

Name _____ Class _____ Date _____

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
C7.1 Exothermic and endothermic reactions	I can define exothermic and endothermic reactions.	<input type="checkbox"/>	I can describe examples of exothermic and endothermic reactions.	<input type="checkbox"/>	I can explain a chemical reaction in terms of energy transfer.	<input type="checkbox"/>
	I can state that energy is conserved in a chemical reaction.	<input type="checkbox"/>	I can explain, using observations from calorimetry, how to classify a reaction as exothermic or endothermic.	<input type="checkbox"/>	I can plan, carry out, and evaluate the errors in a calorimetry investigation.	<input type="checkbox"/>
	I can safely complete a calorimetry experiment for a reaction that takes place in solution.	<input type="checkbox"/>	I can explain in detail how to carry out a calorimetry experiment.	<input type="checkbox"/>		
C7.2 Using energy transfers from reactions	I can state a use of an exothermic reaction and an endothermic reaction.	<input type="checkbox"/>	I can explain how an energy change from a chemical reaction can be used.	<input type="checkbox"/>	I can suggest a chemical reaction for a specific purpose based on the energy change for the reaction.	<input type="checkbox"/>
	I can write word equations for familiar reactions.	<input type="checkbox"/>	I can write balanced symbol equations for familiar reactions.	<input type="checkbox"/>	I can evaluate in detail the uses of exothermic and endothermic reactions.	<input type="checkbox"/>
C7.3 Reaction profiles	I can define activation energy.	<input type="checkbox"/>	I can label activation energy on a reaction profile diagram.	<input type="checkbox"/>	I can explain why chemical reactions need activation energy to start them.	<input type="checkbox"/>
	I can sketch a generic reaction profile diagram for an exothermic or endothermic reaction.	<input type="checkbox"/>	I can generate a specific reaction profile diagram for a given chemical reaction when its energy change is also supplied.	<input type="checkbox"/>	I can use the particle model to explain how a chemical reaction occurs.	<input type="checkbox"/>
		<input type="checkbox"/>	I can identify bonds broken in reactants and new bonds made in products of a reaction.	<input type="checkbox"/>	I can explain energy change in terms of the balance between bond making and bond breaking.	<input type="checkbox"/>

AQA Chemistry

GCSE Student Checklist

C7 Energy changes

Name _____ Class _____ Date _____

Lesson	Aiming for 4		Aiming for 6		Aiming for 8	
C7.4 Bond energy calculations			I can explain, using the particle model, how reactants become products in a chemical reaction.	<input type="checkbox"/>	I can calculate the energy needed to break the reactant bonds and the energy released when the product bonds are made.	<input type="checkbox"/>
			I can explain why bond breaking is endothermic and bond making is exothermic.	<input type="checkbox"/>	I can calculate the energy change for a reaction, including the correct unit.	<input type="checkbox"/>
			I can define bond energy and identify all the bonds that break and are made in a chemical reaction.	<input type="checkbox"/>	I can explain in terms of bond energies how a reaction is either exothermic or endothermic.	<input type="checkbox"/>
C7.5 Chemical cells and batteries	I can describe a simple cell.	<input type="checkbox"/>	I can explain how potential difference can be changed in a cell.	<input type="checkbox"/>	I can describe an electrochemical cell with half-equations and ionic equations.	<input type="checkbox"/>
	I can describe a battery.	<input type="checkbox"/>	I can interpret data from an electrochemical cell to determine the reactivity of the metals involved.	<input type="checkbox"/>	I can explain why the reactions in an electrochemical cell are redox reactions and determine which species is oxidised or reduced in an electrochemical cell.	<input type="checkbox"/>
	I can give an example of a non-rechargeable battery.	<input type="checkbox"/>	I can explain why non-rechargeable batteries stop working.	<input type="checkbox"/>	I can evaluate the use of non-rechargeable batteries.	<input type="checkbox"/>
C7.6 Fuels cells	I can describe a hydrogen fuel cell.	<input type="checkbox"/>	I can explain how a hydrogen fuel cell produces electricity.	<input type="checkbox"/>	I can describe the reactions in fuel cells using balanced symbol and half equations.	<input type="checkbox"/>
	I can state some uses for hydrogen fuel cells.	<input type="checkbox"/>	I can list the advantages and disadvantages of hydrogen fuel cells.	<input type="checkbox"/>	I can evaluate the use of hydrogen fuel cells instead of rechargeable cells and batteries.	<input type="checkbox"/>
	I can state that hydrogen fuel cells could be an alternative to rechargeable cells and batteries.	<input type="checkbox"/>	I can explain why hydrogen fuel cells are an alternative to rechargeable cells and batteries.	<input type="checkbox"/>	I can determine and explain which species is oxidised and which is reduced in a hydrogen fuel cell	<input type="checkbox"/>