Mathematics at Bilston Church of England Primary School

We will aspire through our Christian beliefs and attitudes for all children in our care to flourish both academically and personally; develop respect for others and to reach out to their local and global communities, so, 'hand in hand together with faith we will strive to achieve all things. . .

'I am able to do all things through him (Jesus) who strengthens me.'

Philippians 4:13

All Scripture is breathed out by God and profitable for teaching, for reproof, for correction, and for training in righteousness.

Timothy 3:16

Intent for the teaching of Mathematics

As mathematics is important and integral for everyday life, we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.
Our Mathematics curriculum is intended to ensure that children have access to a high-quality Mathematics curriculum that builds knowledge and skills incrementally and allows them to use their knowledge in all areas of mathematics to solve real-life problems.
Our mathematics curriculum is designed with the intent that each child will become fluent, confident, and competent in the basics of mathematics, developing their ability to calculate, to reason and to solve problems through the learning of formal and mental strategies and applying these skills to increasingly complex problems.

We want the children to:

- become fluent in the fundamentals of mathematics and develop conceptual understanding as well as the ability to recall and apply knowledge rapidly and accurately
- be able to solve problems and reason mathematically
- use mathematical language
- be able to use and apply their mathematical knowledge, skills and understanding to science, other subjects, and real-life contexts.

Implementation of Mathematics (Mastery)

The National Curriculum sets out what must be taught in each Key Stage. At Bilston Church of England Primary School, we follow the Power Maths scheme but tailor it to the needs of individual classes. We support our pedagogy and assessment with the use of the NCETM mastery materials and DFE Ready to Progress documents to help us focus on the most important knowledge and understanding within each year group.

- The school's Medium-Term Plan and Calculations Policy are used by teachers to plan, this will drive the journey of mathematics for every year group, from

Concrete to Pictorial, then onto Abstract. Each week's worth of work encourages children's fluency with problem solving and reasoning embedded within lessons.

Due to a whole class, step-by-step teaching approach, children at Bilston Church of England Primary School can move through the curriculum at broadly the same pace. As a result of spending more time on fundamentals, the children can establish firm foundations on which to build their understanding. Because of our concrete-pictorial-abstract approach, children learn to see the connections in maths and understand that mathematics can be represented in different ways.

Teachers teach the skills needed to succeed in mathematics providing examples of good practice and having high expectations. Stem sentences are used to support understanding. We intend to create a vocabulary rich environment, where talk for maths is a key learning tool for all pupils. Good modelling is a driver for pupil understanding and develops the confidence of pupils to explain mathematically.

The maths curriculum provides sufficient opportunities for planned revisits of previously learned knowledge, concepts, and procedures; this is to ensure that, once learned, mathematical knowledge becomes deeply embedded in pupils' memories; freeing pupils' attention to work with independence, apply their mathematical knowledge to more complex mathematics.

Those pupils behind age-related expectations are supported with same day interventions and questioning and targeted support in lessons from adults. Children who grasp concepts rapidly are challenged with greater depth problems from the within lessons.

Teachers use their professional judgement to determine how long to spend on a particular objective. Feedback is provided to pupils verbally, through teacher marking, peer marking and self-marking. This informs teaching for the next lesson.

Maths is included in other subject areas where appropriate exposing children to mathematical thinking and concepts across the curriculum.

Each class in both Key Stage 1 and Key Stage 2 will provide children with a daily lesson for mathematics, which will be at least an hour in duration. There will also be time given before registration to rehearse prior learning to develop fluency. The structure of the lessons will have problem solving and reasoning embedded in every lesson and use a variety of teaching and learning styles, to develop children's knowledge, skills and understanding in mathematics. We will do this through a daily lesson that will include a high proportion of whole-class and group-direct teaching. During these lessons, we will encourage children to ask as well as answer mathematical questions. They will have the opportunity to use a wide range of resources and apparatus to make the learning opportunities concrete.

Daily Learning

Lessons start with a clear WALT (we are learning to) for the lesson. Children will reflect on their learning from yesterday, this will be the starting block for the new learning. Adults will model the learning using a variety of manipulatives and will continually ask open questions throughout to embed understanding.
Children will be exposed to challenges (independent learning tasks) during the lesson, this will vary due to the children's understanding or the new learning that is taking place. Adults will consistently use assessment for learning.
Adults will model the correct use of mathematical language and encourage pupils to use this throughout every lesson.
All children will be taught the same, excluding the children who have specific needs in maths and same day interventions will take place to ensure "Keep up not Catch up."
All classes have an extra adult in their classroom. These adults will support children where necessary
All children will sit in mixed ability seats, with exception to those children with specific needs. This encourages peer support for some and allows all children to talk through mathematical strategies, therefore embedding their understanding.
Children will be challenged through key questioning by adults.
Each week's set of lessons are carefully planned to ensure progression of skills, knowledge and understanding.

Impact of Mathematics

The impact of a high – quality curriculum in maths is assessed through summative and formative assessment. Quality first teaching means that adults intervene quickly and assess the learning occurring in their classroom and make amendments. The curriculum is planned to ensure children have ample opportunities to revisit areas of knowledge and to build upon these.
We use internal data termly (STAT SHEFFIELD) for teachers and leaders to reflect on every pupil and carry out pupil progress meetings to identify issues and areas to support specific individuals. Children complete NFER tests termly, these give adults a standardised score, this can support the teacher's judgement or create a professional discussion, with a member of SLT (senior leadership team), about the child's needs. Using this data, teachers make amendments to planning based on this and leaders may plan interventions if accelerated progress is needed. As a school, we moderate children's work on a termly basis. These professional discussions are vital for teachers and as a whole school.
All the above is monitored through learning walks, book scrutiny, and data collection and during pupil progress meetings.

How we are Improving Mathematics in 2021-2022

- Rigorous monitoring is to take place regularly – supporting ECT's and recently qualified teachers with their delivery
- Power Maths- new scheme of work. Monitor its effectiveness and its impact on standards.
- STAT Sheffield tracking system will be used more rigorously from the start of the year to ensure assessments are accurate.
- Embedding a Mastery approach for Mathematics with support and training from SHAW Maths Hub.
- Maths CPD for staff including half day INSET on Power Maths and their delivery.
- Purchasing resources to support Mastery Approach for Mathematics