

Moisture in the Atmosphere

Hydrologic cycle

- Evapo-transpiration

- Condensation

Water

- material that exists in 3 states

- Transfer of energy

Phase change

- H₂O

- Low temps

- Warmer temps

- Higher temps

Cooling phase change

- Latent heat of vaporization

Heating phase change

- Latent heat of condensation

Heat transfer

example

- Most intense heating
- Most evap

Measures of moisture

- Absolute humidity (AH)
- Capacity (C)
- Relative humidity (RH)
- Capacity
- Dew point

problem

Vertical motion and precip

- Warm air less dense than cool
- As air rises T decreases
- Cools to dewpoint

- Normal lapse rate

 - Adiabatic lapse rates

 - Dry rate

 - Moist rate

 - Mechanisms of lifting
 - Convection

 - Frontal(cyclonic)

 - Orographic
 - Windward
 - leeward
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- problem