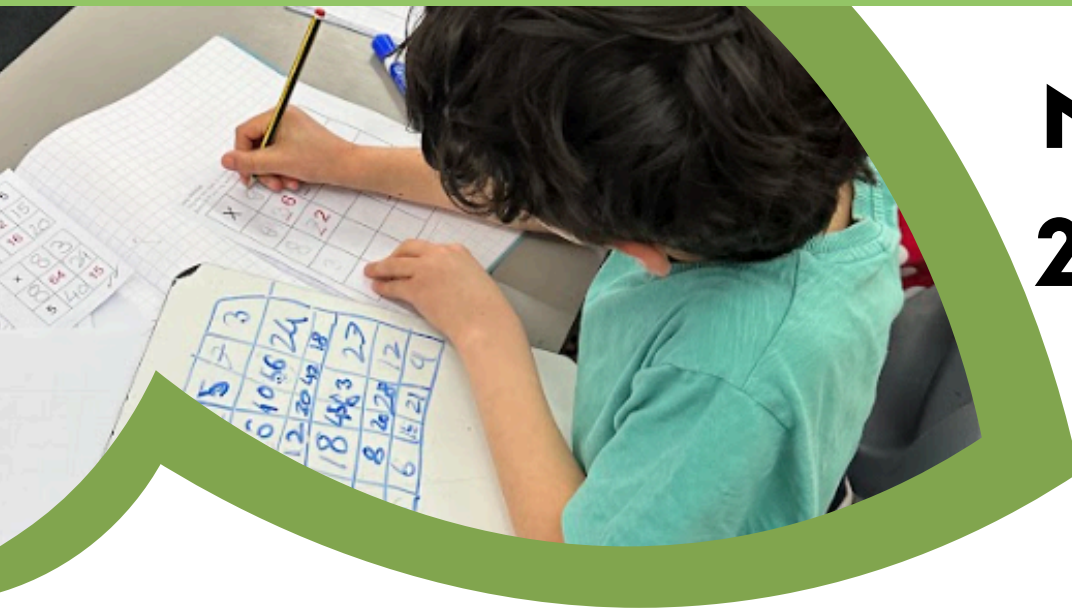


Maths Hub

2024 - 2025



Context

The Camden Primary Maths Hub convened educators from across the borough to collaborate on two key areas: KS1 factual fluency and problem-solving pedagogy. Through Joint Practice Development (JPD), teachers and leaders co-developed strategies, shared resources, and implemented classroom test and learn. School led hubs are one approach Camden Learning invests in to meet the aim of knowledgeable and skilled leaders and teachers who love working and learning in Camden, as set out in Building Back Stronger, Camden's Education Strategy.

2024 - 2025 Focus

National and local data informed the hub's focus. Camden SATS results (2024) reflected that whilst 78% of pupils achieved the expected standard in arithmetic, only 65% achieved this in reasoning and problem solving.

- **KS1 Factual Fluency:** With the end of statutory KS1 SATs, schools faced both a risk of end of Key Stage 1 knowledge gaps not being identified, and an opportunity to refocus on core number sense was seen as beneficial as a result. Teachers saw parallels with phonics success—systematic, consistent teaching could secure fluency and wanted to apply a similar methodology.
- **Problem Solving:** Despite strong fluency and reasoning curricula, problem solving was reported by teachers attending the hub as often marginalised due to time constraints and variable teacher confidence. White Rose planning whilst typically used for problem-solving tasks, were frequently skipped or rushed through.

The hub aimed to address these gaps by equipping teachers with pedagogical models, coherent sequences of learning, and co-produced action plans.

Hub Activities and Implementation

KS1 Factual Fluency JPD

Year two of the fluency JPD focused on classroom implementation. Schools adopted varied approaches: bespoke schemes, Number Sense Maths, and NCETM's Mastering Number. The standout initiative was **Sum Slam**, a four-week inter-school competition for Year 2 classes. Co-designed quizzes reflected shared pedagogy: equitable, quick, coherent, playful, and structured. Class averages were tracked to celebrate whole-class progress, fostering motivation and community.

"Children made progress and saw tangible improvement which has given them a confidence boost."

Problem Solving JPD

Schools audited provision, analysed pupil work, and built coherent sequences of learning. A lesson study in a Year 4 classroom allowed teachers to observe and analyse live teaching. Schools developed tailored action plans to embed problem solving weekly or fortnightly.

"Problem solving is no longer something we save for the end of a lesson, but something we now plan to teach explicitly."

Teachers embraced the idea that struggle is where learning lives. Tasks were adapted to be low threshold, high ceiling to ensure accessibility and challenge.

Impact and Outcomes

The KS1 factual fluency JPD provided a framework for sustainable improvement and gave pupils a stronger foundation for their mathematical journeys.



The Sum Slam resulted in high pupil engagement, clear gains in fluency evidenced through core tracking and a strong sense of belonging to the Camden maths community.



Teachers surveyed reported renewed clarity in how they teach and revisit number facts and said they felt more confident, better equipped and more aligned in their approaches.



Schools began planning targeted interventions for pupils who found fluency more challenging and reported more rapid gap closure as a result.

The KS1 factual fluency JPD provided opportunity for focus and reflection on precision in teaching.

Teachers

- Developed clearer, more coherent sequences for teaching problem solving.
- Gained confidence in explicitly teaching problem solving as core content.
- Shifted mindset, problem solving was reported as no longer reserved for the end of lessons or only for high attainers across a number of schools.
- Learned to adapt tasks to be accessible to all pupils using low threshold, high ceiling strategies.
- Engaged in lesson study and collaborative analysis to refine pedagogy.
- Created tailored action plans for embedding problem solving into weekly teaching that was sustainable and manageable.

Pupils






- Experienced richer mathematical discussions and reasoning through tasks like Esti-mysteries.
- Built resilience and enjoyment in tackling challenging problems.
- Had increased access to problem solving as part of their regular maths diet.
- Benefited from more inclusive and structured approaches to problem solving.

Maths Leaders

- Reported improved problem-solving provision across the school.
- Learnt how to prioritise problem solving within timetables despite curriculum pressures.
- Strengthened whole-school planning expectations and consistency in maths pedagogy.
- Fostered networks through cross-school collaboration, sharing resources and strategies.



Key Takeaways

-  Systematic, daily, structured sessions following a carefully planned sequence and agreed model can secure factual fluency by age 7.
-  Competitions like Sum Slam build belonging, motivation, and progress when focused on class averages.
-  Explicit teaching of problem solving, with modelling and rich tasks, is essential for all pupils.
-  Specific action plans, focused on improving approaches to teaching of key arithmetic and problem solving and that are tailored to the school, ensure sustainability of approach and ownership by Maths leaders.
-  Collaboration across schools accelerates teacher confidence and spreads innovative practice.

Hub Next Steps

- **Deepen Fluency Work:** With a specific focus on maths in the Early Years.
- **Problem Solving development:** Introduce maths games in KS1 to continue to develop reasoning and problem solving.
- **Enhance Enrichment:** Inter-school challenges to continue.

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- *19 Camden Schools participated in the Problem Solving JPD.*
- *17 Camden Schools participated in the KS1 Factual Fluency JPD.*
- *Participants ranged from single representatives to two per school, giving opportunities for between 17 and 38 teachers per session. Schools nominated maths leads and class teachers who could benefit most and lead implementation in their schools for maximum impact.*

