



G.D. GOENKA PUBLIC SCHOOL

Class: 7th Subject: Social Science TOPIC: “Composition And Structure Of The Atmosphere”

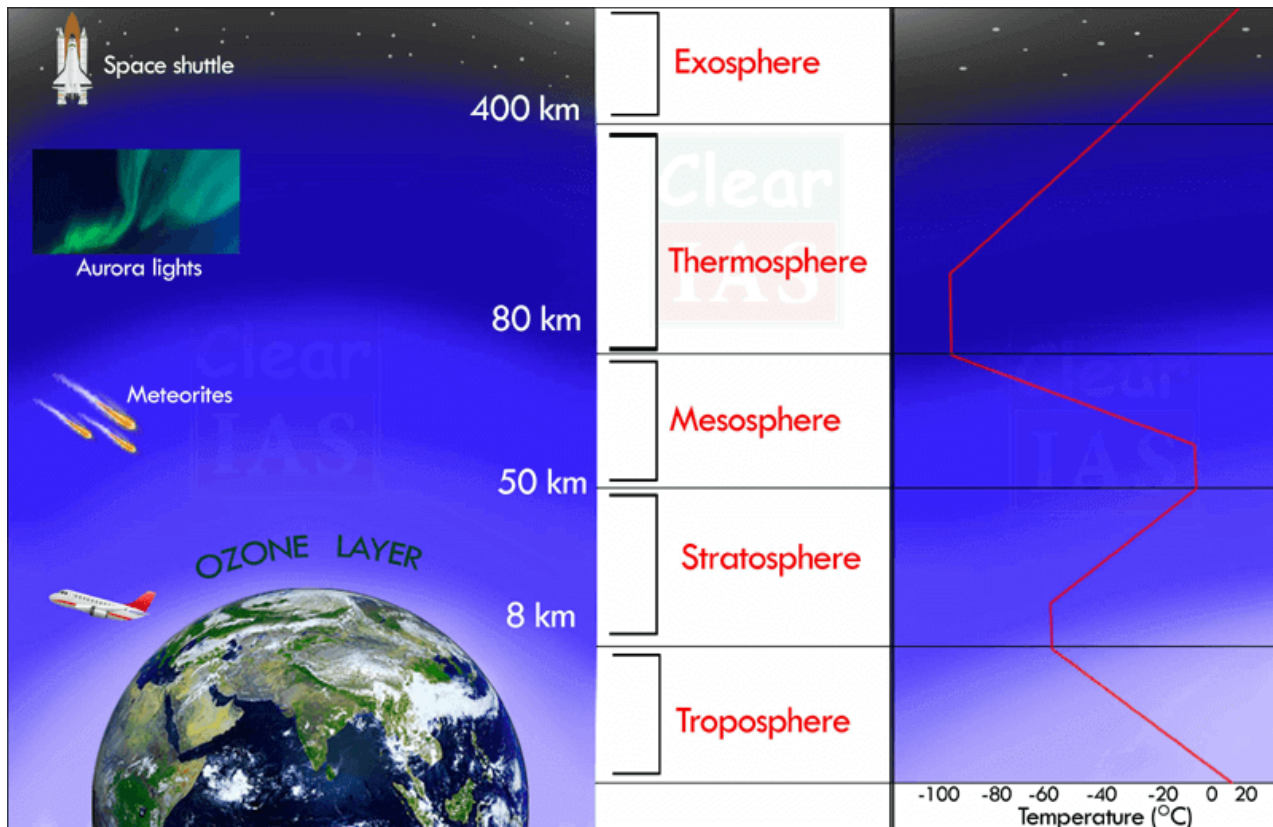
Learning Objective:

- To explain the characteristics of different layers of the atmosphere.
- To describe the importance of Cyclic processes of important gases of the atmosphere such as nitrogen, oxygen and carbon dioxide.

Structure of the atmosphere

The atmosphere can be divided into five layers according to the diversity of temperature and density. They are:

1. Troposphere
2. Stratosphere
3. Mesosphere
4. Thermosphere (Ionosphere)
5. Exosphere



Troposphere

- It is the lowermost layer of the atmosphere.
- The height of this layer is about 18 km on the equator and 8 km on the poles.
- The thickness of the troposphere is greatest at the equator because heat is transported to great heights by strong convectional currents.
- Troposphere contains dust particles and water vapour.
- This is the most important layer of the atmosphere because all kinds of weather changes take place only in this layer.

Stratosphere

- Stratosphere is found just above the troposphere.
- It extends up to a height of 50 km.
- Weather related incidents do not take place in this layer. The air blows horizontally here. Therefore this layer is considered ideal for flying of aircraft.

Mesosphere

- It is the third layer of the atmosphere spreading over the stratosphere.
- It extends up to a height of 80 km.
- In this layer, the temperature starts decreasing with increasing altitude and reaches up to – 100 degree Celsius at the height of 80 km.

Thermosphere

- This layer is located between 80 and 400 km above the mesopause.
- It contains electrically charged particles known as ions, and hence, it is known as the **ionosphere**.

Exosphere

- The exosphere is the uppermost layer of the atmosphere.
- Gases are very sparse in this sphere due to the lack of gravitational force. Therefore, the density of air is very less here.