KS2 Maths Information Session

Maths teaching for Mastery

Mastery works on the principle that everyone can enjoy and learn Maths.
With this approach, we work systematically to develop children's understanding of key concepts and ideas through small steps.
Our focus is on cementing number facts such as Times Tables and Number Bonds. Maths fluency is the key to success.

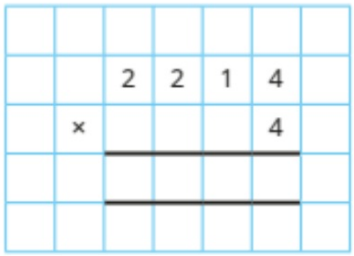
The CPA approach

Concrete
Pictorial
Abstract

A football stadium holds 2,214 people.

The stadium is full for four matches in a row.

What was the attendance for all four matches?

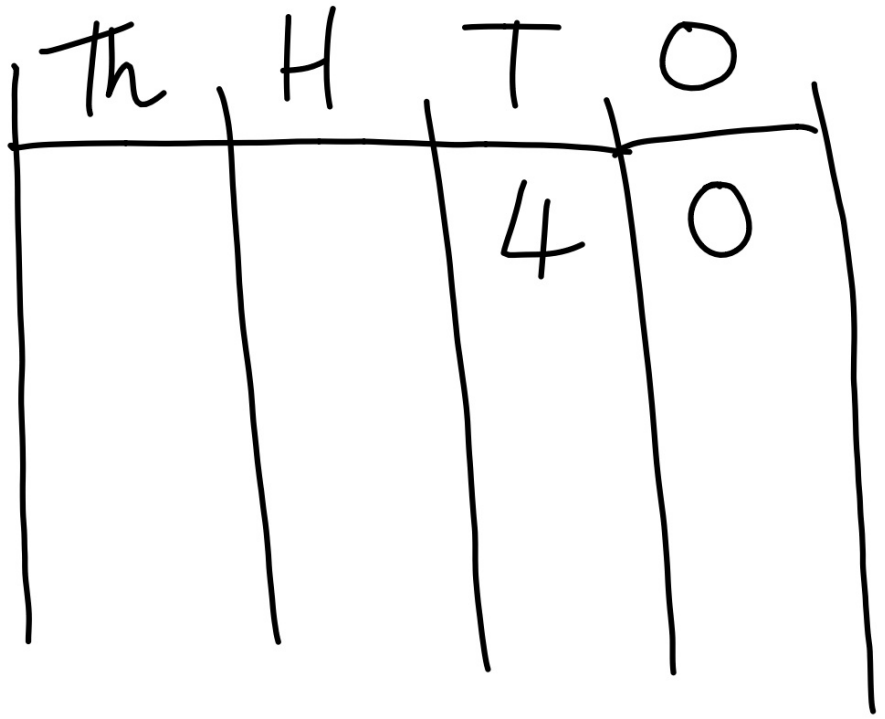


Place Value

Place Value recognises that the position of a digit within a number changes its value.
For example, in the numbers 123 and 321 the value of the 1 digit is not the same.

Let's play a game!

On your whiteboard, draw a 'Place Value Grid.
Like this:



Children's understanding of place value allows them to make links and develop their mathematical understanding.

If I know this, then I know that...

For example, if I know that 2x 1 = 2, then I know that 2 x 10 = 20

We also want children to recognise that Number Bonds to ten and twenty allow us to understand more complex Mathematics.

If 6 + 4 = 10, I know:
60 + 40 = 100
0.6 + 0.4 = 1

Distributive Law

The Distributive Law explains that we can partition a number into easier calculations:

$14 \times 2 = 10 \times 2$ ~~$+ 4 \times 2$~~

4×2

Where children are tasked with multiplication or division problems that they struggle with we encourage them to partition, using a part whole model.

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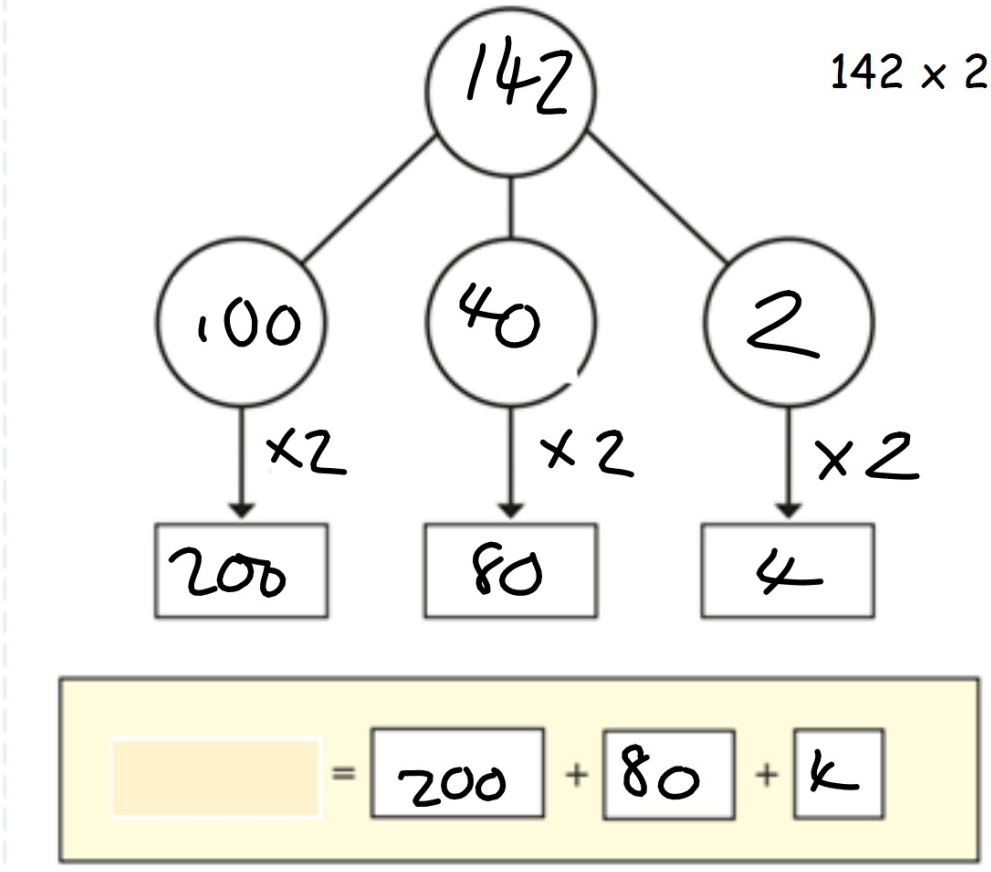
The Part Whole Model



Expanded Method - Multiplication

Annie and Tom are working out 32 × 13

Annie's method

×	10	3
30	300	90
2	20	6

300 + 90 + 20 + 6 = 416

Tom's method

			3	2	
	×		1	3	
			9	6	
		3	2	0	
		4	1	6	
		1			

(32 × 3)

(32 × 10)

32
× 2
60
64

What is the same and what is different about Annie's and Tom's methods?

How can we work together?

The key to Maths confidence is fluency. We want key number facts learnt to automaticity to give children the foundations needed to progress.

Times Tables are a crucial part of this. In Year 4, children undertake the compulsory Multiplication Tables Check and the happier children are with them, the easier this process is.

Practice at home is vital. Using tools such as arrays and/or concrete resources can help children to understand the relationships between numbers more clearly.

Maths in context

The more often children encounter Maths in everyday contexts, the more comfortable they will become with it.
You can engage them through simple exercises such as cooking, shopping, travelling etc.

Maths in Games

Where games involve Maths (card games, dice games, money games) allow your children to be 'in charge' of the Maths aspects of the game - Banker, Counter, Dealer etc. Again, we want children to be as familiar and comfortable with Maths as possible.

Useful Links

School Calculation Policy:
http://www.sparsholt.hants.sch.uk/web/maths/335598

Digital Place Value Grid Tool:
https://assets.whiteroseeducation.com/fixed/wre/digital-tools/pv-chart/index.html

Times Tables resources:
https://www.timestables.co.uk/

http://www.timestables.me.uk/printable-pdf-quiz-generator.htm

https://play.ttrockstars.com/