

The Globe

Geography Study Notes on Globe

Globe: Latitudes and Longitudes

A globe is the earth's true model. The globes are of various types and sizes. Globe can be rotated in the same way as the rotation of a topspin or potter's wheel.

Countries, continents and oceans are presented on the globe in their respective sizes.

Axis

Is the imaginary line that passes through the earth's centre and connects the two lines. In a titled manner, a needle is fixed across the globe, which is called its axis.

- The North Pole and the South Pole are the two points on the globe where the needle passes through.
- Like the Sun, the globe can be rotated from West to East around this point.
- The Northern part of the earth is called the Northern Hemisphere, and the Southern half is called the Southern Hemisphere.
- All parallel circles ranging from the equator to the poles are called latitude parallels.

Equator

- The earth is divided into two equal parts by another imaginary circular line running on the globe, this line is called the equator.
- The equator is the latitude of zero degrees.

Other important longitudes and latitudes

In addition to the equator (0 degrees), the North Pole (90 degrees North) and the South Pole (90 degrees South), there are four significant latitude parallels-Tropic of Cancer ($23\frac{1}{2}^{\circ}$ N) in the Northern Hemisphere, Tropic of Capricorn ($23\frac{1}{2}^{\circ}$ S) in the Southern Hemisphere, Arctic Circle (at $66\frac{1}{2}^{\circ}$ N) which lies north of the Equator and Antarctic Circle ($66\frac{1}{2}^{\circ}$ S) which lies to the south of the Equator.

Note: As we move away from the equator, the latitude parallels decrease in size.

Heat Zones of the Earth

(i) The zone between the Tropic of Cancer and Tropic of Capricorn experiences peak heat and is referred to as the Torrid Area.

(ii) The temperature of the regions between the Arctic Circle and the Tropic of Cancer and the Antarctic Circle and the Tropic of Capricorn is medium. These are classified as Temperate Zones.

(iii) The areas between the Arctic Circle and the Northern Pole in the Northern Hemisphere and the Antarctic Circle and the Southern Pole in the Southern Hemisphere remain very cold due to the slanting rays of the sun. They're called the Zones of Frigid.

What are Longitudes:

(i) Unlike latitude parallels, all meridians are of the same size. These are semi-circles and the distance between them decreases as they travel towards the pole and become zero at the poles.

(ii) All countries, therefore, agreed that the count would start from the meridian passing through Greenwich, where the Royal Observatory of the United Kingdom is located. This meridian is known as Prime Meridian.

(iii) The Earth is divided into two equal parts: one is the Eastern Hemisphere and the other is the Western Hemisphere.

Longitude and Time:

(i) The best means of measuring time is the movement of heavenly bodies i.e. the earth, moon, and planets.

(ii) Every day the sun rises and falls, and of course, it's the world's best time-keeper.

(iii) The shadow cast by the sun is shortest at noon and longest at sunrise and sunset and thus can be counted as local time.

(iv) If Greenwich's prime meridian has the sun at the highest point in the sky, all the points along that meridian are at noon or mid-day.

(v) As the earth rotates from west to east, the points east of Greenwich are ahead of Greenwich's time and the places west of it are behind Greenwich time.

Why do we have Standard Time?

(i) Local times are expected to vary from place to place on various meridians.

- (ii) In India, for example, the difference in local time of Dwarka in Gujarat and Dibrugarh in Assam will be approximately 1 hour and 45 minutes.
- (iii) The longitude of $(82 \frac{1}{20} \text{ E})$ is considered to be the regular meridian in India. Local time is taken as the standard time for the entire country at this meridian. It is called Indian Standard Time(IST).
- (iv) We follow more than one standard time in some countries that have a wide geographical range.