

St John's CE Primary School

Progression in Knowledge and Skills in
Mathematics

EYFS – Y1



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The purpose of this document is to clearly map out and link the transition from the Early Years Foundation Stage to the start of KS1, Y1. It is based on the 2021 Development Matters document, Early Learning Goals for the EYFS and on the published 2014 national curriculum. It also takes into account the 2021 published 'Ready to Progress Criteria' for Y1 to ensure that all objectives are clear for teaching staff.

Mathematical Vocabulary			
Three and Four-Year Olds	Communication and Language		<ul style="list-style-type: none"> • Use a wider range of vocabulary. • Understand 'why' questions, like: "Why do you think the caterpillar is so big?" • Be able to express a point of view and to debate when they disagree with an adult or a friend, using words as well as actions.
Reception	Communication and Language		<ul style="list-style-type: none"> • Learn new vocabulary. • Use new vocabulary through the day. • Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.
ELG	Communication and Language	Speaking	<ul style="list-style-type: none"> • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. • Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate

Number and Place Value			
Counting and Identifying			
Three and Four-Year Olds	Mathematics		<ul style="list-style-type: none"> 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'). Fast recognition of up to 3 objects, without having to count them individually ('subitising').
Reception	Mathematics		<ul style="list-style-type: none"> Count objects, actions and sounds. Count beyond ten. Subitise
ELG	Mathematics	Numerical Patterns	<ul style="list-style-type: none"> Verbally count beyond 20, recognising the pattern of the counting system. Subitise (recognising quantities without counting) up to 5.
Y1	Mathematics		<ul style="list-style-type: none"> Count to and across 100. Forward and backwards, beginning with 0 to 1, or from any given number. (RPC - NPV-1 Count within 100, forwards and backwards, starting with any number.) Count numbers to 100 in numerals. Count in multiples of twos, fives and tens. (RPC - NF-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.) Identifying and representing numbers using objects and pictorial representations.

Representing and Estimating Numbers			
Three and Four-Year Olds	Mathematics		<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics	Number	<ul style="list-style-type: none"> • Subitise (recognising quantities without counting) up to 5.
Y1	Mathematics	Number	<ul style="list-style-type: none"> • Identifying and representing numbers using objects and pictorial representations • Read and write numbers to 100 in numerals Mathematics • Read and write numbers from 1 to 20 in numerals and words
Reading and Writing Numbers			
Three and Four-Year Olds	Mathematics		<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • Link the number symbol (numeral) with its cardinal number value.
ELG	Mathematics		
Y1	Mathematics		<ul style="list-style-type: none"> • Identifying and representing numbers using objects and pictorial representations • Read and write numbers to 100 in numerals Mathematics

		<ul style="list-style-type: none"> • Read and write numbers from 1 to 20 in numerals and words.
Understanding Place Value, Comparing and Ordering Numbers		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> • Compare quantities using language: 'more than', 'fewer than'.
Reception	Mathematics	<ul style="list-style-type: none"> • Compare numbers. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10.
ELG	Mathematics	Numerical Patterns
		<ul style="list-style-type: none"> • Have a deep understanding of numbers to 10, including the composition of each number. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
Y1	Understanding Place Value and Comparing	
		<ul style="list-style-type: none"> • Given a number, identify one more and one less • RPC - 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$
Solving Problems		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> • Solve real world mathematical problems with numbers up to 5.
Reception	Mathematics	<ul style="list-style-type: none"> • Solve real world mathematical problems and missing number counting.

Addition and Subtraction			
Number Bonds / Mental Calculations			
Reception	Mathematics		<ul style="list-style-type: none"> Automatically recall number bonds for numbers 0–5 *deep knowledge* and some to 10.
ELG	Mathematics	Number	<ul style="list-style-type: none"> 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.
Y1	Mathematics		<ul style="list-style-type: none"> represent and use number bonds and related subtraction facts within 20 RPC - 1NF-1 - Develop fluency in addition and subtraction facts within 10
Solve Problems			
Reception	Mathematics		<ul style="list-style-type: none"> Subitise. Link the number symbol (numeral) with its cardinal number value
ELG	Mathematics	Numerical Patterns	<ul style="list-style-type: none"> Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.
Y1	Mathematics		<ul style="list-style-type: none"> Read, write and interpret mathematical statements involving addition, subtraction and equals signs Represent and use number bonds and related subtraction
	Calculations		<ul style="list-style-type: none"> Add and subtract one-digit and two-digit numbers to 20, including zero RPC - 1AS-1 – Compose numbers to ten from two parts, and partition numbers to ten into parts, including recognizing odd and even numbers.

		<ul style="list-style-type: none"> • RPC – 1AS-2 - Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions to real life contexts.
	Solve Problems	<ul style="list-style-type: none"> • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$

Multiplication and Division		
Number Facts		
Y1	Number Facts	<ul style="list-style-type: none"> • RPC - 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.
	Problem Solving	<ul style="list-style-type: none"> • 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

Fractions		
Recognise and Write		
Y1	Recognise and Write	<ul style="list-style-type: none"> • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity

Measure - Money		
Recognise and Write		
Y1	Money	<ul style="list-style-type: none"> Recognise and know the value of different denominations of coins and notes

Measure - Time		
Recognise and Write		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'
Year 1	Time	<ul style="list-style-type: none"> 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 relating to dates, including days of the week, weeks, months and years Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times

Measure - Time		
Using Measures		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> Make comparisons between objects relating to size, length, weight and capacity.
Reception	Time	<ul style="list-style-type: none"> Compare length, weight and capacity.

Y1	Using Measures	<ul style="list-style-type: none"> • Compare, describe and solve practical problems for: <ul style="list-style-type: none"> o Length and heights, long/short, longer/shorter, tall/short, double/half o Mass/weight for example heavy/light, heavier than/lighter than o Capacity and volume for example full/empty, more than/less than, half full/half empty o Time for example quicker, slower, earlier, later • Measure and begin to record the following: <ul style="list-style-type: none"> o Length and heights o Mass/weight o Capacity and volume o Time (hours, minutes, seconds)
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Geometry – Properties of Shapes

Recognise 2D and 3D Shapes and their Properties

Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
Y1	Identifying shapes and their properties	<ul style="list-style-type: none"> • recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> - 2-D shapes [e.g. rectangles (including squares), circles and triangles]

		<ul style="list-style-type: none"> - 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. • RPC - 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.
Compare and Classify Shapes		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Select, rotate and manipulate shapes to develop spatial reasoning skills. • Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.
Y1	Identifying shapes and their properties	<ul style="list-style-type: none"> • RPC - 1G-2 - Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.

Geometry – Position and Direction		
Position, Direction and Movement		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Draw information from a simple map.
Y1	Identifying shapes and their properties	<ul style="list-style-type: none"> Describe position, direction and movement, including whole, half, quarter and three-quarter turns
Patterns		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Continue, copy and create repeating patterns.
Statistics		
Record, Present and Interpret Data		
Three and Four-Year Olds	Mathematics	<ul style="list-style-type: none"> Experiment with their own symbols and marks, as well as numerals.