



Thornhill Early Years Foundation Stage School Policy for Mathematics

At Thornhill Nursery School, we aim to support and extend children's learning and competence in mathematics. We aim to provide opportunities for children to use their skills in a variety of situations and for a range of purposes. The children will be supported in developing their confidence and disposition to achieve this. We support the view that mathematical skills and knowledge are essential in enabling children to participate successfully in society. Working in partnership with parents, we hope to set children on a journey of mathematical development. Through planned activities and spontaneous play, to stimulate children's interest in Mathematics and build their knowledge so that they are prepared for the fresh challenges and opportunities of school. Young children learn best when given the opportunity to be independent and self-motivated learners, free to pursue interests and consolidate learning over several days. Equal importance is placed on learning through planned adult-led activities and child initiated learning which arises from a rich, stimulating and easily accessible environment. The Early Years Foundation Stage guidance provides the framework for the curriculum for mathematics.

Aims

The objectives within the Early Years Outcomes framework (A non-statutory guide for practitioners and inspectors to help inform understanding of child development through the early years) for mathematics is organised into two groups:

- Numbers
- Shape, space and measure

Our aims in the teaching and learning of 'Number' are that the children will begin to:

16 to 26 months age band

- Know that things exist, even when out of sight
- Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles
- Say some counting words randomly

22 to 36 months

- Selects a small number of objects from a group when asked, for example, 'please give me one', 'please give me two'.
- Recite some number names in sequence.
- Create and experiment with symbols and marks representing ideas of number.
- Begin to make comparisons between quantities.
- Use some language of quantities, such as 'more' and 'a lot'.
- Know that a group of things changes in quantity when something is added or taken away.

30 to 50 months age band

- Use some number names and number language spontaneously
- Use some number names accurately in play
- Recite numbers in order to 10



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- Know that numbers identify how many objects are in a set.
- Beginning to represent numbers using fingers, marks on paper or pictures.
- Sometime matches numeral and quantity correctly.
- Show curiosity about numbers by offering comments or asking questions.
- Compare two groups of objects, saying when they have the same number.
- Show an interest in number problems.
- Separate a group of three or four objects in different ways, beginning to recognise that the total is still the same.
- Show an interest in numerals in the environment.
- Show an interest in representing numbers.
- Realise not only objects, but anything can be counted, including steps, claps or jumps.

40 to 60 months age band

- Recognise some numerals of personal significance.
- Recognise numerals 1 to 5.
- Count up to three or four objects by saying one number name for each item.
- Count actions or objects which cannot be moved.
- Count objects to 10, and beginning to count beyond 10.
- Count out up to six objects from a larger group.
- Select the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Count an irregular arrangement of up to ten objects.
- Estimate how many objects they can see and checks by counting them.
- Use the language of 'more' and 'fewer' to compare two sets of objects.
- Find the total number of items in two groups by counting all of them.
- Say the number that is one more than a given number.
- Find one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Record, using marks that they can interpret and explain.
- Begin to identify own mathematical problems based on own interests and fascinations

Early learning goal – Numbers

- Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number
- To use quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer
- They solve problems, including doubling, halving and sharing

Our aims in the teaching and learning of 'Shape, space and measures' are that the children will begin to:

16-26 month age band

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- Attempt, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles.
- Use blocks to create their own simple structures and arrangements.
- Enjoy filling and emptying containers.
- Associate a sequence of actions with daily routines.
- Beginning to understand that things might happen 'now'.

22 to 36 months age band

- Notice simple shapes and patterns in pictures.
- Begin to categorise objects according to properties such as shape or size.
- Begin to use the language of size.
- Understand some talk about immediate past and future, e.g. 'before', 'later' or 'soon'.
- Anticipate specific time-based events such as mealtimes or home time

30-50 months age bands

- Show an interest in shape and space by playing with shapes or making arrangements with objects.
- Show awareness of similarities of shapes in the environment.
- Use positional language.
- Show interest in shape by sustained construction activity or by talking about shapes or arrangements.
- Show interest in shapes in the environment.
- Use shapes appropriately for tasks.
- Begin to talk about the shapes of everyday objects, e.g. 'round' and 'tall'.

40-60 months age band

- Begin to use mathematical names for 'solid' 3D shapes and 'flat' 2-D shapes, and mathematical terms to describe shapes.
- Select a particular named shape.
- Can describe their relative position such as 'behind' or 'next to'.
- Order two or three items by length or height.
- Order two items by weight or capacity.
- Use familiar objects and common shapes to create and recreate patterns and build models.
- Use everyday language related to time.
- Begin to use everyday language related to money.
- Order and sequences familiar events.
- Measure short periods of time in simple ways

Early learning goal – shape, space and measures

- Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems
- They recognise, create and describe pattern
- They explore characteristics of everyday objects and shapes and use mathematical language to describe them



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Key features of are mathematics teaching

There are opportunities for children to learn Maths throughout the EYFS (both inside and outside) – through both planned activities and the self-selection of easily accessible quality maths resources. Children are just as likely to access the Mathematics curriculum through cooking activities in the kitchen, building activities in the construction area or in the garden. Whenever possible children's interests are used as a vehicle for delivering the curriculum, for instance an interest in dinosaurs may give rise to sorting, counting and recording the number of dinosaurs in small world play. Staff support children's learning through planned activities but also value and support self-initiated mathematical learning.

Appropriate scaffolding and challenge is provided by all staff to support and extend children's learning. Staff model a rich mathematical vocabulary and use practical situations as they arise as problem solving exercises. Children who use a means of communication other than spoken English are supported in developing an understanding of mathematical language and concepts, through use of their home language and Makaton signing etc. Staff understand that some mathematical concepts, such as counting with 1:1 correspondence, are acquired slowly and can come and go. Adult encouragement and the provision of opportunities to practise these skills throughout the EYFS will ensure that they are eventually firmly embedded and provide a secure foundation for future learning. Differentiated activities meet the needs of children of different abilities and learning styles – for example number action songs to meet the needs of more physical or kinaesthetic learners. Careful observation and tracking enables staff to monitor children's progress, and that of groups of children, and plan for the next stage in their learning.

The teaching targets for the age band

- 16- 26 months, 22-36 months and some 30-50 are taught in afternoon nursery
- 30-50 months and some 40-60 months are taught in morning nursery
- 30-50 months are taught and revised in reception
- 40-60 months and the Early Learning Goals are taught in reception

Recording and Assessment

Lesson observations, assessment sheets and evaluations are used to assess children's learning and these are also used to inform future planning and next steps. As a school we use Target Tracker as a format for recording information and further progress throughout the year. Children's records in Target Tracker are updated regularly throughout the term. This also keeps account of children's progress in Literacy over each academic year.

The co-ordinator for Mathematics is Mrs Patricia Kuevi

The EYFS Leader is Mrs Ami Henkes

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