



Maths Policy

2023-2024

Policy history

Policy Version Date	Summary of change	Governor adoption Date	Signed by the Chair	Next Review Date
1 Summer 2015	Written by Chris Rickard	10 th September 2015		Summer Term 2016
2	Reviewed by MH	16 th June 2016		Summer Term 2017
3	Reviewed by MH	15 th June 2017		Summer Term 2018
4	Reviewed and amended by RW	10 th June 2019		Summer Term 2020
5	Reviewed and amended by RW	1 st December 2020		Summer term 2021
6	Reviewed and amended by RW	15 th June 2021 at virtual governing body meeting		Summer 2023
7	Reviewed and amended by CH	22 nd June 2023		Summer 2024

Intent

At Bickleigh Down Church of England Primary, we believe that mathematics is an important part of children's development from an early age. We provide a curriculum that inspires, supports and motivates them to achieve and exceed their potential.

We intend on delivering a curriculum that enables children to:

- Have a conceptual understanding of mathematics and recognise that maths underpins much of our daily life.
- Build upon their learning and understanding from Foundation to Year Six and facilitate a love for learning.
- Become fluent in the fundamental skills of maths; we believe that rapid fluency and arithmetic skills underpin the whole learning process and this depth of fluency is the prerequisite to allow reasoning and problem solving.
- Develop a resilience through their strong fluency and arithmetic skills to enable them to reason and problem solve with increased skill.
- Build on their mathematical language so they can explain and reason their understanding.
- Be challenged in greater depth to allow them the opportunity to apply their skills and articulate their thinking.

Our intended learning outcomes for all pupils are as follows:

Early Years Foundation Stage

- Have a deep understanding of number to 10, including composition of each number.
- Subitise up to 5.
- Automatically recall (without reference to rhyme, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
- Verbally count beyond 20, recognising patterns on the counting system.
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- Explore the represented patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Key Stage One

- Develop confidence and mental fluency with whole numbers, counting and place value.
- Know the number bonds to 20 and be precise in using and understanding place value.
- Be able to recognise, describe, draw, compare and sort different shapes and use the related vocabulary.
- Use a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

Lower Key Stage Two

- Become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value.
- Develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.
- Have the ability to solve a range of problems, including with simple fractions and decimal place value.
- Draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them.
- Use measuring instruments with accuracy and make connections between measure and number.
- Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.
- By the end of year 4 they should have memorised multiplication tables up to and including 12 x 12

Upper Key Stage Two

- Extend their understanding of the number system and place value to include larger integers.
- Develop the connections between multiplication and division with fractions, decimals, percentages and ratio.
- Solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation.
- Be introduced to the language of algebra as a means for solving a variety of problems.
- Consolidate and extend knowledge developed in number through geometry and measures.
- Classify shapes with increasingly complex geometric properties and learn the vocabulary need to describe them.
- Read, spell and pronounce mathematical vocabulary correctly.
- By the end of Year Six, be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

Curriculum

At Bickleigh, our learning intent is taken from the National Curriculum Programmes of study. We follow the National Curriculum through White Rose Maths to ensure continuity and progression. This is used as a guide for teaching however mathematics is tailored to meet the individual needs of each cohort and to fulfil our ambition for the children by the time they leave us. In addition to White Rose, we use a system formulated by teachers in our school which creates individualised fluency and arithmetic learning activities. This allows our children to make strong progress in these fundamental areas and build progressively on these key skills. Foundation Stage also use White Rose Maths alongside NCETM Numberblocks.

Calculation

Each daily maths session includes opportunities for children to build on their fluency, reasoning and problem-solving skills. Each lesson starts with a retrieval activity or an individualised arithmetic learning activity formulated by teachers to increase automaticity, fluency and rapid recall of facts. Children are then taught through clear modelling and given opportunities to discuss and share their mathematical thinking.

Within each lesson, resources are readily available to allow children to demonstrate their conceptual understanding before moving on to pictorial representations and then abstract learning through mathematical symbols. We teach children to be flexible with these three approaches and apply all to their thinking.

See also our Maths Subject Guidance and CPA Calculation Policy

Planning

Teachers plan for deep coverage and mastery of the school's curriculum through both daily maths lessons and additional opportunities to develop maths skills.

Plans for daily maths lesson include teaching, practising, applying, and reviewing and cater for all learning styles. Children's targets are at the forefront of all planning and are clearly linked to and reviewed through regular assessments.

Lessons include opportunities for:

- Practical activities and mathematical games
- Problem-solving and reasoning
- Individual, small group and whole class discussions
- Open and closed tasks
- A range of methods of calculating e.g. mental, paper and pencil and calculator
- Working with ICT
- Outdoor learning

Plans should follow our Calculation Policy which gives an overview of the development of addition, subtraction, multiplication and division from Year 1 to Year 6. Teachers should use this detailed information on progression through each strand and how to use practical resources and models to develop understanding at each stage.

See also our Calculation Policy

Assessment

All assessment is used to inform teaching and learning. We identify children's understanding and then swiftly focus interventions to overcome misconceptions. At Bickleigh Down CE Primary School we assess children in five main ways:

- Assessment for learning: continuous
- Marking: daily
- End of unit White Rose assessments
- Termly Tests – PUMA Maths Assessments
- End of Key Stage Assessments: annually

Towards the end of the school year we assess and review pupils' overall progress and attainment by drawing upon assessment for learning, their class record of attainment against key objectives and supplementary notes and knowledge about children to produce a summative record. Accurate information is then reported to parents and the child's next teacher.

See also our Marking Policy

Monitoring and Target Setting

Attainment and achievement in maths is carefully monitored for all pupils as part of the school's monitoring cycle. Progress and attainment are regularly discussed as part of pupil progress meetings. Targets are set in relation to the Fischer Family Trust D data and reviewed termly. Class progress targets for maths are part of teachers' performance management targets.

Moderation

Moderation takes place internally each term. This involves monitoring coverage, levels of mastery and amount of access to greater depth reasoning and problem-solving activities.