

YEAR 11 CURRICULUM INFORMATION – Chemistry									
	Spring 1	Spring 2							
What will students be learning?	Spring 1 Using our resources Students will develop their understanding of rusting from KS3 to understand how both water and air are required for iron to corrode. They should be able to explain how the two methods for preventing rusting – barrier methods and sacrificial methods – disrupt the oxidation of iron and prevent corrosion. Students will also study a series of different material types – alloys, polymers, ceramics, glass, and composites. Students have previously met alloys and polymers in <i>Chapter C3</i> and <i>Chapter C11</i> respectively and students should have built upon this understanding. For each material, students should be able to identify key properties and link these to their common uses. Students will also study the Haber process and how it is carried out economically on an industrial scale. This builds extensively upon knowledge of equilibrium conditions in <i>Chapter C8</i> and students should be able to explain why the industrial conditions for the Haber process are described as a compromise. Students should also be able to recognise the importance of the Haber process in the production of ammonia, being able to explain how ammonia is an important feedstock in the production of fertilisers, both in the laboratory and industrially alongside potassium and phosphorus fertilisers.	Spring 2   Revision for Summer GCSE exams   Required practical focus:   1 Making salts   2 Neutralisation   3 Electrolysis   4 Temperature   changes Paper 1   5 Rates of reaction   6 Chromatography   7 Identifying ions   8 Water purification							
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How will students be assessed?	C15 (Using our resources) milestone	In-class exam questions Required practical booklet							
Literacy – What keywords	Corrosion, Sacrificial protection, Galvanise, Alloys, Monomers,	Atomic structure							
will be taught?	Thermosoftening, Thermosetting, Manufacture, Fertiliser	Periodic Table							
		Bonding structure							
		Properties							
		Quantitative							
		Chemical							
		Energy							
		Chemical change							
		Urganic Analysis							
		Alldiysis Atmosphere							
		Aunosphere							



					Resources			
What employability skills	Skills such as investigative and analytical which can lead to careers as:				Mathematical and practical skills (apparatus and technique skills).			
are being developed?	Materials engineer, N	laterials scienti	st, Industrial 🤅	engineer, Polymer	Skills such as investigative and analytical which can lead to careers as:			
	scientist, Metallurgist	, Inorganic cher	mist, Glass blo	ower, Ceramic	Explosives engineer, Electrical engineer, Chemical manufacturer,			
	engineer	, .	-		Chemical engineer, Surfactants research engineer, Research scientist,			
	Chameer				Drilling consultant, Offshore driller, Petroleum geologist, Gas engineer,			
					Meteorologist, Astronomer, Criminal analyst, Pharmacologist,			
				Phlebotomist, Laboratory technician, Healthcare scientist, Nuclear				
				Physics, Quantum physics, Pyrotechnics engineer, Water treatment				
				technician, Water engineer, Swimming pool engineer, Materials				
				scientist, Metal extractor, Welder, Healthcare scientist, Toothpaste				
				manufacturer, Hydrogen fuel system engineer, Fuel cell engineer,				
					Fragrance chemist, Polymer chemist.			
Wider Curriculum Links?	DT (Materials and their composition)			Maths (Interpreting and creating graphs, rearranging equations,				
	Geography (Agriculture)				tangents, creating and interpreting tables, fractions)			
	Maths (Proportions)	ions)			Food (Use of food colouring dyes)			
					Food (Use of E numbers in food)			
				Biology (How different conditions impact on reactions)				
					Food (How temperature affects food production)			
What useful websites are		and the				wanter		
there for this topic?	6.0	ET 1		BBC	60	ET Man		BBC
			22	Bitesize	NEW /		22	Bitesize
		C.SI.				6.11		
	Free science	Primrose	Seneca	BBC Bitesize	Free science	Primrose	Seneca	BBC Bitesize
	lessons	Kitten	Selleca	bbe bitesize	lessons	Kitten	Senecu	bbe bitesize
What wider reading could	Textbooks: AQA Chemistry for GCSE Combined Science: Trilogy				Textbooks: AQA Chemistry for GCSE Combined Science: Trilogy (Oxford)			
be done for this topic?	(Oxford)			Textbooks: AQA Chemistry for GCSE Separate Science				
	Textbooks: AQA Chemistry for GCSE Separate Science							
What else can students	Exam questions				Exam questions			
be doing independently	Numeracy practice				Numeracy practice			
to develop their	Practice and use of videos to recap the required practical carried out							actical carried out
understanding of this								
topic?								