Whole School Mathematics Overview

Intent:

Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. This high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Through the schemes of work the approach we will adopt is one of mathematics mastery. 'Do it, twist it, solve it' is the three-pronged mechanism for teaching mathematic concepts. There will be a mathematics station in every room so that pupils can select their own resources. Pupils will be taught the bar model and other visual approaches to solving calculations. We attend that pupils will become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Pupils will learn to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. Pupils will solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

CONTENT

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Counting, subtraction, addition within 30. Non-standard measures. Halves and quarters. Year names in the 21st century.	Counting, subtraction, addition within 40. Names of 2D and 3D shapes. Year names in the 20th century.	Counting, subtraction, addition within 50. Time. Comparing lengths	Repeated addition, Multiplication. Division arrays. Fractions – counting in halves and quarters.	Counting to 100. Half and quarter turns. Money. Mass/weight	2D shapes. 3 D shapes Capacity and volume.
Year 2	Steps of 2, 3 5 and 10 back from and to 100. Calculations with years	The properties of 2D and 3D shape.	Money in pounds and pence. 2, 5 and 10 times tables.	Fractions of quantities, shapes, objects.	Time, half past/to. Quarter past/to. Analogue time.	Calculations with mass/weight, capacity
Year 3	Comparing, ordering numbers to 1000. 2, 4, 5, 8, 10 times tables.	Perimeter	Analogue time. Estimating time. 3D nets	Tenths. Dividing masses and quantities by 10. Measure masses.	Angles of turn. Parallel and perpendicular lines. Draw and make 3D shapes	Bar charts, pictograms, tables. Venn and carroll diagrams.

Year 4	Round numbers to 10, 100, 1000. Roman Numerals to 100. Place value to 4 figure numbers.	Factor pairs. Addition and subtraction of 3 digits by 1 digit. Finding area by counting squares.	Convert between measures of time. Time in analogue and digital	Money problems. Area of rectilinear shapes. Compare and order numbers to 2 dp.	Acute and obtuse angles. Compare triangles and quadrilaterals. Symmetry. Coordinates in the 1st quadrant	Perimeter. Conversion between units. Time graphs and bar charts. Pictograms.
Year 5	Compare and order numbers to 1 million. Negative numbers in context. Rouning to the nearest 10, 100, 1000, 10000	Division and multiplication by 10, 100, 1000. Square numbers Cube numbers	Compare and order fractions Improper fractions + and – fractions	Read, write, order numbers to 3 DP. Calculate % as part of a whole.	Area of composite shapes. Angles on a straight line. Regular and irregular polygons.	Converting between metric units. Perimeter. Prime numbers. Volume and capacity.
Year 6	Compare and order numbers to 10 million; multiply and 4 digits by 2 digit numbers.	Multiply proper fractions. Simplify fractions. Fractions, decimals and percentage equivalents.	Multiply numbers to 2dp. Understand the value of numbers to 3dp. Convert metric to imperial measures.	Creating and using simple formulae.. Pie charts. Missing number problems.	Draw 2D shapes from dimensions and angles. Compare and classify shapes. Angles that meet at a point. Translation. Coordinates in 4 quadrants.	Profit, loss, VAT, budgeting.

Whole School Mathematics Overview						
Links to Curriculum						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

	Whole School Mathematics Overview					
	SKILLS					
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1						
Year 2						
Year 3						
Year 4						
Year 5						
Year 6						