

Blue Pathway								
Purple Pathway								
Orange Pathway								
	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12
AO1 Remember	Describe efficiency, and appreciate the conservation of energy.	Describe what is meant by specific heat capacity	Recall the formula for power and energy efficiency	Describe conservation of energy	Describe relationships between scientific advances, their ethical implications and the benefits and risks associated with them.	Explain pathways of energy transfer and conservation of energy	Use accurate and appropriate scientific language and units	Explain energy resources external factors, patterns and trends
	State the pathways for energy transfer	State examples of renewable & non-renewable energy sources	Describe the pathways for energy transfer				Use appropriate terminology in answers	
	Define renewable & non-renewable		Remember key facts about most areas of Science.	Explain specific heat capacity				
AO2 Application	Suggest energy pathways in household appliances	Consistently use and sometimes rearrange equations in calculations.	Calculate power and energy efficiency	Use specific heat capacity calculations	Link thermal conductivity to rate of energy transfer	Apply and rearrange efficiency and other calculations including KE.	Understand specific heat capacity and rearrange the given formula	Apply concepts of specific heat capacity
	Use the equation for energy transferred		Interpret data and use it to support evidence.	Interpret Sankey diagrams	Rearrange equations in calculations.	Consistently rearrange multi-step calculations	Use energy calculations with suitable units	Link energy stores, pathways & processes
AO3 Analyse and Evaluate	Recognise anomalous results and spot some causes of error in experimental procedures.	Compare resources, efficiency & cost	Identify some causes of error and uncertainty in data or experimental procedures.	Evaluate efficiency				
		Consistently draw conclusions consistent with the available evidence.		Evaluate the reliability of methods in detail.				
AO3 Experimental Procedures	Identify variables in an investigation	Accurately make and record observations and measurements	Carry out an experiment to calculate specific heat capacity	Describe an experiment to calculate specific heat capacity	Identify sources of error in thermal energy practical	Safely carry out practical investigations by creating a full risk assessment	Suggest improvements in the specific heat capacity practical	Plan, justify, and carry out a safe, reliable and valid investigation to test a hypothesis
		Describe an experiment to investigate thermal energy loss						