

Lane Green First School

Mathematics

Vision for Mathematics

Intent

Our mathematics curriculum aims to foster a love for maths in all learners through engaging, challenging and varied opportunities. At Lane Green First School, we provide meaningful and relevant experiences which allow children to become methodical, resilient life-long learners and apply their mathematical understanding in real life contexts. We embed a deeper understanding, relational understanding of maths by utilising a concrete, pictorial, abstract approach, guiding children on their path to mastering mathematical concepts. Children at Lane Green First School are encouraged to become risk takers through exploration and discovery.

Implementation

A **CPA (concrete, pictorial, abstract) approach** is incorporated into planning and teaching in order to deepen children's understanding of mathematical concepts and methods, leading children down the path to achieving maths mastery.

Children are encouraged to use both **concrete resources and pictorial representations** to guide them in solving problems.

Children are given the opportunity to **reason and solve problems** regularly; learning is varied and allows for deep and secure understanding.

The school's **agreed calculations policy** for progression in written and mental calculations is implemented across year groups.

To learn mathematics effectively, **some things have to be learned before others**, e.g. place value needs to be understood before working with addition and subtraction, addition needs to be learnt before looking at multiplication (as a model of repeated addition).

Pupils develop **fluency** through practicing key skills, repeating, reinforcing and revising which is all built into planning across the school.

Planning is **well differentiated** to support and challenge children accordingly.

To **challenge** pupils in each mathematical area, teachers plan challenges that require children to deepen their thinking, often through problem solving and reasoning questions.

Same day intervention is provided for children who are not sufficiently fluent with earlier material to consolidate their understanding.

Children practise their **times table recall** and accuracy through daily tables practice, which are progressive across each term and year group.

Mathematical vocabulary is explicitly displayed within the classroom - this is discussed with children and they are encouraged to use it independently.

Children work both **collaboratively and independently** solving problems, which require them to persevere and develop resilience.

Classrooms use working wall displays and more permanent mathematical displays to share **good examples of skills** so that children can use this to support their workings.

Children's mathematical work is **celebrated** during special mentions.

Impact

Planning - Does the planning provide opportunities for fluency, reasoning and problem solving? Does the planning adopt a CPA approach, whereby the children can explore mathematical concepts in a variety of ways? Are questions planned for to support children in mastering a deeper understanding of a range of concepts? Is planning relevant and linked where appropriate to real life contexts? Are tasks differentiated? Is there a clear sequence where children build on prior learning?

Monitoring of planning and books - Does the children's work in books reflect their understanding? Is planning well thought through? Is CPA planned for suitably to ensure resources support the children in understanding different concepts? Is it clear that children have been challenged? Are there a variety of tasks in children's books?

Pupil voice - Do children enjoy Maths? Are they excited by lessons? Do they have a passion for maths? Are they learning and developing their understanding for a range of concepts? Do they feel they have the opportunity to use these skills and apply them? Are children confident in discussing concepts using mathematical vocabulary? Do they enjoy working in collaboration with their peers?

CPD - Are staff confident in their subject knowledge? Do we provide opportunities for staff to share good practise and ask for support? Are staff given feedback following planning/book scrutinies and opportunities to develop their practice? Are we keeping staff updated with any necessary information regarding the Maths action plan?

Environment - Are classroom displays and working walls purposeful? Are they age appropriate? Do they use correct mathematical vocabulary? Do they support the children? Do the children use the displays and working walls? Are there displays of children's maths work up in classrooms? Is concrete equipment accessible in classrooms for children to use?

Data - Is the maths data in line with historical End of KS1 data? Does it show progress throughout a child's school journey? Is the data in line or better than national averages?