

# How Maths is taught in the Early Years Foundation Stage

At Grampound Road, we strive to live by our Christian Values to inspire the very best in our pupils. We work together with passion to create a trusting, nurturing environment where everyone feels valued, secure and respected. We provide exciting and engaging opportunities to allow our pupils to persevere, thrive and achieve; to make the most of God's gifts and to develop their talents. We encourage children to take risks and show courage, having high expectations of each other and high aspirations for the future. Our aim is to ensure our children become successful, and compassionate, citizens of the future.

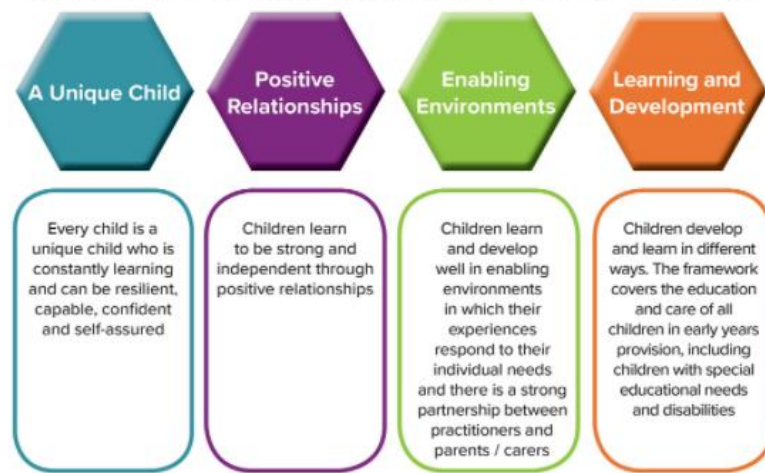


How does the EYFS support the Maths curriculum in the wider school?

## The EYFS supports the Maths curriculum in the wider school by:

- Instilling the three 'Characteristics of Effective teaching and Learning' in all children right from the start in order to help practitioners in interacting and supporting children from an early age with their learning and development. Practitioners do this by providing and fostering each child's love of learning through:
  - 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.
- To give pupils the building blocks they need to continue to succeed in Maths in the wider school, practitioners ensure that they meet children where they are and develop their skills and knowledge through creating an enabling environment, positive interactions and experiences which are relevant to each child's age/stage of learning and their interests. In the Early Years, this means learning is unique to the group of the children sitting in front of them each year and for each individual child and their experiences. Practitioners nurture and encourage pupils through 'The Four Guiding Principles' as outlined below:

### The Four Guiding Principles of the Early Years Foundation Stage



Without these four principles, children will not be able to experience success in mathematics and develop the confidence to take risks, ask questions and explore alternative solutions without fear of being wrong, all of which are fundamental skills needed for mathematics. By creating an EYFS curriculum which is driven by interests and our school's values and practitioners' personal values, positive relationships are built and therefore children will enjoy exploring and applying mathematical concepts to understand and solve problems, explaining their thinking and presenting their solutions to others in a variety of ways.

- Practitioners identify schemas during play and by recognising and then extending these patterns of behaviour and thinking, they can plan a learning environment and opportunities to support children's interests and learning. This is an intrinsic part of child development and encourages independence as young children explore particular patterns of movement which will provide fundamental foundations for Maths in the wider school.
- Pupils in the EYFS are encouraged through play to identify opportunities when they can apply their mathematical knowledge and their thinking skills to become real-life problem solvers. When children think mathematically and have the vocabulary to explain their thinking, they can make connections across all other areas of learning. Pupils are given frequent and varied opportunities to build and apply this understanding following the 'CPA' model which forms our Mastery approach throughout the school.
- Adults aim to bring the '3 m's' into children's independent play: Mathematics, Making Conversation and Mark Making. Through doing this, adults use their interactions to create opportunities to develop children's mathematical knowledge and skills during their interest led play, e.g. introducing the record of scores on a tally chart when playing a competitive game, or creating mathematical problems as passwords to get into a secret superhero base.

Adults model and introduce mathematical language when 'Making Conversations' as children observe the world around them.

What are the Early Learning Goals children need to achieve by the end of reception to support the Maths curriculum?

Early Learning Goals	
<p><b>Number</b></p> <ul style="list-style-type: none"> <li>Have a deep understanding of number to 10, including the composition of each number.</li> <li>Subitise (recognise quantities without counting) up to 5.</li> <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>	<p><b>Numerical Patterns</b></p> <ul style="list-style-type: none"> <li>Verbally count beyond 20, recognising the pattern of the counting system.</li> <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> <li>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</li> </ul>

What learning would you expect to see in EYFS for Maths?

Maths
<ul style="list-style-type: none"> <li>Count objects, actions and sounds.</li> <li>Subitise.</li> <li>Link the number symbol (numeral) with its cardinal number value.</li> <li>Count beyond ten.</li> <li>Compare numbers.</li> <li>Understand the 'one more than/one less than' relationship between consecutive numbers.</li> <li>Explore the composition of numbers to 10.</li> <li>Automatically recall number bonds for numbers 0-5 and some to 10.</li> <li>Select, rotate and manipulate shapes to develop spatial reasoning skills.</li> <li>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</li> <li>Continue, copy and create repeating patterns.</li> <li>Compare length, weight and capacity.</li> </ul>

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Getting to Know You			Just Like Me!			It's Me 1 2 3!			Light and Dark			Alive in 5!			Growing 6, 7, 8			Building 9 & 10		
Opportunities for settling in, introducing the areas of provision and getting to know the children.			Match and sort Compare amounts			Representing 1, 2 & 3 Comparing 1, 2 & 3 Composition of 1, 2 & 3			Representing numbers to 5. One more and less.			Introducing Zero Comparing Numbers to 5 Composition of 4 & 5			6, 7 & 8 Making Pairs Combining 2 Groups			9 & 10 Comparing Numbers to 10 Bonds to 10		
Key times of day, class routines: Exploring the continuous provision inside and out. Where do things belong? Positional language.			Compare size, mass & capacity Exploring pattern			Circles and triangles Positional language			Shapes with 4 sides. Time			Compare Mass (2) Compare Capacity (2)			Length & Height Time			3d-Shape Pattern (2)		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<b>Phase</b>	To 20 and Beyond			First Then Now			Find my Pattern			On the Move		
<b>Number</b>	Building Numbers Beyond 10 Counting Patterns Beyond 10			Adding More Taking Away			Doubling Sharing & Grouping Even and Odd			Deepening Understanding Patterns and Relationships		
<b>Spatial Reasoning</b>	Spatial Reasoning (1) Match, Rotate, Manipulate			Spatial Reasoning (2) Compose and Decompose			Spatial Reasoning (3) Visualise and Build			Spatial Reasoning (4) Mapping		

How are pupils given opportunities to apply basic skills in your subject?

Mathematics in the EYFS includes both numbers and shape, space and measure.

### **Numbers**

Young children begin to make the link between numerals and quantity, counting and knowing how many items are in a group and learning how to use simple calculation skills in practical, real-life situations. Opportunities to explore, practise and build on mathematical learning are provided outside and inside, in all areas of provision, in child and adult initiated activities. Children have daily discreet carpet lessons in Maths lesson which is carefully sequenced using the White Rose Long Term Plan (see above). In addition to this, practitioners develop mathematical skills and thinking through:

- Introduction of number songs in rhyme time.
- Daily counting activities such as how many children are here today, how many are absent.
- Daily calendar maths, discussing the date, days of the week, months, recognising numbers, thinking about special days coming up this month.
- Story books e.g. Ten in the Bed.
- Lots of modelled counting during play.
- Prepositional language introduced.
- Opportunity to explore insert puzzles.
- Opportunities to explore sorting and naming colours through provision e.g. bottle caps, painting, searching for Autumn leaves at song time, story time and snack time – all the time.
- Daily voting station
- Access to continuous provision resources always available for children to access throughout free play (numbers, loose parts, tens frames, part-whole models etc)
- High-quality adult-led discussions and interactions, encouraging mathematical language and problems during children's free play.

### **Shape, space and measure**

As young children try to make sense of the world around them, they make links and connections between what they see in their environment and their past experience. Through this process, they begin to notice and understand the properties of shapes, for example knowing that a ball will roll.

Children also become aware of variations in size and space and they begin to apply this knowledge to negotiate space, solve problems and understand more about the world. They also begin to notice patterns and this helps them to develop skills in sequencing, ordering and time. Practitioners provide children with opportunities to develop their understanding of shape, space and measure through:

	<ul style="list-style-type: none"> <li>• open ended resources available to practice and develop understanding such as sand and water play, role play kitchen area, construction etc.</li> <li>• High-quality adult-led discussions and interactions, encouraging mathematical language and problems during children's free play.</li> <li>• Access to continuous provision resources always available for children to access throughout free play (2D and 3D shapes).</li> <li>• Children are given opportunities to apply new knowledge and skills during daily provision, as well as opportunities to freely explore mathematical concepts and problems based on their own interests and inquiries.</li> </ul>
<p>What does your subject look like in Early Years? How does this link to the rest of the school?</p>	<p>Children in EYFS explore mathematical concepts through active exploration and their everyday play-based learning. Children are taught key concepts and develop number sense using a hands-on practical approach. EYFS practitioners provide opportunities for children to manipulate a variety of objects which support their understanding of quantity and number. Pupils explore the 'story' of numbers to twenty through the use of models and images, following White Rose maths.</p> <p>Pupils explore the five counting principles; the one to one principle, the stable order principle, the cardinal principle, the abstraction principle and the order-irrelevance principle. Teachers use a mastery approach to build a solid foundation for further progress. The CPA approach is used when teaching children key mathematical skills. Practitioners allow children time for exploration and the use of concrete objects help to support children's mathematical understanding. Mathematics in the early years provides children with a solid foundation that will enable them to develop skills as they progress through their schooling and ensures children are ready for the National Curriculum.</p>