

E exits

E is a product

feels - warm

$-\Delta H$ (change in Enthalpy)
heat

$-q$ (heat)

lost

endothermic
(in)

surroundings



Takes in E

E is a reactant

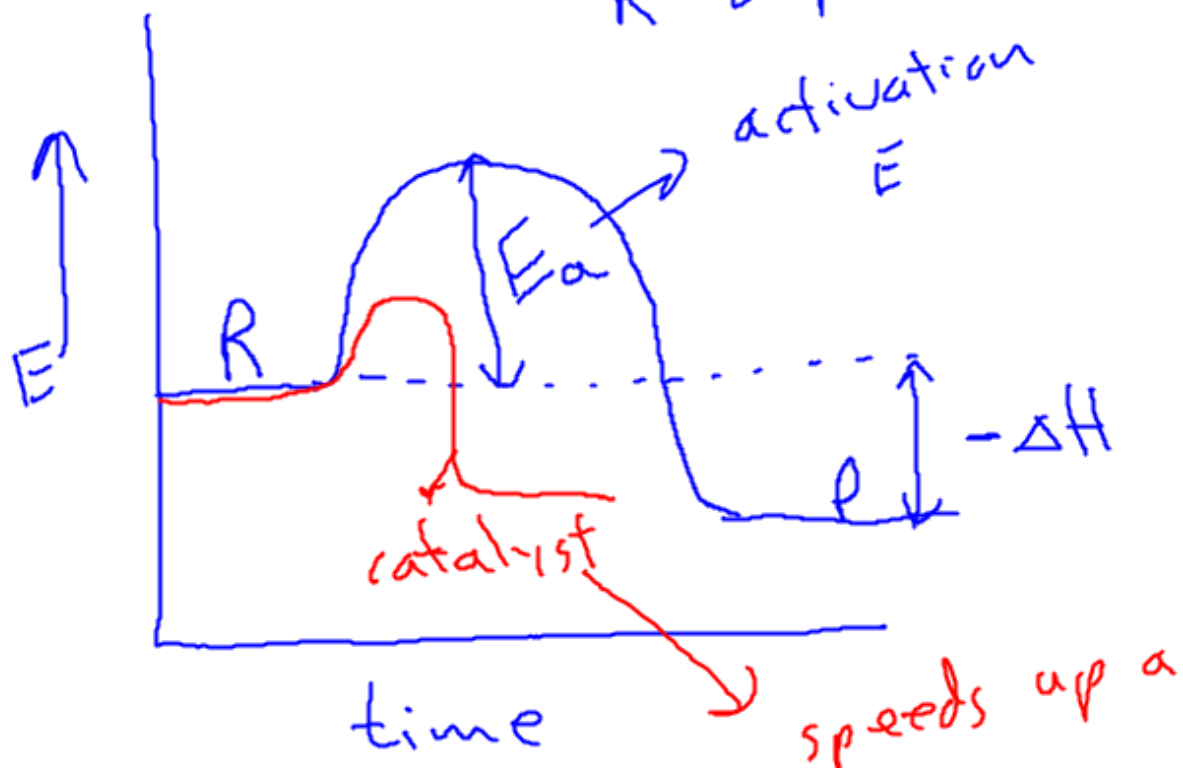
feels - cold

$+\Delta H$

$+q$

gain

E diagrams



Heat problems

$$q = m s \Delta T \rightarrow$$

heat (J) Joule

mass (g)

change in Temp
 $T_{\text{final}} - T_{\text{initial}}$
($^{\circ}\text{C}$)

Specific heat capacity
($\frac{\text{J}}{\text{g}^{\circ}\text{C}}$)

- * each substance has its own value
- * how much heat an a substance can store

$$J = (\cancel{\text{g}}) \left(\frac{\text{J}}{\cancel{\text{g}^{\circ}\text{C}}} \right) (\cancel{^{\circ}\text{C}})$$

What does the value of S
tell us?

S

large #

- * stores a lot of heat
- * very slow T changes

s small #

- * stores very little heat
- * rapid T changes

heat lost = heat gained

$$-q_L = q_g$$

