

The New Mathematics Curriculum

The following information on this page has been taken directly from the National Curriculum (published 2014).

Purpose of study

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

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 have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems
- **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.

Maths at Bishop Loveday Primary School

Maths At Bishop Loveday School

We recognise that Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems.

Maths is a core subject with a range of cross-curricular links (e.g. data handling in Science, measures in Geography) but most often, is best taught discretely, using opportunities from other subjects to rehearse skills in a context. Numeracy involves developing confidence and competence in number work; shape, space and measure; handling data and the using and applying of these skills.

Teaching staff at Bishop Loveday aim to support children in achieving economic well-being. We also aim to equip children with a range of computational skills and the ability to solve problems in a variety of contexts and an enjoyment of the world of number, shape, space and measure.

The importance of Mental Maths

Developing mental calculation skills and a good recall of key number facts form the bedrock of our Maths curriculum from EYU to Year 6. We recognise that there is a need to continually revisit and overlearn these mental skills and facts so that they may be met and rehearsed and applied in a range of different contexts.

‘On the Boil’

In addition to teaching the daily maths lesson, we have created an extra daily mental maths session to teach these key skills in order to keep the key mental skills for the year ticking over and ‘on the boil’ continuously. The ‘on the boil’ skills and facts for each year group are published on our website and will hopefully provide parents with ideas to support children’s Maths learning at home. Teachers also set homework tasks and games that are based on these core skills.

Written Calculation

Please see the Warriner MAT Calculation Policy. This can be found on the school website.

Spoken Language- Maths Vocabulary and the language of strategy

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions. Please see the Mathematics vocabulary booklet, which details the key Maths vocabulary for each year group.

Information and communication technology (ICT)

The National Curriculum states that calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of key stage 2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure. In both primary and secondary schools, teachers should use their judgement about when ICT tools should be used. For example, there can be times when ICT can be used to great effect when rehearsing mental facts or when recording and handling data.

Planning

The programmes of study for mathematics are set out year-by-year for key stages 1 and 2. Schools are, however, only required to teach the relevant programme of study by the end of the key stage. Within each key stage, schools therefore have the flexibility to introduce content earlier or later than set out in the programme of study. In addition, schools can introduce key stage content during an earlier key stage, if appropriate. All schools are also required to set out their school curriculum for mathematics on a year-by-year basis and make this information available online. We carry out curriculum planning in mathematics in three phases (long-term, yearly, medium-term, termly and short-term, weekly).

Assessment

Early Years are using Early Learning Goals and pupil profiles to assess Maths. Pupils are recorded as emerging, expected or exceeding targets. Please see the Early Years policy for more details on Early Years assessment.

Teachers use formative assessment on a daily basis to inform their teaching, providing 'next step marking comments verbally and in writing in their books.

Rising Stars PUMA tests are administered three times a year in terms 2, 4 and 6 to measure progress. Pupil progress is recorded and used for pupil progress tracking and analysis. Teachers meet throughout the year and provide the head teacher with information about pupil progress. Pupil attainment is measured using the year group of the objectives they are working from and one of four descriptors:

- emerging (just beginning to work within the year's Maths curriculum)
- developing
- expected
- mastering (working at greater depth)