



Maths Curriculum Overview- Elmore Green Primary School

National Curriculum Maths Aims

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

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.

DfE Mathematics Programmes of Study, September 2013



Maths Curriculum Intent

The language of mathematics is international. The basic skills of mathematics are vital for the life opportunities of our children. Our aim is for all children to think mathematically, enabling them to reason, solve problems and assess risk in a range of contexts.

At Elmore Green Primary School, our Mathematics Mastery curriculum has been developed to ensure every child can achieve excellence in mathematics. Children can experience a sense of awe and wonder as they solve a problem for the first time, discover different solutions and make links between different areas of mathematics. It provides pupils with a deep understanding of the subject through a concrete, pictorial and abstract approach. This ensures pupils fully understand what they are learning.

Key features of our Maths Mastery curriculum:

- High expectations for every child
- Fewer topics, greater depth
- Number sense and place value come first
- Focus on mathematical thinking and language
- Resources to support
- Problem solving is central
- Calculate with confidence- understand why it works

Mathematics Mastery places emphasis on the cumulative mastery of essential knowledge and skills in mathematics. It embeds a deeper understanding of maths by utilising a concrete, pictorial, abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.





Aims

- To implement the current legal requirements of the EYFS Curriculum and the National Curriculum (NC).
- To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts.
- To ensure pupils become fluent in the fundamentals of mathematics, developing conceptual knowledge and an ability to recall and apply knowledge rapidly and accurately
- To ensure that pupils can reason mathematically and solve problems
- For our children to develop a 'can do' attitude and perceive themselves as mathematicians.
- To broaden children's knowledge and understanding of how mathematics is used in the wider world.
- For our children to use and understand mathematical language and recognise its importance as a language for communication and thinking.

Our youngest children will begin their early mathematical development supported by excellent early mathematical teaching which supports the development of early number sense, giving them the foundational skills needed to confidently reason and solve mathematical problems.

Our intent is for every child to leave our care as able and independent mathematicians, with the confidence and skills required to calculate fluently, reason confidently and solve problems efficiently. They will be thoroughly prepared in all aspects of mathematics and fully equipped for the next step in their educational journey.



Maths Curriculum Implementation

Mathematics is taught on a daily basis throughout the school - EYFS to Year 6. Each class in KS1 and KS2 provide a minimum of 1 hour of mathematics per day. A mix of adult led and teacher led activities are put together for children in EYFS.

The use of White Rose medium term planning is adapted to create a bespoke curriculum designed to meet the needs of our children and to allow for opportunities for revisit and retention, ensuring full coverage of the national curriculum for mathematics and providing a broad and balanced spread of all areas of the curriculum. Teachers are confident to manipulate this planning in the short term in order to meet the needs of all of our children.

Using WRM progression of skills document, the teaching of mathematics year to year builds progressively on the skills taught in previous year groups.

On a daily basis, children, regardless of their ability, in KS1 and KS2 are provided with opportunities to become more fluent in their learning, to reason mathematically and to solve a range of problems. This is done using a range of sources such as White Rose Maths and Master the Curriculum.

We use Times Table Rock Stars to enthuse the children in learning times tables.

Mathematics homework is provided on a weekly basis to help embed the week's learning, this is done through challenges on Class Dojo.

Learning is differentiated to meet the needs of the children within the class whilst still providing each child with the opportunity to achieve the learning intentions to meet the expectations of their year group.

Interventions are put in place, through analysing half termly data.

Opportunities to collaborate in pairs or small groups are given regularly so children can learn from and support each other.

Opportunities for self-assessment are provided daily so children are given instant feedback in their learning.

Quality first teaching is provided throughout the school along with effective teacher modelling along with effective assessment for learning to make sure children are moved on in their learning or supported when finding it difficult

Cross-curricular links are provided when opportunities arise, particularly through the use of Computing.

Mathematics 'working walls' are in each classroom to provide key information and vocabulary with modelled examples to support learning. The WOW wall showcases children's work to give a sense of pride.

EYFS

Number fluency is continually developed within early years: our Mathematical curriculum covers 'Number and Shape, Space and Measures.' Children participate in short maths sessions daily and are given time to explore mathematical concepts, test ideas, develop their understanding and practise taught skills through play. Children are encouraged to use their mathematical



understanding and skills to solve real-life problems and practitioners are trained to identify and extend opportunities to foster this. Ten Town is used to help with number fluency.



Maths Curriculum Impact

Pupil Voice

Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths. They can articulate the context in which maths is being taught and relate this to real life purposes. Children show confidence and believe they can learn about a new maths area and apply knowledge and skills they already have.

Evidence in knowledge

Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential.

Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times tables

Evidence in skills

Pupils use acquired vocabulary in maths lessons. They show a high level of pride in the presentation and understanding of the work. Teachers plan a range of opportunities to use maths inside and outside.

Refer to look at our most recent 'School Performance'

<https://www.elmoregreenprimary.co.uk/school-performance>

Through evaluation of work on children's ipad at Elmore Green Primary School, it is clear to see the high quality of mathematics throughout the school. Children are able to confidently talk about their work in maths lessons and can apply age-appropriate skills and knowledge in their work. They are willing to take risks and learn from their mistakes, showing both perseverance and resilience in mathematical learning.