



Batheaston Church School

"That they may have life, life in all its fullness"

Knowledge and Skills Progression for Maths

Strand	EYFS	Year 1	Year 2	Year 3
Number and place value.	To count objects, actions and sounds.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number given a number, identify one more and one less.	Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
	ELG To be able to subitise numbers up to 5 (recognise quantities without counting).		Compare and order numbers from 0 up to 100; use <, > and = signs	Compare and order numbers up to 1000
	Link the numeral with its cardinal number value	Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens	Recognise the place value of each digit in a two-digit number (10s, 1s)	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
	To be able to count beyond ten. ELG Verbally count beyond 20, recognising the pattern of the counting system.	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.	Identify, represent and estimate numbers using different representations, including the number line.	Identify, represent and estimate numbers using different representations



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	To be able to compare numbers using more than, less than and equal	Read and write numbers from 1 to 20 in numerals and words	Read and write numbers to at least 100 in numerals and in words.	Read and write numbers up to 1000 in numerals and in words
	Understand the one more/one less than relationship between consecutive numbers.		Use place value and number facts to solve problems.	Solve number problems and practical problems involving these ideas
Addition and subtraction	Explore the composition of numbers to 10. ELG Have a deeper understanding of the number 10, including composition of each number.	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	Solve problems with addition and subtraction: Using concrete objects and pictorial representations, including those involving numbers, quantities and measures	Solve problems, including: <ul style="list-style-type: none"> • Missing number problems • Using number facts • Place value • More complex addition and subtraction.
	ELG Automatically recall number bonds for numbers 0–5 and some to 10.		Applying their increasing knowledge of mental and written methods.	Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction



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		Represent and use number bonds and related subtraction facts within 20.	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.	
	ELG Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Add and subtract one-digit and two-digit numbers to 20, including zero	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> • A two-digit number and ones • A two-digit number and tens • Two two-digit numbers • Adding three one-digit numbers. 	Add and subtract numbers mentally, including: <ul style="list-style-type: none"> • A three-digit number and ones • A three-digit number and tens • A three-digit number and hundreds
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Estimate the answer to a calculation and use inverse operations to check answers
Multiplication and division	ELG Explore and represent	Solve one-step problems involving multiplication and division, by calculating the answer using	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables



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	patterns within numbers up to 10, including evens, odds, double facts and how quantities can be distributed equally.	concrete objects, pictorial representations and arrays with the support of the teacher.	recognising odd and even numbers.	
			Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods
			Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	
			Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects
Fractions, Decimals, percentages		Recognise, find and name a half as one of two equal parts of an object, shape or quantity.	Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity.	Recognise, find and write fractions of a discrete set of objects: unit fractions and non unit fractions with small denominators.
		Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.		



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			Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
				Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
				Recognise and show, using diagrams, equivalent fractions with small denominators.
				Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]
				Compare and order unit fractions, and fractions with the same denominators
				Solve problems that involve all of the above.
Algebra				
Ratio & Proportion				
Geometry, Properties of Shape	Select, rotate and manipulate shapes to develop spatial reasoning skills.	Recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> 2-D shapes [for example, rectangles (including 	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	Measure the perimeter of simple 2-D shapes



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		squares), circles and triangles]	Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	Recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
	Continue, copy and create repeating patterns.		Compare and sort common 2-D and 3-D shapes and everyday objects.	
				Recognise angles as a property of shape or a description of a turn.
Position, direction movement		Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	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).	Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.



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			Order and arrange combinations of mathematical objects in patterns and sequences.	
Measure:	Compare length, weight and capacity.	Lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]	Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
		Mass/weight [for example, heavy/light, heavier than, lighter than]	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, thermometers and measuring vessels	
		Capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]		
		Time [for example, quicker, slower, earlier, later]	Know the number of minutes in an hour and the number of hours in a day.	Know the number of seconds in a minute and the number of days in each month, year and leap year.
		Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	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.	Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.
		Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]	Compare and sequence intervals of time	Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock,



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				a.m./p.m., morning, afternoon, noon and midnight
		Recognise and use language relating to dates, including days of the week, weeks, months and years.		Compare durations of events [for example to calculate the time taken by particular events or tasks].
		Recognise and know the value of different denominations of coins and notes.	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	Add and subtract amounts of money to give change, using both £ and p in practical contexts.
			Find different combinations of coins that equal the same amounts of money.	
	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.			
Statistics			Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Interpret and present data using bar charts, pictograms and tables.
			Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.
			Ask and answer questions about totalling and comparing categorical data	



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