



Subject routeway

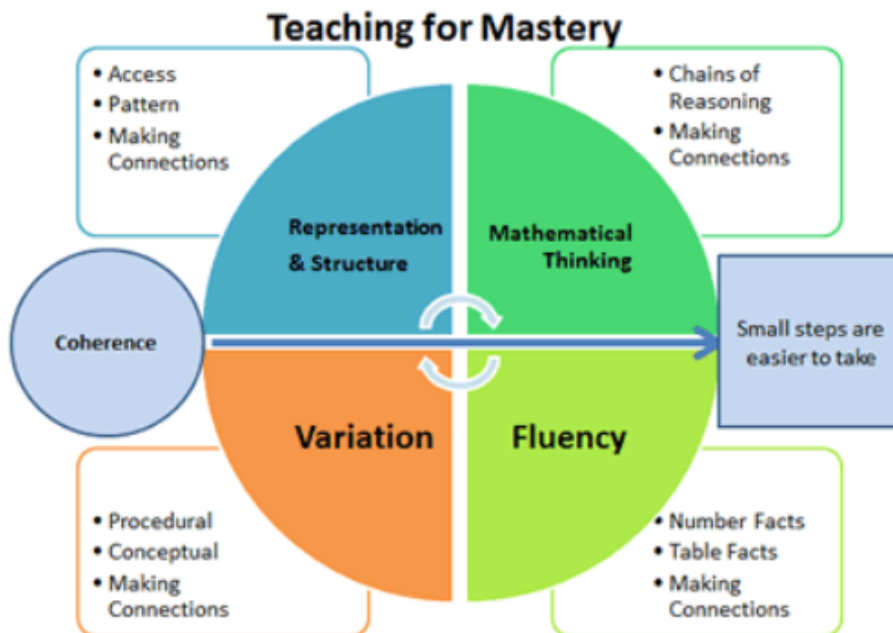
Subject: Maths

Lead: Georgia Patrick

1. Curriculum intent

Our Maths curriculum aims to ensure that every child has an appreciation and love for Maths. We strive for them to become confident mathematicians through problem solving and reasoning. We want our children to be prepared for the wider world, to develop financial literacy and numerical fluency to help them gain employment and succeed in their careers. Most of all, we want all children to enjoy Maths, to flourish in this subject and to have an appreciation of the beauty and power of mathematics.

We teach all of our lessons through a Mastery approach. Instead of learning mathematical procedures by rote, we want pupils to build a deep conceptual understanding of maths which will enable them to apply their learning in different situations. Each Maths lesson will include the 5 areas of Mastery shown below:



By teaching these 5 areas of Mastery, our learners will have a secure understanding of mathematical concepts which will allow them to discuss, explain and justify their mathematical thinking.

We aim to achieve this by teaching them to:

UN Convention on the Rights of the Child, Article 28 – Every child has the right to an education.



- become fluent in the fundamentals of Mathematics
- reason mathematically.
- solve problems by applying their Mathematics.

2. Inclusion

Our aim is for all children, including those with SEND, to access the full mathematical curriculum that their peers are accessing. All pupils are entitled to receive high quality teaching from their class teacher. Additional adults are deployed under the supervision of the class teacher to support and scaffold the progress of all children in mathematics. Lessons are carefully planned to facilitate the small steps in learning that will bridge the gap for learners with SEND. Resources, such as dienes, Numicon and counters are effectively used to support the learning of SEND learners alongside pictorial representations and abstract calculations. Scaffolding is also be used to enable children with SEND to access whole class teaching as frequently as possible.

3. Sequencing

We use *Mastery in Number* in Reception and Year 1 to lay a solid foundation of number knowledge and to fill the gaps which are often already evident for some of our more disadvantaged pupils when they initially join the school.

In Reception, children develop the fundamental skills of counting, sorting, matching and comparing through play and talk through continuous provision. Using play-based and experiential learning including traditional counting songs, appealing physical resources, number books and pictorial representations, we support children to develop a sound grasp of early mathematical concepts and language. Reception also have discreet maths lessons following the NCETM Mastery in Number programme. Over the course of this programme, pupils will develop and demonstrate good number sense, fluency in calculation and a confidence and flexibility with number. Children will be able to subitise numbers up to 10 and understand difference number concepts like cardinal numbers, ordinal numbers and one to one correspondence.

In Year 1 to Year 6, we follow the National Curriculum (2014) and use the *White Rose Maths* approach to build deep understanding, confidence and competency. Our curriculum follows a teaching for mastery approach which systematically builds on previous learning. Each year group starts with a deep focus on number, place value and calculation and goes on to build on that knowledge to support understanding in other areas of mathematics. Review and recall are built in, for example, through the “flash back four” and reinforcement of instant recall facts linked to the current *White Rose* content.

We blend concrete, pictorial and abstract approaches (the CPA method) to give children a firm grasp of numerical concepts and methods. We recognise the importance of mathematical language and support children to articulate and explore their ideas in pairs, groups and the whole class. We encourage regular retrieval practice to ensure strong recall of basic number facts, and teach problem solving to enable children to use and apply their maths knowledge. Our teachers are trained and supported to ensure that no child is left

behind and that children with knowledge gaps or specific numeracy issues are supported to access the full curriculum.

Our wider curriculum reinforces mathematical knowledge and maths concepts through, for example, data handling and presentation in ICT, developing sound chronological awareness in History and understanding distances and direction in Geography.

Class Teachers and teaching assistants deliver targeted small group interventions to support children with additional learning needs in maths. Staff also use same day interventions to address misconceptions immediately. We use data from statutory and non-statutory assessments to identify children needing additional support in maths.

4. Milestones

The *White Rose* scheme clearly sets out expectations and endpoints, in line with National Curriculum expectations for each unit, year group and key stage. There is constant formative assessment and termly summative assessment which feeds into our pupil progress system and informs class planning and intervention. Teachers use a variety of approaches for ongoing formative assessment including low stakes quizzing through STIK (Show That I Know) at the start of each lesson and *White Rose* End of Unit Quizzes. Termly summative assessment is through the *White Rose* End of Term Assessments. Assessment is also supported by termly book looks, pupil voice, and moderation across year groups.

5. Professional development

Our Maths Leader has attended Teaching for Mastery programme through the NCETM Maths Hub. Through this 4-year programme we aim to develop teaching for mastery throughout school. We are currently in the 'Sustaining' phase of the process which is the final year. Information from this programme has been disseminated throughout the school

Teachers and TAs have engaged in subject knowledge enhancement courses through the NCETM over the past few years. These members of staff have also received training in how to use concrete resources to support the mathematical understanding of their learners. In recent years, we have also trained our staff in how best to support our SEND learners.