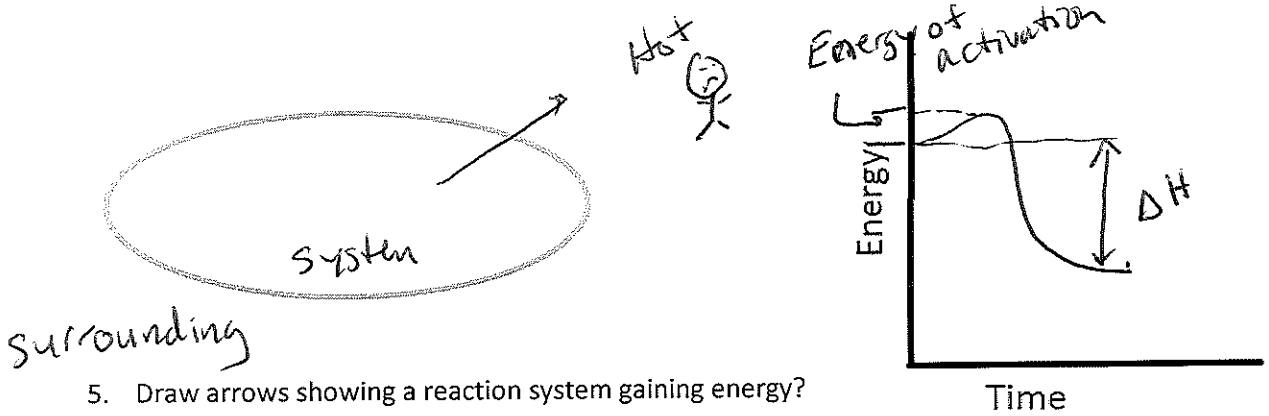
What is energy?

1. What is energy? – ability to do work → move, Lift, Heat

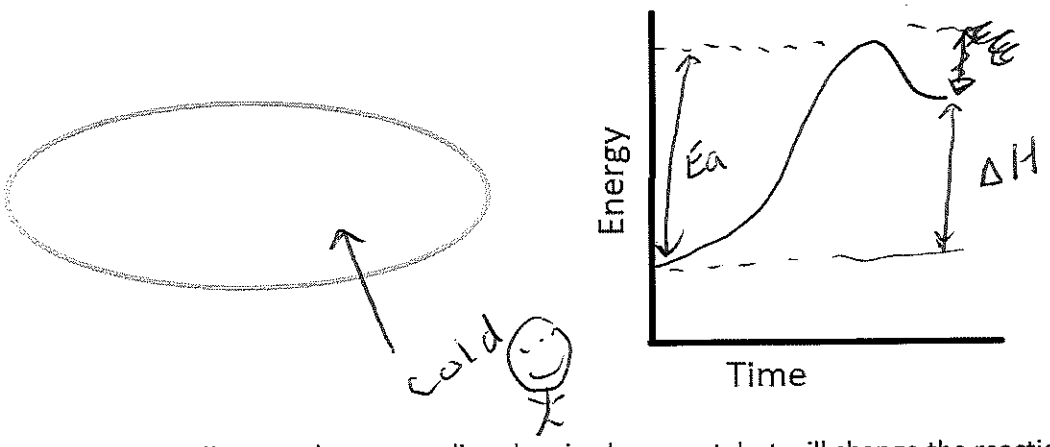
2. What is a calorie?
   4.18J = 1 cal 1000 cal = 1 Cal

3. Convert the following units:
   a. 250 cal → 0.250 Cal
   b. 2.5Cal → 10450J joules $2.5 \cdot \frac{1000}{1} \cdot \frac{4.18\,J}{1\,cal} = 10450\,J$

4. Draw arrows showing a reaction system losing energy?
   a. Label the system, surroundings, and energy flow.
   b. On the chart, draw the energy diagram for the system over the course of the reaction.



5. Draw arrows showing a reaction system gaining energy?
   a. Label the system, surroundings, and energy flow.
   b. On the chart, draw the energy diagram for the system over the course of the reaction



6. On each energy diagram, draw a new line showing how a catalyst will change the reaction system.