



Subject Lead – Mrs Stacey Hudson

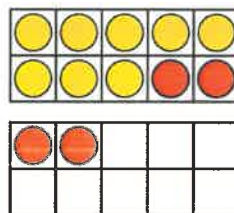
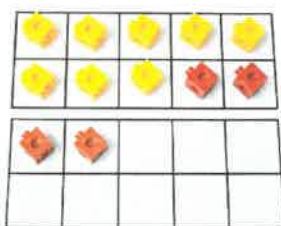
Introduction

At St. Michael's we believe that all pupils can achieve in mathematics. We believe that at each stage of learning, children should be able to demonstrate deep, conceptual understanding of a topic and build on this over time. We want children to be able to not only recall and use the maths taught but to also be able to transfer and apply it in different contexts, being able to reason and problem solve. This deep learning is what we are aiming for by teaching maths using the mastery approach.

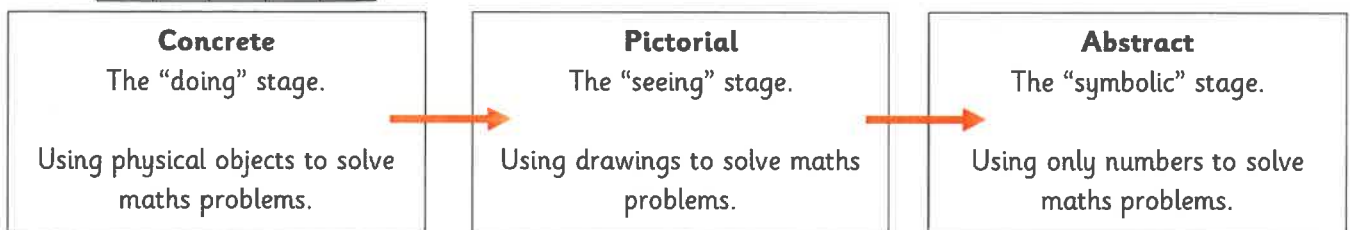
What Is Maths Mastery?

Maths mastery ensures that all children are given the opportunity to acquire a deepened understanding of the subject. A strong emphasis is put on problem solving and reasoning which results in understanding the concepts in greater depth.

Before this can be achieved, children need to have a solid enough understanding of the concepts and procedures before they can move on to more advanced material. This can be achieved by using a CPA (concrete, pictorial, abstract) approach to maths giving all children the opportunity to work towards mastery.



$$8 + 4 = \square$$



Our Curriculum

Our maths curriculum provides all children with the opportunity to master an understanding of maths. Questioning and exploration allow children to develop confidence in Maths which enables them to enjoy and achieve to their highest potential.

Our maths curriculum is split into year group specific units that are taught in a sequence whereby previous learning can be used to support new learning. The sequence in which the units are taught also supports the teaching of, and the children's ability to create links between different concepts and therefore deepen their understanding.

Each unit is then designed in small, carefully sequenced steps that pupils should aim to master before moving on to the next stage. When designing these small steps, the concepts of mastery underpin the lesson planning to ensure children have a deep conceptual understanding of what is being taught. The objective is explored using a range of representations and structures; fluency is developed as well as the flexibility to move between different contexts; variation is used to develop deep and holistic understanding and children are encouraged to think mathematically throughout.

We are part of the NCETM's Mastering Number Project. This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.

Early Years

In Early Years we use The Development Matters Framework and White Rose Maths to ensure that we meet the Early Years Foundation Stage Educational Programme for Maths. Staff make the most of the opportunities for maths in all that the children do.

In Nursery, maths is taught by making links to mathematical contexts during play and daily routines. Teachers use the Development Matters Framework as a guidance as to what to teach and use their professional knowledge to plan the next steps for the children.

In Reception, Maths is taught through daily discrete teaching. Number and Numerical Patterns are taught through the delivery of the NCETM 'Mastering Number Programme' four times a week. Teachers follow the White Rose Maths planning for shape, space and measures.

Key Stage 1

Key Stage 1 teachers use Primary Stars Maths as a basis for their planning and teaching. The mastery scheme encourages a deeper understanding of the concepts taught by following a CPA (Concrete, Pictorial, Abstract) approach to ensure all children can access learning without the need of memorising mathematical procedures. To encourage a deepened understanding of the concepts, the Primary Stars Maths resources are designed to avoid rote learning and repetition of the same task.

The scheme covers the 2014 National Curriculum for Maths and aligns the White Rose Maths Scheme of Learning.

Teachers also deliver four 10-15minute 'Mastering Number' sessions per week, in addition to their daily maths lesson.

Assessment, Reporting, Recording

Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to ensure that understanding is being achieved and that progress is being made. Feedback is given to the children as soon as possible, and marking work will be guided by the school's Marking Policy.

Formative assessment tools are used during the lesson to judge the impact that the teaching is having on the children's learning.

Children who have not developed a deep understanding of a concept, will work in small groups later in the day to explore the concept further and address any misconceptions that may have arisen during the lesson.

Summative assessments are carried out at the end of each term to measure how deep the children have learned a concept when it is assessed out of context and at a later date to the initial teacher input.

Where assessments have shown that understanding may not be as deep, these ideas are covered further in either small group intervention sessions or through further coverage in the main maths sessions.

Differentiation:

We believe that all children can achieve in maths you will not see 'typical differentiation'. Instead you will see support mechanisms put in place to ensure all children can access the lesson and that challenges are put in place to ensure children can deepen their understanding. Teachers differentiate in a variety of ways to meet the needs of the children:

Primary Stars Maths provides a 3-star system enabling teachers to tailor activities to children's abilities. They do not differentiate by making numbers 'bigger' or 'smaller', they focus on the concrete, pictorial, abstract approach and the skills to work towards mastery.

Collaboration and group work using class floor books empowers children who lack confidence to share and explore ideas. It provides opportunity for children to work in pairs or small groups enabling them to vocalise their ideas.

Marking

Maths is marked inline with the school's marking policy. The RAG traffic light system is used to show if a learning objective has been achieved. Work should be marked during the lesson to monitor pupils progress. Pupils should be provided with opportunities to reflect on the marking, often verbally.

The following abbreviations are used when marking:

I – Independent Work

S – Supported Work

SC – Self corrected work

Inclusion

We are committed to equality of opportunity in all aspects of school life. Our aim is to offer all our pupils a maths curriculum that is relevant and differentiated so that all our pupils may reach their full potential. Children with additional needs are included in whole class lessons and teachers provide scaffolding and relevant support as necessary.

Monitoring

Monitoring takes place regularly through sampling children's work, and teacher planning, through book scrutiny and lesson observations. Feedback and Coaching is then given to staff to improve practice and strive for quality first teaching always.

Role of the Subject Leader

- To develop the Maths policy throughout the school
- To monitor progress in the Maths across the school
- To keep up to date with development in Maths
- To offer support and advice to colleagues
- To complete orders for equipment and resources needed

Covid-19

Children at our school will continue to receive high quality maths lessons including children who may be learning from home. In the instance of home learning, activities will be uploaded onto Class Dojo portfolios for parents and children to access.

Reviewed by: Stacey Hudson

Date: September 13th 2022



Next Review Date: September 2023