PT 1

2/26/14

Purpose: How to calculate the gain & loss of energy.

- pregnant Mom gives heat to the baby

- Girl friend Rolling over heating up the boyfriends instal Nostrall w Bad MORning breath.

2 SKinny girls hugging in a deep freezer

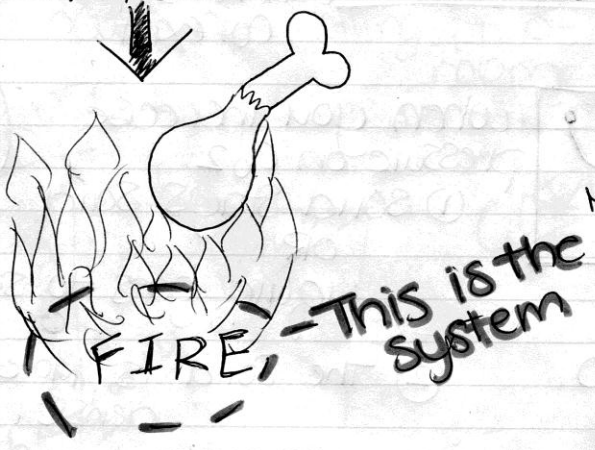
DATE FEB 26 2014 BY:

* EXOTHERMIC - heat goes out
* Endo thERMIC - heat goes in

} vocab words

EX.

a.) Sketch.



b.) Equation:

Methane → SMOKE
OR
Methane ⇒ SMOKE

(ΔH = NE
T U

☆ we assumed Methane was the system

c.) Statement: if we choose that the system is "Methane" this change is Exothermic ⇒ d. Chose "Chicken" as system, the change is Endothermic

PT 2.

2) Units of heat

a. Joule - Metric unit of energy

b. Kilojoule - 1,000 = 1 Joule

c. Calorie - is the amount of energy needed to raise 1 gram of water by 1 degree Celcius.

d. Capital "C" calories for food -

e. Conversion factors
1000 calories = 1 Calorie
4.184 joules = 1 calorie
1000 joules = 1 kilojoule

f. ex. Seaweed → SHI *
(Food table says $\Delta H = 10$ Calories per 12 pcs.

3) Calculate How Many.
a) Calories of energy gained eating 3 pieces of seaweed

$$3 \text{ pieces} \times \left(\frac{10 \text{ Calories}}{12 \text{ pieces}}\right) = 2.5 \text{ Calories}$$

b.) Joules of energy gained by you eating 22 pieces of seaweed

$$22 \text{ pieces} \left(\frac{10 \text{ Calories}}{12 \text{ pieces}}\right)\left(\frac{1{,}000 \text{ calories}}{1 \text{ Calories}}\right)\left(\frac{4.184 \text{ Joules}}{1 \text{ calories}}\right) = 79{,}000 \text{ Joules}$$