Reviewed January 2026

Strong Close Nursery School

Mathematics Policy

Rationale

"*Research on children's learning in the first six years of life demonstrates the importance of early experiences in mathematics. An engaging and encouraging climate for children's early encounters with mathematics develops their confidence in their ability to understand and use mathematics. These positive experiences help children to develop dispositions such as curiosity, imagination, flexibility, inventiveness, and persistence, which contribute to their future success in and out of school"*

Clements & Conference Working Group

Mathematics is a highly inter–connected discipline critical to science, technology and engineering and necessary for financial literacy and most forms of employment. Developing a good understanding of mathematical concepts is therefore essential in enabling children to participate successfully in society and in understanding their world. A high-quality mathematics education will support children by developing a strong grounding in number so that all children can develop the building blocks to excel mathematically. We will provide frequent and enjoyable opportunities to build and apply this understanding through a variety of activities such as using every day concepts, like counting steps, or using tens frames for organising counting as well as opportunities to develop their spatial reasoning skills including shape, space and measure. The children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.

Children begin to explore mathematical concepts through their play from an early age. This playful approach should continue in nursery. It ensures their developing knowledge and understanding is grounded in concrete experiences, which are important building blocks for future learning.

"It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes."

Statutory Framework for the EYFS Educational Programme.

To provide effectively for the learning, interests and needs of all our children we will use the 'Statutory Framework for The Early Years Foundation Stage' to inform our practice. The seven key features of effective practice from the non-statutory Development Matters will be at the heart of our day-to-day practice. We recognise the individuality of all children and the need to nurture their confidence, capabilities, and independence. Our curriculum will reflect the needs and interests of our children and we will develop more in depth learning through schemas, projects, real world experiences and repeated and motivating activities. To this end we will ensure that our practice reflects the characteristics of effective teaching and learning; Playing and Exploring, Active Learning and Creating and Thinking Critically. Our children that are on or being assessed for our resourced places are assessed using the Developmental Journal resources.

Aims

Our aims set out how we intend to deliver a high-quality curriculum

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- To provide a cross-curricular and whole school approach to the teaching of maths, which is grounded in knowledge and understanding of the subject matter and the most effective ways of teaching and learning.
- To provide a well organised mathematically rich environment indoors and outdoors in which children can experience mathematical ideas in a purposeful way.
- To use the environment to support and develop mathematical learning through continuous provision and enhanced provision that is rich and varied and responds to spontaneous play and children's interests.
- To support children's learning with high quality adult interaction in order to help children use and understand the language of maths
- To work in partnership with parents by sharing information regarding Mathematical development and their child's learning.
- To have a particular focus on the aspects of mathematical development in our planning and assessment
  - Numbers
  - Numerical Patterns
- To ensure that all children are supported through the best possible opportunities to embed strong mathematical skills to make the best possible progress, consolidate their learning over time and narrow the achievement gap.

We will provide a culture that supports children's curiosity, thinking and problem solving

Objectives

Our objectives set out how we implement our aims

- We will develop positive attitudes and interests in mathematical understanding through all children's early years' experiences, including stories, songs, games, imaginative play, the natural and made world etc. by transmitting enthusiasm and enjoyment in the subject.
- We will use children's interests as they occur and develop these in a mathematical direction when appropriate.
- We will plan activities, problems and challenges for groups and individuals.

We will develop a culture where children feel confident to talk to adults and peers "have a go" and not to be afraid to make mistakes. To ensure that all adults model rich mathematical vocabulary with children at all times.

- We will use experiential activities and visual aids to support mathematical learning.
- We will ensure that patterns and connections are developed through daily routines for example snack times

- We will increase staff knowledge about mathematical development through relevant in-service training.
- We will use environmental walks to deepen children's mathematical learning
- We will involve and support parent / carer in our work by sharing individualised, specific and relevant strategies from our schema toolkit, 50 Things to do Before you're 5 app and Tiny Happy People website in relation to mathematics
- We will discuss children and their interests weekly to inform planning, and share at home with parents and carers through our What's Happening to help support and deepen children's learning through play. Half termly planning newsletters are also developed by staff and shared with parents/carers.
- To ensure that children are making the best progress, over time, we will assess their progress and interests termly using Development Matters and the key observational checkpoints including the Developmental Journal materials for those children on specialist places, supported to make smaller steps of progress. The results of these, will inform future planning both at an individual level and also at a curriculum level.
- We will make the most of the opportunities for maths in all that children do. This means taking advantage of opportunities to use numbers where they naturally arise. Numbers can be found in most situation: indoors, outdoors and in the community, like on bus stops or street numbers

The following support the **implementation** of this policy and ensure we monitor **impact**

a. Learning and Teaching Policy
b. Communication Strategies with Children
c. Guidelines for Mathematics
d. Development Matters
e. Developmental Journal documents
f. Assessment Policy and Guidelines

Mathematics Guidelines

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"Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of number to 10, the relationship between them and the patterns within those numbers."

Development Matters Non- statutory curriculum guidance for the Early Years Foundation Stage

These guidelines set out how we intend to implement the aims and objectives of the Mathematics Policy

To support children's learning adults, need to:

N**otice** **Interact** **Extend**

Notice

- At first glance
- Throughout a session
- During a week
- Over time

Interact

- Copying/ modelling non-verbal
- Self-talk
- Parallel talk
- Repeating
- Expanding/extending
- Open-ended questions
- Back and forth interaction

Extend

- Introduce new resources / experiences
- Relocate to a different area
- Research relevant materials e.g., number songs, numbers/shapes in the local area
- Make connections
- Record what children have done, make a book
- Plan with children what you can do tomorrow/next week
- Plan a relevant visit / visitor

Approaches

- Adults show interest in how children solve problems and value their different solutions. They talk about the methods children use to solve a problem in order that they become aware of the strategies they used.

- Adults understand that mathematical concepts are acquired slowly and require practise. Adult encouragement and the provision of opportunities allow children time to practice and consolidate

- these skills. This will ensure that they are firmly embedded and provide a secure foundation for future learning.

- Adults model rich mathematical vocabulary and use practical situations as they arise as problem solving exercises. In order to help children to use and understand the language of maths, all adults should use a common vocabulary.
- Use mathematical language during spontaneous play and daily routines e.g., snack time etc.
- Use rhymes, finger play, songs and stories involving counting on and counting back to help teach the order or sequence of number.
- Encourage children to use everyday words to describe position and familiar routes and locations.
- Demonstrate the language for size, shape, position, measures, weight and capacity in discussions.
- Explore characteristics of everyday objects and shapes and use mathematical language to describe them.
- Provide the opportunity to sequence events, recognise, create and describe patterns
- Count informally for fun during a spare minute of the day.
- Encourage children to link numerals and amounts and understand one more / one less.
- Use a cross curricular approach which explores mathematics through different context, including schemas, story books, puzzles, puppets, songs and games Tell fairy tales and have pictures of the characters to count or act out the story and count the characters together e.g., gingerbread man – how many are chasing the gingerbread man now?
- Help children to count accurately by initially putting items in a line so that they do not count them twice and to be able to understand the last number reached tells them how many are in total. (Cardinal principle)
- Have areas where children can sort, count and match objects, where they can explore the properties of objects, where they can weigh, measure and explore pattern etc.
- Make number lines available for reference and encourage children to use them in their own play.
- Encourage children to represent problems and record what they have done in their own way e.g., by drawing their own symbols and marks, tallying or numerals
- Providing a range of activities, some of which focus on mathematical learning and some which enable mathematical learning to be drawn out e.g., exploring schemas, shape, size and pattern during block play.

Ensure that the teaching of mathematics builds on what children already know.

- Make books/ displays about schemas, shape, time and measure: using natural objects/ collections for pattern work, sorting, comparing amounts; shapes found in the environment; long and short things; things of a specific length; and ones about patterns, or comparing things that are heavier or lighter.

- Ensure children's writing/mark making is displayed. This is very motivational for children and provides an opportunity to demonstrate the importance of early mark making to parents and carers. **Please see the school display policy and guidelines**

- Observe children's mathematical development in all areas and experiences.

- Make suggestions to keep the play going, where appropriate and encourage children talk about what they are doing and develop a culture where they are not afraid to make mistakes

- Ensure that observation and assessment procedures inform long term, medium term and short-term planning. This should be done by identifying individual needs in the short term, areas of learning that require focus in the medium term and in the longer-term organisation, resources and training needs.

- Use environmental learning walks to show patterns and numbers in the natural environment.

Useful references and related documents

- Department for Education: The Statutory Framework for the Early Years Foundation Stage 2021
- Development Matters and Developmental Journals

For the latest up to date research and useful information to support mathematical teaching and learning please refer to the Education Endowment Foundation website:
https://educationendowmentfoundation.org.uk/tools/guidance-reports/early-maths