| | Town Lane Infant School – **Progression within Mathematics** |
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| Concept | EYFS<br>Birth to 3<br>3 and 4 Year Olds<br>Reception<br>(Statements from Maths Progression Skills/knowledge for Early Years 2021 document (J.Bailey) | Year 1 | Year 2 |
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| Place value | I am beginning to be aware of numbers.<br>I am interested in counting words and can be a number chanter.<br>I am beginning to count in sequence and may use my finger to tap or point to count out objects.<br><br>Subitizing<br>I have a good number sense of 1 and two items.<br>I can recognise and make collections of 1 to 3 objects through matching activities. *I may not be able to verbalise the words 1 to 3 yet.*<br><br>Comparing<br>I am beginning to differentiate between amounts.<br>I can understand and use the words more or lots. | **1NPV-1 Count to and across 100, forwards and backwards, from 0, 1 or any given number**<br><br>Read and write numbers from 1 to 20 in numerals and words<br><br>Count in multiples of 2, 5 and 10<br><br>Count, read and write numbers to 100 in numerals<br><br>Identify one more and one less than a given number | Count in steps of 2's, 3's and 5's from 0 and in 10's from any number – forwards and backwards<br><br>**2NPV - 1 Recognise the value of each digit in two-digit numbers, and compose and decompose using standard and non-standard partitioning.**<br><br>Identify, represent and estimate numbers using different concrete and pictorial representations<br><br>Compare and order numbers from 0 to 100; using equality symbols<br><br>**2NPV–2 Reason about the location of any two-digit number in the linear number system,** |

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| | **Counting**<br>**I am beginning to understand one to one correspondence whilst counting objects in a line or moving objects.**<br>**I can use counting as part of my everyday play.**<br>**I can count out to 5 verbally and may be able to count out 5 objects.**<br>**I can give you the correct number of items to 3/5 if you ask me.**<br><br>**Cardinality**<br>**I can count out up to 5 fingers by counting them one by one.**<br>**I understand that the last number counted is the total amount in the group.**<br>**I am beginning to notice numerals in my environment.**<br>**I am beginning to link numerals to a specific amount with objects and during interactive games.**<br>**I can recognise my birthday number.**<br>**I can recognise numbers up to 5.**<br>**I can order dotted cards or stones to 5 in the correct sequence.**<br>**I can represent amounts using symbols and marks.**<br>**I can represent amounts using numerals.**<br><br>**Subitizing**<br>**I have a number sense of 1 to 3 objects or an amount in a picture/on a card and can verbalise this.**<br><br>**Comparison** | Can demonstrate the value of 2 digit numbers using apparatus eg Dienes, Numicon<br><br>**1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using <>and =**<br><br><br>Use language of: equal to, more than, less than (fewer), most, least | **including identifying the previous and next multiple of 10.**<br><br><br>Read and write numbers to at least 100 in numerals and words<br><br>Solve problems including place value and number facts |

I can visually estimate who has more or less or the same and may subitise. Later on, I may count to compare.
I can separate a group of items in different ways and realise the total is still the same. I can do this to 3 and then to 5.

Counting
I realise that anything can be counted
I can recognise numbers up to 10.
I can sequence 0-10 in order.
I can count backwards from 10 to 0 verbally or when moving objects from a group.
I can count on from any given number.
I can tell you what number comes after or before a given number.
I can see errors in other's counting or self-correct when counting.
I can count in 10's and use patterns to count.

Cardinality
I can order the numerals to 5 in the correct sequence.
I can order dotted cards, stones etc or numerals up to 10 in the correct sequence.

Subitizing
I can perceptually recognise items to 5
I can conceptually subitise an amount to 5 and work out different combinations of parts to get a whole.

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| | **I can use things such as a 5 frame or a 10 frame to conceptually subitise.**<br>**I can use conceptual subitising to group smaller amounts into a whole amount. (Part, part whole or varying combinations.)**<br>**I can recall number bonds to 10**<br><br>**Comparison**<br>**I am beginning to perceptually compare or match small amount of similar or dissimilar collections (I may count or subitise these).**<br>**I am beginning to identify some ordinal number positions such as the first and second teddy in sequence.**<br>**I can identify and use ordinal numbers orally to 5 and beyond.**<br>**I can compare numbers to 10 and beyond even if one set of objects is a larger physical size than the other.**<br>**I can estimate a larger collection of items and check by counting**<br>*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;*<br>*Have a deep understanding of number to 10, including the composition of each number;*<br>*Subitise (recognise quantities without counting) up to 5;*<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.* | | |

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| | *Verbally count beyond 20, recognising the pattern of the counting system;*<br><br>*Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;* | | |
| **Addition and subtraction** | I understand part-whole and can give you a part of a whole amount if you ask me to give you one<br>I can add a small amount of items together and show understanding with a matching corresponding amount even though I may not be able to verbalise this.<br>I understand the whole is bigger than the parts but may not give an accurate answer to begin with, I just recognise that it is a bigger number.<br><br>I can solve practical and real-world mathematical problems through play and using objects such as 'part part whole' and separating with objects.<br><br>I am beginning to understand the concept of 1 more and 1 less and the relationship between consecutive numbers.<br>I can add one and subtract one from a given number to 10 and say how many I have altogether. I may just know this without having to recount.<br>I can work out the missing addend or amount taken away in a number problem sentence (such as you started with 10 apples and now have 5, what changed?). | Represent and use number bonds and related subtraction facts within 20<br><br>**1NF–1 Develop fluency in addition and subtraction facts within 10.**<br><br>Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. 6 + 4 = 10 , therefore 4 + 6 = 10 and 10 – 6 = 4)<br><br>Add and subtract one digit and two-digit numbers up to 20, including 0.<br><br>**1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.**<br><br>**1AS–2 Read, write and interpret equations containing addition (), subtraction () and equals () symbols, and relate additive** | **2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.**<br><br>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100<br><br>Using concrete equipment and pictorial representations to add and subtract numbers including:<br>A two-digit number and ones<br>A two-digit number and tens<br>Add two two-digit numbers<br>Add three one-digit numbers<br><br>**2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".**<br><br>**2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction** |

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| | | **expressions and equations to real-life contexts.** | **facts: add and subtract only ones or only tens to/from a two-digit number.** |
| | | Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 =  - | **2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.** |
| | | | Begin to practise strategies for the development of mental calculation (particularly of number bonds) |
| | | | Recognise and apply the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems |
| | | | To use concrete and pictorial representations to solve problems including addition and subtraction; quantities and measures. Children will be moving towards a written method. |
| Multiplication and divisi3n | I can share out a small amount of objects sometimes equally.<br>I can share out a small amount of items equally between two or three people or toys giving one at a time to each. | **1NF–2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.** | **2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.**<br><br>**2MD–2 Relate grouping problems where the number of groups is unknown to multiplication** |

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| | *ELG*<br>*Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.* | | **equations with a missing factor, and to division equations (quotitive division).**<br><br>Recall multiplication and division facts for the 2,5 and 10 multiplication tables<br><br>Recall and recognise odd and even numbers – linking them to the multiplication tables |
| | | Understand language of 'grouping' and 'sharing'<br><br>Recall doubles and halves within 20<br><br>Use concrete equipment and pictorial representations (including arrays) to solve one-step problems involving multiplication and division. | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs<br><br>Understand/ show that the multiplication of two numbers is commutative and that division by another is not<br><br>Solve problems including multiplication and division using a range of concrete and pictorial representations. For example, arrays, repeated addition, mental strategies and known multiplication and division facts |
| **Fractions** | **I can recognise what is and what is not a half of a shape or object.** | Recognise, find and name a half as one of two equal parts of an object, shape or quantity<br><br>Recognise, find and name a quarter as being one of four equal parts of an object, shape or quantity | Recognise, find, name and write fractions – 1/3, ¼, 2/4 (½) and ¾ and apply to lengths, shapes, objects or quantities<br><br>Write simple fractions. For example; ½ of 6 = 3. |

| | | | Recognise the equivalence of 2/4 and ½ |
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| **Measurement** | **I can recognise similarities and differences in sizes, lengths, heights, widths, weight and capacity. I can compare them as I order and/or build and play. I can learn to use language that relates to them.**<br><br>Birth to 3 Compare sizes, weights etc. using gesture and language - 'bigger/ little/smaller', 'high/low', 'tall', 'heavy'.<br><br><br>Make comparisons between objects relating to size, length, weight and capacity.<br><br>Compare length, weight and capacity.<br>Becomes familiar with measuring tools in everyday experiences and play. | Measure and begin to record lengths/height, mass/weight, capacity/volume, time (seconds, minutes and hours)<br><br>Compare, describe and solve practical problems (including using the correct vocabulary) for:<br>**Length/height** (*long/short, taller/shorter, double/half*)<br>**Mass/weight** (*heavy/light, heavier, lighter*)<br>**Capacity/volume:** (*full/empty, more than, less than, half full, quarter*) | Compare and order lengths, mass, volume/capacity and record the results using equality symbols |
| **Money** | | Recognise and know the value of different denominations of coins and notes | Recognise and use the symbols for pounds (£) and pence (p)<br><br>Combine pounds and pence to make a given value<br><br>Recognise and find combinations of coins that equal the same amount of money |

|  |  |  | Solve problems in practical contexts involving the addition and subtraction of money of the same unit, including giving change |
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| Time | **I can talk about routines. I can learn to use the language of time.**<br>Beginning to understand that things might happen now or at another time, in routines.<br><br>Recalls a sequence of events in everyday life and stories.<br>Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'<br><br>Is increasingly able to order and sequence events using everyday language related to time.<br>Beginning to experience measuring time with timers and calendars. | Recognise and use language relating to dates (days of the week, weeks, months and years)<br><br>Sequence events in chronological order using language of *before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.*<br><br>Read and draw the time to the hour and half past the hour | Compare and sequence intervals of time<br><br>Read and write the time to 5-minute intervals including quarter past/to the hour<br><br>Recall the number of minutes in an hour and the number of hours in a day<br>Choose and use an appropriate standard unit to estimate and measure length/height in any direction (cm/m); mass (g/kg); temperature(c); capacity (ml/l) to the nearest appropriate unit – using rulers, thermometers and measuring vessels |
| Geometry (properties of shape) | **Shape**<br>Combine objects like stacking blocks and cups. Put objects inside others and take them out again.<br>Complete inset puzzles.<br>Build with a range of resources. | Recognise and name common 2-D shapes including rectangles, squares, circles and triangles<br><br>Recognise and name common 3-D shapes including: cubes, cuboids, pyramids and spheres | Identify and describe the properties of 2-D shapes, including the number if sides and vertical/horizontal lines of symmetry<br><br>Identify and describe the properties of 3-D shapes including the number of edges, vertices and faces |

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| | Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.<br>Combine shapes to make new ones – an arch, a bigger triangle etc.<br>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><br><br>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.<br>Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes. | Recognise the common 2-D and 3-D shapes in different orientations<br><br>Recognise the similarities and differences between common 2-D and 3-D shapes<br><br>**1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.**<br><br>**1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.** | Identify 2-D shapes on the surface of 3-D shapes<br><br>Compare and sort common 2-D and 3-D shapes and everyday objects.<br><br>Read shape names (suitable for their word reading and spelling)<br><br>Draw lines and shapes using rulers<br><br>**2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.** |
| **Geometry (spacial awareness, position and direction)** | I can explore the space around me.<br>I enjoy filling and emptying a variety of containers.<br>Responds to some spatial and positional language.<br><br><br>I can follow and use positional language.<br>Discuss routes and locations, using words like 'in front of' and 'behind'. | Describe position and movement including language of: whole, half, quarter and three-quarter turns. Make connections between turns and movement on a clockface.<br><br>Use language of left, right, top, bottom, on top of, in front of, above, between, around, near, close, far, up, down, forwards, backwards, inside and outside. | Use mathematical language to describe position, direction and movement in a straight line.<br><br>Distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns. |

| | | | | Use language of clockwise and anti-clockwise) |
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| | Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints.<br><br>Select, rotate and manipulate shapes in order to develop spatial reasoning skills. | | | |
| **Geometry (Patterns)** | Notice patterns and arrange things in patterns.<br><br>Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.<br>Extend and create ABAB patterns – stick, leaf, stick, leaf.<br>Notice and correct an error in a repeating pattern<br><br>**I can recognise, describe, and build repeating patterns, including AB but also patterns with core units such as AAB, ABC, and AABC** | | | Order and arrange combinations of mathematical objects (counters, cubes) in patterns and sequences<br><br>Recognise and recall patterns and sequences<br><br>Continue given sequences; using the recognised pattern<br><br>Recognise patterns in different orientations |
| **Statistics** | | | | Read and interpret simple pictograms, tally charts, block diagrams and simple tables<br><br>Understand how to read a given key |

2023 Maths progression map

| | | | Construct simple pictograms, tally charts, block diagrams and simple tables<br><br>Ask and answer simple questions by counting the number of objects in each category and sort categories by quantity<br><br>Ask and answer questions about totalling and comparing categorical data |