Eden Primary Curriculum: Maths Intent

At Eden, we believe all children can achieve in mathematics, and strive for secure and deep understanding of mathematical concepts through manageable and progressive steps and strong teaching. A rich and varied curriculum meets the needs of all children and allows them to develop as passionate mathematicians. The Essentials Maths scheme, which is based on Maths mastery, provides the basis for and challenge within our maths teaching. It is supplemented and enhanced by other high-quality resources and support materials, class based, small group and individual lessons, cross curricula themes when possible and some outdoor learning. The teaching of maths reflects the diversity and breadth of our school curriculum (EG finding an effective way of working out how many candles are lit during the Jewish holiday of Hannukah). Key concepts, creative thinking, reasoning, fluency and questioning are taught and we expect children to challenge and engage in dialogue with their peers so that they can communicate and apply their new knowledge across the whole curriculum, within their own interests and in their life beyond school. The classroom environment supports the children's learning by having working walls that reflect the current teaching and learning and mathematical questions that inspire and motivate the children. They remind children of prior learning or facts that underpin the whole of mathematics (ie. times tables or number bonds). During their time in the school children will be given the opportunity to join in with school based or inter school mathematical challenges. The teaching of maths will reflect the inclusivity of the school. Children with SEND are planned for within the class lesson as far as possible. However, the support and resources used may need to be adapted and scaffolded to meet their needs.

By the end of KS2, we aim for all children to:

- become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios
- reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using accurate mathematical language.
- have a secure understanding of number and number operations, enabling both written and mental calculations to be performed efficiently, fluently and accurately
- Be ready for the challenges of Key Stage 3 and beyond

Eden Primary Curriculum: Maths Implementation

At Eden Primary, we use the Herts for Learning Essentials Maths Scheme, which is based on Maths Mastery. Maths mastery is a teaching and learning approach that aims for pupils to

develop deep understanding of maths before moving on rather than being able to memorise key procedures or resort to rote learning.

The end goal and expectation is for the majority of pupils to have acquired the fundamental facts and concepts of maths for their year or key stage such that by the end of it they have achieved mastery. Meeting each child's needs is achieved by emphasising deep knowledge for quick graspers and thorough individual support and timely intervention before the next lesson where required. Children are provided with concrete models, equipment and images to support their understanding, moving to abstract representations when they are ready. Pupils who progress through learning rapidly are challenged to deepen their understanding through reasoning and problem solving. A minimum of four lessons a week are taught. Teachers work with a focus group each lesson, to provide additional support for children who need to catch up or deepen understanding for those who have grasped the concept quickly. The groups they work with are flexible and will be dependent on recent learning, formative assessment and what is happening in the lesson.

During class lessons and focus group support, adults constantly assess next steps and diagnose misconceptions ready for future planning and teaching. Groups are flexible and based upon pupils' understanding of the current learning in recognition that children grasp areas of maths at different rates. So, for example, a pupil might find learning an aspect of number difficult but may require challenge in geometric learning.

There are maths meetings during the week. During these key skills and facts are rehearsed so that children's mathematical fluency develops. Emphasis is then placed on learning through reasoning and developing multiple strategies and concepts towards understanding. Opportunities for children to practise reasoning skills occur every day and children are encouraged to talk about their findings so they are using mathematical language confidently and competently.

Children are offered differentiated challenge tasks, which reinforce and extend their learning. Teachers make use of a wide range of opportunities to assess understanding, including mini plenaries to enable them to re-shape lessons according to the progress made at each stage and opportunities for quick practice of concepts on individual whiteboards or in workbooks.

The 'Herts for Learning Essentials Maths Sequences' scheme provides a scaffold of clear learning sequences to be taught in progressive, logical steps; these continually build upon prior learning, enabling pupil progression. The learning is revisited and reinforced throughout the year to ensure that concepts are mastered, and learning, knowledge and skills become secure.

Rich mathematical talk is given high status and supported by the learning environment and teachers' questioning. Precise mathematical language is used by adults and children and developed and enhanced through paired talk. Within lessons, teachers regularly repeat and highlight key vocabulary and mathematical language. Children have frequent opportunities to practise concepts, rehearse solutions and reason with their peers, as well as engaging in whole class and small group mathematical discussions.

Children are frequently given opportunities to 'have a go' at applying their learning in new contexts. Exciting, challenging reasoning and problem-solving tasks are set and children can progress in their learning through systematic trial and error. Rather than being deterred by mistakes, children learn to recognise that they are in fact a useful, positive part of the learning process. Our whole school culture promotes self-challenge, resilience, courage, questioning and deep thinking.

Our curriculum is enhanced with opportunities for children to enrich their mathematics understanding. Examples of this have been maths puzzles set around Euro 2020 and mathematical learning during the Eden Parent's Group Fun Day. Every year group is encouraged to spend time learning maths outside in Coldfall Woods.

Eden Primary Curriculum: Maths Impact

The impact of our maths curriculum is the measure of how well our intent has been realised. It is demonstrated through the success of our learners and their confidence to demonstrate the knowledge they have retained over time and strong outcomes for all groups or pupils across the school. Children's achievements in mathematics are assessed in a variety of ways. Marking and feedback provide ongoing assessment information and children are teacher assessed formally at the end of each term from Year One to Year Six. Progress and attainment is monitored in Target Tracker and discussed in pupil progress meetings. The children are assessed using national statutory assessments at the end of Reception, Year 2 and Year 6 and in times tables in Year 4. Since Eden took on the Essentials for Maths scheme there has been a marked increase in the levels of children meeting the expected standard in maths and exceeding them. The progress of the children is also monitored termly by using diagnostic tests connected to the Essentials curriculum.

Monitoring of the children's books, as well as how they perform in lessons and tasks enable us to assess levels of understanding and the use of reasoning. During frequent maths meetings, fluency in number across the school is assessed and has a significant impact.

We continually evaluate the impact of our mathematics curriculum by:

- Judgements based on monitoring and evaluation activities within school, such as work scrutiny, outcomes of assessments, planning and quality of teaching and learning.
- The learning attitudes, engagement and motivation shown by the children.

- Ongoing feedback and assessment, which addresses misconceptions and gaps in learning and informs planning, to ensure that the curriculum effectively meets the needs of all pupils.
- Termly assessments, which are then analysed, use of assessment data tracking systems, to ensure children know what they are meant to know at specific points during their education and that any gaps are quickly addressed.
- Evidence from monitoring which shows that children are active in their learning, able to construct their own knowledge and think flexibly and creatively.
- Evidence that children are improving their ability to talk about their findings and the strategies they employed using the appropriate mathematical language as well as evidence that they are able to use these strategies in other situations.
- Regular monitoring and learning walks observing levels of engagement and motivation during lessons. Activities are designed so that all children in the school are challenged and engaged.
- Maths training and quality assurance for staff and support from the Maths Lead for practitioners.
- Conversations with pupils.