

Tacolneston & Morley CE Primary Academies Federation



As each has received a gift, use it to serve one another, as good stewards of God's varied grace

1 Peter 4:10

Work together, learn together, grow together...

Maths Policy

All policies at Tacolneston & Morley CE VA Primary Schools Federation should be taken as part of the overall strategy of the school and implemented within the context of our Safeguarding Policy and our vision, aims and values as Church of England Schools.

Agreed: Spring 2023

Head Teacher:

Governor:

Review: Spring 2025

Intent - Developing Mastery in Maths

TACOLNESTON & MORLEY CE PRIMARY ACADEMIES FEDERATION

At the Tacolneston & Morley CE Primary Academies Federation, we firmly believe in the importance of maths for our children, both as a key to future learning and as a vital tool for use throughout their everyday lives. We believe that every child can master an understanding and love of maths with the right kind of teaching and support. So, we aim to provide a positive, stimulating environment where children feel confident to explore maths and develop their skills.

The 2014 National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of mathematics
- Are able to reason mathematically
- Can solve problems by applying their mathematics

We have an emphasis on developing depth of knowledge before breadth, with an overarching goal for children to develop their fluency, reasoning and problem solving skills while developing an enthusiasm for maths. Pupils will have access to the same curriculum content and are given the opportunity to deepen their conceptual understanding by tackling engaging, challenging and varied problems. Within our calculation strategies, children must not simply rote learn procedures but be guided to develop and demonstrate their increasing fluency through the use of concrete materials and pictorial representations. When planning, teachers identify ways to reinforce children's understanding and learning by challenging their understanding of concepts and exploring and discussing common misconceptions.

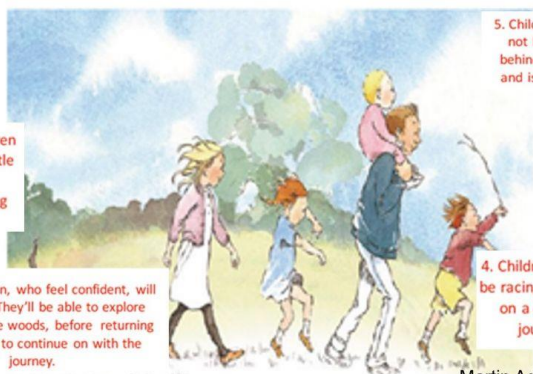
Teaching for Mastery



1. We ALL start the journey TOGETHER

2. Some children will need a little additional support along the way

3. Some children, who feel confident, will be let loose. They'll be able to explore deeper into the woods, before returning to the group to continue on with the journey.



5. Children will not be left behind alone and isolated.

4. Children will not be racing off ahead on a different journey.

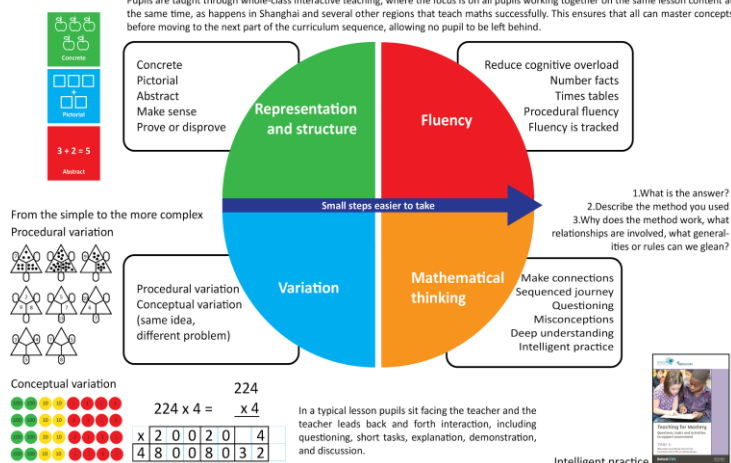
Martin Adsett
Mastery Specialist

We're Going on a Maths Hunt

Maths Mastery

See: The essence of maths teaching for mastery

Pupils are taught through whole-class interactive teaching, where the focus is on all pupils working together on the same lesson content at the same time, as happens in Shanghai and several other regions that teach maths successfully. This ensures that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind.



Implementation - An Overview

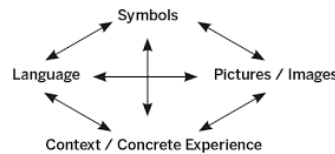
The mastery model we are building incorporates these main points -

- All pupils are encouraged with the belief that by working hard they can succeed and that mistakes and the 'struggle' are what enable their brains to grow.
- Staff will use their maths skills, knowledge of common misconceptions and of their pupils to plan and deliver carefully sequenced lessons that use back and forth interactions to enable children to master the same content at the same time.
- Some children will have interventions to help build fluency and number sense or to reinforce concepts so that they are able to move forward with the whole class.
- Supported by high quality textbooks, teachers will use procedural and conceptual variation to deepen learning.
- Additional opportunities for practice and developing fluency and reasoning are also built in during the week through the use of early morning work, times table rockstars, maths meetings or fluency sessions to ensure children are building on and retaining key knowledge. .
- Children will use carefully chosen equipment to represent problems that expose mathematical structures and concepts; following a concrete, pictorial, abstract approach. It is important that structured models are used across the school to help children reason about mathematical relationships.
- Children will support each other's learning, talking about and explaining their mathematics.
- Teachers plan and introduce sentence stems that express key concepts and enable children to communicate their ideas with precision and clarity; repetition of these help embed this knowledge.
- There is a strong and consistent focus on questioning that encourages and develops mathematical reasoning by, for example, asking children to explain how they solved a problem or worked out a calculation while considering and comparing different methods and their efficiency.
- Teachers plan cross-curricular opportunities to develop pupils' mathematical fluency.

Implementation - Power Maths

We have chosen to use the Power Maths programme to guide our delivery of maths mastery because at its heart is a clearly structured teaching and learning process that helps make certain that every child masters each maths concept securely and deeply.

Unlike most other subjects, maths comprises a wide array of abstract concepts – and that is why children and adults so often find it difficult. By taking a multi-sensory, Concrete-Pictorial-Abstract (C-P-A) approach, we allow children to tackle concepts in a tangible and more comfortable way.



For each year group, the curriculum is broken down into core concepts, taught in units. A unit divides into smaller learning steps – lessons. Step by step, strong foundations of cumulative knowledge and understanding are built.

We use a unique lesson sequence designed to empower children to understand core concepts and grow in confidence. Embracing the National Centre for Excellence in the Teaching of Mathematics' (NCETM's) definition of mastery, the sequence guides and shapes every Power Maths lesson we teach.

Each lesson is divided up into:

- A '**Power Up**' mental or oral starter activity which is designed to support fluency in all key number facts.
- '**Discover** and **Share**' activities where children can share, reason and learn.
- Children then '**Think together**' to consider solutions as a class, with partners or independently.
- Children then get the chance to '**Practice**' the skills learnt to build fluency and develop a deeper understanding of mathematical concepts. Challenge questions link to other areas of maths and encourage children to take their understanding to a greater level of depth.
- Children review, reason and '**Reflect**' on learning in every lesson.
- Following an '**I do**' '**We do**' '**You do**' scaffolded approach which incorporates varied, frequent and thoughtful practice that deepens and embeds conceptual understanding in a logical, planned sequence.

We use correlation documents to ensure we are covering the National Curriculum for Mathematics 2014.

Implementation - EYFS

In the (EYFS), we relate the mathematical aspects of the children's work to:

- the Development Matters statements for Reception and 3 and 4 year olds
- the Early Learning Goals (ELG), set out in the EYFS profile document for Number and Numerical Patterns
- a rich experience of shape, space and measures

We do this by:

- skillfully delivering a well-sequenced curriculum through a variety of opportunities to learn and practise e.g. adult-led input, small group work, continuous provision and fluency sessions.
- providing children with opportunities to practice and improve their mathematical skills daily during a short class input and small group or individual activities following Inspiring Number
- providing daily practice of number sense using NCETM Mastering Number
- using a CPA approach to ensure children are holding maths in their hands and their minds
- developing the language needed to talk and reason about numbers using stem sentences
- including children's interests as a vehicle for delivering the curriculum
- ensuring there are opportunities for mathematical thinking throughout the EYFS, both inside and outside, in planned activities and self-initiated learning
- providing easily accessible high quality maths resources for children to select and explore in continuous provision