



Mathematics Policy

Reviewed and rewritten	October 2026
Next review	October 2029, or earlier when the new national curriculum programmes of study for mathematics are published (first teaching from September 2028)
Policy lead	Mathematics Subject Leader
Read alongside	Health and Safety; Equal Opportunities; Marking; Homework; ICT; Assessment, Recording and Reporting; Literacy; Calculation

1. Introduction

Mathematics teaches us how to make sense of the world around us through developing an ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many people to the development and application of mathematics. Mathematics should be a source of delight and wonder, offering pupils intellectual excitement and an appreciation of its essential creativity.

2. Aims

The school's aim is for all pupils to have equality of opportunity and:

- to promote enjoyment and enthusiasm for learning through manipulatives, explorations and discussion
- to develop logical thinking and reasoning skills through natural curiosity and investigations
- to be able to demonstrate their skills and knowledge and talk about their work using appropriate mathematical language
- to develop confidence in the fundamentals of mathematics, develop conceptual understanding and recall and apply knowledge
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts
- to develop an efficient, reliable, compact written method of calculation for each operation

3. Objectives

- To ensure that all pupils follow a broad and balanced mathematics programme based on the requirements of the National Curriculum, alongside the written calculation policy.

- To ensure that all pupils are provided with interesting and challenging tasks that enable them to achieve standards commensurate with their abilities and potential.
- To ensure that pupils can work individually and collaboratively in groups and within the whole class.
- To allow pupils to develop as independent learners, able to make decisions about their own work.

4. Approaches to teaching and learning

Teachers and practitioners will draw on a range of teaching strategies, techniques and tools, including online resources. Our aims will seek to make learners more aware of the learning processes they are using. Children will develop a range of problem-solving strategies that they consciously apply in a variety of contexts. Teachers recognise the critical role in learning of experiences or interactions with the surrounding environment and manipulatives, and support this by exploratory pedagogic approaches.

Teaching of the curriculum will support individual, paired and group work and will recognise the importance of scaffolding to support learning. In order to master a concept in mathematics, teachers will plan for small steps of progression. Existing knowledge will be built upon using the concrete, pictorial and abstract approach to ensure confidence and that there is a depth of understanding. Teachers will encourage the development of independence through carefully structured learning experiences.

Teachers will aim to:

- plan and provide a balanced experience incorporating the exploration, acquisition, consolidation and application of knowledge and skills, with opportunities to use, extend and test ideas, thinking and reasoning
- share the excitement of learning mathematics and capture children's imagination by showing them the unusual or unexpected; show children how mathematics can be used creatively to represent, measure, predict and extrapolate to other situations
- model for children how to explore mathematics and look for patterns, rules and properties, identify the rules and laws and deduce for themselves when they apply; help children to describe, replicate and use patterns and properties; ensure that they meet both general applications of the rules and exceptions
- give children opportunities to consolidate the mathematical knowledge, understanding and skills they have learned in order to become fluent; ensure that they recognise how their learning builds on previous learning; ensure that they feel appropriately supported and challenged by the work they are set
- build on existing knowledge using the concrete, pictorial and abstract approach
- engage with children's thinking; promote discussion for children to think about their ideas, methods and mathematical representations of the real world; focus on underlying concepts and processes with prompting and probing questions
- demonstrate and promote the correct use of mathematical vocabulary and the interpretation and use of symbols, images, diagrams and models as tools to support thinking, problem solving, reasoning and communication
- provide children with well-directed opportunities to use and apply what they have learned to solve routine and non-routine problems; highlight any properties or patterns they identify or create and make connections to other work they have done; draw on their ideas and model approaches and strategies children can use to support a line of enquiry or to interpret or explain their results and methods, using their own approaches and strategies
- teach children how to evaluate solutions and analyse methods, deciding if they are appropriate and successful; help children to understand why some methods are more efficient than others; provide opportunities to compare and measure objects and identify the extent to which shapes

and calculations are similar or different; develop children's understanding and language of equivalence and deduction to support reasoning and explanation

- embed opportunities to develop mental calculation skills
- display key words on working walls and model the correct use of mathematical words
- periodically identify the knowledge, skills and understanding children acquire, pausing to take stock to review children's learning and how it can be applied to new aspects of mathematics
- model with children how they identify, manage and review their own learning; highlight the learning skills they have acquired and used and draw out how these might be applied across the curriculum
- assist children in making their thinking clear to themselves as well as others, and ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions
- ensure mathematical extensions and challenges to broaden children's understanding and develop reasoning
- provide regular opportunities to learn, recall and apply multiplication facts to ensure they are embedded

5. Early Years Foundation Stage

In Reception, mathematics is taught in line with the statutory Early Years Foundation Stage (EYFS) framework, working towards the early learning goals for Number and Numerical Patterns. Children develop a deep understanding of numbers to 10, the relationships between them and the patterns within them.

- Children take part in short, focused mathematics teaching every day, with a strong emphasis on number sense, subitising, counting and early number facts.
- Learning is extended through play and a rich learning environment that offers many opportunities for mathematical exploration, talk and reasoning, both indoors and outdoors.
- Practitioners use stories, songs, games and practical resources to develop mathematical vocabulary and confidence.
- The statutory Reception Baseline Assessment is completed in the first six weeks of the autumn term.

6. Principles of learning

Children learn well when they talk about mathematics with others. Working with peers and with adults who model expert thinking helps children develop greater knowledge and skills than they would alone. Interaction with others in the class, as well as with the learning environment, is important in the learning process for each child.

Planning and teaching will give children opportunities to develop:

- mathematical talk and communication
- working with others
- problem solving
- fluency and rapid recall of key facts
- metacognition: planning, monitoring and evaluating their own learning
- the effective use of technology to support learning

They also develop 'thinking skills' such as:

- reasoning
- enquiry
- creative thinking

- information processing
- evaluation

7. Organisation of mathematics

Planning

Mathematics planning is based on the 2014 National Curriculum. Planning begins from a thorough understanding of children's needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve. Long, medium and short-term planning will take place throughout the school, and all classes follow the White Rose scheme of work where appropriate. Planning is also informed by the DfE's non-statutory guidance, "Mathematics guidance: key stages 1 and 2", and its ready-to-progress criteria, which identify the most important knowledge and understanding pupils need before moving on.

The school may take part in Maths Hub programmes, such as the NCETM's Mastering Number programme for Reception to Year 2, to strengthen children's fluency and number sense.

Medium-term planning will outline the areas of mathematics that will be taught during the term to ensure coverage of the National Curriculum. Within short-term planning, clear learning objectives will be shown to demonstrate the progression needed to reach and master the objective. Opportunities for exceeding learners are planned for through rich problem-solving tasks and reasoning activities to ensure a greater depth of understanding and mastery is achieved.

Planning will allow for a variety of approaches during the week to maintain the enthusiasm and interest of the pupils. Our four key principles are:

- regular lessons every day
- an emphasis on becoming fluent in the fundamentals of mathematics
- reasoning mathematically
- regular opportunities for problem solving and investigations

Adaptive teaching

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems that broaden their knowledge before any acceleration through new content. In order to successfully 'close the gap' between different abilities, teachers should try to avoid using programmes of study from other year groups. However, the National Curriculum states that schools have some flexibility to introduce content earlier or later than set out in the programme of study.

Children will be taught as a whole class, with the teacher using a range of questions to develop mathematical thinking, but children should be able to begin their tasks as and when they feel ready. Not all groups of children will necessarily start the activities at the same time. Teachers value pupils' oral contributions and create an ethos in which all children feel they can contribute. Activities are planned to encourage the full and active participation of all pupils, and teachers adapt their teaching during the lesson in order to meet the needs of all pupils.

Pupils with SEND and pupils who need extra support

- Teachers use adaptive teaching, such as scaffolds, manipulatives, visual representations, pre-teaching and additional modelling, so that pupils with special educational needs and disabilities (SEND) can access the same mathematics as their peers wherever possible.
- Pupils with SEND are supported in line with the school's SEND Policy, working with the SENCO and parents.

- Assessment is used to identify pupils, including disadvantaged pupils, who are falling behind or have gaps in key knowledge. They receive timely, high-quality small-group or one-to-one support to help them keep up.
- The impact of interventions is monitored by the Subject Leader and senior leaders.

Daily maths lesson

A typical lesson will be 45 to 60 minutes. Daily mathematics lessons are structured to maintain good pace and a variety of learning experiences. Daily lessons allow for opportunities for mental recall, discussion and reasoning, developing and consolidating ideas, investigating and experiencing, and self or peer assessment, although lessons will not have a set format.

Links to other curriculum areas

Cross-curricular activities will be planned for children to develop mathematical experience from a wide range of situations and curriculum subjects. This will enable children to practise applying their mathematical skills in real-life situations, including cookery, science and music.

8. Assessment, recording and reporting

Teachers will make regular assessments and evaluations. It is essential to ensure that future learning builds on previous attainment and the children's achievement. Pupils' progress will be recorded in a variety of ways. This involves:

- informal testing of mental recall and mental calculation, given orally on a regular basis
- weekly times tables test results recorded from Year 3 to Year 6
- written assessments in the pupils' books through the marking of their work
- weekly assessments of all children to identify achievement in relation to the learning objective of that week
- end of unit assessments, with data collated on a spreadsheet for gap analysis and CPD
- reporting to parents through parent consultations
- three assessments a year in preparation for Progress Review Meetings
- the annual report to parents

Statutory assessment

- the Reception Baseline Assessment, in the first six weeks of Reception
- the Multiplication Tables Check in Year 4, in June
- the end of Key Stage 2 mathematics tests in Year 6

Format of pupils' work

Pupils will start by recording their mathematics on squared paper, firstly 10mm and then 8mm squares. There will be opportunities for pupils to record their mathematics informally and through photos.

Pupils will be encouraged to give each piece of work a learning intention and date. They will be expected to present their work clearly and neatly and show all their jottings.

9. Role of the Subject Leader

The Subject Leader will find opportunities through staff development days and staff meetings to inform teachers of curriculum developments. The Subject Leader will:

- take the lead in policy development and implementation of the full curriculum to ensure progression and continuity throughout the whole school
- support colleagues as necessary in their short-term planning, assessment and record keeping

- monitor the delivery of the mathematics curriculum
- keep up to date with developments in mathematics and share information with colleagues as appropriate
- analyse assessment data, including statutory assessment results (the Multiplication Tables Check and Key Stage 2 tests) and end of unit data
- produce a costed development plan following a needs analysis

10. Resources

A regular review of resources will be carried out by the Subject Leader, and new resources will be bought from the budget as appropriate. Manipulatives are fundamental in embedding mathematical concepts, building confidence and making connections between mathematical concepts. Resources are used within lessons and are available for children to use independently.

11. Role of teaching assistants

Teaching assistants receive training in the methods and ethos of the school's approach to mathematics. Class teachers share their learning intentions and identify which children are to be supported. Feedback is encouraged, either orally or by written notes.

12. Monitoring

Governors, senior leaders and the Subject Leader will monitor the quality and impact of mathematics teaching and learning, including through learning walks, book looks, pupil voice and analysis of assessment data. Governors will be able to attend local authority governor training and be updated on any new initiatives.

13. Health and safety

In line with the school's Health and Safety Policy, children are instructed in the safe use of all equipment, especially when using heavy weights and drawing compasses. Care needs to be taken when younger children are using small apparatus such as counting objects.

14. Equal opportunities

The Governing Body, Headteacher and all staff are responsible for ensuring that all aspects of the school's Mathematics Policy and its application promote equality for all pupils.

15. Review

This policy will be reviewed by the Mathematics Subject Leader following discussions with colleagues. Amendments will be presented to the whole staff and to the appropriate committee of the Governing Body before implementation. Following the Curriculum and Assessment Review, a reformed national curriculum will be taught from September 2028; this policy will be reviewed when the new mathematics programmes of study are published.