



Westfield Nursery School Mathematical Development Policy

Vision

At Westfield Nursery School we aim to deliver against our vision: inspired beginnings and outstanding futures.

Children's mathematical development occurs as they seek patterns, make connections, and recognise relationships through finding out about and working with numbers and exploring shape, space and measure. Under the EYFS Mathematics is a specific area. Specific areas include essential skills and knowledge for children to participate successfully in society. (EYFS 2017)

Rationale

We believe that mathematical learning is developmental and takes place over time. The children will learn best when they feel happy, and in a safe, secure environment. They learn most effectively if given the opportunity to learn through play exploration, active learning, creating and thinking critically. They learn best through first hand experiences in an environment that allows for opportunities to use, understand and record numbers. Children must also have the support and encouragement to explore shape, space and measure. This is both in the inside and outside environment.

Guidelines for implementation, in the main nursery and bumble bees.

Early year's practitioners should (both inside and outside):

- Have a positive attitude to mathematical development in children.
- Have a good understanding of the learning outcomes for mathematical development in the EYFS document.
- Should ensure that they have knowledge of current trends relating to mathematical learning in early years.
- Ensure that planned small group activities are provided to encourage mathematical development, and that they activity has differentiated learning outcomes to meet children's individual needs.
- Be aware that mathematics does not depend on specific mathematical resources but on children having the opportunities to develop mathematical concepts and understanding.
- Ensure that there are a variety of stimulating and appropriate mathematical resources available both indoors and outdoors, many of which may be open ended and flexible in their usage and are on a large and small scale.
- Ensure that appropriate resources are easy for children to access and to find.

- Ensure that they have a good understanding of how ICT can promote children's' mathematical development.
- Model mathematical language and mathematical recording.
- Have a secure knowledge of the resources available, and to ensure that all the resources are used, not just the more familiar ones.
- To have the opportunity to challenge, extend and make sense of their own learning.

Guidelines for implementation – Number

Early years practitioners should provide opportunities for children to (both inside and outside):

- To facilitate learning by planning experiences and activities around the EYFS mathematical statements.
- Record and make marks to represent numbers.
- Provide resources that allow children to make comparisons, 1:1 correspondence, count, match, sort and to be able to select objects from a group when asked, eg, I need one more etc.
- Use language of quantities such as more, and a lot.
- Understand that a group of objects changes in quantity when something is added or taken away.
- Through play to use number names and number language spontaneously.
- Represent numbers using fingers, marks on paper and other mediums such as sand, shaving foam and paint.
- Estimate how many people, children, objects they can see and to check by counting them.
- Begin to use the vocabulary involved in adding and subtracting.
- Begin to identify own mathematical problems based on own interests and fascinations.
- To hold appropriate workshops for parents/ carers to attend, to give information leaflets to parents to aid their knowledge of activities they can do at home with their child.
- Through message board children should have the opportunity to: count, estimate, total and record numbers.
- The use of mathematical vocabulary relating to number.

Guidelines for implementation – Shape, Space and Measure

Early year's practitioners should provide opportunities for children to (both inside and outside):

- Facilitate learning by planning experiences and activities around the EYFS mathematical statements.
- Explore and notice different patterns in pictures.
- Use the language of size, and categorise objects according to properties such as size, shape and type.
- Understand some talk about immediate, past and future, e.g. before, later, or soon.
- Anticipate specific time-based events, such as nursery routine, eg message board, tidy up time, snack time, home time. To use the language of time.
- Explore shape and space of environment, and to show an interest in playing with shapes and making arrangements with different objects.
- Become interested and notice different shapes in their own environment. To use the language of shape, such as round and tall. To begin to use the mathematical names for solid 3D shapes and flat 2D shapes.
- Use positional language, such as in front of, on, under, behind, next to.
- Order items by length, height, weight and capacity.
- Become familiar with the use of everyday language related to time and also to money.
- During Message Board children should have the opportunity to: name 2D/3D shapes and to talk about the shapes they find in their environment.
- The use of mathematical vocabulary relating to shape, space and measure.

Resources

A mathematical resources cupboard is situated in Butterfly Class story room and has a wide variety of resources to aid mathematical development. All staff should have a good knowledge of the resources on offer. Resources must also be available in each room and outside area that children can independently access to further their development in the aspects of mathematical development, such as number and shape space and measure.

Staff to ensure that they encourage children to access the interactive mathematical resources in the outside maths cabinet and designated area. Resources to be rotated regularly to ensure children remain engaged.

Children/Staff should be encouraged to share in the responsibility of the equipment and have clear expectations with regard to storage, use and care.

It is everyone's responsibility to ensure that all resources are kept in good working order, returned complete and are appropriate for the children's stage of development.

Equal opportunities

All practitioners must have high expectations of what the children can achieve regardless of gender, ability, race or cultural/ social backgrounds. Any observed inequality such as an activity only being accessed by a particular group, needs to be discussed and addressed. It is important to consider the cognitive and English language abilities of the children for whom English is an additional language and for children with special needs. Safety of all children when using mathematical equipment and exploring their environment is the responsibility of all members of staff, both inside and outside.

Working with parents/carers

- Parents will be invited to attend stay and play days with a mathematical focus.
- Parents will be encouraged to view our mathematical parent resource folder (situated in the entrance library).
- Parents will be encouraged to understand the importance of the indoor and outdoor environment when promoting Maths.
- Parents will be encouraged to promote Maths within the environment, outside of Nursery.
- Maths challenge sheets and mathematical rhymes will be sent home for children to complete and learn with their parents/carers.
- Shape of the week will be on display on our parent notice board.

Monitoring and Evaluation

It is the subject leader's responsibility to monitor, evaluate and implement necessary changes to ensure effective provision of mathematical development opportunities, this is through regular scrutiny of planning, assessment, data, learning walks, observations and feedback from other members of the nursery. Subject Leader and Support will attend relevant training and will share new knowledge in staff meetings and keep CPD up to date.

Conclusion

The implementation of this policy will ensure all children at Westfield Nursery School reach their potential in Mathematics.

Mathematical Leader is Christine Begley. Support: Emily Pratt.