



Mathematics Policy

The Corporation of Oundle School includes both Oundle School, a boarding and day School for pupils aged 11 – 18 and Laxton Junior School, a day School for pupils aged 4 - 11. This policy applies solely to Laxton Junior School.

Introduction

This policy serves as a guide to the teaching and learning of mathematics at Laxton Junior School, ensuring a consistent and effective approach across all year groups. At Laxton Junior School, we are committed to delivering a distinctive and outstanding education. We aim to promote community well-being and maximise our purpose through collaboration with the Corporation of Oundle School. Our goal is to be leaders in our field, nurturing pupils to become global contributors. Our mathematics programme is designed to foster a love for the subject, equipping pupils with the tools they need to thrive. We strive to provide engaging and interesting opportunities beyond the standard curriculum, encouraging pupils to explore and enjoy mathematics in various contexts. This policy outlines our approach to achieving these aims, ensuring that all pupils receive a high-quality mathematics education that prepares them for future success.

Aims

When teaching mathematics we aim to:

- **Develop mathematical fluency**, ensuring that pupils become fluent in the fundamentals of mathematics through varied and frequent practice.
- **Encourage mathematical reasoning**, developing pupils' ability to reason mathematically by following a line of enquiry and developing arguments, justifications, or proofs using mathematical language.
- **Promote problem-solving skills**, enabling pupils to use logic in solving problems, applying their knowledge and understanding to break problems down into simpler steps and persevering in seeking solutions.
- **Foster a love of mathematics**, encouraging a positive attitude towards mathematics, helping pupils to enjoy and appreciate the subject.
- **Support independent and collaborative learning**, encouraging pupils to work both independently and collaboratively, developing their ability to think clearly and logically.
- **Enhance communication skills**, helping pupils to communicate mathematical ideas and information effectively, using precise mathematical language, symbols, and diagrams.
- **Apply mathematics to real-life contexts**, ensuring pupils see the relevance of mathematics to everyday problems and situations, as well as highlighting the cross-curricular links.
- **Develop quick recall of basic facts**, fostering the development of quick recall of basic number facts based on understanding.

Our Approach

Curriculum

At Laxton Junior School, we follow the White Rose Maths scheme, a scheme which aligns with the National Curriculum. This scheme uses cumulative small-steps to help pupils build a solid foundation in mathematics. Teachers use high-quality, context-bound problems from the scheme as a teaching tool. Pupils further develop their understanding through practice questions that follow the same structure each lesson, ensuring they build fluency, reasoning, and problem-solving skills. Flexibility is built into the programme to allow teachers to structure learning according to the needs of their pupils and class. Some children may need to spend longer on a particular concept through interventions or additional lessons, while others will reach deeper levels of understanding through work that encourages them to delve deeper into the same concept. This approach ensures that all pupils receive a tailored education, enabling them to achieve their full potential.

Planning

Long-term planning is based on the yearly teaching requirements outlined in the National Curriculum. Throughout the school, we use White Rose teaching resources along with a variety of other schemes and equipment to support the teaching of mathematics.

The White Rose scheme provides the basis for medium-term planning, ensuring that key teaching objectives are covered. At Laxton Junior School, we recognise the importance of a clearly structured teaching and learning process that helps children master each concept securely and deeply.

Short-term planning is carried out weekly but is flexible and responsive, allowing for appropriate intervention either within or after the lesson. Explanation and discussion are integral parts of our maths lessons and reveal whether or not the children truly understand the concept they are learning, enabling teachers to respond and address any misconceptions as they arise.

Teaching and Learning

At Laxton Junior School, we create a stimulating environment in which all pupils feel confident and capable of achieving in maths. To build such a culture, we approach maths with the following in mind:

- **Concrete Manipulatives**
We use hands-on materials such as counters, base-ten blocks, and fraction tiles to help pupils understand abstract mathematical concepts. These manipulatives provide a tangible way for pupils to explore and grasp new ideas, making learning more engaging and accessible.
- **Pictorial Representations**
Visual aids, including diagrams, charts, and drawings, are employed to bridge the gap between concrete experiences and abstract thinking. By representing problems pictorially, pupils can better visualise and understand mathematical relationships and processes.
- **Mental Strategies**
We encourage the development of mental arithmetic skills to promote quick and efficient calculation. Pupils practice mental strategies regularly, which helps them to build confidence and improve their ability to solve problems without relying solely on written methods.
- **Written Methods**
Formal written methods are taught to ensure accuracy and clarity in mathematical work. Pupils learn standard methods of calculation for operations such as addition, subtraction, multiplication, and division, which are essential for solving more complex problems.

- **Problem Solving**

We focus on developing pupils' ability to apply their mathematical knowledge to a variety of problems. This includes both routine and non-routine problems, encouraging pupils to think creatively in finding solutions.

- **Maths Talk**

Promoting discussion and explanation in the classroom helps to deepen understanding and articulate reasoning. Pupils are encouraged to explain their thought processes, justify their answers, and engage in mathematical dialogue with their peers and teachers.

This, combined with a responsive approach to teaching, ensures that all pupils achieve in their maths lessons. Some pupils may require additional support through the use of concrete manipulatives or scaffolded learning, whereas other pupils may be tasked with applying their understanding of the same concept to more complex scenarios. By incorporating these strategies, we ensure that every pupil is challenged appropriately within their maths lessons.

Differentiation

At Laxton Junior School, pupils in the Prep Phase are grouped according to their attainment levels. It is important to note that all groups follow the same sequence of lessons and base content. Teachers use their professional judgement to adapt lessons to their group, ensuring that every pupil is both supported and challenged. Pupils in the Pre-Prep Phase are not grouped according to attainment and are taught maths in their form class.

Differentiation strategies used include:

- **Type of tasks set:** Tasks are tailored to match the varying abilities of pupils. For example, some pupils might work on basic fluency problems, while others tackle more complex word problems or investigations that require higher-order thinking skills.
- **Extent of teacher input, support, and challenge:** Teachers adjust their level of involvement based on the needs of the pupils. Some pupils may require more direct instruction and guidance, while others might benefit from minimal intervention, allowing them to explore concepts independently.
- **Provision of different types of resources:** A variety of resources are used to support learning, including manipulatives and visual aids. These resources help to make abstract concepts more concrete and accessible.
- **Organisation of the classroom:** The classroom is arranged to facilitate different types of learning activities. This might include designated areas for group work, individual study, and hands-on activities, ensuring that the environment supports diverse learning needs.
- **Expectations of outcome:** Teachers set clear and achievable expectations for each pupil, based on their individual learning needs. This ensures that all pupils are challenged appropriately and can experience success in their learning.
- **Questioning used to stimulate learning and understanding:** Effective questioning techniques are employed to encourage pupils to think critically and articulate their reasoning. Open-ended questions, probing questions, and prompts are used to deepen understanding and promote discussion.

Cross-Curricular Links

There are countless opportunities within other subject areas in which maths is applied and developed:

- **Art** - pupils develop spatial reasoning skills and the ability to recognise patterns through artwork exploring shapes, symmetry, proportion, and measurement.
- **Humanities** - In History lessons, pupils develop an understanding of time and measurements of time through discussions of historical events. In Geography, pupils develop skills in data collection and calculation through geographical field investigations. Pupils estimate and measure using mathematical equipment and record their findings using charts, tables and graphs.
- **Science** - Pupils develop skills in data collection and analysis by conducting physical experiments, using units of measurement, calculating averages and interpreting results. Pupils record their finding using charts, tables and graphs.
- **French** - Pupils apply their understanding of maths through counting, using money, telling the time and date.
- **Music** - Pupils apply their understanding of maths through counting and pattern recognition.
- **Sport** - Pupils develop an understanding of position and direction through the use of mathematical language.
- **Computing** – Pupils apply the principles and concepts of logic, algorithms and data representation using a range of computing programs.

Co-Curricular Enrichment

At Laxton Junior School, we provide a wide range of co-curricular enrichment opportunities to enhance our pupils' mathematical experiences beyond the standard curriculum. These include:

- **After-school clubs** such as Bridge, Chess, and the Spatial Reasoning Club foster a love for mathematics through a range of engaging activities.
- **Enrichment days/weeks** shine a spotlight on areas connected to maths helping pupils make connections to the wider world in which we live.
- **Workshops and guest speakers** share their expertise and demonstrate real-world applications of mathematics. This includes opportunities available through Oundle School, such as Oundle Maths Enrichment Conference (OMEC) and Expert Ed workshops.
- **Maths projects and competitions** provide opportunities for pupils to showcase their skill and creativity within maths.
- **Parent in Partnership workshops** encouraging parents to get involved in their children's learning by support their mathematical development at home.
- **Outdoor Learning** spaces are used to enhance the maths curriculum, encouraging children to notice the connection between maths and the natural world. EYFS take part in weekly Outdoor Learning

sessions, engaging in activities rich in spatial reasoning, with places to squeeze through, navigate around, and experience from different heights.

These activities collectively create a vibrant and stimulating mathematical environment that inspires our pupils to explore and enjoy mathematics.

Adult Support

In EYFS, teachers and teaching assistants provide support through exploration, ensuring that mathematical learning is seamlessly integrated into everyday activities. This approach allows young learners to explore mathematical concepts in a natural and engaging environment, fostering a deep understanding through hands-on experiences. Teachers work with small groups to further their mathematical learning. These sessions are designed to provide targeted support, allowing teachers to address specific learning needs and challenges. By working in smaller groups, teachers can offer more personalised instruction, engage pupils in deeper discussions, and use a variety of teaching strategies to enhance understanding. Teachers and teaching assistants work closely to plan and implement these activities, ensuring they are tailored to meet the individual needs of each pupil. Regular communication and collaboration between teaching assistants and teachers are essential to monitor progress and adapt strategies to support all learners effectively.

In the Pre-Prep phase, pupils engage in daily whole class maths lessons. This structured approach ensures that all pupils receive consistent and comprehensive instruction in key mathematical concepts. Each class is supported by a dedicated teaching assistant, who works alongside the teacher to enhance the learning experience. Teachers and teaching assistants collaborate to provide targeted support by working with small groups of pupils, allowing for personalised instruction that addresses individual learning needs and promotes deeper understanding. This teamwork ensures that every pupil receives the attention and guidance necessary to succeed in their mathematical education.

In the Prep phase, maths is organised into groups based on pupils' attainment levels, ensuring that instruction is appropriately challenging and supportive for all students. Pupils engage in daily maths lessons in their groups, which helps to build a strong foundation in key mathematical concepts. To promote independence and self-reliance, pupils at this stage do not have a dedicated teaching assistant. Instead, teachers focus on fostering independent learning skills, encouraging students to take ownership of their mathematical development. This approach helps prepare pupils for future academic challenges by developing their problem-solving abilities and confidence in their mathematical skills.

Marking and Feedback

Marking and Feedback in maths is in line with our school Marking and Feedback Policy. Verbal feedback is a powerful tool used by our teachers to highlight successes and to address any misconceptions. Colour coding and Marking Codes ensures that feedback is visual and immediately indicated to pupils when they need to revisit a particular problem (see Marking and Feedback Policy). Pupils respond to feedback and make corrections to their maths work using red polishing pen.

Learning Environment

Classroom environments are arranged in such a way to best support the children of that class. Concrete manipulatives are visible and easily accessed by pupils. Key vocabulary and pictorial models are displayed to support our children to both visualise and articulate the maths they are learning in class. Stem sentences further support our pupils to explain concepts or problems using accurate vocabulary.

Homework

Pupils from Years 1 to 6 are set maths homework on a weekly basis to consolidate their learning from the week and to revisit concepts learnt over the course of the year to ensure that all learning remains fresh. In addition to this, children from Years 2 to 6 are encouraged to practise times tables using Times Table Rock Stars, an online resource which is fun and engaging.

Assessment

Assessment is undertaken in accordance with our Assessment and Teaching and Learning Policies. We are continually monitoring and assessing our pupils to identifying their progress, this in turn informs our teaching next steps. We endeavour to make our assessment purposeful, allowing us to provide appropriate work for the needs of the pupils, thus benefiting their learning and ensuring challenge and progress.

Formative Assessments are an informal part of every lesson and are closely matched to the teaching objectives. Learning targets are given during each lesson, using WALTs (we are learning to) and Success Criteria, ensuring that all pupils have a clear understanding of what is to be learnt. Within each lesson, formative assessment happens continuously using a wide variety of Assessment for Learning techniques; this knowledge often requires a teacher's immediate attention and appropriate action to successfully support each child's learning journey. Planning of future work is then amended accordingly based on individual and group requirements. Pupils are also encouraged to check each other's work, to identify when learning objectives have been achieved, where improvements could be made and to promote discussion about different approaches and how a variety of strategies may be used effectively.

Summative Assessments are carried out twice a year throughout the school, when pupils' attainment is measured against school and national targets. These are a combination of written and computer-based assessments and results are recorded on the school's central assessment database.

Table showing assessments schedule for each year group

	EYFS		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6	
	Term 1	Term 3	Term 1	Term 3	Term 1	Term 3	Term 1	Term 3	Term 1	Term 3	Term 1	Term 3	Term 1	Term 3
CAT4					Level X		Level Pre-A		Level A		Level B		Level C	
PT Maths		Level 5 (paper)		Level 6 (paper)		Level 7		Level 8		Level 9		Level 10		Level 11
MTC					MTC2	MTC3		MTC4						

Equality, Diversity and Inclusion

Equal Opportunities

We are an inclusive school and ensure that all children - irrespective of gender, race, religion and belief, cultural background, linguistic background, SEN or disability - have equal opportunity to access our maths curriculum. We are committed to improving our curriculum, learning environment, provision of resources and mechanism for sharing information to enable all children to participate fully in our curriculum. Further details of our work, in this regard, are set out in our Accessibility Plan, with some of our ongoing strategies outlined below:

- Small class sizes enable greater personalisation of the curriculum
- Resources reflect positive role models and include a range of diversity
- Personalised Support Plans enable staff and children to work on specific targets relevant to their learning needs
- Staff deliver a curriculum using a variety of appropriate resources to tailor the learning to all children

- Regular progress reviews take place with children and parents

Children are given regular, ongoing targets, and children in KS2 are aware of their own targets for learning.

The maths curriculum is regularly reviewed to ensure it is appropriate for all children, and maths teachers have the autonomy and freedom to adapt lessons to suit all learners.

Special Educational Needs and Disability (SEND)

Teacher observation, ongoing assessments and Pupil Progress Meetings support the identification of children in need of additional support in maths. This support is provided by our Educational Support team. Support for accessing the maths curriculum varies depending on the child and is developed in conjunction with the teaching staff and Educational Support teachers. Some children may receive one-to-one support whereas others may work as part of an intervention group. Children with maths targets in their Education Support Plan will be supported in school to ensure that they are making progress with their identified area of need. For further details, please see our Educational Support Policy.

English as an Additional Language (EAL)

All children have an equal opportunity to access our curriculum and receive, if required, individual language support internally or externally depending on their first language. A culture of 'Maths Talk' supports our EAL learners to develop their language skills. The use of stem sentences further help our EAL children to express themselves mathematically and encourages accurate use of vocabulary. For further details, please see our EAL Policy.

More Able and Exceptionally Able

At Laxton Junior School, we ensure that our More Able and Exceptionally Able pupils are provided with plenty of opportunities to be stretched and challenged in maths. Pupils are made to think deeply about maths through rich and sophisticated problems and puzzles. These pupils are often encouraged to explore maths through open-ended questions which encourage exploration.

Beyond the classroom, More Able and Exceptionally Able pupils have numerous opportunities to explore maths at events and competitions. Laxton Junior School hosts several 'Maths Challenge' events to which local schools are invited, such as Oundle Mathematics Enrichment Conference (OMEC) and maths competition aimed at Year 3 to Year 6 pupils. Our More Able and Exceptionally Able Year 5 and 6 pupils also have the opportunity to take part in a series of Webinars hosted by ExpertEdLive, exploring intriguing problems that encourage mathematical thinking. For further details, please see our More Able and Exceptionally Able Policy.

Monitoring Arrangements

The Head of Maths, with the support of the Assistant Head Academic, is responsible for the monitoring of their subject to ensure that the maths curriculum meets the needs of our children. This includes ensuring that resources, CPD, and long and medium term planning are in place. The Head of Maths is responsible for conducting peer observations, team teaching and training to ensure that our curriculum challenges and supports all of our children.

Linked Policies

This policy is linked to:

- Assessment Policy
- Curriculum Policy

- Educational Support
- EAL Policy
- EYFS Policy
- Marking and Feedback Policy
- More Able and Exceptionally Able Policy
- Teaching and Learning Policy

Reviewer	Elme Marais
Post of Reviewer	Head of Maths
Review Date	Michaelmas 2024
Reviewed and filed with both Schools	Michaelmas 2024
Next Review (max 3 years)	Michaelmas 2026