



## Maths Year 11 Foundation Tier Curriculum End Points and key vocabulary

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	<ul style="list-style-type: none"> <li>Sequences</li> <li>Linear Graphs</li> <li>Probability, systematic listing and the product rule</li> <li>Quadratics</li> </ul>	<ul style="list-style-type: none"> <li>Simultaneous equations</li> <li>Inequalities</li> <li>Direct and inverse proportion</li> <li>Curves and graphs</li> <li>Functions</li> </ul>	<ul style="list-style-type: none"> <li>Plans and elevations</li> <li>Transformations</li> <li>Vectors</li> <li>Constructions and loci</li> </ul>	<i>Revision and recap</i>	<i>Revision and recap</i>	<i>Exams</i>
Ethos Links	STEM – use of exact calculations and importance of being exact within many STEM careers	STEM – Curves and graphs used to demonstrate exponential growth within bacteria	STEM and Sustainability – constructions and loci used within relation to landscape planning and gardening. Also used in relation to security cameras. STEM – use of enlargement in scale models			
Knowledge	By the end of this unit students will know and understand:  <b>Sequences</b>	By the end of this unit students will know and understand:	By the end of this unit students will know and understand:  <b>Plans and elevations</b>	By the end of this unit students will know and understand:	By the end of this unit students will know and understand:	By the end of this unit students will know and understand:

	<p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• Common sequences including geometric progression</li> <li>• Fibonacci sequences and be able to apply and use them</li> <li>• How to deduce the <math>n</math>th term of linear sequences</li> <li>• Recognise quadratic sequences and continue them</li> </ul> <p><b>Linear graphs</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• How to plot straight line graphs</li> <li>• Parallel lines and how to identify them</li> <li>• <i>How to find the equation of a</i></li> </ul>	<p><b>Simultaneous equations</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• How to solve simultaneous equations</li> <li>• How to form simultaneous equations and solve</li> </ul> <p><b>Inequalities</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• How to solve linear inequalities</li> <li>• How to represent inequalities on a number line</li> <li>• How to use the inverse to solve two-part inequalities</li> </ul>	<p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• Plans and elevations of 3D shapes</li> <li>• How to construct plans and elevations of 3D shapes</li> </ul> <p><b>Transformations</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• How to transform shapes and recognise a combination of transformations</li> </ul> <p><b>Vectors</b></p> <p>By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>• Addition and subtraction of vectors</li> <li>• Multiplication of vectors by a scalar</li> </ul>	<p><i>Revision and recap</i></p>	<p><b>Revision and recap on all content in preparation for exams</b></p>	
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	<p><i>line given 2 points</i></p> <ul style="list-style-type: none"> <li>Gradients and intercepts and how to interpret them</li> </ul> <p><b>Probability and probability diagrams</b> By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>Probability and the outcome of probability experiments</li> <li>Frequency trees and how to complete them</li> <li>Relative frequency</li> <li>Mutually exclusive events</li> <li>How to calculate and interpret conditional probabilities with tree diagrams and Venn diagrams</li> </ul>	<p><b>Direct and inverse proportion</b> By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>Direct and inverse proportions</li> <li>Equations that describe direct and inverse proportion</li> <li>Graphs that represent direct and inverse proportion</li> </ul> <p><b>Curves and graphs</b> By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>Cubic graphs and how to sketch them</li> <li>Reciprocal graphs and how to sketch them</li> </ul>	<ul style="list-style-type: none"> <li>Vectors represented on a diagram</li> </ul> <p><b>Constructions and loci</b> By the end of this unit students will know and understand:</p> <ul style="list-style-type: none"> <li>How to construct angle bisectors and perpendicular bisectors</li> <li>How to construct a perpendicular to a given line from a given point</li> <li>How to solve loci problems</li> <li>That the perpendicular distance from a point to a line is the shortest distance to the line</li> </ul>			
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- Set notation of Venn diagrams

### Systematic listing and product rule

By the end of this unit students will know and understand:

- How to apply systematic listing strategies
- The product rule for counting

### Quadratics

By the end of this unit students will know and understand:

- How to expand and factorise double brackets
- How to solve quadratic equations by factorising
- How to find approximate solutions on a graph
- How to plot quadratic graphs

	<ul style="list-style-type: none"> <li>• Roots, intercepts and turning points of quadratic functions and how to identify them</li> </ul>					
<b>Key Vocabulary</b>	Exact Rationalise Denominator Surd Coefficient Expand Factorise Substitute Arc Segment Chord Cyclic quadrilateral Tangent	Root Intercept Turning point Simultaneous Proportion Direct Inverse Cubic Reciprocal Exponential Gradient Centre	Iteration Approximate Loci Bisector Perpendicular Vector Scalar Proof	Enlarge Reflect Rotate Translate Describe fully Invariance Stretch Function		