

Mathematics Curriculum

Our intention is that the children at Everton Heath Primary School will be confident and capable mathematicians, who enjoy Maths, and who work at the highest level they can.

Through our curriculum our children will:

- become fluent in Maths regardless of their innate ability or earlier Mathematical experience.
- learn using concrete (physical) resources alongside pictorial representations, as well as more abstract calculations.
- be taught in an inclusive way so that all learners can access the main task, whilst the more advanced learners are encouraged to deepen their learning through additional tasks or deeper questions to explore.
- understand that fluency, reasoning and problem solving are inter-connected and each aspect is developed in every lesson.
- develop a relational understanding of Mathematical concepts, so that they can see the connections between different types of Maths, and apply their understanding to different contexts.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. Pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving problems. They should apply their mathematical knowledge to science and other subjects. The expectation is that the majority of pupils will move through the scheme of work at broadly the same pace. However, decisions about when to progress should always be based on the security of pupil's understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged to 'dive deeper' and draw it, explain it, make a mistake, tell a maths story and prove it, before an acceleration through new content. Those who are sufficiently confident with earlier material should consolidate their understanding, including additional practice, before moving on.

Mathematics Implementation

We follow the Mathematics Mastery approach to teaching maths. Our mathematics curriculum is designed to meet the needs of teaching mixed-age classes. Long term and medium-term plans are written following the National Curriculum to help expose the structures of the maths to support children to break down maths into small steps. White Rose planning schemes are used to support short-term planning and resources.

Through our teaching, and the ethos that all pupils have the potential to attain well in maths, we aim to remove the barriers associated with being classed as low or high ability. Mastery of maths involves pupils being able to understand and use different representations of concepts. When introduced to a new concept, children have opportunity to follow the concrete-pictorial-abstract approach. Concrete objects and manipulatives help them understand what they are doing and support children's understanding of abstract methods.

- Maths mastery is a whole-school curriculum that creates continuity and progression in the teaching of mathematics from EYFS to year 6.
- Pupils study mathematics daily covering a broad and balanced mathematical curriculum including elements of number, calculation, geometry, measures and statistics.

- The classes are mixed-age, however each year group is taught the relevant year group maths objectives throughout the year.
- Alongside daily maths sessions an additional 15 minutes a day is spent focusing on the four main operations (addition, subtraction, multiplication, division and fractions) to build fluency in these areas and to think about numbers in the fun context of a game.
- We focus not only on the mathematical methods but also focus on mathematical vocabulary
- To support children in year 4 with their multiplication practice for the multiplication tables check (MTC), we use 'Going for Gold' an NCETM initiative and also 'Times Table Rockstars' which is an online and fun learning platform.
- Classrooms are equipped with learning walls to aid in maths lessons. The content of learning walls is flexible and contains key vocabulary, concepts and knowledge.

Mathematics Impact

Throughout each lesson formative assessment takes place and feedback is given to the children, both verbal and through marking, to ensure they are meeting the specific learning objective. Teachers use this assessment to influence their planning and ensure they are providing a mathematics curriculum that will allow each child to progress.

Teacher judgements are supported by the White Rose Maths planning and assessment materials, as well as NFER assessments in the Autumn and Summer terms, and statutory assessment practice.

- The teaching of maths is monitored on a termly basis through book scrutinies, learning walks and lesson observations.
- In EYFS baseline assessment is completed during the first 6 weeks of Autumn term, with regular formative assessment throughout the year and at the end of the year every child's level of development is assessed against the Early Learning Goal using teacher's formative assessment.
- Results from formative and summative assessment is then used to determine children's progress and attainment.
- Children in year 6 complete National Statutory tests in summer term. This measures their progress across the key stage.
- Children are reasoning with increased confidence, independence, resilience and accuracy.

Mathematics Early Learning Goals

Number: Children at the expected level of development will:

- Have a deep understanding of number to 10, including composition of each number
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG:

- Verbally count beyond 20, recognising the pattern of the counting system

- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds,

Please see 'White Rose Curriculum' document for the long-term planning overview and 'White Rose sticky knowledge map' for a breakdown of the learning objectives across the year groups.