



**St Mary's CE High School Curriculum Map 2023- 24**  
**Mathematics Year 11 Higher tier**

	Autumn 1a	Autumn 1b	Spring 2a	Spring 2b	Summer 3a	Summer 3b
<b>CONTENT</b>  <i>Declarative / core / powerful</i> <i>Knowledge – ‘Know What’</i>	<b>Sequences</b>  <b>Quadratic graphs</b>  <b>Equations of lines</b>  <b>Regions</b>  <b>Estimating gradients of curves/area under curves</b>	<b>Circle theorems</b>  <b>Vector geometry</b>  <b>Equations of circles</b>	<b>Algebraic proportion</b>  <b>Quadratic formula</b>  <b>Quadratic simultaneous equations</b>  <b>Graphs of trigonometric functions</b>  <b>Graph transformations</b>  <b>Quadratic inequalities</b>	<b>Revision</b>	<b>Revision / Public exams</b>	<b>Revision / Public exams</b>
<b>Intent</b>	These topics are taught together to help make links with sequences and graphs. Here, students extend their understanding of shapes of graphs ready to have an appreciation of	These topics cover the final areas of geometry yet to be covered. Students have already covered congruence and other equations in year 10, which will help with the understanding of these topics.	The year 11 curriculum finishes off with the most challenging areas of GCSE maths. Where students are not necessarily aiming for the highest grades, some of these topics could be interchanged with			



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	<b>transformed graphs in Spring 2</b>		<b>additional revision time.</b>			
<b>Skills</b>  <i>Procedural Knowledge – ‘Know How’</i>	Students need to be able to:  Find missing terms of Fibonacci, geometric and quadratic style sequences  Find the position to term rule of a quadratic sequence	Students need to be able to:  Use circle theorems to solve problems  Add and subtract vectors  Find scalar multiples of vectors  Form vector expressions  Form complex proofs using vectors  Solve problems using equations of circles	Students need to be able to:  Solve problems using algebraic direct/inverse proportion  Use the quadratic formula to solve quadratics  Sketch graphs of trigonometric functions  Sketch graphs which have been translated or stretched in the y or x axis  Recognise equations of transformed graphs	Students will spend this half term targeting key skills and strengthening weak areas	Students will spend this half term targeting key skills and strengthening weak areas	Students will spend this half term targeting key skills and strengthening weak areas
<b>Key Questions</b>	What shape are we expecting for this graph?	What lines can you highlight to help see which theorem to use?	Which rules for graph transformations were intuitive?			



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	<p>What is the equation of a line perpendicular to this one (through any point)</p> <p>Can you give another...</p>	<p>How can you categorise the theorems to help recognise them?</p>	<p>Which rules for graph transformations were not intuitive?</p>			
<b>Assessment</b>	<p>Students will be assessed on a Diagnostic quiz at the end of each unit and a retest to improve any gaps in learning.</p> <p>written exam questions taken from GCSE papers</p>	<p>Students will be assessed on a Diagnostic quiz at the end of each unit and a retest to improve any gaps in learning.</p> <p>A half termly assessment will be completed in class covering content covered this half term, and previous topics covered at St. Mary's</p> <p>written exam questions taken from GCSE papers</p>	<p>Students will be assessed on a Diagnostic quiz at the end of each unit and a retest to improve any gaps in learning.</p> <p>A half termly assessment will be completed in class covering content covered this half term, and previous topics covered at St. Mary's</p> <p>written exam questions taken from GCSE papers</p>			



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<b>Links to careers/wider world</b>	STEM, Graphic design,	Engineering, product design, STEM				
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