



SUBJECT STATEMENT: MATHEMATICS

Mathematics 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 school 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.

Teaching and learning

Mathematics is a core subject in the new National Curriculum. The school uses a variety of teaching resources as the basis for implementing the statutory requirements of the National Curriculum programmes of study for mathematics. These include Collins Busy Ant, Not As We Know It Focus on Mathematics, Andrell Education Big Maths and Abacus Evolve.

Curriculum planning in Mathematics is carried out in three phases (long-term, medium-term and short-term). The long-term and medium-term plans make up the Mathematics Scheme of Work.

Each class has a daily mathematics lesson of an appropriate length for the age of the children.

Problem solving is an essential part of the aims of the new national curriculum. The school aims to provide children regular weekly opportunities to apply their understanding of mathematics in the context of routine and non-routine problems. The children are also taught different strategies and approaches to problem solving via the use of the problem solving toolkit and Nirch problem solving activities.

The school uses a variety of teaching and learning styles in Mathematics. The aim is to develop children's knowledge, skills and understanding. Children have the opportunity to use a wide range of resources including ICT. Children are actively encouraged to use mathematical resources and teaching tools to assist their understanding of Mathematical concepts. Wherever possible, they are encouraged to apply their learning to everyday situations.

There is a wide range of mathematical ability in all classes. Suitable learning opportunities are provided for all children by matching the challenge of the task to the ability of the child. This is achieved through a range of

strategies including differentiated group work, paired activities, open-ended investigations and resources including Collins Busy Ant, Big Maths, Abacus Evolve.

Early Years Foundation Stage (EYFS)

Children are given opportunities to develop their understanding of number, measurement, pattern, shape and space, through a balance of adult focused and child initiated activities that allow them to enjoy, explore, practice and talk confidently about mathematics.

Mathematics across the curriculum

Mathematics is linked to and used in other curriculum areas: examples include data handling and measure skills in Geography and Science, real-life problem solving in PSHE, rhythm in music, spreadsheets and databases in ICT and repeated patterns in art.

Mathematics and ICT

In Years 1 – 6, ICT is an integral part of teaching and learning in Mathematics. Both teachers and children use the Interactive Whiteboards in each classroom. The children also work individually or in pairs using a range of ICT resources. Foundation Stage and Year 1 pupils are provided with opportunities to use mathematics software when appropriate.

Mathematics and inclusion

Children with special educational needs are catered for through differentiated activities and levels of support. Specific mathematical targets are identified on Individual Education Plans (IEPs). More details of how SEN pupils are supported in Mathematics are given in the school SEN Policy.

More able children are challenged through differentiation and extension activities.

Assessment for learning

Teachers assess children's work as part of every lesson and this informs all planning.

A range of methods of assessment are used to track the children's progress throughout the year.

More formal assessments, based on teacher assessments and SATS style tests, are undertaken at least three throughout the school year and the results of these are used to assess progress against school and national targets. National end of Key Stage tests are used for pupils at the end of Year 2 and Year 6. Optional end of year tests are used at the end of Years 3, 4 and 5

A range of Assessment for Learning strategies are used throughout the mathematics lessons. These include the pupils' use of 'Traffic Lights' to evaluate their own work and the suggestion of targets to improve performance.

Home activities

Class lessons are reinforced by home learning activities each week in Years 1 – 6. Further details can be found in the school's Homework Policy.

Monitoring and review

Monitoring of the standards of children's work and of the quality of teaching in Mathematics is the responsibility of the subject leader and Headteacher. The work of the subject leader also involves supporting colleagues in their teaching, keeping up-to-date on current developments in the subject, and providing a strategic lead and direction for mathematics in the school.