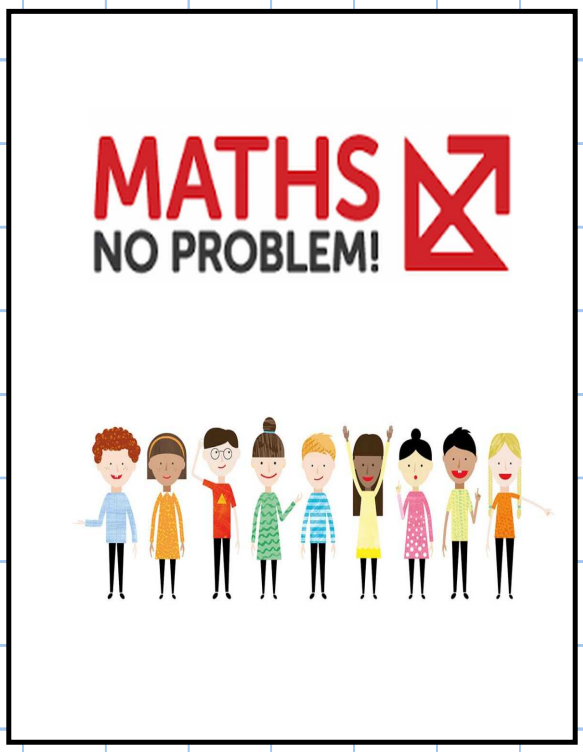
Carr Manor Primary School

Mastery Maths

Years 1, 2 and 3



What is Maths Mastery?

Teaching Maths for mastery is a transformational approach to Maths teaching which stems from high performing Asian nations such as Singapore. When taught to master Maths, children develop their mathematical fluency without resorting to rote learning and are able to solve non-routine Maths problems without having to memorise procedures.

What is Maths Mastery cont...

- Helps pupils develop a deep, long-term and adaptable understanding of Maths
- Slower pace - resulting in greater progress
- Depth before breath (previously children moved onto curriculum areas above their years)
- Focus on one curriculum area at a time - ensuring children have a full and secure understanding before moving on
- When a child has 'mastered' a specific area, they should be able to apply that concept or skill in multiple ways and unfamiliar settings

Carr Manor and Maths No Problem!

The Maths — No Problem! primary series was assessed by the DfE's expert panel, which judged that it alone met the core criteria to support teaching for mastery. As a result, the Maths – No Problem! Primary series is the only textbook which has been placed on a list of recommended textbooks for schools on the mastery programme by the Department for Education.

The material within the textbooks has been put together by a team of mathematical experts who have carefully thought out each number, equation and problem used. This is to enable the children a wide range of opportunities to tackle the tasks in multiple ways.

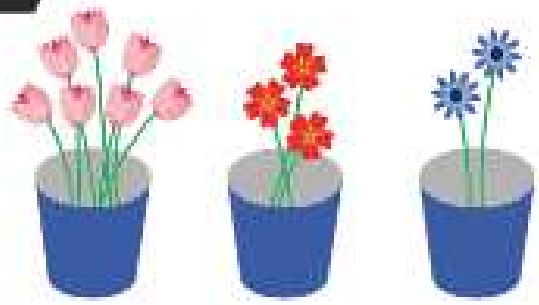
Concrete, Pictorial, Abstract

Concrete, pictorial, abstract is a highly effective approach to teaching that develops a deep and sustainable understanding of Maths.

- It is a gradual and systematic approach which builds on a child's existing understanding
- More effective way of teaching **abstract** concepts
- It provides children with a conceptual understanding of Maths.

Lesson 1

In Focus



Can you add to find out how many flowers there are in total?

https://www.youtube.com/watch?v=D1hwopQLeCU

Lesson 2

In Focus

There were 46 male adults and
49 female adults in a hall.
There were 29 fewer children than adults.
How many children were there in the hall?

https://www.youtube.com/watch?v=l6Ipio8JntU

Let's Learn

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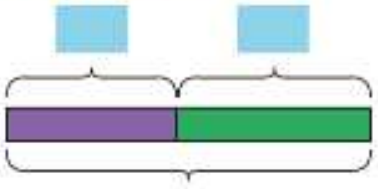

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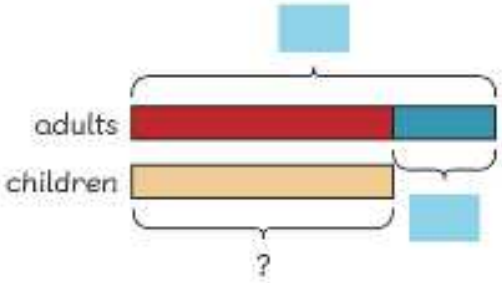
There were adults in the hall.

46 male adults

49 female adults

How many adults were there in the hall?



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There were children in the hall.

29 fewer children than adults

Strategies and resources

Concrete

- Diennes / base ten
- Counters
- 10 frames
- 20 frames
- Bar Model (may also be pictorial)

Pictorial

- Whole, part, part / number bond diagram
- Place value chart
- Number line
- Hundred square
- Pictorial representations

Abstract

- Equations (numbers and symbols)

Differentiation / variation

Tasks and activities are designed to be easy for pupils to enter while still containing challenging components. For advanced learners, the textbooks also contain non-routine questions for pupils to develop their higher-order thinking skills.

Vocabulary

- Ones
- Exchanging
- Equations
- Array
- Groups
- Partition
- Inverse
- Sharing
- Value
- Polygon

Problem solving / Fluency / Reasoning

Fluency

The first aim of the Primary Mathematics Curriclum asks that all pupils become fluent in the fundamentals on Maths. This includes frequent practice with increasingly complex problems over time so that children develop a strong and broad understanding of number and the ability to recall and apply their knowledge of number rapidly and accurately.

Problem solving / Fluency / Reasoning

Problem Solving

All lessons begin with an 'anchor task'.

This encourages children to use their problem solving skills and to develop higher level thinking. The main focus is for the children to practise their skills, build on what they already know and challenge themselves.

Problem solving / Fluency / Reasoning

Reasoning

Reasoning is fundamental to knowing and doing mathematics. It enables children to make use of all their other mathematical skills and so reasoning could be thought of as the 'glue' which helps mathematics makes sense.

- Why??
- Prove it
- How do you know?
- Explain your answer
- Do you agree that... ?
- Is it true that...?
- Can you spot the mistake, explaining why they're wrong?

WWW.

School website- check individual year group pages

https://www.oxfordowl.co.uk/for-home/advice-for-parents/maths-at-home/

https://www.topmarks.co.uk/maths-games/5-7-years/counting

https://mathsframe.co.uk/en/resources/category/22/most-popular

http://www.bbc.co.uk/skillswise/maths/games

http://www.bbc.co.uk/bitesize/ks1/maths/

https://urbrainy.com/maths-games

Videos