Mathematics

Intent

At Yenton Primary School, we believe that mathematics is vital for preparing our children for their futures, as it is essential to everyday life and critical to science, technology and engineering. We believe that it is important that children understand how Mathematics links to their everyday life. Our curriculum aims to provide a foundation for a good mathematical understanding through a mastery approach. At Yenton Primary School, we believe that all children have the potential to succeed in Mathematics. Through mastery, we aim that our children not only become fluent in mathematical processes, but learn to reason confidently and to resiliently solve problems. Our curriculum has been designed to teach secure and deep understanding of mathematical concepts through manageable steps. These small steps are carefully designed to ensure that mathematical skills are progressive through the school. We use mistakes and misconceptions as an opportunity to improve our children's learning and understanding of mathematical concepts. The curriculum is designed to be adaptable to cater for the needs of all of our children. Through rich Mathematics teaching of mastery, we aim to promote enjoyment as our pupils develop their confidence in articulating their knowledge and understanding.

Aims:

- To become fluent in the fundamentals of mathematics so that children develop conceptual understanding.
- To allow children opportunities to recall and apply knowledge rapidly, accurately and over periods of time.
- To reason mathematically to make sense of mathematics and unpick mathematical structures and to justify or prove ideas using mathematical language
- To solve problems by applying their mathematics to a variety of routine and non-routine problems

Implementation

Mathematics is timetabled daily for all pupils to ensure coverage of the National Curriculum. Progression has been mapped across the key units: number and place value, addition and subtraction, multiplication and division, fractions, decimals and percentages, ratio and proportion, measurement, geometry, statistics and algebra.

Our children will be confident in their yearly objectives and then develop a deeper understanding by solving varied fluency problems and reasoning questions. All lessons are progressive and are differentiated to ensure accessibility for all children. During whole class teaching sessions, children will demonstrate that they can talk about mathematics and explain and justify their working out.

Additional to daily Maths lessons, there are regular 15 minute sessions (Maths Blasts) that focus on Arithmetic and Number facts. In KS1, this time is allocated to teach addition and subtraction facts to ensure that children are becoming fluent in recalling them confidently. In KS2, this time is allocated to teach multiplication, making vital connections between multiplication and division facts. Children are provided with opportunities to learn these facts through a range of activities, games and songs.

Our Long Term and Medium Term plans have been designed using the White Rose schemes of work. The plans are supplemented with additional resources such as White Rose Premium Resources. These have been adapted to meet the needs of our children. These plans are adaptable throughout the year to ensure that children become fluent before

moving onto the next skill while ensuring that the National Curriculum is covered. Our medium term plans also link to our Calculation Policy which has been carefully designed to ensure that concrete resources are being used progressively and linked to the abstract calculations that are expected to be used in each year group.

In EYFS, there is a daily Mathematics whole class session. This allows children to see a Mathematical concept in five different ways over the course of a week. This mathematical concept is then carefully planned into continuous provision. In continuous provision and adult-led opportunities, children use concrete resources to unpick and deepen their understanding of mathematical concepts.

In KS1 and KS2, every lesson starts with an anchor task as a method of assessment for learning. This allows children to start the lesson by drawing on previous learning and making connections across mathematics. Children are able to use concrete resources to show their understanding, draw pictorial representations and use abstract methods. They are given the opportunity to reason and think mathematically from the very start of the lesson.

Episodic teaching is used for teachers to model mathematical concepts and children to practice a mathematical concept to become fluent. Teachers expose the children to mathematical structures and models using the concrete, Pictorial, Abstract (CPA) approach. Children use modelled examples to support their independent learning. SEND children are provided with scaffolded work or individual provision where appropriate.

We provide additional home learning resources for children to develop their Mathematical fluency in a fun and interactive way.

Impact

Our Mathematics curriculum is of high quality, well thought out and is planned to demonstrate progression. If children are achieving the curriculum requirements, they are deemed to be making good or better progress. In addition, we measure the impact of our curriculum through the following methods:

- Pupil discussions and daily maths work in books.
- Marking in books addresses misconceptions and move learning forward. This allows lessons to be adapted to meet the needs of our children. Teachers or teaching assistants carry out same day catch up and intervention sessions to ensure that children are secure with a skill before moving on.
- Retrieval quizzes
- Termly tests – these allow teachers to assess learning over an extended period of time and adapt planning to suit the needs of their children.
- Half termly arithmetic tests – these are baselined at the start of a half term. This allows teachers to adapt Maths Blasts to recap taught concepts and address misconceptions. Impact is then tracked at the end of a half term by our Maths lead and this is feedback to staff.
- Half termly number facts tests (KS1 addition/subtraction, Y2/KS2 times tables)
- Teacher assessment using Key Performance Indicators
- Coaching – monitoring of teaching and learning
- Celebration of learning through displays and experience days
- Pupil voice – focusing on children articulating their learning and expressing enjoyment for their Mathematics lessons
- Book trawls/ Planning trawls
- Moderation – opportunities for teachers to discuss the children's achievements and progress being made.