



The World Climatic Zones

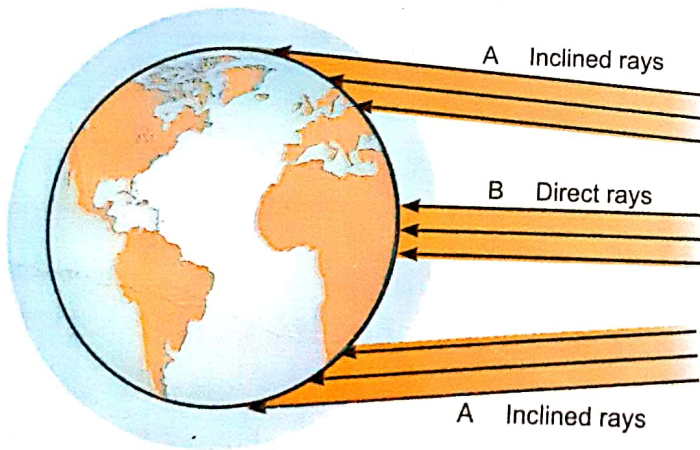
Objectives

In this lesson, you will learn about

- Factors controlling climate
- Flora and fauna
- Human life
- Natural region

Let us begin this chapter by revising a little of what we have learnt in the two previous chapters. We learnt that the Earth is a sphere and lines of latitude and longitude can be drawn on the globe, its replica, to find location of places. We also know now, that the Earth moves in two ways—rotation and revolution. However, it does not rotate vertically, but in a slightly inclined, on a tilted axis. Depending on its movement around the Sun, it passes through different positions and receives the

sunlight at various angles and for different durations. To understand this better, study the diagram given below:



A – Inclined rays travel longer distance through the atmosphere and spread over a larger area.

B – Direct rays travel shorter distance through the atmosphere and spread over a smaller area.

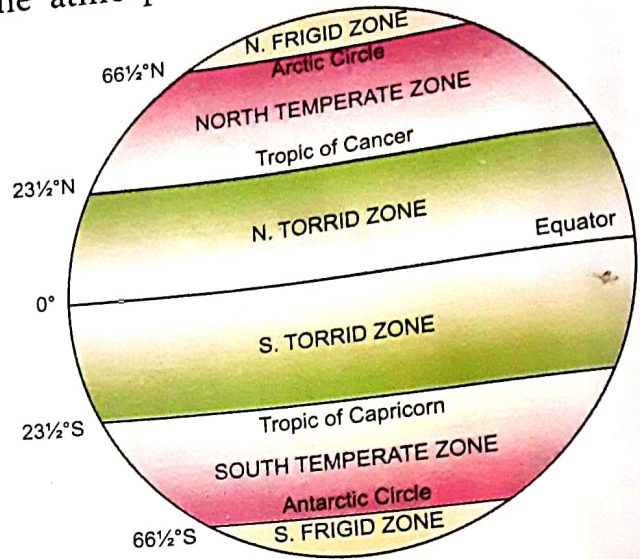
Sunlight at various angles

How hot or cold a place is, depends upon its **latitudinal position** and the **heat received from the Sun**.

The rays, reaching the Equator travel a **shorter distance** through the atmosphere, are **more direct** and, therefore, **spread over a smaller area**. Hence, **high temperatures** are experienced in this region.

On the other hand, the rays reaching Earth beyond the tropics, in the higher latitudes, have to travel a **longer distance** through the atmosphere, and so are **slanting**, therefore, **spread over a larger area**. So, these areas experience **lower temperature** and are colder. All this happens because the Earth is a sphere and, therefore, **curved**. *What would have happened, if the Earth was not curved but had a flat surface?*

You already know, on the basis of the sunlight received, that the Earth is divided into three **heat** or **climatic zones**. The details of these three zones, you have learnt earlier. So we have a **North Torrid, Temperate and Frigid zone** and a **South Torrid, Temperate and Frigid zone**.



Heat zones of the Earth

Factors Controlling Climate

Within each of these climatic zones, several sub-types occur. These sub-types or climatic types are controlled by **three main factors**. Here is how you can remember it easily: **LAD**

- **L**atitudinal position
- **A**ltitude
- **D**istance from the Sea

1. **Latitudinal position**: This you already know—the closer the place is to the Equator, the warmer it will be. The farther it is from the Equator, the cooler the place will be.
2. **Altitude**: If you have been in the mountains, you will know that the places are cooler or even colder there. The same goes with plateaus. This is because temperature decreases with increase in the height of a place. Thus, even if a mountain happens

to lie close to the Equator, it will be covered with snow if its altitude is very high, as in the case of **Mt Chimborazo 6,268 metres**, in Ecuador, located on the Andes Mountains in South America.



Mt Chimborazo



Lighthouse Beach Kovalam, Kerala a popular tourist destination with its mild temperature

3. **Distance from the sea:** The sea plays a very important role in controlling the climate of a place. We have to remember that water heats up and cools down slower than the land.

So, in **summer**, places near the sea are comparatively **cooler** than places in the interior of the land. This happens because water takes longer to warm up. Inland places are **very hot** since land heats up faster.

The reverse happens during winter. Since water takes longer to cool down, seaside areas are **warmer**. However, inland places are **cold**, since land cools down fast. **Sea beaches, thus, are popular tourist destinations during summer as well as in winter!**

Human Life

Down the ages, since ancient times, man has learnt to adapt himself to his environment, that is, the climate and natural vegetation of his surrounding area. He had adopted a definite lifestyle, depending upon his environment. So, the type of work man does, the crops that he grows and even the clothes he wears—all depend upon the climatic zone he belongs to. The people living in



High temperature and heavy rainfall lead to dense tropical rainforests



'Chimpanzees thrive on the lush vegetation of the tropical rainforests

the Equatorial forests lived by hunting, fishing and fruit gathering.

Climate also determines the distribution of world population. The **densely populated** regions are the river valleys, coastal zones and the areas with moderate temperatures, where factors are favourable for man to live in. Whereas the **thinly populated** areas are the frigid zones, the deserts and the dense forests.

Natural Region

Any region, fairly large, having similar climate, natural vegetation, soil and animal life, can be termed a **natural region**. Every climatic or heat zone of the Earth is again divided into several sub zones, or smaller zones, or areas with similar climatic and vegetation characteristics. In the chapters to follow, you will study about some of these natural regions of the world and the lifestyle of the people living in those regions.

□ Answer the following questions-

1. Why places near the equator are hottest?
2. What are the three factors that control the climate of a place?
3. Why Mt. Chimborazo is covered with snow even if it lies near the Equator?
4. Why sea beaches are popular tourist ~~dest~~ destination during summer as well as winter?
5. Define Flora and fauna.
6. Which are densely populated region in the world and why?
7. Define a natural region.

□ Fill in the blanks-

1. How hot or cold a place is, depends upon its _____ and _____.

2. The flora of a region is controlled mainly by the _____ and _____ of that area.

3. The people living in the Equatorial forests lived by _____, _____ and _____.

4. The thinly populated areas are the _____ and _____.