

LONG MEADOW SCHOOL

MATHEMATICS POLICY



Date of last review:	January 2025
Date of next review:	January 2028
Type of policy:	Non-Statutory
Frequency of review:	Every 3 years
Governor committee:	Curriculum Committee

Long Meadow School Mathematics Policy

Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at Long Meadow School. The school's policy for mathematics is based on the 2014 National Curriculum. The policy has been drawn up as a result of staff discussion and has the full agreement of the Governing Body. The implementation of the policy is the responsibility of all the teaching staff.

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Mastery in Mathematics

Essentially, mastery in maths is the idea that children can succeed and have a deep and secure understanding of mathematics. **All** pupils are encouraged by the belief that they can achieve.

The benefits of teaching for mastery are:

- children have a solid foundation in concepts that do not need to be re-taught at a later stage
- children have the ability to reason about a concept and make connections, therefore making maths 'easier'
- it can be used as a strategy for closing gaps
- develops confidence and change mind-sets

Teaching for Mastery in Mathematics at LMS

Teaching time

To provide adequate time for developing mathematics skills, each class teacher will provide a daily mathematics lesson. This may vary in length but will usually last for about 45 minutes in KS1 and 50-60 minutes in KS2. Additional shorter mental maths sessions may also be used at various times (i.e. morning maths tasks) and Mastering Number lessons for Early Years, KS1 and Years 5 and 6.

Planning

At Long Meadow, all year groups use the school long term using the objectives from the 2014 National Curriculum as a planning tool. Each class teacher produces a weekly, tailored lesson plan based on the LTP. Weekly plans include clear learning intentions, success criteria, differentiated activities, resources and classroom organisation.

Class Organisation

The Foundation Stage introduces children to mathematics using the mastery in number approach. This enables children to build and develop number sense an essential foundation for children's mathematical development as they move to year 1 and beyond. Embedding the mastery approach equips children with the tools to develop their critical thinking, problem solving, reasoning and being able to explain their mathematical thinking and taking risks in their learning. There are a wide range of practical activities within continuous provision to help children to practice their new skills. This leads to them embedding and consolidating the new learning and using what they already know to extend this even further. This is outlined in their weekly child-initiated learning planning. The children have 4 focus maths sessions a week where there is adult led small group activities and specific focused child-initiated maths challenges throughout the week. In the Foundation Stage during the summer term, the children are assessed using the Early Learning Goals. This is shared with parents and the year 1 team in preparation for the transition into Year 1.

Within all mathematics lessons there will be a good balance between whole-class teaching, group work, whole class activities, paired learning and individual learning.

To develop the mastery approach, whole class teaching is used throughout the school with children working in mixed ability groups. The level of challenge and support will depend on the outcomes from their cold task assessment at the start of each area of maths. Each lesson will also include an Explorer Task that allows children to develop a deeper understanding of concepts taught.

Approach to Calculation

The curriculum outlines the calculation methods that children need to be taught. At Long Meadow, formal written methods are introduced in Year 3. (see Appendix 1 - Calculation Policy).

Out of class work and home learning

The daily mathematics lesson will provide opportunities for children to practice and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These will be extended through out-of-class activities or home learning tasks. These activities will be short and focused and will be referred to and valued in future lessons.

Links between mathematics and other subjects

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experiences out of a wide range of activities and subject areas through a creative curriculum. This will allow children to use and apply mathematics in real contexts. Maths Days happen throughout the year, in which children are able to use and apply their maths skills to a themed problem.

School and Class Organisation

Equal opportunities

All pupils have access to a full range of mathematical learning experiences regardless of ability, gender, race, religion, social background, culture or disability. It is our policy to identify and provide for those children with specific needs, both those who find mathematical concepts difficult to grasp and those who have good mathematical ability.

How we cater for pupils who are more able

Tasks that challenge and allow children to go deeper with their understanding are provided within lessons. Differentiation through support and activities allow children to develop a deeper understanding. When working with the whole class, teachers will direct some questions towards the more able to maintain their interest and involvement. Mixed ability classes allow more able children to develop reasoning skills and communicate mathematical thinking. More able children will not be moved to a higher year group programme of study; opportunities will be given to develop and extend their greater depth skills. Very occasionally, special arrangements will be made for an exceptionally gifted pupil, e.g. they may follow an individualised programme with more challenging problems to tackle. We would also seek external support to meet their needs, as appropriate.

Pupils with special educational needs and individual education plans

Teachers will aim to include all pupils fully in their daily mathematics lessons. All benefit from the emphasis on oral and mental work and participating in watching and listening to other children demonstrating and explaining their methods. However, a pupil whose difficulties are severe or complex may be supported with an individualised programme in the main part of a lesson. Learner Support Assistants play a vital role in supporting less able children during the Mathematics lesson, through individual support during the mental starter and through leading differentiated activities during the independent task. Same day or next day intervention is used as often as possible to close the gaps in the children's understanding as and when needed.

Resources

Each class also has a range of number resources for daily use; whiteboards, digit cards, counters, 100-squares etc. Practical resources are not reserved for the younger or less able children; teachers will look for ways to engage all children in all years with practical maths tasks, using resources to develop their understanding of a concept.

Information and Communication Technology

ICT will be used in various ways to support teaching and motivate children's learning. ICT will involve the computer, interactive whiteboard, calculators and other audio-visual aids. They will however only be used in the daily maths lesson when it is the most efficient and effective way of meeting the learning intention.

Assessment

Ongoing assessment will be part of every lesson where children check their learning against the agreed success criteria. Hot and Cold Tasks are used to assess the progress of each child in each strand of maths as well as the use of Next Day Plenaries (see Marking and Feedback Guidance/Policy).

Teacher assessment will be recorded (at least) termly and analysed using Insight (see Monitoring and Evaluation). At the end of the year children's progress is assessed against the key objectives in the National Curriculum.

Long-term assessments will take place towards the end of the school year to assess and review pupil's progress and attainment. These will be made through compulsory SATs for pupils in Year 6.

Monitoring and Evaluation

The Maths subject leader and the Head teacher will analyse information gained from the teacher assessments and SATs results to highlight strengths and areas for development in each year group. This analysis happens throughout the year using termly tracker assessments, in preparation for pupil progress meetings and at the end of the year when SATs results come back, allowing the SLT and Class Teachers to close the gap between groups and ensure sufficient challenge is provided for all.

The Maths subject leader will monitor the teaching and learning of Mathematics across the school, through learning walks, book scrutiny, planning scrutiny, pupil voice, display work and enriched curriculum books. They will then feedback to staff and Governors on findings.

Management of Mathematics

Role of Maths Subject Leader

- Lead, manage and monitor the implementation of the National Curriculum, including monitoring the teaching plans and quality of teaching in the classrooms.
- Prepare, organise & lead INSET as appropriate
- With the Mathematics governor, keep the governing body informed about the development of mathematics at Long Meadow.

Role of Head teacher

- Ensure that mathematics remains a high profile in the school's development work.
- Deploy support staff to maximise support for the strategy.

Role of Mathematics Governor

- Provide an important link between the governing body, the school staff and parents.
- Ensure that maths maintains a high profile in the school and remains on the governing body's agenda when appropriate.
- Monitor the teaching of the subject with the subject leader
- Keep up to date with local and national developments in maths

Appendix:

1. Calculation Policy