



## EYFS and Mathematics at Hayward's Primary School

The new EYFS Framework became statutory in September 2021. It is structured differently to the National Curriculum and is organised across seven areas of learning rather than subject areas, which all interlink. This document shows how the skills taught across the EYFS feed into the National Curriculum subject of Mathematics and lend themselves to be the pre-requisite skills children need in this subject. It is also important to remember that underpinning the EYFS Framework are the Characteristics of Effective Teaching and Learning (CoETL) which detail the ways in which children should be learning from their environment, experiences and activities. These also need to be considered when thinking about how the EYFS Framework links to a certain National Curriculum subject. The table below outlines the relevant **statutory Educational Programmes** linked to **Mathematics**, which involves activities and experiences for children, as set out under each of the areas of learning, information on the **non-statutory Development Matters** document and the **Characteristics of Effective Teaching and Learning**.

This document also shows which statements from the **2021 Development Matters** are prerequisite skills for Mathematics within the National Curriculum.

### 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.

### Communication and Language Educational Programme

The development of children's spoken language underpins all seven areas of learning and development. Children's back-and-forth interactions from an early age form the foundations for language and cognitive development. The number and quality of the conversations they have with adults and peers throughout the day in a language-rich environment is crucial. By commenting on what children are interested in or doing, and echoing back what they say with new vocabulary added, practitioners will build children's language effectively. Reading frequently to children, and engaging them actively in stories, non-fiction, rhymes and poems, and then providing them with extensive opportunities to use and embed new words in a range of contexts, will give children the opportunity to thrive. Through conversation, story-telling and role play, where children share their ideas with support and modelling from their teacher, and sensitive questioning that invites them to elaborate, children become comfortable using a rich range of vocabulary and language structures.



### Development Matters

*"The EYFS is about how children learn, as well as what they learn. Children need opportunities to develop their own play and independent exploration."*

The Development Matters is a **non-statutory** document for EYFS which has been created to support practitioner's understanding of child development and their delivery of teaching. This is a document to guide practitioners to design an effective Early Years curriculum and overall support professional judgement enabling children's individual needs to be supported and build upon their strengths. Other areas of learning will also feed into **Mathematics**, for example, the area of Communication and Language plays a significant role in children being able to talk about and explain their understanding and to ask questions etc. Please refer to this document for an in depth view of progress within Mathematics.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1007446/6.7534\\_DfE\\_Development\\_Matters\\_Report\\_and\\_illustrations\\_web\\_2\\_.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1007446/6.7534_DfE_Development_Matters_Report_and_illustrations_web_2_.pdf)

### Development Matters Statements 2020

#### Mathematical Vocabulary

Three and Four Year Olds	Communication and Language		<ul style="list-style-type: none"> <li>Use a wider range of vocabulary.</li> <li>Understand 'why' questions, like: "why do you think the caterpillar is so fat?"</li> </ul>
Reception Children	Communication and Language		<ul style="list-style-type: none"> <li>Learn new vocabulary.</li> <li>Use new vocabulary throughout the day.</li> </ul>
Early Learning Goals	Communication and Language	Speaking	<ul style="list-style-type: none"> <li>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</li> </ul>

#### Number and Place Value

##### Counting

Three and Four Year Olds	Mathematics		<ul style="list-style-type: none"> <li>Recite numbers past 5.</li> <li>Say one number name for each item in order: 1, 2, 3, 4, 5.</li> <li>Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').</li> </ul>
Reception Children	Mathematics		<ul style="list-style-type: none"> <li>Count objects, actions and sounds.</li> <li>Count beyond ten.</li> </ul>
Early Learning Goals	Mathematics	Numerical Patterns	<ul style="list-style-type: none"> <li>Verbally count beyond 20, recognising the pattern of the counting system.</li> </ul>

#### Identifying, Representing and Estimating Numbers

Three and Four Year Olds	Mathematics		<ul style="list-style-type: none"> <li>Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').</li> <li>Show 'finger numbers' up to 5.</li> <li>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.</li> <li>Experiment with their own symbols and marks as well as numerals.</li> </ul>
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Reception Children	Mathematics		<ul style="list-style-type: none"> <li>• Subitise.</li> <li>• Link the number symbol (numeral) with its cardinal number value.</li> </ul>
Early Learning Goals	Mathematics	Number	<ul style="list-style-type: none"> <li>• Subitise (recognising quantities without counting) up to 5.</li> </ul>
<b>Reading and Writing Numbers</b>			
Three and Four Year Olds	Mathematics		<ul style="list-style-type: none"> <li>• Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.</li> <li>• Experiment with their own symbols and marks as well as numerals.</li> </ul>
Reception Children	Mathematics		<ul style="list-style-type: none"> <li>• Link the number symbol (numeral) with its cardinal number value.</li> </ul>
<b>Compare and Order Numbers</b>			
Three and Four Year Olds	Mathematics		<ul style="list-style-type: none"> <li>• Compare quantities using language: 'more than', 'fewer than'.</li> </ul>
Reception Children	Mathematics		<ul style="list-style-type: none"> <li>• Compare numbers.</li> </ul>
Early Learning Goals	Mathematics	Numerical Patterns	<ul style="list-style-type: none"> <li>• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</li> </ul>
<b>Understanding Place Value</b>			
Reception Children	Mathematics		<ul style="list-style-type: none"> <li>• Understand the 'one more than/one less than' relationship between consecutive numbers.</li> <li>• Explore the composition of numbers to 10.</li> </ul>
Early Learning Goals	Mathematics	Number	<ul style="list-style-type: none"> <li>• Have a deep understanding of numbers to 10, including the composition of each number.</li> </ul>
<b>Solve Problems</b>			
Three and Four Year Olds	Mathematics		<ul style="list-style-type: none"> <li>• Solve real world mathematical problems with numbers up to 5.</li> </ul>
<b>Addition and Subtraction</b>			
<b>Mental Calculations</b>			
Reception Children	Mathematics		<ul style="list-style-type: none"> <li>• Automatically recall number bonds for numbers 0-5 and some to 10.</li> </ul>
Early Learning Goals	Mathematics	Number	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Solve Problems</b>			



Early Learning Goals	Mathematics	Numerical Patterns	<ul style="list-style-type: none"> <li>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.</li> </ul>
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### Measurement

#### Describe, Measure, Compare and Solve (All Strands)

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

### Telling the Time

Three and Four Year Olds	Mathematics	<ul style="list-style-type: none"> <li>Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'</li> </ul>
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### Properties of Shapes

#### Recognise 2D and 3D Shapes and their Properties

Three and Four Year Olds	Mathematics	<ul style="list-style-type: none"> <li>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'.</li> <li>Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc.</li> <li>Combine shapes to make new ones – an arch, a bigger triangle, etc.</li> </ul>
Reception Children	Mathematics	<ul style="list-style-type: none"> <li>Select, rotate and manipulate shapes in order to develop spatial reasoning skills.</li> </ul>

#### Compare and Classify Shapes

Reception Children	Mathematics	<ul style="list-style-type: none"> <li>Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.</li> </ul>
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### Position and Direction

#### Position, Direction and Movement

Three and Four Year Olds	Mathematics	<ul style="list-style-type: none"> <li>Understand position through words alone – for example, "The bag is under the table," – with no pointing.</li> <li>Describe a familiar route.</li> <li>Discuss routes and locations, using words like 'in front of' and 'behind'.</li> </ul>
Reception Children	Understanding the World	<ul style="list-style-type: none"> <li>Draw information from a simple map.</li> </ul>

### Patterns



Three and Four Year Olds	Mathematics	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Extend and create ABAB patterns – stick, leaf, stick, leaf.</li> <li>• Notice and correct an error in a repeating pattern.</li> </ul>
Reception Children	Mathematics	<ul style="list-style-type: none"> <li>• Continue, copy and create repeating patterns.</li> </ul>

### Statistics

#### Record, Present and Interpret Data

Three and Four Year Olds	Mathematics	<ul style="list-style-type: none"> <li>• Experiment with their own symbols and marks, as well as numerals.</li> </ul>
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### Characteristics of Effective Teaching and Learning

- **Playing and Exploring** – children investigate and experience things, and 'have a go'
- **Active Learning** – children concentrate and keep on trying if they encounter difficulties, and enjoy achievements
- **Creating and Thinking Critically** – children have and develop their own ideas, make links between ideas, and develop strategies for doing things