

Mathematics



Mathematics is a Specific Area in the Early Years Foundation Stage Curriculum.

We know that young children follow a natural developmental process when learning mathematical concepts and ideas. Our sequence of learning supports this and ensures that children experience a broad and balanced delivery of mathematical approaches and ideas.

Mathematics is everywhere! We believe mathematics in the early years should be real, hands-on and multi-sensory. Children develop their mathematical thinking when they can see, touch, feel, explore and weigh concrete resources. The learning environment is full of inspiring, authentic resources that prompt opportunities for children to develop mathematical skills and concepts in every day, real life ways. Maths opportunities are available in all areas of our nursery – construction, water, domestic play, books – to name a few! Children have lots of first hand experience.

Mathematical learning encompasses number and numerical pattern. Shape, space and measures form part of our mathematical learning too. We provide opportunities for comparison, counting, composition, spatial awareness, shape, patterns and measure.

Children learn holistically and follow their interests, not in a specific mathematical direction. However, there are times when maths learning is incorporated in our adult directed activity.

We aim to empower our children to believe that maths is fun and that they are able to be capable and confident mathematicians. By making maths a part of everyday experiences and activities, children often don't realise maths is what they are doing! By normalising this into their play, children will become confident and comfortable with the skills they are learning. Mathematical language is used in our every day.

Curriculum Progression Sequence

Mathematics: Number		
Age/ stage	Our sequence/ progression of learning	Our Unique Approach
Under ones end point	• I enjoy active rhymes • I can explore open ended resources, e.g. heuristic play	• Singing happens throughout the day at lots of times. This is supported with actions and Makaton signing. • The continuous provision provides lots of opportunities for open ended explorative play.
1 year olds end point	• I can notice when a quantity changes with things I am play with, e.g. I will notice if someone takes something away • I enjoy active rhymes and can take part in them	• There are lots of opportunities to explore objects in a range of different qualities • Adults support and model number behaviours in the play, e.g. 'oh no, it's gone! You need more' '1,2,3 blocks' • Singing happens throughout the day at lots of times
2 year olds end point	• I can say numbers spontaneously through play, although these may not be in order or have meaning • I am curious about numbers in the environment – I might notice and comment on them • I can recognise 'how many' instantly when looking at a small group of objects, e.g. 'one nose', 'two feet'	• There are lots of opportunities to explore objects in a range of different qualities, for e.g. 3 big tyres to roll, a basket of pine cones and posting resources, 6 seats at the snack table. • Adults model counting at every opportunity, e.g. counting the children to see how many there are, counting cups and lunch boxes at lunch time, how many children are at family time – this is part of everyday • Practitioners give children opportunities to solve problems, e.g. when building towers or completing puzzles
Rising threes end point	• I enjoy joining in with number rhymes, songs and chants • I know the sequence of numbers and can recite numbers with increasing accuracy to ten (rote counting) • I am beginning to develop understanding of one-to-one correspondence • I can recognise some numerals which are personal to them, for e.g. '3' because they are '3 years old'	• There are lots of opportunities to explore number rhymes and songs and practitioners make this real using puppets and props and song bags, including the children themselves • Adults model counting actual objects and talk about the skills involved when doing so. • Numerals are visible throughout the environment in meaningful contexts, e.g. on the clock on the wall • There are lots of opportunities to explore objects in a range of different qualities, for e.g. 3 big tyres to roll, a basket of pine cones and posting resources, 6 seats at the snack table.
Pre-school end point (school leavers)	• I can count objects up to 10 with one to one correspondence and I know when to stop • I am beginning to show understanding of subitising, with up to 3 objects • I enjoy mark making and make makes to represent quantities or numbers • I can show a number up to 5 using my fingers with instant recall	• A range of lose parts are available (in blocks, transient art) with supporting number resources such as counting mats and sorting trays to experiment and support a deep awareness of number • Practitioners model counting, adding up, subitising, and writing numerals at various points throughout the day • Family time offers opportunities for number games, puzzles and active counting experiences such as what's the time Mr Wolf

	• I can use language to describe quantity or begin to problem solve e.g he has more than me or sharing resources between a group • I can match quantities and numerals to 5	• Numerals are purposefully displayed around the nursery
--	--	---

Mathematics		
Age/ stage	Our sequence/ progression of learning	Our Unique Approach
Under ones end point	• I explore blocks and cups and may begin to fit things inside other things • I like posting things! • I am aware of my immediate surroundings and will reach for things I might have dropped	• Posting provision is continually available to children within the provision and practitioners model and support • Treasure baskets • Malleable play
1 year olds end point	• I am able to fit pieces into an inset puzzle • I enjoy exploring and can fit myself into lots of different spaces	• Continuous provision allows children to explore shape, space and measure in lots of different ways • Adults play alongside children and point out mathematical elements as this arises in the moment , for e.g. supporting with inset puzzles or tower building • The environment allows children opportunity to move and explore in a range of ways. Children have spaces to explore
2 year olds end point	• I can recognise that two things are the same shape • I enjoy filling and emptying containers and can recognise when these are full and empty • I can build towers with a blocks of all different sizes	• Continuous provision allows children to explore shape, space and measure in lots of different ways • Adults play alongside children and point out mathematical elements as this arises in the moment , for e.g. when putting two socks on or when building a simple tower
Rising threes end point	• I am beginning to select shapes for a creating purpose, when constructing, creating or mark making • I am able to name some simple shapes • I explore weight through malleable and tactile play, on a small scale and a large scale • I can use language in my play to describe size and quantity • I can point out patterns I notice in the environment	• There are an abundance of opportunities to explore mathematical concepts through the exciting and authentic learning environment , from sensory play with small pots and jugs to huge buckets full of sand • Children are supported to learn shape both indoors and out – practitioners comment continually • Teaching in the moment supports learning as and when it happens, for e.g. a lunch bag is labelled ‘heavy’ and running is labelled ‘fast’ a tower is labelled as “tall”
Pre-school end point (school leavers)	• I am able to combine shapes to create other shapes, when constructing, drawing or creating pictures • I can problem solve when things don’t quite go right in my construction or making • I can talk about shapes I am using in my play and can name some of them and some of their properties	• Children are supported to follow their creative ideas and approaches with practitioners who engage their mathematical brains through sustained shared thinking– is it long enough? What do you think? How can we extend it? • Perseverance and determination in mathematical challenges are encouraged and modelled, e.g. working out how the tall tower will balance when it doesn’t work the first time

	• I can follow instructions to involve positional language • I can create a repeating pattern in my play	• Practitioners model the thinking of maths out loud, for e.g. 'we've got 3 square plates and 2 round ones' 'I need a big block at the bottom and a smaller block on top' • Adults explicitly talk about pattern in play • Family time opportunities to teach mathematical concepts through pattern making (physical through movement or with objects) and through space games/ hunts/ feely bags
--	---	---