EYFS Curriculum Progression – Mathematics

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| **Educational Programme**  Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, ‘have a go’, talk to adults and peers about what they notice and not be afraid to make mistakes. | | | | | |
| 2-3 year olds (Nursery 0 &1) | | 3-4 year olds (Nursery 2) | 4-5 year olds (Reception) | | |
| Curricular Goals and Milestones (Steps to Success) | | | | | |
| **Be inquisitive and curious about numbers around them.**   * Begins to say some numbers in order. * Takes part in number rhymes. * Responds to words like lots or more.   **Notice patterns and arrange things in patterns.**   * Spot patterns and talk about them e.g. patterns on a scarf. * Begin to arrange toys in their own patterns. * Joins in with repeated sound and action patterns.   **Compare sizes, weights and shapes etc. using gesture and language - ‘bigger/little/smaller’, ‘high/low’, ‘tall’, ‘heavy’**   * Recognises that 2 objects have the same shape. * Chooses puzzle pieces and tries to fit them in. * Shows an interest in size and weight. * Explores capacity by filling and emptying containers. | | **Counts to and links numbers to amounts to 5 and subitise to 3.**   * Shows finger numbers to 5. * Say one number name for each item. * Make comparisons between quantities. * Be inquisitive and curious about numbers around them.   **Continue, copy and recreate repeated patterns.**   * Can spot errors in patterns. * Continue and create simple AB patterns * Join in with and talk about patterned stories. * Notice patterns and arrange things in patterns.   **Begin to talk about and explore the properties of shape and position, and make comparisons of different objects.**   * Names simple geometric shapes in their play. * Find the longer/shorter, heavier/lighter, and more/less of 2 objects. * Responds to and uses language of position and direction. * Compare sizes, weights and shapes etc. using gesture and language - ‘bigger/little/smaller’, ‘high/low’, ‘tall’, ‘heavy.’ | **To understand in depth numbers to 10, including number bonds.**   * Recall and use number bonds to 5 and 10. * Subitise to 5. * Count, order, recognise and use numbers to 10 and beyond. * Counts to and links numbers to amounts to 5 and subitise to 3.   **To recognise, compare and explore mathematical patterns.**   * Share equally. * Count verbally beyond 20. * Identify odds and evens. * Find one more and one less. * Continue, copy and recreate repeated patterns.   **Tackles problems involving prediction, discussion of properties of shape, spacial awareness and comparison of different measures.**   * Select, rotate and manipulate shapes to develop spatial reasoning skills. * Compose and decompose shapes so that children recognise a shape can have other shapes within it, * Order 3 or more objects by measures. * Name 2D and 3D shapes and talk about the properties. * Begin to talk about and explore the properties of shape and position, and make comparisons of different objects. | | |
| Statutory End of EYFS Assessment: Early Learning Goals | Links to Year 1 / Key Stage 1 | | | Characteristics of Effective Learning | Key Vocabulary |
| Number ELG  Children at the expected level of development will:  - Have a deep understanding of number to 10, including the composition of each number;  - Subitise (recognise quantities without counting) up to 5;  - 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.  Numerical Patterns ELG  Children at the expected level of development will:  - Verbally count beyond 20, recognising the pattern of the counting system;  - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;  - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally | Number and Place value – given a number, identify one more and one less - 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  Number – Addition and Subtraction – Number bonds, represent and use number bonds  Multiplication and division – doubles, problem solving.  Measurement - compare, describe and solve practical problems for: lengths and heights [e.g. long/short, longer/shorter, tall/short], mass/weight [e.g. heavy/light, heavier than, lighter than], capacity and volume [e.g. full/empty, more than, less than, half, half full]  -measure the following: lengths and heights, mass/weight, capacity and volume, time (hours)  -recognise and know the value of different denominations of coins  -sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]  -recognise and use language s, including days of the week,  -tell the time to the hour.  -recognise and name common 2-D and 3-D shapes, including: 2-D shapes [e.g. rectangles (including squares), circles and triangles], 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].  -describe position | | | Playing and Exploring   * Finding out and exploring * Being willing to ‘have a go’   Active Learning   * Being involved and Concentrating * Keeping on trying * Enjoying what they set out to do.   Thinking creatively and critically   * Having their own ideas * Making links * Working with ideas | Count, number, numeral, subitise, odd, even, amount, total, add, subtract, take away, share, equal, order,  Pattern, spots, stripes, line, repeat, copy, create  Shape specific language  Big, little, small, high, low, tall, short heavy, light, same, different, more, less, forwards, backwards, left, right, in front, behind, above, under, next to, |

“The only way to learn mathematics is to do mathematics” Paul Halmas