



# Chem!stry

Name: ..... ( )

Class: .....

Date: ..... / ..... / .....

## Energy Profiles for Exothermic and Endothermic Reactions

Reagents **W** and **X** react together to form products **Y** and **Z**. On the axis shown below, sketch the energy profile for this reaction assuming that it is **a) exothermic** and **b) endothermic**. On each energy profile you should indicate the activation energy ( $E_a$ ) as well as the overall enthalpy change for the reaction ( $\Delta H$ ). Finally, illustrate the effect that a *catalyst* has on the energy profile of each reaction.

<p><b>a)</b> <b>Exothermic Reaction</b></p> <ul style="list-style-type: none"><li>• Is energy absorbed from, or released into the surroundings? ..... ..... .....</li><li>• Is <math>\Delta H</math> for this reaction positive or negative? .....</li></ul>	
<p><b>b)</b> <b>Endothermic Reaction</b></p> <ul style="list-style-type: none"><li>• Is energy absorbed from, or released into the surroundings? ..... ..... .....</li><li>• Is <math>\Delta H</math> for this reaction positive or negative? .....</li></ul>	

- Scan the QR Code below for the answers to this assignment.



[http://www.chemist.sg/energy\\_changes/energy\\_profile\\_diagram\\_ans.pdf](http://www.chemist.sg/energy_changes/energy_profile_diagram_ans.pdf)