# EYFS Curriculum – Mathematics

## Intent

At St John's our children will have many opportunities to develop their understanding of number (including the composition of numbers, number bonds and subitising), numerical patterns (including odds and evens and doubling), measurement, shape and space in a broad range of contexts in which they can explore, enjoy, learn, practice and talk about numbers and shapes. We encourage pupils to understand and respond to the symbols that represent numbers and what this means in real contexts. We support children in understanding what an important role shapes and numbers play in our everyday lives and how they develop our own understanding and help us to solve problems. We approach this area by fostering a love of number and the enjoyment of solving problems.

## Implementation

In Nursery our curriculum allows children to begin to learn the mathematic skills needed for Reception. We follow the Mastering the curriculum progression of lessons to support learning of early mathematical concepts in readiness for Reception. Skills are reinforced throughout our daily routine and activities e.g counting during the register, when lining up, shape hunts, shape language etc.
In Reception our teaching of Maths follows the NCETM mastering number. Children explore maths, using mathematical vocabulary to reason and explain their findings. They use these skills to make better sense of the world around them and develop good number sense. Adults teach the skills needed to succeed in mathematics providing examples of good practice and having high expectations. Every day in Reception children take part in whole class NCETM lessons which we call 'magic maths'. Mathematical opportunities related to a particular concept or element are introduced and explored in detail through the use of engaging resources and songs. Opportunities to practice these concepts are then built into provision.
Throughout EYFS we create a rich environment, where talk for maths is a key. There are opportunities for all children to explore and develop their mathematics throughout our learning environment. Adults are skilled at encouraging mathematical opportunities through children's play and will challenge where this is a focus for the child's next step.

## Impact

All children are competent with the skills of subitising and have developed secure number sense. They can talk about number and explain what it is and isn't. They solve problems and make predictions about what might happen while using appropriate vocabulary. Our pupils apply their mathematical skills in a variety of contexts.

# EYFS Progression Map – Mathematics

| | Autumn Term | | Spring Term | | Summer Term | |
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| | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Education 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. | | | | | |
| **Nursery** | May enjoy counting verbally as far as they can go.<br><br>Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5.<br><br>Uses some number names and number language within play, and may show fascination with large numbers.<br><br>Chooses items based on their shape which are appropriate for the child's purpose | Begin to recognise numerals 0 to 3.<br><br>Subitises one, two and three objects (without counting).<br><br>Links numerals with amounts up to 5 and maybe beyond.<br><br>Responds to both informal language and common shape names<br><br>In meaningful contexts, finds longer, shorter, heavier and lighter, more/less full | Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same!<br><br>Shows awareness of shape similarities and differences between objects<br><br>Creates own spatial patterns showing some organisation or regularity | Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle).<br><br>Explores using a range of their own marks and signs to which they ascribe mathematical meanings.<br><br>Begin to recognise numerals 0 to 5.<br><br>Attempts to create arches and enclosures when building, using trial and improvement to select blocks | Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers.<br><br>Beginning to recognise that each counting number is one more than the one before.<br><br>Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes.<br><br>Explores and adds simple linear patterns of two or three repeating items<br><br>Recalls a sequence of events in everyday life and stories | Beginning to use understanding of number to solve practical problems in play and meaningful activities.<br><br>Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.<br><br>Begin to recognise numerals up to 5 and beyond.<br><br>Joins in with simple patterns in sounds, objects, games, stories, dance and movement, predicting what comes next |
| **Reception** | Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0.<br><br>Counts out up to 10 objects from a larger group.<br><br>Spots pattern in the environment, beginning to identify the pattern 'rule'<br><br>Uses informal language to describe shapes<br><br>May enjoy making simple maps of familiar and imaginative environments | Engages in subitising numbers to four and maybe five.<br><br>Increasingly confident at putting numerals in order 0 to 10 (ordinality).<br><br>Matches the numeral with a group of items to show how many there are (up to 10).<br><br>Becomes familiar with measuring tools in everyday experiences and play<br><br>Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes | Uses number names and symbols when comparing numbers, showing interest in large numbers.<br><br>Estimates of numbers of things, showing understanding of relative size.<br><br>Chooses familiar objects to create and recreate repeating patterns and begins to identify the unit of repeat<br><br>Uses mathematical terms to describe shapes | Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and + or –<br><br>Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects.<br><br>Make comparisons of length, weight and capacity<br><br>Investigates turning and flipping objects in order to make shapes fit and create models predicting and visualising how they will look | In practical activities, adds one and subtracts one with numbers to 10.<br><br>Is increasingly able to order and sequence events using everyday language related to time<br><br>Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build<br><br>Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints | Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three.<br><br>Beginning to experience measuring time with timers and calendars<br><br>Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy. |
| **ELGs** | **Number**<br>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.<br>**Numerical Patterns**<br>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 | | | | | |