



## MATHEMATICS SUBJECT STATEMENT

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.

### 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 computing and repeated patterns in art.

### Mathematics and inclusion

Children with special educational needs are catered for through differentiated activities and levels of support. Specific mathematical targets are identified in Pupil Profiles and individual Provision Maps. More details about how pupils with SEN are supported in mathematics are given in the school SEN Policy. More able children are challenged through differentiation and extension activities.

### Assessment

Teachers assess children's learning as part of every lesson with the aim of addressing misconceptions as they arise. A range of assessment for learning strategies is used during mathematics lessons; these include Learning Talk stampers, pupils' use of 'Traffic Lights' to evaluate their own work and the suggestion of targets to improve performance. In addition to this, a range of methods of assessment are used to track the children's summative progress throughout the year. More formal assessments, based on teacher assessments and SATS style tests, are undertaken at least three times throughout the school year and the results of these are used to assess progress against targets. There are statutory tests for pupils at the end of Year 2 and Year 6.

## Teaching and learning

Curriculum planning in mathematics is carried out in three phases (long-term, medium-term and short-term). In Key Stages 1 and 2, long term and medium term plans are adapted from either the Busy Ants or Hamilton Trust frameworks with additional resources from the table below.

The following key teaching and learning resources are used in daily mathematics lessons:

Key Resources	Owlet	Owl	Panda	Rhino
Numbers and Patters	✓			
Big Maths	✓	✓		
Nrich	✓	✓	✓	✓
White Rose Hub	✓	✓	✓	✓
Busy Ants			✓	✓

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

### 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.

### Key Stages 1 and 2

Mathematics is a core subject in the 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.

### Reasoning and Problem Solving

Reasoning and problem solving are an integral part of our curriculum and most lessons include at least one of these. In addition to the key resources above, the following reasoning and problem solving resources may be used: Talk It Solve It, We Can Do It!, Problem Solving Toolkit, Puzzles and Problems.

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.

### Consolidation and Home Learning

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