

## MATHS AT COLPAI: INTENT, IMPLEMENTATION AND IMPACT

### INTENT

COLPAI's mathematicians are curious, flexible learners who are confident, resilient and flexible in their approach. Through practical activity, exploration and discussion, we aim for all children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. Children will be encouraged to make their own discoveries and share how they got to their own solutions using mathematical vocabulary and stem sentences.

*Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.*

*(National Curriculum – Purpose of Study)*

### IMPLEMENTATION

Our Maths curriculum is based on Power Maths, a UK mastery programme designed to spark curiosity and excitement while nurturing children's mathematical confidence. Power Maths is built around a child-centered lesson design that models and embeds a growth mindset approach (#MathsEveryoneCan), focusing on helping all children to build a deep understanding of maths concepts through small steps.

The CPA (concrete, pictorial, abstract) approach allows children to visualise mathematical concepts allowing them to deepen their understanding and make connections between different representations.

In EYFS, we follow the NCETM Mastering Number programme which focuses on developing strong understanding and flexibility with early number. It also uses the popular Numberblocks characters and clips to engage children with the story of numbers. We also use Mastering Number to supplement our curriculum in KS1, ensuring strong knowledge of number bonds using the rekenrek.

Regular fluency practice ensures that our students recall key facts with increasing speed, allowing them more time for experimenting. In KS1 we ensure fluency of number bonds, and in LKS2 we ensure fluency of times tables. All children are prepared for the National MTC in Year 4, supported by use of Times Tables Rockstars, both in school and at home.

A great emphasis is placed on mathematical language to develop our children as describers of mathematics, giving them plenty of opportunities to discuss the mathematics they are doing and allowing them to take their ideas further. We use a range of stem sentences to support children's reasoning and explanations.

Problem-solving is an integral part of every Power Maths lesson, allowing all children to solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. At the end of every lesson, we have a 'Thinking Together' question where we focus on the problem-solving skills required.

We make use of our City of London location by embracing any external opportunities to celebrate and learn about maths in our locality, through school visits such as the Bank of England, celebrations such as *Maths Week London* and competitions such as *Count On Us/Wondermaths!*.

Children are assessed at regular intervals, both through formal and informal methods. NFER termly assessments allow us to check progress and attainment throughout the academic year. SATs assessments take place at the end of KS1 and KS2. Children are also formally assessed in their rapid recall of times tables at the end of Year 4.

We use the flashback 4 resource to allow for daily retrieval practice, and to check for understanding of all areas of the wider mathematics National Curriculum throughout the year.

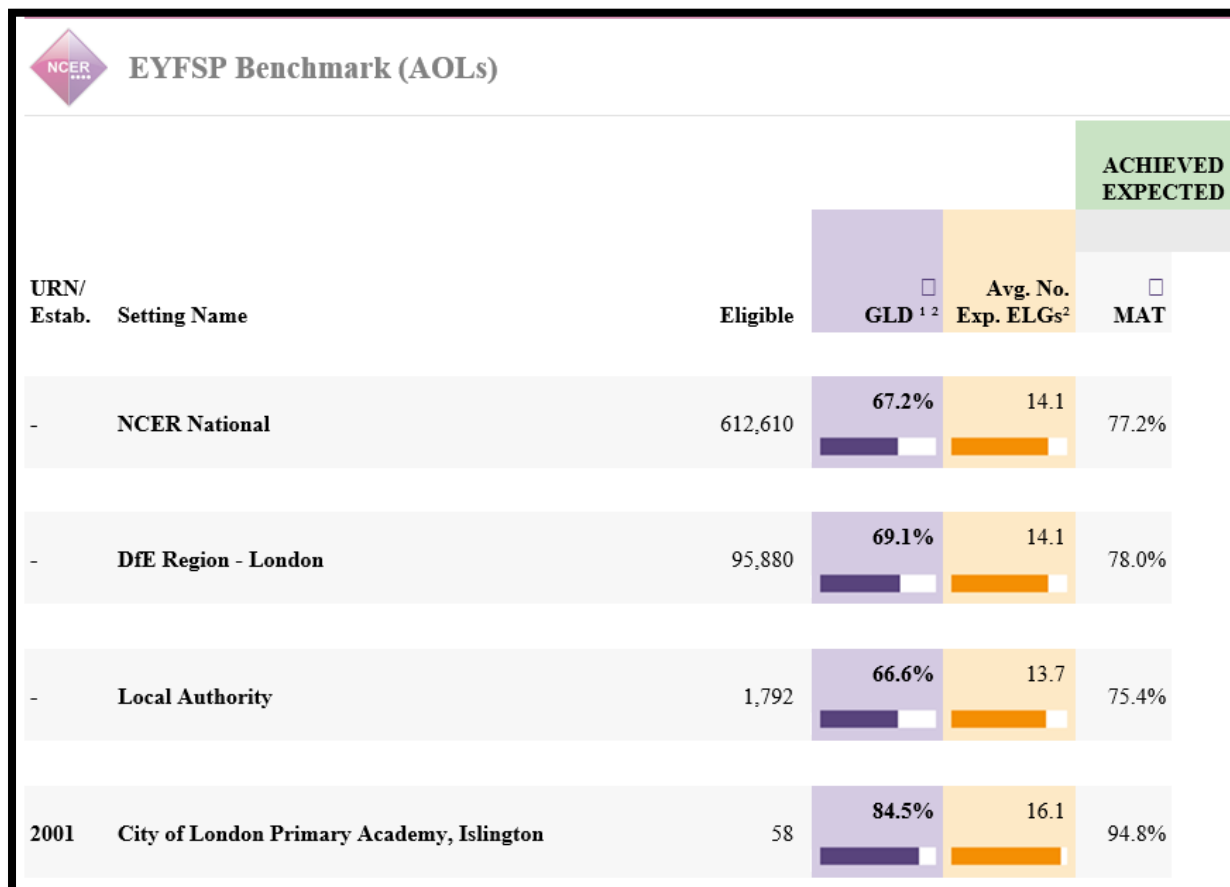
Regular pupil progress meetings allow opportunities to discuss appropriate mathematical interventions across the whole school. Pre-teaching is provided for pupils to ensure everyone can access the lesson. We also have a range of targeted Mathematics interventions, tutoring groups and challenge clubs.

### IMPACT

Well planned sequences of learning support children to develop and refine their maths skills leaving pupils prepared for their future both inside and outside of education. Children are able to independently apply these skills to a range of complex problems, making connections between different strands of Maths. COLPAI Mathematicians can reason with confidence and accuracy, using appropriate mathematical language. Progress is tracked using internal and Trust Wide data collection, and termly pupil progress meetings. When our students leave COLPAI, they are enthusiastic about learning mathematics and have a great understanding of its importance in everyday life, and how they can embrace the many opportunities for Maths in the City of London.

Statistical impact 2022/23:

### EYFS



## END OF KS1

KS1 Subject Summary List													Maths   2023		
Estab. No.	Establishment	Cohort	A	EM	PK1	PK2	PK3	PK4	WTS / HNM	EXS	GDS	GDS			
			<EXS	≥EXS	GDS										
-	NCER National	643,450	0.2%	0.9%	0.6%	0.7%	1.8%	3.9%	21.4%	54.1%	16.3%	29.4%	70.4%	16.3%	
-	LA	1,810	0.3%	0.3%	1.4%	1.0%	2.2%	3.5%	18.5%	51.0%	21.6%	27.0%	72.7%	21.6%	
2001	City of London Primary Academy, Islington	58	0.0%	0.0%	1.7%	0.0%	0.0%	8.6%	10.3%	43.1%	36.2%	20.7%	79.3%	36.2%	

## MTC YEAR 4

Multiplication Tables Check Benchmark										2023
Estab. No.	Estab. Name	Cohort	Eligible <sup>1</sup>	No Score <sup>2</sup>	Score					Average Score <sup>3</sup> (out of 25)
					0-5	6-10	11-15	16-20	21-25	
-	NCER National	86,090	84,550	2.6%	1.8%	5.7%	11.6%	17.2%	61.1%	20.3
-	DfE Region - London	11,310	11,000	3.2%	1.3%	3.8%	8.0%	13.8%	70.0%	21.5
-	Local Authority - Islington	497	480	1.3%	5.2%	6.9%	12.9%	15.8%	57.9%	19.4
2001	City of London Primary Academy, Islington	29	29	0.0%	0.0%	0.0%	3.4%	3.4%	93.1%	24.1