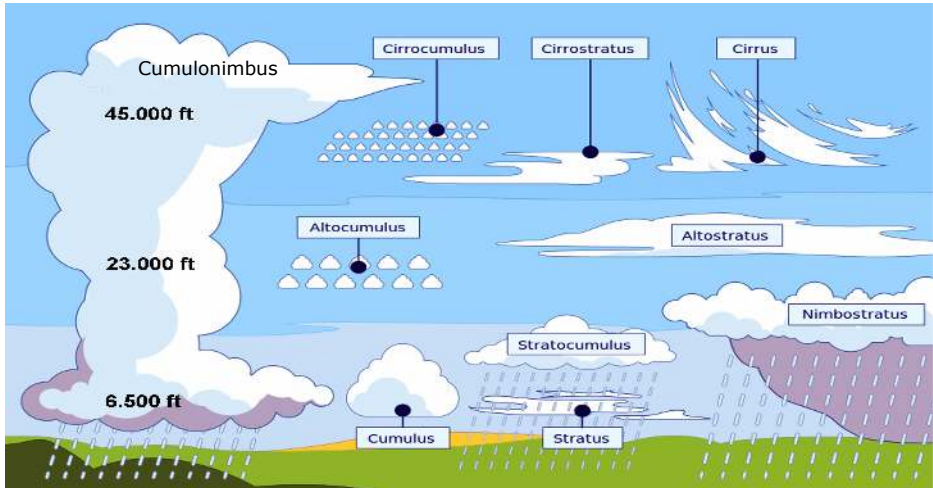


Chapter 6 - Weather (2)

Clouds



2 Types of clouds: Cumuliform (unstable air) and Stratiform (stable)
Prefix Nimbo or Nimbus means Rainclouds

High Clouds, cirrus are mainly composed with ice crystals

4 Families:

Low, middle, high and clouds with extensive vert. Development

$$\text{Base of clouds} = \frac{\text{Temperature} - \text{Dew Point}}{4,4} \times 1000 \text{ (ft)}$$

Unsaturated air cools at 5,4°F / 1000ft

Dew Point cools at 1°F / 1000ft

Turbulence

Cumulonimbus clouds have the greatest turbulence

Towering cumulus (convecting strong turbulence)

Lenticular clouds (50 knots wind or more)



Thunderstorms

3 conditions to form a Thunderstorm:

Sufficient water vapor, unstable lapse rate and initial upward boost
(High humidity, lifting force, unstable conditions)

3 stages:

Cumulus stage (continuous updraft),

Mature stage (precipitation beginning to fall)

Dissipating stage (downdraft, storm dies rapidly)

Squall line Thunderstorm (nonfrontal narrow band of active Thunderstorms)