups like farmers, persons with disabilities, and women, to come together and has brought prosperity to their lives?

With the help of the images below, let's see how the books you study are made. The images show the transformation of pulp (wooden fibre of a tree) into paper and, after printing, into textbooks.

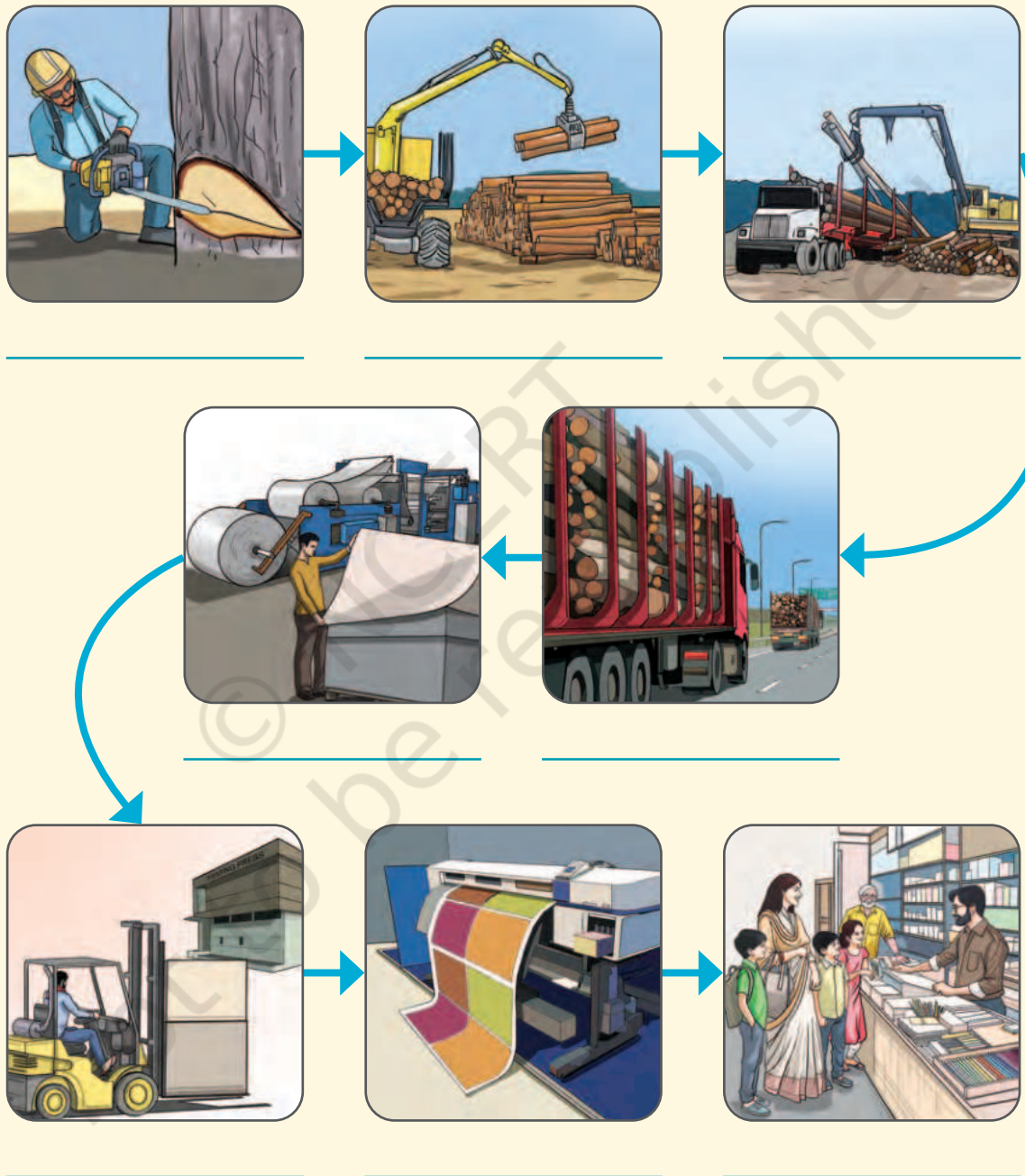


Fig. 14.1

None of the activities that were part of the process – from extracting pulp from the trees to making paper and finally producing the books would have been possible, had it not been for all three sectors working together.



THINK ABOUT IT

Observe the different stages of the process shown in Fig. 14.1 on page 206 and discuss them with your fellow classmates.

LET'S EXPLORE

Label the pictures in the illustration shown in Fig. 14.1 on page 206 as:

1. Primary sector
2. Secondary sector
3. Tertiary sector



DON'T MISS OUT

These days, used paper is recycled to make new paper. Recycling just one tonne of paper saves 17 trees as well as 2.5 cubic metres of landfill space, where waste is dumped. It also takes 70 per cent less energy and water to recycle paper than to make new paper from wood pulp.



What are the different ways through which we can judiciously use paper in the classrooms and offices of your school?

LET'S EXPLORE



List the economic activities in your neighbourhood and label them appropriately as primary, secondary or tertiary. Draw arrows to show how they are connected to each other. In what ways are they dependent on each other? What would happen if one of the activities ceased to exist?



Before we move on...

- In this chapter, we learnt about the three sectors of economic activities.
- The various examples and illustrations helped to understand the difference as well as the interdependence between the three types of economic activities or sectors — primary, secondary and tertiary.

Questions, activities and projects

1. What is the primary sector? How is it different from the secondary sector? Give two examples.
2. How does the secondary sector depend on the tertiary sector? Illustrate with a few examples.
3. Give an example of interdependence between primary, secondary and tertiary sectors. Show it using a flow diagram.



Glossary

Abundance: A very large quantity of something.

Accolade: An expression of praise or an acknowledgement of merit.

Adaptation: How a living thing changes slightly over time to survive in a changing environment.

Afterlife: A life that begins after death.
Allotment: The giving or sharing out of something.

Altitude: The height of an object above sea level.

Ancient: Of or from a long time ago.

Archaeologist: A person who studies human history and prehistory through the excavation of sites and the analysis of physical remains.

Ascetic: Someone who engages in rigorous spiritual practices to attain a higher consciousness.

Astronaut: A person who is trained to travel in a spacecraft into outer space.

Attachment: The condition of having a bond with someone or something, usually through sentiment or habit.

Auspicious: Favourable or bringing luck; for instance, 'an auspicious beginning'.

Avalanche: The sudden fall of snow, ice or rocks from a mountainside, often occurring when the snow starts melting.

Bay: A broad inlet of the sea where the land curves inwards.

Bewildering: Confusing or perplexing.

Bitumen: A black, sticky substance such as tar or asphalt.

Bonds: Connections.

Bulldozer: A heavy vehicle with a large blade in front used to move soil or rocks.

Cardinal direction: One of the four main directions — north, south, east and west.

Carve: To cut (a hard material) in order to produce an object, design.

Chant: To sing, often loudly; rhythmically and repeatedly.

Choke: To have severe difficulty in breathing because of a constricted or obstructed throat or a lack of air.

Chore: A routine task, especially a household one.

Clink: A sharp ringing sound.


Cloudburst: A sudden violent rainstorm.

Collaborate: Work jointly on an activity or project.

Collapse: To suddenly fall down or give way; such a fall.

Commemorate: To mark the memory of someone or something, often through a ceremony.

Commonality: A sharing of features or characteristics.



Conceive: To form a mental representation of something.

Confiscate: When some authority seizes someone's property.

Confluence: The meeting point of two or more rivers.

Consciousness: The quality or state of being aware, for instance of something within oneself.

Conservation: The prevention of wasteful use of a resource.

Constellation: A group of stars forming a recognizable pattern in the sky.

Constitution: A document that spells out the basic principles and laws of a nation.

Consult: To seek information or advice from.

Consumption: Eating or drinking something; purchasing goods or services.

Context: The background or setting for an event, statement or idea, in terms of which it can be fully understood.

Convention: A way in which something is usually done or agreed upon.

Conventional: Based on or in accordance with a convention.

Convicted: Having been declared guilty, by a jury or a judge, of an offence.

Cooperative: A group of people who voluntarily come together to meet their economic and social needs in a formal way.

Cosmos: The world or the universe as an ordered and harmonious system.

Crucial: Of great importance.

Cultivate: To prepare and use land or any space for crops or gardening.

Dairy: A place where milk is collected and stored.

Decentralise: To transfer control to local offices or authorities.

Dedicated: Devoted to a task or purpose.

Defy: To openly resist or refuse to obey.

Deity: A god or goddess.

Deliberate: Done consciously and intentionally.

Delightful: Highly pleasing.

Depict: To represent or describe through words or a drawing, painting, etc.

Descending: Moving or sloping downwards.

Destiny: Events that will necessarily happen to a particular person, or a power that controls future events.

Deviate: To change from the usual way.

Digging: Extracting from the ground by moving earth.

Dispute: A disagreement or argument.

Distress: Extreme anxiety, sorrow, or pain.

Diverse: Showing a great deal of variety.

Economic sectors: Broad groups of activities that help with the economic prosperity of a nation.

Eliminate: To completely remove or get rid of.

Elite: Higher layers of the society, such as rulers, officials, administrators, and often priests.

Empower: To give someone or a group of people the authority or power to do something.

Empowerment: The empowering of someone or a group of people.

Encounter: Unexpectedly meeting with someone or something.

Endanger: To put someone or something at risk or in danger.

Enforce: To cause (something) to happen by necessity or force.

Engrave: To cut or carve a text or a design on some hard surface such as stone or metal.

Enhance: To further improve the quality, value, or extent of something.

Enrich: Improve or enhance the quality or value of.

Enshrine: To preserve something highly respected in a special place or text, etc.

Epic: A long poem generally narrating the adventures of heroes and other great figures of the past.

Equator: An imaginary line on the surface of the Earth that runs at 0° latitude, dividing the Earth into the Northern and Southern Hemispheres.

Era: A distinct period of time.

Erosion: The loss of soil, rock or land caused typically by the action of the sea, wind or rain.

Eruption: A sudden outbreak of something, typically something unwelcome or noisy.

Estuary: The place where a river meets the sea.

Evolution: The process by which different kinds of living organisms have developed from earlier forms during the history of the earth.

Excavate: To dig out.

Excavator: A person who excavates an archaeological site; a large machine that digs and moves earth.

Excursion: A short journey or trip, especially one taken as a leisure activity.

Exemplify: To illustrate by giving an example, or to be an example of.

Exert: To make a physical or mental effort.

Expanse: A wide continuous area.

Exploitation: The action or fact of treating someone unfairly in order to benefit from their work.

Exploration: The activity of searching and finding out about something.

Export: Goods or services produced in one country and sold in another country.

Extraction: The action of extracting something, especially using effort or force.

Facilitate: To make an action or process easier.

Factory: Building or group of buildings where final products are manufactured or put together.

Fauna: The animal life of a particular region or period of time.

Favourable: To the advantage of someone or something.

Fee: A payment made in exchange for professional advice or services.

Figurine: A statuette, especially one of a human form.

Financial: Relating to money.

Finished goods: Goods that have completed the manufacturing process.

Flash flood: A sudden local flood, often caused by a cloudburst.

Flora: The plant life of a particular region or period of time.

Folklore: The traditional beliefs, customs, and stories of a community, passed through the generations by word of mouth.

Foothills: A low hill at the base of a mountain or mountain range.

Formulate: To express or prepare methodically.

Fortification: A massive wall surrounding a settlement or city, generally for protective purposes.

Fossils: Remains or impressions of parts of plants or animals found preserved in a petrified form within layers of soil or rocks.

Foster: To encourage the development of something.

Fragile: Easily broken or damaged.

Framework: A basic structure underlying a system, concept, or text.

Franchise: A constitutional right or privilege; or a right granted to an individual or group enabling them to carry out specified commercial activities.

Full-fledged: Completely developed or established.

Fundamental: Something that is very important and forms the base or foundation for something.

Generation: All of the people born and living at about the same time, regarded collectively.

Genetics: The branch of biology that studies how, in plants, animals or humans, certain features and characteristics get passed down from one generation to the next.

Glaring: Giving out or reflecting a strong light.

Gratitude: The quality of being thankful; appreciation for kindness.

Greenhouse farming: Growing plants in a controlled environment, like a glass or plastic structure, to improve crop yields.

Greenwich Mean Time (GMT): The mean solar time at the Royal Observatory in Greenwich, London, used as a reference time for the world.

Gregorian calendar: The calendar now used internationally.


Gulf: A part of the sea nearly surrounded with land.

Hailstone: A small ball of ice falling from the sky in showers.

Hamlet: A small settlement or small village.

Harass: To create an unpleasant or hostile situation.

Harmoniously: With harmony.



Harmony: The state of being without conflict or disagreement; the pleasing quality of any situation.

Healer: Someone who uses traditional practices to relieve or heal diseases.

Herd: A herd is a large group of animals; to herd is to keep or look after such a group.

Heritage: Valued objects and qualities such as historic buildings and cultural traditions that have been passed down from previous generations:

Historian: A person who studies and writes about the past.

History: The study of the human past.

Homemaker: A person who looks after a home, including housework.

House: An assembly where laws are discussed or passed.

Immense: Extremely large or great.

Implementation: The process of putting a decision or plan into effect.

Import: The purchase of goods by one country from other countries.

Indian Standard Time (IST): The official time observed throughout India, which is 5 hours and 30 minutes ahead of GMT.

Ingredient: An element of a whole; often, any of the foods or substances that are combined to make a particular dish.

Inhabitants: People who live in a particular place.

Inscriptions: Words or texts written or cut in some material such as stone or metal.

Interdependence: The dependence of two or more people or things on each other.

International Date Line: An imaginary line on the Earth's surface located at about 180° longitude, where, by convention, one calendar day is added or subtracted when crossed.

Intimidating: Something or someone that makes you feel scared or nervous.

Intrigue: Causing interest or curiosity about something.

Invaders: A person or group that forcefully enters a country or region.

Invocation: The calling for the assistance or presence of some superior being.

Judiciously: With good judgement or sense.

Landscape: All the visible features of an area of land.

Landslide: The sudden collapse of a mass of earth or rock from a mountainside.


Lava: The molten liquid rock that flows out of a volcano, or the rock so formed once it has cooled off.

Lichen: A plant-like organism that generally clings to rocks, walls or trees.

Livestock: Farm animals regarded as an asset.

Logistics: The detailed organization and implementation of a complex operation.

Manifest: To make evident through actions, events, or occurrences.



Manuscript: A document written by hand on some material such as bark, cloth, palm leaf or paper.

Marine: Related to or found in the oceans and seas.

Market: A place where people engage in the exchange of goods and services.

Marvel: To experience intense surprise or interest.

Meagre: Lacking in quantity or quality.

Mechanism: Part of a machine, or system of parts working together in a machine.

Meridian of longitude: An imaginary half-circle that runs from the North Pole to the South Pole on the surface of the earth and indicates how far east or west a point on the Earth's surface is from the Prime Meridian.

Metallurgy: The technique of extracting metals from nature, purifying or combining them, as well as the scientific study of metals and their properties.

Meticulous: Showing great attention to detail; very careful and precise.

Middlemen: Persons who buy goods from producers and sell them to consumers at a fee.

Migrate: People moving from one place to another for some length of time.

Monetary: Relating to money or currency.

Monetary value: Value of something that can be measured in terms of money.

Money's worth: The monetary value that people place on an object based on the benefit they derive from it.

Monk: A man who leaves life in the world to become part of a community leading a life dedicated to religious or spiritual pursuits.

Montane forest: A type of forest that grows in mountainous regions.

Moss: A small green plant without flowers or true roots, often spreading in a cushion-like cover.

Motto: A short sentence or phrase chosen as the beliefs or ideals of an individual, family, or institution.

Narrative: A story or account of events, experiences, or interactions, typically presented in a structured format.

Native: A person born in a specified region or country and still lives there.

Navigate: The act of directing a ship, aircraft, etc. from one place to another, or the science of finding a way from one place to another.

Navigation: The act of navigating.


Nominal: In name only.

North Pole: The point in the Northern Hemisphere where the Earth's axis of rotation meets the Earth's surface, located at 90°N.

Nuclear family: A family consisting of parents (or a parent) and their children, but not including aunts, uncles, grandparents, etc.

Numerous: Great in number; many.

Nun: The female equivalent of a monk.



Offshoot: A thing that develops from something else.

Orchard: An enclosed piece of land planted with fruit trees.

Oversee: To supervise a person or persons and their work.

Parallels of latitude: Imaginary lines on the surface of the Earth that run east to west, parallel to the Equator, and indicate how far north or south a point on the Earth's surface is from the Equator.

Paraphrase: To express the meaning of something written or spoken, but using different words, especially to achieve greater clarity or to summarise.

Pasteurisation: A process by which milk is preserved by heating it to a specific temperature to kill harmful bacteria.

Payment in kind: A non-cash payment received for the work performed.

Perceive: To be aware of something or someone.

Perceptible: That can be seen, heard, felt, tasted, smelled, or somehow noticed.

Perspective: The way you see or think about some issue.

Pigment: A substance that gives something a particular colour when it is present in it or added to it.

Pilgrim: A person who journeys to a sacred place for religious reasons.

Pitch in: To intervene by contributing something.

Precipitation: Water from the atmosphere reaching the ground in any form — rain, snow and hail are the most common forms of precipitation.

Precise: Marked by accuracy of expression or detail.

Prime Meridian: The meridian of longitude designated at 0°, which passes through Greenwich, England.

Proportion: A part, share, or number considered in comparison with a whole.

Prosperity: The state of being prosperous.

Prosperous: Having or bringing wealth and success.

Pulses: A category of crops that includes beans, peas, lentils (dal).

Radiate: To emit (energy, especially light or heat) in the form of rays or waves.

Regulate: To control by means of rules and regulations.

Relief: A design that stands out from the surface of a panel, which may be of stone, wood, ceramic, etc.

Renovation: Making something (such as a building) new again.

Renowned: Known or talked about by many people; famous.

Reservoir: A large natural or artificial lake used as a source of water supply.

Resilience: The capacity to meet challenges and difficulties, adapt to them or overcome them.

Resolve: To settle or find a solution to.

Retail: The sale of goods in small quantities for use by the end consumer.

Reverence: Deep respect for someone or something.

Rob: To take property unlawfully from a person or place.

Rounded off: Approximated to a simpler number.

Salary: A fixed regular payment generally paid monthly by an employer to an employee.

Scholar: A specialist in a particular branch of study.

Scorching: Very hot.

Sea level: The average level of the surface of the oceans, also called 'mean sea level'.

Sea: A large body of salty water that is smaller than an ocean and partly or completely surrounded by land.

Secondary sector: The group of activities that involves processing of raw materials derived from the primary sector into products for sale or consumption.

Seeker: A sage, yogi, philosopher or intellectual who seeks the truths of this world.

Segregation: The action or state of setting someone (or a group of people) or something apart from others.

Settlement: A place where people establish a community.

Shrine: A sacred space or place.

Source of history: A place, a person, text or an object from which we gather information about some past event or period.

South Pole: The point in the Southern Hemisphere where the Earth's axis of rotation meets the Earth's surface, located at 90°S.

Species: A group of closely related living beings that have similar characteristics and breed with each other.

Spectacular: Beautiful in a dramatic and eye-catching way.

Spiritual: Concerned with something greater than oneself, such as the spirit or soul (ātman in Sanskrit and many Indian languages).

Spirituality: The search for, or attainment of, a deeper or higher dimension beyond our current personality.

Standard Time Zone: A zone of typically 15° of longitude wide, which corresponds to one hour of time difference from the next time zone.

Statecraft: The management of state affairs.

Steep: Rising or falling sharply.


Stirring: Causing excitement or strong emotion.

Subcontinent: A large distinguishable part of a continent.

Submerge: Cause (something) to go under water.

Surge: A sudden powerful forward or upward movement, for instance by a crowd or by a natural force such as the tide.

Synthetic: Not natural; artificial.



Terrace farming: Cultivation on steps of land that are cut into mountain slopes.

Terrain: A piece or stretch of land, from the point of view of its physical features.

Terrestrial: On or relating to the earth.

Tertiary sector: The group of activities that involves the provision of services which complement both primary and secondary sectors, such as transportation, banking, etc.

Testimony: Evidence or proof of something.

Transform: To make a marked change in the form, nature, or appearance.

Transgender: Someone who is born as a person of one sex but relates more to the experiences of a person of the other sex.

Transmit: To pass on something from one person or place to another.

Tributary: A river that flows into a larger river (or lake).

Underlying: Lying or situated under something.

Underprivileged: Not enjoying the same standard of living or rights as the majority of people in a society.

Undulating: Moving with a smooth up-and-down motion.

UNESCO: This stands for 'United Nations Educational, Scientific and Cultural Organization', which promotes dialogue between people and nations through education, science and culture.

Unstitched: Having no stitches; unsewn.

Upliftment: A raise in the level of something; an improvement.

Urbanization: The process by which towns and cities are formed.

Valley: A lower area between hills or mountains, often with a river or stream flowing through it.

Variation: A different or distinct form or version of something.

Vital: Absolutely necessary; essential.

Voluntary: Acting of one's own free will.

Wage: A payment made by the employer to the worker for a specific period of time.

Warehouse: A large building used for storing products before they are sold, used or rented out.

Wealth: An abundance of valuable possessions.

Weaving: Forming cloth by interlacing threads of yarn.

Welfare: Health, prosperity and well-being.

Widespread: Found or distributed over a large area or number of people.

Worldview: A certain view or understanding of the world, its origin or workings.

Note: The definitions in this Glossary have been simplified keeping in mind the Grade and the particular context in which the words defined are used in this textbook.

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4. AI generated images

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Notes: (1) "ASI" stands for Archaeological Survey of India; (2) all Internet links are as accessed in June 2024.