Year 5 Maths Scheme of Learning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 5	**Place Value** • Read, write and compare • numbers up to 1,000,000 • Rounding to the nearest 10, 100, 1000 • Roman numerals up to 1000	**Multiplication and Division A** • Factors, multiples, squares, primes, cubes, multiply and divide by powers of 10	**Multiplication and division B** • Formal written methods • Multiplication up to 4-digit x 2-digit • Division 4-digit by 1-digit including remainders • Solve problems with multiplication and division	**Decimals and percentages** • Order and compare decimals up to 3 decimal places • Round decimals • Understand percentages • Equivalent fractions, decimals and percentages	**Shape** • Measuring, calculating and drawing angles • Polygons • 3D shapes	**Negative numbers** • Understand negative numbers • Compare and order negative numbers • Find the difference between a positive and negative number
	Addition and Subtraction • Up to 4 digits using formal written methods • Solve problems with addition and subtraction	**Fractions A** • Compare and order fractions, improper fractions and mixed numbers, equivalent fractions, add and subtract fractions and mixed numbers	**Fractions B** • Multiply fractions, find fractions of amounts, find the whole	**Perimeter and Area** • Area and perimeter of rectangles and rectilinear shapes	**Position and Direction** • Coordinates • Translations • Symmetry • Reflection	**Converting Units** • Converting metric and common imperial units • Converting units of time
				Statistics • Draw and interpret line graphs, read and interpret tables and timetables	**Decimals** • Add and subtract decimals • Multiply and divide by 10, 100 and 1000	**Volume** • Understand and compare volume and capacity

Year 6 Maths Scheme of Learning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6	**Place Value** • Read, write and compare numbers up to 10,000,000 • Round to powers of 10 up to 1000000	**Fractions A** • Simplify, compare and order fractions • Add and subtract fractions including mixed numbers • Solve problems	**Ratio** • Solve problems with ratio • Compare ratio and fractions • Use scaling and scale factors to solve problems with shapes, recipes and proportion	**Converting Units*:** • Convert units • Calculations with metric units *Delivered during additional maths lesson	**Position and Direction *** • Read and plot coordinates in 4-quadrants • Reflection • Translation *Delivered during additional maths lesson	**Problem solving and investigating**
	Addition, Subtraction, Multiplication and Division • Formal Methods of addition and subtraction with integers • Understand and use factors, multiples, prime numbers, square and cube numbers • Multiplication up to 4-digit x 2-digit • Division up to 4-digit by 2-digit • Solve multi-step problems	**Fractions B** • Multiply fractions by integers and other fractions • Divide fractions by integers • Find a fraction of an amount	**Algebra** • Use function machines and inverse function machines • Form expressions • Substitution • Use a formula • Solve simple equations **Decimals** • Understand place value in decimals and round decimals • Multiply and divide by 10, 100 and 1000 • Four operations with decimals	**Fractions, decimals and percentages** • Understand and use equivalent fractions, decimals and percentages • Calculate percentage of an amount **Area, Perimeter and Volume** • Calculate perimeter • Calculate area - rectangles, triangles and parallelograms • Calculate volume of a cuboid **Statistics** • Calculate the mean • Interpret pie charts, line graphs and bar charts	**Shape** • Measure and draw angles - including to draw shapes accurately • Calculate angles - including in triangles, quadrilaterals and polygons • Identify the parts of a circle • Identify nets of 3D shapes	**Practical Maths** **Linear and Non-linear sequences** (KS3 content) • Describe and continue sequences • Recognise linear and non-linear sequences • Explain the term-to-term rule of a sequence • Explore special sequences - including triangular numbers and the Fibonacci sequence

Year 7 Maths Scheme of Learning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	**Algebraic notation** • Forming expressions • Inverses • Substitution • Generate a sequence	**Place Value** • Using place value to compare and order numbers - integers up to 1 billion and decimals to hundredths • Rounding to powers of ten and to significant figures • Introduce standard form	**Addition and subtraction** • Mental strategies, formal written methods and problem solving with integers and decimals	**Directed number** • Ordering • Four operations • Using a calculator • Substitution • Solving equations • Order of operations • Powers and roots	**Constructing, measuring and using geometric notation** • Labelling conventions • Draw and measure lines and angles • Geometric properties of 2D shapes • Construct triangles • Draw and interpret pie charts	**Developing number sense** • Reason from known facts • Estimation • Use factors • Prime factorisation* • Choose the most appropriate method for a calculation *Content added to this unit
	Equality and Equivalence • Understanding and using equivalence in algebraic expressions • Forming and solving simple equations • Like and unlike terms • Simplifying expressions	**Fraction, decimal and percentage equivalence** • FDP equivalence and representations • Simple pie charts	**Multiplication and division** • Mental strategies, formal written methods and problem solving with integers and decimals • Order of operations	**Addition and subtraction of fractions** • Calculations with integers, fractions and mixed numbers • Converting fluently between fractions, decimals and percentages to solve problems • Fractions in algebraic contexts	**Developing geometric reasoning** • Calculate missing angles at points, lines and in triangles and quadrilaterals • Investigate angles in parallel lines • Angle sum of polygons • Problem solving	**Set notation:** • Understanding set notation • Venn diagrams
		Averages and range • Working out median, mean and mode • Understanding range • Choosing an appropriate average	**Fractions and percentages of amounts** • Calculator and non-calculator methods			
			Perimeter and area • Perimeter and area of rectangles, parallelograms, triangles and trapezia			

Year 8 Maths Scheme of Learning

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 8	**Probability** • The probability scale • Sample spaces • Probability for single events	**The Cartesian plane** • Lines parallel to the axes • Explore gradient and y-intercept of straight line graphs • Explore negative gradients • Links to direct proportion and to sequences • Plot graphs of the form y = mx + c	**Algebraic techniques** • Form and simplify expressions • Substitution • Expand and factorise brackets • Form and solve equations inc. with brackets and unknowns on both sides • Formulae, expressions, equations and identities	**Fractions and percentages** • Equivalence of fractions, decimals and percentages • Fractions, decimals and percentages of amounts • Percentage increase and decrease • Calculator methods • Percentage change • Problem solving	**Angles in parallel lines and polygons** • Calculate missing angles at points, lines and in triangles and quadrilaterals • Investigate angles in parallel lines • Angle sum of polygons • Problem solving • Constructions • Properties of quadrilaterals	**Data Handling** • Questionnaires • Draw and interpret a range of charts and graphs • Identify misleading graphs
	Ratio and scale • Solve problems with ratio • Compare ratio and fractions • Divide in a given ratio • Investigate pi (π) as a ratio • Gradient as a ratio					
	Multiplicative change • Direct proportion in context • Direct proportion graphs • Scale factors • Map scales • Similar shapes	**Collect and represent data** • Draw and interpret scatter graphs • Types of data • Represent data in frequency tables • Two-way tables	**Sequences** • Generate sequences using term-to-term and position-to-term rules • Find n^{th} term	**Standard form** • Numbers in standard form • Calculate with numbers in standard form • Negative and fractional indices	**Area** • Area of rectangles, parallelograms, triangles and trapezia • Compound shapes • Area of circles • Problem solving	**Averages** • Understand and use median, mean and mode • Outliers • Understanding range • Choosing an appropriate average • Find the mean from grouped and ungrouped frequency tables
		Probability • Sample spaces for more than one event • Probability from tables and Venn diagrams	**Indices** • Simplify expressions using rules of indices			
	Multiply and divide Fractions • Calculations with integers, fractions and mixed numbers			**Number sense** • Rounding • Estimation • Calculations in context • Metric conversions	**Line symmetry and reflection** • Line symmetry • Reflect in vertical, horizontal and diagonal lines	