Maths Curriculum Rationale

INTENT

Alignment	In the EYFS we aim to instil a love of mathematical learning and problem solving through practical, real life contexts embedded throughout our daily routines and rituals and our learning environment. Adult led provision also teaches the skills and concepts needed to create a solid mathematical foundation that equips each child to progress and succeed in their future learning in KS1, Ks2 and beyond.
End Points	Children will become fluent mathematicians and demonstrate their understanding thus leading to them achieving well. Children will acquire core mathematical facts, an understanding of concepts and strategies that they are able to apply successfully and efficiently when solving problems. Children can apply efficient and accurate mathematical methods when faced with more complex calculations or unfamiliar problems.
Sequencing	To support pupils to 'make rich connections across mathematical ideas', the content of the curriculum for each year group is broken down into units, which develop specific mathematical behaviours alongside age-appropriate knowledge and skills. The school uses White Rose to ensure progression, supplemented by resources from NCETEM and other providers. We follow the Mastery approach, throughout school, which is research and evidenced-based.
Social Disadvantage	A key principle of our teaching is about the belief that every child can engage with the curriculum for their year group, unless they have an additional need. Pre-teaching and interventions are in place to ensure that all children can engage with the key learning. The structure of the curriculum is designed to ensure that all children can keep up with the pace of learning.
Local Context	We want all children to become fluent mathematicians through ensuring they acquire core mathematical facts, an understanding of concepts and strategies that they are able to apply successfully and efficiently when solving problems.

IMPLEMENTATION

Pedagogical Approaches	In order for children to become fluent mathematicians, opportunities to practice and develop their recall of key facts are provided. White Rose provides planning and resources to support teachers in the delivery of maths concepts.
Teachers' Expert Knowledge	The Maths Leader supports teaching staff through delivering regular CPD. White Rose provides teachers with exemplification for maths objectives and ensures that all pupils are able to progress to deeper and more complex problems whilst also being confident with fluency and problem solving. We have provided teachers with CPD about the Mastery approach and used the EEF guidance documents which are research and evidenced-based.
Promoting Discussion and Understanding	Discussion and effective questioning by the teacher is key to allowing pupils to recall new knowledge. It will also help them make links between new material and prior learning. Through the use of formative assessment each lesson, information can be recalled by the children from their long-term memory. The children are encouraged to use thinking stems to help them to form their reasoning answers in lessons.
Knowing and Remembering More	Each lesson begins by reviewing prior learning from previous lessons and units ready for their development in the new one. Several times a week, children complete a 'Do Now', meaning they recall knowledge and skills from last lesson, last week and last term. Children from Y2-Y6 also participate in times tables challenges each week which is supported by the children's work on the digital app, Times Tables Rock Stars.
Teacher Assessment	Formative assessment is essential to ensure that all children are not only learning new concepts, but remembering and applying previous knowledge and skills. Effective questioning plays a fundamental role in checking for understanding and ensuring misconceptions are quickly addressed as does marking and feedback during or between lessons.

IMPACT

Approach to Assessment	Formative assessment is used in each lesson to identify and address gaps and misconceptions. It is used in every lesson to recall learning from previous years. Live marking take place to ensure that these misconceptions are addressed in a timely fashion. Standardised maths assessments (PiXL) are used throughout the year to provide standardised scores. Question Level Analysis work is completed after testing to inform teachers of their classes' next steps.
Performance Data	In the EYFS, adults continuously observe and, through their interactions and questions, will identify where children are in their learning over time. Data is published for maths at the end of KS2.The school tracks progress towards these to ensure children are on target for national expectations. Teachers assess children based on both formative and summative assessment.
Pupils' Work	We have high expectations of all children in terms of the quality and presentation of their work, which we believe leads to a sense of pride, linking with our school values. Children demonstrate that they are fluent and then prove their understanding through independently justifying, reasoning and convincing. Children are able to demonstrate their understanding in a variety of ways.
Talking to Pupils	The subject leader talks to pupils about their learning as part of the monitoring process. Children's books are used to guide discussions and provide the subject leader with the information required to identify the key knowledge, facts, concepts and strategies taught have been remembered and understood. The subject leader will also ask the children about what they have learnt in their current year and previous years, to see if subject matter has been embedded into the children's long-term memory and links have been established.