

Curriculum Map-

Below is a curriculum map, showing what is taught at each stage of the year.

Year	Unit	Map	Prior links	Future links	Interweaving
7	1	- Change Freely between related standard units of time - Four operations with the use of symbols =, ≠, <, >, ≤, ≥, number patterns, index notation & prime numbers, Prime number decomposition. LCM & HCF - Area & perimeter 2D shapes by formula - Understand place value use in written & mental methods	Roman numerals, converting between analogue & digital clock Triangular numbers Establishing if a number is prime up to 100 Area by counting squares. Comparing units of measure Understanding zero as a place holder and place value in decimal and fraction form	Solving complex time problems Prime decomposition in Y8U1, Y9U1 and skills used in context in KS4. Using known shape facts to obtain simple proofs. Ordering numbers. Understanding place value to include decimals, fractions, powers & roots.	SSDD: Telling time, contextual time problems and timetables Four operations: inverse operations Area & Perimeter: Fractions & decimals and algebra

		- Hierarchy of operations - Equivalent Fractions			
	2	- Equivalence (Conversion between FDP) - Ratio - Algebraic notation - Simplify, substitute & solve linear equations - Draw 2D shapes & find missing angles in triangles - Quadrilaterals - Angles at a point and on a straight line		Equivalence of fractions is revisited and built upon in Y8U2 & Y9U2 and developed further in KS4. Equations Y8U2 Angles Y8U2	
	3	- Collect, organise & interpret data - Interpret statistical data (mean, median, mode & range) - Find and contextualise statistical measures using graphs. - Visualise & identify 2 & 3D shapes, 3D nets and calculate volume of prisms.	Area and naming shapes	Previously area and naming shapes in KS2 Revisited Y8U3 where they will develop a deeper understanding of surface area and measures will be given in algebraic terms	FDPs and Negatives in averages and range FDPs in area and volume Algebraic notation in mean, range and area and volume
8	1	- Order of operations, estimation & negative numbers. - Indices & prime numbers - HCF & LCM.	Previously visited in Y7U1/2: prime numbers, Prime number decomposition. LCM	revisited and developed in Y9U1 and skills used in context in KS4	- FDPs in area and volume - solve linear equations/ algebra in order

		• Equivalences, perimeter & area and conversion between units. • The Use of Pi, area & perimeter of circles. • Compound Measures.	& HCF; related standard units of time Area & perimeter 2D shapes by formula; Hierarchy of operations; Negative numbers at KS2 (ordering on NL, counting up and down through 0)		of operations • missing angles in estimation (rounding) • HCF and LCM in: FDP; order of operations (factorising) Ratio/proportion; area and volume • Converting between units of measure • Algebra (Y7) in geometry
	2	• Plot linear & quadratic graphs • simplify, expand & factorise • solve formulae • inequalities & linear sequences. • Missing angles, • ratio & proportion and percentage change. • Constructions with a compass & protractor, • similar & congruent shapes.	Y7 U2: Algebraic notation; linear equations; missing angles in triangles; at a point and on a straight line; ratio; Draw 2D shapes	Algebraic manipulation revisited Y9U2 . Congruency in Y9U3	• coordinates in plot linear and quadratic graphs • Fractions into expanding brackets • order of operations in algebra • HCF, LCM, Primes in simplify, expand and factorise

					• Negative numbers in inequalities and linear seq • HCF and LCM in: FDP; order of operations (factorising) Ratio/proportion; area and volume • Converting between units of measure • Algebra (Y7) in geometry • ratio and proportion, polygon properties in similar and congruent shapes • The Use of Pi, area & perimeter of circles; polygon properties; and missing angles in constructions with compass and protraction
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	3	• 2D & 3D shapes: • surface area. • Volume of prisms. • Averages & range • probability laws. • Find and contextualise statistical measures.	Area Y7U1 Vol Y7 Unit 3. Average and statistical measures Y7U2 Probability scale, calculating independent probabilities (fraction)KS2	Revisited Y9 complex shapes, missing sides and algebraic notation will be used.	
9	1	• Estimate, prime numbers • LCM & HCF • index laws • standard form. • Fractions • percentages • ratio & proportion and equivalences • Represent data.	Previously visited in Y7U1 and Y8U1 and skills used in context in KS4.		
	2	• Probability. • Simplify algebraic expressions by collecting like terms, expanding and factorising. • Use algebraic manipulation to solve multi-step equations including unknowns on both sides and change the subject of a formulae. • Simultaneous equations. • Plot linear, quadratic, cubic, reciprocal, circle & direct proportion & real life graphs.	Previously Proportion: Y8U3	Proportion revisited in KS4	

	3	• Missing angles • similar & congruent shapes. • Interpret charts & graphs • Transform & construct shapes • Probability and frequency trees. • Use trigonometric ratios & Pythagoras' Theorem in 2D & 3D. • Transform graphs, shapes, and use vectors • Calculate probability and construct statistical diagrams.	For example, they will have seen probability in Y7U3 & Y8U3	Students will be revisiting key mathematical concepts and developing these further for their GCSE exams in Y11.	
10	1	• Simplify, expand & factorise and solve equations. • Plot & interpret linear, quadratic, cubic & reciprocal graphs. • Pythagoras' Theorem • Trigonometry. • <i>Proportion</i> • <i>Geometric progression</i> • <i>Surds</i> • <i>FDPs</i> • <i>Plot & interpret graphs</i> • <i>Solving quadratic equations & inequalities</i> • <i>Algebraic manipulation.</i>	They will have seen equations in Y7U2, Y8U2 & Y9U2	They will develop their understanding of solving and factorising different equations.	• Fractions and decimals in solving equations • Substitution in Pythagoras' Theorem and Trigonometry • Ratio and FDPs in proportion • Powers and roots in surds • Solving linear equations and substitution in solving quadratic equations and inequalities

	2	• Ratio & proportion • Percentage growth & decay • Index laws • Standard form • Error intervals • Compound measures • Perimeter & area • Surface area and volume. • <i>Iterative processes</i> • <i>Functions</i> • <i>Gradients and rate of change</i> • <i>Constructing shapes</i> • <i>Finding similar & congruent shapes</i> • <i>Circle theorems.</i>	They will have seen measures in Y7U3, Y8U3 & Y9U3.	They will develop their understanding with compound measures and change.	• FDPs and the four operations in ratio and proportion • Length, Area and Volume in compound measures • Substitution in iterative processes, functions and gradients • Angles and measurement in constructing shapes
	3	• Missing angles • Similar & congruent shapes • Interpret charts & graphs • Transform & construct shapes • Probability and frequency trees • <i>Use trigonometric ratios</i> • <i>Pythagoras' Theorem in 2D & 3D</i> • <i>Transform graphs</i>	They will have seen probability in Y7U3 & Y8U3	They will develop their understanding with different representations and explanations with data.	• Properties of polygons in angles and shapes • Basic laws of probability in frequency trees and calculating probability • Properties of

		• <i>Transform shapes</i> • <i>Calculate probabilities</i> • <i>Constructing statistical diagrams</i>			transformations of shapes in transformation of graphs • FDPs in vectors
11	1	• <i>Forming and solving equations</i> • <i>Solving quadratics and sketching - including inequalities</i> • <i>Index laws - combining laws including fractional and negative indices</i> • <i>Surds - rationalising binomial denominators</i> • <i>Vectors</i> • <i>Statistical diagrams - Histograms and the links to other diagrams</i> • <i>Trigonometry & Pythagoras in 3D and Bearings</i> • <i>Shape Problem Solving - including sectors/segments, angles in polygons</i> • <i>Functions - solving equations involving composite and inverse functions</i> • <i>Applied Ratio problems</i>	Higher students will have seen all of these topics in year 10. In year 11 they will be expanding on their knowledge by combining and interweaving ideas e.g. combining multiple circle theorems.	Provides a foundation for A-Level Mathematics and Further Mathematics.	• <i>Shape, Ratio and averages in Forming and solving equations (inc Quadratics)</i> • <i>Shape in Surds</i>
	2	• <i>Direct and Inverse Proportion</i> • <i>Circle Theorems - combining theorems</i> • <i>Bounds</i> • <i>Sequences - recognising types of sequences, generating and finding nth term</i> • <i>Conditional Probability</i>			• <i>Forming and solving equations in Circle Theorems and Conditional Probability</i>
	3	Revision			

