

By the End of Year 1

Number				Measurement	Geometry		Statistics
Place Value	Addition and Subtraction	Multiplication and Division	Fractions		Properties of Shape	Position and Direction	
count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs	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	recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity	compare, describe and solve practical problems for: lengths/heights, mass/weight, capacity/volume, time	recognise and name common 2-D and 3-D shapes, including: 2D shapes (rectangles, circles, triangles) 3D shapes (cuboids, pyramids, spheres)	describe position, direction and movement, including whole, half, quarter and three-quarter turns	
count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s	represent and use number bonds and related subtraction facts within 20	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.	recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity	measure and begin to record the following: length/height, mass/weight, capacity/volume, time	handle common 2-D and 3-D shapes, naming these and related everyday objects fluently	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	
given a number, identify 1 more and 1 less	add and subtract one-digit and two-digit numbers to 20, including 0	make connections between arrays, number patterns, and counting in 2s, 5s and 10s.	Pupils are taught half and quarter as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. For example, they could recognise and find half a length, quantity, set of objects	recognise and know the value of different denominations of coins and notes, sequence events in chronological order	recognise these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other.	make whole, half, quarter and three-quarter turns in both directions and connect turning clockwise with movement on a clock face	
identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$		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.	recognise and use language relating to dates, including days of the week, weeks, months and years			
read and write numbers from 1 to 20 in numerals and words	memorise and reason with number bonds to 10 and 20 in several forms (for example, $9 + 7 = 16$; $16 - 7 = 9$; $7 = 16 - 9$). They should realise the effect of adding or subtracting 0. This establishes addition and subtraction as			tell the time to the hour and half past the hour and draw the hands on a clock face to show these times			
practise counting (1, 2, 3...), ordering (for example, first, second, third...) and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent.	combine and increase numbers, counting forwards and backwards.			pairs of terms: mass and weight, volume and capacity, are used interchangeably at this stage.			
begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations.	discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more			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			
practise counting as reciting numbers and counting as enumerating objects, and counting in 2s, 5s and 10s from different multiples to develop their recognition of patterns in the number system (for example, odd and even				order to become familiar with standard measures, pupils begin to use measuring tools such as a ruler, weighing scales and containers.			
recognise and create repeating patterns with objects and with shapes.				use the language of time, including telling the time throughout the day, first using o'clock and then half past.			

By the End of Year 2

Number				Measurement	Geometry		Statistics
Place Value	Addition and Subtraction	Multiplication and Division	Fractions		Properties of Shape	Position and Direction	
count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward	solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ($^{\circ}$ C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales,	identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line	order and arrange combinations of mathematical objects in patterns and sequences	interpret and construct simple pictograms, tally charts, block diagrams and tables
recognise the place value of each digit in a two-digit number (10s, 1s)	solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs	write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$	identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	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	ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
identify, represent and estimate numbers using different representations, including the number line	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot	use fractions as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities.	recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	work with patterns of shapes, including those in different orientations.	ask-and-answer questions about totalling and comparing categorical data
compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and 1s, a two-digit number and 10s, 2 two-digit numbers, adding 3 one-digit numbers	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	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	find different combinations of coins that equal the same amounts of money	compare and sort common 2-D and 3-D shapes and everyday objects	use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (for example, pupils themselves moving in turns, giving instructions to other pupils to do so, and	record, interpret, collate, organise and compare information (for example, using many-to-one correspondence in pictograms with simple ratios 2, 5, 10).
read and write numbers to at least 100 in numerals and in words	show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot	use a variety of language to describe multiplication and division	should count in fractions up to 10, starting from any number and using the and equivalence on the number line (for example, $1\frac{1}{4}$, $1\frac{2}{4}$ (or $1\frac{1}{2}$), $1\frac{3}{4}$, 2). This reinforces the concept of fractions	solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	handle and name a wide variety of common 2-D and 3-D shapes including: quadrilaterals and polygons and cuboids, prisms and cones, and identify the properties of each shape (for example, number of sides, number of faces).		
use place value and number facts to solve problems	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	Pupils are introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other		compare and sequence intervals of time	identify, compare and sort shapes on the basis of their properties and use vocabulary precisely, such as sides, edges, vertices and faces.		
Using materials and a range of representations, pupils practise counting, reading, writing and comparing numbers to at least 100 and solving a variety of related problems to develop fluency	extend their understanding of the language of addition and subtraction to include sum and difference.	connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face.		tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times	read and write names for shapes that are appropriate for their word reading and spelling.		
count in multiples of 3 to support their later understanding of a third.	Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using $3 + 7 = 10$; $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $30 + 70 = 100$; $100 - 70 = 30$ and $70 = 100 - 30$	begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations		know the number of minutes in an hour and the number of hours in a day	draw lines and shapes using a straight edge.		
As they become more confident with numbers up to 100, pupils are introduced to larger numbers to develop further their recognition of patterns within the number system and represent them in different ways, including	check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (for example, $5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5$). This establishes commutativity and associativity of	work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition		use standard units of measurement with increasing accuracy, using their knowledge of the number system. They use the appropriate language and record using standard abbreviations.			
Pupils should partition numbers in different ways (for example, $23 = 20 + 3$ and $23 = 10 + 13$) to support subtraction	Recording addition and subtraction in columns supports place value and prepares for formal written methods with larger numbers	begin to relate these to fractions and measures (for example, $40 \div 2 = 20$, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, $4 \times 5 = 20$ and $20 \div 5 = 4$).		Comparing measures includes simple multiples such as 'half as high'; 'twice as wide'.			
become fluent and apply their knowledge of numbers to reason with, discuss and solve problems that emphasise the value of each digit in two-digit numbers. They begin to understand 0 as a place holder.				become fluent in telling the time on analogue clocks and recording it.			
				become fluent in counting and recognising coins. They read and say amounts of money confidently and use the symbols £ and p accurately, recording pounds and pence separately.			