Mathematics

Subject	Quote to lead subject	Intent	Implementation	Impact
Math	Mathematics is the language with which God created the universe - Galileo	For pupils to be inspired and confident mathematicians, learning through a spiral curriculum	Based on a concrete, iconic, symbolic approach and guided by the Abacus programme, maths is taught by pupils utilising tools that help support their knowledge. Daily and weekly reviews, fluency, are embedded.	Pupils become confident in the 'Four Pillar Areas' of Place Value, Number Facts, Models and Images, Doubling and Halving. Pupils share an enjoyment and interest in learning about mathematics.

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Mathematics	Wts	1.1 Count to / across, read and write to 100 1.2 Identify 'one more' and 'one less' 1.3 Use +, - and = symbols 1.4 Know number bonds to 20 1.5 Count in 1s, 2s, 5s and 10s 1.5 Add and subtract one-digit and two-digit numbers to 20, including zero 1.6 Use language to compare like 'more than', 'most', 'less than' 1.94 Use common vocabulary for comparison, e.g. heavier, taller, full, longest, shortest, quickest, slowest 1.93 Recognise and name common 2-d and 3-d shapes 1.92 Describe position & movement, including half and quarter turns 1.97 Solve one step problems using the above	
Mathematics	AT	1.91 Use language of days, weeks, months & years 1.95 Use ordering vocabulary e.g. before, after, next, yesterday, tomorrow 1.98 Solve one-step problems, including simple arrays for x and ÷	
Mathematics	GDS	1.7 Begin to measure length, capacity, weight 1.6 Recognise coins and notes 1.8 Use time vocabulary e.g. hour, minutes, seconds, o'clock, half past 1.9 Tell the time to the hour and half-hour 1.96 Recognise find, and use ½ and ¼ of an object, shape or quantity	
Mathematics	Wts	2.1 read and write numbers in numerals up to 100 2.2 partition a two-digit number into tens and ones to demonstrate an understanding of place value, though they may use structured resources1 to support them 2.3 add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus 2.4 recall at least four of the six2 number bonds for 10 and reason about associated facts 2.5 count in twos, fives and tens from 0 and use this to solve problems 2.92 know the value of different coins 2.93 name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties.	

Mathematics	AT	2.95 read scales in divisions of ones, twos, fives and tens 2.6 partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus 2.7 add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus 2.8 recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships 2.9 recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary 2.91 identify 1/4, 1/3 , 1/2 , 2/4, 3/4, of a number or shape, and know that all parts must be equal parts of the whole 2.94 use different coins to make the same amount 2.96 read the time on a clock to the nearest 15 minutes 2.97 name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry.	
Mathematics	GDS	1. read scales where not all numbers on the scale are given and estimate points in between 2. recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts 3. use reasoning about numbers and relationships to solve more complex problems and explain their thinking 4. solve unfamiliar word problems that involve more than one step 5. read the time on a clock to the nearest 5 minutes 6. describe similarities and differences of 2-D and 3-D shapes, using their properties.	
Mathematics		3.1 Represent and order numbers using different representations 3.2 Secure place value to 100 3.4 Use written column addition and subtraction 3.5 Mentally add and subtract units, tens or hundreds to numbers of up to 3 digits 3.6 Learn 3, 4 and 8x tables 3.7 Add/subtract using money in context 3.8 Tell the time from 12 hr and 24 hr clocks to the nearest 5 min (inc. no.13)	Autumn

		3.93 Recognise, find and write fractions 3.99 Solve number problems, including multiplication and simple division and missing number problems 3.991 Use commutativity to help calculations 3.993 Calculate using simple time problems 3.996 Solve one and two step problems using the above	
Mathematics		3.3 Compare, read, write and order numbers to 1000 3.9 Identify and use right angles 3.92 Draw 2-d / Make 3-d shapes 3.94 Recognise some equivalent fractions 3.95 Add/subtract fractions up to 1 3.96 Order fractions with common denominators 3.97 Know the number of seconds in a minute, days in a month, year and leap year 3.98 Measure simple perimeter * Use Roman numerals up to XII;	Spring
Mathematics		3.91 Interpret bar charts and pictogram 3.992 Use estimation to check answers 3.994 Identify horizontal, vertical, perpendicular and parallel lines 3.995 Use and count in tenths, forwards and backwards 3.97 Measure and calculate with metric measures	Summer
Mathematics	GDS	Working at greater depth across most areas of the curriculum, using and applying Mathematical knowledge and Thinking Mathematically	
Mathematics		4.1 Know place value to 1000 (Th,H,T,U) 4.2 Column addition and subtraction up to 4 digits 4.3 Know all tables up to 12 x 12 (x7, x11, x12 in Spring) 4.5 Round numbers to nearest 10, 100 or 1000 4.7 Multiply and divide mentally, including x/÷1 and x0 and x three numbers 4.6 Use standard short multiplication for 2 digits x 1digit 4.8 Estimate and calculate measures including converting units 4.9 Solve one and two step problems using the above	Autumn

		4.999 Count in multiples of 6,7,9,25,1000	
Mathematics		4.3 Know all tables up to12 (x7, x11, x12 in Spring) 4.8 Order and compare numbers beyond 1000 4.9 Compare 2-d shapes, including quadrilaterals and triangles 4.91 Compare, calculate and estimate money in £ and p 4.93 Read, write and convert time between analogue and digital times 4.94 Identify acute, obtuse and right angles 4.95 Recognise common equivalents 4.96 Calculate rectangle perimeters 4.98 Identify and complete symmetry in 2-d shapes 4.992 Recognise and count forwards and back in tenths and hundredths 4.993 Recognise and write decimal equivalents of tenths and hundredths, ¼ ½ ¾ 4.997 Round decimals to whole numbers 4.9992 Use factor pairs and commutativity for mental multiplication 4.9993 Use estimation and inverse to check operations	Spring
Mathematics		4.3 Find area by counting squares 4.92 Convert hours to minutes, minutes to seconds, years to months, weeks to days 4.99 Use first quadrant coordinates to plot shapes 4.991 Introduce simple translations 4.996 Compare, add and subtract fractions with common denominators 4.998 ÷ a one or two digit number by 10 or 100, identifying place value of digits 4.994 Use bar charts, pictograms and line graphs 4.9991 Count backwards to negative numbers * Use Roman numerals to 100 (C) and how 0 came to be	Summer
Mathematics	**GDS**	Working at greater depth across most areas of the curriculum, using and applying Mathematical knowledge and Thinking Mathematically	
Mathematics		5.1 Use standard written methods for all four operations 5.2 + and - up to 4 digits, multiply 4 digits by 2 digits 5.3 Confidently add & subtract mentally with large numbers 5.6 Convert between different units metric and imperial and time	Autumn

		5.8 Measure and identify angles 5.91 Compare and order fractions with denominators of the same multiple 5.92 Identify equivalent fractions 5.96 Write decimals as fractions, including fifths, tenths and 25ths 5.99 Use vocabulary of and identify prime, factor and multiple 5.992 Secure place value to 1 000 000, including counting forwards and back	
Mathematics		5.5 Use long multiplication for 2-digit numbers, short multiplication for 4 d ÷ 1 d 5.4 X and ÷ decimals by 10, 100, 1000 5.95 Interpret tables & line graphs 5.991 Use square and cube numbers 5.994 Understand regular polygons and find missing lengths and angles 5.995 Use negative whole numbers in context, counting through 0 5.997 Add & subtract fractions with common denominators and with mixed numbers 5.999 Multiply fractions and mixed numbers by units 5.9991 Order & round decimal numbers to 2 decimal places and 3 decimal places	Spring
Mathematics		5.7 Identify 3-d shapes 5.9 Reflect & translate shapes 5.93 Use thousandths 5.94 Link percentages to fractions and decimals, including fifths, tenths and 25ths 5.97 Calculate perimeter of composite shapes & area of rectangles 5.98 Calculate area of rectangles 5.993 Estimate volume & capacity 5.996 Round numbers up to 1000 000and use this to check answers 5.998 + and - fractions with the same denominator/multiple of denominator 5.9992 Solve multi-step problems for the above *Read Roman numerals to 1000 (M) and years written in Roman numerals	Summer
Mathematics	GDS	Working at greater depth across most areas of the curriculum, using and applying Mathematical knowledge and Thinking Mathematically	
Mathematics		6.1 All written methods, including long division and x/÷ up to 4d by 2d using long multiplication, and x/÷decimal numbers	Autumn

		6.2 X and ÷ numbers by 10, 100 and 1000 with answers to 3dp 6.3 Know that shapes of the same area can have different perimeters 6.4 Calculate area of triangles / parallelograms 6.5 Use area & volume formulae including for cubes and cuboids 6.6 Classify shapes by properties and use scale factors 6.7 Know and use angle rules to find missing angles 6.8 Use negative numbers in context, crossing 0 in calculations 6.9 Use order of operations 6.91 Express missing number problems algebraically 6.93 Use estimation to check answers 6.95 Compare and simplify fractions 6.96 Use equivalents to add fractions 6.97 Solve problems using decimals and percentages and equivalents for fractions 6.9994 Solve multi-step problems for the above and previous year 3-5 work	
Mathematics		6.1 All written methods, including long division and x/÷ up to 4d by 2d using long multiplication, and x/÷decimal numbers (long division) 6.92 Identify factors, multiples & primes 6.95 Compare and simplify fractions (simplifying) 6.98 Introduce ratio and proportion 6.99 Use pie charts and line graph 6.991 Calculate mean averages 6.992 Multiply simple fractions 6.993 Divide fractions by whole numbers 6.994 Draw 2d shapes given dimensions and angles 6.995 Name and draw parts of circles (radius, diameter, circumference) 6.996 Translate and reflect shapes, using all four quadrants 6.997 Confidently use a range of measures & conversions up to 3dp 6.998 Secure place value and rounding to 10,000,000, including negative numbers and decimals to 3dp 6.999 Round any whole number to a required degree of accuracy	Spring

		6.9991 Calculate mentally using efficient strategies e.g. simplifying the calculation	
Mathematics		6.92 Classify shapes by properties and use scale factors (Scale Factors) 6.9992 Generate and describe linear number sequences 6.9993 Solve problems using the relative sizes of different quantities with missing numbers	Summer
Mathematics	GDS	Working at greater depth across most areas of the curriculum, using and applying Mathematical knowledge and Thinking Mathematically	