Unit 1 – Thermochemistry

1. Exothermic reactions: (−) ΔH; feels hot; heat is a product; temperature goes up…
   Endothermic reactions: (+) ΔH; feels cold; heat is a reactant; temperature goes down…

2. ΔH_{rxn} = Bonds broken − Bonds formed…(reactant bonds are broken; product bonds are formed)

3. Breaking bonds is endothermic.
   Forming bonds is exothermic.

4. $\Delta H_{rxn}=\Delta H_{products}-\Delta H_{reactants}$ ...Don't forget to multiply by the coefficients!!

5. If a rxn is exo. then the bonds formed in the products are stronger/more stable than the reactant bonds.
   If a rxn is endo. then the bonds formed in the products are weaker/less stable than the reactant bonds.

6. Doubling a reaction? ΔH will double.
   Reversing a reaction? The sign for ΔH changes.
   Adding reactions? Add the ΔH's.

Thou Shalt Not Forget Questions

Credit: Dan Reid

Unit 1 – Thermochemistry

1. Fill out the chart below:

	Exothermic	Endothermic
Algebraic sign ΔH:		
If you touch it feels:		
Heat is a:		
The temperature goes:		

2. Identify if each process is exothermic or endothermic:

   Breaking bonds _____ Making bonds _____

3. Which is correct?

   $\Delta H_{rxn} = \Delta H_{products} - \Delta H_{reactants}$ or $\Delta H_{reactants} - \Delta H_{products}$

4. Circle which is true:

   If a rxn is exo. then the bonds formed in the products are (stronger or weaker) than the reactants

   If a rxn is endo. then the bonds formed in the products are (stronger or weaker) than the reactants

5. What happens to ΔH when:

   Doubling a reaction _____

   Reversing a reaction _____

   Adding reactions _____