Maths Curriculum Long Term Planning

		Term 1	Term 2	Term 3
Year	Big Idea	**Number as a Tool** How does the way we structure and use numbers help us measure, describe, and make sense of the world?	**Handling the Unknown** How do we use symbols and mathematical rules to describe and solve problems involving unknowns or parts of a whole?	**Relating the Parts to the Whole** How do we use comparison and established rules to describe the structure, distribution, and composition of quantities and space?
	Key knowledge and skills	• Place Value • Calculations • Rounding • Area & Perimeter • Types of Number • Order of Operations • Averages	• Algebraic Notation & Manipulation • Substitution • Solving equations • Fractions of amounts • Equivalent fractions • Calculations with fractions • Mixed numbers & improper fractions	• Measuring & drawing angles • Angle rules • Calculating percentages. • Converting between fractions, decimals & percentages.
	End Point	Pupils can use place value, calculations, and rules to measure and interpret data accurately.	Pupils can use algebraic techniques and fraction rules to describe, manipulate, and solve for unknown values and parts of a whole.	Pupils can use angle rules to find missing parts of a shape and are confident in working with percentages.

		Term 1	Term 2	Term 3
8 Year	Big Idea	**Space and Likelihood** How do we use geometric formulas and risk models to calculate the physical properties of space and predict the likelihood of random events?	**Scale and Movement** How do we use multiplicative rules and coordinate transformations to resize quantities, calculate real-world rates, and alter spatial orientations?	**Geometric Reasoning** How do we use the mathematical properties of lines, angles, and triangles to calculate distances, navigate spaces, and prove structural equality?
	Key knowledge and skills	• Area & Perimeter • Circles • Volume & Surface Area • Averages • Probability • Combined Events	• Ratio • Proportional Scales & Rates • Compound Measures • Transformations • Constructions & Loci	• Angle Geometry & Rules • Anges in Polygons • Bearings • Pythagoras' Theorem • Right-Angled Trigonometry • Congruence & Similarity
	End Point	Pupils can use these models to evaluate spatial properties across multiple dimensions, analyse statistical data distributions, and calculate the exact probability of independent and dependent events.	Pupils can use these proportional and geometric rules to scale real-world rates, apply precise coordinate transformations, and accurately construct physical boundaries in space.	Pupils can use these geometric rules to calculate unknown angles, navigate using bearings, apply trigonometric ratios to solve right-angled triangles, and construct formal similarity and congruence proofs.

		Term 1	Term 2	Term 3
9 Year	Big Idea	**Building Blocks** How do we use the laws of arithmetic, symbolic notation, and proportional parts to manipulate quantities and reveal structural relationships within numbers?	**Patterns** How do algebraic rules allow us to reveal fixed patterns, solve for unknown connections, and visualise movement on a coordinate grid?	**Connections** How do we use comparison and established rules to describe the structure, distribution, and composition of quantities and space?
	Key knowledge and skills	• Numerical Fluency & Arithmetic • Prime Decomposition • Indices & Standard Form • Rounding & Estimation • Algebraic Manipulation • Fractions • Percentages • FDP Conversion • Interest	• Equations & Inequalities • Rearranging Formulae • Simultaneous Equations • Sequences • Drawing graphs • Equations of lines	• Ratio • Proportional Reasoning • Compound Measures • Statistical Charts • Bivariate Data
	End Point	Pupils can use these building blocks to calculate fluently with numbers, fractions, and percentages, use standard form, estimate precisely, and manipulate algebraic expressions	Pupils can use these patterns and rules to solve multi-step equations, track sequences, sketch linear and quadratic graphs, and determine geometric line interactions.	Pupils can use these connections to scale and share quantities proportionally, calculate compound rates, and construct complex statistical distributions to analyse trends.

		Term 1	Term 2	Term 3
10 (Yea	Big Idea	**Fluency, Functions, and Dimensions** How do number properties and algebraic operations allow us to calculate exact measurements, plot moving paths, and navigate geometric spaces?	**Quantifying the World** How do we apply logical steps to solve for numerical unknowns, calculate 3D boundaries, and model random real-world outcomes?	**Mapping Continuity** How do we use algebraic and geometric steps to extend infinite number patterns, plot moving journeys, and divide physical spaces accurately?
	Key knowledge and skills	• Algebraic Manipulation • Linear & Quadratic Graphs • Types of Number • HCF/LCM • Standard Form • Transformations • Compound Measures • Pythagoras • Trigonometry	• Solving Equations • Percentages • Angles • Statistics • Area, Perimeter & Volume • Probability	• Construction • Ratio • Fractions • Equations of lines • Speed, Distance, Time Graphs • Sequences
	End Point	Pupils can use these mathematical rules to manipulate algebraic terms, construct and interpret linear and quadratic graphs, calculate real-world compound rates, and apply trigonometric ratios to solve right-angled triangles.	Pupils can use these mathematical rules to solve multi-step equations, calculate geometric area and volume, evaluate percentage changes, and analyse statistical data alongside risk probabilities.	Pupils can use these mathematical rules to track and extend numerical sequences, solve real-world rate graphs, construct precise geometric frameworks, and write exact equations for linear paths.

		Term 1	Term 2	Term 3
H) 10 (Year	Big Idea	**Dimensionality** How do numbers, equations, and shapes scale across dimensions to reveal exact algebraic solutions and geometric constraints?	**Functions and Rate Models** How do we use algebraic formulas, linear graphs, and statistical data models to track changing rates, solve boundary limits, and quantify uncertainty?	**Convergence** How do algebraic operations, geometric translations, and continuous statistical data sets converge to reveal exact limits, physical trajectories, and structural certainties?
	Key knowledge and skills	• Indices • Surds • Quadratics • Simultaneous Equations • Algebraic Fractions • Pythagoras & Trigonometry • Similarity & Congruence • Transformations • Circle Theorems • Volume & Surface Area	• Proportion • Compound measures • Equations of lines • Areas & Rates of Change • Inequalities • Percentages • Grouped Data • Probability • Functions	• Consolidation & Therapy • Grouped Data • Algebraic Proof • Vectors • Graph transformations • Iteration
	End Point	Pupils can use these mathematical rules to simplify complex radical and fractional expressions, solve quadratic and simultaneous systems, apply geometric and circle theorems to deduce proofs, and calculate spatial metrics for 3D shapes.	Pupils can use these mathematical rules to form and interpret compound rates, evaluate rates of change from graphs, set up boundary inequalities, manipulate algebraic functions, and analyse grouped data alongside probability metrics.	Pupils can use these mathematical rules to analyse complex grouped data distributions, construct rigorous algebraic and geometric proofs, manipulate vector paths, execute graph transformations, and use iterative processes to approximate solutions.

		Term 1	Term 2	Term 3
11 Year	Big Idea	**Mathematical Synthesis and Mastery** How do we achieve fluency across all domains and strategically connect our knowledge to solve complex, multi-topic problems?	**The Cycle of Improvement** How do we evaluate our mathematical profile, target specific weaknesses, and build the resilience needed to achieve genuine mastery?	
	Key knowledge and skills	• Number • Algebra • Ratio, proportion & rates of change • Geometry & Measures • Probability • Statistics	• Evaluation of weaknesses • Prioritise and improve • Fluency • Problem Solving • Effective revision • Resilience	
	End Point	Pupils can fluently synthesise skills from all domains to solve complex, multi-step problems requiring mastery.	Pupils can confidently analyse their mathematical weaknesses, apply targeted strategies, and demonstrate resilience and fluency across all previously revised content.	