

Key Stage 3 Subject Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Y7	Topics and content to be learnt		Topics and content to be learnt		Topics and content to be learnt	
	Add/Subtract & Place Value Multiply/Divide & BIDMAS Rounding & Estimating Factors/Multiples HCF and LCM Primes, Squares & Triangular Numbers Negative Numbers	Names and Properties of 2D Shapes Nets and 3D shapes Perimeter and Area Volume	Converting between FDP; +/- /x/÷ Fractions Decimals Percentages Ratio & Proportion	Bar Charts/ Pictograms/Line Graphs Tally Charts/Two-Way Tables & Data Types Mean Median, Mode and Range Scatter Graphs and Pie Charts	Sequences Simplifying Substitution Solving Equations	Types of Angles and Measuring Angle Notation & Rules Angles in a Triangle and Quadrilateral
	Knowledge, skills and understanding explicit to these topics/stage Basic numeracy – applying this to real life situations. Shapes – communication of written work in terms of perimeter, area and volume		Knowledge, skills and understanding explicit to these topics/stage Students need basic numeracy skills to work through percentage, ratio and proportion questions – very heavily based on problem solving questions By the end of this unit, students need to be able to take data given and interpret the information in a form of different graphs.		Knowledge, skills and understanding explicit to these topics/stage Students have not yet worked much on algebra from KS2. Summer 1 sets the tone to understand what algebra is, how it works and why it is used.	
Y8	Topics and content to be learnt		Topics and content to be learnt		Topics and content to be learnt	
	BIDMAS & General Number Problems Conversion & Travel Graphs Coordinates and Straight line graphs Sequences Inequalities	Names and Properties of 2D and 3D Shapes Perimeter and Area Circles Surface Area & Volume	Converting between FDP; +/- /x/÷ Fractions Decimals Percentages Ratio & Proportion	Mean Median, Mode and Range Revisit Bar Charts & Two Way Tables, Scatter Graphs and Pie Charts Cumulative Graphs & Quartiles Probability & Venn Diagrams	Simplifying Substitution Factorising Solving Equations	Angles Reflection and Symmetry Rotation and Translation Enlargement and Combined Transformations
	Knowledge, skills and understanding explicit to these topics/stage To interpret and communicate mathematical information in a variety of forms, appropriate to the context.		Knowledge, skills and understanding explicit to these topics/stage At this point, students are building on their knowledge from year 7 spring term, and extending their knowledge further through application of the topics, and stretch and challenge.		Knowledge, skills and understanding explicit to these topics/stage Students are building on their algebra understanding from Summer Year 7 and working on more challenging questions, building more links between different topics.	
Y9	Topics and content to be learnt		Topics and content to be learnt		Topics and content to be learnt	
	Foundation Calculations Decimal numbers Place value Factors and multiples Squares, cubes and roots Index notation Prime factors	Foundation Algebraic expressions Simplifying expressions Substitution Formulae Expanding brackets Factorising Using expressions and formulae	Foundation Frequency tables Two-way tables Representing data Time series Stem and leaf diagrams Pie charts Scatter graphs Working with fractions Operations with fractions Multiplying fractions	Foundation Solving equations 1 Solving equations 2 Solving equations with brackets Introducing inequalities More inequalities More formulae Generating sequences Using the nth term of a sequence	Foundation Properties of shapes Angles in parallel lines Angles in triangles Exterior and interior angles More exterior and interior angles Geometrical patterns Mean and range Mode, median and range Types of average	Foundation Rectangles, parallelograms and triangles Trapezia and changing units Area of compound shapes Surface area of 3D solids Volume of prisms More volume and surface area

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<p>Higher</p> <p>Number problems and reasoning Place value and estimating HCF and LCM Calculating with powers (indices) Zero, negative and fractional indices Powers of 10 and standard form Surds</p>	<p>Higher</p> <p>Algebraic indices Expanding and factorising Equations Formulae Linear sequences Non-linear sequences More expanding and factorising</p>	<p>Dividing fractions Fractions and decimals Fractions and percentages Calculating percentages Higher</p> <p>Statistical diagrams Time series Scatter graphs Line of best fit Averages and range</p> <p>Fractions Ratios Ratio and proportion Percentages Fractions/ decimals/ percentages</p>	<p>Higher</p> <p>Angle properties of triangles and quadrilaterals Interior angles of a polygon Exterior angles of a polygon Pythagoras' theorem Trigonometry</p>	<p>Estimating the mean Sampling</p> <p>Higher</p> <p>Linear graphs Graphing rates of change Real life graphs Line segments Quadratic graphs Cubic and reciprocal graphs More graphs</p> <p>Perimeter and area Units and accuracy Prisms Circles Sectors of circles Cylinders and spheres Pyramids and cones</p>	<p>Higher</p> <p>Plans and Elevations Transformations and combinations Bearings/Loci and scale drawings</p>
<p>Knowledge, skills and understanding explicit to these topics/stage Students are now looking at core number topics, again building on Year 7 and 8 understanding.</p>		<p>Knowledge, skills and understanding explicit to these topics/stage At this point, students are acquiring, selecting and applying mathematical techniques to solve problems. They are showing more reasoning skills, and making deductions from problems.</p>		<p>Knowledge, skills and understanding explicit to these topics/stage Students are being taught to develop fluent knowledge, skills and understanding of methods and concepts.</p>	