

Earth Movements And Seasons

Exercise Pg. 33

Q. 1. Can you relate what are the major seasons you have seen?

Answer : Students are supposed to answer this question with respect to the particular place they belong to.

They can also add on the changes that are experienced in relation with the change of seasons.

Q. 2. Can you describe the changes that happen each in season – how hot it gets, how much it rains, what happens to the plants and trees and animals, what food you get to eat, etc.

Answer : Seasonal change is accompanied by a host of changes such as the food we eat, crops that are grown, different types of birds which migrate from other regions etc.

For example – during the summers in North India, seasonal fruits such as Mangoes and Lychee are available. Different kinds of migratory birds visit the region and certain vegetable are also exclusively available during the summer season.

Students can highlight various characteristics suited to their regions in accordance with the question.

Exercise Pg. 34

Q. 1. Look at the globe and find out the names of countries which are located to the south of the equator-

1. Asia
2. Africa
3. Europe
4. North America
5. South America
6. Australia

Answer : 1. Asia – Indonesia, Maldives

2. Africa – Angola, Democratic Republic of Congo

3. Europe – Uganda, Kenya

4. North America –This region lies to the North of the Equator

5. South America – Colombia, Brazil

6. Australia – Tasmania, New Guinea, Mainland Australia

Q. 2. Did you find any continent which is located entirely to the North of the Equator?

Answer : North America is a continent located entirely to the North of the Equator.

Q. 3. Did you find any continent which is located entirely to the South of the Equator?

Answer : Antarctica is a continent located entirely to the South of the Equator.

Q. 4. Did you find any continent which spread on both sides of the North and South of the Equator?

Answer : Africa is a continent which spreads on both the North and the South of the Equator.

Exercise Pg. 37

Q. 1. Imagine that the Earth goes around the Sun but its axis is not tilted. How will it affect the change of seasons in Telangana? How will it affect the change of seasons in the northern region whose photograph you saw in the beginning of the chapter?

Answer : If the Earth did rotate and only revolve around the sun then it would mean that a place would have the same seasons throughout the year. The portions that get more sunshine would keep getting it throughout the year in the same way and the vice-versa.

This would also affect Telangana because the seasons will become constant and climatic conditions would remain the same throughout the year.

Exercise Pg. 38

Q. 1. Find out if Telangana falls on the Tropical Belt or in the Temperate Belt.

Answer : Telangana falls on the Tropical Belt.

The climatic conditions in the state of Andhra Pradesh are due to its tropical location having a semi-arid climate, located in the southern part of the Tropic of Cancer.

Q. 2. Will the sun shine directly on our heads in Telangana during any month? If yes, in which month?

Answer : No, sun rays do not fall directly on Telangana.

Q. 3. Find out the belt in which Delhi is situated and if it would receive snowfall during winters.

Answer : Delhi is situated in the Temperate Belt and it does not receive snowfall during winters.

Improve your learning

Q. 1. Do you think there is any correlation between the crops grown in your region and the seasons? Find out by discussing with your elders and friends and write a short essay on it.

Answer : Yes, there is a direct relationship between the types of crops and vegetation in a particular region and the ongoing season in the same region. Each type of season brings different types of flora and fauna and distinct vegetation specific to that season. For example – we eat mangoes during the summer season.

Students can find out about different seasons and the types of crops and vegetation specific to that season through many sources and write an essay.

Q. 2. Why do you think Andhra Pradesh does not receive any snowfall during winter months?

Answer : The location of the state of Andhra Pradesh is a factor that greatly contributes to its climatic conditions wherein the state does not receive any snowfall during winter months. This happens because Andhra Pradesh lies south of the Tropic of Cancer and therefore experiences tropical semi-arid climate.

Q. 3. We have a rainy season. How do you think it is related to the movement of the Earth and the pattern of Sun's rays? Does it occur in the summer or winter or in the season in between?

Answer : The Earth revolves around the Sun while rotating around its own axis. As the Earth revolves around the Sun, Earth's axis remains tilted in the same direction throughout the year. This movement of the Earth is a major factor that determines the seasonal variation in the southern and northern hemisphere of the Earth. The area which faces the sun directly therefore keeps shifting throughout the year. In March, the Sun shines directly over the equator, while in June; it shines directly over the Tropic of Cancer in the Northern Hemisphere. Then in September, the Sun shines directly over the equator and in December, it shines on the Tropic of Capricorn in Southern

Hemisphere. Therefore, such movements cause a pattern of seasonal changes in different regions of the earth.

Q. 4. Collect information about time of Sunrise and Sunset for different months of the year in your place (you can look up the local newspaper for this). Calculate the duration of day and night – how many hours every day – for every month. Do you see any pattern in this?

Answer : Students can perform this activity with the help of local newspapers as well as the internet in order to get the exact time of sunrise and sunset.

Further the duration of daytime can be calculated.

There would surely be a pattern in the duration of daytime during different seasons. For example – In North India, the days are shorter and nights are longer during winters and vice versa.

Q. 5. Explain the idea of rotation of the Earth to your parents or sisters or brothers.

Write down their questions or doubts and try to answer them.

Answer : The rotation of the earth around its own axis as well as earth's movement around the Sun is important in determining climatic conditions in different regions and continents.

Students can explain the idea to their near ones and this would help them in understanding the realities and practicalities of the subject matter.

Q. 6. Imagine that the Earth does not rotate but goes around the Sun around the year.

What difference will it make to the seasons and distribution of temperature?

Answer : The rotation of the Earth around its own axis and the movement of Earth around the sun are responsible for change in seasons and the distribution of temperature. If the Earth did rotate and only revolve around the sun then it would mean that a place would have the same seasons throughout the year. The portions that get more sunshine would keep getting it throughout the year in the same way and the vice-versa.

Q. 7. Identify a country in the Temperate Belt in both Northern and Southern Hemi-sphere. Compare the seasons in those countries and your place. Which will be warmer in May-June and which will be cooler in December-January or in March or September?

Answer : Sweden, a country in Europe lies in the Northern Temperate Belt whereas Australia lies in the Southern Temperate Belt.

Students can compare the seasonal changes within these countries to their specific regions and understand the changes in temperature and climatic conditions.

For example – Australia experiences summer in the months of December, January and February which are considered to be the hottest months. However, contrastingly, Northern region of India experiences winter during December, January and February.

Students can elaborate through other seasonal examples.

Q. 8. What are the six seasons in Indian climate?

Answer : The six seasons in Indian climate according to Hindu scriptures are –

1. Spring – This season begins in February and ends in April.
2. Summer – This season begins in April and ends in June.
3. Monsoon – This season begins in second of half June and ends in August.
4. Autumn – This season begins in August and ends in October.
5. Pre-winter – This season begins with the end of autumn season in October and ends in December.
6. Winter – This season begins in December and ends in February before the beginning of spring.

Q. 9. Read the first paragraph of this chapter and answer the following question:

What is the impact of seasons on the lives of human beings?

Answer : Human beings live along a large community of plants and animals, while observing constant changes in their surroundings throughout the year. The flowering and fruiting of trees and plants, changes in the activities of animals etc. are a result of seasonal changes as well as the changes in the distribution of temperature which varies across the country.