



AQA GCSE Combined Science: Trilogy

Topic Checklists

5.5 Energy Changes

5.5.1 Exothermic and Endothermic Reactions

Topic	Success Criteria	Progress		
Energy Transfer during Exothermic and Endothermic Reactions	I can explain what is meant by 'conservation of energy' in chemical reactions.			
	I can describe the transfer of energy in an exothermic reaction.			
	I can give some examples of exothermic reactions.			
	I can describe some everyday uses of exothermic reactions.			
	I can describe the transfer of energy in an endothermic reaction.			
	I can give some examples of endothermic reactions.			
	I can describe an everyday use of endothermic reactions.			
	I can distinguish between exothermic and endothermic reactions based on the temperature change of the surroundings.			
	I can evaluate uses and applications of exothermic and endothermic reactions given appropriate information.			
I can investigate the variables that affect temperature changes in reacting solutions (required practical activity 10).				
Reaction Profiles	I can give a definition for the term 'activation energy'.			
	I can explain what must happen to the reacting particles in order for a chemical reaction to occur.			
	I can draw simple reaction profiles (energy level diagrams) for exothermic and endothermic reactions showing the relative energies of reactants and products, the activation energy and the overall energy change.			
	I can use reaction profiles to identify reactions as exothermic or endothermic.			



Topic	Success Criteria	Progress		
The Energy Change of Reactions (HT Only)	I can calculate the energy needed to break bonds and the energy released when bonds are formed using bond energies supplied.			
	I can calculate the overall energy change of a reaction from the sum of the energy needed to break bonds in the reactants and the sum of the energy released when bonds in the products are formed.			
	I can describe how the energy released from forming new bonds compares to the energy needed to break existing bonds in exothermic and endothermic reactions.			