

WKS 14.1 – Energy Concepts (1 page)

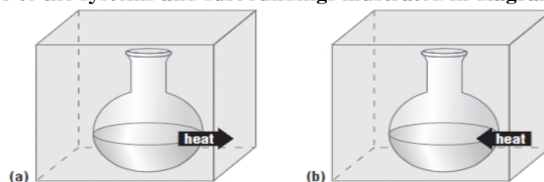
- Heat is measured in units called _____.
- The energy transferred between samples of matter because of a difference in their temperatures is called _____.
- What area of study in chemistry is concerned with the heat transfers that occur during chemical reactions?

- The amount of heat needed to raise 1 gram of a substance by 1°C is called the _____.
- Circle the letter next to each sentence that is **true** about heat.
 - One effect of adding heat to a substance is an increase in the temperature of that substance.
 - Heat always flows from a cooler object to a warmer object.
 - If two objects remain in contact, heat will flow from the warmer object to the cooler object until the temperature of both objects is the same.

This chart shows standard enthalpies of formation in kcal/mol for various substances. Write whether the formation of each substance is an exothermic or endothermic reaction.

Substance	ΔH	Exothermic or Endothermic
6. $\text{AlCl}_3(\text{s})$	-167.4	
7. $\text{HCl}(\text{g})$	-22.1	
8. $\text{NO}(\text{g})$	21.6	
9. $\text{O}_3(\text{g})$	34.0	
10. $\text{MgO}(\text{s})$	-143.8	

Questions 11 through 15 refer to the systems and surroundings illustrated in diagrams (a) and (b) below.



- Which diagram illustrates an endothermic process? _____
- Is heat flow positive or negative in diagram (a)? _____

13. Which diagram illustrates an exothermic process? _____
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 ig with CUPS handout.

h Careers Today, 3rd Edition, Judith Gerdin, 2003
 sh Teacher for editing
 eaching with Reading and Writing: Mark Forget, 2004

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Materials List	See b
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