Curriculum Statement for Mathematics

'Children's chances of success are maximised if they develop deep and lasting understanding of mathematical procedures and concepts' (National Centre for Excellence in Teaching Mathematics).

At the Bythams School we use the *maths mastery* approach to teaching our curriculum. This approach aims to develop deep understanding of maths leading to the ability to apply maths to multiple contexts and solve problems, rather than being able to memorise key procedures or resort to rote learning.

The mastery approach is characterised by a belief that all children can succeed to learn and enjoy mathematics, given the right conditions and time. Children are taught together as a class through carefully structured teaching delivered in connected steps, providing the necessary scaffold for all to achieve.

Our curriculum design ensures a coherent and detailed sequence of essential content identified through small steps which build on prior learning. This develops secure understanding and supports sustained progression over time, linked to the National Curriculum.

We use White Rose Maths as our main scheme to support this approach so that all children (with very limited exception) have acquired the fundamental maths facts and concepts by the end of their key stage and can confidently move onto the next stage of their learning journey.

Our pedagogy underpinning the principles of maths mastery:

- Development of mathematical learning behaviours so that children focus and engage fully as learners who reason and seek to make connections
- Continual development of teachers' knowledge to refine and improve their mathematics teaching
- Whole class teaching where the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration and discussion enabling children to think, reason and apply their knowledge
- Monitoring progress through regular formative checks and end of block assessment, ensuring children have grasped what is being taught
- Quickly addressing misconceptions and gaps in children's understanding through short pre-teaching and post-teaching sessions delivered to groups and individuals
- Avoiding cognitive overload in working memory through key mathematical facts learned deeply and practised regularly, enabling children to focus on new learning
- Carefully selected examples, representations and models to emphasise connections enabling children to develop deep knowledge
- A working wall for mathematics as an interactive display that includes models for current learning, key mathematical vocabulary and challenges to promote deeper thinking
- Procedural fluency and conceptual understanding developed through practice as a vital part of learning

Through a structured curriculum carefully sequenced, we aim to teach all children to:

- confidently use concrete, physical manipulatives and representations in *'seeing'* the maths. This builds and deepens their understanding of mathematical structure and connections
- access ideas and communicate concepts by confidently using mathematical vocabulary
- choose appropriate methods and strategies to solve problems
- think flexibly and apply mathematical thinking and reasoning to maths problems, including looking for patterns and relationships, conjecturing, and generalising
- develop accurate recall of key number facts and procedures essential for fluency, including knowing multiplication tables by the end of Year 4
- develop a deep and connected understanding of mathematics that they can apply to a range of contexts.