



Mathematics Policy

Mission Statement

St Barnabas Church of England School aims to provide a safe, caring Christian environment where each child is valued, nurtured and given the opportunity to thrive educationally, personally and spiritually.

Working together we can aspire, learn and achieve through our Christian Values of Forgiveness, Honesty, Kindness, Love, Obedience and Respect.



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Author: Lesley Silk
Governor: Natalie Howes

ST BARNABAS CHURCH OF ENGLAND SCHOOL

Maths Policy

At St Barnabas Church of England School, we have high expectations for all of our pupils and believe that all pupils can become confident and skilled mathematicians. We strive for all pupils to be curious about mathematics, enjoy mathematics and to understand the importance of mathematics in their everyday lives.

Since the introduction of the new Mathematics Curriculum in 2014, we have adopted many of the approaches of the Maths Mastery Methodology and we are following the Long term and Medium term Planning issued by the White Rose Maths Hub, Halifax.

Aims

In line with the aims of the National Curriculum for mathematics, we aim to ensure that our pupils gain:

- * Deep and sustainable learning in mathematics which they are able to apply to a range of contexts
- * An ability to build on previous knowledge
- * An ability to reason about a concept and make connections
- * Sound procedural and conceptual understanding
- * Fluency with number
- * An ability to solve complex problems by breaking them down into smaller steps and showing resilience

The strong ethos we have surrounding the British Values, will allow the children to achieve these aims with the support of their peers and adults in school.

Teaching and Learning Style

At St Barnabas, you will typically see the following features to mathematics learning:

- * The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention. The questioning and scaffolding individual pupils receive in class as they work through problems will differ and pupils who grasp concepts rapidly are challenged through more demanding problems which deepen their thinking further.
- * Practise and consolidation play a central role to mathematics learning. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.
- * Teachers use precise questioning in class to test conceptual and procedural knowledge, and assess pupils regularly to identify those requiring intervention so that all pupils keep up.
- * Teachers use the CPA approach (concrete, pictorial, abstract) approach to ensure that concepts are modelled to pupils using multiple representations. This ensures that procedural and conceptual understanding are developed simultaneously.
- * Pupils are seated in mixed ability groups as we believe that all pupils can attain highly in mathematics and every pupil will have different strengths and development areas. Therefore groupings within classes are flexible and pupils will work in different groups dependent on their need.

*Every classroom will have an accessible and inviting learning wall, up to date with resources linked to the current mathematical focus. Children will be confident in accessing the learning walls to support their learning within lessons. They will contain examples of good mathematical practice from the children, sentence openers, vocabulary and other stimulus material,

*Each classroom will have a 'Today's number' board, which will be used daily either as a morning job or part of the maths meeting. This will be updated throughout the year to include mathematical concepts appropriate to their development.

Curriculum – EYFS

Mathematics within the EYFS is developed through purposeful, play based experiences and will be represented throughout the indoor and outdoor provision. The learning will be based on pupils' interests or current topics and will focus on the expectations from Development Matters / Early Years Outcomes.

As the pupils progress through, more focus is placed on representing their mathematical knowledge through more formal experiences. Pupils will be encouraged to record their mathematical thinking when ready and this will increase throughout the year.

Curriculum – Key Stage 1

Pupils spend far longer on key mathematical concepts in number. In Year 1 and 2, we follow a structured curriculum map (White Rose Maths Hub) however this is flexible to the needs of the pupils and therefore if a concept has not been grasped thoroughly by most pupils, there is flexibility to adapt the curriculum map and revisit concepts.

Those pupils who grasp concepts more rapidly are given opportunities to deepen their knowledge further and improve their reasoning skills, through rich problems, rather than accelerating on to new curriculum content.

Lesson Design

Teachers will briefly recap previous learning before then building on this previous learning by introducing the next step to the pupils. Teachers use concrete apparatus and visual representations at every opportunity to reinforce the concept and ensure deep and meaningful understanding. Pupils have the opportunity to practise the new skills using carefully crafted and varied questioning and talk will be used regularly to allow the pupils the opportunity to feedback as to how they solved problems.

During the teacher input, additional staff should be assessing and identifying those pupils who do not grasp the concept as quickly or fully as others. This information will then be passed back to the teacher so that the teacher can work directly with these pupils during independent work.

During independent learning the pupils should, as far as possible, practise the skills that they have acquired independently to avoid an over-reliance on adults, however throughout this time, additional staff should work with different pupils to support and assess learning.

In addition to the maths lesson, daily maths meetings are held after lunch for 10 - 15 minutes to consolidate key areas and give children repeated practice of basic skills and concepts (fluency, consolidation, mastery of what has been taught)

Differentiation

Differentiation will be seen by pupils working on differing complexities of problems within the same objective. 'Rapid graspers' will have challenging problems to solve to ensure that they continue to make progress. There will be some pupils who are using practical equipment for longer in order to support learning. While our aim is that the gap between mathematical attainment in our classes is closed, we accept that some children will need adult support and separate mathematical activities.

Interventions

Using formative assessment gathered through the practise tasks, teacher questioning and other formative assessment methods, any pupils who have not grasped the concept or who have misconceptions will have a rapid intervention (Catch up - marked as CU in their exercise books) to ensure that they are ready for the next step of learning. Where possible, this will occur on the same day to ensure that gaps are rapidly plugged, ready for the next steps.

Resources

Within all lessons, teachers will utilise practical resources to ensure that concepts are represented to the pupils to gain depth of understanding. Each class has maths boxes which contain practical resources relevant to those children so that they are freely available at all times during the maths lesson.

It is acknowledged that a great deal of time is required for teachers to provide the visual reinforcement and varied practise activities to facilitate intelligent practice and support the learning. We use several resources that can support teachers with this planning. Inspire Textbooks, Maths No Problem Textbooks and Shanghai Maths textbooks, Beam resources as well as online resources from Nrich.

Assessment and Reporting

Teachers will use targeted questions and problems that require pupils to remember, understand, apply, reason, analyse and evaluate their knowledge and skills. In addition the children for whom it is appropriate within year 2, will take the Reasoning and Arithmetic papers from White Rose Maths Hub at the end of each term.

At the beginning of each unit, teachers will conduct an AfL activity to give a starting assessment and will assess again at the end. These assessments will then be used to inform the school tracking system to assess the pupils on an ongoing basis and a judgement made about whether a pupil is on track to achieve age-related expectations will be made at the end of the term.

The contribution of mathematics to other curriculum areas

Generally mathematics will be taught discretely to ensure that links are not tenuous, however where there is a clear link to another subject e.g. data handling within science, symmetry in Art, measuring in DT, mathematics skills should be applied to this subject and used to evidence the pupils' depth of understanding.

Maths Lead
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