

The sun's daily journey

Let us follow a place X on the earth's surface as the earth rotates. The part of the earth facing the sun has day, and the part turned away from the sun has night.

- As X nears the red dot, it starts to get some light. But the sun is not yet visible. This part of the day is called **dawn**.
- When X reaches the red dot, the sun becomes visible to X on the east. X gets the first direct rays from the sun. This is the time of **sunrise**.
- At the blue dot, the sun is directly overhead at X. It is now **noon**, or **midday**, at X. After this, X begins to turn away from the sun.
- At the green dot, the sun disappears from view on the west. This is the time of **sunset**.
- As X moves away from the green dot, it gets a little light for some time, even though the sun is not visible. This time is called **dusk**.
- At the yellow dot, X is farthest from sunlight. It is now **midnight** at X.

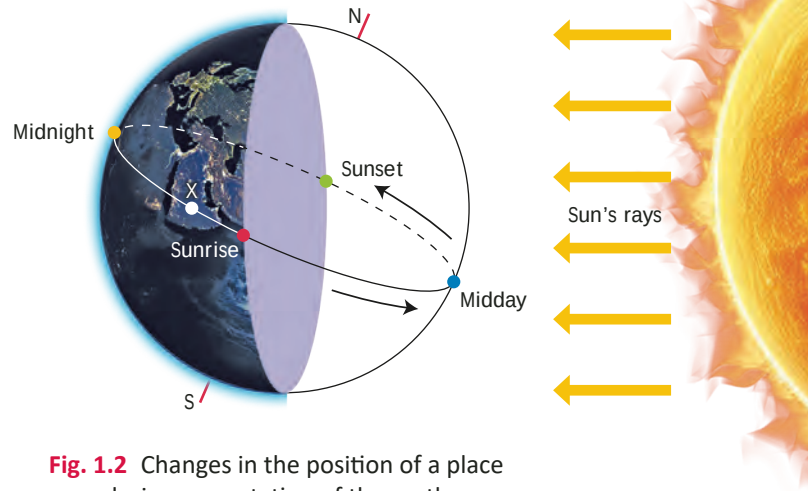


Fig. 1.2 Changes in the position of a place during one rotation of the earth

ACTIVITY

Do this simple activity to see how a place on the earth has day and night due to the earth's rotation. You will need an orange, a pencil, a *bindi* or a small sticker, and a source of light. You may use the light from a torch or a mobile phone.

1. Push the pencil through the orange and use it as the earth.
2. Paste the bindi somewhere on the orange. The bindi represents a place on the earth.
3. Darken the room and shine the light on the orange. The light represents the sun.
4. The side of the orange facing the light will be lit (day), and the other side will be in darkness (night).
5. Slowly rotate the orange from left to right, just as the earth rotates.
6. See how the bindi moves between the lit (day) and dark (night) parts as the orange turns.



Fig. 1.3 The bindi moves from darkness to light as the orange rotates.

Revolution

While spinning about its axis, the earth also revolves around the sun along its orbit. The earth takes about 365 days (1 year) to complete one revolution.

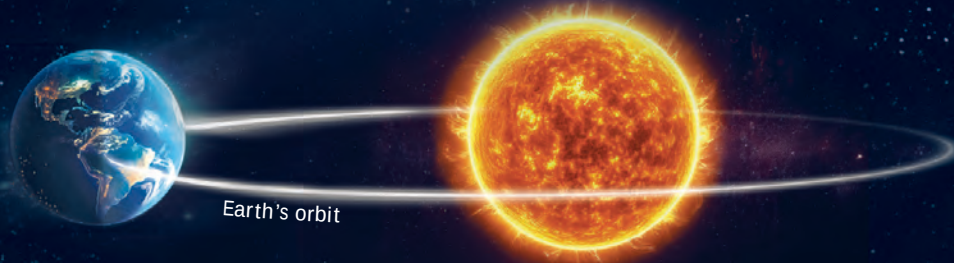
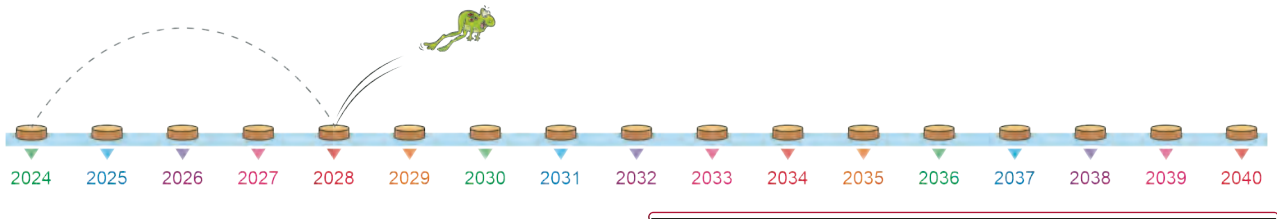


Fig. 1.4 Revolution of the earth



The earth takes about 365 days and 6 hours to move around the sun once. But, to keep things simple, we take a calendar year as 365 days only. Every four years, the extra 6 hours add up to 24 hours ($6 \times 4 = 24$), which makes 1 extra day. This extra day is added to the February of the fourth year, so that it has 29 days instead of 28, and that year has 366 days. Such a year is called a leap year. Can you calculate which years will be leap years till the year 2040?



We imagine a line called the **equator** running around the middle of the earth. It divides the earth into two equal parts—the Northern Hemisphere and the Southern Hemisphere. The earth's axis is tilted. So, one of these hemispheres leans towards the sun while the other leans away. The earth's revolution around the sun and the tilt of its axis result in different lengths of days and nights, and different seasons.

Unequal days and nights

- The hemisphere that leans towards the sun gets sunlight for a longer time. So, it has longer days and shorter nights.
- The hemisphere that leans away from the sun gets sunlight for a shorter time. So, it has shorter days and longer nights.
- Only at the equator, are days and nights equal.

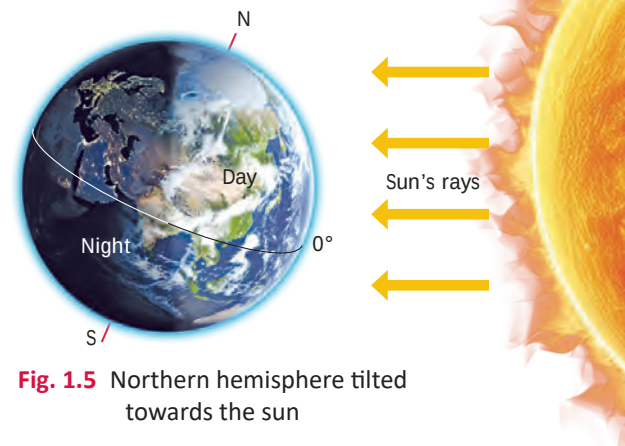
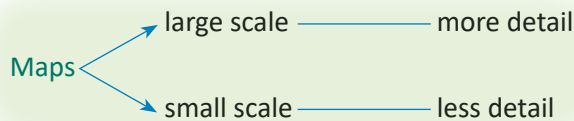


Fig. 1.5 Northern hemisphere tilted towards the sun

The scale of a map can also change the level of detail that can be shown on a map. A large-scale map covers a small area but shows a lot of details. A small-scale map of the same size covers a larger area but shows lesser details. So, to find a particular place in your city, you would use a large-scale map. But, to find the location of countries you would use a small-scale map.



Fig. 2.10 A large-scale map



Direction The directions east (E), west (W), north (N) and south (S) are called the **cardinal points** of the compass. Most maps have a vertical arrow marked 'N' in one corner. This is called the **north line**, and it points to the north direction. If there is no north line, we assume that the top of the map is the north. Once we know where the north is, it is easy to find the other directions—east, west and south.

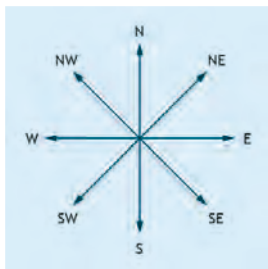


Fig. 2.12 The cardinal points and intermediate directions

Large-scale maps

They cover small areas but show a lot of details.

These are useful for navigation and finding specific locations.

Small-scale maps

They cover larger areas but show less details.

These are useful for understanding general locations and distances between larger areas.



Fig. 2.11 A small-scale map

Besides the four main directions, there are also four **intermediate directions**—north-east, north-west, south-east and south-west. The intermediate directions help us locate places more accurately.



Landforms: Features of the Earth's Surface

The surface of the earth is not even. It has different features in different regions. These features are called **landforms**.

How Do Landforms Take Shape?

Landforms are formed and shaped by various natural processes.

There is a layer of **magma** (very hot molten rock) under the surface of the earth. The flow of magma under the earth's surface can sometimes push up or pull down a part of the surface, and thus form new landforms.

When magma comes out onto the earth's surface, it is called **lava**. Lava cools down and hardens into different shapes, creating various landforms.

Some landforms are created when wind, running water and glaciers wear away existing land surfaces. Wind, running water and glaciers can break off pieces from rocks and carry them away. This process is called **erosion**. Erosion shapes existing landforms. And the eroded materials can form new landforms when they are deposited elsewhere.

Types of Landforms

Some of the major landforms we see around the world are **mountains**, **plateaus** and **plains**.



Mountains

A mountain is a cone-shaped landform that rises much higher than the land around it. It has steep sides and a pointed top. The pointed top of a mountain is called its **peak**. When many mountains are in a line, they form a mountain **range**. Mount Everest is a peak in the range called Himalayas. Mount Aconcagua in the Andes range and Mount Elbert in the Rockies range are other examples of peaks.

A **hill** is a low mountain. Hills have rounded tops and gentler slopes than mountains.

The mountains and hills of a range are separated by deep valleys. A **valley** is a lowland lying between two areas of higher ground.



Oral source material

Oral sources are stories, songs and sayings passed down from one generation to the next to the next by telling or performing. For example, grandparents tell stories to their children, who then share them with their own kids. Some of these stories are family histories, called **genealogies**, which talk about ancestors and where they came from.

Folklore is another type of oral source. It includes traditional tales or legends. These stories often teach a lesson. Folk songs, dances and dramas also help preserve history. For example, the folk art forms Yakshagana from Karnataka and Chhau from West Bengal, Jharkhand and Odisha tell various traditional stories through performances.

Speeches and **interviews** are also important oral sources. They help us learn about the past through the memories and experiences shared by people who lived during important historical events.

Why sources are important

Sources help us understand how people lived, what they believed and how they interacted with each other. They give us evidence of important activities like trade, politics and culture.

Sources also show us technological advances, such as new tools and buildings. They help historians piece together events and learn from the experiences of past societies.

By studying sources, we connect with our roots and understand how human societies have changed and developed over time.

Modern advances in studying history

Historians now use science to learn more about the past. They study ancient climates to understand how environmental conditions affected people. Chemical tests on excavated objects reveal what people ate or how they made tools. Genetic studies help historians learn where people came from and how they are connected to us today. (**Genetics** is the study of how certain characteristics are passed down from one generation to the next in plants and animals.) Additionally, historians also use relatively modern sources like newspapers, the television and the internet to get details about events in the recent past.

Conclusion

The history we read today comes from the hard work of many scholars who studied these sources for years. Their research helps us understand our past, know our culture and grow into responsible citizens.



Fig. 1.7 Yakshagana



Seals showing animals like bulls, elephants, tigers and rhinoceros tell us about the wildlife of that time.



The Harappans made animal figurines, and toys with moving parts, like this bull whose head moved when the string was pulled.

A pangolin figurine



A toy cart

Gaming boards with small pieces have been found at many Harappan sites.



This stone sculpture of a bearded man has been found at Mohenjo-daro. It shows a man wearing a patterned shawl and a headband.

The Harappans used a special drill to make holes in stone beads. These holes helped thread the beads into necklaces and bracelets.



A large water tank found at Dholavira, showing the Harappans' advanced engineering skills. Similar water tanks have also been discovered in other Harappan cities like Mohenjo-daro and, more recently Rakhigarhi.





A gateway in the fortifications surrounding the citadel at Dholavira. Remains of pillars with polished surfaces can be seen near this gate.



A brick well found at Lothal. Wells have been found in most Harappan cities. Mohenjo-daro has over 700 wells.

The citadel of Mohenjo-daro



1. **Assertion (A)** The Eightfold Path is also called the Middle Path.

Reason (R) The Buddha suggested a way of life that avoided both extreme hardship and extreme luxury.

2. **Assertion (A)** Prince Vardhamana came to be known as 'Jina' (conqueror) after he attained Kaivalya.

Reason (R) He was able to gain a large number of followers in different parts of India.



The Ajanta caves and the Ellora caves are located in present-day Maharashtra, India. They are very old rock-cut temples and monasteries and filled with amazing art.

The Ajanta caves were built between the 2nd century BCE and the 6th century CE. They have beautiful paintings and sculptures that show the life of the Buddha and stories from the Jataka tales.

The Ellora caves were built between the 6th and 9th centuries. They have Buddhist, Hindu and Jain temples all in one place! The carvings are detailed and very impressive. The Kailasa temple in Ellora is especially famous for its grand design.

Today, these caves are UNESCO World Heritage Sites. Visitors from around the world come to see their beauty and learn about India's history.



Scenes from the Buddha's life painted inside the Ajanta caves

The beautiful Kailasa temple in the Ellora caves



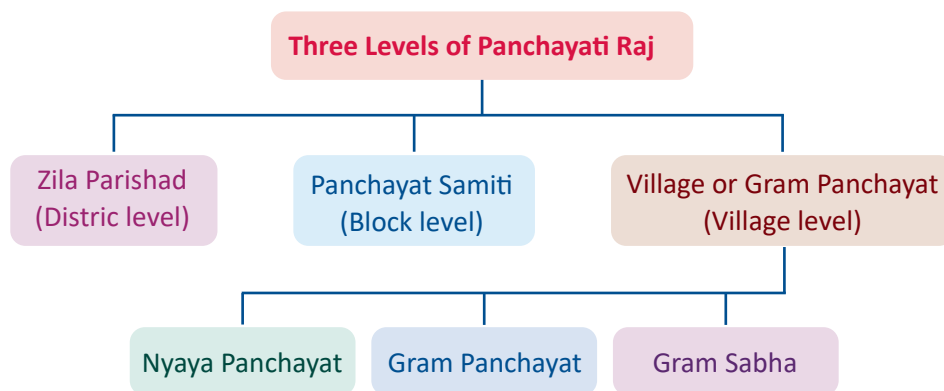
TRY IT OUT

Pick one example of how Indian philosophy has influenced the world.

- It could be how Buddhism spread to China, Japan, Tibet and other parts of the world.
- It could be how Yoga is now practised by people worldwide.
- It could be how the concept of ahimsa influenced Mahatma Gandhi and other world leaders.

Create a presentation on your chosen topic. Share it with the class and explain how Indian ideas have travelled across the world!

For better management, states in India are divided into districts. Each district is further divided into blocks, which have several villages. Panchayats exist at all three levels—village, block and district. This system is called **Panchayati Raj**. The system works at three levels—village (gram panchayat), block (panchayat samiti) and district (zila parishad). Together, they manage roads, water, schools, farming and healthcare among many other things. It helps people make decisions and solve problems in their community. Panchayats bring development, fix local issues and make sure government help reaches everyone.



🌀🌀🌀 How Are Panchayats Formed? 🌀🌀🌀

Members at all the three levels of local self-government—gram panchayat (village), panchayat samiti (block) and zila parishad (district)—are elected by the people. Each area under a panchayat is divided into smaller parts called **constituencies** or **wards**. Each ward elects one representative. Members serve for five years. Some seats are reserved for women and disadvantaged groups.

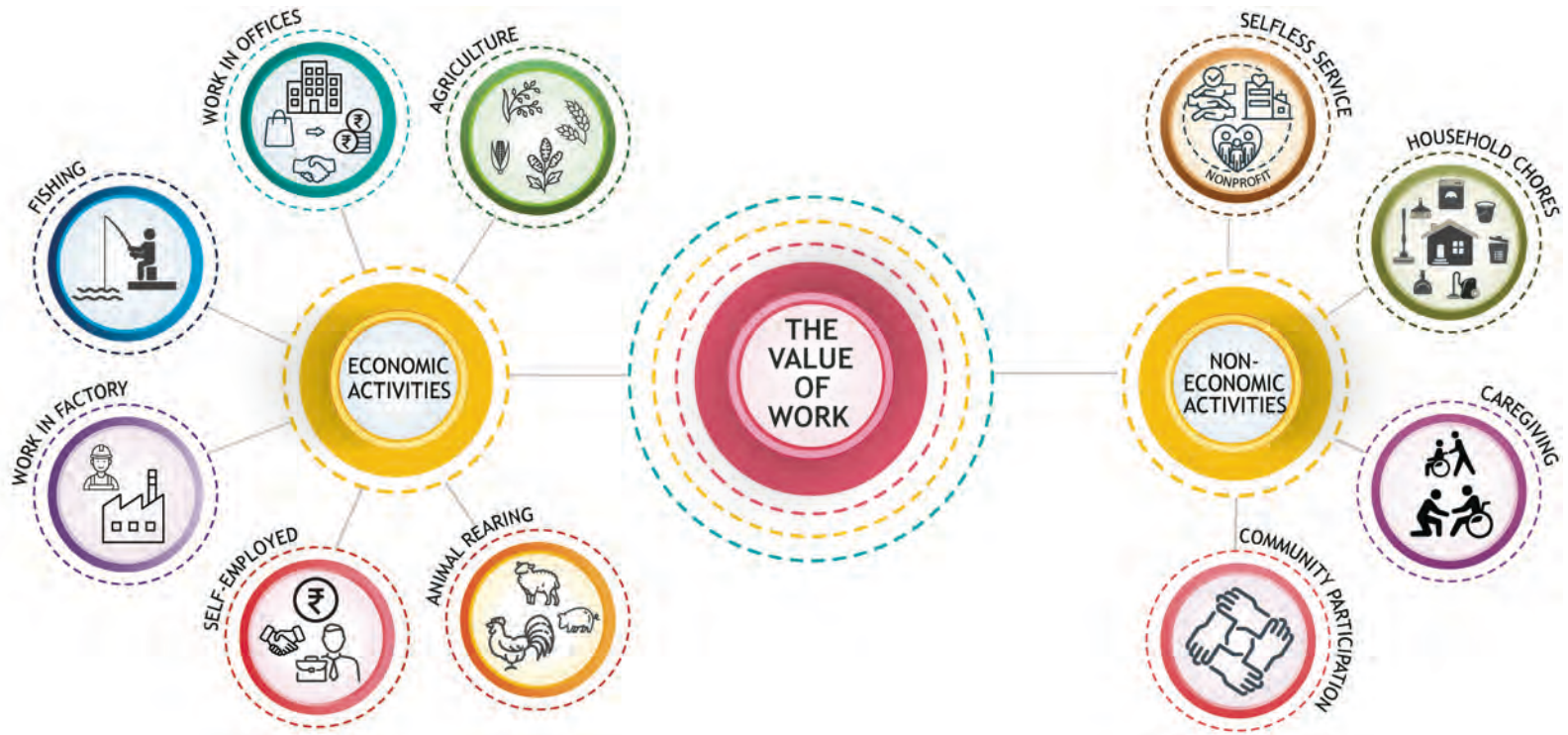
Local MLAs and MPs are part of block samitis and zila parishads. Heads of gram panchayats in a block join the block samiti. Similarly, heads of block samitis become members of the zila parishad. They are called **ex officio** members because they hold these roles by their position. This means they do not need to be elected again to be part of these groups. A person automatically gains certain duties or privileges because of their position or office, without needing extra approval.

A simple way to understand ex officio membership is by looking at your school. In your school, the principal is ex officio head of the student council. This means that even though the students did not elect the principal, he or she still has the right to be part of council meetings because of his or her position.



In the 8th century, Chola rulers governed southern India. They had strong village administration. Three assemblies managed village affairs. They owned land, collected taxes and managed funds. They had judicial powers too.

POINTS TO REMEMBER



- There are two types of work—economic and noneconomic activities.
- Economic activities are done to earn money or income. For instance, farmers sell their crop, people work in offices and shopkeepers sell their goods to earn.
- Noneconomic activities are done out of love, care or responsibility without expecting money. For instance, looking after your grandparents, doing household chores, offering selfless service at temples and gurudwara, etc.
- Money is used to buy or sell goods and services.
- Before money came into use, people used the barter system, where they exchanged items.
- There are various forms of payment like salary, fee, wages and payment in kind.
- The process of adding value to a product and transforming it into something for consumption by spending time, skill and resources is called value addition.
- Noneconomic activities are important because they build strong personal and community relations and teach responsibility to make you a better person.