

KEVICC Key Stage 4 Curriculum Subject: Mathematics			Key Vocabulary and notation.	
Summer Half-Term				
Term: Year 10 Summer Term – Block Eight		Topic: Simultaneous Equations Recap linear and quadratic		
<b>What is the essential knowledge from this unit?</b> <b>What do students need to remember and understand?</b>			Possible	Meet
			Solution	Eliminate
			Infinite	Expression
			Finite	Add
			Variables	Subtract
			Equation	Negative
			Substitute	Equivalent
			Variable	Coefficient
			Verify	Multiplier
			Solve	Lowest
			Solution	common
			Unknown	multiple
			Inverse	Formulate
			Substitution	Context
			Subject of	Linear
			the formula	Square
			Rearrange	Intersection
			Simultaneous	Non-linear
			equations	Factorise
			Intersect	Simplest form
			Coordinate	In terms of
			Quadratic	Touches
			Quadratic	Intersect
			graph	Straight line
			Points of	Manipulating
			intersection	Unknowns
			Mathematical questioning should be designed to unpick the structure of the maths and deepen the student's understanding. When students talk about mathematical concepts, they should develop the vital mathematical language that helps them explain their ideas fully.	
			Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.	
<b>What prior learning supports understanding of this content?</b> <ul style="list-style-type: none"><li>Simplify algebraic expressions.</li><li>Substitute numerical values into formulae and expressions.</li><li>Apply the four operations (+, -, x, ÷) to fractions.</li><li>Expand brackets and collect like terms.</li><li>Factorising expressions.</li><li>Form and solve one-step and two-step equations.</li><li>Understand equivalence of algebraic expressions.</li><li>Describe positions on the full co-ordinate grid (all four quadrants).</li><li>Plot coordinates in all four quadrants.</li></ul>			<b>How does this content link to future learning?</b> <ul style="list-style-type: none"><li>Simplify and manipulate algebraic expressions (including those involving surds) by:<ul style="list-style-type: none"><li>collecting like terms</li><li>multiplying a single term over a bracket</li><li>taking out common factors</li><li>expanding products of two binomials</li><li>factorising quadratic expressions of the form <math>x^2 + bx + c</math> including the difference of two squares</li><li>simplifying expressions involving sums, products, and powers, including the laws of indices</li></ul></li><li>Know the difference between an equation and an identity; argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments and proofs.</li></ul>	

<p><b>Reading:</b> <i>Where in the unit are students supported to read complex academic text?</i></p> <ul style="list-style-type: none"> <li>• Reading and understanding mathematical questions and problems' – teacher input.</li> <li>• Decoding complex examination questions - explain what they are asking the student to do' – teacher input.</li> <li>• Following instructions to solve problems - break down the tasks – teacher input.</li> <li>• Recognising terminology, numbers, and symbols.</li> </ul>	<p><b>Writing:</b> <i>Independent writing tasks and how they are structured</i></p> <ul style="list-style-type: none"> <li>• Using the correct subject specific terminology for numbers and symbols – examination papers, class books.</li> <li>• Responding to questions that ask for an explanation or a reason – examination papers, class books.</li> <li>• Self-evaluation, reviewing, reflecting and analysis of own work – class books, personalised learning checklists and analysis.</li> <li>• Creating notes that can be used later for revision purposes - class books, revision cards, mind maps etc.</li> </ul>
<p><b>Key assessments:</b></p> <p>How will do students review the information learned?</p> <p>End of block assessments.</p> <p>AQA end of block assessments provide a quick progress check at the end of each block of learning to make sure students have understood the content being covered. These are available for both foundation and higher tiers.</p> <p>End of term/year assessments and mock examinations.</p> <p>End of term assessments assessing the students' progress towards targets and provide diagnostic information to modify future teaching.</p> <p>End of year 9 and 10 examinations assessing the students' progress towards targets and provide diagnostic information to modify future teaching.</p> <p>Two mock examinations seasons take place during year 11 using previous years AQA 8300 examination papers. Students to experience the full suite of papers at both Foundation and higher tiers using Non-calculator and Calculator requirements.</p> <p>All examinations will explore the three examination papers at both foundation and higher tiers using non-calculator and calculator requirements.</p> <p><b>How will feedback be seen?</b></p> <p>Marked end of block, term assessments and mock examinations.</p> <p>Personalised learning checklists for all assessments identifying strengths and areas of development.</p> <p>Written teacher feedback and marking in compliance with faculty and College Marking Policies. Student responses to marking. Students self-mark using purple pen. Verbal feedback given every lesson from teacher and peers as appropriate. Teacher and student self-assessment of presentation of class books will be completed to ensure written work is of high standard and students are achieving their potential.</p>	