

Curriculum Coverage in the Department of Maths

	Year 7	Year 8	Year 9	Year 10 (Foundation)	Year 11 (Foundation)	Year 10 (Higher)	Year 11 (Higher)
Autumn Term 1	<p>Topic: Place Value Overview:</p> <ul style="list-style-type: none"> • Place value in integers and decimals. • Ordering and comparing numbers. • Measures <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Estimation and Rounding Overview:</p> <ul style="list-style-type: none"> • Rounding to decimal places • Rounding to significant figures • Estimation of calculations • Estimation using error intervals <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Similarity and Congruence Overview:</p> <ul style="list-style-type: none"> • Naming of shapes • Notation of lines, angles and shapes • Proving similarity • Proving congruency <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Algebra Overview:</p> <ul style="list-style-type: none"> • The basics • Expressions • Substitution • Formulae <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Multiplicative Reasoning Overview:</p> <ul style="list-style-type: none"> • Direct Proportion • Inverse proportion • Multiplicative graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Algebra Overview:</p> <ul style="list-style-type: none"> • Solving equations • Rearranging equations • Calculating Nth term • Using and applying Nth term <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Further Trigonometry Overview:</p> <ul style="list-style-type: none"> • Cosine rule for missing sides • Cosine rule for missing angles • Sine rule for missing sides – including the ambiguous case • Sine rule for missing angles • Area of triangles ($\frac{1}{2}ab\sin C$) <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment
	<p>Topic: Properties of number Overview:</p> <ul style="list-style-type: none"> • Multiples • Powers and roots • Factors • Prime factor decomposition <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Solving Linear Equations Overview:</p> <ul style="list-style-type: none"> • One step equations • Two step equations • Expanding brackets • Linear equations with brackets <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Pythagoras Overview:</p> <ul style="list-style-type: none"> • Introduction to Pythagoras • Finding the length of the hypotenuse • Finding any length in a right-angle triangle • Reasoning with triangles <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Tables, Graphs and Charts Overview:</p> <ul style="list-style-type: none"> • Tables, charts and graphs • Pie charts • Scatter graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Constructions and bearings Overview:</p> <ul style="list-style-type: none"> • Plans and elevations • Constructions • Loci • Bearings <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Averages Overview:</p> <ul style="list-style-type: none"> • Calculating averages from a list • Calculating mean from a table • Drawing scatter graphs • Interpreting scatter graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Further statistics Overview:</p> <ul style="list-style-type: none"> • Cumulative frequency curves • Interquartile range and box plots • Histograms • Interpreting histograms <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment
Autumn Term 2	<p>Topic: Arithmetic Overview:</p> <ul style="list-style-type: none"> • Addition and subtraction of negative numbers and decimals • Multiplication and division of negative numbers and decimals • Efficient calculations <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Sequences Overview:</p> <ul style="list-style-type: none"> • Position to term rules • Extending sequences • Calculating Nth term • Using linear Nth term <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Probability Overview:</p> <ul style="list-style-type: none"> • Review of key terms • Likelihood and randomness • Probability • Combined events <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Fractions and Percentages Overview:</p> <ul style="list-style-type: none"> • Fractions, decimals and percentages • Percentage calculations • Reverse percentages <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Quadratic Expressions Overview:</p> <ul style="list-style-type: none"> • Expand 2 (or more) brackets • Factorise quadratic expressions • Plot quadratic graphs • Interpret quadratic graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Fractions, Percentages and ratio Overview:</p> <ul style="list-style-type: none"> • Fractions, decimals and percentages • Percentage calculations • Reverse percentages • Ratio • Direct and inverse proportion <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Quadratic Expressions Overview:</p> <ul style="list-style-type: none"> • Expanding 2 (or more) brackets • Factorising quadratics with coefficients in front of x^2 • Sketching circle graphs • Sketching with key points, quadratic and cubic graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment
	<p>Topic: Expressions and Equations Overview:</p> <ul style="list-style-type: none"> • Introduction to algebra • Formulae and equations • Simplifying expressions • Distributive law <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 			<p>Topic: Equations, inequalities and sequences Overview:</p> <ul style="list-style-type: none"> • Equations • Inequalities • Sequences generating terms • Sequences Nth term <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Perimeter, Area and Volume (ii) Overview:</p> <ul style="list-style-type: none"> • Area of circles • Area and perimeter of sectors • Cylinders – Area and volume • Cones – Area and volume • Spheres – Area and volume <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Angles and Triangles Overview:</p> <ul style="list-style-type: none"> • Parallel lines • Interior and exterior angles of polygons • Pythagoras • Trigonometry – missing sides • Trigonometry – missing angles <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Circle theorems Overview:</p> <ul style="list-style-type: none"> • Circle geometry • Arc length • Area of sectors • Circle theorems • Proof of angles at centre and angles in semi circle <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>

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Spring Term 1	<p>Topic: Coordinates</p> <p>Overview:</p> <ul style="list-style-type: none"> Plotting coordinates Connecting formulae, coordinates and graphs <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments End of unit assessment 	<p>Topic: Linear Graphs</p> <p>Overview:</p> <ul style="list-style-type: none"> Plotting and using coordinates Calculating gradient and intercepts Plotting linear graphs Interpreting line relationships <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Non Linear Sequences</p> <p>Overview:</p> <ul style="list-style-type: none"> Review of linear sequences Non linear sequences (Quadratic) Geometric sequences Other sequences (Fibonacci etc) <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Angles</p> <p>Overview:</p> <ul style="list-style-type: none"> Properties of shapes Parallel lines Angle facts Interior and exterior angles of polygons <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Fractions, indices and standard form</p> <p>Overview:</p> <ul style="list-style-type: none"> Fractions index laws Reciprocals Index law calculations Standard form <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Graphs</p> <p>Overview:</p> <ul style="list-style-type: none"> Linear graphs $Y = mX + c$ Non – linear graphs Coordinate geometry (Midpoints, length of lines etc) <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Further Algebra</p> <p>Overview:</p> <ul style="list-style-type: none"> Changing the subject (complex) Algebraic Fractions Solving algebraic fractions Completing the square Algebraic proof <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>
	<p>Topic: Perimeter and Area</p> <p>Overview:</p> <ul style="list-style-type: none"> Properties of quadrilaterals and triangles Perimeter of shapes Area of shapes <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments End of unit assessment 	<p>Topic: Percentages and Proportionality</p> <p>Overview:</p> <ul style="list-style-type: none"> Compare FDP Calculating percentages of amounts Solve direct proportion relationships Solve indirect proportion relationships <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Expressions and Formulae</p> <p>Overview:</p> <ul style="list-style-type: none"> Distributive law Factorising Difference of two squares Inverse operations Changing the subject <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Statistics</p> <p>Overview:</p> <ul style="list-style-type: none"> Sampling Methods Averages Mean from tables <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Congruency, Similarity and vectors</p> <p>Overview:</p> <ul style="list-style-type: none"> Similarity Congruency Column Vectors Basic vector journeys <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Perimeter, Area and Volume</p> <p>Overview:</p> <ul style="list-style-type: none"> Perimeter and area of 2D shapes Volume of 3D shapes Cylinders, cones and Spheres – volume and surface area <p>Accuracy and bounds</p> <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments End of unit assessment 	<p>Topic: Vectors</p> <p>Overview:</p> <ul style="list-style-type: none"> Vector journeys Complex vector journeys Vector proofs Geometric proof using vectors <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments
Spring term 2	<p>Topic: Fractions</p> <p>Overview:</p> <ul style="list-style-type: none"> Calculating with fractions and decimals Comparing and ordering fractions Adding and subtracting fractions Multiplying and dividing fractions <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments End of unit assessment 	<p>Topic: Statistics</p> <p>Overview:</p> <ul style="list-style-type: none"> Representing data Calculating and applying pie charts Calculating averages Analysing and comparing data <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Trigonometry</p> <p>Overview:</p> <ul style="list-style-type: none"> Properties of right angle triangles Sine, Cosine and Tangent Calculating missing sides Calculating missing angles <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Perimeter, Area and Volume</p> <p>Overview:</p> <ul style="list-style-type: none"> Area Surface Area Volume Perimeter <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Further Algebra</p> <p>Overview:</p> <ul style="list-style-type: none"> Rearranging Equations Cubic graphs Reciprocal functions Simultaneous equations <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Transformations, constructions and bearings</p> <p>Overview:</p> <ul style="list-style-type: none"> Enlargements, translations, rotation and reflections Describing transformations Construction of bisectors, SSS, SAS, SAA triangles Bearings <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Further graphs</p> <p>Overview:</p> <ul style="list-style-type: none"> Reciprocal graphs Exponential graphs Gradients of non linear graph Area under a graph Circle graphs – tangents <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>
				<p>Topic: Graphs</p> <p>Overview:</p> <ul style="list-style-type: none"> Plotting straight line graphs Interpreting straight line graphs Real life graphs plotting Interpreting real life graphs <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Boot camp for 6 weeks following the end of SOL to prepare for the GCSE exams</p>	<p>Topic: Simultaneous equations</p> <p>Overview:</p> <ul style="list-style-type: none"> Linear simultaneous equations graphically Linear simultaneous equations algebraically Graphical linear and quadratic simultaneous equations Solving inequalities <p>Assessment:</p> <ul style="list-style-type: none"> Prior Knowledge checks Diagnostic questions Mid-unit assessments <p>End of unit assessment</p>	<p>Boot camp for 6 weeks following the end of SOL to prepare for the GCSE exams</p>

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Summer Term 1	<p>Topic: Ratio and Proportion</p> <p>Overview:</p> <ul style="list-style-type: none"> • Multiplicative relationships • Representing multiplicative relationships • Fractions in context • Applying ratios <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Topic: Perimeter, Area and Volume</p> <p>Overview:</p> <ul style="list-style-type: none"> • Perimeter of shapes (inc circles) • Area of shapes (inc circles) • Surface area of 3D prisms • Volume of 3D prisms <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Standard Form</p> <p>Overview:</p> <ul style="list-style-type: none"> • Multiplying by powers of 10 • Index notations • Converting large numbers to standard form • Converting small numbers(<1) to standard form <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Transformations</p> <p>Overview:</p> <ul style="list-style-type: none"> • Enlargements • Reflections • Translations • Rotations <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Boot camp for 6 weeks following the end of SOL to prepare for the GCSE exams</p>	<p>Topic: Probability</p> <p>Overview:</p> <ul style="list-style-type: none"> • Probability of events • Independent events • Tree diagrams with replacement • Tree diagrams without replacement <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	<p>Boot camp for 6 weeks following the end of SOL to prepare for the GCSE exams</p>
			<p>Topic: Polygons and Angles</p> <p>Overview:</p> <ul style="list-style-type: none"> • Angle properties • Angles in parallel lines • Interior and exterior angles of polygons • Reflective properties of polygons <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Graphical Representations</p> <p>Overview:</p> <ul style="list-style-type: none"> • Interpreting linear graphs • Modelling real life situations • Non-linear graphs • Direct and inverse proportion <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Ratio and Proportion</p> <p>Overview:</p> <ul style="list-style-type: none"> • Sharing in a given ratio • Ratio problems • Multiplicative reasoning • Proportion <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Boot camp for 6 weeks following the end of SOL to prepare for the GCSE exams</p>	<p>Topic: Multiplicative Reasoning</p> <p>Overview:</p> <ul style="list-style-type: none"> • Direct Proportion • Inverse proportion • Multiplicative graphs • Combined proportional problems <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment
Summer Term 2	<p>Topic: Transformations</p> <p>Overview:</p> <ul style="list-style-type: none"> • Translations • Transformations • Rotations • Enlargements • Scale diagrams <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments 	<p>Topic: Constructions</p> <p>Overview:</p> <ul style="list-style-type: none"> • Perpendicular bisectors • Angular bisectors • SSS,SAS,SAA triangles • Bisectors through a point <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: PRE GCSE Number</p> <p>Overview:</p> <ul style="list-style-type: none"> • Number skills that are essential for the start of the GCSE course <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments <p>End of unit assessment</p>	<p>Topic: Right Angle Triangles</p> <p>Overview:</p> <ul style="list-style-type: none"> • Calculating short sides • Calculating the hypotenuse • Calculating missing sides (SOHCAHTOA) • Calculating missing angles (SOHCAHTOA) <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 		<p>Topic: Congruency, Similarity in 2D and 3D shapes</p> <p>Overview:</p> <ul style="list-style-type: none"> • Similarity • Congruency • Algebraic proof <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	
				<p>Topic: Probability</p> <p>Overview:</p> <ul style="list-style-type: none"> • Basic probability • Venn diagrams • Tree diagrams • Independent events <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 		<p>Topic: Graphs of trigonometric functions</p> <p>Overview:</p> <ul style="list-style-type: none"> • Plot and recognise the shape of sine, cosine and tan graphs • Solve problems with trigonometric graphs <p>Assessment:</p> <ul style="list-style-type: none"> • Prior Knowledge checks • Diagnostic questions • Mid-unit assessments • End of unit assessment 	