

Teaching for Mastery Glossary and Pedagogies

Below, you will find a check list of some key pedagogies and definitions of terms employed in mastery teaching.

Some key terms and ideas

Variation – procedural and conceptual:

The central idea of teaching with variation is to highlight the essential features of a concept or idea through varying the non-essential features.

*Variation is not the same as variety – careful attention needs to be paid to what aspects are being varied (and what is **not** being varied), and for what purpose.*

Procedural variation – How is variation in the **examples** used to draw attention to certain features of the concept.

$32+10 =$

$33+9 =$

$34+8 =$

$35+7 =$

$36+6 =$

What do you notice?

Includes opportunities for...

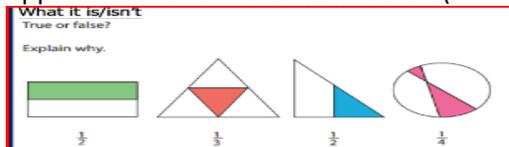
-solving problems (routine and non routine)

-applying to different contexts

-making connections

Conceptual variation – How is the concept presented in different ways? Conceptual variation provides children with multiple representations that support them in gaining a deeper understanding of what a concept is, and what it is not.

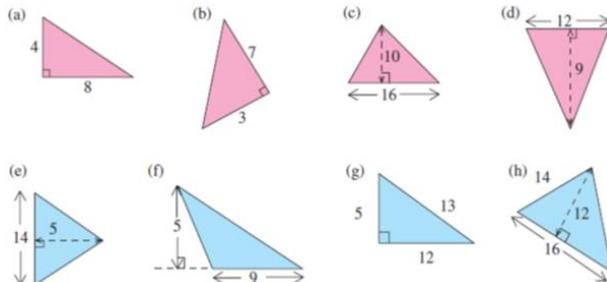
Opportunities to focus on: What it is (standard and non standard -What it is not (use of mistakes and misconceptions to clarify understanding)



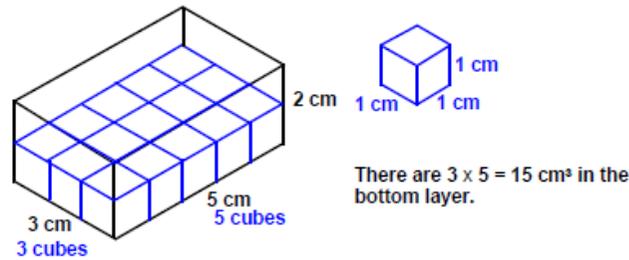
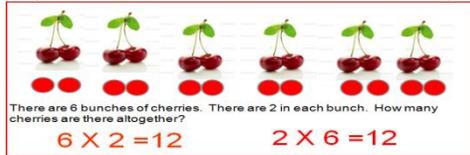
Exploring unit fractions and equal parts.

Non examples are given to draw out misconceptions

Intelligent practice - A key feature of teaching for **mastery** is the precise designing of pupil activities and **practice** questions, so that, rather than pupils repeating a mechanical activity, they are taken down a path where the thinking process is practised with increasing creativity.



Representation and structure-The representation chosen needs to pull out the concept being taught, and in particular the key difficulty point. It exposes the structure.



As there are two layers the cuboid contains $2 \times 15 = 30 \text{ cm}^3$.

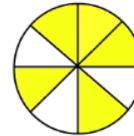
Teaching the whole class together- aiming at maximising opportunities for all children to be exposed to concepts and rich mathematical representation and thinking. (There may be times when children are asked to engage in paired /group /independent work before being drawn back together. 'Reining in of the kite' moments!

Precise use of mathematical language- modelled by the teacher, rehearsed by the children with the teacher. Emphasis on children being encouraged to respond in whole sentences.

Use of 'sentence stems'. Debbie Morgan states that stem sentences help to...

- Enabling all children to recognise what's important and what needs to be remembered for later learning
- Returning to ideas and enabling ideas to be connected
- Providing the correct language for all children to think about and communicate mathematical ideas
- Providing high quality shared language to discuss, connect and share ideas. (<https://www.ncetm.org.uk/resources/49824>)

The shaded region is $\frac{5}{8}$ because the whole has been split into eight equal parts and five are shaded.



Opportunities for all pupils to go deeper: 'dong nao jin'

This may involve challenging questions, or challenging activities that allow the children to 'puzzle' further, and deepen their learning.

Discussion inc. sharing and critiquing of answers and strategies

Overall lesson structure

Thinking about the specific focus of the maths covered ...

- What it *is*
- What it is *also*
- What it *isn't*

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