KS1 Maths Curriculum Map

	YEAR 1	YEAR 2
Autumn	• To read and write numbers from 1 to 20 in numerals and words. • To count, read and write numbers to 100 in numerals. • *To practise ordinal numbers and solve simple concrete problems.* • To add and subtract one-digit and two-digit numbers to 20, including zero. • To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. • To identify one more and one less than a given number. • To recognise, *handle* and name common 2D and 3D shapes *in different orientations/sizes and relate everyday objects fluently.* • *To recognise that rectangles, triangles, cuboids and pyramids are not always similar to each other.* • To measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time. • To sequence events in chronological order using language. • To recognise and use language relating to dates, including days of the week, weeks, months and years. • To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. • To recognise and know the value of different denominations of coins and notes.	• To read and write numbers to at least 100 in numerals and in words. • To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. • To compare and order numbers from 0 up to 100; use <, > and = signs. • To recognise the place value of each digit in a two-digit number (tens, ones) to *become fluent and apply their knowledge of numbers to reason with, discuss and solve problems.* • *To begin to understand zero as a place holder.* • To use place value and number facts to solve *related* problems *to develop fluency.* • To 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. • To read, tell and write the time to five minutes, including quarter past/to the hour/half hour and draw the hands on a clock face to show these times. • *To become fluent in telling the time on analogue clocks and recording it.* • To know the number of minutes in an hour and the number of hours in a day. • To compare and sequence intervals of time. • *To become fluent in counting and recognising coins.* • To recognise and use symbols for pounds (£) and pence (p) *accurately, recording pounds and pence separately*; combine amounts to make a particular value. • To find and use different combinations of coins that equal the same amounts of money. • To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. • *Pupils read and write names for shapes that are appropriate for their word reading and spelling.* • To *handle*, identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. • To *handle*, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. ○ To identify 2D shapes on the surface of 3D shapes. • To *identify*, compare and sort common 2D and 3D shapes and everyday objects *on the basis of their properties and use vocabulary precisely.* • *Pupils draw lines and shapes using a straight edge.*

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Spring	• To read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. • To *discuss* and solve one-step problems *(in familiar practical contexts)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. *Problems include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enable to use these operations flexibly.* • *To make connections between arrays, number patterns, and counting in twos, fives and tens.* • *Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities.* • *To count in multiples of twos, fives and tens from different multiples to develop their recognition of patterns in the number system, including varied and frequent practice through increasingly complex questions.* • *To recognise and create repeating patterns with objects and with shapes.* • To compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time.	• To recall and use addition and subtraction facts to 20 *to become fluent in deriving associative facts (e.g. 10 – 7 = 3, 100 – 70 = 30)* and derive and use related facts up to 100. • *To extend the language of addition and subtraction to include sum and difference.* • To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • To add and subtract numbers using an efficient strategy, explaining their method verbally using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, add three one-digit numbers. • To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. • To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. • *To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.* • *To begin to relate multiplication and division facts to fractions and measures (e.g., 40 ÷ 2 = 20, 20 is a half of 40).* • *To count in fractions up to 10, starting from any number and using the* $\frac{1}{2}$ *and* $\frac{2}{4}$ *equivalence on the number line.* • To recognise, find, name, identify and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of a length, number, shape, set of objects or quantity and know that all parts must be equal parts of the whole. • *To connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes. They meet* $\frac{3}{4}$ *as the first example of a non-unit fraction.* • To write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence $\frac{2}{4}$ and $\frac{1}{2}$. • To choose and use appropriate standard units *with increasing accuracy using their knowledge of the number system* to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. • *To use the appropriate language and record using standard abbreviations.* • To compare and order lengths, mass, volume/capacity and record the results using >, < and =. • To order and arrange combinations of mathematical objects and *shapes, including those in different orientations,* in patterns and sequences.

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Summer	• To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at year 1. • To *memorise*, represent and use number bonds and related subtraction facts within 20. • *To realise the effect of adding or subtracting zero.* • To solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. • To recognise, find and name a half as one of two equal parts of an object, shape or quantity *by solving problems.* • To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *by solving problems.* • *To connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.* • *To move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units using measuring tools, such as a ruler, weighing scales and containers.* • To describe position, direction and movement, including whole, half, quarter and three-quarter turns *in both directions and connect clockwise with the movement on a clock face.* • *To use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside.*	• To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1. • *To begin to record addition and subtraction in columns to support place value and prepare for formal written methods with larger numbers.* • To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods. • To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot, *to develop multiplicative reasoning.* • *To use a variety of language to describe multiplication and division.* • To count from 0 in multiples of 4, 8, 50 and 100. • To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers and use them to solve simple problems, demonstrating an understanding of commutativity as necessary. • *To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.* • To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. • *To connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face.* • *To compare measures including simple multiples such as 'half as high'; 'twice as wide'.* • To use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise). • *To record, interpret, collate, organise and compare information.* • To interpret and construct simple pictograms, tally charts, block diagrams and simple tables *(e.g. many-to-one correspondence in pictograms with simple ratios 2, 5, 10 scales).* • To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. • To ask and answer questions about totalling and comparing categorical data.