



Mathematics: Intent, Implementation & Impact

Curriculum Intent

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of mathematics
- Are able to reason mathematically
- Can solve problems by applying their mathematics

At Maulden Lower school, these skills are embedded within maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts.

We make cross-curricular links with our termly topics. Through our creative curriculum, the teaching of mathematics is extended beyond the daily mathematics lesson. Links are made, where relevant and purposeful, between our topics and mathematics. This allows children the opportunity to apply mathematical skills and concepts, as well as enabling children to see that mathematics is part of everyday life.

We strive for all children to develop an enthusiastic, creative and resilient attitude towards mathematics and to experience success in the subject that will stay with them throughout their lives.

Curriculum Implementation

At Maulden lower school we follow the White Rose Scheme of learning from Reception to the end of Year 4. White Rose is a combined 'Mastery' and 'Spiralled' scheme. We spend longer on topics to gain a deeper understanding with the aim of mastering mathematical concepts. We understand that spending a longer period of time on a topic doesn't mean all pupils will 'master' it the first time they see it and will therefore need to revisit and reinforce in other year groups and in different contexts.

The majority of children progress through the curriculum content at the same pace. Adaption is achieved by individual support, intervention and opportunities to develop a deeper understanding by reasoning and problem solving.

We allow for opportunities to address misconceptions and we challenge pupils to spot, explain and correct errors. This may be based on true/false explanations, spotting and correcting mistakes in a mathematical procedure or agreeing or disagreeing with a statement and explaining why.

Early Years

Children in Reception follow the White Rose scheme of learning which underpins the Educational Programme of Mathematics (DFE March 2021) providing a curriculum that embeds mathematical thinking and talk. Key mathematical concepts are taught, revisited and developed across the year. The scheme is divided into ten phases and provides a variety of opportunities to develop understanding of number, shape, measure and spatial thinking.

Key Stage One

Our daily maths lessons follow the White Rose small steps and are usually 1 hour in length and begin with an oral starter or a Flashback starter revisiting concepts previously taught in the past week, month or term. Children have access to Numbots and Times Table Rock Stars to play at home which work on key number skills and times table facts. In the autumn term of Year 2 the children will complete weekly number bond, number facts and times table challenges in which the children progress when they score 100%. The aim of these challenges is for quicker recall of number facts to apply to mathematical concepts and procedures.

Lower Key Stage Two

Our daily maths lessons follow the White Rose small steps and are usually 1 hour in length and begin with an oral starter or a Flashback starter revisiting concepts previously taught in the past week, month or term. Children have access to Numbots and Times Table Rock Stars to play at home which work on times table facts. In Year 3 and 4 the children complete a times table and inverse challenge in which the children progress when they score 100%. The aim of these challenges is for quicker recall of times table and division facts so that by the end of Year 4 children are confident with times tables up to 12×12 .

In both Key stages children will have the opportunity to practise varied fluency using the CPA approach and support is determined during each lesson to ensure secure understanding and challenge is visible where children are asked to reason and prove their understanding at a deeper level.

Assessment

Prior to the start of a block of learning, children will complete a pre-block assessment to determine any areas of misconception or gaps in learning. These gaps and misconceptions will then be implemented within teacher's planning.

Children complete an end of block assessment to determine any areas for intervention. Once all blocks for the term are complete, the children will complete an arithmetic and reasoning assessment.

Curriculum Impact

By the time children leave Year 4 we aim for children to be fluent in the fundamentals in mathematics with the ability to recall and apply their knowledge. Children will be able to use their skills to solve problems by applying their maths in a variety of situations. Children will be able to reason mathematically and be able to justify and prove using mathematical language.

In order for this to happen, the Maths Lead, the Headteacher and the Senior Leadership Team take responsibility for the monitoring of the mathematics curriculum and the standards achieved by the children. The Maths subject co-ordinator will complete monitoring activities throughout the year.

This monitoring takes the form of:

- lesson observations and feedback.
- Staff meeting discussions.
- learning walks and pupil voice conversations.
- planning scrutiny followed by support where necessary.
- book scrutiny on a termly basis.
- pupil progress meetings with the head teacher where Sonar Tracker data is analysed and intervention and next steps are put in place for children not making expected progress.
- moderation within the FARM cluster of local schools.
- transition opportunities for our Year 4 pupils, as well as staff, to engage with Alameda Middle School.