Maths Curriculum Overview 2024-2025

Building Cognitive Architecture – Coherent and Connected – Knowledge and Skill Based

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
School Value	Thankfulness	Justice	Endurance	Compassion	Koinonia	Trust
Year 5	**Number & Place Value**	**Number Facts & x/÷:**	**Geometry & Multiplication & Division**	**Multiplication & Division**	**Fractions**	**Number & Place Value & Geometry**
Key Concepts/ideas	Place Value Decimal fractions	Money Negative numbers	Short multiplication and division Area and scaling	Calculations with decimal fractions Factors, multiples, primes & volume	Add, subtract & multiply fractions Find fractions of amounts, equivalence and FD equivalence	Converting units Angles
Sequence of Learning	**Place Value** - Read, write and interpret numbers to 1,000,000. - Find more or less of a number (powers of 10). - Compare and order numbers to 1,000,000. - Round to the nearest 10, 100 and 1000. - Round within 1,000,000. - Roman numerals to 1,000. **Decimal Fractions** - Understand tenths and hundredths. - Round decimal numbers to the nearest integer & tenth. - Convert cm to m and vice versa. - Add and subtract decimal numbers.	**Money** - Know that a penny is hundredth of £1 - Add & subtract money. - Find change, when purchasing one or several items. **Negative Numbers** - Read & write negative numbers. - Use negative coordinates.	**Short multiplication and division** - Multiply & divide up to a 3-digit number by a 1-digit number. **Area and scaling** - Calculate the area of squares, rectangles & rectilinear shapes. - Compare & describe lengths. - Compare & describe measurements (mass/capacity/time). - Use division to solve comparison & change problems.	**Calculating with decimal fractions** - x/÷ integers & non-integers by 10/100/1000. - Convert units of measure. - x 1-digit numbers by fractions. **Factors, multiples, primes & volume** - Understand & calculate volume. - Explain & identify prime & cube numbers. - Find factors (and prime & common factors) of numbers.	**+ - x Fractions** - Add & subtract fractions. - Multiply fractions by whole numbers. - Multiply mixed numbers by an integer. **Find fractions of amounts, equivalence and FD equivalence** - Find equivalent decimals and fractions. - Find fractions of a whole. - Find the whole, when a part is known. - Order & compare fractions.	**Converting units** - Convert units of measure - Solve problems involving different units. - Convert between miles and kms. - Convert between units of time. **Angles** - Compare angles. - Understand acute, obtuse & reflex angles. - Estimate & measure angles.

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Key Opportunities	Maths drop in sessions		Maths drop in sessions Maths Challenge Club	Maths drop in sessions	Maths drop in sessions Maths Challenge Club	Maths drop in sessions Maths Challenge Club
Vocabulary / Conventions.						
Cross Curricular Thematics						
Substantive Knowledge *(Established Facts – Key Knowledge)*						
Disciplinary Knowledge *(Methods of Working)*	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.
Year 6	**The Number System**	**Number & Measurement**	**Number & Measurement**	**Number**	**Geometry**	**Investigations** **Y7 Readiness**
Concepts/Ideas	Place Value The Four Operations	Fractions A: Equivalence, Simplifying, +/- Fractions B: x/÷, Fractions of Amounts	Converting Units Ratio Algebra Area, Perimeter & Volume	Decimals FDP Statistics	Shape Position & Direction	Investigative Work Y7 Readiness: Place Value
Sequence of Learning	**Place Value** - Numbers to 10,000,000 - Powers of 10 - Compare, order & round any integers. - Negative numbers. **The Four Operations**	**Fractions A** - Find & simplify equivalent fractions. - Compare & order. - +/- fractions & mixed numbers. - Solve multi-step problems. **Fractions B**	**Ratio** - Use ratio language. - Use scale factors. - Solve ratio & proportion problems. **Algebra** - Solve function machines.	**Decimals** - Place value of integers & decimals. - Round decimals. - x/÷ by 10, 100 & 1000. - x/÷ decimals by integers. **FDP** - FD equivalents.	**Shape** - Measure, classify & calculate angels. - Understand vertically opposite angles. - Angles in triangles, quadrilaterals & polygons.	Investigative Work **Y7 Readiness: Place Value** - Understand the value of digits in decimals, measures and integers.

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	- +/- integers. - Understand factors, multiples, primes, squares & cubes. - Rules of divisibility. - Formal methods for x/÷. - Know & use the order of operations. - Solve multi-step problems.	- x fractions by integers & by fractions. - ÷ fractions by integers. - Find fractions of amounts. - Find the whole. **Converting Units** - Understand & use metric & imperial measures. - Convert miles & kms.	- Form expressions & equations. - Solve equations. **Area, Perimeter & Volume** - Understand area & perimeter. - Find area of triangles & parallelograms. - Volume of cuboids. -	- Understand % & equivalent FDP. - Order FDP - Find % of amounts **Statistics** - Read & interpret line graphs, pie charts & dual bar charts. - Draw pie charts. - Understand & find the mean.	- Understand the structure of circles. - Draw shapes & produce nets of 3D shapes. **Position & Direction** - Read & plot coordinates in four quadrants. - Solve problems using coordinates. - Translate & reflect shapes.	
Key Opportunities			Maths Challenge Club	UKMT Junior Maths Challenge	Maths Challenge Club	Maths Challenge Club
Vocabulary / Conventions.						
Cross Curricular Thematics						
Substantive Knowledge *(Established Facts – Key Knowledge)*						
Disciplinary Knowledge *(Methods of Working)*	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.
Year 7	**Place Value & Properties of Number**	**Operating on Number & Number**	**Geometry**	**Number & Operating on Number**	**Multiplicative Reasoning**	**Geometry**

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Key Concepts/Ideas	Place Value, estimation and rounding. Property of number: factors, multiples, squares, cubes & primes	Arithmetic procedures with integers & decimals Expressions & Equations	Plotting coordinates Perimeter & Area	Ordering & comparing Arithmetic procedures including fractions.	Understanding multiplicative relationships: fractions and ratio	Transformations
Sequence of Learning	**Place Value** - Understand the value of digits in decimals, measures and integers. **Property of Number** - Understand multiples, integer exponents, roots and use the unique prime factorisation of a number.	**Operating on Number** - Add, subtract, multiply & divide integers & decimals. - Use the laws of arithmetic to calculate efficiently. **Number** - Form and interpret expressions and equations. - Simplify algebraic expression. - Manipulate algebraic expressions.	**Plotting Coordinates** - Connect coordinates, equations and graphs. **Perimeter & Area** - Understand the concept of perimeter and area.	**Number** - Work with terminating decimals and their corresponding fractions. - Compare and order positive and negative integers, decimals and fractions. **Arithmetic procedures including fractions** - Add & subtract fractions. - Multiply & divide fractions -	**MR with fractions & ratio** - Understand the concept of multiplicative relationships - Understand that fractions as a multiplicative relationship. - Understand ratios as multiplicative relationship.	**Transformations** - Understand and use translations. - Understand and use rotations. - Understand and use reflections. - Understand and use enlargements.
Key Opportunities	Sparx Club Maths drop in sessions	Sparx Club Maths drop in sessions	Sparx Club Maths drop in sessions Maths Challenge Club	Sparx Club Maths drop in sessions UKMT Junior Maths Challenge	Sparx Club Maths drop in sessions Maths Challenge Club	Sparx Club Maths drop in sessions Maths Challenge Club
Vocabulary / Conventions.						
Cross Curricular Thematics						
Substantive Knowledge *(Established Facts – Key Knowledge)*						

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Disciplinary Knowledge *(Methods of Working)*	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.	Reasoning and problem-solving through justifications. Communicating ideas through effective discussions, questioning and critical thinking.
Year 8	**Number** **Sequences & Graphs**	**Sequences & Graphs** **Operating on Number**	**Multiplicative Reasoning**	**Statistics & Probability**	**Geometry**	**Geometry**
Key Concepts	Estimation and rounding Sequences Graphical representations	Graphical representations Solving linear equations	Understanding multiplicative relationships	Statistical representations, measures and analysis .	Perimeter, area and volume Geometrical properties: polygons	Geometrical properties: polygons Constructions
Sequence of Learning	**Estimation and rounding** - Round numbers to nearest decimal places and significant figures. - Estimate calculations. **Sequences** - Understand the features of a sequence. - Recognise and describe arithmetic sequences. **Graphical representations** - Connect coordinates, equations and graphs.	**Graphical representations** - Explore linear relationships. **Solving linear equations** - Find solutions to linear equations with one unknown. - Solve a linear equation with a single unknown on one side where obtaining the solution requires one or multiple steps - Solve efficiently linear equations with a single unknown involving brackets.	**Understanding multiplicative relationships** - Understand that multiplicative relationships can be represented in a number of ways. - Understand that percentages as a multiplicative relationship. - Understand proportionality	**Statistical representations, measures and analysis** - Understand and calculate accurately measures of central tendency and spread. - Construct accurately statistical representations. - Interpret reasonably statistical measures and representations. - Choose appropriately statistical measures and representations.	**Perimeter, area and volume** - Understand the concept of perimeter, area and volume and use them in a range of problem-solving situations. **Geometrical properties: polygons** - Understand and use angle properties.	**Geometrical properties: polygons** - Understand and use angle properties. **Constructions** - Use the properties of a circle in constructions - Use the properties of a rhombus in constructions.
Key Opportunities	Sparx Club	Sparx Club	Sparx Club	Sparx Club	Sparx Club	Sparx Club

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