AP Chemistry Daily Videos
6.2 Energy Diagrams

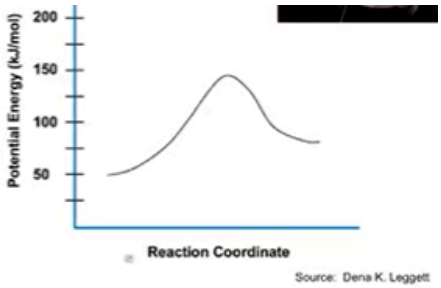
Daily Video #1

1. Sketch and label a sample energy profile for an exothermic process.

2. Sketch and label a sample energy profile for an endothermic process.

3. Pause the video at 3:42, attempt the problem, then evaluate how you did and identify any errors.

Which of the following best describes the changes occurring in the reaction represented by the energy profile shown?



Source: Dena K. Leggett

a) 25 kJ is transferred from the system and the products are more stable than the reactants.

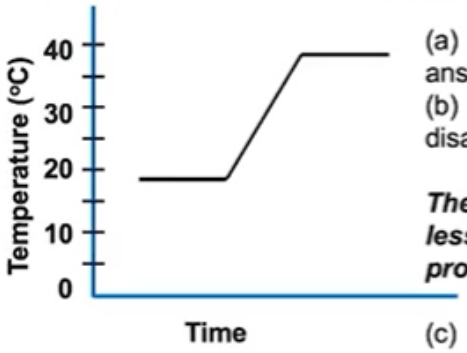
b) 25 kJ is transferred into the system and the products are more stable than the reactants.

c) 25 kJ is transferred from the system and the products are less stable than the reactants.

d) 25 kJ is transferred into the system and the products are less stable than the reactants.

4. Pause the video at 5:30, attempt the problem, then evaluate how you did and identify any errors.

An experiment was performed in an insulated container to determine the energy changes in a chemical reaction. A graph of temperature versus time is shown.



(a) Is the reaction exothermic or endothermic? Justify your answer using the data provided.
(b) A student makes the following statement. Do you agree or disagree?

The energy required to break the bonds in the reactants is less than the energy released when the bonds form in the products.

(c) Sketch an energy profile diagram for this reaction.

5. What are the takeaways?