Bolton-on-Swale St Mary's CE Primary

Maths Intent, Implementation, Impact Statement

Intent

Bolton-on-Swale St Mary's CE Primary School recognises that maths is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides for varied fluency using a range of visual manipulatives and concrete materials matched with the ability to reason mathematically and solve problems like a mathematician. Also, it provides children with an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. We enable them to recognise that there is a sense of awe and wonder in Maths.

Maths is a journey and long-term goal, achieved through exploration, clarification, practice and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time. Staff ensure children have access to a high-quality maths curriculum that is both challenging and enjoyable. They provide children with a variety of mathematical opportunities, which will enable them to make connections in their learning to prior mathematical learning and to other subjects in the curriculm. It will promote confidence and resilience in maths and develop independent learners with inquisitive minds. It will develop learners who have secure mathematical foundations and an interest in further self-improvement.

Implementation

Our curriculum is reviewed regularly to ensure that is it current and effective. Teachers are supported in their teaching of mathematics through appropriate high quality CPD ensuring confidence in the skills and subject knowledge that they are required to teach. We continually strive to build upon the excellent understanding of the expectations of the curriculum that our staff have. We achieve this through regular quality CPD delivered by our subject leader, through external courses and training from the White Rose Maths Hub and through participation in a sustaining mastery Teacher Research Group (TRG) to promote collaborative working with other schools also. All staff are encouraged to raise questions, seek support and request further training if needed in order to ensure everyone is confident in what they teach. Good practice is shared between staff and all CPD is used to inform teaching and learning across school. Resources and equipment are audited regularly so that children have materials of high quality and accuracy to support their learning. Our resources allow us to better use models and images to support learning in each area and enable the progression from concrete to pictorial to abstract. Children are familiar with these resources and can access them independently where needed.

Curriculum maps are based on the White Rose yearly overviews for mixed age planning which set the curriculum out in blocks enabling children to get to grips with different areas of maths through extended periods of time. Alongside the White Rose materials, we use many other resources to ensure that our offer is rich and varied. These include, NCETM, NRich, Third Space Learning and regular problem solving to ensure coverage of fluency, problem solving and reasoning in different formats. Teachers also implement the schools agreed calculation policies for progression in written and mental calculations.

Fluency is developed through repeating, reinforcing and revising of key skills; regular arithmetic takes place in all classes. Children are given time to practice and perfect their calculation strategies including giving pupils the opportunity to make appropriate decisions when estimating, calculating and evaluating the effectiveness of their chosen methods. Feedback is given in a variety of ways to ensure pupils are well informed and making visible progress. Discussion is essential to learning and children are encouraged to discuss their thoughts, ideas and methods with a partner, group or the teacher. Developing reasoning remains one of our key focuses. Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently when solving problems which requires them to persevere and develop resilience.

We use termly White Rose Topic Assessments to help teachers to gather an understanding of their pupils' existing and developing knowledge and skills. Data is analysed by the class teacher through GAP analysis and RAG scores and is recorded in Sonar Data Tracker. Teachers are proactive in tackling misconceptions and re visiting key skills and knowledge. Aiming for a deep understanding is our priority. Senior Leadership, Governors and Subject leaders can also monitor, support and challenge the progress of each class.

Correct mathematical vocabulary is used by all teachers and this is discussed with and explained to children who are then encouraged to use it independently when talking about maths. Vocabulary is displayed clearly on working walls and is referred to in every lesson.

SEND pupils and those in the lower 20% of the cohort are monitored carefully through formative assessment and live marking in class. High quality targeted support is provided as required. It is recognised that small-group support is more likely to be effective when: sessions are brief and regular and explicit connections are made between targeted support and everyday activities or teaching.
We are inclusive and our SEND children follow the same blocks of learning as their class. They are supported through use of additional adults, scaffolded next steps, structured resources and collaborative peer to peer learning as appropriate. Children may complete additional pre and post teaching outside of maths lessons. The Class Teacher, Teaching Assistants, Maths Subject Leader and SEND coordinator liaise closely with each other.
Able Year 6 mathematicians attend additional maths sessions in the summer term to prepare them to take the UKMT Maths Challenge.

Enrichment activities and application of maths to the real world is an important aspect of our learning. Clear links are made to data handling in Science, Measurement in Design Technology and PE, Coordinates in Geography, Chronology in History. Our Year 5/6 children participate in the Yorkshire Building Society 'Money Minds Programme' with a focus on financial understanding for the real world. Our Year 6 children complete a 'Young Apprentice Challenge' culminating in the stall they run at the Summer Fair.

Impact

The impact of our mathematics curriculum results in our children understanding the relevance and importance of what they are learning in relation to real world concepts. Children know that maths is a vital life skill that they will rely on it in many areas of their daily life. Children have a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions; they know that it is reasonable to make mistakes because this can strengthen their learning through the journey to finding an answer. Children are confident to 'have a go' and choose the equipment they need to help them to learn along with the strategies they think are best suited to each problem. Our children have a good understanding of their strengths and targets for development in maths and what they need to do to improve. Our maths books evidence work

of a high standard of which children clearly take pride; the components of the teaching sequences demonstrate good coverage of fluency, reasoning and problem solving. Our feedback and interventions support children to strive to be the best mathematicians they can be, ensuring a high proportion of children are on track or above. Our school standards are high, we moderate our books both internally and externally and children are achieving well.