Mathematics Intent Marlborough Road Academy

## Intent

At Marlborough Road Academy, we believe that every child can master and enjoy mathematics. Our intent is to develop confident, resilient mathematicians who understand the 'why' behind the 'how' and can apply their knowledge fluently and flexibly. As educators, it is our priority to ensure children develop firm foundations in their mathematics learning, through a secure understanding of number sense and place value. We want to enable children to:

- be confident mathematicians who are fluent in the fundamentals of the subject
- reason mathematically
- become resilient problem solvers and be able to apply their mathematics

## Implementation

Through the use of a research-based, mastery approach to teaching maths, 'Maths No Problem' ensures a consistent, coherent journey through the key mathematical concepts from Year 1 to Year 6.

Maths No Problem lessons follow a clear structure, alongside Rosenshine's Principles. A typical lesson contains:

- A review of prior learning to promote fluent recall using United Learning's maths advisor arithmetic and retrieval resources.
- Children being encouraged to make connections with previous knowledge and look for patterns to embed new learning
- New concepts are presented in a logical sequence, initially enacted with "concrete" materials; later, represented by models and then by abstract notation.
- Children are given the opportunity to explore real life/ everyday problems and are given time to think deeply about the mathematics involved, using mathematical vocabulary to reason, explain and justify their thinking in collaboration with their peers.
- Emphasis is placed on promoting multiple methods of solving a problem and challenge occurs through depth rather than acceleration.
- Guided practice ensures that children understand their learning before moving onto independent work. Further guided practice is provided for those who need it following assessment. These children will then move onto independent practice.

- Challenges are provided to deepen understanding and provide opportunities for children to develop their reasoning skills and ability to explain their thinking in different situations. These can include the DFE's Ready to Progress assessment questions

In the Early Years Foundation Stage (EYFS), we relate the mathematical aspects of the children's work to the Development Matters statements and the Early Learning Goals (ELG), as set out in the EYFS profile document. Maths content focuses on early development of children's understanding of numbers up to 20, the language of comparison and ordering and finding and creating patterns. This is delivered through three formal teaching sessions a week; adult-led, small-group follow-up tasks and continuous provision opportunities

Homework- Children are expected to practise either number bonds in KS1 (which moves onto times tables in Year 2) or times tables and related facts in KS2. This is supported with subscriptions to Times Tables Rock Stars (Year's 2-6) to develop fluency and recall. All classes have a homework sway, which can be accessed through the school website, these contain songs, worked out examples or vocabulary we are using in class related to a strand of maths.

## Impact

We measure the impact of our curriculum using the following methods:

- Daily retrieval tasks
- Monthly reviews on taught concepts
- Termly Progress in Understanding Mathematics Assessments (White Rose), a suite of termly standardised maths tests which enable school to track progress, predict future performance and benchmark against national averages
- Key stage two SAT results
- Pupil discussions about their learning

Our problem-based approach to mathematics aims to equip children with the reasoning, pattern-spotting and problem-solving skills they need to thrive in the modern world.