Unit 8: Thermo
Topic: Specific Heat + E transfer 1/25

Specific Heat

- is why some things get hot + others don't in some circumstances
  ex: pie, beach
- due the composition of sub

= amount of heat (flow E) required to ↑ T 1g of substance 1°C
= resistance to change in T

high specific heat = doesn't ΔT easily
ex: water $4.184 \frac{J}{g \cdot °C}$ doesn't ΔT easy
low ex: Al $0.91 \frac{J}{g \cdot °C}$ does ΔT easily

$Q = mC\Delta T$

Q = heat transfer E gained + E lost − (J)
m = mass of substance (g) 1kg = 1000g
C = specific heat $\left(\frac{J}{g \cdot °C}\right)$ or $\left(\frac{cal}{g \cdot °C}\right)$
ΔT = change in $T_f - T_i$ (°C)

Q is conserved $Q_{in} = Q_{out}$

$Q_1 = -Q_2$

$m_1 C_1 \Delta T_1 = -m_2 C_2 \Delta T_2$