KS5 Curriculum Overview (CHEMISTRY)

<u>Year 12</u>

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Topic 1: Atomic Structure and the	Physics Link	Career links
Periodic Table	Math Link: Mathematical skills	Research Chemists,
Topic 2: Bonding and Structure		Chemical Engineering,
Topic 3: Redox I	calculating a	project engineers, development chemists,
	relative atomic mass from isotopic	laboratory technicians,
	composition data, using simple	technical associates,
	probability to	research analysts,
	 calculate the peak heights for the mass 	Chemistry teacher. British Values
	spectrum of chlorine molecules, using	Tolerance – acceptance of
	 logarithms to compare successive 	differing opinions on how
	ionisation energies for an element.	to answer questions and
	 investigate relationships, such as 	resolve challenges.
	between the magnitude of ionization.	Individual Liberty – within Core practical activities all
		students have to work
	 representing shapes of molecules with 	independently.
	suitable sketches, plotting data to	Rule of Law – Students
	investigate trends in boiling	have to follow strict safety guidance to ensure their
	temperatures of alkanes.	own safety and for the
	 consider the strengths and weaknesses 	safety of others.
	of the models used to describe different	Democracy – When
	types of bonding. As part of their study	completing pair and team challenges realizing that
	of 6 electron-pair repulsion theory,	they have to listen as well
	students can see how chemists can	, discuss their own opinions.
	make generalisations and use them to	Mutual respect - When
	make predictions	completing pair and team
	 using an algebraic method to work out 	challenges realizing that they have to listen as well
		discuss their own opinions.
	the oxidation number of an element	Listening to others'
	within a complex species,	responses to answers and
	 balancing equations for redox reactions 	being willing to play their part.
	by combining ionic half-equations.	part.
TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Topic 4: Inorganic Chemistry and		Career links & BV
the Periodic Table	Physics Link	Laboratory Technicians,
Topic 5: Formulae, Equations and	 investigating displacement reactions in 	Research Chemists,
Amounts of Substance	the halogens	Chemical Engineering,
	 Mathematical skills - manipulating data 	British Values Tolerance – acceptance of
	on the solubility of hydroxides.	differing opinions on how
	 Using data to make predictions based 	to answer questions and
	on patterns and relationships.	resolve challenges
		Individual Liberty – within
		Core practical activities all

	 converting between units such as cm3 and dm3, using standard form with the Avogadro constant, rearranging formulae for calculating moles in solids and in solutions, calculating atom economy, dealing with percentage errors. Consider ideas of: measurement uncertainty, evaluating their results in terms of systematic and random errors. They can also consider how the concept of atom economy is useful to help chemists make decisions so that reactions can be made more 	students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others' responses to answers and being willing to play their
	efficient in terms of resources.	part.
TERM 3 TOPIC/s		*Career links & BV
Topic 2: Bonding and Structure	*Key Skills/Subject Links	Career links
Topic 2: Bonding and Structure Topic 3: Redox I Topic 6: Organic Chemistry I	 Physics Link Mathematical include Representing shapes of molecules with suitable sketches, plotting data to investigate trends in boiling temperatures of alkanes. Consider the strengths and weaknesses of the models used to describe different types of bonding. As part of their study of electron-pair repulsion theory, students can see how chemists can make generalisations and use them to make predictions. Mathematical skills include calculating the yield of a reaction or an atom economy. Students can consider how the polymer industry provides useful solutions for many modern applications, but poses questions about sustainability of resources and the feasibility of recycling. chemistry, showing them how chemists work safely with potentially hazardous chemicals by managing risks 	Research Chemists Chemical Engineering project engineers development chemists laboratory technicians technical associates research analysts Chemistry teacher, Medical professions British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions.

 *Key Skills/Subject Links ysics & Math Links: athematical skills include calculating the yield of a reaction or an 	*Career links & BV
ysics & Math Links: athematical skills include	
	Career links Research Chemists, Chemical Engineering,
 atom economy. Students can consider how the polymer industry provides useful solutions for many modern applications, but poses questions about sustainability of resources and the feasibility of recycling. chemistry, showing them how chemists work safely with potentially hazardous chemicals by managing risks athematical skills include plotting and extrapolating graphs of temperature rise against time for displacement reactions, calculating enthalpy changes in J and in kJ mol-1, using algebra to solve Hess's law problems, calculating enthalpy changes using bond enthalpies. 	project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher, Medical professions. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others Democracy – When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others' responses to answers and being willing to play their part.
 *Key Skills/Subject Links 	*Career links & BV
	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts,
	 *Key Skills/Subject Links ath Link athematical skills include calculating the yield of a reaction or an atom economy. Students can consider how the polymer industry provides useful solutions for many

	about sustainability of resources and the	Medical professions
	·	British Values
	feasibility of recycling.	Tolerance – acceptance of
	chemistry, showing them how chemists	differing opinions on how to answer questions and
	work safely with potentially hazardous	resolve challenges.
	chemicals by managing risks	Individual Liberty – within
	analysing fragmentation patterns in mass	Core practical activities all
	spectra.	students have to work independently.
	Within this topic, students can consider	Rule of Law – Students
	how different instrumental methods can	have to follow strict safety
	provide evidence for analysis. They can see	guidance to ensure their
	how accurate and sensitive methods of	own safety and for the safety of others.
	analysis can be applied to the study of	Democracy – When
	chemical changes, but also to detect drugs	completing pair and team
		challenges realizing that
	such as in blood or urine testing in sport	they have to listen as well discuss their own opinions.
	Mathematical skills	Mutual respect - When
	deriving an algebraic expression for the	completing pair and team
	equilibrium constant.	challenges realizing that
	Consider an appreciation of equilibrium	they have to listen as well
	processes, coupled with kinetics, can lead	discuss their own opinions. Listening to others'
	chemists to redevelop manufacturing processes	responses to answers and
	to make them more efficient.	being willing to play their
		part.
TERM 6 TOPIC/s	 *Key Skills/Subject Links 	*Career links & BV
Topic 11: Equilibrium II	 *Key Skills/Subject Links Math Link 	Career links
Topic 11: Equilibrium II Topic 14: Redox II	Math Link	Career links Research Chemists,
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	Math Link Mathematical skills that could be developed in	Career links Research Chemists, Chemical Engineering,
Topic 11: Equilibrium II Topic 14: Redox II	Math Link Mathematical skills that could be developed in this topic include:	Career links Research Chemists,
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians,
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates,
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians,
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how
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Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider how chemists can use the concept of equilibria to predict quantitatively the direction and extent of chemical 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all
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Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider how chemists can use the concept of equilibria to predict quantitatively the direction and extent of chemical change. Students consider how ideas developed in different contexts within chemistry can be shown to be related to a major explanatory 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider how chemists can use the concept of equilibria to predict quantitatively the direction and extent of chemical change. Students consider how ideas developed in different contexts within chemistry can be shown to be related to a major explanatory principle. 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider how chemists can use the concept of equilibria to predict quantitatively the direction and extent of chemical change. Students consider how ideas developed in different contexts within chemistry can be shown to be related to a major explanatory principle. Students consider how chemists continue to 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others.
Topic 11: Equilibrium II Topic 14: Redox II Topic 19: Modern Analytical	 Math Link Mathematical skills that could be developed in this topic include: Constructing expressions for Kc and Kp and calculating values with relevant units, estimating the change to the value of an equilibrium constant when a variable changes. Within this topic, students can consider how chemists can use the concept of equilibria to predict quantitatively the direction and extent of chemical change. Students consider how ideas developed in different contexts within chemistry can be shown to be related to a major explanatory principle. 	Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When

Students consider a wider range of instrumental methods used for analysis and see how this technique is used in medicine through MRI scans.	they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others responses to answers and being willing to play their part.
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KS5 Curriculum Overview (CHEMISTRY)

Υ	ear	13

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Topic 12: Acid-base Equilibria Topic 17: Organic Chemistry II	 Mathematical skills developed in this topic include logarithms and exponentials for converting from concentration to pH and vice versa, rearranging Ka expressions into expressions suitable for calculating pH of a buffer solution, plotting and interpreting titration curves. Consider the historical development of theories explaining acid and base behaviour show that scientific ideas change as a result of new evidence and fresh thinking. Relate their study of buffer solutions to a range of applications in living cells, medicines, foods and the natural environment Mathematical skills include representing chiral molecules with appropriate diagrams, calculating percentage yields and experimental errors. Students can consider how organic synthesis can produce a variety of important materials, such as esters for solvents, flavourings and perfumes. 	Career Links The use of buffer solutions in Surgery, Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others responses to answers and being willing to play their part.

TERM 2 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Topic 13: Energetics II	Mathematical skills include	Career links
Topic 17: Organic Chemistry II	 calculating the missing value from a 	Chemical Engineering,
		Research Chemists,
	Born-Haber cycle using algebraic	Chemical Engineering, project engineers,
	expressions, using natural logarithms	development chemists,
	when calculating an equilibrium	laboratory technicians,
	constant from ΔG.	technical associates,
	Students consider	research analysts,
	 how chemists evaluate theoretical 	Chemistry teacher. British Values
	models by comparing the real and	Tolerance – acceptance of
	ideal properties of chemicals, for	differing opinions on how to
	example in the study of theoretical	answer questions and resolve challenges.
	and experimental lattice energies. The	Individual Liberty – within
	study of entropy shows students	Core practical activities all
	 how chemists use formal, abstract 	students have to work
		independently. Rule of Law – Students have
	thinking to answer fundamental	to follow strict safety
	questions about the stability of	guidance to ensure their
	chemicals and the direction of	own safety and for the
	chemical change.	safety of others.
	Mathematical skills include	Democracy – When
	representing chiral molecules with	completing pair and team challenges realizing that they
	appropriate diagrams, calculating percentage	have to listen as well discuss
	yields and experimental errors.	their own opinions.
		Mutual respect - When
	Students can consider	completing pair and team
	how organic synthesis can produce a	challenges realizing that they have to listen as well discuss
	variety of important materials, such as esters for	their own opinions.
	solvents, flavourings and perfumes.	Listening to others'
		responses to answers and
		being willing to play their
		part.
TERM 3 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
Topic 15: Transition Metals	Mathematical skills include	Career links
Topic 18: Organic Chemistry	 investigating the geometry of different 	Chemical Engineering,
III Topic 16: Kinetics II		Medical Sciences, Research Chemists,
Topic 16: Kinetics ii	transition metal complexes.	Chemical Engineering,
	 They can also appreciate that catalyst 	project engineers,
	research is a frontier area, and one which	development chemists,
	provides an opportunity to show how the	laboratory technicians,
	scientific community reports and validates	technical associates,
	new knowledge.	research analysts, Chemistry teacher.
	Mathematical skills include	British Values
	 plotting and justifying the shapes of rate- 	Tolerance – acceptance of
	concentration and concentration-time	differing opinions on how to
		answer questions and resolve challenges
	graphs,	

	 calculating half-life of a reaction, 	Individual Liberty – within
	calculating activation energy from a	Core practical activities all
		students have to work
	suitable graph, rearranging the Arrhenius	independently. Rule of Law – Students have
	equation in the form $y = mx + c$.	to follow strict safety
	Consider different methods used to	guidance to ensure their
	measure reaction rates and collect valid	own safety and for the safety of others
	data.	Democracy – When
	 Analysis of data, and a knowledge of 	completing pair and team
	rate equations, they can see how chemists are able	challenges realizing that they
	to propose models to describe	have to listen as well discuss their own opinions.
	the mechanisms of chemical reactions.	Mutual respect - When
		completing pair and team
	Mathematical skills include	challenges realizing that they
	 calculating the resonance stability of 	have to listen as well discuss their own opinions.
	benzene from thermodynamic data,	Listening to others'
	calculating percentage yields.	responses to answers and
	Within this topic, students can	being willing to play their part.
	 consider how the model for benzene 	
	structure has developed in response to	
	new evidence.	
TERM 4 TOPIC/s	 *Key Skills/Subject Links 	*Career links & BV
	• • •	
Topic 16: Kinetics II	Mathematical skills include	Career links
Topic 16: Kinetics II Topic 18: Organic Chemistry III		Career links Research Chemists, Chemical Engineering,
Topic 18: Organic Chemistry	Mathematical skills include	Research Chemists, Chemical Engineering, project engineers,
Topic 18: Organic Chemistry	Mathematical skills include calculating the resonance stability of 	Research Chemists, Chemical Engineering, project engineers, development chemists,
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians,
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. 	Research Chemists, Chemical Engineering, project engineers, development chemists,
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher.
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher.
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges.
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently.
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently.
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the
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Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team challenges realizing that they
Topic 18: Organic Chemistry	 Mathematical skills include calculating the resonance stability of benzene from thermodynamic data, calculating percentage yields. Within this topic, students can consider consider how the model for benzene structure has developed in response to new evidence. Mathematical skills include investigating the geometry of different 	Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team

		Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others responses to answers and being willing to play their part.
TERM 5 TOPIC/s	 *Key Skills/Subject Links 	*Career links & BV
Revision of most required subjects and practice for Examinations		Career links Research Chemists, Chemical Engineering, project engineers, development chemists, laboratory technicians, technical associates, research analysts, Chemistry teacher. British Values Tolerance – acceptance of differing opinions on how to answer questions and resolve challenges. Individual Liberty – within Core practical activities all students have to work independently. Rule of Law – Students have to follow strict safety guidance to ensure their own safety and for the safety of others. Democracy – When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Mutual respect - When completing pair and team challenges realizing that they have to listen as well discuss their own opinions. Listening to others' responses to answers and being willing to play their part.
TERM 6 TOPIC/s	*Kov Skills/Subject Links	*Career links & BV
Examinations	*Key Skills/Subject Links	N/A
	N/A	1975