

Intent

Mathematics enables children to make sense of the world around them. Our aim is to provide a rich, stimulating and connected curriculum accessible to all pupils right through from Reception to Year 4 and beyond.

In doing so, we want to ensure our pupils:

- ❖ become fluent in the fundamentals of mathematics including through varied and frequent practice with increasingly complex problems over time, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- ❖ are able to 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.

We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

SMSC:

We strive to enable each pupil to explore the connections between their numeracy skills and every-day life, developing deep thinking and questioning the way in which the world works. We encourage our pupils to see the sequences, patterns, symmetry and scale both in the man-made and natural world and to use maths to explore it more fully. Problem-solving skills and teamwork are fundamental to mathematics - thinking creatively, discussing, explaining and presenting ideas. Children are always encouraged to support each other in their learning, assessing their own strengths and feeling a sense of achievement. Mathematics is a universal language with many cultural inputs. We provide opportunities to highlight this e.g. comparing Roman Numerals to our own decimal Hindu-Arabic system.



Impact:

We believe that the impact of using our personalised Maths curriculum together with the progressive steps and blocks will result in:

- ❖ children responding enthusiastically and with enjoyment to maths in all contexts in the belief that 'we can all do maths'
- ❖ fast recall of facts and procedures
- ❖ flexibility and fluidity to move between different contexts and representations of maths
- ❖ ability to recognise relationships and make connections in maths lessons
- ❖ level of pride in the presentation of the work
- ❖ regular and ongoing assessment that informs teaching which, in turn, supports each child to make progress
- ❖ a lifelong connection with and love of maths

Implementation

Our maths provision follows the National Curriculum and is based on the White Rose Maths (WRM) Schemes of Learning for Reception and Mixed Ages (Years 1 & 2 and Years 3 & 4).

We follow the mastery principles of spending longer on topics to gain deeper understanding, making connections, keeping the class working together on the same topic and a fundamental belief that, through effort, all pupils are capable of understanding, doing and improving at mathematics. We also recognise that pupils need to revisit topics and we make sure that they have opportunities to do so, in different contexts and in different years, to strengthen and consolidate their understanding.

In Early Years, continuous provision is carefully planned to ensure a variety of mathematical activities are available for children to access freely. These activities encourage the learning of Maths in a child-led environment, where teachers model and use questioning to encourage children to explore mathematical concepts. Mathematical language is modelled to children in order to encourage discussion during play and through the use of books and rhymes. Children are also taught in groups each day, where the White Rose planning is used to support the Early Learning Goals, to ensure that children are given the opportunity to master the fundamental mathematical skills.

In KS1 & 2, the curriculum is designed to support pupils to be able to perform simpler tasks so that they can move on to more complex ones. This leads to a sequence of 'blocks' of mathematics. Within each of these blocks are 'small steps' which again are sequenced in order of difficulty and dependency. Each step leads carefully from the previous one, building on pupils' prior knowledge in order to develop new skills. Fluency, reasoning and problem solving are integrated into classroom practice.

We provide pupils with a variety of concrete and pictorial representations to reinforce their learning. Teachers use careful questions to draw out children's discussions and their reasoning. Everyone has access to a range of equipment to embed and deepen their understanding. Some pupils may require additional support out of class to look back over the steps covered or to deliver short targeted sessions before a topic is taught. Lessons provide opportunities to achieve greater depth, with children being offered rich and sophisticated problems, as well as exploratory and investigative tasks.

Arithmetical fluency is reinforced daily across all year groups. These concepts are revisited through other topics across the year. In Years 3 & 4, times tables are practised regularly both at school and at home and are assessed weekly.

We encourage opportunities for exploring and investigating maths across the curriculum, outdoors and in the wider world.