

Tendern Heart High School

Section 33 B, Chandigarh

Class: IX

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Subject: Geography

Chapter 2

Latitudes and Longitudes

Good Morning Students

This is the lesson of Class IX Geography. In this lesson we will study about latitudes and longitudes, Earth's Grid System, Important Latitudes of the Earth, Climatic Zones, Great Circle Routes, calculation of Longitude and Time.

(1) Introduction

- The Earth's Spherical Shape is best represented by Globe.
- The Earth is flattened at poles and slightly bulged at Equator.
- This is due to centrifugal force.
- The shape of the Earth is Geoid.
- The Earth is divided into Northern and Southern Hemisphere by Equator and Eastern and Western Hemisphere by Prime Meridian.

(2) The Earth's Grid

- The Network of Latitude and Longitude on Globe is known as Earth's Grid.
- It enables us to find location of any point on Earth.
- For Example: Gandhinagar in Gwalior is located on $23^{\circ}12'N$, $72^{\circ}41'E$.

(3) Latitudes

- Latitude of a place is the angular distance of that place North or South of the Equator as measured from centre of the Earth.
- Lines of Latitude are drawn parallel to Equator.
- Latitudes grow smaller towards the poles.
- Equator is the longest Latitude.
- The distance between each latitude is 111 kms approx.

(4) Important Latitudes of the Earth:

(a) Equator (0°)

- It is 0° latitude that divides the Earth into two equal halves, namely Northern and Southern Hemisphere.
- The rays of Sun falls vertically over the Equator almost throughout the year.

(b) Tropic of Cancer ($23\frac{1}{2}^\circ\text{N}$)

- This latitude is important as the Sun is overhead on 21st June on this latitude, making it the longest day in the Northern Hemisphere. This marks Summer in Northern Hemisphere.

(c) Tropic of Capricorn ($23\frac{1}{2}^\circ\text{S}$)

- This latitude is important as the Sun is overhead on 22nd December on this latitude, making it the longest day in Southern Hemisphere. This also marks Summer in Southern Hemisphere.

(d) Arctic Circle ($66\frac{1}{2}^\circ\text{N}$)

- The area within this latitude receives oblique rays of the sun.
- It receives 6 months days and 6 months night.

(e) Antarctic Circle ($66\frac{1}{2}^\circ\text{S}$)

- The sun rays do not reach here except when sun is overhead on Tropic of Cancer and Tropic of Capricorn.

Now, Students Let's recapitulate by means of quick test. I will read out the questions which you will try to find.

- Q1) What is the distance between each latitude?
- Q2) Which latitude marks the longest day in Northern and Southern Hemisphere?
- Q3) Which latitude experiences 6 months days and 6 months night?

Thus, after some time the answers were discussed in class:

Ans 1) 111 kms approx

Ans 2) Tropic of Cancer and Tropic of Capricorn.

Ans 3) Arctic circle

I hope you all understood the first four topics very well. So you all are required to revise it at home and also read next two topics before hand.

With this I conclude the interactive session.