LATITUDES AND LONGITUDES

Latitude and longitude are used to locate places

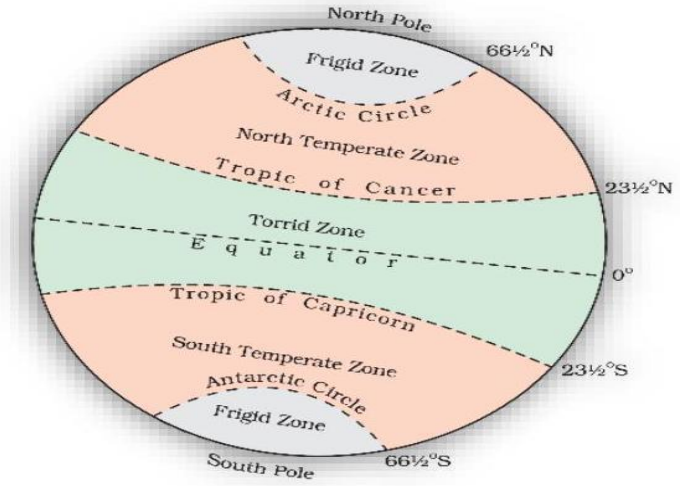
Latitude - to determine whether and locate places

Latitude are horizontal imaginary lines that are drawn acrossly globe
0° - equator
90° N - North pole
90° S -South Pole
23° 30' N - Tropic of Cancer
23° 30' S - Tropic of Capricorn
66° 30' N - Arctic circle
66° 30' S - Antarctic circle

Why 23.5° and 66.5° latitudes are important?

The latitudes at roughly 23.5° (23° 30') and 66.5° (66° 30') north and south are critical geographical markers because they are derived directly from the Earth's axial tilt of approximately 23.5° . This tilt is responsible for our seasons, the intensity of sunlight, and the length of days.

Earth revolution (1 year) around the sun causes various seasons.
Earth's rotation causes day and night.



1. In **March**, Sun is exactly above equator

It is also known as **Vernal Equinox**

Equinox – March 20 or 21

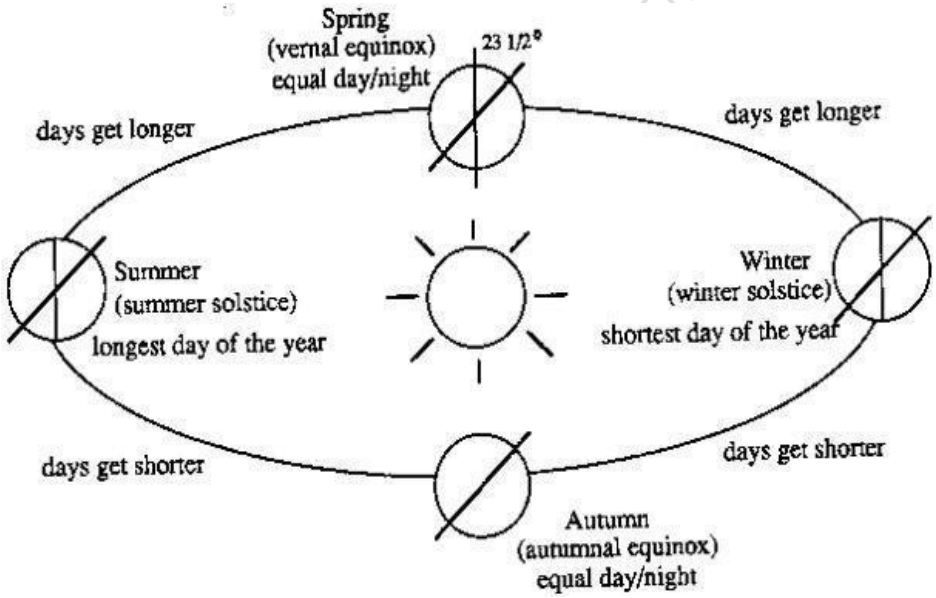
Equal day and night

2. In **June**, Sun is in the northern hemisphere, which is above Tropic of Cancer

3. In **September**, Sun is again above the equator

Also known as **Autumnal Equinox**

4. In **December**, Sun is in the southern hemisphere, which is above Tropic of Capricorn



Tropic of Cancer (Northern Hemisphere)	Tropic of Capricorn (Southern Hemisphere)
1. June 21 – long day time, short night time Summer solstice	June 21 - Short day time, long night time
2. Dec 22 – long night time, short day time Winter solstice	Dec 22 – short night time, long day time

Examples for change in weather across countries:

1. Indonesia – lies in equator region – Heavy / moderate summer

2. India – lies in Tropic of Cancer – May, June (Summer), Dec (Winter)

3. Australia – Tropic of Capricorn – Dec (Summer), June (Winter)

4. Russia or Siberia – Polar region – Moderate or extreme winter

Regions receiving vertical and slanting sunlight

Tropic of cancer – Northern most point receives vertical sunlight

Tropic of Capricorn – Southern most point receives vertical sun light

Beyond these latitudes, regions receive only slanting sunlight

Arctic Circle – it is the northern most point which receives sunlight, when sun is in the southern most point

Antarctic circle – it is the southern most point which receives sunlight, when sun is in the northern most point

Longitude:

They are the vertical imaginary lines drawn across the globe

Longitudes are useful in calculating time and location

Major longitudes – 0° (Greenwich meridian), 180° E/W