Energy Changes

The key areas of study in this topic are:

- How reactions can be classified as exothermic and endothermic
- How to link energy changes to bond breaking and forming
- Calculating energy changes in reactions using bond energies

By the end of this topic I should be able to:	Start	End
7.9 Recall that changes in heat energy accompany the following changes: a salts dissolving in water b neutralisation reactions c displacement reactions d precipitation reactions and that, when these reactions take place in solution, temperature changes can be measured to reflect the heat changes		
7.10 Describe an exothermic change or reaction as one in which heat energy is given out		
7.11 Describe an endothermic change or reaction as one in which heat energy is taken in		
7.12 Recall that the breaking of bonds is endothermic and the making of bonds is exothermic		
7.13 Recall that the overall heat energy change for a reaction is: • exothermic if more heat energy is released in forming bonds in the products than is required in breaking bonds in the reactants • endothermic if less heat energy is released in forming bonds in the products than is required in breaking bonds in the reactants		
7.14 Calculate the energy change in a reaction given the energies of bonds (in kJ mol–1)		
7.15 Explain the term activation energy		
7.16 Draw and label reaction profiles for endothermic and exothermic reactions, identifying activation energy