



Mathematics  
Mastery



**Oak Hill Academy**  
**West London**  
an Aspirations Academy

In September 2017, Year 3 at Oak Hill Academy introduced a 'mastery approach' to teaching maths using the underlying principles of Mathematics Mastery.

Instead of learning mathematical procedures by repetition, we want pupils to build a deeper understanding of all maths concepts which will enable them to be able to apply their learning to a range of different situations.

The pedagogy is identical to Singapore maths, which is highly regarded in the educational sphere as being a 21<sup>st</sup> century approach to mathematics teaching. Singapore rank 1<sup>st</sup> in the world for maths and the Aspirations Academy has decided to initiate Maths Mastery within all of our academies.

In order to get it completely right, we only roll out this across one year group at a time and we are fully supported by the Mathematics Mastery company in ensuring success.

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## Intent

At Oak Hill Academy, our Mathematics Mastery curriculum has been developed to ensure every child can achieve excellence in mathematics. All children can experience a sense of awe and wonder as they solve a problem for the first time, discover different solutions and make links between different key areas of mathematics. It provides all pupils with a deep understanding of the subject through a concrete, pictorial and abstract approach.



## Implementation

- Ensure children are engaged and enjoying their lessons.
- Ensure staff are secure with the Mathematics Mastery six-part lesson.
- Provide staff with tools to assess effectively throughout lessons using focused and targeted AfL
- Provide staff with tools to assess effectively using PITA judgements linked to end-of-year expectations from the National Curriculum.
- Support staff in planning and [resources](#) fun, engaging and purposeful mathematics lessons.
- Encourage an open culture for self-reflection, improvement and CPD.

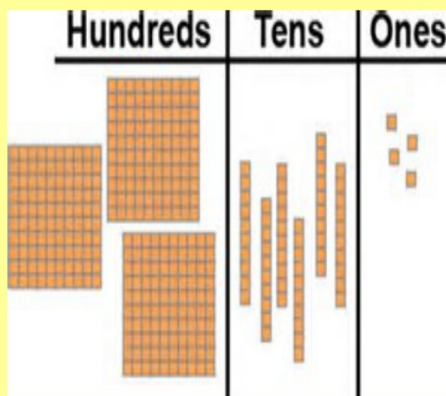


## Impact

- Closing gaps for children to make at least expected progress from KS1 to KS2
  - Evidence of high quality provision in Maths books
  - Opportunities to link to other curriculum areas if they arise
  - Opportunities for Maths Challenge days to develop Cultural Capital.
  - Provide opportunities for linking of content domain skills through reasoning and problem solving.
  - Ensure children have the opportunity to be immersed in problems and worded problems.
  - Provide tools to children to help them to break down questions throughout mathematics to pick out key themes and concepts.
  - Provide opportunities for **transdisciplinarity** where appropriate and when it can effectively link to the half term's assignment.
  - Encourage development of **cognitive load management** - giving all learners the ability to discriminate and filter information for importance. This involves all aspects of perception, thinking, reasoning, and remembering.
- Ensure learners are working **collaboratively** to build on previous knowledge and develop **communication**.



Research shows that in order for children to learn they need concrete/pictorial and abstract tools.



$$364 + 40 = 404$$

This develops an understanding of a concept.

We need to go back and forth between all three representations.

Experience and discovery using it in the real world.

Depth of understanding - not just searching for answers.

Now We are going to try out a 6 part lesson to show you exactly how the children in Year 3 do Maths. Ready...

## How you can support your child at home?

- Time - an area all children need support in.
- Days of the week/Months of the Year
- Counting up in 10/100's from any given number 246, 256, 266 and so forth.
- Counting back in 10/100's from any given number 246, 236, 226, 216, 206, 196
- Adding two digits together, listen to your child explain what they are doing- regrouping NOT CARRYING OVER!
- Use the vocabulary the children learn



