St Francis’ Nursery Unit
Early Mathematical Experiences Policy

We the staff of St Francis’ Nursery Unit recognise that mathematical concepts and skills are important for everyday life and that these develop slowly in the young child. Early mathematical experiences are vital in the early years and form the foundation for later mathematical development.

Nursery staff need to build on the mathematical experiences the children will have had at home and seek to extend these further. Therefore maths in the Nursery is largely based on practical activities and experiences.

It is our aim that all areas of play both indoors and outdoors in our setting will promote the development of early mathematical concepts and skills in an enjoyable way, and so instil in the children positive attitudes towards mathematics.

We recognise that a great deal of early mathematics relies on understanding and using new mathematical language associated with an increasing awareness of number, order, shape, space, size, quantity, time, pattern and relationships. Throughout the day we aim to ensure that the children are immersed in mathematical language which we use as part of our natural interactions with the children.

During play and other activities and routines in the Nursery, we aim to give the children opportunities to sort, match, compare, classify, count and make pattern and sequences, using a wide range of resources including the computer. We also aim to teach lots of number songs and rhymes based on our monthly topics as well as playing circle games and telling stories.

Through their play and other experiences including work on the computer and ipad in the setting we aim to develop the children’s understanding of:

**Number**
- We read stories that have an element of number in them, such as The Three Little pigs.
- We teach number songs and rhymes associated with the topics, such as “1,2,3,4,5 Once I caught A Fish Alive” and “5 Little Leaves”.
- We play circle games such as, “There is one in the circle…”
- We limit play areas to specific numbers of children, such as only 4 children in the Home Area or at the water tray.
- We encourage the children to help set the snack table and set their own place for dinner which involves a degree of counting.

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- We encourage the children to understand and use ordinal numbers throughout the day, for example asking each row to set their tables at dinner time, front row first, middle row second and back row third.
- We provide simple games which involve an element of counting.
- We make children aware of the numbers written around them on everyday materials.
- We give the children simple instructions which may require them to count such as “get me two cars please” or “take two sweets please”.
- Play number games on the computer and ipad.
- In Term Two & Three we provide number puzzles and encourage children to take part in counting activities at a Mathematical Area.

**Shape**

- We encourage the children to observe and talk about different shapes in the natural environment, such as leaves and worms.
- We provide the children with a wide range of materials to build with, such as Interstar, Lego, Duplo Lego and Large wooden blocks, encouraging the children to talk about shape and size.
- We encourage the children to talk about the shape of everyday objects used in the setting, for example a plate is a circle and the door is a rectangle.
- We provide the children with a wide range of recycling resources to make models with and encourage the children to use language such as “the kitchen roll tube is a cylinder”.
- We provide a range of resources, such as Tap Tap and magnetic shapes to create models and pictures.
- We provide shape games such as “Pass the Bag” and shape dominoes.
- During all creative work we draw the children’s attention to the shape of the resources being used, for example a square page.
- We cover the a topic on “Shape” in January.
- We provide the computer and ipad to play Shape Games on.

**Space**

- Through building with large blocks and other construction materials both inside and out we aim to develop the children’s spatial awareness.
- Through music and movement activities we aim to help each child explore his/her own personal space both indoors and out.
- Through all activities we aim to develop an awareness of safety and the need for each child’s personal space.
- On the mat areas we allocate each child his/her own space, with his/her symbol on it.
- We play games which require the children to find a space.

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• When the children ask for a resource to play with that has not been planned for that day, they are asked to make space for it before taking it out, this may require putting other resources away.
• We use lots of prepositional language throughout the day, such as, in, out, under and play simple games to reinforce this language.
• Each area of play has its own space.

**Size and Quantity**

• We provide activities for, matching, sorting, grouping, comparing and contrasting according to size and quantity.
• Through activities we use and promote language of measure such as small, big, long and short.
• We use and promote language of mass, such as heavy and light.
• We use and promote language of volume, such as full and empty.
• We use and promote language of quantity, such as more, less, the same as.
• We use and promote language of comparison and order, such as small, smaller and smallest.
• We provide the computer and ipad to enhance learning on size and quantity.

**Pattern**

• We provide a range of resources for making patterns, such as shells, buttons and stones.
• We encourage the children to make patterns with beads, cotton reels, pasta, flower mosaics, shapes and buttons.
• We encourage the children to copy, continue and create their own patterns.
• We encourage the children to talk about patterns they see in the environment, such as flowers, minibeasts and animals.
• Through music activities, songs and rhymes and “Music Express” activities we help the children to become aware of the patterns in sounds and songs and rhymes.
• We provide the computer and ipad to play pattern making games.

**Sequencing/Time**

• Through our daily routines the children develop a sense of time.
• We provide the children with activities that require the children to sequence, such as dressing the dolls.
• We talk about the seasons, events and festivals that are coming up, plant seeds and bulbs to develop an awareness of the passing of time.
• We use sand timers and countdown clocks for turn taking, for time on the “Thinking Chair” and for giving warnings, for example for going outside.

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• We provide simple sequencing games.
• We tell stories that begin with “Once upon a time…”.
• We encourage then children to retell stories they have heard in the setting in sequence.
• We encourage the children to recall and retell their own personal stories in sequence.
• We encourage the children to recall past events.
• We use and promote language such as today, yesterday, tomorrow, time to, soon, after, later.
• We use the computer and ipad to reinforce learning on Sequencing and Time Relationships

• We provide activities for, matching, sorting, grouping, comparing and contrasting.
• We encourage the children to sort at tidy up time.
• We encourage the children to match objects together and make associations, for example the dustpan and brush go together.
• We provide lotto games and association games that require matching, sorting, grouping and classifying skills.
• We encourage the children to explore links stories such as “The Three Little Pigs”.

See Monthly Areas of Learning and Areas of Play plans.