Working with NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

At Vernon Park, our teachers are working with the NCETM to become Mastery Specialists so that our pupils can master maths. Teaching for mastery is currently more widespread in primary schools across England, with around 9,000 primary schools engaging with their local Maths Hub, and over 850 primary teachers training as Mastery Specialists.

Children's chances of success are maximised if they develop deep and lasting understanding of mathematical procedures and concepts. Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject. The phrase 'teaching for mastery' describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths. Achieving mastery means acquiring a solid enough understanding of the maths that's been taught to enable pupils to move on to more advanced material. Vernon Park is currently working at the Embedding stage of the Mastery journey.

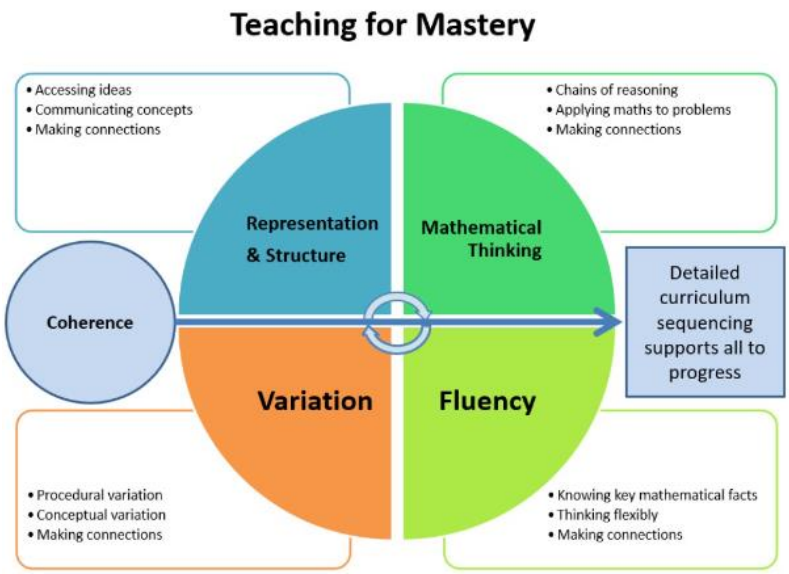
Primary Teaching for Mastery

Discover what teaching for mastery means and how to get involved

Mastery Readiness	Mastery Development	Mastery Embedding	Mastery Sustaining
Take a step into the primary Teaching for Mastery Programme	Develop a teaching for mastery approach to maths in your primary school	Support for schools in their second year of teaching for mastery	Support for schools to make teaching for mastery 'business as usual'

The Five Big Ideas

Behind all NCETM work in the field for teaching mastery are Five Big Ideas, all informed by research evidence and classroom experience. The diagram below helps bind these ideas together.



Coherence

Teaching is designed to enable a coherent learning progression through the curriculum, providing access for all pupils to develop a deep and connected understanding of mathematics that they can apply in a range of contexts.

Representation and Structure

Teachers carefully select representations of mathematics to expose mathematical structure. The intention is to support pupils in 'seeing' the mathematics, rather than using the representation as a tool to 'do' the mathematics. These representations become mental images that students can use to think about mathematics, supporting them to achieve a deep understanding of mathematical structures and connections.

Mathematical Thinking

Mathematical thinking is central to how pupils learn mathematics and includes looking for patterns and relationships, making connections, conjecturing, reasoning, and generalising. Pupils should actively engage in mathematical thinking in all lessons, communicating their ideas using precise mathematical language.

Fluency

Efficient, accurate recall of key number facts and procedures is essential for fluency, freeing pupils' minds to think deeply about concepts and problems, but fluency demands more than this. It requires pupils to have the flexibility to move between different contexts and representations of mathematics, to recognise relationships and make connections, and to choose appropriate methods and strategies to solve problems.

Variation

The purpose of variation is to draw closer attention to a key feature of a mathematical concept or structure through varying some elements while keeping others constant.

- Conceptual variation involves varying how a concept is represented to draw attention to critical features. Often more than one representation is required to look at the concept from different perspectives and gain comprehensive knowledge.
- Procedural variation considers how the student will 'proceed' through a learning sequence. Purposeful changes are made in order that pupils' attention is drawn to key features of the mathematics, scaffolding students' thinking to enable them to reason logically and make connections.

The Five Big Ideas were first published by the NCETM in 2017