

CBSE Class 6 Geography Notes

Chapter 3 - Motions of the Earth

There are two types of motions of the Earth - Rotation and Revolution. When the Earth spins or rotates around its axis, that movement of spinning is called Rotation of Earth. And when the Earth spins or revolves around the sun, that movement is called the Revolution of Earth. In these notes, we have discussed the various motions of the Earth and what that results in. By going through these CBSE Class 6 Geography notes of Chapter 3 - Motions of the Earth, students can clear all their doubts.

Overview

The Earth has two types of motions, rotation and revolution.

Rotation - It is the movement of the earth on its axis.

Revolution - The movement of the earth around the sun in a fixed path or orbit is called Revolution.

Orbital Plane - The axis of the earth which is an imaginary line, makes an angle of $66\frac{1}{2}^{\circ}$ with its orbital plane. The plane formed by the orbit is known as the orbital plane.

The earth receives light from the sun and due to its spherical shape, only half of it gets light from the sun at a time. The portion facing the sun experiences day while the other half, away from the sun, experiences night.

Illumination - The circle that divides the day from night on the globe is called the circle of illumination. The earth takes about 24 hours to complete one rotation around its axis. The period of rotation is known as the earth day.

The second motion of the earth around the sun in its orbit is called revolution. It takes $365\frac{1}{4}$ days (one year) to revolve around the sun. A year consists of 365 days and we ignore six hours for the sake of convenience. Six hours saved every year are added to make one day (24 hours) over a span of four years. This surplus day is added to the month of February. Thus every fourth year, February is of 29 days instead of 28 days. Such a year with 366 days is called a leap year.

A year is divided into summer, winter, spring and autumn seasons. Seasons change due to the change in the position of the earth around the sun.

The areas near the poles receive less heat as the rays of the sun are slanting. The North Pole is inclined towards the sun and the places beyond the Arctic Circle experience continuous daylight for about six months. Since a large portion of the Northern Hemisphere is getting light from the sun, it is summer in the regions north of the equator. The longest day and the shortest night at these places occur on 21st June.

At this time in the Southern Hemisphere, all these conditions are reversed. It is winter season there. The nights are longer than the days. This position of the earth is called the Summer Solstice. On 22nd December, the Tropic of Capricorn receives direct rays of the sun as the South Pole tilts towards it. As the sun's rays fall vertically at the Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S), a larger portion of the Southern Hemisphere gets light. Therefore, it is summer in the Southern Hemisphere with longer days and shorter nights.

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The reverse happens in the Northern Hemisphere. This position of the earth is called the Winter Solstice. On 21st March and September 23rd, direct rays of the sun fall on the equator. At this position, neither of the poles is tilted towards the sun; so, the whole earth experiences equal days and equal nights. This is called an equinox. On 23rd September, it is autumn season in the Northern Hemisphere and spring season in the Southern Hemisphere.

The opposite is the case on 21st March when it is spring in the Northern Hemisphere and autumn in the Southern Hemisphere.

