Bampton CE Primary School and Nursery

Learning together with Respect, Friendship and Perseverance

To be the best we can be for ourselves and others

Belonging, Believing, Building

Title of Policy	Maths Policy
Date Adopted by the Governing Body	July 2025
Review Date	July 2027
Adopted by LGB	September 2025

At Bampton CE Primary School we are continuing to develop and embed a Mastery approach to the teaching of Maths. We do not believe in the idea that people 'just can't do maths' and we encourage all pupils to believe that by working hard at maths they can succeed.

We follow the underlying principle that our curriculum *'emphasises secure learning of, rather than encountering, mathematical knowledge' (Ofsted Maths Review 2023)*

Intent

Our intent is to:

- Encourage all our pupils to think of themselves as mathematicians who are willing to take risks and are ready to apply their mathematical skills in a variety of contexts across the curriculum.
- Develop an independence, confidence and resilience when faced with mathematical challenges that will stay with them throughout their lives.
- Provide all children with a range of opportunities to explore and deepen their understanding and knowledge of mathematical concepts by following a mastery approach.
- Develop fluency, mathematical reasoning and the capability to solve increasingly sophisticated problems
- Achieve or exceed the standards in line with the EYFS Framework and the National Curriculum 2014 expectations.
- Ensure children have access to high-quality teaching that provides both challenge and support

Implementation

We support children's learning through a 'Concrete – Pictorial – Abstract' (CPA) approach, to ensure that children develop a deeper understanding of what they are learning whilst making connections within and across topics. Children throughout the school are encouraged to use the CPA approach to support their own learning. Once concepts are grasped, manipulatives are used less frequently so that children don't become too reliant on them and they can spend more time on developing their pictorial and abstract thinking.

The widespread use across the year groups of familiar models and images such as tens frames, part whole and bar models as well as number tracks and number lines amongst other things, helps to ensure learning is embedded and children can use them confidently to show their understanding as they progress through the school.

Fluency

Teaching of Fluency is developed through daily sessions practising key skills and previous learning to ensure it is consolidated. It may include practice at quick recall of number facts including x tables or practice at calculation strategies. The aim is that these things are learnt to a point of automaticity and banked in their long-term memory to enable pupils to direct their working memory to exploring new concepts and reasoning more deeply. Teachers may adapt the Fluency sessions in response to individual needs. This will be in addition to the main Maths lesson.

The structure of Fluency session delivery across the school will be:

- Fluent in Five (Y1-Y6) – A daily 15-minute session where children complete age-appropriate arithmetic challenges and explore any misconceptions. These sessions should be structured as follows:
    1. Children work through the questions independently.
    2. Answers are displayed on the board and children work through with their partner to celebrate success or identify – and correct – marvellous mistakes.
    3. The teacher works through each question, checking for success and asking children what their 'marvellous mistake was'.
    4. The teacher will then make a formative assessment of the most common marvellous mistake and address misconceptions through modelling and ad-hoc questions.
- Mastering Number at KS1 –
    - Y1 will focus on developing their knowledges of additive facts within 10.
    - Y2 will secure their knowledge of additive facts within 10 and develop their understanding of facts across 10 (up to 20).
- Mastering Number at Y3 –
    - Securing additive facts across 10 and introducing multiplicative fluency.
- Mastering Number at KS2 –
    - Y4 will focus on developing and their multiplicative facts across the 1-12 times tables.
    - Y5 will secure their knowledge of multiplicative facts and begin to apply this knowledge across different functions (fractions, decimals, ratios).
- Weekly times table teaching and assessment on a Friday (Years three and four will be more in depth as they are preparing for the MTC at the end of Y4).

Lesson Planning Delivery

EYFS will follow the Mastering Number at Reception scheme of work to deliver their teaching of number. This will be supplemented by the White Rose scheme of learning to ensure delivery of the statutory 2021 Early Years Framework.

Teachers in KS1 and KS2 will use the small steps within the White Rose scheme of learning to inform their medium-term planning; whilst also taking consideration of the Ready-to-Progress criteria for Years 1-6 as outlined in the '2020 DFE Mathematics Guidance: Key Stages 1 and 2'. Progression of calculation strategies is outlined in the school's calculation policy.

All classes will aim to have five lessons a week taking 45-60 minutes each. When planning, teachers should use materials from a range of sources including: White Rose, NCETM, I See Reasoning and others. All lessons will take the following format - though this may change ad-hoc depending on a teacher's formative assessment:

1. Lessons will begin by recapping prior learning and ensuring that children have the essential building blocks to take on new learning. This could take the form of a maths game, explanation of a non-example, solving a problem or targeted

questions. The White Rose flashbacks are also a good resource that support regular practice.

2. 'Hook' – A real life example will be used to get the children thinking about the new learning that they are about to take on (one slide).
3. 'Do it' – Teachers will show the children 'what it is' they are doing following an *I do, We do, You do* approach. Teacher's will use concrete, visual and abstract representations from a variety of sources alongside a 'ping-pong' dialogue with children (4 slides – but may be extended as required within lessons).
4. 'Explain it' – Teachers will show the children a non-example, supporting them to understand 'what it is not'. This ensures an opportunity to cover off common misconceptions and enhance the understanding of what should be done (1-2 slides).
5. 'Solve it' – Teachers will provide children with an opportunity to explore how the new concept can be applied within a problem solving or reasoning context. All children in the class should be exposed to these problems (1-2 slides)
6. Children will then demonstrate their understanding through independent work in their books.
7. The teacher class will discuss the answer to the problem-solving question, ensuring that all children are provided an opportunity to develop their problem-solving skills.
8. Plenary – Children should be presented with a check out question, that recaps the learning. This could take the form of a 'True or False' or multiple-choice question.

In keeping with the Mastery approach, we aim for all children to be taught the same learning objectives with most lessons being taught as a whole class. However, there will be subtle adaptation through questioning and peer-to-peer and peer-to-adult explanations so that both less-confident and 'rapid graspers' are suitably challenged. Where necessary, smaller groups are supported to help access concepts more successfully.

Developing Problem Solving and Reasoning

Opportunities to reason and solve mathematical problems are regularly provided to enable pupils to demonstrate their deep and secure understanding. Challenges are designed to stretch all pupils' thinking and develop their understanding by justifying and proving their answers using precise mathematical language. It is important that teachers model to the whole class how to solve problems not just to the 'rapid graspers'

It is understood that problem solving and reasoning skills need to be specifically taught so a program to develop each skill is set out on the LTP with a focus on a different skill each half term. See '*Developing problem solving with NRICH'.*

We feel that developing effective oracy is also very important. Children are regularly encouraged to explain their reasoning to peers or to the class.

Classroom Support

All classrooms should be set up to support the children with their learning throughout each lesson.

They should have a working wall that is relevant to the topic and lesson taking place. These should contain worked examples, stem sentences, and key vocabulary, as well as concrete and pictoral representations.

Classrooms should also have a bank of concrete resources for children to use in lessons. This can be guided by the class teacher or accessed independently.

Demonstrating Understanding
It is expected that all children will be taught how to present their work neatly and systematically. Where possible – and increasingly with age – the majority of written work will be done directly into exercise books.

Independent work will follow a similar structure to the lesson input:

1. Do It – Children to complete tasks that demonstrate their understanding of the new learning (between 5 and 10 questions).
2. Explain it – Children to be presented in with a non-example. They are required to explain why the non-example is wrong, what should be done and present a worked example with the correct answer (1 question).
3. Solve It – Children to be presented with 1 or 2 reasoning problems that allow them to apply their knowledge laterally.

Whilst the children are working, the teacher should be circling the room, live marking work and addressing misconceptions in the moment. Children should ensure that they have answered each section accurately before moving on to the next.

Assessment
Assessment of maths will take three forms: Child Metacognition, Formative and Summative.

Child Metacognition involves children reflecting on their own learning, asking themselves what has gone well and what they could do better. They will then draw a simple face next to the LO to show their understanding and communicate their confidence levels to their teacher. A smiley face will indicate they are feeling confident, a straight face will symbolise uncertainty and a sad face will show lack of confidence / “don’t get it”.

Within lessons, teachers will complete a series of formative assessments to check conceptual and procedural understanding from the children and whether the lesson can move on. They will do this using a variety of techniques (cold calling, show me boards, hand symbols and work in exercise books) that ensure all children are captured. These assessments will also help teachers to diagnose which children need stretching and which need an intervention so that they can ‘keep up’.

Summative assessment will take three forms and be completed throughout the year:

- End of unit assessment: This will be a 10-question assessment created by the teacher to determine children’s learning and whether there are elements that need to be kept ‘on the boil’. Questions should be created in line with the Ready-to-Progress Criteria.

- Termly NTS assessments of the whole curriculum will take place three times a year to inform planning and monitor progress. Y6 will use past SAT papers instead of NFER testing.
- Statutory assessments will take place in EYFS (Early Learning Goals), Y4 (Multiplication Table Check) and Y6 (SATs) in the Summer Term. Y2 will also complete non-statutory SATs in the Summer Term.

IMPACT

The impact of our maths curriculum will be visible in the children's performance within the three forms of assessment we conduct within school. These will show how confident the children are feeling; how able they are to describe and explain procedures and reasoning in their own words; and, their ability to make connections and apply their knowledge across the wider curriculum.

Most children will also meet Age Related Expectations at each expected milestone: Early Years children will meet those indicated in the Early Years Framework and Early Learning Goals, whilst children in Y6 will achieve the expected standards in their End of Key Stage 2 Assessment.