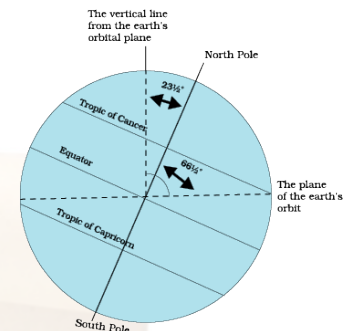


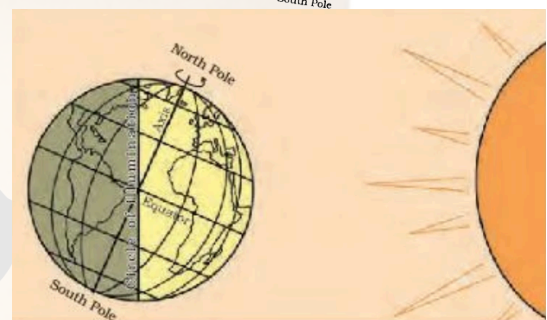
NCERT - CLASS 6 GEOGRAPHY - CHAPTER 3: MOTIONS OF THE EARTH

Types of motions

- Rotation: Movement of the earth on its axis
- Revolution: Movement of the earth around the sun in a fixed path or orbit



- Orbital Plane: The plane formed by orbit → the axis of the earth makes an angle of $66\frac{1}{2}^{\circ}$ with its orbital plane.
- Circle of Illumination: The circle that divides the day from night → does not coincide with the axis
- Earth Day: The period of rotation → 24 hours → daily motion of the earth



If the earth did not rotate?!

- Portion facing the sun would always experience day
- Continuous warmth
- The other half would remain in darkness
- Would be freezing cold all the time
- Life would not have been possible in such extreme conditions

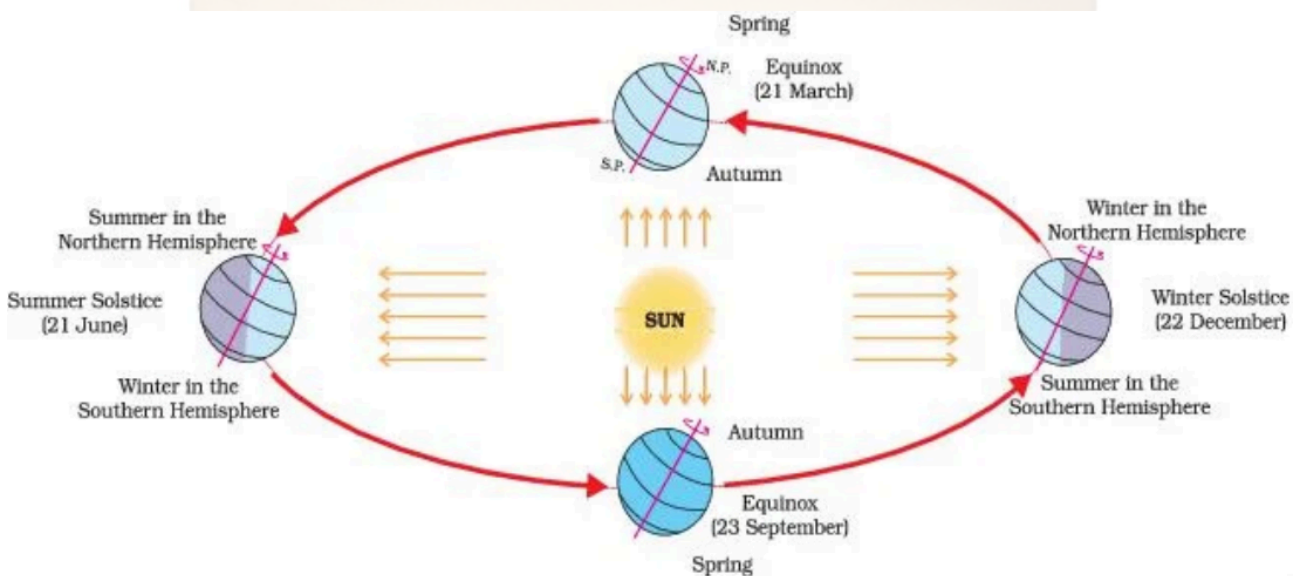
Revolution

- The second motion of the earth around the sun in its orbit
- 365 1/4 days → one year
- A year → 365 days → we ignore six hours for our convenience
- Six hours saved every year are added to make one day (24 hours) → Added to February every fourth year → called the Leap year → 366 days
- Earth travels around the sun in an elliptical orbit
- Earth is inclined in the same direction throughout its orbit
- A year → divided into summer, winter, spring, and autumn seasons
- Seasons change due to changes in Earth's position around the sun

Revolution and seasons

Summer Solstice:

- June 21
- Northern Hemisphere tilted towards the sun
- Rays of the sun fall directly on the Tropic of Cancer
- These areas receive more heat
- The North Pole is inclined towards the sun
- Places beyond Arctic Circle → experience continuous daylight for about 6 months
- Northern Hemisphere → It is summer → The longest day and the shortest night occur on June 21
- Southern Hemisphere → It is winter → Nights are longer than days



Winter Solstice:

- December 22
- Southern Hemisphere tilted towards the sun
- Rays of the sun fall vertically at the Tropic of Capricorn
- These areas receive more sunlight
- The South Pole inclined towards the sun
- Places beyond Antarctic Circle → more days
- Southern Hemisphere → It is summer → with longer days and shorter nights
- Northern Hemisphere → It is winter
- Australia → Christmas in summer

Equinox:

- 21st March & 23rd September
- Direct sun rays fall on the equator
- Neither of the poles is tilted towards the sun

- Whole earth → experiences equal days and equal nights

September 23:

- Northern Hemisphere → Autumn
- Southern Hemisphere → Spring

March 21:

- Northern Hemisphere → Spring
- Southern Hemisphere → Autumn

- Days & Nights and changes in seasons → due to Rotation & Revolution of the Earth

Book
Scribe