HICON SERIES

CLASS 5 LESSON 3

SOCIAL

MANY WAYS OF LIVING - WEATHER AND CLIMATE

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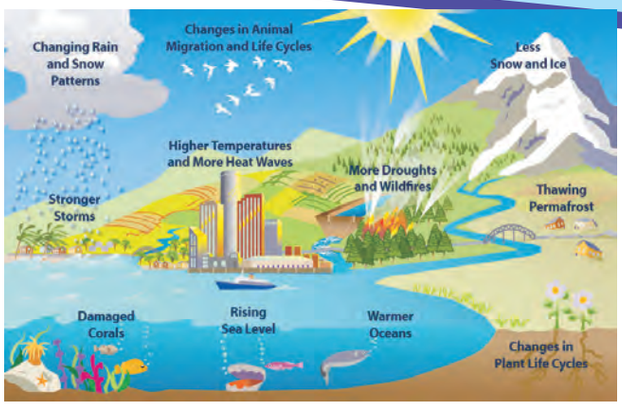
LESSON
PART 2

Lesson-3

Many Ways Of Living - Weather And Climate



In this lesson, we shall learn about :

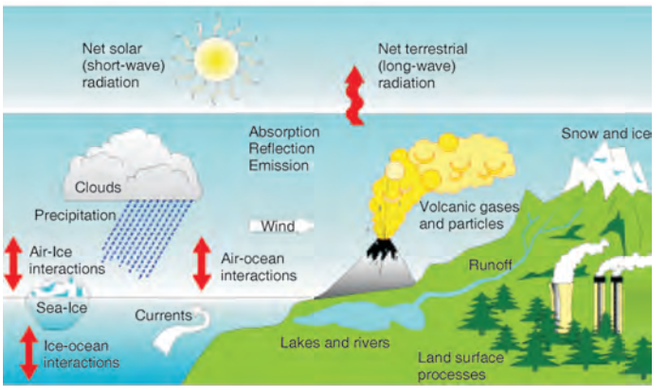
- The factors that influence climate :
- Distance from The Equator or Latitudes
- The Torrid, Frigid and Temperate zones
- Altitude, Distance from the sea, Direction of winds
- Rains and humidity, Ocean currents

New Words dramatically, temperate, torrid, frigid, moderate, meteorology, hemisphere

Our earth is surrounded by a layer of air known as atmosphere. Weather is the condition of the atmosphere of a place at a short period of time. It can change dramatically from day to day. Climate is the average weather condition of a place over a long period of time. Climate keeps on changing. It does not remain constant at all places. The climate of a place tells us about the season at that place. The change in seasons affects our daily life. It affects the plants and animals as well as people - their food and clothes.

Activity For seven days, note the weather report from a local newspaper and observe the changes occurring in the weather.

Factors that influence Climate : The climate of a region is directly depends on the temperature of the day and night of that place. Temperature is the degree of hotness or coldness of the air. The sun is the supreme source of heat. It gives off the same amount of heat everywhere. But all the parts of our earth do not receive the same amount of heat at all times. This distribution of heat is affected due to many reasons. Some of the factors which influence climate are as follows:

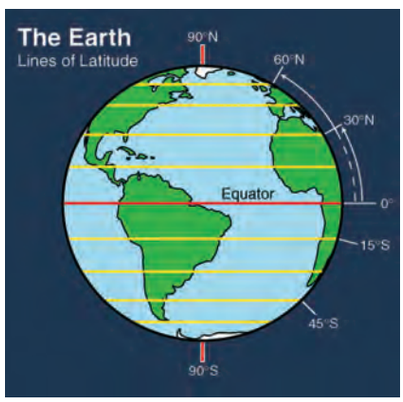


Think and Discuss

Why is the weather of everyday hottest at noon and cooler in the morning and evening and how is the weather looks on rainy day ?

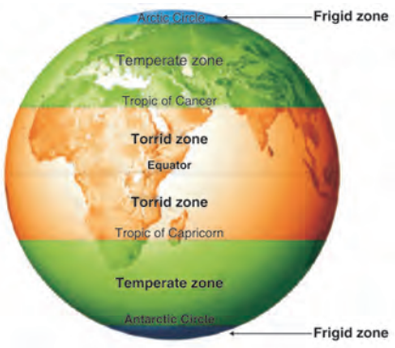
(A) Distance from the Equator or Latitudes :

The Equator is an imaginary line that encircle the earth in the middle. It divides the earth into two equal halves. It has equal distance from the two poles.



It is closest to the sun as this part of the earth bulges out the most. The rays of the sun fall vertically near the Equator and slanting at those places which are far away from the Equator. This direct heat makes the area near the Equator hottest almost throughout the year. As we move away from the Equator, the sun rays spread over a larger area slantingly, thus this region has lower temperature. As the distance from the Equator increases, the temperature decreases and makes the area cooler. On the basis of the heat received on the earth from the sun, we can divide the earth into three zones.

The Torrid Zone : The area between the Tropic of Cancer and the Tropic of Capricorn is hottest part of the earth. It is known as the Torrid Zone. 'Torrid' means 'very hot'. The sun shines directly above this region. So, it is very hot throughout the year. This region has a tropical climate. Our country, also has a tropical climate.



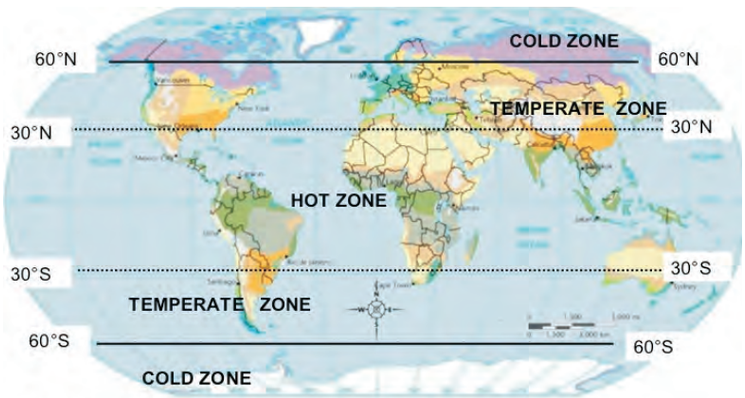
The Frigid Zone : As we move away from the Equator towards the poles, there is a gradual decrease in temperature. The sun rays fall on the earth in a slanting way. So, the climate remains cold in these regions.

These regions are called the Cold or Frigid Zones. The area between the North Pole and Arctic Circle and the South Pole and Antarctic Circle are known as the Frigid Zone. They remain covered with snow and ice throughout the year.

Some Facts :

In the Polar regions, the sun shines for 24 hours on some days and some other days the sun is not visible at all.

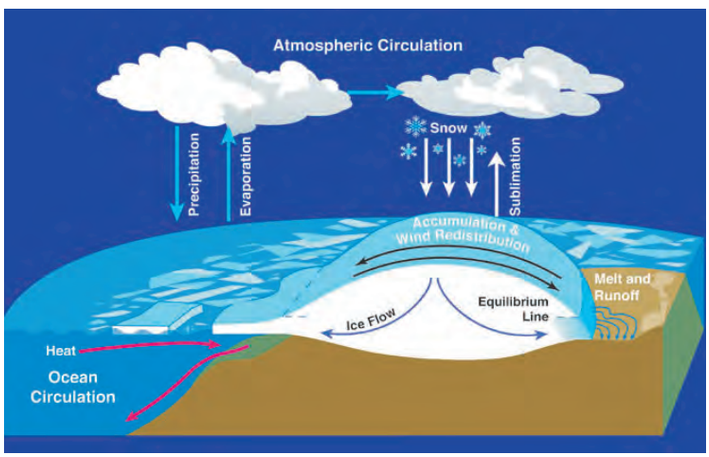
The Temperate Zone : The area between the Torrid and Frigid zones is called the Temperate Zone. The climate here is neither very hot nor very cold. The area in the Northern Hemisphere is called the North Temperate Zone and the area in the Southern Hemisphere is called the South Temperate Zone.



Thus, we can say that the distance of a place from the Equator is an important factor which determines the climate of a region. The places which are near the Equator have hot climate while the places which are far have cold climate.

Activity

Look at the map of world and locate in which zone is India situated.

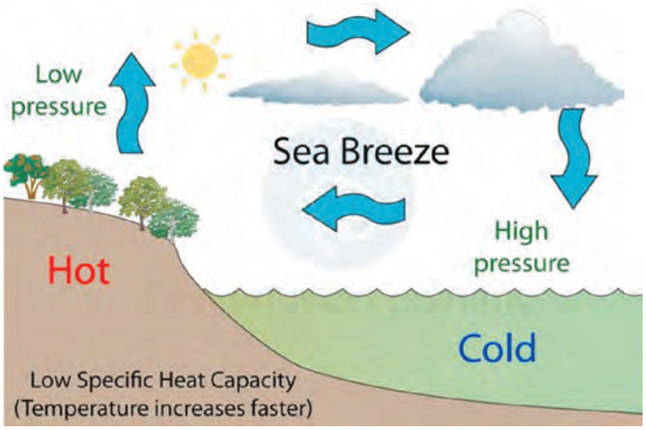


(B) Altitude or Height above Sea Level : Another factor that affects climate is the altitude or height above sea level. The higher we go, the colder it is. That is why the climate of the mountains and hills is cooler than that of plains. Even in summers, the hill stations like Shimla, Nainital, Darjeeling, Mussoorie have the cold and pleasant climate.

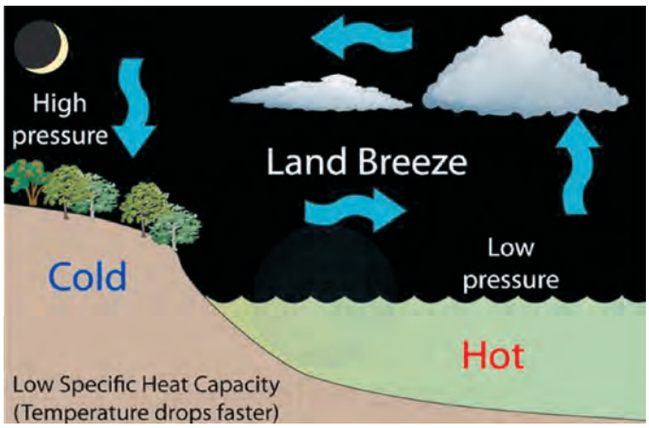
Think and Discuss

Shimla and Ludhiana, both the cities are situated almost at the same distance from the Equator. Find out why Shimla is cold and Ludhiana is hot in summers.

(C) Distance from the Sea : The climate of the coastal regions is affected by the sea. The places near the sea are neither too hot nor too cold. They experience moderate climate. On the other hand, places far from the sea are hot in summer and cold in winter. For example, Mumbai is located near the sea-coast. It is cooler in summer and warmer in winter. It has a moderate climate. While Delhi is far away from the sea and is very cold in winter and very hot in summer. The places far away from the sea coast have extreme climate. This is because the land becomes hot quickly and cools down quickly while water become hot slowly and cools down slowly. This affects the air of that place. As you know hot air is lighter than the cold air, warm air from the land rises and the cool air from the sea occupies its place. It makes the coastal area cool in summer.`



Sea Breeze in Day



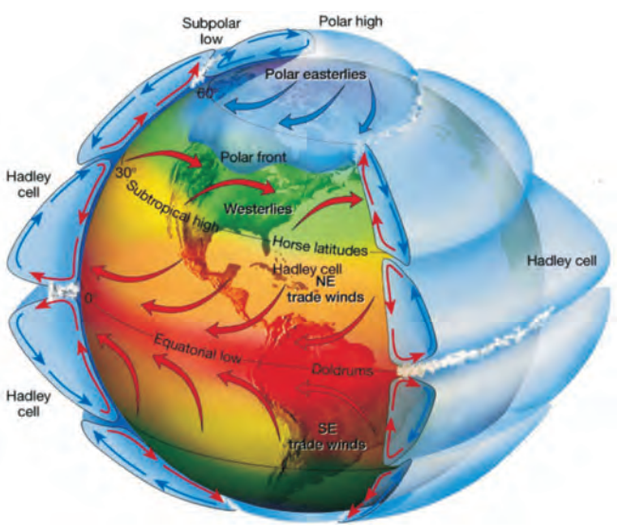
Land Breeze in Night

In winters, the land cools down more quickly than the sea. The sea cools down slowly. The air rises above the sea is warmer. The cooler air from the land blows towards the sea. Thus, blowing of wind in this manner makes the region warm in winter.

The air rises from the land and blows towards the sea is called land breeze while the air rises from the sea and blows towards the land is called sea breeze. The air near the sea coast contains more vapours, so the climate here is humid. But the air is dry in the regions which are far away from the sea.

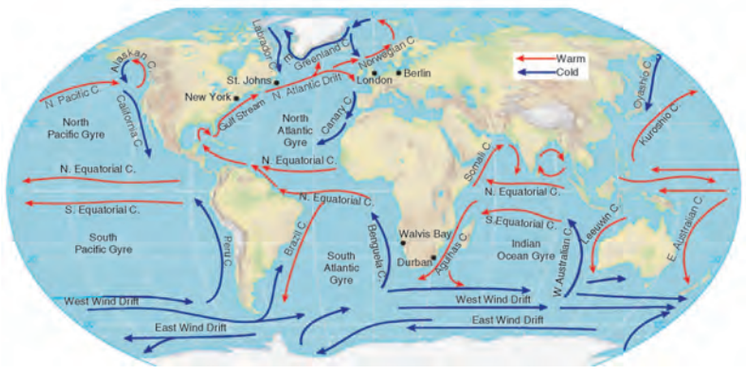
(D) Directions of Winds: The motion of air from one place to another is called wind. The direction of wind also affects the climate of a place.

The winds blowing from hot regions bring high temperature, while those blowing from cold regions bring low temperature.



(E) Rains and Humidity : Rainfall is another factor that influence the climate. The distribution of rainfall in our country is highly uneven which leaves a great variation in the climatic conditions.

Humidity is the amount of moisture or water vapour present in the air. The winds blowing from the sea or ocean are laden with moisture and increase the humidity in the atmosphere. The places near the sea are more humid and make us sweat considerably.



Ocean Currents

(F) Ocean Currents : There are warm and cold currents in the seas and oceans. These currents affect the climate of the coastal areas. For example, when Western Europe has icy temperature, warm water of the Gulf stream brings a great relief to the people. In the same way, the cold currents reduce the temperature in the Torrid Zone .

The climate of a place affects the life style of the people a lot. The crops they grow, the dresses they wear, the houses they live in, the food they eat and occupations all are dependent on the climate of a place.

Some Facts :

Weather forecasting is called meteorology. The persons who predicts the weather are called meteorologists.

THINGS TO REMEMBER

1. The average weather condition of a place over a long period oftime is called climate.
2. Climate varies from one place to another.
3. The area near the Equator is the hottest area in the world. It is called the Torrid Zone.
4. The area near the Polar regions is cold and called the Frigid Zone.
5. The area between the Torrid Zone and the Frigid Zone is called the Temperate or Moderate Zone.
6. There are many factors which influence the climate of a place.
7. The climate of a place depends upon the distance from the Equator, height above the sea-level, distance from the sea, directions of winds, rains and humidity and the ocean currents.

EXERCISE

A. Write 'T' for True and 'F' for False :

1. The rays of the sun fall directly on the Equator. ( )
2. The rays of the sun fall directly on the Polar regions. ( )
3. Ludhiana is cooler than Shimla. ( )
4. Places near the sea are very cold. ( )
5. As altitude increases, it gets hotter. ( )
6. Torrid Zone has a very hot climate. ( )

B. Fill in the blanks :

1. _____ is the presence of water vapour in the air.
2. The areas near the Poles are in the _____ Zone.
3. The coastal areas have _____ climate.
4. The _____ Zone lies between the Tropic of Cancer and the Tropic of Capricorn.
5. As we go far away from the Equator, it gets _____
6. A person forecasting the weather is called _____

C. Write one line about each of the following :

1. Torrid Zone _____
2. Frigid Zone _____
3. Temperate Zone _____

D. Write reason for the following :

1. Areas near the Equator are the hottest regions. _____
2. Areas near the Poles are the coldest regions. _____
3. Areas between the Tropics and the Poles are the moderate regions. _____
4. Places near the sea experience moderate climate. _____
5. Places near the sea have humid climate. _____

E. Answer the following questions:

1. What is climate ?
2. What is the difference between weather and climate ?
3. Which factors influence weather and climate ?
4. What is humidity?
5. How does sea affect the climate of a place ?
6. Why are Polar areas cooler than Equatorial areas ?

Project / Activity

F. **Draw a model of the earth and label all the Heat Zones on it.**

G. **On the outline map of the world, mark major climatic regions.**