

**Barnsley Academy – (Year 9 Science 9CE) Curriculum
Scheme of Work – 2023-24**

Term 1 – Week 3				
	1	2	3	4
Lesson Focus	Big Picture – Combustion	Big Picture – Thermal decomposition	Big Picture – CTG	9CE – EOJA
Prerequisite Knowledge	Y7 & Y8 Particles Chemical reactions 7CC <u>Previous lessons:</u> Measuring rates, conclusions from rate of reaction graphs, effect of concentration on rates, Temperature & surface area, Catalysts, Endothermic and exothermic reactions	Y7 & Y8 Particles Chemical reactions 7CC <u>Previous lessons:</u> Measuring rates, conclusions from rate of reaction graphs, effect of concentration on rates, Temperature & surface area, Catalysts, Endothermic and exothermic reactions, combustion	Y7 & Y8 Particles Chemical reactions 7CC <u>Previous lessons:</u> Measuring rates, conclusions from rate of reaction graphs, effect of concentration on rates, Temperature & surface area, Catalysts, Endothermic and exothermic reactions, combustion, thermal decomposition.	Measuring rates, conclusions from rate of reaction graphs, effect of concentration on rates, Temperature & surface area, Catalysts, Endothermic and exothermic reactions, combustion, thermal decomposition.
Core Knowledge	<ul style="list-style-type: none"> Describe how to test for the products of combustion Compare complete and incomplete combustion in terms of reactants, products and energy release. Name the environmental problems caused by each type of combustion. 	<ul style="list-style-type: none"> Define thermal decomposition. Write word and symbol equations to represent thermal decomposition reactions. Carry out a thermal decomposition reaction and explain it in terms of conservation of mass. 	<ul style="list-style-type: none"> Define rate of reaction and how it can be measured Collect, record and interpret data on factors affecting rates of reactions Define endothermic and exothermic reactions Make and record accurate temperature readings Suggest and explain changes to equipment that would improve the data collected. Recognize endothermic and exothermic reactions from temperature changes, 	

			e.g thermal decomposition and combustion.	
Expert Model /Guided Practice/Agreed Approach (Procedural Knowledge)	Highlighting key content, combustion as an example of an exothermic reaction, products of combustion and how they can be verified.	Highlighting key content, thermal decomposition as an example of an endothermic reaction, products of thermal decomposition Modelling calculating masses from thermal decomposition reactions.	Highlighting key definitions, rates, endothermic and exothermic reactions, catalysts Modelling, describing and explaining the factors that affect the rates of reactions.	Pick out any extended questions – annotate command words and key content under visualiser to set students up for success prior to starting the paper.
Independent Practice	IP 1 – Products of combustion worksheet IP 2 – hydrocarbons as fuels worksheet	IP 1 – word equations on thermal decomposition IP 2 –calculations on masses from decomposition reactions. IP 3 –KPI	Adapted based on misconceptions identified	Complete EOQA in silence – 50 minutes
Assessment (Informal/Formal)	Circulation/live feedback/self-assessment/class assessment/whole class feedback (mini whiteboard)/quiz.	Circulation/live feedback/self-assessment/class assessment/whole class feedback (mini whiteboard)/quiz.	Circulation/live feedback/self-assessment/class assessment/whole class feedback (mini whiteboard)/quiz.	
Resources	worksheets, https://www.youtube.com/watch?v=8iCLrYDWiJO	Worksheets	worksheets	Test sheets, calculators
Specific SEN(D)/EAL support				