

GREAT COATES VILLAGE NURSERY SCHOOL

POLICY FOR **MATHEMATICS**

Reviewed every 3 years.
Autumn Term 2025
To be reviewed Autumn Term 2028

INTRODUCTION

We live in a mathematical world. Every day we all face mathematics in various forms and these are our reasons for teaching mathematics in the nursery. Mathematics is a universal language that enables an understanding of the world and is an essential part of the curriculum. Children need to be confident, skilled and resilient mathematicians. We need to lay the foundations on which children can build secure and firm mathematical concepts, so that they can make sense of the world and best use of the opportunities they encounter building a problem solving culture underpinned by self-belief. So we need to focus on core content as children play, explore and be active in their learning, creating and thinking critically. This policy outlines the purpose, nature and management of Mathematics in our school.

The policy reflects the consensus of opinion of the whole teaching staff and has been drawn up as a result of the implementation of the Early Years Foundation Stage (EYFS) Document in September 2008 and subsequently the revised EYFS Sept 2012 and now the revised EYFS 2023.

The Governors initially approved this policy at their meeting in November 2008

The implementation of this policy is a requirement and the responsibility of the whole staff, in order to achieve the agreed objectives.

1. What Mathematics means for the Children

Mathematical Development (Maths) is now one of the 'Specific' Areas of Learning & Development.

Here at Great Coates Village Nursery School we aim to 'foster the love of maths.' Children need to not be afraid to make mistakes and have a positive attitude in mathematics. We will strengthen the teaching of early mathematics so children have a strong and confident foundation in number with a secure base mostly to five so that the children are ready for the next phase in their educational journey. Current mathematical pedagogy highlights the importance of enhancing children's ability to see small quantities without counting as they explore relationships between quantities. Mathematics takes place everywhere and should be embedded as 'real life' to begin to develop and understand the number system. Children need to be able to apply their understanding of number through problem solving.

Children who really understand mathematical understanding at a mastery level will show you in their play, by talking and showing you.

Mathematics will occur in many forms within the Nursery and it is not seen as an isolated subject. It involves adults supporting children as they develop their understanding of Mathematics in a broad range of contexts both indoors and outside. Through planned progressive and spontaneous activities, children are able to explore, enjoy, learn, practice and talk about their experiences, understanding and skills in order to gain confidence and competence to use them.

‘Mathematics involves providing children with opportunities to develop and improve their skills in subitizing, counting to ten, understanding and using numbers, calculating simple addition and subtraction problems: and to describe shapes, spaces and measures’.
(Extract from revised EYFS Sept 2012) and the revised EYFS 2023

‘Children’s mathematical development occurs as they look for patterns, make connections and recognise relationships through finding out about and working with numbers and counting, with sorting and matching and with shape space and measures.’

2. Aims

To establish firm foundations for the children to develop their knowledge, skills, concepts attitudes and confidence through the provision of well planned experiences, alongside spontaneous opportunities, in a stimulating and secure environment.

3. Entitlement

All children will have access to: -

- ❖ A range of Mathematical activities, which may be planned or spontaneous, resources which are relevant, appropriate and challenging to the development of each individual child, including those with special needs, and which consider and recognise the skills children bring with them from home.
- ❖ A caring ethos in which all young children feel secure, valued and confident with their mathematical skills, and where motivation, eagerness and enthusiasm to learn are fostered and encouraged.
- ❖ An environment which is organised with due regard to the health and safety of young children whilst offering opportunities for exploration, play and well planned and assessed activities which reflect good early years practice.
- ❖ An environment where each child is viewed as an individual with specific needs being met in appropriate ways and with individuality being encouraged.
- ❖ An environment where independence is fostered so that each child is offered the opportunity to reach their full potential, both in this area of the curriculum and in life.

4. Implementation

a) Organisation

Our philosophy is based on developing confidence and self-esteem by providing an approach, which is geared to the specific needs of young children. Emphasis is on first hand experiences which view talk and play as important media for learning, and which build on what the child can already do, and what he/she already knows and understands. We organise the children's learning and move them forward in their development through

one-to-one interaction, input in small groups, as well as whole class and a whole school approach where appropriate. It is our intention to encourage self-discipline and independence. In preparing young children for life skills it is important that they learn to be independent and able to find appropriate resources for an activity, to carry out the activity and to clear away afterwards. The organisation and layout of the classroom is therefore very important. A sound framework for Mathematics, based on Development Matters element of the EYFS 2012, and now the reviewed EYFS 2021 is required to ensure that all children develop the necessary skills, concepts, attitudes, knowledge and understanding in this and all areas of learning. However, we acknowledge prior knowledge which the child brings to Nursery, based on real life experiences. In order to ensure we build on this, numerals and their corresponding values are permanently on display in the environment.

Our Mathematical programme aims to encourage an enquiring mind, a problem-solving approach, adaptability, and learning through discovery, including visualisation. Practical activities planned in many areas of learning offer a ready basis for mathematical understanding and provide the foundation for mathematics. An appropriate language is built up in these activities and children are able to apply their existing knowledge and explore new concepts. These activities will eventually lead to a more structured approach when the individual is ready. Providing mathematical vocabulary from the offset is paramount both now and in the next stage of education.

Mathematics is now developed through two main elements:

- ❖ **Numbers to ten** – is about children being able to recognise small quantities quickly known as subitizing, this important skill is a precursor for counting reliably from 0-5. As children begin their journey of acquiring a deeper understanding of numbers to 10, rather than rushing them on. Early experiences should include comparison, counting, cardinality, and composition, including doubling, halving and sharing. (The new revised EYFS 2021). As children work towards automatic recall of number bonds.
- ❖ **Shape, Space and Measures**, – with more emphases now on spatial reasoning (The new revised EYFS 2021), supporting the moving from “embodied experiences to more abstract thinking” (Chilvers 2021). It is about how children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. It is also about how they recognise, create and describe patterns and explore characteristics of everyday objects and shapes and use mathematical language to describe them.

b) Delivery

The learning experiences of children in their early years form a good, broad foundation for developing their education. How children learn, their attitude to learning and the building up of self-disciplined learning are equally as important as what they learn. Therefore, it is the role of all early years educators to nurture their eagerness and positive attitude to learning. Children need concrete experiences in a wide variety of contexts which then enables pictorial and mastery to be developed further.

In order to achieve this we must give particular attention to the following:

Positive Relationships

- ❖ Give children sufficient time, space and encouragement to discover and use new words and mathematical ideas, concepts and language during child-initiated activities in their own play.

- ❖ Encourage children to explore real-life problems, to make patterns and recognise small quantities quickly. For example. Instead of asking how many we say, “What do you see and what do you notice?” Children need to understand the many ways of making 5 for example and see relationships (number bonds) so that they can recall these confidently and quickly reducing the need to count.
- ❖ Support children who use a means of communication other than spoken English to develop and understand specific mathematical language while valuing their knowledge of mathematics in the language or communication system they use at home.
- ❖ Value children’s own graphic and practical explorations of mathematics.

Enabling Environments

- ❖ Recognise the mathematical potential of the outdoor environment, for example, for children to discover things about shape, distance and measures, through their physical play.
- ❖ Exploit the mathematical potential of the indoor environment, for example, enabling children to discover things about numbers, counting and calculating through practical situations such as counting how many children are in the music area or how many story books a child has looked at today, how many children can access an area according to aprons or chairs, etc.
- ❖ Ensure that mathematical resources are readily available both indoors and outside.

Learning and Development

- ❖ Develop mathematical understanding through all children’s early experiences including through stories, rhymes, songs, games and imaginative play.
- ❖ Provide a range of activities, some of which focus on mathematical learning and some of which enable mathematical learning to be drawn out, for example, exploring shape, size and pattern during block play.
- ❖ Use mathematical terms during play and daily routines.

Activities within the classroom and outside are planned to encourage full and active participation of all children whatever their ability.

Children will have access to the computer and opportunity to use a variety of software, which will develop their mathematical understanding alongside their Information Technology skills and other areas of the curriculum.

All children, regardless of gender, race, or capability, are given equal access to, and encouraged to take part in, all activities. Children are given opportunities to explore and enjoy stories, poetry, music, and art and play materials from a wide range of cultures.

Safe use of equipment, which is well-ordered and easily accessible, is taught and the idea of a safe environment is promoted in all groups.

Mastery Development:

We can support the development of children’s mathematical mastery as they play and explore through six key aspects (Chilvers 2021)

- **Children’s talk... serve and return**
- **Self-regulation and meta-cognition**

- **Children's agency and self-belief**
- **Sustained shared thinking**
- **Balance of Adult-led and Child-led play and activities**

5. Special Needs.

We ensure that all children, including those with special educational needs, have access to a range of activities, resources and experiences that will help them to make maximum progress within all areas of learning and development. The children's rate of progress will vary, as will individual achievement therefore staff will plan activities to ensure that all children have opportunity to reach their full potential. We must be aware of the particular needs of all our children so that we can plan and assess to ensure progression and continuity.

6. Planning & Assessment

Weekly planning is always displayed in the classroom. The planning will detail the learning opportunities for Mathematics which may be introduced by the Key Persons, be enhancements to the continuous provision, spontaneous opportunities instigated by the children or a mix of all three.

Parents have an important role to play in the assessment process. They are invited to attend weekly 'Stay and Play' sessions with their child during the term before their admission which enables them to learn more about the Early Years Foundation Stage. They are asked to complete a 'profile' about their child's achievements before admission to the Nursery.

The Stay & Play sessions also enable Key Persons to begin to gather all important evidence to support baseline assessments, which are completed within the first six weeks after the child's admission date. Baseline assessments enable us to assess the child's stage of learning and development and thus form a starting point for future teaching and learning. Key Persons will continue to gather evidence, to support the children's progress, throughout their time at the Nursery, through quality interactions and recording wow moments using the 'Tapestry' online recording system. Summative assessments are completed six weeks after admission and once every term thereafter. This information is shared with parents at our termly Parents meetings.

7. Background Information

This policy was informed by reference to the Early Years Foundation Stage Guidance 2008 and the revised Early Years Foundation Stage 2012 and now the revised EYFS 2021.

8. Policy Review and Evaluation

The Co-ordinator will review the policy and discuss any amendments with all staff on a bi-annual basis. Any changes will be presented to the governors at the appropriate meeting.

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Policy prepared Spring/Summer 2008 to meet requirements of EYFS

Date policy agreed...November 2008

Policy prepared Autumn 2022 to meet the new requirement of the new reviewed EYFS (2021).

J. Steabler Mathematics Co-ordinator (2022)

S.Jackson Link Governor (2022)

Review Record

- ❖ Policy updated January 2019. Reference to staff Co-ordinator removed.
- ❖ Policy updated April 2019. Linked Governor changed to Sarah Jackson.
- ❖ Policy reviewed and agreed by the Governing Body at the **Pupil Outcomes Committee meeting 07/11/19**
No changes made.
 - ❖ Policy reviewed and revised October 2022 by the Governing Body at the **Curriculum Committee meeting 19/10/22 Changes made in light of reviewed EYFS 2023**
 - ❖ Policy reviewed and revised 6/10/25 by the Governing Body