Mathematics in EYFS:

What Maths looks like at St Bridget's

Mathematics 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.

At St Bridget's we use the number of the week approach which is supported by the NCETM six key areas of early mathematics learning:

- Cardinality and counting – understanding that the cardinal value of a number refers to the quantity or 'howmanyness' of things it represents.
- Comparison- understanding that comparing numbers involves knowing which numbers are worth more or less than each other.
- Composition – understanding that one number can be made up from (composed from) two or more smaller groups.
- Pattern – looking for and finding patterns helps children notice and understand mathematical relationships
- Shape and space – understanding what happens when shapes move or combine with other shapes, helps develop wider mathematical thinking.
- Measures – comparing different aspects such as length, weight and volume, as a preliminary to using units to compare later.

Maths in our classroom looks like this:

- Daily discrete teaching carpet sessions (20 / 30 minutes every day)
- Mastering number sessions taught daily (5/10 minutes everyday)
- Daily mathematical discussions are vital and play a big part in our daily routines for example day of the week, month of the year, 1st, 2nd, 3rd in the line, discussion about time at certain parts of the day for example it is 10 o'clock it is playtime, it is 1 o'clock and lunchtime is over etc
- Specific adult directed maths activities completed weekly
- Weekly journaling – a big focus on mathematical graphics – children giving meanings to their markings and explaining their thinking.
- Mathematical possibilities for the 6 key areas in many areas of the classroom during discover and do – for example the construction areas, small world, investigation station with the right high-quality interactions and questioning mathematics can be practised, revised, revisited and reviewed when appropriate and where necessary.
- Morning maths challenges take place as the children come in to school for example representation of numbers in different ways, subitising what can you see? What do you notice? Number formation, mathematical graphics / number stories.

Each child has an individual maths book and journal to see progression as the year goes on.
Separate long term and weekly maths plans are also available to show more in-depth planning.

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.

This document demonstrates which statements from the 2020 Development Matters are prerequisite skills for mathematics within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for mathematics.

The most relevant statements for mathematics are taken from the following areas of learning:

- Communication and Language
- Mathematics

Mathematical Vocabulary			
Three and Four-Year-Olds	Communication and Language		• Use a wider range of vocabulary. • Understand 'why' questions, like: "why do you think the caterpillar is so fat?"
Reception	Communication and Language		• Learn new vocabulary. • Use new vocabulary throughout the day.
ELG	Communication and Language	Speaking	• Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.

Number and Place Value			
Counting			
Three and Four-Year-Olds	Mathematics		• 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').
Reception	Mathematics		• Count objects, actions and sounds. • Count beyond ten.
ELG	Mathematics	Numerical Patterns	• Verbally count beyond 20, recognising the pattern of the counting system.
Identifying, Representing and Estimating Numbers			
Three and Four-Year-Olds	Mathematics		• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Subitise. • Link the number symbol (numeral) with its cardinal number value.

ELG	Mathematics	Number	• Subitise (recognising quantities without counting) up to 5.
Reading and Writing Numbers			
Three and Four-Year-Olds	Mathematics		• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals.
Reception	Mathematics		• Link the number symbol (numeral) with its cardinal number value.
Compare and Order Numbers			
Three and Four-Year-Olds	Mathematics		• Compare quantities using language: 'more than', 'fewer than'.
Reception	Mathematics		• Compare numbers.
ELG	Mathematics	Numerical Patterns	• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
Understanding Place Value			
Reception	Mathematics		• Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10.
ELG	Mathematics	Number	• Have a deep understanding of numbers to 10, including the composition of each number.
Solve Problems			
Three and Four-Year-Olds	Mathematics		• Solve real world mathematical problems with numbers up to 5.

Addition and Subtraction			
Mental Calculations			
Reception	Mathematics		• Automatically recall number bonds for numbers 0-5 and some to 10.
ELG	Mathematics	Number	• 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.
Solve Problems			
ELG	Mathematics	Numerical Patterns	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.

Measurement		
Describe, Measure, Compare and Solve (All Strands)		
Three and Four-Year-Olds	Mathematics	• Make comparisons between objects relating to size, length, weight and capacity.
Reception	Mathematics	• Compare length, weight and capacity.

Telling the Time		
Three and Four-Year-Olds	Mathematics	• Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then…'

Properties of Shapes		
Recognise 2D and 3D Shapes and their Properties		
Three and Four-Year-Olds	Mathematics	• 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'. • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc.
Reception	Mathematics	• Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
Compare and Classify Shapes		
Reception	Mathematics	• Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.

Position and Direction		
Position, Direction and Movement		
Three and Four-Year-Olds	Mathematics	• Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'.
Reception	Understanding the World	• Draw information from a simple map.
Patterns		
Three and Four-Year-Olds	Mathematics	• 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. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern.
Reception	Mathematics	• Continue, copy and create repeating patterns.

Statistics		
Record, Present and Interpret Data		
Three and Four-Year-Olds	Mathematics	• Experiment with their own symbols and marks, as well as numerals.