

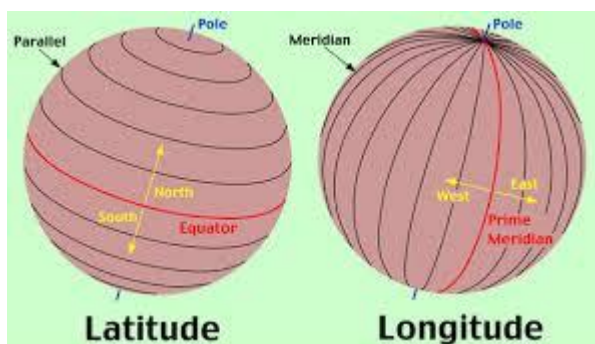
Social Studies
Class 5
Lesson 3
Latitudes And Longitudes

Learning Objectives;

Parallels or Latitudes Important Latitudes

Meridians or Longitudes Locating Places

Since the Earth is spherical in shape, it is difficult to locate a place on Earth. So our mapmakers devised a system of imaginary lines to form a net or grid on maps and globes. Thus there are a number of horizontal and vertical lines drawn on maps and globes to help us locate a place.



Any location on Earth is described by two numbers--- its Latitude and its Longitude.

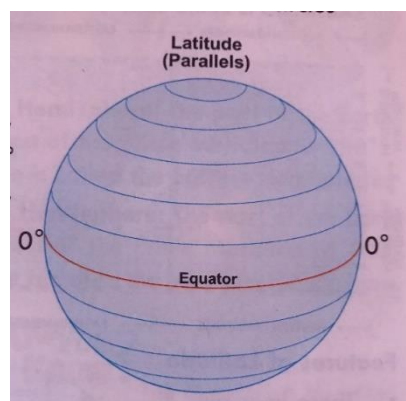
The imaginary lines that run from East to West are called Parallels or Lines of Latitude.

The imaginary lines that run North to South from the poles are called Meridians or the lines of Longitude.

LATITUDES

Lines of Latitude are east-west circles around the globe. Equator is the 0° latitude. It runs through the centre of the globe, halfway between the north pole and the south pole which are at 90° .

Equator	0
North pole	90°N
South pole	90°S



The Equator divides the Earth into two equal halves called hemispheres.

1. Northern Hemisphere: The upper half of the Earth to the north of the equator is called Northern Hemisphere.
2. Southern Hemisphere: The lower half of the earth to the south of the equator is called Southern Hemisphere.

Features of Latitude

- These lines run parallel to each other. They are located at an equal distance from each other. They are also called Parallels.
- All Parallels form a complete circle around the globe. North Pole and South Pole are however shown as points.
- Equator is the biggest circle. The circles gradually become shorter as we move away from the equator towards the poles.

Numbering of the Parallels

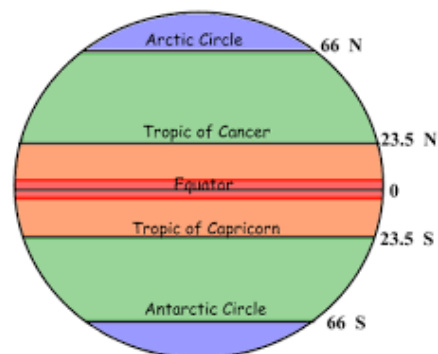
- ✚ The numbering of the parallels starts from the equator which is located at 0° .
- ✚ Parallels are marked from 0° to 90° degrees.
- ✚ Parallels are drawn at the interval of 1° .
- ✚ There are 90 parallels in the Northern Hemisphere, and 90 in the Southern Hemisphere. Thus there are 181 parallels in all including the Equator.
- ✚ The parallels in the Northern Hemisphere are marked 'N' and the parallels in the Southern Hemisphere are marked 'S'.

Important Parallels

There are some other special parallels which have been given special names. They are:

$23\frac{1}{2}^\circ$	N latitude	Tropic of Cancer
$23\frac{1}{2}^\circ$	S latitude	Tropic of Capricorn
$66\frac{1}{2}^\circ$	N latitude	Arctic Circle
$66\frac{1}{2}^\circ$	S latitude	Antarctic Circle

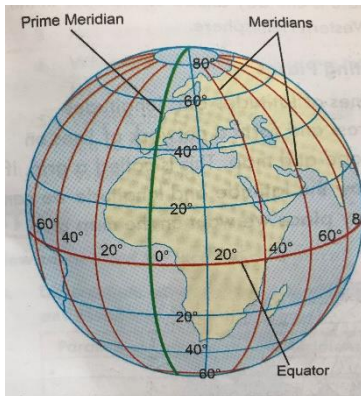
Latitudes tell us how far north or south from the equator a place is.



Important Latitudes

Longitudes

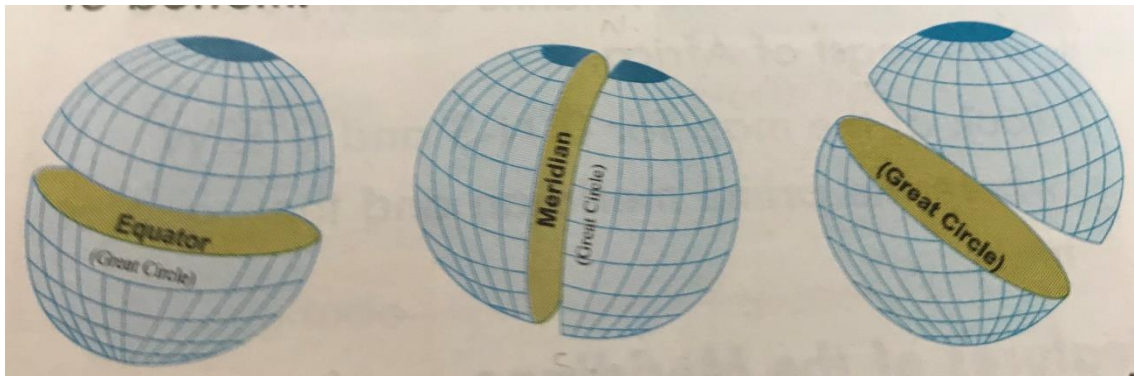
The semicircles running from North to South on a globe or map are called Lines of Longitudes or meridians.



The Prime Meridian is the most important line of longitude. It is located at zero degrees longitude (0°). The Prime Meridian runs through Greenwich, a place near London. It is the starting point for numbering meridians.

Greenwich Meridian

It divides the Earth in two halves from top to bottom:



Eastern Hemisphere The part of the Earth to the east of the Prime Meridian to 180° longitude is called the Eastern Hemisphere.

Western Hemisphere The part of the Earth to the west of the Prime Meridian to 180° longitude is called the Western Hemisphere.

There are 360 meridians- 180 to the east and 180 to the west of the Prime Meridian. The meridians in the Eastern Hemisphere are marked as 'E' and meridians in the Western Hemisphere are marked as 'W'.

The meridian of 180° E and meridian of 180° W are in the same line. Longitude describes how far east or west a place is located from the Prime Meridian.

Features of the Meridians

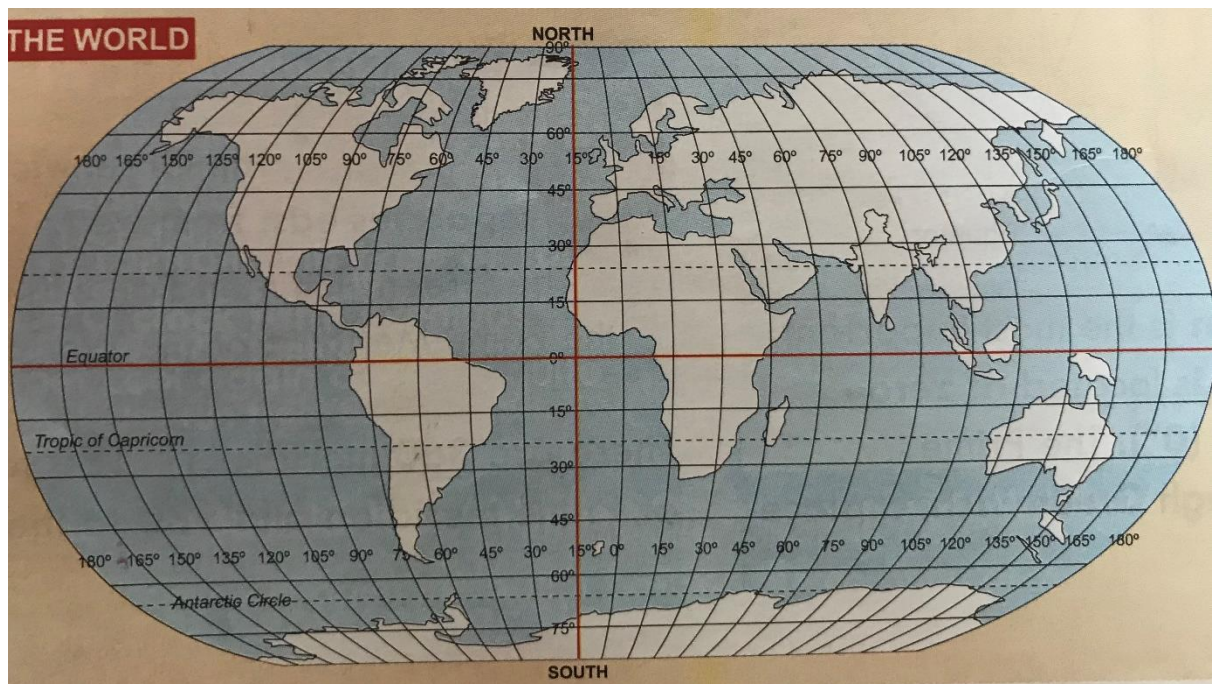
- Unlike latitudes all meridians are of the same length.
- The distance between two meridians is greatest at the equator.
- As we move away from the equator towards the poles, the distance between the meridian gradually decreases.
- Meridians cut the latitudes at right angles.

Locating places

The lines of latitudes and longitudes crisscross and form a network of lines on the globe and map. This is called a grid. If we know the latitude and longitude we can find any place we want on the map or a globe. the intersection of latitude and longitude lines, i.e. the place where they meet, is called coordinates it helps in identifying the exact location of a place.



Grid on a Globe



Grid on World Map

Learn the following Answers

1. What are latitudes? Write three features of latitudes.

Ans. The imaginary lines that run from East to West are called Parallels or Lines of Latitude.

Features of latitudes are

- These lines run parallel to each other. They are located at an equal distance from each other.
- All parallels form a complete circle around the globe
- Equator is the biggest circle. The circles gradually become shorter as we move away from the equator towards the poles.

2. What is Equator? Why is it important?

Ans. Equator is the 0° latitude. It runs through the centre of the globe, halfway between the north pole and the south pole which are at 90°.

The Equator divides the earth into two equal halves called hemispheres.

3. How are latitudes numbered ?

Ans. Latitudes are numbered as

- The numbering of the parallels starts from the equator which is located at 0° .
- Parallels are marked from 0° to 90° degrees.
- Parallels are drawn at the interval of 1° .
- There are 90 parallels in the Northern Hemisphere, and 90 in the Southern Hemisphere. Thus there are 181 parallels in all including the Equator.
- The parallels in the Northern Hemisphere are marked 'N' and the parallels in the Southern Hemisphere are marked 'S'.

4. What are Meridians? Write any three features of Meridians

Ans. The imaginary lines that run North to South from the poles are called Meridians.

Features of the Meridians

- All meridians are of the same length.
- The distance between two meridians is greatest at the Equator. As we move away from the Equator towards the poles, the distance between the meridian gradually decreases.
- Meridians cut the latitudes at right angles.

5. What is Prime Meridian? Why is it important?

Ans. The Prime Meridian is also known as Greenwich Meridian. The Prime meridian is the most important line of longitude. It is located at zero degrees longitude (0°). The Prime Meridian runs through Greenwich, a place near London. It is the starting point for numbering meridians. It divides the earth in two halves from top(North) to bottom(South).

6. What is a grid?

Ans. The lines of latitudes and longitudes crisscross and form a network of lines on the globe and map. This is called a grid.

7. Fill in the blanks

1. The Equator divides the Earth into northern hemisphere and the southern hemisphere.
2. The north pole is marked as 90°N
3. The $23\frac{1}{2}^\circ$ North latitude is called Tropic of Cancer
4. The $66\frac{1}{2}^\circ$ S latitude is called Antarctic circle
5. The network of latitude and longitude is called a grid.
6. There are 360 meridians on the globe
7. There are 181 number of latitudes on the globe.
8. Half part of the Earth north of equator Northern Hemisphere