

Bampton CE Primary School and Nursery

Learning together with Respect, Friendship and Perseverance



School Vision Statement

We endeavour to enable individuals in our school community to learn together, grow in respect, tolerance and understanding of the world in which we live, embrace Christian values and reach our full potential.

Title of Policy	Maths Policy
Date Adopted by the Governing Body	April 2017
Review Date	April 2020
Signed by the Chair of Governors	

The maths policy is to be used with the Bampton CE Primary School Calculation Policy, and the Maths Vocabulary list.

Introduction:

Our school believes that all pupils are capable of understanding and doing mathematics, given sufficient time. We also believe that pupils are neither ‘born with the maths gene’ nor ‘just no good at maths.’

Therefore we seek to:

- ensure that we deliver high quality provision, within an enabling environment;
- develop pupils’ perseverance, effort and growth mindsets; and
- provide context and challenge within which children can achieve in, and enjoy mathematics.

General approach:

As part of our strategy to raise pupil attainment, our school uses ‘The national curriculum in England: mathematics programmes of study: key stages 1 and 2’ (2014) as a basis for planning teaching and to fulfill the government’s statutory requirements; this ensures continuity and progression throughout the school. Our school embraces the statement: “The school curriculum comprises all learning and other experiences that each school plans for its pupils. The national curriculum forms one part of the school curriculum.” (2.2, National Curriculum 2014)

Assessment for Learning (AfL), a focus on investigative and problem solving approaches, and the development of mathematical thinking are at the heart of our school’s approach. A rigorous and planned commitment to the continued development of teacher and teaching assistants’ subject knowledge complements and strengthens this.

Aims:

Our aim is that our pupils should:

- **become fluent in the fundamentals of mathematics**, so that they:
 - have a well-developed sense of number values
 - know by heart key number facts (KIRFs) - e.g. times-tables and related division facts, number bonds – in line with the latest programmes of study
 - apply knowledge of the above to work out connected facts
- **reason mathematically**, so that they:
 - are able to follow a line of enquiry

- provide generalisations and proof of findings around their investigations
- are able to justify their thinking, e.g. as to why a particular calculation strategy is the most efficient
- **solve problems by applying their understanding of mathematics**, so that they:
 - encounter a variety of both routine and non-routine problems
 - are able to select specific maths skills and/or operations
 - persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps

Provision:

Foundation Stage

Teachers follow the revised Statutory Framework for the Early Years Foundation Stage 2014. This outlines the knowledge, skills, understanding and attitudes children will need in order to achieve the steps noted in the “Development Matters” document, and reach the Early Learning Goals in Maths. These goals are intended to be achieved by most children by the end of the Reception Year. The Early Learning Goals for Maths are as follows:

Numbers

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Shape, Space and Measures

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

The children learn through planned, purposeful play experiences and through a mix of adult-led and child-initiated activities.

Mathematics in Foundation stage is initially developed through stories, songs, games and imaginative play. A positive approach to Numeracy around the classroom helps the children to begin to relate mathematics to their everyday lives. The EYFS learning environment includes visual images, models and number resources to stimulate interest.

We give all the children the opportunity to develop their understanding of number, measurement, pattern, shape and space, and solve problems through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics. They also take part in regular “Puzzle Day” sessions. Mathematical resources are readily available both indoors and in the outside learning environment.

Primary Phase

In order that our children access a broad and balanced mathematical curriculum, we plan coverage using the Hamilton Trust maths scheme, supplemented in KS1 with the “Numicon” maths scheme. This ensures that the following domains are covered each year:

- Number:
 - number and place value
 - addition and subtraction
 - multiplication and division
 - fractions, including decimals and percentages
- Measurement
- Geometry:
 - properties of shape
 - position and direction
- Statistics
- Ratio and proportion (Year 6)
- Algebra (Year 6, although the foundations will be taught from Key Stage 1)

Teachers’ planning also takes into consideration the needs of our pupils, providing challenge for all learners. Teachers will use their assessments to actively diagnose and address perceived ‘gaps’ in conceptual understanding, as part of the marking and feedback cycle.

Mathematics lessons normally take place daily. Each week the following activities also take place:

- Development of fluent recall of number facts (from the KIRFs document for Years 1 – 4). Age appropriate activities are:
 - for Year 1 and early Year 2, the Quick Maths sheets which are found in the Maths section of the shared area. These should be used weekly starting with number bonds to 5, and progressing to the next sheet once all questions are answered correctly.
 - for Year 2 to Year 6, the Superhero Times Tables scheme. This is to be used once children are becoming proficient at recall of 2x, 5x and 10x facts, and can be found in the Maths section of the shared area. Certificates are issued once children complete the Superhero paper within the allocated time. Teachers are able to give children the next Superhero to begin practising if it is only time rather than accuracy delaying completion of the previous Superhero paper.
 - Additionally, KIRFs are tracked using the “Hit the Button” software to ensure targeted teaching. “Hit the Button” is easily integrated into the “Puzzle Day” sessions.
- Regular problem solving. On alternate weeks pupils are given an opportunity to use the age appropriate “Puzzle Day” resources, and to take part in an extended problem solving session based on the Rising Stars “Problem Solving and Reasoning” scheme.

In line with the new curriculum focus on children making connections, our school provides stimulating cross curricular enrichment opportunities.

Resources:

Our school encourages the use of visual and concrete resources to promote understanding (as per the Calculation Policy). Each class is equipped with a variety of resources to promote the understanding of number work. These are clearly labelled and available for children to access independently. Other resources are kept centrally and can be borrowed.

In each class there is a working wall. This is not a permanent display, but is added to as the children's work progresses. It contains the models and images, mathematical vocabulary (as per Maths Vocabulary list) and examples of pupils' work. The wall is used by children to support their learning.

Inclusion:

We provide an inclusive curriculum which will meet the needs of all pupils, where the teaching and learning, achievements, attitudes and well-being of every learner matters. All children have equal access to the curriculum regardless of their gender or background. This is monitored by analysing pupil performance throughout school to ensure that there is no disparity between groups (including those with SEND, EAL and Disadvantaged Pupils).

Intervention is provided to ensure that all children achieve their full academic potential, including more able pupils. The effectiveness of these interventions is monitored on provision maps by the SEND Coordinator, with the Sandwell Numeracy Tests sometimes used to provide evidence of impact.

Children with SEND are taught within the daily mathematics lesson, and work is differentiated in order to support access to learning in all lessons. Where applicable, children's Pupil Profiles incorporate outcomes which reflect objectives from the National Curriculum.

Assessment:

Assessment for Learning is regarded as an integral part of teaching and learning and is a continuous process which informs future planning. Teachers provide marking and feedback on pupils' work in line with the Marking and Feedback Policy. Children are encouraged to develop a "Growth Mindset", where mistakes are treated as learning opportunities.

Formative assessments are made on an ongoing basis as part of the marking and feedback cycle. These are recorded on the school's internal electronic assessment system, "Target Tracker".

Tests are carried out in Terms 1, 3 and 5. All pupils in Years 1–6 complete the Headstart Assessment suite of papers for the four areas of number (Number and Place Value, Addition and Subtraction, Multiplication and Division, Fractions). In Terms 2, 4 and 6 the Headstart papers are completed for the remaining Maths areas in Years 2-6. Results are

analysed using the Headstart Test Analysis software, and are used to further inform assessments on “Target Tracker”.

“Target Tracker” pupil information is used to generate summative assessments and these are used as progress measures. Assessments are moderated at school and Trust level to ensure the consistency of judgements.

Statutory assessments are made at the end of the Foundation Stage, of Key Stage 1 and of Key Stage 2.

Information from both formative and summative assessments is used to plan next steps, and teachers indicate to children their next step learning targets on a regular basis where appropriate.

Monitoring and Reporting:

In order to respond to the latest changes in the mathematical landscape we will ensure that:

- Maths provision and impact on learners is evaluated and reviewed regularly via the School Improvement Plan and/or the annual Maths Action Plan. As part of this process, the Maths Leader of Learning will triangulate evidence from a range of monitoring activities (e.g. planning/book scrutinies, learning walks/observations and pupil voice) to determine next stages of development. Feedback is then provided to teachers by the Maths Leader of Learning in the form of pupil progress meetings, and a written breakdown of class results.
- Meetings are held three times per year with Maths Link Governors. These provide an opportunity for the Maths Leader of Learning to report on the current position, and for the Governors to raise questions as part of their role in holding School Leadership to account.
- The continued professional development needs of our staff, including the Maths Leader of Learning, Teachers and Teaching Assistants, are regularly reviewed and planned as appropriate. The expectation is that staff attending CPD will be given planned opportunities to cascade key messages, or share through lesson study.

Homework:

Mathematics homework relating to number facts being taught is set in line with the Homework Policy.