



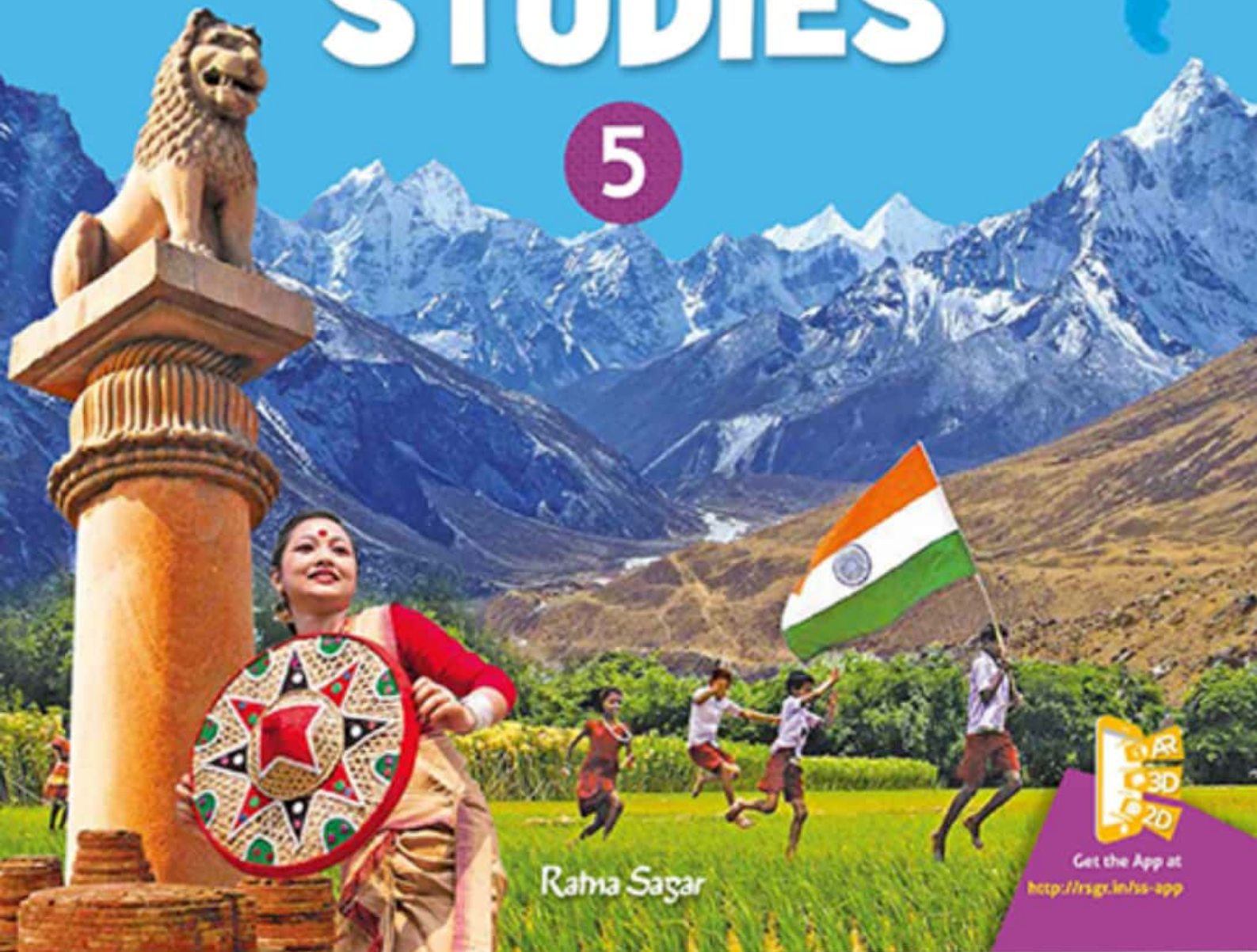
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My Big Book of SOCIAL STUDIES

5

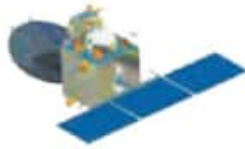


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Contents

COMIC STRIP Let's Keep Our City Clean 6

1. Know Your Planet 9

2. Parallels and Meridians 15

3. Movements of the Earth 20

4. Major Landforms 25

MY PAGE 31

5. Weather and Climate 32

6. The Land of Dense Forests 38

7. The Land of Snow 45

8. The Land of Sand 52

9. The Treeless Grasslands 59

MY PAGE 65

MODEL TEST PAPER 67

10. Environmental Pollution 69

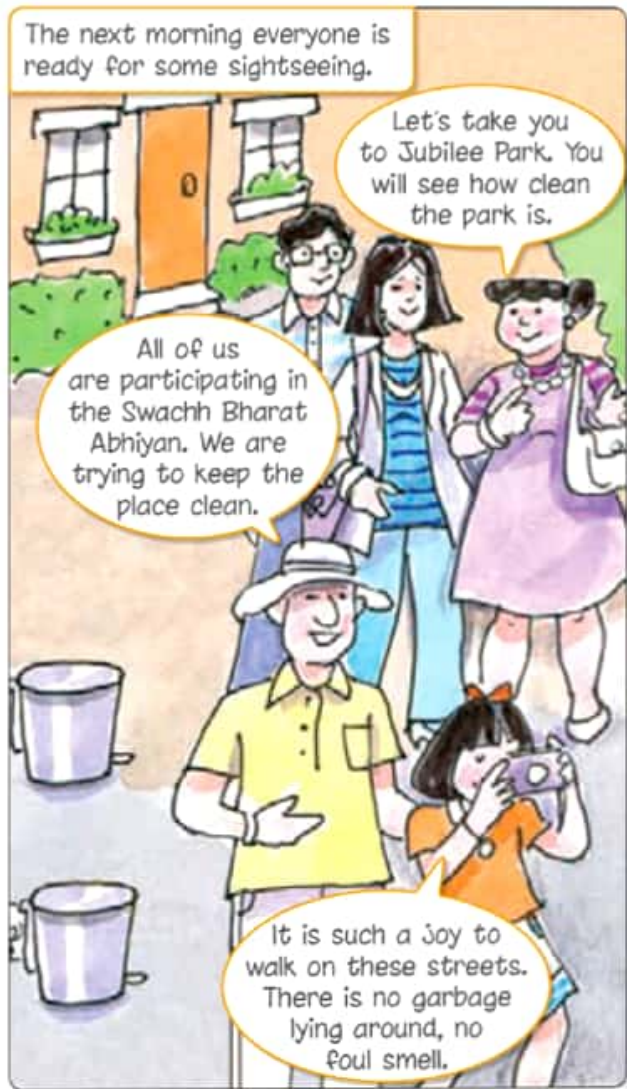
11. E for Environment 74



Let's Keep Our City Clean

Alice Zhimo, a 10-year-old girl from Nagaland, is going to her aunt's place for her summer holidays. She goes to the market with her mother to buy a few things they need for the journey.





Alice and her parents are pleased to see the clean and beautiful Jubilee Park.



They take a bus back from the park.



At Aunt's house . . .



Every city and town should be
clean, healthy and beautiful! Let's work
together to make our cities and towns
CLEAN and GREEN.



Illustrations by NEETA GANGOPADHYAY



Know Your Planet



Get Set!

Write the names of two planets

1. whose names start with the letter **M**. _____

2. which lie beyond Saturn. _____

Which of the eight planets would you like to visit and why? Discuss in class.

Our Earth is a unique planet. It is the only planet in our solar system that has water and air. Our Earth has land masses and water bodies. The large land masses are called **continents**. The large water bodies are called **oceans**. See Map 1.1 and learn their names.

SHAPE OF THE EARTH

In ancient times, people believed that the Earth was flat and had steep edges. Ferdinand Magellan, a Portuguese explorer, sailed around the world and proved that the Earth is round. Pictures taken from space have also proved that the Earth is like a **sphere**. It is round, but is slightly flattened at the top and at the bottom.

WHAT IS A GLOBE?

To study the Earth we need its model. A globe is a simple and accurate model of the Earth. It shows the distribution of land and water on the surface of the Earth. We can also see the correct shape, size and location of the continents and oceans on a globe.

But, we cannot always use a globe to study the Earth. This is because

- a large globe is difficult to carry around.
- a globe is small and all the details of a place cannot be shown on it.
- we cannot make a globe for a part of the Earth.
- only one half of the Earth can be seen at a time on a globe.



A globe



Map 1.1 There are seven continents and five oceans in the world.

MAPS

A map is a representation of the Earth's surface or a part of it on a flat surface. The word 'map' comes from the Latin word *mappo*, which means a napkin. Gerardus Mercator, a Flemish map-maker, was the first to publish a collection of maps in the form of a book. A book of maps is called an atlas.

We can draw maps on a flat surface to show continents, countries, cities and even a neighbourhood. You can draw a map of your school and show all the details on it. In this way a map is better than a globe.

However, the Earth is spherical

in shape and its surface is curved. A curved surface cannot be shown correctly on a flat surface such as paper. Try to cover a ball with a sheet of paper without creasing it. You will not be able to do it. So, it is not possible to make an accurate map of a curved surface. However, small areas



FactWise

One of the earliest surviving globes is the **Erdapfel** or Earth apple. It was made by Martin Behaim in 1492. Georg Glockendon painted the map on the Erdapfel.



can be represented fairly accurately on maps. This makes maps useful tools to study the Earth.

Types of maps

There are different types of maps.

Physical maps show the physical features of a place such as mountains, plateaus, plains and rivers. Countries, states and their capitals are shown on political maps. General information about climate and rainfall of a region is shown in climatic maps. Besides these, there are maps that tell us about the industries, population, transport, minerals, crops, soil, natural resources, forests and wildlife of a region.



Checkpoint

Circle the correct answers.

1. The large water bodies on the Earth are called lakes / oceans / continents.
2. The Earth is cylindrical / triangular / spherical in shape.
3. A globe is a diagram / map / model of the Earth.
4. The first person who published a collection of maps was Copernicus / Magellan / Mercator.

READING MAPS

Maps give us a lot of information about a country or a place. We must know how to read a map and understand the information it provides. Every map has some basic features. They are as follows.



The needle of the compass always points towards the north direction. Hence, we can easily find directions using a compass.

Directions

All maps follow a system of directions. The four major directions are – North, South, East and West. The top of the map is North. The bottom of the map is South. East is to the right and West is to the left. The directions on a map can also be shown by an arrow marked 'N', which points towards the north direction. The other directions are then easy to find.

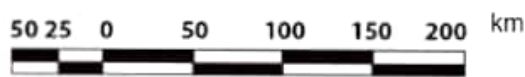
We can also mark the four intermediate directions on a map.

- North-East lies between the North and the East.
- North-West is between the North and the West.
- South-East is between the South and the East.
- South-West lies between the South and the West.

Scale

It is not possible to show the actual size of the Earth on a map because it is too large. Let us suppose that the ground

distance between Delhi and Agra is 200 km. It is not possible to show these cities at 200 km from each other on the map. Therefore, this distance is represented by a smaller unit (say 5 cm) on the map. The ratio between the distance on the ground and the distance on the map is known as the scale of the map. In this case, we would write it as 5 cm : 200 km. Maps are always drawn to scale.



A map scale

Symbols

There is not enough space on a map to show mountains, rivers, lakes, bridges, dams, temples, churches and railway tracks. However, a map without this information would not be useful. Different symbols are therefore used on a map to give us this information. For example, the land boundary of a country is shown by thick dashes and dots in black. A city is marked by a small circle.

Colours

We use different colours to show various things on a map. Generally, maps follow a common colour scheme.

For example, on a physical map

- water bodies are shown in shades of blue. Light blue is used for shallow waters and a darker shade of blue for deep waters.
- plains or lowlands are shown in shades of green.
- highlands are shown in shades of brown.

A key is given on a map to help us understand the colour scheme and the symbols used. Look at Map 1.2. Its key shows the height of land above sea level or depth of water below sea level. It also shows what the colours represent on the map.



Map 1.2 The scale, symbols and colours used on a map

Words to know

sphere

an object that is completely round, such as a ball

intermediate directions

the directions in between the major directions

symbols

marks which have a particular meaning



Quick recap

- A globe is a model of the Earth. It shows the continents and oceans.
- A map represents the Earth on a flat surface. There are different types of maps.
- North, South, East and West are the four major directions.
- The scale of a map is the ratio between the map distance and the actual distance between two places.
- Symbols and colours are used to represent different features on a map.



Read and answer



A Tick (✓) the correct answers.

- The Earth is a unique planet because
 - it is the only planet in the solar system. _____
 - it has land masses and water bodies. _____
 - it is the coldest planet. _____
 - it is the hottest planet. _____
- The explorer who sailed around the world was
 - Vasco da Gama. _____
 - Gerardus Mercator. _____
 - Christopher Columbus. _____
 - Ferdinand Magellan. _____
- A political map shows
 - countries and capitals. _____
 - rainfall and temperature. _____
 - physical features. _____
 - population. _____
- The ratio between the distance on a map and the actual distance on the ground is called
 - direction. _____
 - sphere. _____
 - scale. _____
 - symbol. _____
- The symbol used to show a city on a map is a
 - dash. _____
 - small circle. _____
 - triangle. _____
 - rectangle. _____



The Earth as seen from space.

B Write T for True or F for False.

1. We can make a globe for a small part of the Earth. _____
2. Forests and industries cannot be shown on a map. _____
3. Symbols on a map show features that cannot be drawn. _____
4. Plains and mountains are shown in different colours. _____

C Answer these questions.

1. How was it proved that the Earth is spherical in shape?
2. How is a globe useful to us?
3. How do maps help us? Why is a map less accurate than a globe?
4. What are the features that help us to read a map?

D Think and answer.

The Earth looks mostly blue when seen from space. Why?



Do and learn



E ACTIVITY Write the names of two countries in the following continents.

1. Asia _____
2. Africa _____
3. Europe _____
4. South America _____

F The scale of a map is 1 cm : 250 km. The distance between these places on a map is given. Find the actual distance.

	ON THE MAP	ON THE GROUND
1. Jammu – Chennai	11 cm	_____
2. Mumbai – Bhopal	3 cm	_____
3. Bengaluru – Visakhapatnam	4 cm	_____

G MAP WORK On the map of India given on page 142, use appropriate colours to show the following.

- Indian Ocean
- Bay of Bengal
- Northern Plains
- Arabian Sea
- Himalayas
- Thar Desert

H LIFE SKILL Find directions using the Sun. Stand facing the Sun in the morning. The Sun rises in the east, so you will be facing the east direction. Now, find the other directions.

1. _____ is to my back.
2. _____ is to my right.
3. _____ is to my left.



Parallels and Meridians



Get Set!

Look at a globe. There are some lines on it. Fill in the missing letters to complete their names.

1. E _ U _ T _ R

2. T _ _ P _ C of C _ _ C _ R

3. A _ _ T _ _ _ I _ C L _

4. _ R _ _ I _ of _ _ P _ I C _ _ N

5. _ N _ _ R _ T _ _ C _ R _ _ E

6. P _ _ M _ M _ R _ _ I _ N

You have read that the Earth is spherical in shape. To find the location of places on the Earth, we need certain imaginary lines as reference. These lines are called parallels and meridians.

The Earth rotates on its **axis**. It is an imaginary line drawn through the centre of the Earth. The end points on the axis are called **poles**. The poles are used as two fixed points. The point on the top is the North Pole. The one at the bottom is the South Pole.

PARALLELS

A set of circles is drawn on the surface of the globe. These circles run from east to west. They are called parallels or lines of latitude.

The Earth is divided into two equal parts by drawing an imaginary line midway between the North Pole and the South Pole. This line is called the **Equator**. It is the longest parallel. The part of the Earth which lies to the north of the Equator is called the **Northern Hemisphere**. The other half, known as the **Southern Hemisphere**, lies to the south of the Equator.



Fig. 2.1 Parallels are lines of latitude.



FactWise

The word 'latitude' originates from the Latin word *latus* which means wide. The word 'meridian' originates from the Latin word *meridies* which means midday. It is from the word meridian that we get words such as *ante meridiem* (a.m.) meaning 'before noon' and *post meridiem* (p.m.) meaning 'after noon.'

Important features of parallels

- All parallels are complete circles, except for the North Pole and the South Pole. These are points.
- The length of the parallels decreases as we move away from the Equator and towards the poles.
- All parallels are located at an equal distance from each other.
- Parallels neither touch nor cross one another.

How are parallels numbered?

We start from the Equator and mark it as 0° latitude. We mark the other parallels from 0° to 90° . Apart from their value, the parallels are also marked N (North) or S (South), according to their location. The North Pole is written as 90°N . The South Pole is written as 90°S . Parallels are drawn at intervals of one degree. There are 90 parallels in the Northern Hemisphere and 90 parallels in the Southern Hemisphere. Therefore, there are 181 parallels in all, including the Equator.



Fig. 2.2 Important parallels

Important parallels

Other than the Equator (0°), the North Pole (90°N) and the South Pole (90°S), there are four other important parallels. These are

- the Tropic of Cancer ($23\frac{1}{2}^\circ\text{N}$)
- the Tropic of Capricorn ($23\frac{1}{2}^\circ\text{S}$)
- the Arctic Circle ($66\frac{1}{2}^\circ\text{N}$)
- the Antarctic Circle ($66\frac{1}{2}^\circ\text{S}$)

The Arctic and the Antarctic circles are also called polar circles.



Checkpoint

Write T for True or F for False.

1. The east-west lines drawn on a globe are called parallels. _____
2. All parallels are of the same length. _____
3. The North Pole lies in the Southern Hemisphere. _____
4. The Tropic of Cancer lies in the Northern Hemisphere. _____

MERIDIANS

Imaginary lines running from north to south are called meridians or **lines of longitude**. These lines are drawn from pole to pole.



Fig. 2.3 Meridians are lines of longitude.

Important features of meridians

- All meridians are of the same length.
- The maximum distance between any two meridians is at the Equator.
- The distance between any two meridians decreases as we move away from the Equator towards the poles.
- Meridians cut the parallels at right angles (90°).
- Meridians are used to measure distances in the east-west direction.

How are meridians numbered?

You have read that to number the parallels we start from the Equator. Similarly, we need a starting point to number the meridians. In 1884, it was decided to fix Greenwich, a place near London, as the starting point for numbering meridians. The meridian that passed through Greenwich was

marked 0° and named Prime Meridian. The longitude of a place is measured east or west of the Prime Meridian.

Like parallels, meridians are also drawn at intervals of one degree. If we move away from the Prime Meridian towards the east or the west, we reach halfway round the Earth at 180° . Thus, there are 180 meridians towards the east of the Prime Meridian and 180 meridians towards the west of the Prime Meridian. The meridian of 180° E and 180° W is the same line. So, in total there are 360 meridians.

Locating places on the globe

The parallels and meridians form a network of lines on the globe. This is called a **grid**. We use it to locate places on the globe.

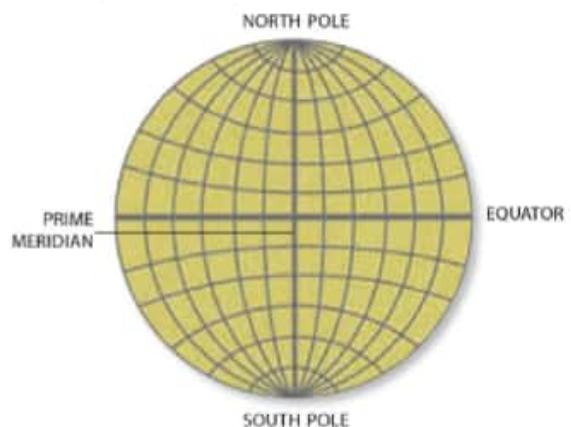


Fig. 2.4 A grid is a network of parallels and meridians.

To locate a place, we must know the values of its parallel or latitude and its meridian or longitude. The point at which the parallel and the meridian cross each other is the location of that place.

Words to know

- axis** an imaginary line passing through two extreme points on a sphere around which it spins
- pole** either of the end points at the top or bottom of the Earth's axis



Quick recap

- The two end points on the Earth's axis are called poles. The North Pole is in the Northern Hemisphere and the South Pole is in the Southern Hemisphere.
- Lines of latitude, also called parallels, are drawn from east to west.
- The Equator is the longest parallel. It divides the Earth into two equal halves.
- Lines of longitude are also called meridians. They are drawn from north to south.
- The Prime Meridian (0°) is taken as the starting line for all other meridians.
- The network of parallels and meridians on the globe is called a grid. To locate a place on a globe, we must know its latitude and longitude.



Read and answer

A Tick (✓) the correct answers.

- The two end points of the Earth's axis are called
a. dots. _____ b. lines. _____ c. poles. _____ d. caps. _____
- The part of the Earth above the Equator is called the
a. North Pole. _____ c. South Pole. _____
b. Southern Hemisphere. _____ d. Northern Hemisphere. _____
- If parallels are drawn at intervals of one degree, there will be
a. 181 parallels. _____ c. 360 parallels. _____
b. 90 parallels. _____ d. 180 parallels. _____
- The Prime Meridian passes through a place called
a. Sandwich. _____ c. Norwich. _____
b. Greenwich. _____ d. London. _____
- To locate a place on a globe we must know its
a. latitude. _____ c. latitude and longitude. _____
b. longitude. _____ d. time zone. _____

B Complete the series.

1. Tropic of Cancer : $23\frac{1}{2}^{\circ}\text{N}$: : Tropic of Capricorn : _____
2. Equator : _____ : : Prime Meridian : Longitude
3. _____ : Longitudes : : Parallels : Latitudes
4. North Pole : 90°N : : _____ : 90°S
5. _____ : $66\frac{1}{2}^{\circ}\text{N}$: : Antarctic Circle : $66\frac{1}{2}^{\circ}\text{S}$

C Answer these questions.

1. What is a parallel? Write three features of parallels.
2. How do we number parallels on a globe?
3. What is a meridian? Write three features of meridians.
4. How can we locate a place on a globe?



The Prime Meridian passes through the Royal Observatory at Greenwich.

D Think and answer.

The length of a parallel increases as we move away from the poles towards the Equator. Why?



Do and learn

- E ACTIVITY** Fill in the table with the names of the countries through which the parallels pass. Choose from the box. You can look up an atlas for help.

Kenya Paraguay Mexico Saudi Arabia Canada Russia Ecuador Australia

Equator	Tropic of Cancer	Tropic of Capricorn	Arctic Circle

- F** A place that is closer to the poles is always colder than a place that is closer to the Equator. Which of these places will be colder? Give reasons.

1. Hammerfest – 70°N , 23°E OR Vostok Station – 78°S , 106°E
2. Lagos – 6°N , 3°E OR Melbourne – 37°S , 144°E
3. Turkmenbat – 39°N , 63°E OR Valdivia – 39°S , 73°W

- G** Through which states in India does the Tropic of Cancer pass? Use an atlas to find out.

- H WEBLINK** To play an interesting game on locating places, visit rsgr.in/bss501.



Movements of the Earth



Get Set!

Fill in the correct numerals.

- 1 minute = _____ seconds
- 1 hour = _____ minutes
- 1 hour = _____ seconds
- 1 day = _____ hours
- 1 month = _____ days
- 1 year = _____ months
- 1 year = _____ days
- 1 leap year = _____ days

In ancient times, people believed that the Earth was stationary and heavenly bodies moved around it. Nicolaus Copernicus, a Polish astronomer, first said that the Earth spins on its own axis and moves around the Sun. Thus, the Earth has two types of movements – **rotation** and **revolution**.

ROTATION

The movement of the Earth on its axis is called **rotation**. The Earth takes about 24 hours or one day to complete one rotation. It **rotates** from west to east. Due to this, we see that the Sun rises in the east and sets in the west.

Days and nights

The rotation of the Earth causes days and nights. Due to its spherical shape, only half of the Earth receives light from the Sun at a particular time. This half has 'day'. The other half, which is turned away from the Sun is in darkness and has 'night'. See Fig. 3.1.

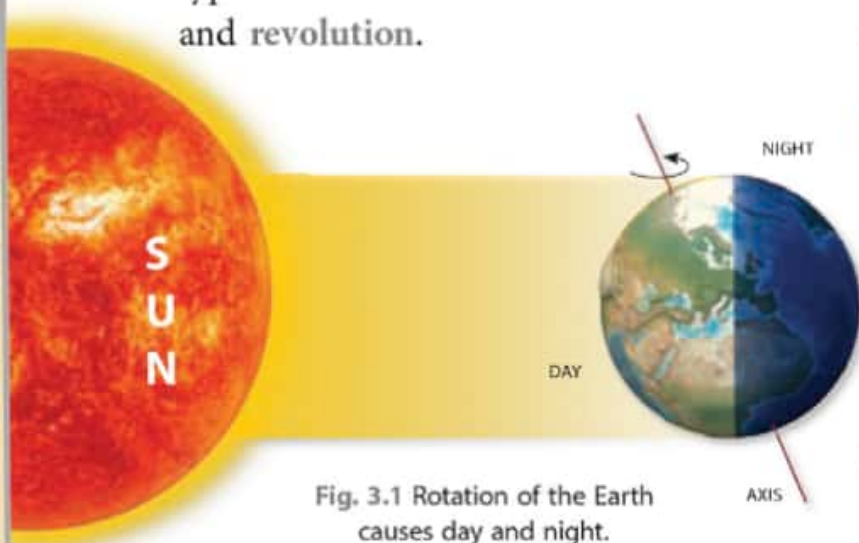


Fig. 3.1 Rotation of the Earth causes day and night.



After night comes day – this is caused by the rotation of the Earth.

Let us understand the formation of day and night through an activity. Look at Fig. 3.2. Take a torch and a globe. Ask your friend to shine the torch on the globe. You will see that half of the globe is lighted, while the other half is not. Find out the names of two countries each lying in the lit half and the dark half. Now slowly rotate the globe. What do you see? You will see that the countries which were in the lighted part have now moved into the darkness. The countries which were in the dark have now moved towards the light. This shows that as the Earth rotates, all places have day and night, but at different times.



Fig. 3.2 Only one-half of the globe receives light from the torch at a particular time.



Checkpoint

Fill in the blanks.

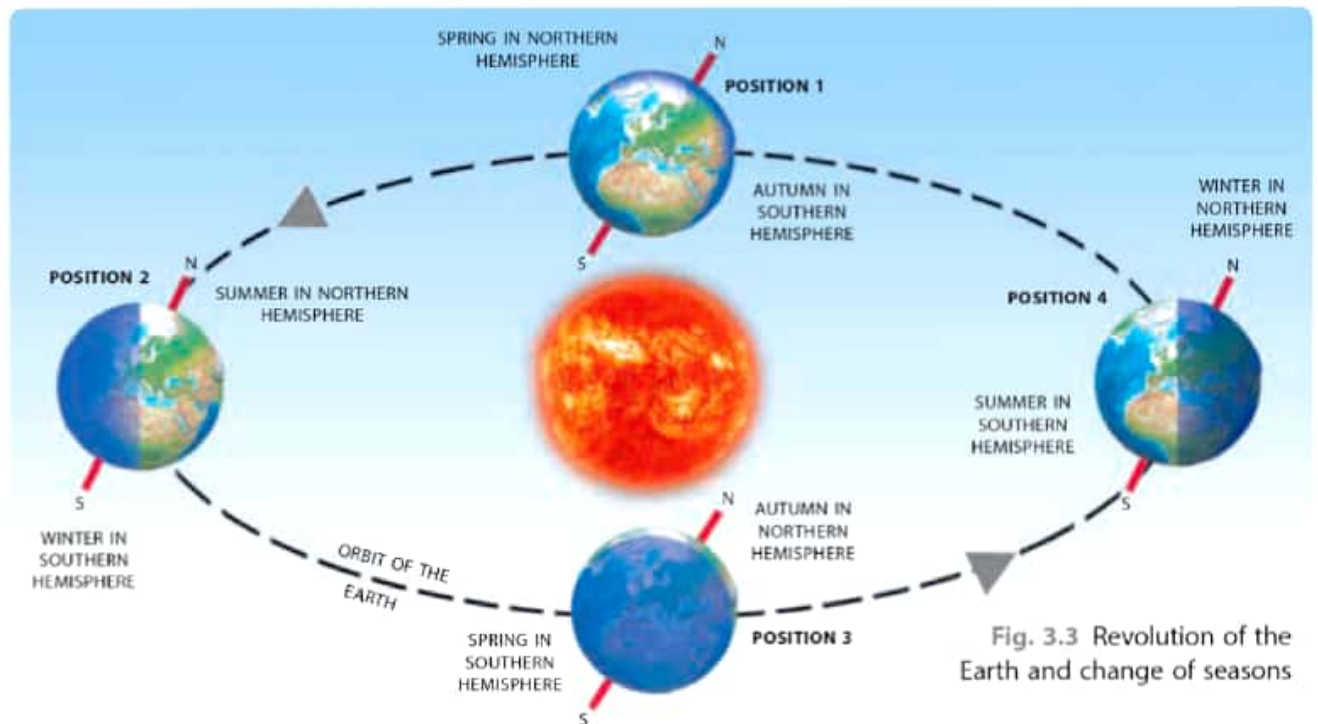
1. The Earth moves around the _____
2. _____ is the movement of the Earth on its axis.
3. To rotate once on its axis the Earth takes about _____
4. The part of the Earth which has _____ is turned away from the Sun.

REVOLUTION

While rotating on its axis, the Earth also revolves around the Sun. This movement is called **revolution**. The Earth revolves along a fixed path called **orbit**. The orbit is **oval** in shape. It takes the Earth about 365 days or one year to complete one revolution.

Seasons

The revolution of the Earth causes four seasons – summer, autumn, winter and spring. Fig. 3.3 shows the revolution of



the Earth and the change of seasons.

Look at **Position 2**. At this position the North Pole is tilted towards the Sun. The Northern Hemisphere gets more sunlight. Therefore, it is summer in this hemisphere. The days are longer than the nights. During this time the South Pole is tilted away from the Sun. The Southern Hemisphere gets less sunlight. Therefore, it is winter in this hemisphere. The days are shorter than the nights.



FactWise

The Earth actually takes $365\frac{1}{4}$ days to go around the Sun once. But a year has 365 days. So, every four years we add a day ($\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 1$) to the month of February. That year is called a leap year and has 366 days.

Look at **Position 4**. The South Pole is tilted towards the Sun. The Southern Hemisphere gets more sunlight. Therefore, it has summer. During this time the North Pole is tilted away from the Sun. The Northern Hemisphere gets less sunlight. Therefore, it is winter in this hemisphere.

Look at **Position 1** and **Position 3**. When the Earth is in these positions, the Sun's rays fall directly on the Equator. As a result, the length of days and nights become the same throughout the world. It is neither very hot nor very cold in both the hemispheres. The Northern Hemisphere has spring in Position 1 and autumn in Position 3. The Southern Hemisphere has autumn in Position 1 and spring in Position 3.

Words to know

- rotate to move or turn in a circle
revolve to go in a circle around a central point
oval shaped like an egg



Quick recap

- The Earth has two types of movements – rotation and revolution.
- The movement of the Earth on its own axis is called rotation. It causes day and night.
- The movement of the Earth around the Sun is called revolution. It causes seasons.



Read and answer



A Tick (✓) the correct answers.

- Nicolaus Copernicus said that the Earth revolves around the
a. Moon. _____ c. Sun. _____
b. Pole Star. _____ d. comets. _____
- The movement of the Earth around the Sun is called
a. revolution. _____ c. gravitation. _____
b. rotation. _____ d. season. _____
- The revolution of the Earth causes
a. days and nights. _____ c. natural disasters. _____
b. seasons. _____ d. thunder and lightning. _____
- When it is summer in the Northern Hemisphere, the Southern Hemisphere experiences
a. winter. _____ b. spring. _____ c. rains. _____ d. autumn. _____

B The underlined word in each sentence is incorrect. Write the correct word.

- The Sun rotates from the west to the east. _____
- The Sun rises in the west. _____
- The revolution of the Earth causes days and nights. _____
- The orbit of the Earth is circular. _____
- When it is autumn in the Northern Hemisphere, it is winter in the Southern Hemisphere. _____

C Answer these questions.

1. What is rotation? How long does the Earth take to rotate on its axis once?
2. Explain how days and nights are caused.
3. What is revolution? How long does the Earth take to complete one revolution?
4. How do seasons occur? Explain with a diagram.

D Think and answer.

In which season do the people of Australia celebrate Christmas? Why?



Do and learn



E ACTIVITY Given below are the periods of revolution of the eight planets. Write their names. (HINT distance from the Sun)

- | | | | |
|-------------|-------|--------------|-------|
| 1. 365 days | _____ | 5. 687 days | _____ |
| 2. 12 years | _____ | 6. 165 years | _____ |
| 3. 88 days | _____ | 7. 225 days | _____ |
| 4. 29 years | _____ | 8. 84 years | _____ |

F Fill in the table for a week.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Time of sunrise							
Time of sunset							

Then find out

- the longest day of the week. _____
- the shortest day of the week. _____

G WEBLINK To watch a video on the revolution of the Earth, visit rsgr.in/bss502.

H LIFE SKILL Hari and his family are planning to go to New Zealand during the summer vacation. Tick (✓) the clothes they should pack.

- | | | | |
|--------------------------|-------|-------------------|-------|
| 1. sweater | _____ | 5. cotton clothes | _____ |
| 2. woollen cap | _____ | 6. warm socks | _____ |
| 3. short sleeved clothes | _____ | 7. scarf | _____ |
| 4. heavy jacket | _____ | 8. gloves | _____ |



Major Landforms



Get Set!

Which physical feature does each state/Union Territory remind you of?

1. Bihar plains
2. Maharashtra _____
3. Rajasthan _____

4. Jammu & Kashmir _____
5. Lakshadweep _____
6. Uttar Pradesh _____

The Earth is made up of land and water. Around 29 per cent of the Earth's surface is covered by land and about 71 per cent by water.

The surface of the Earth is not the same everywhere. Some parts are flat and level, while others are raised. Landforms are natural features of the Earth's surface. The major landforms of the Earth are mountains, plateaus, plains, deserts and rivers.

MOUNTAINS

A mountain is a landform which rises more than 900 metres above the mean sea level. Mountains cover about 20 per cent of the total land area of the Earth.

Mountains differ in height and shape. They have very steep slopes. The highest point of a mountain is called a

peak or a summit. Mountain peaks are mostly conical in shape. Which is the highest peak in the world?

The height and shape of mountains depend on their age. The Himalayas and the Alps are young mountains. They are high and have conical peaks. The Aravallis and the Appalachians are very old mountains. Therefore, they are low and have rounded peaks.

Mountains cover one-fifth of the Earth's total land area.





FactWise

Some people say that Mount Mauna Kea, a volcano in Hawaii (USA), is actually the tallest mountain in the world. Its height above the mean sea level is only 4,205 metres. The base of the volcano is 6,000 metres below the sea level, making it taller than Mount Everest.

Several mountains may join together to form a **chain** or a **range**. Mountains often have a series of parallel ranges, which may extend for hundreds of kilometres. The Andes in South America and the Rockies in North America are two examples.

Importance

Mountains have a thin soil cover and steep slopes. It is difficult to grow crops here. The mountainous regions are thinly populated. This is due to an unsuitable climate, shortage of flat land and difficulty in transportation. Despite this, mountains are very useful to us.

- Mountains act as a barrier against cold and hot winds.
- Rivers originating from mountains provide water for irrigation.
- The slopes of mountains have rich pasture lands and valuable forests.
- Some mountains are rich in minerals.

PLATEAUS

A plateau or **tableland** is a highland with a flat top. It rises abruptly from the surrounding land. So it has steep slopes. Many rivers and streams flow through plateaus.

Some plateaus are very large and extend over hundreds of kilometres. The Deccan Plateau in India is an example. The Tibetan Plateau is the largest and the highest in the world. It is surrounded by mountain ranges on all sides. Other examples are the Colorado Plateau in North America and the Bolivian Plateau in South America.

- Most plateaus are in dry regions and on the **leeward** side of the mountains.

The Colorado river flows through the Colorado Plateau in the USA.





Plains are very fertile. People grow many crops in the plains.

- Due to high altitudes, the climate is cold and the growing season is short.
- Many plateaus have deep canyons on their surface. The Grand Canyon in the Colorado Plateau is an example.

Importance

- Plateaus have grasslands on which cattle and sheep are reared.
- Some plateaus are rich in mineral deposits.

PLAINS

A plain is a flat and low-lying land surface. They are also called lowlands. They can be level or slightly hilly. The slope of the land is gentle.

Plains may be formed by deposition of sand and silt by rivers, as in the case of the northern plains of India. Rivers carry sand and silt with them. When the rivers slow down, these materials are deposited on their banks. Plains are formed by these deposits.

Some plains are in the interior of continents while some are near the sea coast. Plains are more thickly populated than mountains and plateaus.

Importance

- Plains have fertile soil which is suitable for agriculture. Most ancient civilizations came up on the banks of rivers on the plains.
- Most big cities and towns are located in the plains.
- It is easier to construct roads, railways, aerodromes and canals in the plains.



Checkpoint

Write the names of these landforms.

1. This has steep slopes and a conical peak. _____
2. This has steep sides and a flat top. _____
3. This flat and fertile land is thickly populated. _____

DESERTS

Deserts are land areas that receive very little rainfall. These areas have a dry climate. Deserts have:

- very hot days and cold nights.
- frequent dust storms.
- hills of sand called sand dunes.
- little vegetation due to less rainfall.

Most deserts are located on the western side of continents and on the leeward side of mountains. Some examples of deserts are the Sahara Desert and the Kalahari Desert in Africa, the Great Sandy Desert and the Great Victoria Desert in Australia, the Thar Desert and the Arabian Desert in Asia, the Atacama Desert and the Patagonian Desert in South America.

RIVERS

Rivers are natural channels that carry rainwater or water from melted ice and snow from mountains to plains, lakes and seas. These channels start as streams and join together to form a river.

From the place of origin to its mouth, a river passes through three stages.

The upper or the young course

Most rivers originate in the mountains. Here, the speed of the river is very high. The river cuts a deep and narrow channel in the mountains. Some features of the upper course are canyons, waterfalls and rapids.

The middle or the mature course

The middle course of the river begins when it leaves the mountains and enters the plains. Here the valley widens. At this stage, the speed of the water decreases and the river develops loops, which are called meanders. River Ganga, for example, has a meandering course between Prayagraj and Varanasi.

The lower or the old course

In its lower course, the river joins a bigger water body such as a sea. In this course the speed of the river is very slow. The river deposits the silt it carries near the mouth, forming a triangular shaped land called delta. The largest delta in the world is formed by the Ganga and the Brahmaputra rivers before they join the Bay of Bengal. Find out its name.

Rivers form meanders in the middle course.



Words to know

leeward side	the side of a mountain that is sheltered from winds; it gets very little rainfall
canyon	a deep valley with steep sides made of rock
mouth	the place where a river joins the sea or a lake
rapids	part of a river where the water flows very fast over rocks



Quick recap

- Mountains, plateaus, plains, deserts and rivers are some landforms on the Earth's surface.
- Mountains are the highest landforms. They have peaks.
- Plateaus are highlands rising from the surrounding areas. They have flat tops.
- Flat and low-lying land surfaces are called plains. They are thickly populated.
- Deserts are large areas covered with sand. They receive very little rainfall.
- A river passes through three stages – upper, middle and lower – before reaching the sea.



Read and answer



A Tick (✓) the correct answers.

- The natural features on Earth are called

a. seas.	_____	c. mountains.	_____
b. deserts.	_____	d. landforms.	_____
- The Rockies lie in

a. Asia.	_____	c. North America.	_____
b. Africa.	_____	d. South America.	_____
- Sand and silt deposited by rivers leads to the formation of

a. mountains.	_____	c. streams.	_____
b. plains.	_____	d. bays.	_____
- Dust storms are common in

a. mountains.	_____	c. deserts.	_____
b. plains.	_____	d. coastal areas.	_____
- In the middle course, the river develops loops called

a. meanders.	_____	b. rapids.	_____	c. canyons.	_____	d. deltas.	_____
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Deltas are very fertile agricultural regions.

B Match the columns.

- | | |
|-------------|---------------|
| 1. plateau | a. rapids |
| 2. desert | b. peak |
| 3. river | c. lowland |
| 4. plain | d. sand dunes |
| 5. mountain | e. tableland |

C Answer these questions.

1. How are mountains useful to us?
2. What is the importance of plateaus?
3. Why are plains thickly populated?
4. What are the main features of a desert?
5. How is a delta formed?



The Sahara Desert is the largest desert in the world.

D Think and answer.

Jammu & Kashmir is thinly populated. Why?



E ACTIVITY Find out and write the name of a plateau in each of these continents.

- | | |
|------------------------|---------------------|
| 1. Asia _____ | 4. Europe _____ |
| 2. South America _____ | 5. Antarctica _____ |
| 3. North America _____ | 6. Africa _____ |

F PROJECT Your teacher will divide the class into five groups. Each group will make a project on the given topic.

Group A Himalayas

Group C Northern plains of India

Group E Sahara Desert

Group B Colorado Plateau

Group D River Nile

G LIFE SKILL Sometimes when it is hot, you feel weak and drained out. Your body is telling you that you are losing water and you need to replenish it. Tick (✓) what you should do in such a situation.

- | | |
|--|--|
| 1. Run as fast as you can. _____ | 4. Stand in the Sun. _____ |
| 2. Put a wet towel on your head. _____ | 5. Lie down in the shade or under a fan. _____ |
| 3. Wear loose clothes. _____ | 6. Have Oral Rehydration Salts (ORS). _____ |

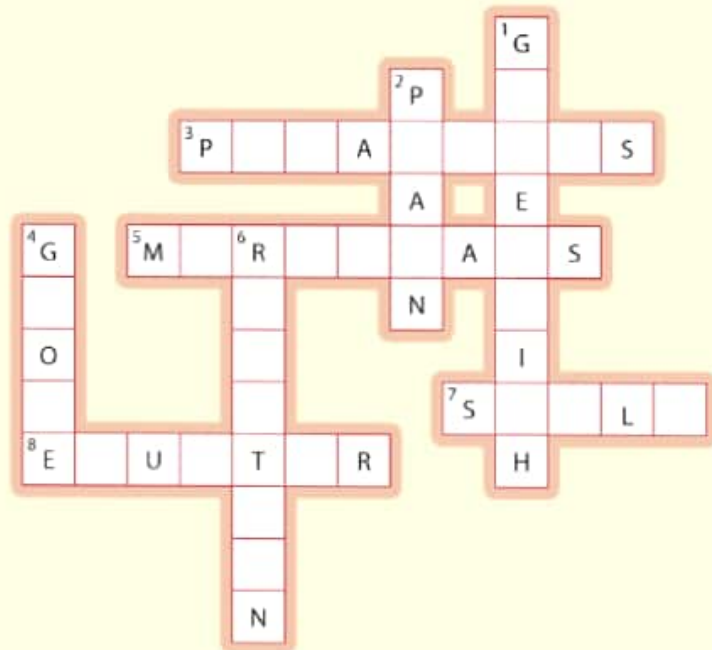
MY PAGE

for lessons 1 – 4

A WORD PUZZLE Read the clues and solve the word puzzle.

ACROSS

- 3 Horizontal lines on a globe
- 5 Vertical lines on a globe
- 7 The ratio between distance on the ground and distance on a map
- 8 This is the longest parallel.



DOWN

- 1 The Prime Meridian runs through this place.
- 2 A flat low-lying land surface.
- 4 A model of the Earth
- 6 The movement of the Earth on its axis.

B MAP WORK On the map given below, write the names of the continents and oceans.

