

To develop the teaching of Mastery, schools will work with the Maths Hub and start by joining the Mastery Readiness Programme followed by Teaching for Mastery National programme. This will include national text book use, approved by DFE followed by a Sustaining Mastery Programme.

Mastery specialists in both primary and secondary schools are also trained, and continue to be trained, to deliver and support this programme.

Eventually all schools will be involved in this national roll out.

To find out what your child's school is doing, speak to the Maths Subject Leader in school and/or contact:

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Teaching for Mastery

A Guide for Parents

Think of three levels of learning:

Shallow learning: surface, temporary, often lost

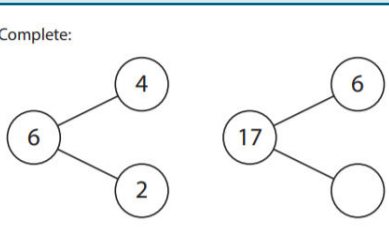
Deep learning: it sticks and can be recalled and used

Deepest learning: it can be transferred and applied in different contexts

The deep and deepest levels are what we are aiming for by teaching maths using the Mastery approach.

A mathematical concept or skill has been *mastered* when a child can show it in different ways, use mathematical language to explain their ideas and independently apply the concept to new problems in unfamiliar situations.

Mastery is a journey and long-term goal, achieved through exploration, clarification, practice and application. At each stage of learning children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.

Complete:

Circle the equivalent fraction to 0.25.

$\frac{2}{5}$ $\frac{5}{2}$ $\frac{25}{100}$ $\frac{100}{25}$

Round to the nearest whole number.

$8\frac{3}{8}$ 8.38 8.83



$(6+8) \times 8$
 $= (2+4) \times 8 - 8$
 $= 200 - 8$
 $= 192$



x and y represent whole numbers.
 Their sum is 1000.
 Can the difference between x and y be:

- 100?
- any whole number?
- greater than x?

Amy thinks of a number. Her number:

- is an even number
- is between 20 and 25
- has two different digits.

What is her number?
 Explain your reasoning.



The key features of a mastery approach:

The class work together on the same topic

The emphasis is on keeping the class together until specific concepts or skills are mastered and then moving on together. This does **not** mean that some children will be left behind or others not challenged. Differentiation is now achieved through and deeper understanding, as explained below.

Speedy teacher intervention to prevent gaps

Those children that have not met the expected outcomes or have gaps in their understanding, will be helped by receiving short, immediate extra time on maths, during the lesson or later in the day. This is a positive opportunity to consolidate their understanding.

Challenge is provided by going deeper not accelerating

For those children that have mastered the skill, concept or procedure they will be presented with higher order thinking activities, rather than accelerating through the curriculum.

Focused, rigorous and thorough teaching

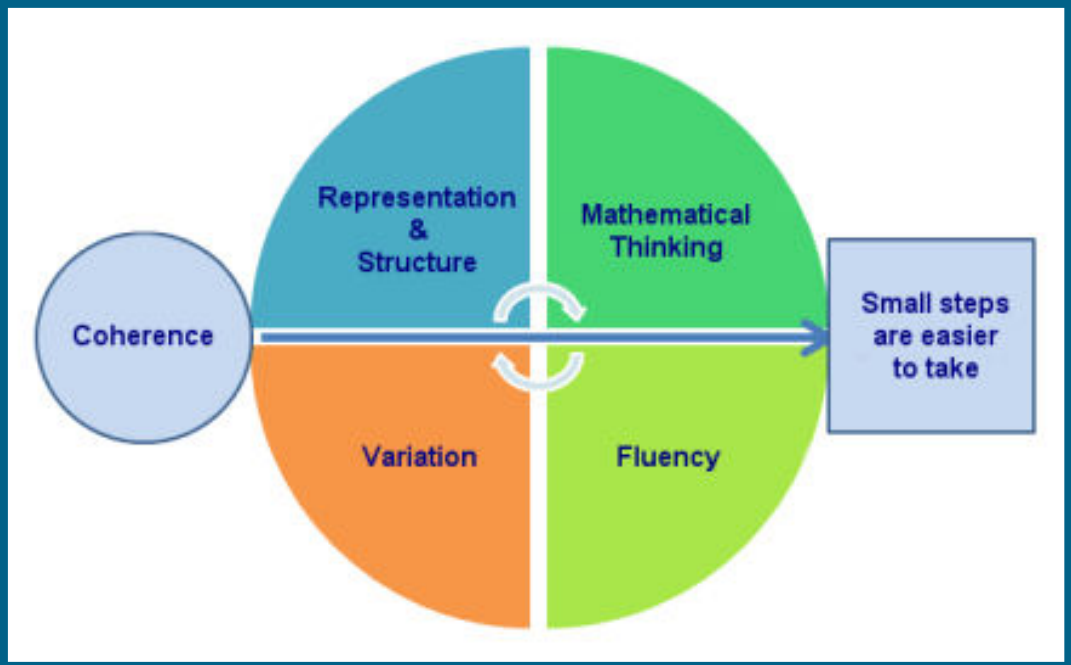
Within Mastery, the idea is to focus on one small step at a time in a lesson, with an emphasis on the mathematical structures involved and the best way to represent these through models and images. Each small step is important as it builds towards deep understanding of a concept.

More time on teaching topics – depth and practice

The same topic is likely to have the same focus until the class has mastered the concept, skill or procedure being taught. This is particularly the case for number and calculations. Focus areas are being taught over a longer time with smaller steps of progress and time is for practice and depth, making the learning effective.

Representation and Structure
Representations such as objects and pictures are used in lessons expose the mathematical concepts being taught.

Mathematical Thinking
If taught ideas are to be understood deeply, they must not merely be passively received but must be thought about, reasoned with and discussed with others.



Variation
Varying the way a concept is initially presented to students, by giving examples that display a concept as well as those that don't display it. Also, carefully varying practice questions so that mechanical repetition is avoided, and thinking is encouraged.

Fluency
Quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations of mathematics.

Coherence
Connecting new ideas to concepts that have already been understood, and ensuring that, once understood and mastered, new ideas are used again in next steps of learning, all steps being small steps.