

Curriculum Plan	Subject	Chemistry	Year	Y13
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		W/C 2 nd November	W/C 9 th November	W/C 16 th November
How you will access home learning		The PowerPoint and lesson materials will be available in our Y13 group on Microsoft Teams if for one reason or another you are unable to access the lesson live or the teacher doesn't deliver the lesson live. You will need access to your Chemistry A2 textbook via Kerboodle as well as the data sheets.		
How you be able to interact with your teacher and gain feedback on your work		You will be able to join each lesson via Microsoft Teams. This will enable you to listen to teacher delivery, to ask questions, and to complete the same tasks live, as those who are working in the lesson. You can join in with questioning in the lesson using the chat function to check your understanding.		
Retrieval How we will help you to recall previously learnt knowledge		Carefully selected past paper questions will be used to determine how the previous lessons content was understood. This will help consolidate knowledge and understanding as well as tackle misconceptions.	Carefully selected past paper questions will be used to determine how the previous lessons content was understood. This will help consolidate knowledge and understanding as well as tackle misconceptions.	Carefully selected past paper questions will be used to determine how the previous lessons content was understood. This will help consolidate knowledge and understanding as well as tackle misconceptions.
New Learning	What you will be learning about this week	<p>Learning outcomes</p> <p>Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> → the secondary and tertiary structure of proteins → the role of intermolecular bonds in determining the secondary and tertiary structures and, hence, the properties of proteins. 	<p>Learning outcomes</p> <p>Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> → the characteristics of enzyme catalysis, including specificity, temperature sensitivity, pH sensitivity, competitive inhibition – explanation of these characteristics of enzyme catalysis in terms of a three-dimensional active site (part of the tertiary structure) → the shape of the rate versus substrate concentration curve for an enzyme-catalysed reaction → techniques and procedures for experiments involving enzymes. 	<p>Learning outcomes</p> <p>Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> → molecular recognition [the structure and action of a given pharmacologically active material] in terms of: <ul style="list-style-type: none"> • the pharmacophore and groups that modify it • its interaction with receptor sites • the ways that species interact in three dimensions [size, shape, bond formation, orientation].
	How we will teach you the new knowledge or ideas	PowerPoint content and teacher led explanations to support you in understanding a range of chemical concepts around protein structure and the intermolecular forces that hold them together. Teacher modelling to talk through applying these ideas and concepts to different molecules and reaction scenarios.	PowerPoint content and teacher led explanations to support you in understanding a range of chemical concepts around how both enzymes work and what factors may impact on both their effectiveness and their rate of reaction. Teacher modelling to talk through applying these ideas and concepts to different molecules and reaction scenarios.	PowerPoint content and teacher led explanations to support you in developing further ideas around enzymes particularly with molecular recognition and the pharmacophore. Teacher modelling to talk through applying these ideas and concepts to different molecules and reaction scenarios.

	Activities that will help you learn and practice what you've been taught	Structured note responses, text book summary questions as well as the associated practical(s) for that chapter (if in school) or other related closely linked activities if remote learning.	Structured note responses, text book summary questions as well as the associated practical(s) for that chapter (if in school) or other related closely linked activities if remote learning.	Structured note responses, text book summary questions as well as the associated practical(s) for that chapter (if in school) or other related closely linked activities if remote learning.
	What you can do if you are stuck	You can ask any questions during the live lesson through using the chat function on Microsoft Teams. The Teams lessons will be recorded so you can refer to teacher explanations and listen to them again. Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail MB/KR to ask a question, we can easily write out a solution, take a photo and email it back to you.	You can ask any questions during the live lesson through using the chat function on Microsoft Teams. The Teams lessons will be recorded so you can refer to teacher explanations and listen to them again. Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail MB/KR to ask a question, we can easily write out a solution, take a photo and email it back to you.	You can ask any questions during the live lesson through using the chat function on Microsoft Teams. The Teams lessons will be recorded so you can refer to teacher explanations and listen to them again. Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail MB/KR to ask a question, we can easily write out a solution, take a photo and email it back to you.

	W/C 23 rd November	W/C 30 th November	W/C 7 th December	W/C 14 th December
How you will access home learning	The PowerPoint and lesson materials will be available in our Y13 group on Microsoft Teams if for one reason or another you are unable to access the lesson live or the teacher doesn't deliver the lesson live. You will need access to your Chemistry A2 textbook via Kerboodle as well as the data sheets.			
How you be able to interact with your teacher and gain feedback on your work	You will be able to join each lesson via Microsoft Teams. This will enable you to listen to teacher delivery, to ask questions, and to complete the same tasks live, as those who are working in the lesson. You can join in with questioning in the lesson using the chat function to check your understanding.			
Retrieval How we will help you to recall previously learnt knowledge	Carefully selected past paper questions will be used to determine how the previous lessons content was understood. This will help consolidate knowledge and understanding as well as tackle misconceptions.	Carefully selected past paper questions will be used to determine how the previous lessons content was understood. This will help consolidate knowledge and understanding as well as tackle misconceptions.	PL feedback and assessment week. Feedback on PL expert and end of chapter questions followed by PL written assessment for much of this week.	AS assessment week-an AS assessment paper of past MCQ will take place in the first double of the week, with feedback and follow up taking up the next lessons with targeted intervention as needed.

New Learning	What you will be learning about this week	<p>Learning outcomes</p> <p>Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> → DNA and RNA as condensation polymers formed from nucleotides, which are monomers having three components (phosphate, sugar, and base): <ul style="list-style-type: none"> • the phosphate units join by condensation with deoxyribose or ribose to form the phosphate–sugar backbone in DNA and RNA • the four bases present in DNA and RNA join by condensation with the deoxyribose in the phosphate–sugar backbone • two strands of DNA form a double-helix structure through base pairing → the significance of hydrogen bonding in the pairing of bases in DNA and in relation to the replication of genetic information – how DNA encodes for RNA, which codes for an amino acid sequence in a protein. 	<p>Learning outcomes</p> <p>Demonstrate and apply knowledge and understanding of:</p> <ul style="list-style-type: none"> → the further interpretation and prediction of mass spectra: <ul style="list-style-type: none"> • use of the high-resolution value of the M^+ peak to work out a molecular formula • the mass differences between peaks indicating the loss of groups of atoms → proton and carbon-13 nuclear magnetic resonance (NMR) spectra for the determination of molecular structure → the combination of spectroscopic techniques (mass spectrometry, IR, and NMR) to determine the structure of organic molecules. 		
	How we will teach you the new knowledge or ideas	<p>PowerPoint content and teacher led explanations to support you in understanding a range of chemical concepts around the structure, function and role of DNA in selecting amino acids for protein synthesis and the importance of the intermolecular forces involved.</p> <p>Teacher modelling to talk through applying these ideas and concepts to different molecules and reaction scenarios.</p>	<p>PowerPoint content and teacher led explanations to support you in understanding the technique of NMR and how it can be used in analysis of organic molecules, as well as developing your understand of MS through the idea of fragmentation.</p> <p>Teacher modelling to talk through applying the idea of NMR & MS fragmentation to different molecules and reaction scenarios.</p>		

	<p>Activities that will help you learn and practice what you've been taught</p>	<p>Structured note responses, text book summary questions as well as the associated practical(s) for that chapter (if in school) or other related closely linked activities if remote learning.</p>	<p>Structured note responses, text book summary questions as well as the associated practical(s) for that chapter (if in school) or other related closely linked activities if remote learning.</p>		
	<p>What you can do if you are stuck</p>	<p>You can ask any questions during the live lesson through using the chat function on Microsoft Teams. The Teams lessons will be recorded so you can refer to teacher explanations and listen to them again. Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail MB/KR to ask a question, we can easily write out a solution, take a photo and email it back to you.</p>	<p>You can ask any questions during the live lesson through using the chat function on Microsoft Teams. The Teams lessons will be recorded so you can refer to teacher explanations and listen to them again. Use your online Kerboodle textbook to refer to any previous content. If you need to e-mail MB/KR to ask a question, we can easily write out a solution, take a photo and email it back to you.</p>		