

## Heat and Temperature

Heat

- the thermal energy transmitted from one body to another
- Temperature
  - the physical property that determines the direction in which heat will flow.

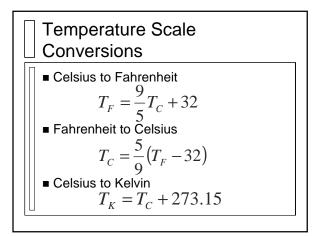
## **Temperature Scales**

Fahrenheit (F°)

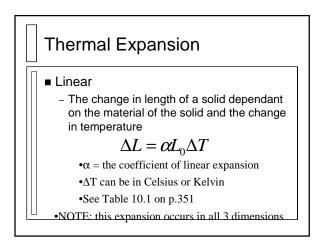
- Originally based on an salt/water combination and the temperature of the human body
- Celsius (°C)

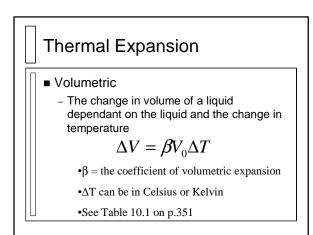
– based on the freezing point (0°C) and the boiling point (100°C) of water

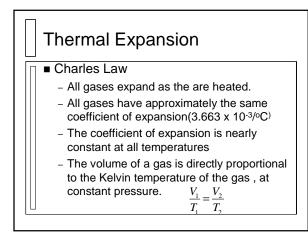
- Kelvin (K)
  - based on the theoretical temperature that molecular energy is at a minimum. (0 K)

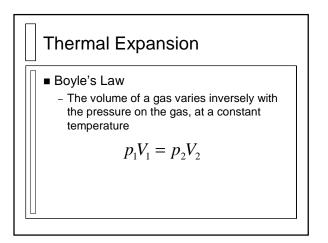












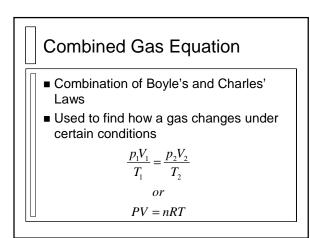
## Pressure

Units

- 1 atmosphere (atm)
  - the average atmospheric pressure
- Pascal (Pa)
  - SI Unit of pressure
    1atm = 1.01 x 10<sup>5</sup> Pa
  - raun = 1.01 x 10<sup>5</sup> Pa

## Standard Temperature and Pressure (STP)

The ideal situation for gas laws
 Temperature = 0°C
 Pressure = 1 atm or 1.01 x 10<sup>5</sup> Pa



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