Maths

What We Teach in Maths:

- A secure understanding of key mathematical knowledge from Early Years through to Year 6, including number and place value, the four operations, fractions, decimals, percentages, measurement, geometry, statistics, and algebra.
- Substantive knowledge: the factual content and core concepts of mathematics such as number relationships, place value, operations, equivalence, proportionality, patterns, and spatial reasoning.
- Disciplinary knowledge: how mathematicians think and work, including reasoning logically, recognising patterns, making conjectures, testing ideas, using representations, and justifying and explaining solutions.
- Development of fluency, reasoning, and problem-solving skills, enabling children to select and apply appropriate methods, explain their thinking, and solve increasingly complex and unfamiliar problems.
- Big ideas that recur across year groups, including number sense, structure, equivalence, relationships, patterns, and the application of mathematical thinking to real-life contexts.
- Progressive development of mathematical vocabulary to support precise communication, including terms related to operations, properties, measures, geometry, and data.
- Opportunities to apply mathematics in real-world and meaningful contexts, including links to the school environment, daily life, and practical problem-solving situations.

This approach ensures clear sequencing and progression across the school, building on prior learning while developing increasing depth, accuracy and independence. It reflects high ambition for all learners and ensures coherence, challenge, and the development of secure mathematical understanding over time.

How We Teach Maths:

- Through a carefully sequenced mastery curriculum that revisits key concepts, building fluency before moving on to more complex reasoning and problem-solving. Lessons are structured to ensure pupils develop a deep and secure understanding of mathematical concepts, mastering foundational knowledge before making clear connections between mathematical ideas over time.
- Teaching is informed by ongoing assessment. Misconceptions are identified through questioning, discussion, and live marking, allowing teachers to provide immediate feedback and adapt teaching and support within lessons. Learning is broken into small, manageable steps, with targeted scaffolding to support understanding and address gaps.
- A range of pedagogical approaches are used, including explicit teaching, modelling, guided practice, independent practice, and problem-solving tasks. Pupils are encouraged to develop both fluency and reasoning skills, enabling them to recall facts efficiently and explain their thinking clearly.
- Concrete, pictorial, and abstract (CPA) approaches are embedded across the curriculum. Manipulatives are used to support understanding of abstract concepts, alongside pictorial representations such as bar models, number lines, and arrays, helping pupils visualise relationships and structure within mathematics.
- Mathematical representations, such as bar models and part/whole models, are used to support problem-solving and reasoning, helping children to organise information and make connections between different concepts.
- Mathematical vocabulary and oracy are central to lessons. Pupils are explicitly taught subject-specific language and are encouraged to articulate their thinking using full sentences, justify their answers, and engage in mathematical discussions. This supports deeper understanding and helps pupils communicate ideas with clarity and precision.
- Adjustments and scaffolds are provided to ensure all learners, including those with SEND, EAL, or who are disadvantaged, can access the full curriculum. These may include visual supports, sentence

stems, carefully structured tasks, and additional guidance where needed, while maintaining high expectations for all pupils.

- Learning is made meaningful through real-life contexts and problem-solving opportunities that encourage pupils to apply their knowledge in practical situations. Pupils are supported to think like mathematicians by exploring patterns, making conjectures, testing ideas and explaining their reasoning with increasing confidence and independence.
- The subject leader attends regular updates and training to ensure knowledge of current practice and curriculum developments remains up to date. This is shared with staff through ongoing communication and professional development. The subject leader also supports teachers by monitoring teaching and learning across the school, reviewing pupil outcomes, and offering guidance and advice to help maintain consistently high standards and support continuous improvement.

<u>What Our Children Have Learnt in Maths:</u>

- By the end of primary school, our children will have developed a secure understanding of key mathematical knowledge, including number and place value, the four operations, fractions, decimals, percentages, measurement, geometry, statistics, and introductory algebra. A strong emphasis is placed on times table recall, enabling pupils to develop fluency, accuracy, and confidence in calculations, which underpins much of their future mathematical learning.
- Children demonstrate their understanding by solving problems, explaining their reasoning and using appropriate mathematical vocabulary. They can select and apply efficient strategies, represent their thinking and move confidently between concrete, pictorial and abstract representations.
- Progression is evident in the increasing complexity of work, the fluency with which children recall and use mathematical facts (including multiplication and division facts), and their ability to apply knowledge to unfamiliar problems. As they move through the school, children become more independent in explaining their methods, justifying answers, and identifying and correcting errors.
- Confident mathematicians are able to articulate their thinking clearly, use precise vocabulary, recall times tables quickly and accurately, tackle challenges with resilience, and explain and justify their reasoning both verbally and in writing. They are willing to explore different strategies and persevere when problems are not immediately clear.
- Evidence of learning is gathered through pupils' work in books, live marking and feedback, formative assessment during lessons, quizzes and reasoning discussions. Teachers use this evidence to identify gaps, address misconceptions, and inform next steps in learning.
- All pupils, including those with SEND and those who are disadvantaged, are supported to achieve well through targeted scaffolding, appropriate challenge, and high-quality teaching. Progress is carefully tracked to ensure that all children build secure mathematical understanding and make strong progress over time.