|  | EYFS <br> (3 to 4 years to ELGs) | KS1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |
| $\begin{aligned} & 3 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \tilde{n} \cdot \\ & 0 \\ & < \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | Use a wider range of vocabulary. <br> Understand 'why' questions, like: "why do you think the caterpillar is so fat?" <br> Learn new vocabulary. <br> Use new vocabulary throughout the day. <br> Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. | To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at year 1. | To read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1. | To read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. |

Whole-School Mathematics Progression Map

| $\begin{aligned} & z \\ & \frac{z}{3} \\ & \frac{0}{0} \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | EYFS <br> (3 to 4 years to $E L G s$ ) | KS 1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |

## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map

Recite numbers past 5 Say one number name for each item in order: 1, 2, 3, 4, 5.
Know that the last number
reached when counting a small set of objects tells you how many there are in total ('cardinal principle').

Count objects, actions and sounds.
Count beyond ten.

Verbally count beyond 20, recognising the pattern of the counting system

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 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 count in steps of 2,3 , and 5 from 0 , and in tens from any number, forward and backward.

To continue to count in ones, tens and hundreds, so that pupils become fluent in the order and place value of numbers to 1000.

To count from 0 in multiples of $4,8,50$ and 100 .


## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map





## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map


|  | EYFS <br> (3 to 4 years to ELGs) | KS 1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |
|  | Automatically recall number bonds for numbers 0-5 and some to 10 . <br> Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10 , including double facts. | To add and subtract one-digit and twodigit numbers to 20 , including zero. <br> To realise the effect of adding or subtracting zero. | To extend the language of addition and subtraction to include sum and difference. <br> To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. <br> 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 add and subtract numbers mentally, including: two-digit numbers, where the answers could exceed 100, a three-digit number and ones, a three-digit number and tens and a threedigit number and hundreds. |


|  |  | To memorise, represent and use number <br> bonds and related subtraction facts <br> within 20. | To recall all number bonds to and <br> within 10 and use these to reason with <br> and calculate bonds to and within 20, <br> recognising other associated additive <br> relationships. |
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|  |  |  | To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | To estimate the answer to a calculation and use inverse operations to check answers. |
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|  | Explore and represent patterns within numbers up to 10 , including evens and odds, double facts and how quantities can be distributed evenly. | 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 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. |  |

Whole-School Mathematics Progression Map

|  | EYFS <br> (3 to 4 years to ELGs) | KS 1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  |  |  | To begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations. <br> To begin to relate multiplication and division facts to fractions and measures (e.g., $40 \div 2=20,20$ is a half of 40 ). <br> 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 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 efficient mental methods, for example, using commutativity and associativity, and progressing to formal reliable written methods of short multiplication and division. |
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## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map


To 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 efficient mental methods, for example, using commutativity and associativity, and progressing to formal reliable written methods of short multiplication and division. (included in mental calculation section)

|  |  | 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 solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. | To solve simple problems in contexts, deciding which of the four operations to use and why. These include missing number problems, involving <br> multiplication and division, including measuring and positive integer scaling problems and correspondence problems in which n objects are connected to $m$ objects. |
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|  | EYFS <br> (3 to 4 years to ELGs) | KS1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |
|  |  |  | 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 count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing onedigit numbers or quantities by ten. |

## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map


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 understand the relation between unit fractions as operators (fractions of), and division by integers.

To recognise, understand and use fractions as numbers: unit fractions and nonunit fractions with small denominators as numbers on the number line (going beyond 0-1 and relating this to measure), and deduce relations between them, such as size and
equivalence.
To recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators


| Comparing and Ordering Decimals |  |  |  |  |
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|  |  |  |  | To solve problems that involve all of the above. |

Whole-School Mathematics Progression Map


Whole-School Mathematics Progression Map

|  | EYFS <br> (3 to 4 years to ELGs) | KS1 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance Teacher Assessment Framework |  | KS2 <br> Statutory Curriculum Guidance Non-Statutory Curriculum Guidance |
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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |

## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map

|  | Make comparisons between objects relating to size, length, weight and capacity. <br> Compare length, weight and capacity. | To compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time. <br> To measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time. <br> 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 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 ( $\mathrm{m} / \mathrm{cm}$ ); mass ( $\mathrm{kg} / \mathrm{g}$ ); temperature $\left({ }^{\circ} \mathrm{C}\right)$; capacity (litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. <br> To use the appropriate language and record using standard abbreviations. <br> To compare and order lengths, mass, volume/capacity and record the results using $>$, < and $=$. <br> To compare measures including simple multiples such as 'half as high'; 'twice as wide' | To measure using the appropriate tools and units, compare (including simple scaling by integers) add and subtract using mixed units: lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ ); mass (kg/g); volume/capacity (l/ml). |
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## Banks Lane Infant and Nursery School

Whole-School Mathematics Progression Map


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 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 tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks

To begin to use digital 12 hour clocks and record their times in preparation for using digital 24-hour clocks in year 4.

To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and

## hours

To use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and
midnight.
To know the number of seconds in a minute and the number of days in each month, year and leap year.

To compare durations of events

| $\begin{aligned} & \mathbf{3} \\ & 0 \\ & \\ & \text { 0 } \end{aligned}$ |  | To recognise and know the value of different denominations of coins and notes. | To become fluent in counting and recognising coins. <br> To recognise and use symbols for pounds ( $£$ ) and pence (p) accurately, recording pounds and pence separately; combine amounts to make a particular value. <br> To find and use different combinations of coins that equal the same amounts of money. <br> To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. | To become fluent in recognising the value of coins. <br> To add and subtract manageable amounts of money, including mixed units, to give change, using both $£$ and $p$ in practical contexts. |
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|  |  |  |  | To measure the perimeter of simple 2D shapes. |

Whole-School Mathematics Progression Map

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|  | Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'. <br> Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. <br> Combine shapes to make new ones - an arch, a bigger triangle, etc. <br> Select, rotate and manipulate shapes in order to develop spatial reasoning skills. | To recognise, handle and name common 2D and 3D shapes in different orientations/sizes and relate everyday objects fluently. <br> To recognise that rectangles, triangles, cuboids and pyramids are not always similar to each other. | Pupils read and write names for shapes <br> that are appropriate for their word reading and spelling. <br> To handle, identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. <br> To handle, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. <br> To identify 2D shapes on the surface of 3D shapes. | To describe the properties of 2D and <br> $3 D$ shapes using accurate language. <br> To extend knowledge of the properties of shapes is extended at this stage to symmetrical and nonsymmetrical polygon and polyhedron. <br> To recognise 3D shapes in different orientations and describe them. |
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|  | Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can. |  | 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. | To connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. <br> To identify horizontal and vertical lines and pairs of perpendicular and parallel lines. <br> To draw 2D shapes and make 3D shapes using modelling materials. |
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| $\begin{gathered} \text { D } \\ \text { だ } \\ \text { مٌ } \end{gathered}$ |  |  | To recognise angles as a property of shape or a description of a turn. <br> To identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn <br> To identify whether angles are greater than or less than a right angle. |  |


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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |
|  | Understand position through words alone - for example, <br> "The bag is under the table," with no pointing. <br> Describe a familiar route. <br> Discuss routes and locations, using words like 'in front of' and 'behind'. <br> Draw information from a simple map. | To describe position, direction and movement, including whole, half, quarter and threequarter turns in both directions and connect clockwise with the movement on a clock face. <br> 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 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). |  |



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|  | 3 and 4 year olds Reception <br> Early Learning Goals | Year 1 | Year 2 | Year 3 |
|  | Experiment with their own symbols and marks, as well as numerals. |  | To record, interpret, collate, organise and compare information. <br> 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). <br> To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. <br> To ask and answer questions about totalling and comparing categorical data. | To interpret and present data using bar charts, pictograms and tables and use simple scales with increasing accuracy. |
|  |  |  | To solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables. |  |



