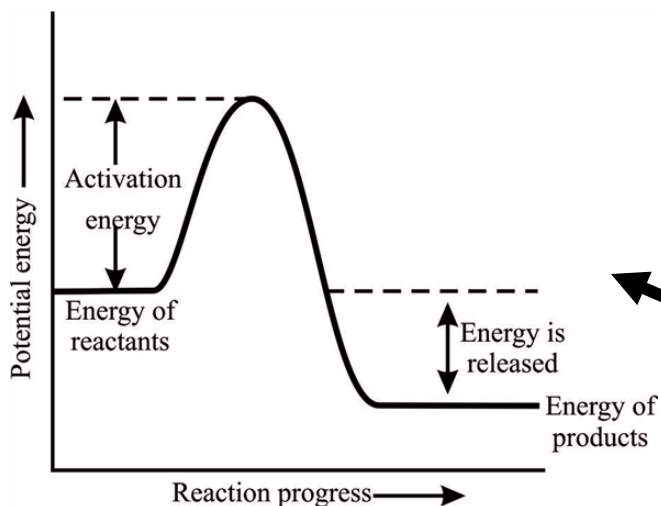


# Exothermic Reaction

- An **exothermic reaction** more energy is released than is required to break the bonds in the initial reactants
  - Reactants  $\longrightarrow$  Products + energy
  - An exothermic reaction sheds heat energy as the reaction progresses, meaning it radiates heat while it is going on.



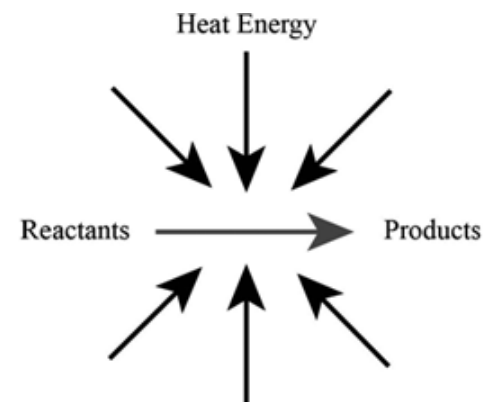
**Activation Energy:** The minimum amount of energy the reactant particles need in order to collide with each other and react

**Reaction Profile** – Know this!

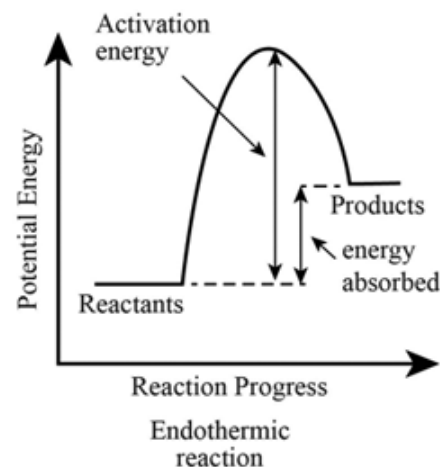
# Endothermic Reaction

Reactants + Energy  $\rightarrow$  Products

- Endothermic reactions draw in & store energy in the form of chemical bonds produced by the rxn
- In an endothermic reaction, the **product** contains more net energy than the **reactants** did at the start of the process
  - Basically it takes more energy to make, than you get from breaking it apart the product
- **From a chemistry standpoint**, there is no such thing as cold -- only an absence of heat. Endothermic reactions draw heat energy into themselves. As that heat leaves the surrounding area, the temperature drops.



*Pictorial representation of endothermic reaction*



*A graph showing  $\Delta H$  of an endothermic reaction*