

'Living and Learning in Faith'

#### **Intent**

Maths is an important creative discipline that helps us to understand and change the world. We want all pupils at Our Lady's Primary School to experience the beauty, power and enjoyment of Maths and develop a sense of curiosity about the subject with a clear understanding. At Our Lady's we foster positive 'can do' attitudes and we promote the fact that 'We can all do maths!' We believe all children can achieve in Maths, and teach for secure and deep understanding of mathematical concepts through manageable steps. We use mistakes and misconceptions as an essential part of learning and provide challenge through rich and sophisticated problems.

### **Implementation**

In EYFS, Maths is presented through the engaging play areas of continuous provision that the children explore independently or guided by an adult. The Mastering Number Programme (developed by The Nationals College for Excellence in the Mastering of Number – NCETM) along with White Rose resources, are used to develop early number, numerical patterns shape, space and measure understanding and allow the children to experience Maths at an age appropriate level.

In Key Stage 1 and 2, the Mastery principles are supported by our use of the White Rose schemes of work and the Five Big Ideas from the NCETM. These principles reflect the teaching found in high performing education systems internationally, particularly those of east and south-east Asian countries such as Singapore, Japan, South Korea and China.



The approach used in our Maths is built upon Jerome Bruner's principles of beginning all areas of Maths at a concrete level. All children will use manipulatives (tens frame, Dienes ...) so that the concepts being taught are understood by all children. From this approach, children will move at an appropriate pace to pictorial representations of the theme being taught (using part whole or bar models) to lastly to the abstract – the symbols that we see on a daily basis (2 + 4 = 6). The strategy/pace of the approach is to move to abstract learning as quickly and as necessary as possible.

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The lessons in school are characterised by the following Principles:

- Teachers reinforce an expectation that all pupils are capable of achieving high standards in Maths.
- Pedagogy is based upon 'I do, We do, You do' where well designed lessons are 'crafted' to support all learners.
- The large majority of pupils progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and intervention (some children may use the concrete manipulatives for a longer period of time to understand the concept being taught).
- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts in tandem.
- Teachers use precise questioning in class to test knowledge and assess pupils regularly to identify those requiring intervention so that all pupils keep up.
- Children are articulate in explaining and justifying their thinking when answering questions.
- Children have opportunities and are taught to work both collaboratively and independently.
- All lessons in Years 1 to Year 6 begin with five minutes of Fluency built on Variation Theory so as to enable children to become flexible, efficient and accurate with number.
- Tasks built of prior knowledge
- The intention of these approaches is to provide all children with full access to the curriculum, enabling them to achieve confidence and competence – 'mastery' – in Maths, rather than many failing to develop the maths skills they need for the future.

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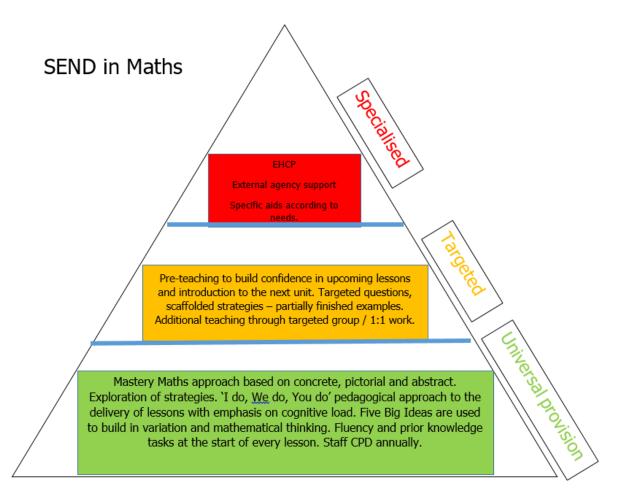








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#### **Impact**

A mathematical concept or skill has been mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Maths because they think they can't do it or are not naturally good at it. The White Rose Maths programme addresses these preconceptions by ensuring that all children experience challenge and success in Maths by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards, with achievement at the end of KS2 well above the national average and a high proportion of children demonstrating greater depth, at the end of each phase.

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### We monitor the impact of this subject through:

- Monitoring of annotated plans
- Pupil voice
- Termly Maths testing focusing on the term's learning
- Regular oral and written feedback
- Book looks
- Lesson drop ins

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