Curriculum Intent Document:

	Year 7	Year 8	Year 9 Foundation	Year 9 Higher
Autumn 1	**Topic: Number: Place Value & Rounding/ Four Operations I** Content covered: Understanding negative numbers, ordering and rounding numbers, estimating answers, and working with place value up to 3 decimal places. Identifying factors, multiples, primes, and powers. Calculating HCF and LCM and understanding index notation. Links to prior learning: Builds on KS2 number fluency and prepares students for algebraic reasoning in KS3.	**Topic: Number: Four Operations II / Number Properties II / FDP** Content covered: Consolidating calculation methods with integers, decimals, and fractions. Applying equivalence between fractions, decimals and percentages, including estimation and rounding in context. Links to prior learning: Builds on Year 7 number and fraction fluency to prepare for standard form and ratio applications.	**Topic: Number Skills & Percentages** Content covered: Consolidating calculation strategies, order of operations, rounding, and use of a calculator. Developing fluency in percentage change, increase/decrease, and reverse percentages. Links to prior learning: Builds on KS3 number fluency, percentage and estimation skills to prepare for GCSE problem solving.	**Topic: Number Skills & Statistical Diagrams** Content covered: Consolidating calculation strategies, order of operations, rounding, and estimation. Introducing statistical diagrams, averages, and interpreting data sets with accuracy. Links to prior learning: Builds on KS3 number fluency and statistics to prepare for advanced GCSE reasoning and data interpretation.
Autumn 2	**Topic: Geometry: Properties of Angles I/ Properties of Shapes I/ Constructions I**	**Topic: Geometry: Angles, Constructions II, Perimeter & Area II**	**Topic: Statistics 1 & Angles** Content covered:	**Topic: Sequences / Ratio & Proportion / Percentages** Content covered: Exploring

	Content covered: Using protractors accurately, calculating angles on a line, around a point, and within triangles and quadrilaterals. Recognising and describing 2D and 3D shapes, constructing nets, and exploring relationships between faces, edges, and vertices. Constructing triangles using ruler, protractor, and compass, and understanding perpendicular and parallel lines. Links to prior learning: Builds on KS2 number fluency and prepares students for algebraic reasoning in KS3.	Content covered: Applying geometric reasoning to angles in polygons and parallel lines, accurate constructions, and multi-step area and perimeter problems. Links to prior learning: Extends Year 7 geometry to include more complex shapes and reasoning.	Interpreting data using averages and graphical methods. Applying angle facts in polygons, parallel lines and triangles. Links to prior learning: Extends KS3 work on statistics and geometry, reinforcing reasoning and accurate construction skills.	arithmetic and geometric sequences, applying ratio and proportion to real-world contexts, and solving multi-step percentage problems. Links to prior learning: Extends Year 8 proportional reasoning and develops understanding of multiplicative relationships for GCSE.
Spring 1	**Topic: Number: Fractions/ Percentages/ Ratio & Proportion I** Content covered: Simplifying fractions, converting between improper and mixed numbers, comparing and ordering fractions, and linking fractions to division.	**Topic: Algebra: Manipulation, Equations, Sequences & Graphs II** Content covered: Expanding and factorising expressions, solving linear equations and inequalities, and plotting linear graphs from tables of values.	**Topic: Number Properties, Decimals and Fractions** Content covered: Exploring prime factors, HCF, and LCM, and applying them to multi-step problems. Calculating with decimals and fractions with accuracy and estimation.	**Topic: Angles & Transformations / Constructions & Loci** Content covered: Applying reasoning with angles, performing geometric transformations, and constructing perpendicular and angle bisectors using

	Understanding percentage as 'out of 100', converting between fractions, decimals and percentages, and solving percentage problems. Introducing ratio notation and simplifying ratios. Solving problems involving proportional reasoning and unitary methods. Links to prior learning: Builds on KS2 number fluency and prepares students for algebraic reasoning in KS3.	Links to prior learning: Builds on Year 7 algebra foundations and prepares for coordinate geometry at GCSE.	Links to prior learning: Builds on Year 8 FDP fluency to develop foundation GCSE problem-solving techniques.	accurate tools. Links to prior learning: Builds on KS3 geometry and develops problem-solving and accuracy required for higher-tier geometry.
Spring 2	**Topic: Algebra: Algebraic Manipulation I/ Solving Equations I/ Sequences & Graphs I** Content covered: Simplifying and expanding expressions, collecting like terms, and forming algebraic expressions from word problems. Solving one- and two-step linear equations using inverse operations and substitution. Generating and extending linear sequences, finding nth	**Topic: Ratio & Proportion: Direct Proportion, Speed, and Scaling** Content covered: Applying proportional reasoning in real-life contexts including recipes, maps, and speed-distance-time problems. Links to prior learning: Develops understanding from Year 7 ratio and percentage modules, linking to compound measures in KS4.	**Topic: Linear Graphs & Expressions and Formulae** Content covered: Plotting linear graphs, understanding gradients and intercepts, and manipulating algebraic expressions to form and use formulae. Links to prior learning: Develops from KS3 algebra and introduces coordinate graphing required for GCSE algebraic reasoning.	**Topic: Algebraic Manipulation / Length, Area & Volume** Content covered: Expanding and factorising algebraic expressions and applying these to formulae for length, area, and volume. Links to prior learning: Extends Year 8 algebra and mensuration knowledge, preparing students for algebraic proof and formula manipulation.

	terms, and plotting coordinates in all four quadrants. Links to prior learning: Builds on KS2 number fluency and prepares students for algebraic reasoning in KS3.		
Summer 1	**Topic: Statistics: Representing Data I/ Probability I** Content covered: Constructing and interpreting bar charts, pie charts, pictograms, and line graphs. Understanding discrete and continuous data. Calculating mean, median, mode, and range, and using data to compare and interpret trends. Introducing probability language, simple experiments, and theoretical probability using fractions. Links to prior learning: Builds on KS2 number fluency and prepares students for	**Topic: Statistics: Data Representation II, Averages & Probability** Content covered: Interpreting and comparing grouped data, calculating averages, and exploring theoretical probability through experiments. Links to prior learning: Extends Year 7 data handling and supports GCSE-level statistical thinking.	**Topic: Ratio, Speed & Proportion / Perimeter & Area** Content covered: Applying ratio and proportion reasoning to real-life contexts such as scaling, recipes, and speed. Reinforcing perimeter and area calculations for compound shapes. Links to prior learning: Extends Year 8 ratio and geometry learning and introduces compound measures used in KS4 contexts.	**Topic: Linear Graphs & Right-Angled Triangles** Content covered: Plotting and interpreting linear graphs, identifying gradients, and applying Pythagoras' theorem and trigonometric ratios in right-angled triangles. Links to prior learning: Develops from Year 8 coordinate geometry and prepares for trigonometric applications in Year 10.

	algebraic reasoning in KS3.			
Summer 2	**Topic: Geometry: Mensuration** Content covered: Calculating perimeter, area, and volume of 2D and 3D shapes. Using appropriate formulae and units. Finding area and perimeter of rectangles, triangles, and compound shapes. Understanding volume and surface area of cuboids and prisms, and problem-solving in context. Links to prior learning: Builds on KS2 number fluency and prepares students for algebraic reasoning in KS3.	**Topic: Geometry: Volume, Surface Area & Transformations** Content covered: Calculating the volume and surface area of prisms and cylinders, and performing transformations including reflection, rotation, translation, and enlargement. Links to prior learning: Builds on Year 7 mensuration and develops spatial reasoning for higher-level geometry.	**Topic: Transformations & Vectors / Revision** Content covered: Exploring reflections, rotations, translations, and enlargements with accuracy. Introducing simple vector notation and combining vectors. Links to prior learning: Builds on KS3 transformations and prepares students for GCSE coordinate geometry and vector work.	**Topic: Probability / End of Year Revision** Content covered: Calculating theoretical and experimental probabilities, using sample space diagrams and combined event reasoning. Revision of key Year 9 topics for GCSE progression. Links to prior learning: Builds on KS3 probability and prepares students for compound probability in Year 10.

The Year 7 Mathematics curriculum aims to consolidate core number fluency, develop conceptual understanding across algebra and geometry, and embed mathematical reasoning and problem-solving skills. Each term builds progressively on prior learning and promotes mastery through rich tasks and cross-topic connections.

	Year 10 Foundation	Year 10 Higher	Year 11 Foundation	Year 11 Higher
Autumn 1	**Topic:** Probability & Volume and Surface Area **Content covered:** Calculating simple and experimental probabilities and representing outcomes using tables, grids, and diagrams. Extending to 3D volume and surface area calculations of prisms and cylinders. **Links to prior learning:** Builds on Year 9 data and shape understanding, introducing GCSE-level probability and mensuration.	Topic: Equations & Inequalities / Accuracy, Powers & Surds Content covered: Solving linear and simultaneous equations, representing inequalities, and simplifying powers and surds accurately. Links to prior learning: Extends Year 9 algebraic reasoning and introduces surd manipulation required for higher-tier problem solving.	Topic: Statistics 2 / Constructions and Loci Content covered: Constructing and interpreting scatter diagrams and calculating averages from grouped data. Applying loci in problem-solving contexts. Links to prior learning: Reinforces data interpretation from Year 10 and extends geometric reasoning for GCSE application.	Topic: Compound Measures / Congruence & Similarity Content covered: Applying relationships between speed, distance, time, density, and pressure. Exploring congruent and similar shapes including 3D enlargement. Links to prior learning: Builds on Year 10 proportional reasoning and geometry for advanced GCSE application.
Autumn 2	**Topic:** Linear Equations & Measures and Scale Drawing Content covered: Solving equations with unknowns on both sides and applying knowledge of measures and	Topic: Quadratic Equations / Sampling & Complex Diagrams Content covered: Solving quadratic equations by factorisation and graphing, and interpreting data from	Topic: Curved Shapes, Number & Sequences Content covered: Calculating volume and surface area of pyramids and curved solids. Revisiting number properties and	Topic: Quadratics Recap / Simultaneous Equations / Mock Exam Preparation Content covered: Revisiting and strengthening quadratic and simultaneous equation methods, including

	scale in practical problems. Links to prior learning: Develops algebraic reasoning from Year 9 and applies ratio skills to scaling contexts.	advanced statistical diagrams. Links to prior learning: Builds on Year 9 algebraic manipulation and graphical skills, preparing for more complex algebraic methods.	arithmetic sequences. Links to prior learning: Connects to previous mensuration work and consolidates number fluency before exams.	graphical and algebraic solutions. Preparing for mock assessments. Links to prior learning: Consolidates previous algebraic learning and ensures readiness for GCSE assessment.
Spring 1	**Topic: Compound Measures & Variation / Statistics 2** Content covered: Exploring compound measures such as speed, density, and pressure. Analysing statistical diagrams including cumulative frequency and box plots. Links to prior learning: Links Year 9 proportion work to GCSE functional problem solving and statistical comparison.	**Topic: Combined Events & Properties of Circles** Content covered: Using probability trees and Venn diagrams for combined events, and applying circle theorems to calculate angles and prove geometric relationships. Links to prior learning: Extends probability work from Year 9 and geometry from KS3 for higher GCSE reasoning.	**Topic: Right-Angled Triangles, Congruence & Similarity** Content covered: Using trigonometric ratios in right triangles and applying congruence and similarity to geometric reasoning tasks. Links to prior learning: Extends Pythagoras and transformation work from Year 10.	**Topic: Gradients & Areas Under Graphs / Revision of KS4 Topics** Content covered: Understanding rates of change and estimating areas under curves using graphs. Reviewing all Year 9 and 10 content for mastery. Links to prior learning: Extends graph work from Year 10 and applies to GCSE problem-solving in functional contexts.
Spring 2	**Topic: Constructions, Loci & Curved Shapes** Content covered: Performing accurate constructions and loci using	**Topic: Proportionality / Further Pythagoras & Trigonometry** Content covered: Applying direct and inverse	**Topic: Combined Events, Powers & Standard Form** Content covered: Working with probability of combined events using tree and Venn	Final Revision & GCSE Examinations

	compasses and rulers. Calculating surface area and volume of cones and spheres.
	  Links to prior learning: Extends Year 9 geometry and prepares students for spatial reasoning tasks at GCSE.
		proportion, and using advanced trigonometry in non-right-angled triangles and 3D problems.
		  Links to prior learning: Builds on earlier ratio and trigonometry work and prepares for higher-tier functional problems.
			diagrams. Applying index laws, negative powers, and standard form.
			  Links to prior learning: Links Year 10 probability and number fluency to higher GCSE mathematical reasoning.	

Summer 1	**Topic: Number & Sequences / Right-Angled Triangles**
	  Content covered: Developing number fluency and exploring arithmetic sequences. Applying Pythagoras' Theorem to 2D and simple 3D problems.
	  Links to prior learning: Builds on Year 8 algebra and shape work to introduce GCSE-level reasoning in geometry.
		Topic: Further Graphs / Algebraic Fractions & Functions
		  Content covered: Sketching and interpreting quadratic, cubic, and reciprocal graphs, and simplifying algebraic fractions. Introducing functions and composite functions.
		  Links to prior learning: Extends algebraic understanding from Year 9 and 10 and prepares for GCSE graph interpretation and transformation.
			Final Revision & GCSE Examinations	Final Revision & GCSE Examinations

| Summer 2 | **Topic: Congruence & Similarity / Revision**
Content covered: Exploring congruent and similar shapes, understanding scale factors and enlargement. Structured revision for GCSE content.
Links to prior learning: Extends Year 9 and 10 geometry and prepares for final problem-solving questions. | **Topic: Vector Geometry / Revision**
Content covered: Understanding and manipulating vectors in two dimensions, solving geometric problems using vector proofs, and revising key GCSE concepts.
Links to prior learning: Builds on transformations and geometric reasoning from KS3 and Year 10. | Final Revision & GCSE Examinations | Final Revision & GCSE Examinations |