Little London Academy

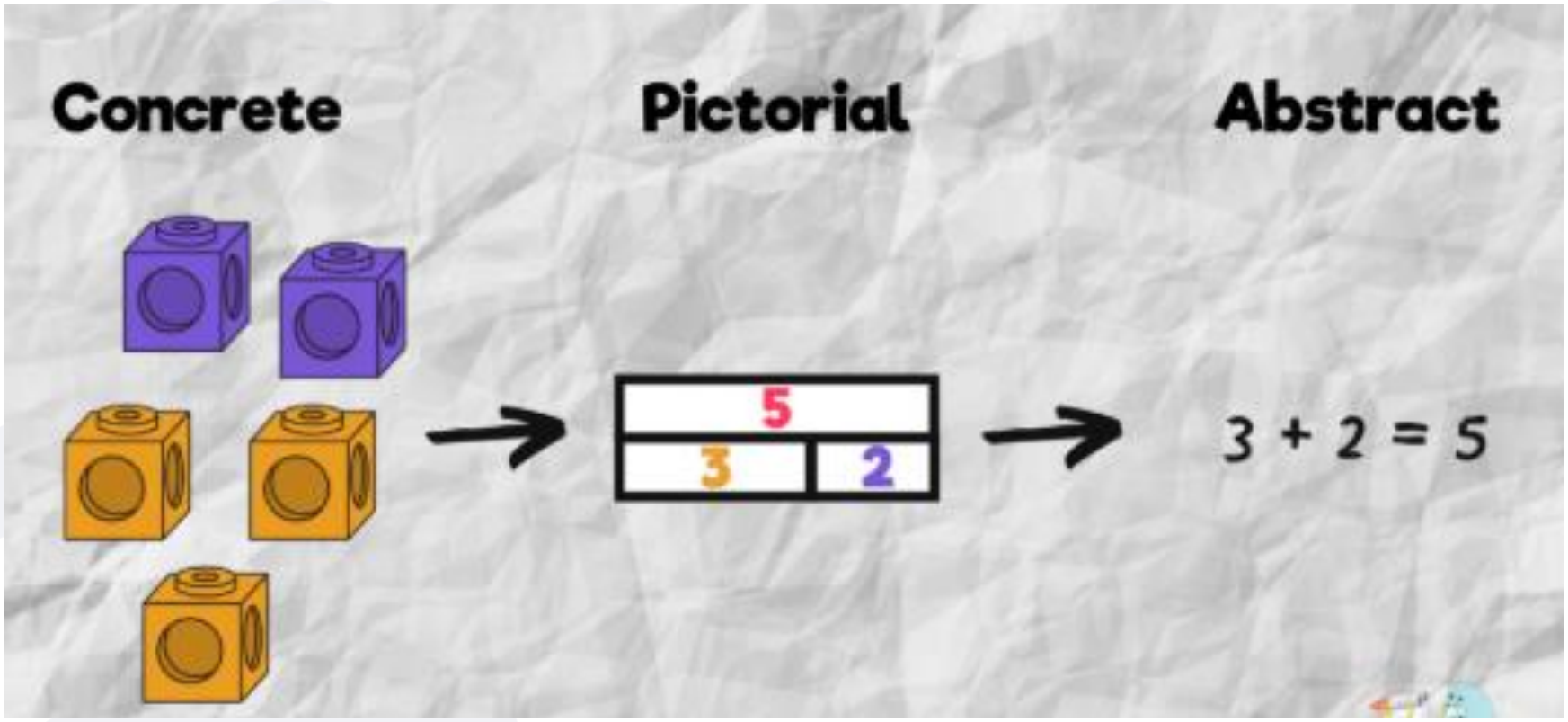
GORSE

Year 5/6 Maths Parent Workshop

Tuesday 11th February 2025

Maths at Little London Academy

- At Little London, we teach maths through a CPA approach.



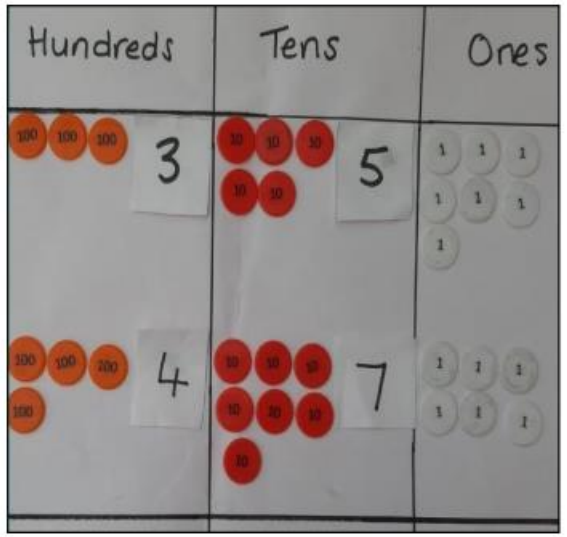
Little London Academy

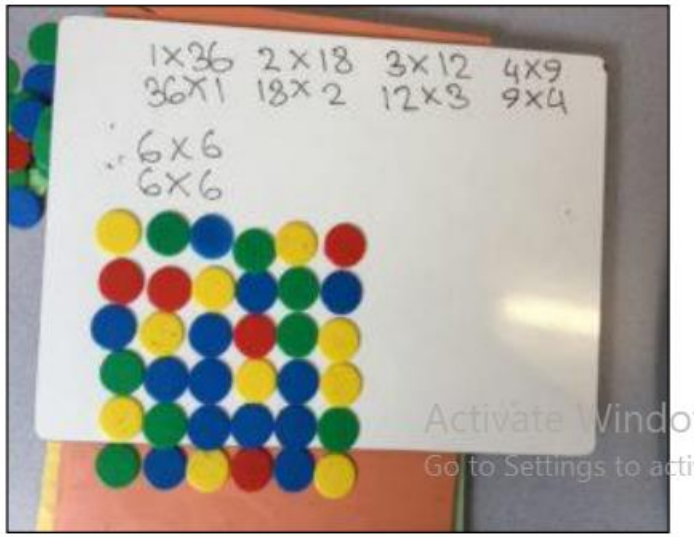
CPA Approach: Concrete Pictorial Abstract

Concrete: Doing the maths

Introducing real objects that can be manipulated to bring the problem to life.

E.g. money, counters.

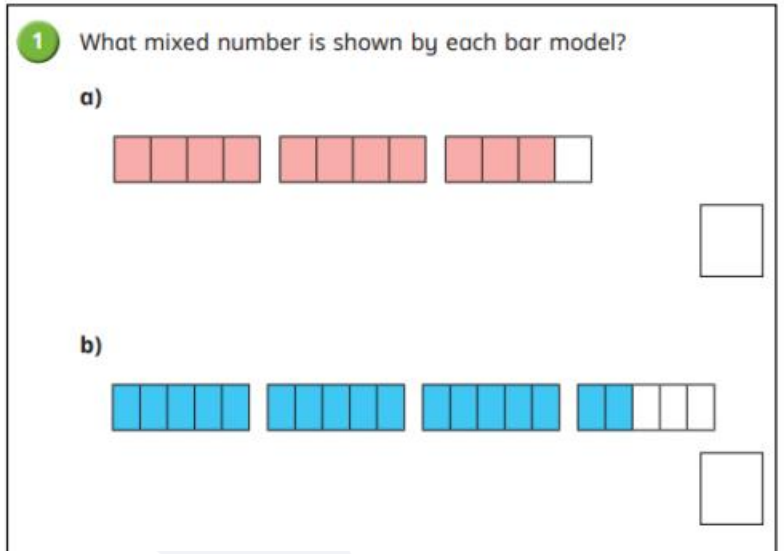


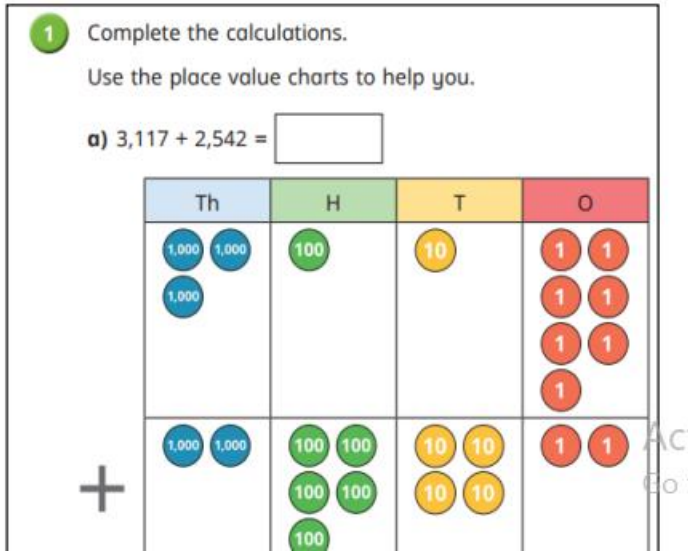


CPA Approach: Concrete Pictorial Abstract

Pictorial: Seeing the maths

Making connections between the concrete and the pictorial representations and the pictorial and the abstract. E.g. part whole models, bar models, ten frames.

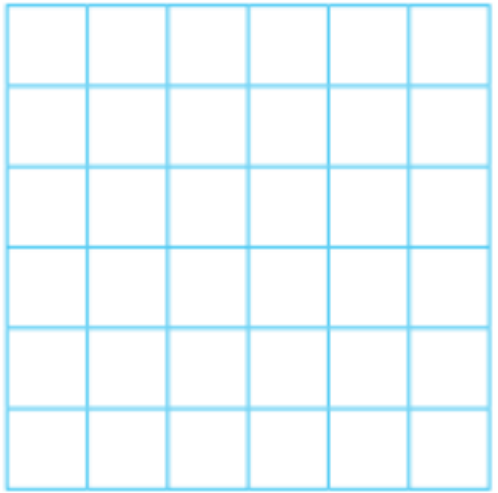




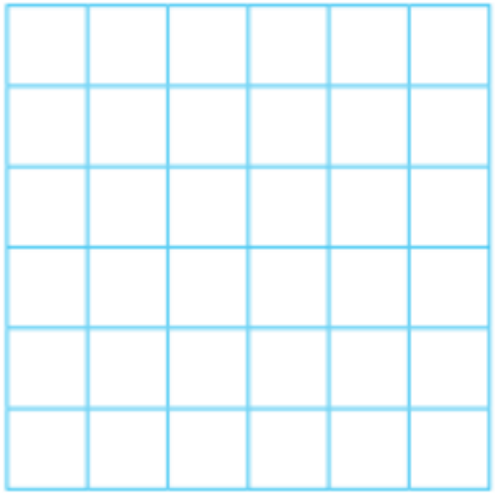
CPA Approach: Concrete Pictorial Abstract

Abstract: The final stage is for children to **understand abstract mathematical concepts, signs and notation**. When a child demonstrates with concrete models and pictorial representations that they have grasped a concept, we can be confident that they are ready to explore the abstract. At this stage, pupils are expected to have a depth of knowledge, which can now be applied without the need for physical or visual support strategies.

e) 3 × 240



f) 7 × 131



The Mastery Approach

When children learn a new concept in maths, they then embed those skills through different forms.

These are fluency, reasoning and problem solving.

Just because your child has learnt to solve calculations within 100,000 in Year 5, we don't just move on to millions in the next lesson.

Little London Academy

Fluency- this stage secures knowledge

- Complete the calculations.

			3	2	4	2	
	×				2	1	
			3	2	4	2	
		6	4	8	4	0	

(3,242 × _____)

(3,242 × _____)

			3	2	4	2	
	×				2	6	
		1	9_1	4_2	5_1	2	
		6	4	8	4	0	

(3,242 × _____)

(3,242 × _____)

			4	2	3	6	
	×				5	2	

(_____ × _____)

(_____ × _____)

			3	4	7	2	
	×				6	4	

(_____ × _____)

(_____ × _____)

- Find the product of 3,064 and 43

- Estimate the answers to the multiplications.

3,282 × 32	7,132 × 21	9,708 × 38

Work out the multiplications.

How close were your estimates to the actual answers?

Write <, > or = to compare the calculations.

4,458 × 56 ◯ 4,523 × 54

4,458 × 55 ◯ 4,523 × 54

4,458 × 55 ◯ 4,522 × 54

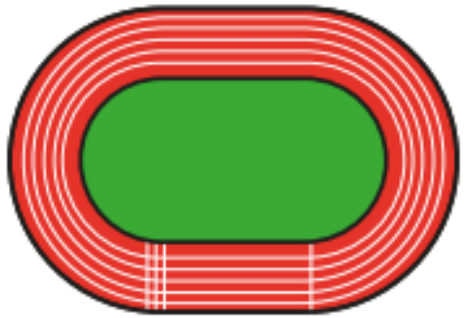
Did you need to work out the calculations each time?

Reasoning- this stage allows pupils to think mathematically and use language

- A race is 5,407 m long.

  36 runners complete the race.

  What is the combined total distance run?



			2	5	3	4	
	×				2	3	
			7_1	5	9_1	2	
			5_1	0	6	8	
		1	2	6	6	0	
				1	1		

What are the mistakes in this calculation?

Work out the correct answer.

Tiny thinks these multiplications will have the same answer.

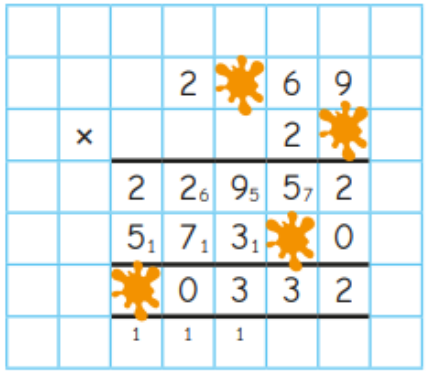
1,342 × 23	1,341 × 24

Why might Tiny think this?

Is Tiny correct?

Problem Solving- this stage is the most complexed

Teddy has spilt some paint on this multiplication.



What are the missing digits?

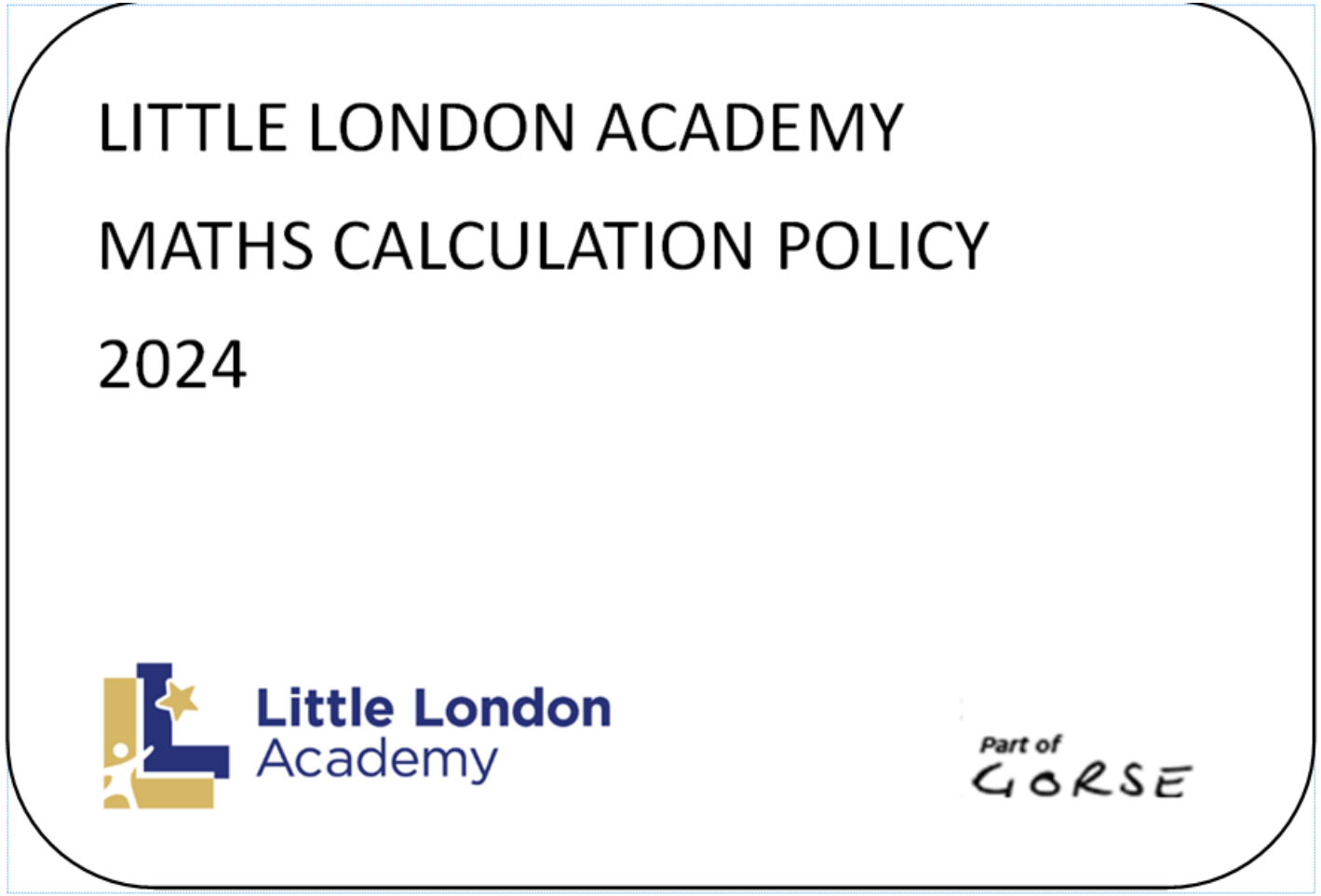
0	2	3	5	6	9

Arrange the digits in the multiplication to make the greatest possible product.

☐☐☐☐ × ☐☐

Little London Academy

Maths Calculation Policy



Our calculation policy shows how each calculation is taught using concrete objects, pictorial aids and using an abstract method.

It includes all calculations from the Early Years- Year 6

It covers addition, subtraction, multiplication and division (the four operations)

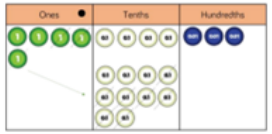
Little London Academy

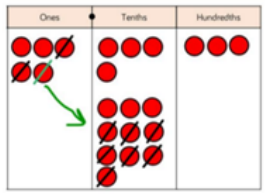
Maths Calculation Policy

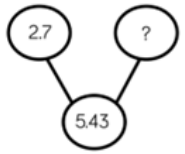
YEAR 5

Subtract numbers with up to 3 decimal places

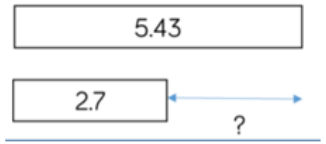
5.43 – 2.7 = 2.73







5.43	
2.73	?



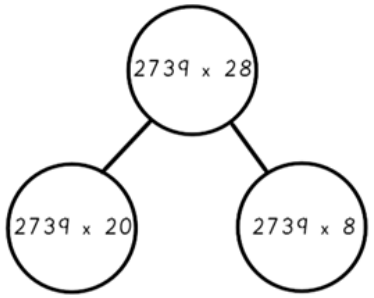
5.43—2.7 = 2.73

$$\begin{array}{r} {}^{4}\cancel{5}.{}^{1}43 \\ -\ 2.70 \\ \hline 2.73 \end{array}$$

Place value counters and plain counters on a place value grid are the most effective manipulative when subtracting decimals with 1,2,and then 3 decimal places. Give the children context, e.g. money.

YEAR 5/6

Multiply 3 or 4-digit numbers by 2-digit numbers



TTh	Th	H	T	O
	2	7	3	9
×			2	8
$^{2}2$	$^{1}5$	$^{3}9$	$^{7}1$	2
$^{1}5$	4	$^{1}7$	8	0
7	6	6	9	2

When multiplying 3 or 4 digit numbers buy 2 digit numbers the children need to be using a formal method. Practise with manipulatives with questions involving fewer digits and allow pupils to have a times tables grid to aid them until the method is embedded.

Thank You!

Little London Academy

GORSE