Intent

Our curriculum aims to enable our pupils to:

Become fluent in the basics of mathematics through frequent practice using problems which grow in difficulty over time, so that our pupils are able to develop their understanding of concepts and have the ability to recall and apply knowledge accurately and rapidly.

Be able to reason mathematically by following a line of enquiry, conjecturing relationships and making generalisations, and developing an argument, justification or proof using mathematical language.

Solve problems by applying their mathematical skills to a variety of problems, including breaking problems down into smaller steps and persevering with finding solutions.

We expect the following key skills to be developed for all children at New End.

By the end of KS1:

Confidently use mental fluency with whole numbers, counting and place value.

Recognise, describe, draw, compare and sort different shapes and use the related vocabulary.

Know the number bonds to 20 and be precise in using and understanding place value

Read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

By the end of lower KS2:

Use whole numbers and the four operations, including number facts and the concept of place value.

Use efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

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.

Memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

By the end of upper KS2:

Understand the number system and place value to include larger integers.

Use 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.

Use the language of algebra as a means for solving a variety of problems.

Classify shapes with increasingly complex geometric properties and use the vocabulary they need to describe them.

Use written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages

Read, spell and pronounce mathematical vocabulary correctly.

Implementation

Our aims as described above are translated into a progressive, effective curriculum that is based on the National Curriculum for Mathematics 2013. We use White Rose Maths for our planning and delivery of the curriculum. Learning is taught in blocks with small step coverage to ensure progression and breadth. The curriculum is revisited both termly and yearly to ensure that knowledge and skills are embedded. Each class (years 1-6) have a daily mathematics lesson. Revision questions covering previous topics taught are included in the daily lesson. There is the opportunity to answer reasoning and problem solving questions within the White Rose Maths text books and in the extra questions provided in class. Support is provided through the use of practical equipment and the level of adult/peer support provided in lessons. EYFS (Reception follow the WRM planning for each term) have a daily activity focus with extra free play activities covering the concepts in the Early Learning Goals document.

(Appendix 1: An overview of each year's curriculum)

Impact

Teaching the full scheme of work ensures that by the end of Year 6, children in New End will have met the statutory objectives of the National Curriculum in Mathematics. They will be able to negotiate the maths that they meet in Year 7 with confidence, using mathematical language accurately and showing the resilience required for reasoning and problem solving tasks.

Assessment of how well children have learnt the key skills are used at the end of each block. These enable teachers to identify gaps in learning for specific children and to plan for catch up sessions for those individuals or groups. End of term assessments are used to measure progress and to identify children who have met, exceeded or not met the learning objectives. These are used to assist with planning in terms of support and challenge for the subsequent term.

Curriculum Overview

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn Term		• Sorting and Counting to 10 • 2D Shape • Matching quantities • Counting up to 20	• Place Value within 10 • Addition and Subtraction within 10 • Shape • Place Value within 20	• Place Value within 100 • Addition and Subtraction within 100 • Money • Multiplication and Division	• Place Value to 1000 • Addition and Subtraction up to 3 digit numbers • Multiplication and Division including 2,4,8 times tables	• Place Value to 10,000 • Addition and Subtraction up to 4 digit numbers • Length and Perimeter • Multiplication and Division including 3,6,7 and 9 times tables	• Place Value up to 1,000,000 • Addition and Subtraction including more than 4 digits • Statistics • Multiplication and Division including prime, square and cube numbers • Perimeter and Area	• Place Value numbers to 10,000,000 • Addition, Subtraction, Multiplication and Division including formal methods • Fractions • Position and Direction
Spring Term		• Teen numbers • Number formation • 3D shape • Measuring and Capacity	• Addition and Subtraction within 20 • Place Value within 50 • Length and Height • Weight and Volume	• Multiplication and Division including 2, 5, 10 times tables • Statistics • Properties of Shape • Fractions including thirds	• Multiplication and Division including 2,4,8,5 and 10 • Money • Statistics • Length and Perimeter • Fractions	• Multiplication and Division including 11 and 12 times tables • Area • Fractions • Decimals	• Multiplication and Division up to 4 digits • Fractions • Decimals and Percentages	• Decimals • Percentages • Algebra • Converting Units • Perimeter, Area and Volume • Ratio
Summer Term		• Addition and subtraction • Counting in 2s, 5s and 10s • Money	• Multiplication and Division including 2 and 10 • Fractions half and quarter • Position and Direction • Place Value within 100 • Money • Time	• Length and Height • Position and Direction • Time • Mass, Capacity and Temperature	• Fractions including tenths • Time • Properties of Shape • Mass and Capacity	• Decimals • Money • Time • Statistics • Properties of Shape • Position and Direction	• Decimals • Properties of Shape • Position and Direction • Converting Units • Volume	• Statistics • Properties of shape • Consolidation and Themed Projects