

KS3 MATHEMATICS Curriculum Narrative

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

This curriculum of learning has been designed to build upon the experiences encountered at Key Stage 2 at and the [curriculum](#) taught at Primary school.

KS3 Maths Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	Number Unit 1	Algebra Unit 1 Geometry Unit1 Number Unit 2	Number Unit 2 Statistics Unit 1	Statistics Unit 1 Number Unit 3	Number Unit 3 Geometry Unit 2 Number Unit 4	Number Unit 4 Algebra Unit 2 Problem Solving
Year 8	Probability Unit 1 Geometry Unit 3	Statistics Unit 2 Algebra Unit 3	Ratio & Proportion Unit 1	Geometry Unit 4 Geometry Unit 5a Geometry Unit 5b	Algebra Unit 4	Geometry Unit 6 Number Unit 5 Problem Solving
Year 9	Mastering 1a - Product Rule for counting (1) 1a - Multiply and divide by 0 to 1 (1) 1b - recap index	Mastering 1d - Standard form calculations, Simplifying Surds (5) 2c - Sequences (5)	Mastering 4a - Fractions (5) 4b - Percentages (5) 4c - Ration and Proportion (6) 5a - Polygons,	Mastering 5b - Pythagoras and Trigonometry (8) 6a - Graphs: the Basics and Real Life Graphs (6)	Mastering 6b - Linear Graphs and Coordinate Geometry (6) 6c - Quadratic, Cubic and Other	Mastering 7a - Perimeter, area and circles (5) 7b - 3D Forms and Volume (8) 7c - Accuracy and

<p>laws, fractional and negative powers (5) 1c - Recap LCM, HCF, Venn (2) 2a - Algebra Basics - recap to ensure fluency (8) 2b - Equations (9)</p> <p>1a - Calculations, Checking and Rounding (10) 1b - Index Laws (7) 1c - Recap HCF, LCM, Venns (3) 1d - Standard Form and Surds (6)</p> <p>Securing</p> <p>1a - Integers & Place Value (8) 1b - Decimals (6) 1c - Indices (6) 1d - Factors, Multiples, Primes (6)</p> <p>1a - Integers and Place Value (6) 1b - Decimals (6) 1c - Indices (8) 1d - Factors, Multiples and Primes (6)</p>	<p>3a - Averages and Range (4) 3b - Representing and Interpreting Data (8) 3c - Scatter Graphs (2)</p> <p>2a - Algebra Basics (13) - KEY Topic 2b - Equations (9)</p> <p>Securing</p> <p>2a - Algebra Basics (6) 2b - Expanding and Factorising (6) 2c - Expressions and Substitution (8) 3a - Tables (4)"</p> <p>2a - Algebra Basics (9) 2b - Expanding and Factorising (7) 2c - Expressions and Substitution (8)</p>	<p>Angles & Parallel Lines (3)</p> <p>2c - Sequences (4) - focus on understanding of linear. Quadratics are a bonus.</p> <p>3a - Averages and Range (6) 3b - Representing and Interpreting Data (9)</p> <p>Securing</p> <p>3a - Tables (3) 3b - Charts and Graphs (6) 3c - Pie Charts (4) 3d - Scatter Graphs (4) 4a - Fractions (4) - KEY topic</p> <p>3a - Tables (8) 3b - Charts and Graphs - ignore histograms (8)</p>	<p>6b - Linear Graphs and Coordinate Geometry (5)</p> <p>3c - Scatter Graphs (4) 4a - Fractions (10) - KEY topic 4b - Percentages (4)</p> <p>Securing</p> <p>4a - Fractions (6) - KEY topic 4b - Fractions, Decimals and Percentages (4) 4c - Percentages (7) 5a - Equations (4)"</p> <p>3c - Pie Charts (4) 4a - Fractions (5) - KEY topic 4b - Fractions, Decimals and Percentages (5) 4c - Percentages (4)</p>	<p>Graphs (8)</p> <p>4b - Percentages (4) 4c - Ratio and Proportion (9) 5a - Polygons, Angles & Parallel Lines (7)</p> <p>Securing</p> <p>5b - Inequalities (4) 5c - Sequences (7) 6a - Properties of Shapes, Parallel Lines, Angle Facts (6) - KEY topic"</p> <p>4c - Percentages (4) - ignore multipliers and decimal part 5a - Equations (8) - focus on setting up and solving equations 5b - Inequalities (4)</p>	<p>Bounds (5) 8a - Transformations (6)</p> <p>5b - Pythagoras and Trigonometry (9), 6a - Graphs: the basics and Real-Life (8)</p> <p>Securing</p> <p>6a - Properties of Shapes, Parallel Lines, Angle Facts (6) - KEY topic 7a - Statistics and Sampling (4) 7b- the averages (6)</p> <p>5c - Sequences (7) - ignore quadratics 6a-Properties of shapes, parallel lines and angle facts (10) 6b-Interior and Exterior angles of polygons (6)</p>
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KS4 MATHEMATICS Curriculum Narrative

Our GCSE Maths syllabus prepares students for further study at A Level and provides fundamental knowledge and transferable skills for success in everyday life. Our mathematics curriculum provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Students will learn Number, Algebra, Geometry, Statistics, Probability, Ratio and Proportion and must demonstrate good levels of competence in all disciplines, building on prior learning. The curriculum has been adapted, sequenced and differentiated to ensure students maximise their capabilities and are supported in retaining key knowledge and concepts alongside problem solving and application.

Students will be challenged to exceed their potential and develop as resilient and independent learners. Through a combination of high quality teacher-led instruction, independent discovery tasks, practical demonstrations and building conceptual understanding, students will develop into reflective and passionate mathematicians. The course is assessed through three examinations in Year 11 accumulating all the knowledge and skills students have developed. (Inside the brackets are number of lessons spent on each topic). We follow the Pearson exam board specification. In addition, we offer the AQA Further Maths qualification to extend our highest attainers.

KS4 Maths Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	<p>Higher</p> <p>8b - Constructions, Loci and Bearings (6) 9a - Solving Quadratics and Sim. Equations (8) 9b - Inequalities (6) 10 - Probability (10)</p> <p>6b - Linear Graphs and Coordinate Geometry (6) 6c - Quadratic, Cubic and Other Graphs (8) 7a - Perimeter, area and circles (8) 7b - 3D forms and volume, cylinders, cones and spheres (8)</p>	<p>Higher</p> <p>11 - Multiplicative Reasoning (8) 12 - Similarity and Congruence in 2D and 3D shapes (8) 15 - Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics (8)</p> <p>7c - Accuracy and bounds (5) 8a - Transformations (8)</p>	<p>Higher</p> <p>14a - Collecting data (6) 14b - Cumulative frequency, box plots and histograms (7) 13a - Graphs of trig functions (6)</p> <p>9b - Inequalities (6) 10 - Probability (10)</p> <p>Foundation</p> <p>12 - Right-angled triangles: Pythagoras and trigonometry (6)</p>	<p>Higher</p> <p>13b - Further trigonometry (8) 16a - Circle theorems (6) 16b - Circle Geometry (5)</p> <p>11 - Multiplicative Reasoning (8) 12 - Similarity and Congruence in 2D and 3D shapes (8)</p> <p>Foundation</p> <p>15a - Plans and elevations (6)</p>	<p>Higher</p> <p>17 - Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof (8) 18 - Vectors and geometric proof (10)</p> <p>13a - Graphs of trig functions (6) 13b - Further trigonometry (10)"</p>	<p>Higher</p> <p>19a - Reciprocal and exponential graphs; Gradient and area under graphs (8) 19b - Direct and inverse proportion (8)</p> <p>14a - Collecting data (6) 14b - Cumulative frequency, box plots and histograms (7) 15 - Quadratics, expanding more than two brackets, sketching graphs,</p>

	<p>Foundation</p> <p>8a - Perimeter and area (10) 8b - 3D forms and volume (6) 9a - Real-life graphs (8) 9b - Straight-line graphs (6)</p> <p>7a - Statistics and sampling (4) 7b - The averages (6) 8a - Perimeter and area (10) 8b - 3D forms and volume (6)</p>	<p>8b - Constructions, loci and bearings (8) 9a - Solving Quadratics and Sim. Equations (8)</p> <p>Foundation</p> <p>10a - Transformations I: translations, rotations and reflections (6) 10b - Transformations II: enlargements and combinations (8) 11a - Ratio (6) 11b - Proportion (6)</p> <p>9a - Real-life graphs (9) 9b - Straight-line graphs (6) 10a - Transformations I: translations, rotations and reflections (6)</p>	<p>13a - Probability I (5) 13b - Probability II (8)</p> <p>10b - Transformations II: enlargements and combinations (8) 11a - Ratio (6) 11b - Proportion (5)</p>	<p>15b - Constructions, loci and bearings (10)</p> <p>12 - Right-angled triangles: Pythagoras and trigonometry (6) 13a - Probability I (5) 13b - Probability II (8)</p>	<p>Foundation</p> <p>16a - Quadratic equations: expanding and factorising (5) 16b - Quadratic equations: graphs (4) 14 - Multiplicative reasoning (6)</p> <p>15a - Plans and elevations (6) 15b - Constructions, loci and bearings (10)</p>	<p>graphs of circles, cubes and quadratics (8)</p> <p>Foundation</p> <p>17 - Circles, cylinders, cones and spheres (7) 18a - Fractions and Reciprocals (5) 18b - Indices and standard form (6)</p> <p>16a - Quadratic equations: expanding and factorising (5) 16b - Quadratic equations: graphs (4) 14 - Multiplicative reasoning (6) 17 - Circles, cylinders, cones and spheres (7)</p>
Year 11	<p>Higher</p> <p>18 - Vectors and geometric proof (10) 19a - Reciprocal and exponential graphs; Gradient and area under graphs (8)</p>	<p>Higher</p> <p>Mock Exams (2 weeks) Mock Exam review & DIRT 19b - Direct and</p>	<p>Higher</p> <p>19a - Reciprocal and exponential graphs (8) 19b - Direct and inverse proportion (8)</p>	<p>Higher</p> <p>Mock Exam review & DIRT Revision and past papers</p> <p>Foundation</p>	<p>Revision</p>	

	<p>16a - Circle theorems (6) 16b - Circle Geometry (5) 17 - Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof (8)</p> <p>Revision week for Mocks (4)</p> <p>Foundation</p> <p>17 - Circles, cylinders, cones and spheres (7) 18a - Fractions and Reciprocals (5) 18b - Indices and standard form (6)</p> <p>16b - Quadratic equations: graphs (4) 17 - Circles, cylinders, cones and spheres (7) 18a - Fractions and Reciprocals (5) 18b - Indices and standard form (6) Revision week for Mocks (4)</p>	<p>inverse proportion (8)</p> <p>18 - Vectors and geometric proof (10)</p> <p>Foundation</p> <p>Mock Exams (2 weeks)</p> <p>Mock Exam review & DIRT</p> <p>19a - Similarity and congruence in 2D (7)</p> <p>19b - Vectors (7)</p> <p>19a - Similarity and congruence in 2D (7)</p>	<p>Revision and past papers</p> <p>Revision week for Mocks (4)</p> <p>Foundation</p> <p>20 - Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations (5)</p> <p>19b - Vectors (7) 20 - Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations (5)</p> <p>Revision week for Mocks (4) Mock Exams</p>	<p>Mock Exam review & DIRT Revision and past papers</p> <p>Mock Exam review & DIRT Revision and past papers</p>		
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