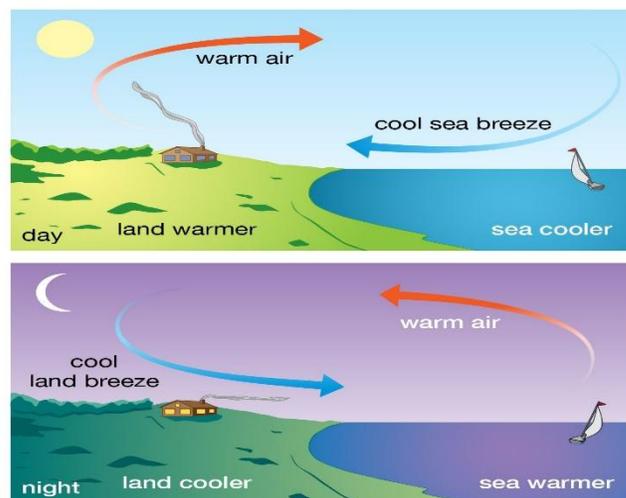


CLIMATE ZONES OF THE EARTH

1. Explain land breeze and sea breeze with a diagram.

Ans: Sea Breeze: During the day, land becomes hotter than sea. The wind above the land also gets hot. Hot air becomes lighter and rises. Cool wind from the sea then blow towards the land. This is called a sea breeze.

Land Breeze: As water takes longer time to cool down than land, So at night, the land cools faster than the sea. Wind over the land gets cool and dense. It now blows from the land towards the sea. This is called land breeze.



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2. Explain the climatic zones of the Earth.

Ans: **1) Torrid zone:-**

- It is located between the area of Tropic of Cancer and Tropic of Capricorn including the Equator
- This zone receives the maximum heat from the sun.
- The climate in torrid zone is hot and humid.

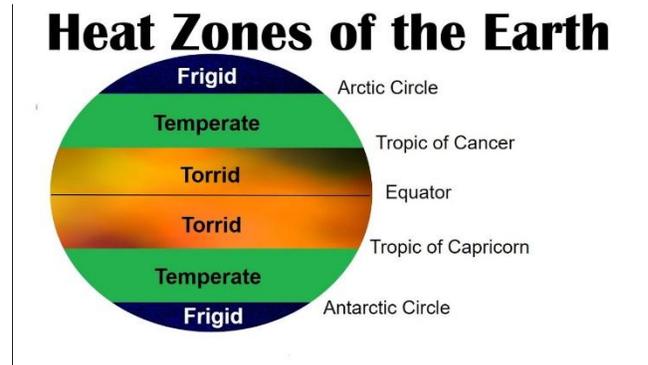
2) Temperate zone:-

- It is located between Tropic of Cancer and Arctic circle in the northern hemisphere and between Tropic of Capricorn and Antarctic circle in the southern hemisphere.
- Most grasslands of the world lie in the temperate zone

- The climate in temperate zone is mild and moderate.

3)Frigid zone :-

- It is located between Arctic circle and North pole in the northern hemisphere and between Antarctic circle and South pole in the southern hemisphere.
- The climate in frigid zone is very cold.



3. What is the difference between weather and climate?

Ans: Weather is the atmospheric condition of a place for a short period. It is temporary and affects a small area. Eg. Belgavi has hot weather today.

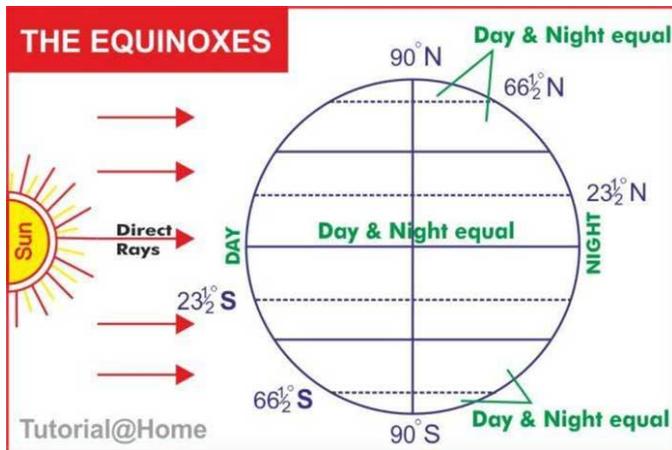
Climate is the atmospheric condition for a long period. It is permanent and affects a large area. Eg, The climate of Jammu and Kashmir is cold.

4. How does altitude affect the climate of place?

Ans: Altitude affects the temperature at a place. As altitude increases, temperature decreases. Hot air rises and becomes lighter, losing its heat-carrying capacity. Mountain regions have low temperature. So they have cool and pleasant climate. Therefore hill stations are popular with tourists in summer.

5. Why do places near the equator receive more heat than those near the poles?

Ans: The places near the equator are hotter because the rays of the sun fall vertically on the equator. Since the vertical rays cover a small area, they are more concentrated. That is why it is hot at the equator.



6. Write the difference between

a) The torrid zone and the frigid zone b) moderate climate and extreme climate

Ans: **1. Torrid Zone:**

- Located near the equator, receives the most direct sunlight and thus has warmest temperature throughout the year.
- Experiences high temperatures throughout the year.
- Also known as the tropics.

Frigid Zone:

- Located near the poles (Arctic and Antarctic Circles).
- Receives the least direct sunlight, leading to very cold temperatures.
- Often covered in ice and snow.

Moderate Climate:

- Characterized by mild temperatures, neither extremely hot nor extremely cold.
- Found in the temperate zones, located between the torrid and frigid zones.
- Experience distinct seasons with warm summers and cool winters.

4. Extreme Climate:

- Refers to the climate with significant temperature variations between seasons.
- Involves very hot summers and very cold winters.
- Include regions with large landmasses or those far from the moderating influence of oceans. Eg Delhi in India

7. Why does Chennai have a moderate climate when compared to Agra?

Ans: In essence, Chennai's proximity to the equator coastal location, that is the moderating influence of the sea create a more moderate and consistent climate, while Agra's inland position leads to greater temperature fluctuations between seasons.