

# Chapter 5: Energy & Chemical Rxns

## Concepts:

temperature vs heat

heat transfer: exothermic vs endothermic  
system vs surroundings

phase changes

specific heat ( $J/g \cdot ^\circ C$ )

heat of fusion, heat of vaporization ( $J/g$ )

thermal equilibrium

internal energy,  $\Delta E = q + w$

heat as  $q$ , work as  $w$

sign conventions for  $\Delta E$ ,  $q$ ,  $w$

## Calculations

specific heat calculations

- how much heat must be added/removed...



- when 2 substances are put together

$$\Delta E = q + w$$