

Lyngford Park Mathematics Curriculum Statement



Intent

At Lyngford Park we work in partnership with the Boolean Maths Hub to develop and promote a mastery approach to mathematics within our school.

We believe that mathematics is essential to everyday life. Children need to have the ability and confidence to be able to use and apply mathematical concepts at the required level to help them succeed and reach their full potential.

We aim to provide a high-quality mathematics education with a mastery approach so all children can:

- become **fluent** in the fundamentals of mathematics;
- **reason mathematically**;
- **solve problems** by applying their knowledge of mathematical concepts;
- **achieve the outcomes required** to enable them to access future learning;
- become **confident mathematicians with a love of math**.

Our intention of teaching for mastery is to give **all** pupils (including those with SEND) access to **equitable** classrooms; classrooms where pupils can all participate and be influential, and classrooms where pupils are encouraged and supported to develop a deep connected and sustained understanding of the mathematics being explored.

As a result of teaching and learning in mathematics, our aim is that pupils will be able to meet the key aims of the National Curriculum for math.

In our school we aim to promote children's curiosity and enable them to safely take risks and learn from first-hand experience wherever possible. Our primary focus is to support the children to become fluent in mathematical understanding from the most basic level so that they can build upon their own understanding. We aim to enable our children to develop conceptual understanding, recall of number facts and patterns and apply their knowledge rapidly and accurately. We aim to promote children's ability to reason through opportunities to discuss their thinking and understanding. This emphasis may result in less written work but much deeper understanding. We promote problem-solving and solution finding. This is not only true in mathematical learning but in almost all aspects of school life.

We aim to support children to make progress at their own pace. Often misconceptions cause greater difficulties at a later stage of learning. We will promote opportunities to pre teach children who may need it or offer same day intervention to help those children who need extra time on the skill to ensure a deep understanding. We provide opportunities for children to revisit their thinking to ensure they feel secure in their understanding and able to move confidently on to next steps and challenges.

Implementation

All children receive a daily math lesson which follows the mastery approach. As a school, we are developing our practice to include the 'Five big ideas': coherence, variation, representation & structure & mathematical thinking.

Each lesson focusses on a series of 'small steps' which support the children to master a clear learning objective. Our lessons are clearly modelled by the teacher, followed by guided practice which allows children to try with the support of the teacher and/or learning support assistant. Feedback is given as a class before children progress to activities which involve peer and independent practice. A range of manipulative resources and pictorial representatives are used to support the children's understanding of the mathematical concept being taught.

When children have mastered a skill within a lesson, deepening activities enable those children to extend their learning by exploring it at greater depth and in a range of contexts.

Each lesson can include elements of: fluency, to practise or consolidate skills; reasoning, to deepen understanding; and problem solving, to apply skills depending on the objective being taught and the understanding of the children.

Currently teachers are using the NCTEM resources which include the ready to progress, curriculum planning and ready to progress assessments. Teachers are guided by the schemes of work provided by the Maths Hub to ensure full curriculum coverage including fluency, reasoning and problem-solving opportunities are addressed within lessons. Teachers also carefully select resources from other schemes of learning to supplement those from the NCETM. Other online resources are available via Edshed which the children have access to both at home and in school.

Whole-class teaching is provided in all single-year classrooms. Differentiation is most often achieved through the support given to children to gain a secure grasp of the concept being taught.

Every classroom has a range of practical apparatus to support children's learning, with additional resources stored centrally.

In addition to the daily math lesson, the Mastering Number program is used throughout the school. In reception, Mastering Number is used as the adult-led provision for math and is followed up with a range of child-led activities which support the learning. In key stage one, Mastering Number is taught to the whole class (in addition to their daily math lesson) to improve their fluency and recall of number facts. Throughout key stage two, Mastering Number is used as an intervention for those children whose recall of number facts is not yet secure. This could be as a whole-class intervention or small group interventions.

The use of Maths Frames improves children's fluency of times tables, working towards the multiplication checks in Year 4. A new whole-school approach to the teaching and learning of times tables is currently being developed.

To ensure that children remain fluent in concepts which have previously been taught during the current and previous academic years, children in years 1 – 6 have daily retrieval tasks known as Early Bird Maths.

Our mastery approach enables children to use their fluency, depth of reasoning and problem-solving skills across all areas of math and other curriculum areas.

Impact:

The impact of our mathematics curriculum is that children know that math is a vital life skill that they will rely on in many areas of their daily life. Children have a positive view of math due to learning in an environment where math is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions. They know that it is reasonable to make mistakes because this can strengthen their learning through the journey to finding an answer. Children are confident to 'have a go' and choose equipment and pictorial representations they need to help them to learn, along with the strategies they think are best suited to each problem. Our math books evidence work of a high standard of which children clearly take pride. The components of the teaching sequences demonstrate good coverage of fluency, reasoning and problem-solving. Our feedback, pre-teaching and same-day interventions support children to strive to be the best mathematicians they can be.

Teachers carry out termly assessments to track attainment and progress within classes as well as throughout the school. Assessments provide in-depth analysis of understanding in all topic areas. The termly assessments enable us to analyse results across the school and make accurate plans accordingly. We moderate our books both internally and externally to ensure that our standards remain high, and children are working in line with their peers from other schools.

We want all children to use mathematical vocabulary to explain their ideas and use methods independently, showing resilience when tackling problems. By the time they move on to the next stage of education, we aim for our children to be able to talk about mathematical problems, suggest methods and prove their working out, demonstrating a flexibility to apply and move between contexts and make connections in their knowledge and understanding. We want our children to be confident mathematicians with the skills to prepare them for the future.