FAIRGREEN INTERNATIONAL SCHOOL

White Rose MATHS

White Rose Maths at Fairgreen

Fairgreen International School LLC
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How does Maths connect to the IB?

White Rose MATHS



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How will WRM be implemented?

1. Getting use to WRM
2. Planning
3. Adaptive teaching
4. Fluency, oracy, reasoning and problem solving
5. Inquiry and misconceptions

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White Rose Provides

- Coherent small-step progression across all units
- Rich visual representations and models
- Balanced fluency, reasoning, and problem solving

Teachers Provide

- Responsive pedagogical decision-making
- Adaptive scaffolding based on live assessment
- Contextual pacing tailored to student needs

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The CPA Approach

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The CPA Approach



Is **not**:

- a concrete activity followed by a pictorial activity followed by an abstract activity.
- using manipulatives every lesson
- Concrete resources are only for pupils who are struggling.
- Representations/concrete materials are no longer needed once pupils reach the abstract method.

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The CPA Approach



CPA is about making connections between representations.

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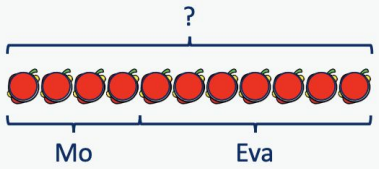
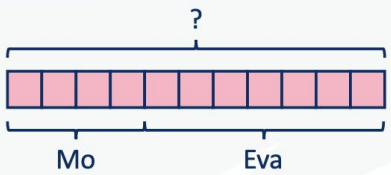
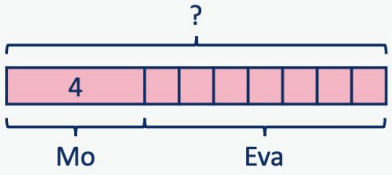
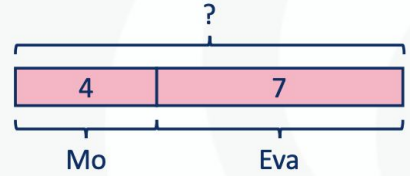
Mo has four marbles.
Eva has seven marbles.
How many marbles do they have altogether?

Model	Calculations
	$4 + 7 = 11$ Mo and Eva have 11 strawberries altogether.

Model	Calculations
	$4 + 7 = 11$ Mo and Eva have 11 strawberries altogether.

Model	Calculations
	$4 + 7 = 11$

Model	Calculations
	$4 + 7 = 11$

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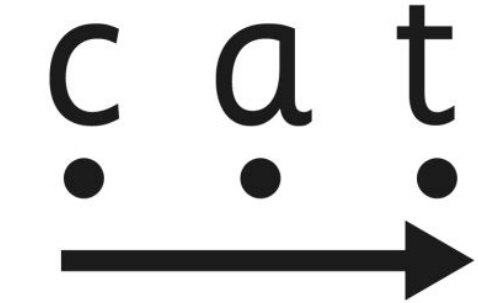

twinkl.co.uk



In a phonics lesson, we show pupils images that relate to the sound they are learning in order for them to make connections.

We need to do the same in maths. Showing the number 1,000,000 in digits is very different to showing it in counters!

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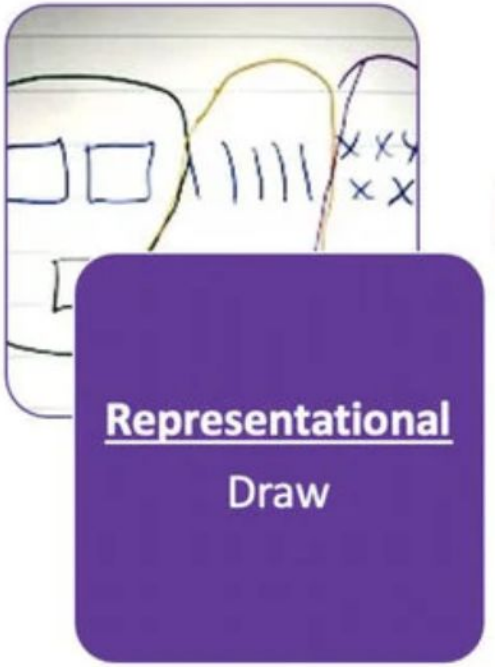

A representation should make the mathematics visible.

It should help pupils:

- understand the structure of the mathematics
- make connections
- explain their thinking
- reason
- identify or overcome misconceptions

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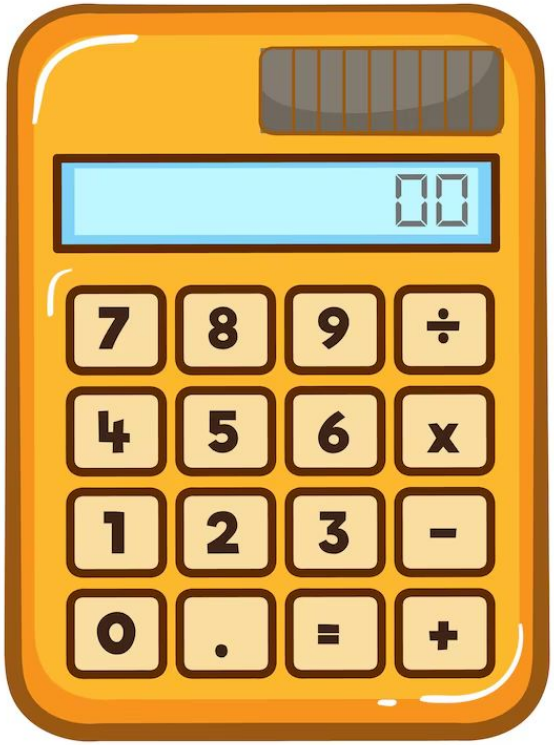
Maths & Inquiry: More than finding the answer





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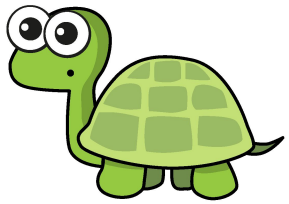
WALT: Subtract Whole Numbers With More Than Four Digits

Why do we start with the smallest place-value column when subtracting?

			6		5		
		4	~~7~~	1 13	~~6~~ 5	1 1	
	-	3	2	7	1	7	
		1	4	6	4	4	



Do you agree with Tiny?

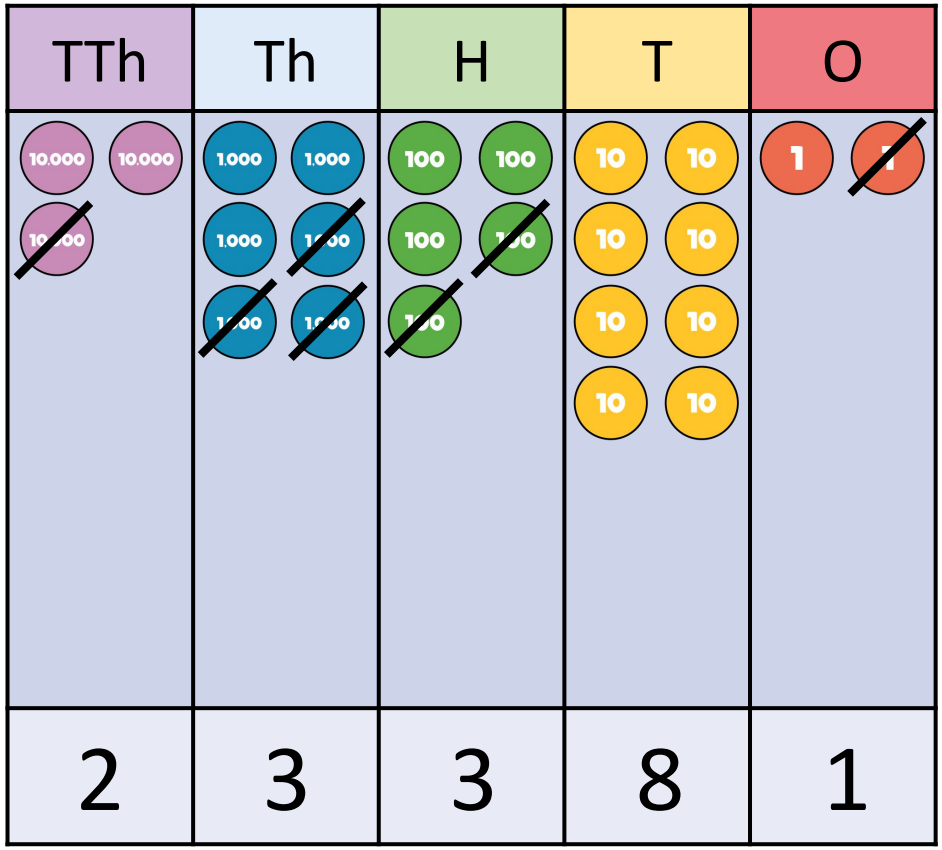


11 ones − 7 ones = 4 ones

Have a think

WALT: Subtract Whole Numbers With More Than Four Digits

What do you notice about how the numbers are arranged? Why might they be arranged this way?



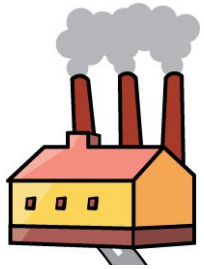
		3	6	5	8	2	
	-	1	3	2	0	1	
		2	3	3	8	1	

In column subtraction we start with the place value column that has the smallest value.

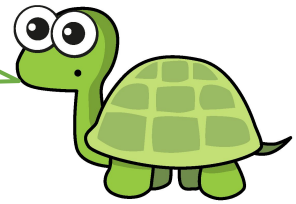
WALT: Subtract Whole Numbers With More Than Four Digits

Can you explain exactly where Tiny went wrong? What evidence supports your thinking?

Factory A employs 30,723 people.
Factory B employs 14,416 people.
How many more people do Factory A employ?



I need to add



Do you agree with Tiny?

30,723

14,416 ?

		2			1		
		~~3~~	$^{1}0$	7	~~2~~	$^{1}3$	
	-	1	4	4	1	6	
		1	6	3	0	7	

Factory A employs 16,307 more people.

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Maths & Inquiry: More than finding the answer

Fairgreen is organising an event for 48 pupils. Each table seats six pupils. How many tables are needed? What changes if five more pupils join?

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How do we support every learner?



1. Concrete resources and visual models

We use manipulatives, drawings and bar models to make mathematical concepts easier to understand and help pupils make connections.

2. Modelling, questioning and discussion

Teachers break learning into manageable steps, address misconceptions and encourage pupils to explain their thinking.

3. Appropriate support and challenge

Some pupils receive additional guidance and practice, while others explore more complex problems, make generalisations or justify their reasoning.

4. Responsive teaching and assessment

Teachers use observations, questions and pupils' work to identify what they understand, where they need help and what they are ready to learn next.

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How can you support maths at home?

Everyday maths

Shopping, comparing prices, calculating change and estimating totals.

Cooking and measuring

Fractions, quantities, time and measurement.

Ask good questions

“How do you know?” “Can you show me another way?” and “Does that answer make sense?”

Build confidence

Praise persistence, curiosity and explaining thinking, not just getting answers right.

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Questions?



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