NAME: HONORS CHEMISTRY

SECTION: Pairs/Check: Heat and Its Measurement

Directions:

1. Put both names on the paper.
2. One partner does the even problems. The other partner does the odd problems. Take turns answering the questions. As you work, explain how you are doing the problem while your partner listens.
3. After each problem, discuss the answer with your partner. If both partners agree on the answer, the solver initials the answer. If an agreement can't be reached, both partners raise their hands to get the teacher's attention.
4. Complete the self-assessment and sign both papers.

Part I: Phase Changes

Write the relevant equation here:

ΔH_{fus} = 6.00 kJ/mol= 333 J/g
ΔH_{vap} = 40.6 kJ/mol = 2254 J/g

1. How much energy (in kJ) is required to melt 75.0 g of water at 0.0^{o}C?

2. How many joules are given off when 125 g of steam condense to liquid water?

3. How much energy is required to boil 450 g of water at 100.^{o}C?

4. How much energy is released when 250 g of water freeze at 0.^{o}C?

C_p(ice) = 2.077 J /g ^oC
C_p(water) = 4.180 J /g ^oC
C_p(water vapor) = 2.042 J /g ^oC

Part II: Heating/Cooling (No Phase Changes)
Write the relevant equation here:

5. How many joules of heat are released when 12.0 grams of water cool from 85^{o}C to 35^{o}C?

6. How much energy is required to raise the temperature of 22 g of ice from -12^{o}C to -2^{o}C?

7. How much energy is released when 52 g of steam is cooled from 107^{o}C to 101^{o}C?

8. How much energy is required to heat 64.2 g of water from 1.0^{o}C to 25.0^{o}C?

The purpose of this assignment was to:
_____

_____

Did I:	Circle the appropriate response:		
Explain how I did the problems?	Always	Sometimes	Rarely
Listen while my partner explained?	Always	Sometimes	Rarely
Give my partner positive support?	Always	Sometimes	Rarely
Stay on task during the assignment?	Always	Sometimes	Rarely
Use encouraging and polite words?	Always	Sometimes	Rarely
Record my work on the paper?	Always	Sometimes	Rarely
Demonstrate an understanding of the material?	Yes	No	

Signatures:
_____ _____

Comments: