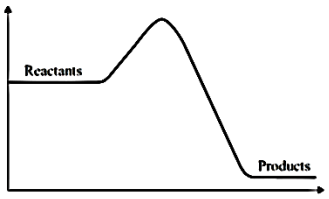
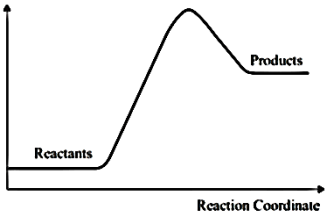
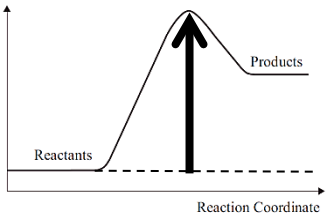
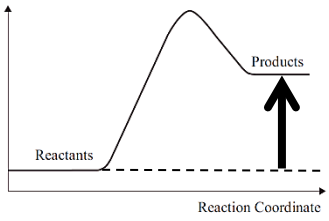
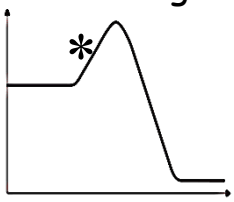
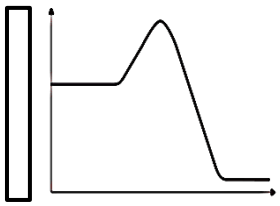
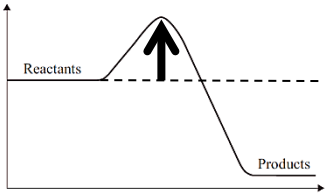
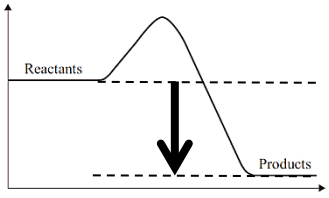
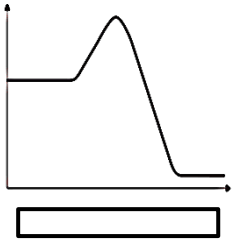
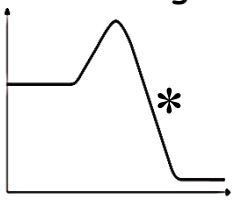
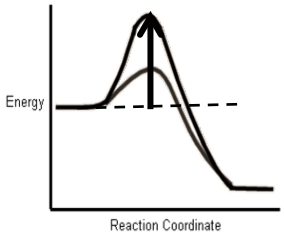
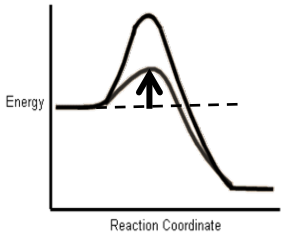
-ΔH means the reaction is …..	energy is released to the surroundings	surroundings warm up; reaction "feels hot" as temperature of reaction mixture increases	
exothermic	**exothermic**	**exothermic**	**exothermic**
Mg & HCl respiration & combustion are all ….	dissolving NH_4Cl & photosynthesis are both….	change of state $S \rightarrow L$ & $L \rightarrow G$ are both…	change of state $G \rightarrow L$ & $L \rightarrow S$ are both…
exothermic reactions	**endothermic reactions**	**endothermic**	**exothermic**
+ΔH means the reaction is …..	energy is absorbed from the surroundings	surroundings cool down; reaction "feels cold" as temperature of reaction mixture decreases	
endothermic	**endothermic**	**endothermic**	**endothermic**
reactants have more energy than the products	reactants have less energy than the products	bond making is always …	bond breaking is always…
exothermic	**endothermic**	**exothermic**	**endothermic**

units for enthalpy changes			bond _____ is occurring 
kJ or kJ mol^{-1}	**Ea / activation energy**	**enthalpy change ΔH (+ΔH)**	**breaking**
			
energy or enthalpy	**Ea / activation energy**	**enthalpy change ΔH (-ΔH)**	**reaction progress / coordinate**
bond _____ is occurring 			a catalyst lowers the activation energy, Ea, for a reaction by…
making	**Ea uncatalysed**	**Ea catalysed**	**allowing it to occur by an alternative reaction pathway / mechanism**
A catalyst does / does not alter ΔH for a reaction	A_____ increases reaction rate by providing an alternative pathway of lower activation energy so a greater proportion of collisions have the required activation energy and are successful	state change from S → L	state change from L → G
does not	**catalyst**	**fusion**	**vaporisation**