

Mathematics Intent – Model Village Primary School

At Model Village Primary School we recognise that Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.

We aim to provide a high-quality mathematics education with a mastery approach that has communication at its core, so that all children:

- become fluent in the fundamentals of mathematics;
- reason mathematically;
- are able to solve problems by applying their mathematics.

(National Curriculum 2014)

At Model Village, we want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically and communicate their ideas and findings. We are committed to developing children's curiosity and excitement about the subject and nurture their confidence in maths as well as an appreciation of the beauty and power of Mathematics. At the heart of this, our belief is that 'every child can!'

Implementation

At Model Village we use Power Maths in FS2 – Year 6, which is recommended by the DFE and carefully aligned with White Rose Maths. It is designed to support teachers in all aspects of their planning whilst delivering Maths Mastery methods effectively. The Power Maths series is a whole-class mastery programme designed to spark curiosity and excitement and help our teachers nurture confidence in maths and become effective communicators. It is the only mastery programme perfectly aligned to the White Rose Maths progressions and schemes of learning and it is written specifically for UK classrooms by leading mastery experts and has been created specifically for children living in the UK and is fully aligned to the 2014 curriculum.

Teachers are provided with the planning and additional CPD to deliver mastery lessons. As part of this process, teachers need to plan the following for mathematic lessons.

- Precise questioning to test conceptual and procedural knowledge.
- At the point of learning intervention.
- How and when manipulatives will be used within each lesson to develop and deepen understanding.
- Where and when White Rose can support learning and deepen understanding.
- Use White Rose end of unit assessments and plan interventions when necessary.

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. Mathematics development involves providing children with opportunities to practise and improve their skills in counting numbers, calculating simple addition and subtraction problems, and to describe shapes, spaces, and measures. The profile for Mathematics areas of learning are Number (ELG 11) and shape, space and measures (ELG 12). We continually observe and assess children against these areas using their age-related objectives, and plan the next steps in their mathematical development through a topic-based curriculum. Number blocks is also used in EYFS as this is found to be engaging and introduces children to numbers in an interesting way; it is also

recommended by the NCETM. FS2 begin to use Power Maths to introduce children to mastery and deepen their understanding.

There are opportunities for children to encounter Maths throughout the EYFS (both inside and outside) – through both planned activities and the self-selection of easily accessible quality maths resources. Whenever possible children's interests are used to support delivering the mathematics curriculum.

Towards the end of Reception teachers aim to draw the elements of a daily mathematics lesson together so that by the time children move into Year 1 they are familiar with a structured lesson / activity.

Impact

As previously mentioned, our mathematics curriculum is based upon 'Power Maths' resources which are fully supported by the Department for Education as they meet the requirements of the new curriculum. It provides all the elements that teachers need to teach Maths mastery with confidence and encourage children to communicate using maths language. We measure the impact of our curriculum through the following methods:

- A White Rose end of unit check – interventions then planned accordingly;
- Termly assessment Progress in Understanding Mathematics Assessment (PUMA) which is a suite of termly standardised maths tests which enable school to track progress, predict future performance and benchmark against national averages;
- A fortnightly Arithmetic test and weekly use of Times Tables Rockstars– designed to develop fluency.
- Pupil discussions about their learning and use of manipulatives to deepen understanding;
- Pupil Voice;
- Termly Lesson Studies;
- Setting of Mathematics Homework and reviewing of results.

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 Mathematics because they think they can't do it or are not naturally good at it. The Power Maths programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics 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.