

Curriculum Statement for Mathematics

“Maths – the study of numbers, shapes and patterns.”

“It’s not that I’m so smart, I just stay with problems longer.”

(Albert Einstein)

Aims and Objectives

We want to provide our children with the key skills needed to become confident and fluent mathematicians. Mathematics equips children with a powerful set of tools, through developing an ability to calculate, reason and solve problems. It is a creative and highly inter-connected discipline. It is essential to everyday life, critical to science, technology and engineering, and necessary for most forms of employment. At Cherry Tree we believe that 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.

Visions and Values

Our Mathematics curriculum is under-pinned by Cherry Tree’s values and vision. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into seemingly distinct domains, but pupils should make connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The National Curriculum aims to ensure that children:

- 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.

The Early Years Framework aims to ensure children enter Year 1:

- Able to count confidently, developed a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.

- Having developed a secure base of knowledge and vocabulary from which mastery of mathematics is built.
- Experienced opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

Teaching and Learning

At Cherry Tree, we teach Mathematics using a mastery approach to engage the learners; we use the White Rose Maths Schemes of Learning and Power Maths (which follows the White Rose Maths small steps) to structure our maths curriculum, starting with our children in EYFS. Through an inclusive approach where all children can achieve, we aim for children to acquire a long-term, secure and adaptable understanding of the subject. Decisions about when to progress, should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Teachers have the resources to offer same day intervention to enable individual or groups of children to secure or enhance their grasp of the day's learning.

White Rose Maths follows the key principles:

- Conceptual understanding
- Mathematical problem solving
- Language and communication
- Mathematical thinking

Teachers plan daily mathematics lessons utilising White Rose Maths and Power Maths resources. Planning includes information on modelling, key vocabulary and questioning. We believe that teaching children a wide variety of mathematical vocabulary is fundamental to their understanding in maths.

We ensure that each week children also have opportunities to revisit prior strands of mathematics learning through Maths 10 sessions which include time, shape, space, measure, times tables.

Assessment and Recording

In Early years, this forms part of each child's Tapestry journal. Each child from Year 1 has an individual Mathematics book where they can record their individual learning. Assessment of the different maths strands is through use of a range of resources including PiXL and statutory assessments (year group appropriate) with results recorded on PiXL. This data is used as a measure for progress and attainment throughout the school; and informs teachers' future planning and delivery of lessons based upon the security of children's knowledge of individual curriculum strands.