

# Mathematics

*“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 the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. 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.”* EYFS Statutory Framework, 2021.

**INTENT:** We want children in Pre-school to have a clear understanding of number, particularly 1-5, and to notice number patterns within the environment and be able to look at a small number of objects and instantly recognise how many there are without needing to count. We will ensure children have a broad experience of a range of mathematical concepts as laid out in the Statutory Framework. During the Reception year, we want to guide the children towards achieving a passion for maths by mastering fluency skills.

**IMPLEMENTATION:** In Early Years we want to develop fluent mathematicians who have a deep conceptual understanding of number. We ensure that they are able to provide explanations, give reasons for their answers and tackle future challenges by:

- Providing opportunities for children to practise, rehearse and apply mathematical knowledge and skills.
- Encouraging children to investigate numbers by exploring their characteristics and patterns, understanding how they can be manipulated using different operations.
- Encouraging them to think logically so that they can make connections and solve problems.
- Fostering children’s acquisition and use of mathematical vocabulary to justify and explain their ideas.

Children are introduced to new concepts through small, adult-led focused groups and will be able to deepen their knowledge and understanding through the enabling environments and quality interactions with EYFS staff. During their Reception year, children will develop strong foundations in number and numerical patterns through whole class sessions, adult-directed activities, independent activities and through play with a range of manipulatives. In Reception teaching will be guided by Numicon Firm Foundations (approximately 4 sessions a week) as well as play opportunities.

During the planning process careful consideration is given to the next steps in learning. The provision is equipped with relevant maths resources to enable children to practise and apply their mathematical knowledge and skills.

- The classrooms are equipped with open ended resources that promote a conceptual understanding of number encouraging children to become confident and fluent.
- The resources are thoughtfully organised on open shelves so that children can see what and how many are available, access them independently and tidy up time can be optimised as an opportunity to practise and rehearse number skills.
- Children in Pre-School and Reception use 5 and 10 frames to self-register every day - this develops their number sense and subitising skills

Adults appreciate that maths can be taught everywhere and that the conceptual understanding of number is the basis for all other mathematical learning. They have a sound knowledge and deep understanding of mathematical concepts and vocabulary to enable them to teach the necessary foundation skills which children need to become fluent mathematicians.

Within the environment adults capitalise on every opportunity to present mathematical problems for children to think about and solve. They support children in practising and applying their mathematical knowledge and skills by encouraging them to talk about their thinking, provide explanations and give reasons for their answers.

**IMPACT:** Children will be confident mathematicians, noticing number and patterns, being able to discuss what they see. We will monitor the impact to ensure children are 'on track' in the developmental age band 3 -4 years. During Reception, children will make links between the concepts they have learnt, to apply new learning and solve problems, building fluency skills through a mastery approach.