Maths Rationale

Maths is a key part of our broad and balanced curriculum where we endeavour to ensure that children develop an enjoyment and enthusiasm for maths. Throughout school, the maths curriculum focuses on developing pupils' fluency, reasoning and problem-solving skills and through embedding a deep conceptual understanding of each concept taught, we aim for pupils to become confident mathematicians. Great emphasis is placed on the use of concrete resources and pictorial representations at all ages, to enable children to fully understand the concepts and principals, when presented with abstract calculations and questions.

From Reception to Year 6, we follow our calculation policy which outlines the progression of strategies and methods to be taught and we have an accompanying vocabulary progression document which we also follow – both link to the CPA approach. Each class follows the scheme of 'White Rose' which supports children in learning the fundamentals behind the meanings of numbers and exploring other key mathematical areas. The 'White Rose small steps' break down the teaching sequence into small achievable steps which begin each unit with a recap and reminder of previous learning.

Where children require additional support, 'scaffolds' are used to support children further to ensure that they have secured the small step before moving on. Pre-teaching activities are used for those children needing additional support before beginning a new unit. For children who understand a concept quicker, challenges are used to deepen and challenge learners further and this is supported by resources from 'Deepening Understanding'.

Times tables and recall of key facts play an important part in our maths lessons, with children developing their fluency in rapid recall of tables up to 12 x 12 by the end of year 4. Across KS1 and KS2, children have access to NUMBOTS which provides online activities for both home and school in which key facts are practised and applied in different contexts. Children from Y3 – Y6 also have the opportunity to consolidate their times tables knowledge using TT Rockstars. This APP gives children the confidence to practise and answer questions in the same style as the MTC at the end of Year 4. Daily maths lessons begin with the use of Flashback 4s which provide opportunities for children to recap key facts from previous lessons. Recap and challenge slides are used weekly to revisit arithmetic and introduce new content and arithmetic tests fortnightly give pupils the opportunity to practise their skills in a formal test situation. Year 1 pupils begin their daily maths lessons with Fluency Bee (an intervention designed to embed confidence in basic fluency skills), while Years 2-4 have 2 dedicated morning sessions to teach these skills discretely. In UKS2, 2 morning sessions are dedicated to teaching arithmetic skills.

Progression

The White Rose curriculum is a spiral curriculum, so that when a topic is covered, it is revisited again many times in different contexts and this is evidenced in the progression documents which focus primarily on the 4 main areas of Number, Measurement, Geometry and Statistics. This allows pupils to master elements of the curriculum by spending longer on topics which are then revisited. The progression document highlights for teachers where the topic has been taught previously, what has already been covered and documents where new concepts are introduced for the first time.

Assessment

Assessment in maths takes place daily with live marking and verbal feedback given where possible. Assessments are given at the end of each unit, providing opportunities for teachers to assess learning from that particular unit and identify gaps in learning. End of term assessments aid teachers to assess children at the 3 formal assessment points throughout the year. More informal diagnostic tasks and quizzes are given to children before beginning a new unit. This allows teachers to analyse common misconceptions and gaps in necessary knowledge that may prevent children from accessing the new unit. Alongside these assessment strategies, children complete 2 weekly arithmetic tests and spend time working through formal methods for all 4 operations.