

# Atmospheric Climate Systems

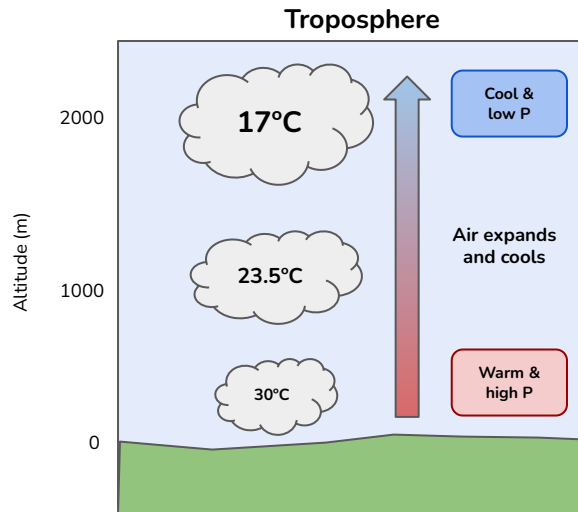
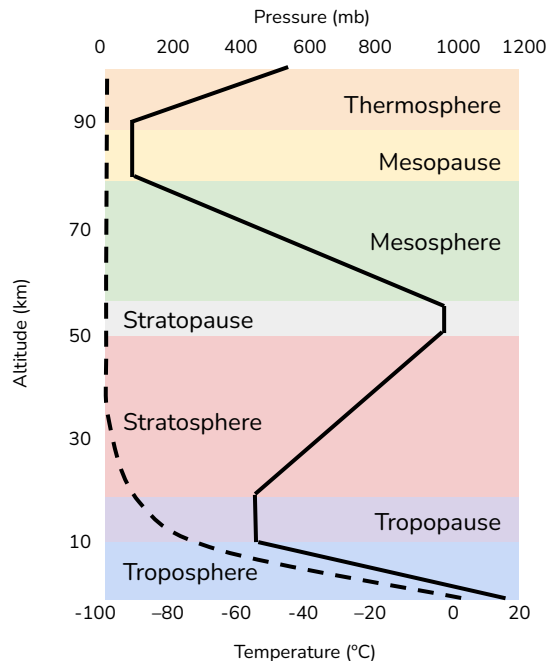
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Sloane Garelick



**Climate**match  
Academy —

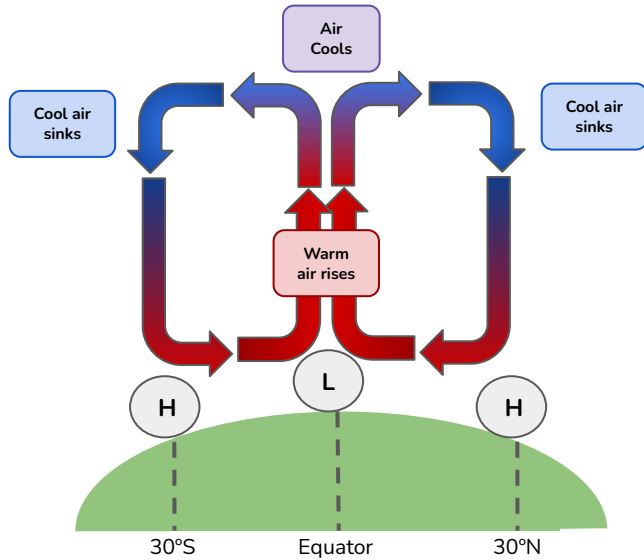
# Atmospheric Temperature and Pressure



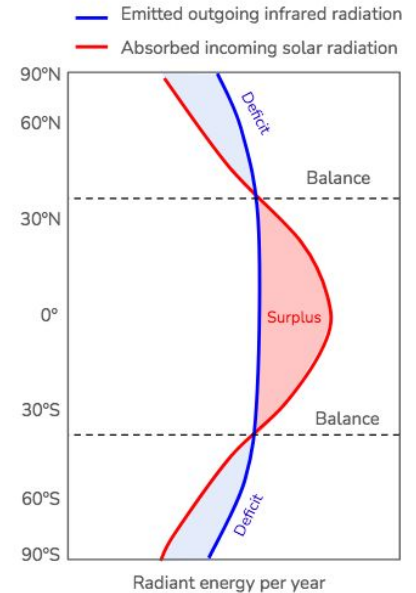
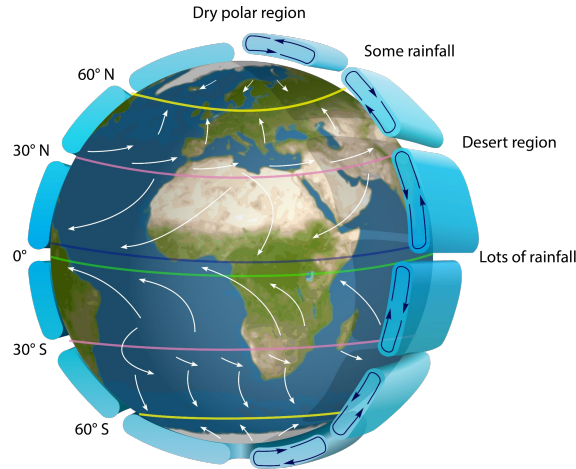
- Most atmospheric climate processes on Earth occur in the troposphere
- As warm surface air rises, it expands and cools
- The change in temperature with altitude is known as the **lapse rate**



# Atmospheric Circulation



**Hadley Cells:** large-scale air circulation driven by atmospheric pressure and temperature gradients



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# Tutorial 3: Opening and Plotting NetCDF4 Data

- In this tutorial, we will be importing atmospheric pressure and temperature data stored in a NetCDF4 file
- We will explore tools for analyzing this data and will learn how to create plots of this data using Xarray

