



Maths Curriculum Overview 2020 – 2021

Department Name:	Maths
Head of Department:	Mr S Graham
Subject Teachers:	Ms E Jabran Mr R Filtness Mr R Leadbetter Ms D Bingham Mrs S Thomson-Keohane Miss F Turner Mr J Field Dr G Williams Miss L Taylor
Accommodation and Resources:	Nine classrooms equipped to accommodate class sizes of up to 30 pupils. Each classroom is stocked with appropriate textbooks, mathematical equipment and interactive whiteboards.
What will students learn in each year?	
Year 7	Term 1: <ul style="list-style-type: none">• Place value• Mental calculations• Written methods for addition & subtraction• Negative numbers
	Term 2: <ul style="list-style-type: none">• Written methods for multiplication & division• Solving problems involving all four operations• Factors, multiples and primes• Highest common factors & lowest common multiples
	Term 3: <ul style="list-style-type: none">• Squares, cubes and roots• Fractions• Fraction calculations



	<ul style="list-style-type: none">• Fraction, decimals and percentages
	Term 4: <ul style="list-style-type: none">• Algebraic notation• Simplify expressions• 2-D shape properties• Angle facts involving lines• Angle facts involving triangles and quadrilaterals
	Term 5: <ul style="list-style-type: none">• Problems involving time• Order of operations• Linear number sequences• Algebraic expressions & linear equations
	Term 6: <ul style="list-style-type: none">• Perimeter & area• Coordinates• Tables, charts and graphs
Year 8	Term 1: <ul style="list-style-type: none">• Factors, multiples and primes• Triangular, square numbers & cube numbers• Prime factor decomposition• Powers and roots• Negative numbers• Fractions and mixed numbers
	Term 2: <ul style="list-style-type: none">• Place value• Written calculation methods• Properties of polygons including symmetries• Draw diagrams from written descriptions• 3-D shape properties• Expressions, equations & formulae• Expand brackets
	Term 3:



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	<ul style="list-style-type: none">• Simplify and manipulate algebraic expressions• Fraction calculations• Percentage calculations• Ratio• Sequences
	Term 4: <ul style="list-style-type: none">• Measures• Angle facts in shapes• Fraction and percentage calculations•
	Term 5: <ul style="list-style-type: none">• Solve linear equations• Perimeter, area and volume• Estimation• Rotation, reflection and translation
	Term 6: <ul style="list-style-type: none">• Theoretical probability• Probability experiments• Tables, charts and diagrams• Distributions of data sets
Year 9	Exam Board: Pearson Edexcel Qualification: GCSE Mathematics
	Term 1: <ul style="list-style-type: none">• Integers & place value• Decimals• Indices, powers and roots
	Term 2: <ul style="list-style-type: none">• Factors, multiples and primes• Algebra: the basics• Expanding and factorising
	Term 3: <ul style="list-style-type: none">• Substitution into formulae• Tables Charts and graphs• Pie charts• Scatter graphs
	Term 4: <ul style="list-style-type: none">• Fraction calculations• Fractions, decimals and percentages• Percentage calculations



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	Term 5: <ul style="list-style-type: none">• Equations• Inequalities• Sequences
	Term 6: <ul style="list-style-type: none">• Properties of shapes• Parallel lines and angle facts• Interior and exterior angles of polygons
Year 10	Exam Board: Pearson Edexcel Qualification: GCSE Mathematics
	Term 1: <ul style="list-style-type: none">• Statistics and sampling• The averages• Perimeter and area
	Term 2: <ul style="list-style-type: none">• 3D forms and volume• Real-life graphs• Straight-line graphs
	Term 3: <ul style="list-style-type: none">• Translations, rotations & reflections• Enlargements & combinations of transformations• Ratio
	Term 4: <ul style="list-style-type: none">• Proportion• Pythagoras• Trigonometry• Probability I
	Term 5: <ul style="list-style-type: none">• Probability II• Multiplicative reasoning• Plans and elevations
	Term 6: <ul style="list-style-type: none">• Constructions, loci and bearings• Quadratic equations: expanding and factorising• Quadratic equations: graphs
Year 11	Exam Board: Pearson Edexcel Qualification: GCSE Mathematics
	Term 1: <ul style="list-style-type: none">• Circles, cylinders, cones and spheres• Fractions and reciprocals• Indices and standard form



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	Term 2: <ul style="list-style-type: none">• Similarity and congruence in 2D• Vectors• Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations
	Term 3: <ul style="list-style-type: none">• Revision
	Term 4: <ul style="list-style-type: none">• Revision
	Term 5: <ul style="list-style-type: none">• Revision
	Term 6: <ul style="list-style-type: none">• Revision
Year 12	Exam Board: Pearson Edexcel Qualification: A Level Mathematics
	Term 1: Pure <ul style="list-style-type: none">• Algebra and functions• Coordinate geometry
	Term 2: Pure <ul style="list-style-type: none">• Further algebra• Trigonometry
	Term 3: Pure <ul style="list-style-type: none">• Vectors Mechanics <ul style="list-style-type: none">• Quantities and units in mechanics• Kinematics 1 (constant acceleration)
	Term 4: Pure <ul style="list-style-type: none">• Differentiation Mechanics <ul style="list-style-type: none">• Forces & Newton's laws• Kinematics 2 (variable acceleration)
	Term 5: Pure <ul style="list-style-type: none">• Integration Statistics <ul style="list-style-type: none">• Statistical sampling• Data presentation and interpretation



	<ul style="list-style-type: none">• Probability
	Term 6: Pure <ul style="list-style-type: none">• Exponentials and logarithms Statistics <ul style="list-style-type: none">• Statistical distributions• Statistical hypothesis testing
Year 13	Exam Board: Pearson Edexcel Qualification: A Level Mathematics
	Term 1: Pure <ul style="list-style-type: none">• Proof• Algebraic and partial fractions• Functions and modelling Mechanics <ul style="list-style-type: none">• Moments• Forces at any angle• Applications of kinematics
	Term 2: Pure <ul style="list-style-type: none">• Series and sequences• The binomial theorem• Trigonometry Mechanics <ul style="list-style-type: none">• Applications of forces• Further kinematics
	Term 3: Pure <ul style="list-style-type: none">• Parametric equations• Differentiation• Numerical methods Statistics <ul style="list-style-type: none">• Regression and correlation• Probability
	Term 4: Pure <ul style="list-style-type: none">• Integration Statistics <ul style="list-style-type: none">• The Normal distribution• Vectors
	Term 5: <ul style="list-style-type: none">• Revision
	Term 6: <ul style="list-style-type: none">• Revision



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Extra-Curricular Activities:	<ul style="list-style-type: none">• UKMT Maths Challenges (National events)• Local competitions organised by the Advanced Maths Support Programmes• Enrichment trips with a variety of Maths related themes
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