Mathematics Policy

Approved by: C. Scott **Date:** 01.02.2025
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Signed by: Roy Fisher (Chair of Governors) Signed by: Jonathan Clucas (Head Teacher)

“Mathematics is a highly interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas” (NC 2014)

Intent and implementation

At Layton Primary School, we are committed to ensuring all are pupils are able to think mathematically and make clear connections by revising and consolidating key mathematical concepts, and extending their knowledge through application in a variety of contexts; in doing so, pupils make connections between key concepts.

- We plan progressively and methodically to ensure pupils, over time, learn to apply their fluency in and out of context in order to ensure mastery of mathematical understanding.
- We also believe that some mathematics material requires over learning in order to develop fluency and to free up working memory.
- Assessment for learning and formative assessment underpins our teaching philosophy in mathematics; learning is valued above task completion.
- Performance can often be a poor proxy for learning. We value performance over time to ensure children retain mathematical concepts in long term memory.
- We value mathematical thinking. Our aim is to develop mathematicians, not pupils who ‘do maths’
- Dialogic teaching is the conduit through which we teach mathematics. It is essential for learners to explain their thinking in order to develop understanding and mastery of application
- Layers underpin all our learning planning and delivery approaches.
- We believe in a multi objective approach where appropriate, in order that pupils may apply learning across a multitude of mathematical situations. This is planned into all of our teaching and learning.
- High quality assessment for learning ensures application of key concepts
- We utilise both success and failure as opportunities to grow and learn.
- We actively prioritise a mental approach to calculation strategies, supported by manipulatives and written methods which support reasoning. This approach supports children to master basic fluency and frees up working

Planning for Teaching and Learning in Mathematics

Assessment for learning and formative assessment underpins our teaching philosophy in mathematics; such that this is given priority when determining the teaching and learning content to be delivered in the classroom. Alongside this, teachers plan in year group teams following the process below to determine content that will be delivered in the long term (Appendix 1) , medium term (an example is provided in Appendix 3) and short term (refer to the planning process below) using the progression map to identify the layers of learning (Appendix 2).

All explicit instruction ensures children:
REVISE - use assessment for learning to determine where to progress teaching and learning to next.
EXTEND - teach new mathematical knowledge as determined by the layers of learning (progression document)
CONSOLIDATE - give children opportunities to consolidate the new knowledge (problem solving approach)
APPLY - use their new mathematical knowledge and understanding in different contexts (multi-objective approach)
Teachers use responsive teaching strategies to adapt the learning as and when required.

Maths Planning Process for Weekly PPA Sessions

Refer to the Mathematics Policy and Long Term Overview

Pre-learning (week before)
Assessment for learning using questioning and Morning Work to determine the content that needs to be revisited prior to new learning

Identity the main objectives for the week from the half-termly overview. Consider which multi-objective links could be covered?

Identify the layers of learning for the main objective using the mathematics progression document. What will need to be **revised** to support new learning?
What questions will need to be asked?

Plan for new learning such that current mathematical knowledge can be **extended.** (I do, We do, You do/ fluency). Plan for opportunities for children to **consolidate** their new knowledge.

Consider how new learning can be used and **applied** in different contexts.

Assessment

Throughout their time in Foundation Stage, children are tracked in their mathematical progress from the internal baseline assessment undertaken during the Autumn first half term. This facilitates early intervention.

Children undertake statutory assessment tests in mathematics in Year 6 and optional statutory assessment tests are undertaken at the end of Key Stage 1.

In years 1 to 6, the NFER summative Assessments are undertaken at Spring 1 and Summer 1.