



Curriculum Map



Subject: Mathematics

Year group: 11

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Content</p> <p><i>Declarative Knowledge – ‘Know What’</i></p>	<p>Delving into data Collecting representing and interpreting data Using number (from year 10) Non-calculator methods</p> <p>Using number (from year 10) Types of number and sequences Indices and roots</p>	<p>Graphs Gradients and lines Non-linear graphs Using graphs</p>	<p>Algebra Expanding and factorising Changing the subject Functions</p>	<p>Reasoning Multiplicative reasoning Geometric reasoning Algebraic reasoning</p>	<p>Revision and communication Transforming and constructing Listing and describing Show that...</p>	
<p>Skills</p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<ul style="list-style-type: none"> Understand sampling including the possible limitations Construct and interpret tables and line graphs for time data series Understand and represent with grouped data Understand and identify correlation Use lines of best fit, understanding the degrees of extrapolation Construct and interpret frequency polygons Evaluate measures of location and dispersion Use statistical diagrams and measures to compare distributions 	<ul style="list-style-type: none"> Find and use equations of straight lines Plot and read the quadratic curves Understand and find roots Plot cubic and reciprocal graphs Reflect shapes in a given line Construct and interpret speed, distance and time graphs Construct and interpret real-life graphs 	<ul style="list-style-type: none"> Expand a single bracket and binomials Factorise into a single bracket Factorise quadratics of the form x^2+bx+c Solve quadratic equations Simplify complex algebraic expressions including algebraic fractions Review solving linear equations Change the subject of the formula, including perimeter, area and volume formulae Volume of a pyramid Find inputs and outputs Show algebraic expressions are equivalent 	<ul style="list-style-type: none"> Review scale and enlargement Work with direct and inverse proportion Calculate with pressure and density Determine whether a problem requires additive or multiplicative reasoning Review angle facts, focusing on the language of reasons and chains of reasoning Review Pythagoras’ theorem and using trigonometrical ratios Work with complex indices Review simplification of complex expressions 	<ul style="list-style-type: none"> Revisit transformations of shapes, linking to types of symmetry Perform standard constructions using ruler and protractor or ruler and compasses Solve loci problems Work with organised lists Sample spaces and probability Complete and use Venn diagrams Work with plans and elevations Use data to compare distributions Illustrate equivalence, numerically and algebraically Justify answers Use the language of angles rules 	



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	<ul style="list-style-type: none"> • Use four operations with integers (positive and negative), decimals and fractions with and without context (include all areas of previous study) • Work with exact answers e.g. area and volume • Evaluate calculations involving percentages • Use factors, multiples and primes and prime factorisation • Recognise arithmetic and geometric sequences • Recognise and use other sequences • Work out powers and roots • Use the rule of indices • Calculate with numbers in standard index form 		<ul style="list-style-type: none"> • Solve problems using the kinematics formulae 	and finding the nth term rule <ul style="list-style-type: none"> • Justify e.g. why a number is/isn't in a given sequence 	<ul style="list-style-type: none"> • Use the conditions for congruent triangles 	
Key Questions						
Assessment	Mini unit test	Mini unit test Full set of PPE	Mini unit test	Mini unit test Full set of PPE	Mini unit test	Final exam