CURRICULUM POLICIES | Lawdale Junior School

Mathematics Policy

Lawdale Junior School

November 2025

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Ratified by:
Next Review:

We are a Rights Respecting School and this policy supports in particular:

Article 28 of the UN Convention on the rights of the child – every child has the right to an education.

1. States parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular:

(a) Make primary education compulsory and available free to all;

Mathematics Policy Statement

Why teach Mathematics?

Mathematics is a subject that children should enjoy and feel confident doing. All children in Lawdale Junior School should be numerate, confident when calculating and able to tackle problem solving in a number of ways. It is also important for them to understand the relevance of mathematics in real life contexts.

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logic, reasoning, problem-solving skills and the ability to think in abstract ways. It also underpins everyday decision-making and financial literacy - cooking, measuring, shopping, reading timetables and budgeting - so pupils see how maths is used beyond the classroom. We explicitly connect learning to future pathways through whole-school "Maths and Careers" assemblies and guest speakers (e.g. finance, engineering, data), raising aspirations by showing how mathematics is applied in a wide range of professions.

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. (National Curriculum 2013)

Aims

In addition to achieving the learning outcomes set out in the programmes of study, we also aim to:

- Promote a positive attitude to mathematics foster enjoyment, curiosity, and confidence when exploring new concepts.
- Develop an understanding of mathematics in everyday life and make connections between lessons in school and real-life applications at home.
- Help pupils recognise the value of mathematics in future education and employment through regular careers-linked assemblies and guest speakers.
- Cater for a range of learning and teaching styles, giving children a wide range of experiences.
- Promote clear and logical thinking, independence and an enquiring mind.
- Develop understanding of the number system, spatial awareness and pattern, and use the relationships between them to solve problems.
- Develop the confidence and ability to estimate and approximate in all areas of mathematics.
- Develop the ability to be able to work independently with resilience in solving maths problems.
- Use mental calculations as a first-choice operation.
- Encourage reasoning and problem solving to deepen conceptual understanding rather than moving on too quickly.
- Use mathematical language with confidence and ease.
- Use ICT to enhance teaching and learning of mathematics including the use of Times Tables Rock Stars and other digital tools to promote fluency.
- Develop cross-curricular links.
- Equip pupils with the mathematical skills to build upon for secondary school learning and to apply confidently in the wider world.
- Provide regular opportunities for recall and retrieval practice (e.g. MOS sessions) to embed key knowledge into long-term memory.

Entitlement- EAL, SEND, GD

In the National Curriculum the program of study is divided into the following areas:

- Number and place value, Number addition and subtraction, Number multiplication and division, Number fractions.
- Measurement
- Geometry properties of shapes, Geometry position and direction
- Statistics

And in year 6 additionally:

- Ratio and proportion
- Algebra

All children are entitled to access all areas of the curriculum at an appropriate level.

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. (National Curriculum 2013)

All pupils will have equal opportunities in mathematics, irrespective of their gender, class or language background. The needs of the bilingual learner will be given particular consideration at Lawdale Junior School. Teachers will employ methods of teaching which enable bilingual learners to access the curriculum, e.g. by working practically, displaying key vocabulary and being good role models for the use of mathematical language.

In whole class sessions, teachers should plan some questions specifically for pupils at the earlier stages of learning English as an additional language (EAL) and others for those with special educational needs and disabilities (SEND) and ask named children to respond.

Wherever possible teachers will aim to fully include SEND pupils in the daily mathematics lesson so that they benefit from the emphasis on oral and mental work and by listening and participating with the other children demonstrating and explaining methods.

Where necessary teachers may, in consultation with the SENDCO, draw up a personalised education plan, identifying suitable objectives and required scaffolds. Children whose difficulties are severe or complex may need to be supported with an individualised programme in the main part of the lesson as these pupils may be working on EYFS or KS1 objectives. When planning, teachers will try to address the child's needs through scaffolded tasks or the use of support staff.

When possible, intervention programs, such as maths booster clubs, will address the needs of specific groups within each year group. These will aim to bring those children who are having difficulties with mathematics into line with the rest of their age group.

Teachers use adaptive teaching strategies to ensure that all learners can access the same mathematical concepts through different levels of support, representation and challenge. This includes the flexible use of manipulatives, guided practice, visual scaffolds, and questioning tailored to pupils' individual needs. Adaptive teaching ensures that all pupils—particularly those with SEND, EAL, or those working at greater depth—are able to make sustained progress within a shared learning journey.

Where appropriate, early intervention and pre-teaching may be provided to address misconceptions and secure core number fluency before new learning is introduced.

Implementation

Our approach to mathematics teaching is based on the following key principles:

- Dedicated mathematics lessons every day.
- Direct teaching and interactive oral work with the whole class.
- A concrete-pictorial-abstract approach (CPA)
- Independent activity where learning is demonstrated within the lesson.
- Mental calculations.
- Choice of challenge to promote independence and self-assessment of readiness.
- Using and applying mathematics skills learnt in real life contexts.
- Reasoning is embedded in every lesson as part of the mastery approach. It is not reserved for extensions but modelled explicitly by teachers to deepen understanding of key concepts. This is done through questioning, discussion, and examples such as "true or false", "prove that", "explain why", and "always, sometimes, never." White Rose and NRICH resources are used to support this.
- Opportunities to regularly revisit and reinforce prior learning through Maths Whizz.
- Revisiting learning through recall and retrieval strategies such as, Mental Oral Starters (MOS), to embed knowledge into long-term memory.
- Weekly times tables checks, supported by **Times Tables Rock Stars (TTRS)** to promote fluency, motivation, and healthy competition.
- Adaptive teaching approaches are used to scaffold learning where appropriate to meet individual needs.

In the main part of the lesson, teachers will group their pupils in a variety of ways according to the nature of the activity, including mixed ability groups. We set work that is challenging, motivating and encourages the pupils to talk about what they have been doing.

Teachers will follow the Calculation Policy in order to ensure that there is consistency across the school. This will also ensure that children have followed through the correct stages of development in their calculation methods.

Organisation

One hour per day is spent teaching mathematics. There are also opportunities for cross-curricular links with computing, science, DT and topics. For example, drawing and interpreting graphs in science, measuring in Design & Technology and statistics in Geography topics. Children are taught within their own classes, where they work in ability and mixed ability groups.

When appropriate, classes also find time within the week to use *Times Tables Rock Stars (TTRS)* to boost multiplication fluency and recall speed. This supports pupils' automaticity in number facts and preparation for the Year 4 Multiplication Tables Check.

Home learning

Mathematics home learning is set weekly across all year groups to consolidate and extend classroom learning. Teachers create resources and tasks that revisit key objectives and embed recent learning through practice and application. Pupils regularly use **Maths Whizz** to support personalised learning and **Times Tables Rock Stars (TTRS)** to boost multiplication fluency and recall speed. These platforms are used alongside teacher-directed tasks to strengthen fluency, reasoning and problem-solving skills.

Home learning typically takes between **30–45 minutes per week** and may vary slightly depending on the year group and focus of learning. In Year 6, pupils also complete additional home learning that may include past paper-style arithmetic and reasoning questions to support preparation for the end of Key Stage 2 SATs and to build confidence with test-style formats.

Work is marked in class and logged. This supports teachers assess learning. Work is kept in either books or folders in date order.

Planning

The staff will meet weekly in year groups to plan and review the mathematics being taught and discuss approaches and strategies.

Teachers will use objectives found in the Mathematics Curriculum programmes of study when planning. They will use the school's Curriculum Framework and refer to documents such as 'Pitch and Expectations' and 'Overcoming Barriers' in order to ensure that they are pitching their lessons at the correct level. They will use White Rose materials to support planning, as well as the Ready-To-Progress document released by the DfE in 2020. They will use layered times tables targets at the appropriate level.
To support and develop the aims and objectives of the 2013 Mathematics Curriculum the school follows the White Rose Schemes of Learning to ensure continuity and consistency between year groups.

In the White Rose Scheme Of Learning children use concrete manipulatives (objects) and pictorial representations (pictures), before moving to abstract symbols (numbers and signs). This progression is referred to as CPA.
The way that children speak and write about mathematics has been shown to have an impact on their success. We use a carefully sequenced, structured approach to introduce and reinforce mathematical vocabulary. Every lesson includes opportunities for children to explain or justify their mathematical reasoning.

Mathematical problem solving is at the heart of our approach - it is both how children learn maths and the reason why they learn maths. By accumulating knowledge of mathematics concepts, children can develop and test their problem solving.

Teachers work together to plan activities that encourage speaking and listening to aid children's mathematical understanding and appropriate language development in the case of bilingual children.

Year 4 Multiplication Tables Check

All Year 4 pupils must complete a statutory Multiplication Tables Check (MTC) in the Summer term (usually June). This is completed online and currently consists of 25 timed questions covering all multiplication facts up to 12 × 12. The National Curriculum states that all pupils must be confidently able to recall multiplication and division facts up to 12 × 12 by the end of Year 4.

Teachers plan weekly opportunities to practise times tables in a variety of engaging ways, including related division facts and application within problem-solving contexts. Times Tables Rock Stars (TTRS) is used across the school to promote automatic recall, motivation and healthy competition. One of its features**,** "Soundcheck," mirrors the exact format of the official MTC, allowing pupils to familiarise themselves with the platform and build confidence ahead of the statutory test.

Annual whole-school and inter-class times tables competitions are held to celebrate achievement and raise the profile of multiplication fluency. In Lower Key Stage 2, times tables practice takes place several times a week, and all pupils have regular opportunities to complete online practice tests.

Assessment, Marking and Record Keeping

Assessment in Mathematics at **Lawdale Junior School** is rigorous, continuous and purposeful. It ensures teachers have an accurate understanding of pupils' attainment and progress so that they can plan effectively for the next steps in learning. We use a combination of **formative** and **summative** assessments to track progress, identify gaps, and inform teaching and intervention.

Formative Assessment – Assessment ***for*** and ***as*** Learning

Formative assessment is an integral part of every mathematics lesson and is used to adapt teaching in real time. It includes:

- **In-class questioning**, observation, and discussion to assess understanding and address misconceptions.
- **Marking and feedback** (see Marking Policy and marking code for further details).
- **Mini-plenaries** and responsive teaching during lessons to clarify misunderstandings.
- **MOS (Maths Overlearning Sessions)** – 5-minute recall and retrieval activities at the start of maths lessons revisiting strands not currently being taught. These help pupils embed knowledge in long-term memory and strengthen fluency through regular spaced practice as part of the spiral curriculum.

Formative assessment enables teachers to make timely adjustments to their teaching, plan targeted support, and ensure pupils are making secure progress. It is also used as **assessment *as* learning**, where pupils reflect on their understanding, explain reasoning, and evaluate their own progress.

Summative Assessment – Assessment *of* Learning

Summative assessment is used to evaluate pupils' understanding and progress over time against age-related expectations.

- **NFER tests** are completed termly in Years 3–5.
- **Year 6** pupils complete half-termly assessments to monitor progress and readiness for SATs.
- **Fortnightly arithmetic tests** are carried out in every year group to assess fluency and accuracy in core arithmetic skills.
- **SATs** take place at the end of Key Stage 2.

The results from these assessments are used to identify gaps in learning, plan interventions and monitor cohort progress. Outcomes are recorded and reported to the Senior Leadership Team (SLT)**,** who analyse data to check that all pupils are making progress and to identify those who may require additional support or challenge.

Where children are not able to access summative tests at age-related expectations, the **SENDCo** is consulted and teacher assessment is used to provide an accurate picture of understanding and next steps.

Interventions

Interventions are informed directly by assessment outcomes and are implemented for pupils not yet working at the expected standard**.** Early identification is a key priority, with baseline assessments in the Autumn term used to determine support needs.

Teachers and TAs deliver targeted interventions for identified pupils, including those in the bottom 20%**,** to close gaps and accelerate progress. These may include small group

sessions, focused teaching of key objectives, and repeated exposure to core question types using past papers and similar formats to develop familiarity and confidence.

Intervention sessions are reviewed regularly for impact, with progress tracked against specific learning targets. The aim is to build pupils' fluency, reasoning and problem-solving skills, and to ensure that all learners develop secure, long-term mathematical understanding.

Reporting

All parents receive an annual written report on which there is a summary of their child's effort and progress in mathematics over the year. In-year progress is also shared during termly parent-teacher meetings.
At the end of Key Stage 2 each pupil's level of achievement against national standards is included as part of their annual written report.

Resources

Children themselves are valuable resources and it is important to draw upon their skills and experience, as well as the languages they most commonly use (in the case of bilingual children).
Each classroom is equipped with a range of basic practical equipment which is placed either within a central class resources area, or a specific Maths area. Children are allowed free access to the equipment as their needs permit.
Larger, more specific items are stored in the Maths Resource Room.
Each class uses an interactive whiteboard and a range of computer programs to which the children have access.

Computing

computing should be seen as an integral part of the daily Maths lesson and should be used to enhance the pupils' learning.
The role of computing should be as follows:-

- To consolidate pupils learning.
- To further develop our pupils' Maths skills.
- To provide our pupils with a variety of stimuli therefore developing their own mathematical processes.
- To promote pupils' enjoyment of Mathematics.
- To provide pupils with opportunities to take part in co-operative activities.
- To provide pupils with problem solving activities.

TTRS and Maths Whizz online is used at Lawdale as a vital tool to allow children to consolidate their learning and is part of children's home learning activities. After school clubs are provided for those children who do not have access to a device at home.

Display

Every class has a mathematics display relevant to the work the children are doing. Displays should include a hundred square, place value chart and the mathematical

vocabulary that is being covered during the current week. There should also be real-life examples of maths on display so that pupils can see the relevance of what they are learning and how it can be applied in everyday life. The symbols and key vocabulary of the four operations should be on display at all times.
Displays and teaching materials should reflect the language spoken by the children in the class/school.

Parental and Community Involvement

Parents are informed at the beginning of each half term of the strand/area of maths that the pupils will focus on in class. On occasion there may be a parent meeting that introduces these mathematical concepts to the parents and ensures they are supporting their child/children using the methods they are being taught in class.
Parent support is seen as a vital part of the children's learning. Parents are encouraged to support children at home to develop their numeracy skills.

Role of the Maths co-ordinator

- To plan, order and deliver staff meetings.
- To revise the school policy in line with current national guidance and school priorities.
- To monitor, review and update resources to ensure classrooms are equipped with high-quality manipulatives, visual representations and digital tools that support the concrete-pictorial-abstract and mastery approach.
- To encourage maths display in classrooms and around the school by providing a good role model.
- To monitor pupil progress.
- To maintain and build priorities set by the school.
- To monitor the planning, record keeping, assessment and teaching of maths throughout the school, using observation, samples of work, planning etc.
- To ensure that parents are confident in how to support their child's mathematical development.
- Be aware of new projects which can develop mathematical learning.