St Barnabas CE Primary School

"Preparing for a positive future, achieved through faith."
Christian values are central to the life of our school, where we are devoted to inspire our children to succeed, flourish and live life in all its fullness.
"Let your light shine."
Matthew 5:16

Maths Policy

Policy Updated:	September 2023
Date reviewed and agreed by Governors:	
Date of next review:	September 2024
Headteacher:	Miss J Hodgkinson
Chair of Governors:	Dr C Kressel

At St Barnabas, Maths teaching and learning is linked closely to some of our Christian values of persevering in the face of problems 'letting your light shine.' We want our children to think like mathematicians developing skills of communicating thinking, generalising, conjecturing, justifying and reasoning.

The aims of the Maths Curriculum follow that of the National Curriculum, ensuring children have secure understanding of not only declarative knowledge but also procedural and conditional knowledge. We believe that, and ensure through our teaching, mathematics is a rich and creative subject in which all pupils can succeed and experience success.

Aims

The national curriculum for mathematics aims to ensure that all pupils:

● become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

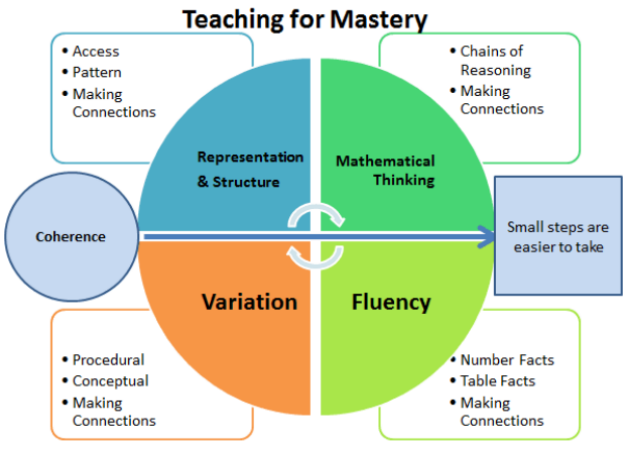
● reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.

● can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Furthermore we aim to:

- enable pupils to be proficient, competent and confident with numbers and the number system, calculations, measures, shape and space and statistics.
- enable the children to master the curriculum, to broaden and deepen their knowledge and understanding.
- foster positive attitudes towards mathematics by developing pupils' confidence, independence, persistence and co-operative skills.

Research and development by the NCETM (National Centre for Excellence in the Teaching of Mathematics) has been influential in our development of pedagogy surrounding the teaching of mathematics and has shaped our understanding of 'Teaching for Mastery'. The NCETM produced '5 Big Ideas' for Teaching for Mastery; they are:



Maths Ethos

At St Barnabas CE Primary, we want the teaching and learning in maths to be celebrated and for children to understand the importance of it in their everyday lives. We want our children to articulate mathematically with confidence to make sense of the world around them and to use the idea of 'I know…so…' As such, we provide children with:

- opportunities to develop children's fluency.
- contextualised problems that allow them to make sense of the world.
- have high expectations for all pupils.
- make connections with different areas of maths and within other subjects.

What is 'Teaching for Mastery'?

Teaching maths for mastery involves employing approaches that help pupils to develop a deep and secure knowledge and understanding of mathematics at each stage of their learning, so that by the end of every school year or Key Stage, pupils will have acquired mastery of the mathematical facts and concepts they've been exposed to, equipping them to move on confidently and securely to more advanced material. Two fundamental points need to be considered:

(1) Acquiring mastery of mathematics is something for all pupils.

(2) Teaching for mastery approaches can enable all pupils (with only a tiny proportion of exceptions) to succeed in maths.

If understanding in any mathematical area is deep (not superficial) then it will mean the learner has recognised and grasped connections between the concept in question and concepts in other areas of maths. Vitally, because maths continually builds on itself, it will mean they will have developed secure, lasting mathematical understanding on which they can build more advanced mathematical ideas at the next stage in their learning.

Teaching and Learning

Across EYFS, KS1/2, we want our children to develop a strong sense of number, to ensure children are equipped with firm foundations that will benefit all areas of the maths curriculum.

In EYFS and KS1 we adopt the Mastering Number Sense program, where small steps are taken for children to understand the sense of number. Reception also enhance this with the use of Whiterose v3 planning. Children in EYFS are encouraged to become confident in subitising, whilst in KS1 children use Rekenrek either practically or digitally, to build firm knowledge of number bonds and relationships.

Across KS1 and 2 teachers plan well sequenced lessons, that build on previous learning using WhiteRose Version 3 planning. These materials are linked to the ready to progress materials, which ensure children have developed the core concepts for their year group, to enable them to access the next stage of their learning. To enhance and provide further reasoning and problem-solving activities, teachers carefully select appropriate material from other high-quality sources, such as, Gareth Metcalfe, Planpanion or NCETM Spine Materials

From Year 1 upwards, we adopt a 5-part lesson model approach. This is

1. Fluency practise
2. Hook
3. Sharing responses to the hook
4. Refining methods discussed
5. Intelligent practise

Our teaching and learning approaches also ensure that we promote the CPA approach (concrete, pictorial and abstract) and stem sentences are used to enable children to articulate their developing knowledge. Misconceptions are celebrated and used as a vehicle to teach difficult concepts.

Inclusion

All children are expected to achieve mastery within maths and work at appropriate stages to ensure progress is made. Children with SEND are supported within small groups by the class teacher or a TA to complete a question with small steps taken and lots of repeated examples, to ensure children not only build their knowledge but their confidence too.

If children have gaps in understanding a particular concept, interventions are carried out within the lesson or after a lesson using No Nonsense Number Facts by Babcock Education.

Feedback, assessment and monitoring

Within the teaching and learning of maths, feedback can take on 2 forms. It can either be:

- Live Marking – whereby children immediately correct any developing misconceptions within the lesson as a direct result of interaction with an adult or modelling from an adult.
- Next day – whereby individual discussions are had between the pupil and the teacher or whole class interactions are had, where most children need a concept remodelling and explaining. Children respond to any questions where a green dot has been given by the teacher.

Children respond to both types of feedback using purple pen. This is from Year 1 upwards.

There are several forms of assessment that occur within maths. These are:

Formative – whereby children are assessed daily by class teachers through the use of targeted questioning and whiteboard work.

Summative – through the use of pre and post assessments for each unit and the use of summative assessments. These are

Year 1 – Whiterose (Aut); NFER (Spr/Sum)

Year 2 – NFER (Aut/Spr) SATs (Sum)

Year 3 – NFER

Year 4 – NFER

Year 5 – NFER

Year 6 – SATs papers

Maths is monitored by the Subject Leader each term through lesson drop ins, informal teacher discussions, learning walks, book looks, pupil voice and analysis of summative assessments. This information is shared with the Headteacher.