Maths Hubs Programme Annual Report

2024/25

> *"Developing teachers is key to retention. Maths Hubs support teachers' subject knowledge and pedagogy, which benefits pupils and builds leadership capacity. It's free, high-quality and led by current practitioners. Why wouldn't you?"*
>
> **Headteacher Advocate**

What's inside:

MATHSHUBS

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Useful links

Want to know more about the work of the Maths Hubs?

About Maths Hubs
explains what a Maths Hub is, the areas covered by each hub, and the history of the programme

Four types of professional development
explains the different formats of Maths Hubs CPD: Work Groups, programmes, communities and Targeted Support

What Maths Hubs are doing
has details of over 30 fully-funded professional development opportunities available through Maths Hubs and the NCETM

Looking for professional development resources?

Curriculum Prioritisation
materials provide a term-by-term framework to support planning and teaching primary maths

Checkpoints
are hundreds of diagnostic activities to help assess KS3 students' prior learning

The NCETM Maths Podcast
offers discussions about maths teaching in all phases and is available on all major podcast platforms

Curious about teaching for mastery?

Mastery Explained
gathers evidence, exemplification and research about the teaching for mastery approach

Mastery Materials
features a wealth of resources to help teachers develop teaching for mastery in their schools and classrooms

Mastery Impact
brings together case studies and interviews from schools that have embraced the teaching for mastery approach

Keen to explore further?

NCETM
is the home of the National Centre for Excellence in the Teaching of Mathematics

AMSP
is the Advanced Mathematics Support Programme, supporting teachers of post-16 maths

NCETM on LinkedIn
is a great way to stay up-to-date with what's new for maths teachers from the NCETM

The data within this report have been analytically assured, but there may be some methodological differences in how programme engagement is defined compared to other Maths Hub and DfE publications.

Welcome

61%

Schools in England engaged with their Maths Hub in 2024/25

Welcome to the Maths Hubs Programme Annual Report 2024/25. This report reflects on another successful year of collaborative work across the network.

International comparisons help us understand how pupils in England are doing, and one of the most important measures is the Trends in International Mathematics and Science Study (TIMSS) 2023. The latest results show that pupils in England are performing well above the international average and rank among the highest-performing countries outside East Asia. The trend suggests that improvements in maths education over the past decade are making a real difference. After celebrating the Maths Hubs Programme's tenth anniversary in 2023/24, our focus is now set firmly on the future and building on that success.

In 2024/25, 30,729 teachers, teaching assistants and school leaders from 61% of all state-funded schools worked with their local Maths Hub to improve mathematics teaching and learning. In this report you will find stories of impact from every phase and setting.

Targeted Support in Mathematics, now moving into its third year, has already shown how sustained, bespoke collaboration with schools facing the greatest challenges can lead to genuine improvement and lasting change. In the year ahead, this expertise will connect with the Department for Education's Regional Improvement in Standards and Excellence (RISE) programme, which provides intensive support to struggling schools.

In 2025/26, Maths Hubs will contribute to the government's Giving Every Child the Best Start in Life strategy, building on the established work already taking place with Reception teachers.

Since 2021, over half of all primary schools in England have taken part in Mastering Number. Maths Hubs are now set to take part in an Education Endowment Foundation (EEF) trial of the programme which will help build the evidence base for early maths education.

The achievements highlighted in this report are the result of the dedication of thousands of teachers. Their commitment gives us every reason to be ambitious about what can be achieved in the years ahead. Strong partnerships remain central to the work of Maths Hubs, and we are grateful to the Department for Education for their continued investment.

Our sincere appreciation goes to everyone who has contributed to the Maths Hubs Programme in 2024/25.

Thank you for your hard work and dedication.

Kathryn Greenhalgh
Senior Leadership Link and
Chair of the Maths Hubs Council

Charlie Stripp
National Director, NCETM

Primary

This year, 8,461 schools have continued to engage in Teaching for Mastery Work Groups, covering the full range of developmental phases, from Mastery Readiness through to the Sustaining stage.

Typically, one or two lead participants from each school join a Work Group, which is led locally by experienced Mastery Specialists. Participants meet regularly throughout the year to collaborate with colleagues from other schools, share ideas, and develop their own classroom practice. Between sessions, they work within their own schools alongside colleagues to drive improvements in the teaching and learning of mathematics. Many schools also benefit from bespoke, in-school support from a Mastery Specialist. Schools are encouraged to maintain an ongoing partnership with their Maths Hub to support continuous development and sustained impact.

Mastering Number at KS2 is now in its second year, continuing to help pupils in Years 4 and 5 develop strong, lasting understanding of multiplicative relationships. The programme builds on the approaches and strategies introduced through Mastering Number at Reception and Key Stage 1, supporting continuity and progression in pupils' mathematical thinking. 1,174 schools have completed their first year and are now deepening and embedding this learning as part of their ongoing classroom practice.

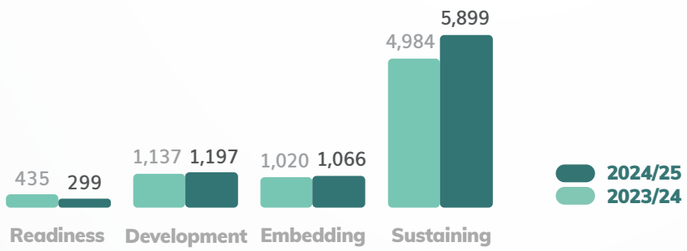
1,683

Schools involved in Mastering Number at Reception and KS1

1,173

Schools involved in Mastering Number at KS2

Participation in the primary Specialist Knowledge for Teaching Mathematics (SKTM) programmes remains strong, with 999 participants involved this year. There are four SKTM pathways: Early Years, Primary Teachers, Primary Teaching Assistants, and Primary Early Career Teachers. Each pathway is carefully designed to develop specific areas of subject and pedagogical knowledge, supporting teachers and teaching assistants to enhance their maths teaching practice and improve outcomes for pupils.



Number of primary schools engaged in the different stages of the Teaching for Mastery Programme

01 Mastering Number in a special school setting

TEACHER

Kat Adams, deputy headteacher

SCHOOL

Rocklands School, Lichfield

SIZE

A 2-11 school with around 140 pupils

DISADVANTAGE

46% of pupils eligible for free school meals

MATHS HUB

North Mids Maths Hub

Mastering Number is making a real difference in a range of settings, including special schools. At Rocklands School in Lichfield, which supports children with complex learning difficulties, the programme has become an essential part of daily teaching.

The team at Rocklands had already been focusing on effective strategies for supporting their pupils before joining Mastering Number, and had been looking at metacognition and the importance of repetition. Kat explains, 'I've done a lot of research into metacognitive strategies and how they support pupils with special educational needs and disabilities (SEND). Mastering Number absolutely feeds into all the research.'

What has been most powerful for Rocklands' pupils is the structure of the sessions. 'The slides are predictable, which reduces cognitive load. They're very clear so pupils haven't got to wade through a visual jungle of things to find key information.'

For many, Mastering Number's consistency has built enthusiasm for maths. 'We're seeing a reduction in refusal and maths anxiety. Children know what to expect and what's coming next. Sessions happen at the same time every day and it's part of their routine – they're fired up for it!'

The benefits go beyond confidence. The focus on stem sentences has changed the way pupils engage and communicate mathematically. 'We've got children joining in now whereas, when they first started, it was more the teacher modelling the stem sentences. Now children confidently join in.'

The school adapts sessions to meet individual needs. 'It varies: a Mastering Number session might be broken into three different sessions depending on the support required. Sometimes we revisit the whole concept the next day and that's OK as we want them to be secure in their understanding.'

Practical resources, gestures and repetition have boosted confidence. 'We use manipulatives that engage the children. We select everyday objects alongside rekenreks, which they love and now use confidently. Clapping, rhyme and gesture also help solidify knowledge.'

Mastering Number has supported reasoning too, with pupils beginning to question the answers suggested by the characters in the resources. 'They're starting to give opposing answers and saying why they agree or disagree, and now they're doing it with each other as well.'

'Mastering Number is inclusive for all. You can provide support, scaffolding and resources and run it at a slower pace. Children are excited to do it!'

02 Sustaining change with teaching for mastery
Q&A

TEACHER

Rob Crump, Primary Mastery Specialist

SCHOOL

City of London Primary Academy, Islington (COLPAI)

SIZE

A 4–11 primary school with 458 pupils

DISADVANTAGE

25% of pupils eligible for free school meals

MATHS HUB

London Central and West Maths Hub

Transformational change in maths often starts with one teacher's belief in doing things differently. For Rob, that belief began in a teacher research group (TRG) and has since developed into whole-school growth, collaboration, and pedagogical change.

Rob explains how engaging with the Maths Hub has transformed maths teaching at COLPAI and helped shift the culture across classrooms in other London primary schools.

Tell us about your school and your involvement with the Maths Hub.
COLPAI has been involved with London Central and West Maths Hub for three years. I joined in September 2024, after meeting the previous maths lead during Mastery Specialist residentials. Before joining COLPAI, I was introduced to teaching for mastery at a TRG.

Which programmes have you been involved in?
Alongside Sustaining Teaching for Mastery, we have engaged in Mastering Number at Reception and KS1. This year, we took part in Mastering Number at KS2 and the Early Career Teacher SKTM has provided valuable support to our ECTs.

"If it wasn't for the NCETM and Maths Hubs, I would not have developed anywhere near as much as I have, and more importantly, I wouldn't have experienced the joy that comes from everything this journey has offered. The growth, support, and collaboration have been invaluable, and I wholeheartedly recommend it to anyone considering joining."

What challenges have you faced and how have you overcome them?
The biggest challenge has been changing the mindsets of some experienced teachers. To address this, I shared research and modelled strategies that support the Five Big Ideas. This hands-on approach, coupled with reflective discussions, has proved powerful.

What positive changes have you seen?
Children enjoy maths more when teachers use mastery approaches. Small steps ensure that no child is left behind and children no longer feel they can't do maths. Careful questioning to deepen understanding means that pupils are not disengaged because work is too easy. Teachers appreciate that classes are progressing together, leading to greater job satisfaction, as they witness better engagement.

What impact has teaching for mastery had on teaching and learning?
Teachers are more confident in adapting lessons to embed the Five Big Ideas. They benefit from collaborative planning and sharing best practice to improve their teaching strategies. Pupils engage more deeply with the content and demonstrate confidence in their problem-solving abilities.

What are your hopes for the future?
To keep embedding teaching for mastery to provide the most effective maths learning. This includes keeping our curriculum coherent and ensuring teachers are confident in planning and adapting lessons. I look forward to seeing pupils continue to enjoy their learning and staff seeing the positive impact of collaboration.

03 Making teaching for mastery a success in a mixed-age setting

TEACHER

Helen Thompson, headteacher

SCHOOL

Fylingdales Primary School, Robin Hood's Bay

SIZE

54 pupils on roll

DISADVANTAGE

26% of pupils eligible for free school meals

STRUCTURE

Three mixed-age classes (R/Y1/Y2, Y3/4, Y5/6)

MATHS HUB

Yorkshire Ridings Maths Hub

Fylingdales Primary sits in the heart of Robin Hood's Bay, a beautiful coastal village in North Yorkshire that attracts thousands of visitors each year. Its popularity as a tourist destination means there are few younger families locally. Pupil numbers at the school remain small and fluctuate from year to year, with only 54 children currently on roll. With three mixed-age classes, teaching maths is particularly challenging, and lessons must engage pupils across year groups and abilities, while ensuring clear progression for all.

In 2023, Fylingdales' leadership decided to engage with the Mastery Readiness Programme through Yorkshire Ridings Maths Hub, a crucial first step that built strong foundations, developed a shared vision for maths, and strengthened subject knowledge across the team. This initial phase also established the systems and structures needed to move forward.

The school then progressed through the Development and Embedding phases of the Teaching for Mastery Programme and is now sustaining teaching for mastery. Alongside this, maths lead Alison Dykes began the Primary Mastery Specialist Programme in 2024, deepening her subject knowledge and equipping her to support colleagues within the federation. As a local leader of mathematics education (LLME), Alison also leads professional development across other schools for the Maths Hub, further developing her own expertise and leadership skills.

Keen to create a curriculum suited to their mixed-age setting, Alison and headteacher Helen Thompson chose to implement a scheme of work using the NCETM Curriculum Prioritisation materials and mixed-age planning guidance. Adopting a phased approach, Alison introduced the materials in her R/Y1/Y2 class, while other teachers engaged in professional development, explored resources, and planned collaboratively for a whole-school launch. The Mastering Number Programme also became a key part of early maths teaching, supported by the creative use of indoor and outdoor spaces to allow split-class teaching when needed.

Helen says this careful, phased approach was intentional: 'We realised the importance of going slow to go fast. Giving staff time to understand the approach and see it in action meant they were more confident when applying it in their own classes.'

By embedding teaching for mastery in the school development plan and linking it to appraisal targets, maths became a shared priority. All staff, including teaching assistants, engaged in regular training, joint planning and collaborative reflection.

During a recent NCETM visit, the impact was clear: even the youngest pupils could explain their reasoning, use precise mathematical vocabulary, and tackle rich tasks with confidence.

The next stage of work with the Maths Hub will focus on deepening mastery, fully embedding NCETM materials across all classes, and continuing to strengthen staff expertise through high-quality professional development.

Helen's advice is simple: 'Prioritise training time, involve everyone and take it slowly to begin with. The long-term benefits for the children are well worth it.'

04 Early Years SKTM Programme Q&A

TEACHER

Helen Hackett, Assistant Maths Hub Lead and Primary Teaching for Mastery Lead

MATHS HUB

Central Maths Hub

Helen has a background in Early Years and SEND, and has been involved with SKTM programmes from the very beginning. Rhian participated in the EY SKTM programme that Helen led this year. We hear from them both about the impact and the benefits of taking part.

Why is the Early Years SKTM so valuable?
Of all the programmes across the Maths Hub, this one is something special. Participants are enthusiastic and engaged and attendance is always high – most Early Years teachers have never had maths-specific CPD for their phase, so they find it really powerful.

What stands out about the cohorts you lead?
Participants are so appreciative of the programme and always go above and beyond. If I suggest a task, they'll come back with examples, children's work, photos and reflections that they are keen to share with each other. They form strong professional relationships, swap ideas, and continue supporting one another beyond the sessions. It's wonderful to see that sense of community develop.

What changes do you see in participants?
On day one, teachers often arrive nervous and uncertain. By the final day, they are so confident – talking about pedagogy, engaging with research, and sharing their learning with school leaders. Confidence is the main thing I see develop: to try new things, to do things differently, and to speak up about what works in Early Years. I see mindsets shift too, moving away from limiting labels and recognising that approaches can work well for all children. Teachers really take ownership of their settings and their practice.

I've worked with a range of teachers – ECTs just starting their careers, maths leads who want to learn more about Early Years and those who have been teaching 20+ years – but all report learning from this programme.

Why would you recommend this programme?
It's a fantastic opportunity to join a community of like-minded people, with dedicated time away from school to talk about maths learning in Early Years. Each session combines theory with accessible, practical activities, and the intersessional tasks are things that teachers would be doing anyway – just with more thought and reflection. Most of all, teachers say their children enjoy maths more, are more confident, and make better progress than expected. That, above all else, should convince any Early Years teacher to get involved.

Maths Hubs Programme Annual Report 2024/25 Primary: SKTM

TEACHER

Rhian Karolski Reception teacher and EYFS lead

MATHS HUB

Central Maths Hub

What made you want to take part in this programme?
I wanted to develop my subject knowledge and gain some new and fresh ideas to support my teaching. The opportunity to network whilst benefiting from Early Years-specific CPD was really appealing.

How did your participation in the programme benefit your class?
I learnt a lot about the theory which helped with understanding and subject knowledge.

I implemented much of the content of the programme immediately back at school and have shared lots of it with the entire phase. We have continued to use the ideas and plan using the curriculum progression, which will create lasting impact on pupil outcomes.

What would you say to someone considering taking part in an SKTM programme?
I would wholeheartedly recommend it. Helen had a wealth of knowledge, and she was able to plant seeds and spark my excitement for maths again!

6,225

Number of participants across all SKTM programmes in 2024/25

Secondary

Secondary schools' engagement with Maths Hubs continued to grow in 2024/25, with 2,175 schools actively participating.

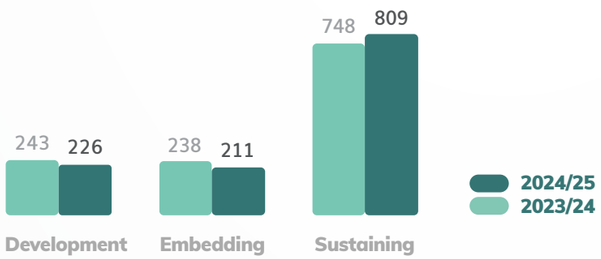
Of these, 226 schools were at the Development stage of teaching for mastery, while 1,020 had moved on to Embedding or Sustaining. Schools in these phases remained involved in Work Groups to build on departmental improvements and further refine their teaching of maths.

Secondary schools also took part in Work Groups that complement the main Teaching for Mastery Programme, helping departments address specific priorities. These included projects focused on transition into KS3, supporting progression, and developing firm foundations for students. The Years 5–8 Continuity Work Group brought together primary and secondary schools to strengthen the transition between phases, ensuring all students make good progress in secondary maths.

Two KS3 programmes – Securing Foundations at Year 7 and Developing Fluency with Multiplicative Reasoning at KS3 – supported teachers in deepening students' understanding of key concepts and improving fluency in early secondary maths. Together, these projects help schools ensure that all students are well prepared for the demands of GCSE and beyond.

Read more about our Securing Foundations at Year 7 Programme on page 26

Maths leadership also continued to be a key focus. The Multi-Academy Trust Maths Leads Community and Secondary Maths Subject Leaders Community remained extremely popular, providing opportunities for almost 1,000 participants to collaborate with fellow subject leaders, engage with current research and developments, and apply this learning to enhance their leadership of maths education.



Number of secondary schools involved in the Teaching for Mastery Programme

Maths Hubs Programme Annual Report 2024/25

Secondary

TEACHER

Rachel Coning, headteacher

SCHOOL

Macmillan Academy, Middlesbrough

SIZE

An 11-18 school, with 1,600 students

DISADVANTAGE

45% of students eligible for free school meals, with up to 60% in some year groups

MATHS HUB

Archimedes NE Maths Hub

01 How sustained Maths Hub engagement can make a real difference for students and staff

Macmillan Academy serves one of the most disadvantaged communities in Middlesbrough. With a high proportion of students facing significant social and economic challenges, the school has worked closely with Archimedes NE Maths Hub for many years to strengthen maths teaching and improve progress.

The partnership began when Vicky Cook, then head of maths and now Assistant Maths Hub Lead at Archimedes, first engaged with the Maths Hub in the earliest days of the programme. Since then, the relationship has deepened and expanded. Headteacher Rachel Coning is clear about the impact: 'The Maths Hub encourages us to look outwards, bringing high-quality CPD into school and helping us make sure staff don't become insular.'

A key development has been engagement with the Secondary Mastery Specialist Programme, ensuring expertise within the department. 'Having Hannah [a Secondary Mastery Specialist] in the team has transformed our KS3 curriculum'. 'She has rewritten schemes of work and supported staff day-to-day. It's not just about big training sessions, but being able to say after a lesson, "What could I do differently?" Having that expertise in the room every day has been massively beneficial.'

The school's long-term involvement with the hub has also supported its exceptional staff retention. Macmillan has a 95% retention rate, with teachers choosing to stay for many years. Rachel points to the way that professional development opportunities help: 'Our new head of maths could have gone elsewhere when she was second in department, but the projects and networks she has accessed through the hub have kept her motivated and committed to our students. That makes a huge difference in a disadvantaged community like ours.'

Staff have engaged in a wide range of Work Groups, including Securing Foundations at Year 7, which is designed to support students with conceptual gaps in KS1 and KS2 maths content. Many students at Macmillan live in areas ranked amongst the most deprived 10% in the country, so having staff who can support them to make good progress in maths is crucial. 'Although we've got lots of children who are classed as pupil premium, when you break that down, a significant number of our children are in that number one band on the IDACI deprivation scale – the very poorest.'

For a school where, in many year groups, over half of students are eligible for free school meals, this sustained relationship with the Maths Hub is making a tangible difference to teaching, learning and staff development in maths.

TEACHER

Charlotte Thurlby, ASL for Maths and Transition Coordinator

SCHOOL

Cockburn School, Leeds (part of the Cockburn MAT)

SIZE

An 11–18 comprehensive with nearly 1,400 students

DISADVANTAGE

39% of students eligible for free school meals

MATHS HUB

West Yorkshire Maths Hub

02 Strengthening continuity and confidence from Year 5 to Year 8

Cockburn School, in south Leeds, took part in the Years 5–8 Continuity Work Group with West Yorkshire Maths Hub. This was part of a wider effort to strengthen coherence and consistency across the transition from primary to secondary.

Charlotte Thurlby, Assistant Subject Leader of Maths for Cockburn School and Maths MAT Coordinator for Transition across the trust, explains: 'We wanted to develop more links with our primaries and share practice. Within our trust, we work hard to create consistency for students that supports them mathematically. The Years 5–8 Continuity Work Group was the perfect match for us to expand this work across the phases.'

Over two years, teachers from three secondary schools and nine feeder primaries collaborated through the project. They explored how key ideas such as fractions, area and algebraic reasoning are introduced and built upon from Year 5 to Year 8. Each session included time to analyse schemes of learning, discuss misconceptions, and observe lessons across phases.

The group also created transition materials, including problem-solving activities and short video clips featuring secondary teachers. 'That's been really nice – students arriving in Year 7 stop me and say, "I've seen you before!" because they've watched the clips. It's helped build confidence and reduced maths anxiety when they start Year 7.'

"If I'd just attended Years 5–8 on my own, the impact would have been very different. Having our feeder primaries in the Work Group made such a difference – the conversations we had were really rich, and everyone wanted to support the students to be good at maths when they get to secondary."

The project also helped sustain mathematical focus in the final term of primary school. 'Some of the Year 6 teachers said it gave them something meaningful to focus on after SATs. Often, once the tests are over, schools switch to enrichment activities, and students can go from early May to September without doing any real maths. This work helped keep the momentum going.'

527

Participants involved in Years 5-8 Continuity Work Groups

'When we looked at progress tests, problem solving was always the thing students struggled with most. Now we're starting to see improvement. They're more confident tackling reasoning questions, and they recognise the types of problems we use in secondary.'

The collaboration has continued beyond the project. 'This year is about keeping those strong links we've built and setting up our own regular cross-phase meetings. It's become part of how we work now.'

TEACHER

Claire Render, Head of Key Stage 3 Maths

SCHOOL

Duke's Secondary School, Ashington

MATHS HUB

Great North Maths Hub

03 NEW: Developing Multiplicative Reasoning at Key Stage 3

This Work Group helps teachers strengthen students' understanding of multiplicative relationships, supporting smoother progression from KS2 and better access to the KS4 maths curriculum. Participants explore how to use representations such as ratio tables, double number lines and manipulatives to make proportional reasoning more accessible.

At Duke's Secondary School in Ashington, where nearly half of students are eligible for pupil premium funding, multiplicative reasoning had been a persistent challenge. Claire Render, Head of Key Stage 3 Maths, worked with Great North Maths Hub to trial approaches in the classroom and then share them across her department.

'We had never used double number lines before, but they have transformed the way students see the links between topics'. The new approaches provided clearer progression from primary and helped teachers present problems in manageable steps.

Impact has been both departmental and individual. Staff feel more confident, and students are beginning to show flexibility in using multipliers in a range of contexts. Claire recalled one Year 8 student who had often avoided maths lessons but now participates with greater enthusiasm. 'She is making real progress in maths now'. The department is now embedding the approaches in schemes of work, with Claire leading further development.

TEACHERS

Stephen Archer (maths) and Gemma Smith (science)

SCHOOL

Diss High School, Norfolk

MATHS HUB

Angles Maths Hub

04 Coherence in Maths and Science

The Developing Mathematical Coherence for Learners Across Maths and Science Work Group gives maths and science teachers the opportunity to work together to explore how maths can be taught more consistently across both subjects to improve student understanding. By reviewing sequencing, and using shared representations and consistent language, participants identify opportunities to make learning more coherent and connected.

At Diss High School in Norfolk, Stephen Archer, a maths teacher, and Gemma Smith, a science teacher, joined Angles Maths Hub's Coherence in Maths and Science Work Group. They found that in science, students were asked to plot graphs before they had met them formally in maths. Adjusting the order to connect graph plotting to number lines in Year 7 gave students greater confidence.

Vocabulary was another focus. 'In science, "rearranging equations" is really just solving equations,' Stephen explained. 'Once we started using the same language, students became much clearer about what to do.'

The collaboration has already improved consistency across departments. Students benefit from coherent teaching, with teachers reinforcing the same concepts in both lessons. With Stephen and Gemma now coordinating Key Stage 3 in their respective subjects, the learning is being embedded across their teams. The Work Group showed that small adjustments in language and sequencing can strengthen the way students connect knowledge, enabling greater progress.

05 Creating coherent maths departments: Secondary Teaching Assistants SKTM Programme
Q&A

Lucy has been involved with the Secondary Teaching Assistants SKTM Programme since its inception as a Research and Innovation Work Group (RIWG). The programme was developed in recognition of the need for subject-specific maths CPD for teaching assistants in secondary settings, to build confidence and improve student outcomes.

TEACHER

Lucy Lycett, Maths Hub Lead and Cohort Lead

MATHS HUB

East Midlands West Maths Hub

What is the rationale for this programme?
Unlike teachers, TAs are rarely subject-specific and may work with one student, moving between lessons in different subjects. We wanted to create a safe, positive environment where they could build knowledge, explore pedagogy and share experiences with other TAs.

What can a participant expect?
The programme runs over four days in the year, each themed around a key topic: addition and subtraction, multiplication and division, fractions, and ratio. We begin by looking at curriculum progression – where students will have met the maths in primary and where it is going next. This helps participants see the bigger picture, including where gaps may have appeared. Sessions are very interactive, with participants taking the role of learners, so they can experience approaches first-hand and take them back into their own settings.

How does this make a difference for TAs?
Confidence is the biggest gain, but also flexibility. TAs often work one-to-one and do not always have a teacher on hand to suggest alternative approaches to aid student understanding. The programme helps them adapt and try a different strategy when something does not work the first time.

How does this strengthen maths departments?
In a strong department, everyone is consistent. Too often, TAs are not included in CPD. This programme gives them the same access to pedagogy as teachers, which means students experience continuity and not fragmentation. That can make a big difference to learning.

PARTICIPANTS

[1] ***"Applying these strategies in interventions and classroom support has already yielded positive results... This programme has reinforced the importance of exploring mathematical language carefully to prevent misconceptions."***

[2] ***"I am more confident. I have a variety of methods and tools to use with students... Understanding current and up-to-date methods of teaching the maths curriculum really helps me to support and scaffold students up to GCSE."***

06 Addressing a significant need: Secondary Non-specialist Teachers SKTM Programme

Across the country, many secondary schools rely on teachers from other subjects to teach maths. The Secondary Non-specialist Teachers Specialist Knowledge for Teaching Mathematics (SKTM) Programme exists to support them. It develops teachers' subject and pedagogical knowledge, enabling them to understand, teach and support students in maths with greater confidence.

Delivered over the equivalent of six days, the programme combines opportunities to deepen subject knowledge with practical classroom strategies. Participants use a range of pedagogical approaches, explore the principles of teaching for mastery, and strengthen their ability to help students think, reason and discuss maths.

TEACHER

Elizabeth Attwood, maths teacher and LLME, Cohort Lead for Non-specialist SKTM

MATHS HUB

Kent and Medway Maths Hub

WATCH

Elizabeth Attwood has worked with the Maths Hubs since their inception and has led this programme for four years at Kent and Medway. With 16 years' experience as a maths teacher, she knows how powerful the programme can be.

'We often get PE, science or RE teachers who have been told they need to teach maths because of shortages. We also have teachers looking to teach maths without a background in the subject'.

For many, the first step to improving their maths is daunting. 'A lot panic or feel nervous before the first session. Others are really excited because they see it as an opportunity to develop their career.'

During sessions, feelings can shift. 'Teachers walk out relieved that maths isn't scary and often tell me they've enjoyed it. By the end of the programme, their contributions are much more open and they're more willing to get involved. Because their confidence has improved, they feel happier talking about maths, and that is amazing to see.'

Central to that growth is the environment the programme creates. 'It gives teachers the time to do maths themselves and develop their understanding of the subject. Coming together to work with other people in a similar situation is important. They have a safe space where they can be open and say, 'I don't understand that', or 'How do you do that?', which is really powerful.'

For Elizabeth, the value of this SKTM is clear: 'It gives non-specialists an opportunity to gain the confidence and knowledge they need to enjoy teaching maths. Maths doesn't look like it did when many of us were at school, so this is their chance to get CPD in those newer methods and to discover what will work for their students.

PARTICIPANTS

[1] ***"This is my first year teaching maths, and I hadn't heard of teaching for mastery before – this programme gives you so many different ways of thinking and approaching problems."***

[2] ***"It's helping me build confidence, in particular with using correct vocabulary and learning different ways of delivering certain topics."***

343

Participants in the SKTM Programme for Secondary Non-specialists

There's nothing better than teaching a student when suddenly the maths clicks and they say, 'Oh yes, I get it, I can do it now'. With the help of this SKTM, teachers new to maths can achieve those breakthrough moments with their classes, and that makes them enjoy teaching more.'

Post-16 Institutions

The professional development offer for post-16 schools and colleges continues to support teachers of GCSE resit, Functional Skills Maths, A level and Core Maths.

With 148 post-16 institutions collaborating with their local Maths Hub in 2024/25, more students than ever are benefiting from their teachers' enhanced subject and pedagogical knowledge.

The successful Post-16 GCSE/FSQ Mastery Specialist Programme saw its second full cohort begin training, with 75 participants starting the programme. A further opportunity for teachers of resit and FSQs, Supporting Students to Achieve a L2 Qualification in Maths, gave participants the opportunity to develop transferable teaching techniques to network with FE colleagues. For teachers of A level and Core Maths, well-established CPD run in conjunction with the Advanced Mathematics Support Programme (AMSP) enabled them to develop their teaching approaches for KS5 students.

133

Schools participating in Supporting Students to Achieve a L2 Qualification in Maths

152

Post-16 institutions engaged with their Maths Hub in 2024/25

01 Post-16 GCSE and FSQ Mastery Specialist Q&A

TEACHER

Veronica Butler, maths teacher

COLLEGE

King Edward VI College, Nuneaton

SIZE

A 16–19 college with around 1,350 students

MATHS HUB

Origin Maths Hub

With her department beginning its teaching for mastery journey in response to the evolving needs of GCSE Maths resit students, Veronica took an opportunity to build her practice and support wider change. Her path into the role of Post-16 Mastery Specialist has been marked by reflection, collaboration, and a commitment to creating more confident, capable students.

What motivated you to become a Mastery Specialist?
I wanted to deepen my understanding of effective teaching strategies, particularly those that could help our resit students. I wanted to explore new approaches to break down complex concepts into manageable steps and rebuild foundational knowledge.

How have you found the training experience?
It has been incredible with so many ideas and methods to try. A highlight has been collaborating with teachers from other colleges. Everyone shares unique perspectives, which has created a rich environment for learning. The training has also encouraged reflection – thinking more deeply about why I teach the way I do, and how small changes can make a big impact.

"One of the most inspiring aspects of the role is the opportunity to collaborate with like-minded professionals and subject experts who are passionate about raising standards in education. Being part of this network allows you to share ideas, explore innovative approaches, and contribute to shaping the future of teaching and learning. If you want to be part of a forward-thinking and supportive community, becoming a Mastery Specialist is a fantastic step to take."

What has the role changed for you as a teacher?
I've appreciated teaching for understanding rather than simply coverage. I now spend more time on key topics, ensuring students grasp underlying concepts before moving on.

I've embraced the idea of students as active participants. I encourage them to search for patterns and ask questions rather than passively receive information. This leads to richer discussions and more resilient students.

What's the best thing about being a Mastery Specialist?
Working with passionate educators has been inspiring. I've learned a wide range of methods that will have a real impact on student understanding. Whether it's trying out a new approach to questioning, using manipulatives, or rethinking how topics are sequenced, there's always something to refine. Knowing I'm shaping my own practice whilst supporting others makes this role exciting and valuable.

How has your department benefited from your role?
I've brought a deep understanding of mastery principles, helping to raise the quality of teaching. I share effective strategies, resources and best practice with colleagues, supporting them in planning lessons that build long-term understanding and fluency.

What are you looking forward to next?
I'm looking forward to continued collaboration across my department and other colleges, as we implement new teaching approaches.

02 Teaching for mastery in post-16: supporting students to achieve L2 in maths

TEACHER

Joe Wydrzynski, Head of Maths and English, and Post-16 GCSE and FSQ Mastery Specialist

COLLEGE

Andover College, part of Sparsholt College Group, Hampshire

SIZE

A land-based college group with over 2,600 students

MATHS HUB

Solent Maths Hub

Andover College, part of the Sparsholt College Group, is based in north-west Hampshire. It supports about 150 GCSE Maths resit students each year alongside a similar number studying Functional Skills.

Joe Wydrzynski has been engaging in the Post-16 GCSE and FSQ Mastery Specialist Programme through Solent Maths Hub since the programme's inception, and he believes it has had a direct impact on his practice and leadership.

'When I first heard the word mastery, I thought it was the teacher being a master mathematician. But it was more about helping students build deeper understanding and giving teachers practical strategies. It was the first CPD where I came back and immediately had something to try in the classroom.'

The Post-16 Mastery Specialist Programme encouraged Joe to reflect more deeply on teaching and learning. 'I started keeping a reflective journal. At first it was just for me, but it really helped me to think about why lessons hadn't gone well, and also why they had gone well. That has been so beneficial, and I've shared it with my team.'

Joe then became involved in the Supporting Students to Achieve a L2 Qualification in Maths cross-phase Work Group. Colleagues from secondary and post-16 settings work together to develop teaching approaches that support students to achieve a Level 2 qualification in maths, whether GCSE or Functional Skills. The aim is to develop consistency in language, sequencing, representations and curriculum continuity.

'The cross-phase element has been brilliant. You meet people from very different contexts, but everyone is keen to share good practice. Some of the ideas I've taken back have had an impact across the whole college, not just in maths.'

Looking ahead, Joe is determined to embed teaching for mastery approaches further. 'For resit students who have struggled with maths, mindset and confidence are huge. Now that I have a bigger toolbox and a supportive network, our students are really starting to believe they can succeed in maths.'

03 Support for new Core Maths teachers: Developing Core Maths Pedagogy SKTM Programme Q&A

TEACHER

Laura Pearson, maths teacher and participant in the SKTM Programme for Core Maths

TEACHER

Jo Denton, maths teacher and Cohort Lead

MATHS HUB

Jurassic Maths Hub

When Laura Pearson, a maths teacher at The Thomas Hardye School in Dorchester, was asked to teach Core Maths for the first time, a colleague recommended that she participate in the Specialist Knowledge for Teaching Mathematics (SKTM) Programme for Core Maths teachers. Laura was supported by her Cohort Lead at Jurassic Maths Hub, Jo Denton, a maths teacher at Poole Grammar School and an MEI Local Lead for post-16 maths.

What were your first impressions of teaching Core Maths?
[Laura]: I felt confident with teaching GCSE, but Core Maths was a different story. The style of Core Maths was completely new to me. Signing up for the SKTM programme gave me a bit of a lifeline. In the first session, when we all tackled estimation tasks together and shared ideas, I realised it was fine not to have all the answers. That gave me a big confidence boost.

How has the programme changed your classroom practice?
[Laura]: It's encouraged me to embrace discussion. Students enjoy the more open-ended tasks and are more willing to talk through their thinking. I enjoy finding real-life contexts for lessons, such as estimating how many eggs Cadbury produces at Easter, or how many toilets are needed at Wembley Stadium!

How has your confidence changed since completing the programme?
[Laura]: It's changed massively. A year ago, I would have avoided teaching estimation altogether because it made me anxious. Now I feel confident to teach it and even enjoy it. The programme gave me both the subject knowledge and the reassurance I needed. Instead of dreading teaching Core Maths, I now feel positive about it, and I've built a bank of strategies I can use in the future.

What does the New to Teaching Core Maths SKTM Programme aim to cover?
[Jo]: It is a programme of six sessions, each exploring a different aspect of teaching Core Maths. The final session focuses on building a contextualised Core Maths lesson. By the end, participants have a clear sense of what an effective Core Maths lesson looks like.

What misconceptions might participants have about Core Maths?
[Jo]: Many teachers are used to a more traditional, didactic approach in GCSE and A level Maths. Core Maths is very different. It is discussion-led, open-ended, and questions don't always have one right answer. A big part of the programme is about giving teachers the confidence to say, 'Let's explore this together', rather than feeling they need to know everything in advance.

What impact do you see as the programme develops?
[Jo]: Confidence is the biggest change. By the end of the programme, teachers are more comfortable facilitating discussion and encouraging students to think critically about context and assumptions. They also learn to use resources flexibly, either as full lessons, starters or revision tasks, which helps them fit Core Maths into different settings. When teachers embrace a discussion-led approach, students really benefit and enjoy the freedom to talk, reason and test ideas.

Targeted Support in Mathematics

Some schools need additional support to begin participating in the Teaching for Mastery Programme. Targeted Support in Mathematics (TSM) gives these schools the tools they need to ensure a strong start leads to long-term success.

Eligible schools – those with identified barriers to participation in the full Teaching for Mastery Programme – may be connected to their local Maths Hub for Enhanced or Intensive support. This is in addition to the usual support a Maths Hub can offer a school wanting to introduce teaching for mastery.

Now moving into its third year, TSM ensures any eligible school receives bespoke support to establish the foundations required to enable effective implementation of teaching for mastery. School leaders work in partnership with a Maths Hub Intenstive Support Partner to plan developments on a specified area of maths provision. Through this collaborative process, the school's capacity to lead future developments is enhanced.

Leaders in participating schools work with their support partner to identify and tackle barriers to success in maths, and the funded Intensive support programme means that release time is available for staff involved to devise effective ways to improve the teaching and learning of maths

The collaborative nature of the support means that schools devise a plan which matches the specific needs of their own context, and the long-term timeframe means that plans can be evaluated, revised and refined to continue to meet the school's needs.

2,900+

Schools in total received Targeted Support in Mathematics in 2024/25

400+

Schools received Intensive Targeted Support in Mathematics in 2024/25

2,500+

Schools received Enhanced Targeted Support in Mathematics in 2024/25

Maths Hubs Programme Annual Report 2024/25 Targeted Support in Mathematics

TEACHER

Josh Lury, Assistant Maths Hub Lead

SCHOOL

Stoke Climsland Primary School, Cornwall

SIZE

180 pupils on roll

DISADVANTAGE

14% eligible for free school meals

MATHS HUB

CODE Maths Hub

01 Targeted support in maths that empowers leaders to make sustained improvement

Stoke Climsland Primary School in East Cornwall was one of several schools identified by the local authority as likely to benefit from targeted support from CODE Maths Hub. Outcomes in maths were well below national levels, and leaders were keen to strengthen their approach.

Working with CODE, the school focused on developing subject leadership and a shared vision of what good maths teaching looks like.

Josh Lury, Assistant Maths Hub Lead at CODE, explained: 'It's not about providing the solutions or telling the school what to do. It's about helping them find their own feet, supporting leaders to recognise the challenges and design a pathway that gets everyone on board. That way, the change is sustained rather than imposed.'

Over two academic years, Josh visited regularly, working collaboratively with the maths lead to review progress, trial new approaches and observe lessons. This led to clearer expectations and a more consistent experience for pupils. Teachers were able to use their commercial scheme of work more effectively, moving from 'working through' the materials to planning lessons with greater purpose and focus.

The impact has been clear. The school's Year 6 outcomes rose by around 34 percentage points during the period of support, reaching 72.3% at age-related expectations. When Ofsted visited part way through the project, the maths lead was able to set out the school's vision for maths with confidence. The school was judged Good overall, with maths identified as a strength.

The school's maths lead, Juliette Endacott, reflected: 'Josh was highly supportive in his role. His coaching approach empowered me to identify the positive changes needed within the school, and his advice and experience provided focused, practical strategies to implement those improvements effectively. These strategies directly contributed to improved KS2 SATs results.'

The journey at Stoke Climsland shows how targeted support can help schools move from uncertainty to clarity. By investing in leadership and giving staff the confidence to adapt and refine their approach, pupils now experience maths teaching that is more consistent, ambitious and effective.

Local Leaders of Mathematics Education (LLMEs)

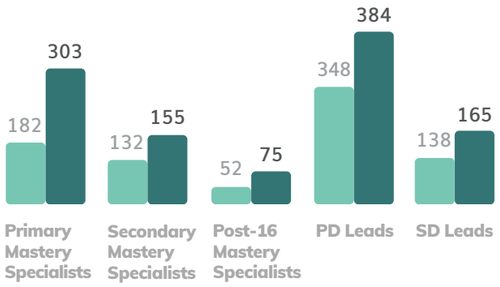
Local leaders of mathematics education, also known as LLMEs, are the teachers and education professionals who lead all Maths Hubs activity at a local level.

LLMEs combine their years of experience and expertise with their current classroom teaching, and are supported by the Maths Hubs Programme and the NCETM to develop their own knowledge and practice of leading maths professional development. Within each hub, LLMEs form their own community, developing their skills in leading maths pedagogy, leading maths teacher professional development, and leading whole-school development in maths. The opportunity to collaborate with others who understand the local and national maths teaching landscape, and to explore evidence-based research, means that they stay at the cutting edge of teacher CPD. They therefore enhance their own schools' maths teaching approaches, bringing their knowledge back into their own settings as well as sharing it through their leadership of hub activity.

Each year, more LLMEs become part of the network, having trained as Mastery Specialists, or having taken part in the School Development Lead Programme or the Professional Development Lead Programme. This ensures that the depth of expertise in the network can sustain the leadership required for the thousands of Work Groups run nationally each year. In 2024/25, 1,945 total active LLMEs were leading Maths Hubs professional development, impacting the professional development of thousands of teachers at all levels.

1,082

LLMEs starting development programmes in 2024/25



LLMEs starting development programmes in 2024/25

01 An LLME's timeline – the journey to Maths MAT Lead and Maths Hub Intensive Support Partner

2009 Qualified as a primary teacher

2013 Became maths lead at his school, developing an interest in improving classroom practice

2015 Attended his first Teaching for Mastery Work Group with Cambridge Maths Hub

2016 Joined Cohort 2 of the Primary Mastery Specialist Programme, supported by a headteacher who encouraged his professional development

2017 Began leading his own Work Groups and supporting teachers across local schools

Completed the NCETM PD Lead Programme

2018 Worked with Opportunity Area schools, gaining experience of supporting schools in challenging contexts

2023 Appointed to a trust-wide role leading maths across 14 primary schools, now expanded to more than 20

2024 Completed the NCETM School Development Lead Programme

Became an Intensive Support Partner (ISP) for Cambridge Maths Hub, providing Targeted Support in Maths to support schools in greater need

TEACHER

Malcolm Watson
Intensive Support Partner (ISP) for Cambridge Maths Hub and Primary Maths Lead for Meridian Trust

My journey with the Maths Hubs started when I went along to a Teaching for Mastery Work Group, really just out of curiosity. I didn't know much about teaching for mastery at the time, but I was struck straight away by how different it felt. There was a real sense of collaboration and reflection, and it made me think about maths teaching in a completely new way.

After a while, I decided to apply to become a Primary Mastery Specialist. That's when things really started to shift for me. It completely changed the way I approached teaching. I began to develop a deeper understanding of maths teaching pedagogy, and that helped me to support the teachers I worked with, as well as the children in my own classroom.

Those sessions in the early days were a mix of uncertainty and discovery, and I realised that it was okay not to have all the answers. The best part was seeing teachers go away, try something new, and then come back excited to share what had worked.

I started off just leading one small Work Group, and that was nerve-wracking enough at the time. Then I moved on to supporting a few more schools, then a whole cluster, and now I've got a role across the trust, supporting more than 20 schools. It's all built on what I have learned through the Maths Hub. It has developed me massively; I don't think I'd have the job I have now without it. It's given me the chance to lead work with different schools, and learn how to support adults' professional learning. Being an LLME provides me with professional development, and I can see myself evolving as a practitioner. That's not something you ever want to leave, if you can help it.

TEACHER

Rim Saada, deputy headteacher and LLME

SCHOOL

Woodmansterne School and Sixth Form, Lambeth

SIZE

A 3–18 school with around 1,600 students

DISADVANTAGE

23% of students eligible for free school meals

MATHS HUB

London South West Maths Hub

02 Secondary Mastery Specialist Programme provides 'most valuable CPD'

For Rim Saada, becoming a Secondary Mastery Specialist was a turning point. 'The Secondary Mastery Specialist Programme honestly turned out to be the most valuable CPD I've had in my career.'

The training strengthened both her subject knowledge and pedagogy. 'It gave me a deep understanding of teaching for mastery and strengthened my own pedagogical approach. I found myself becoming curious about the 'why' behind the maths I was teaching, and that curiosity led me to research topics more deeply'. She also praises the value of collaboration within the programme: 'One highlight was the network of colleagues I worked with: being able to share experiences, learn from one another, and see how teaching for mastery works in different contexts was invaluable'.

At Woodmansterne, Rim's expertise has had a tangible impact, 'It's raised student engagement and outcomes – our Progress 8 score for maths is consistently very high, ranging between +0.68 and +1.3, and the proportion of students achieving grade 7+ is well above national average'. But the ripple effects go beyond results. 'On a day-to-day level, the programme has strengthened collaboration within the maths department and reduced workload, which has further supported staff retention. Teachers feel purposeful and supported, and that sense of shared success makes a real difference'.

Her work also extends to other schools; she leads Secondary Teaching for Mastery and Subject Leader Work Groups, helping schools adapt teaching for mastery for their own contexts and providing collaborative spaces for heads of department to strengthen leadership and curriculum design.

"Watching students develop genuine understanding and confidence in maths – and knowing that it feeds directly into stronger outcomes – is incredibly rewarding.

Go for it – don't hesitate. It will transform both your teaching and your department, especially if you have the right support from your school leaders."

TEACHER

Cat Wilkinson assistant head, SENDCO and class teacher

SCHOOL

St Mary's RC Primary School, Haslingden

SIZE

A 4–11 primary school with around 140 pupils

DISADVANTAGE

19% of pupils eligible for free school meals

MATHS HUB

Abacus NW Maths Hub

03 The benefits of being a primary LLME Q&A

With over five years of involvement with Abacus NW Maths Hub, Cat's role has evolved through continuous professional development, collaboration, and a passion for inclusion. From RIWG Lead to Equity Lead, her journey reflects a commitment to improving outcomes for all pupils, particularly those with SEND, to ensure every child can access high-quality maths teaching.

What motivated you to become an LLME?
My work with the hub has progressed gradually over time, largely due to the support of Kathryn McGregor, Maths Hub Lead for Abacus. As a maths lead, I was keen to implement teaching for mastery in our school and sought Kathryn's advice in 2018. We worked together to develop teaching for mastery, and I supported with events such as open classrooms. Kathryn later encouraged me to become a PD Lead, and my involvement has grown as the hub has expanded.

What have you gained from leading Maths Hub work?
Working with the hub has given me real confidence in my mathematical knowledge and pedagogy through the CPD on offer. The LLME Community days we attend termly feed directly into how I support other teachers. I've developed confidence in utilising research and learned how to harness the expertise of colleagues.

What's the best thing about leading Work Groups?
I love collaborating with the wonderful network of people who are all invested in improving pupils' maths learning. It's also exciting to be part of the research that influences future NCETM projects.

How has your school benefited?
All the CPD and skills I've gained have directly impacted St Mary's as I have disseminated these within school. Staff have attended SKTMs, we've been early adopters of Mastering Number, and I've built a supportive professional network to utilise when needed.

"Becoming an LLME has had a massive impact on my life as an educator. It has not only helped me with subject knowledge and confidence, but it's allowed me to network with like-minded people who all have children's outcomes at heart.

The many inspirational people I have met along the way have motivated me to be the best I can be, for the children I teach.

Being an LLME has opened many doors and embracing these opportunities has been a transformative process. I owe huge thanks to Abacus NW Maths Hub, Kathryn McGregor, and the leadership team at St Mary's for believing in me and encouraging me all the way."

Research, Evaluation and Impact

Research, evaluation and impact are at the heart of the Maths Hubs Programme. Each year, evidence is gathered to understand the difference that hub activity makes for teachers and pupils.

This work goes beyond collecting participation data: it provides insight into how professional development changes classroom practice and improves outcomes for the pupils who most need support.

Research & Innovation (R&I) is one aspect of the REI strand's work. Across all 40 hubs, R&I activity tackles both local priorities and national challenges in maths education. Led by teachers, these activities explore new approaches to teaching and learning at every phase and key stage. Teachers design, trial and refine ideas in their classrooms, and outcomes are shared across the network to help shape the future of the programme.

This year, 766 schools have taken part in Research & Innovation activities, working on seven themes ranging from teaching for mastery in mixed-age primary classes to cross-departmental collaboration in secondary schools. In addition, 571 local leaders of maths education took part in new LLME Development R&I activities, each choosing one of six themes to focus on, such as collaborative professionalism or oracy, to deepen their understanding and practice.

The R&I programme is defined by three core professional cultures:

1. **Research culture:** Teacher-led enquiry is key to R&I activity, drawing on published research to inform the work.
2. **Innovation culture:** The focus is on developing and testing new approaches, or using existing ideas in fresh ways.
3. **Collaboration culture:** Teachers work together throughout, learning from each other's experiences and insights.

The REI strand – both through R&I work and evaluation activity more broadly – works to strengthen cultures of research, innovation and collaboration across the whole Maths Hubs Programme. Its work ensures that projects are continually shaped by evidence of the impact professional development has on teachers' knowledge and classroom practices, school systems, and on pupils.

766

Schools participating in R&I activities

559

Participants involved in LLME Development R&I activities

Maths Hubs Programme Annual Report 2024/25 Research, Evaluation and Impact

01 NEW: Securing Foundations at Year 7: evaluating the impact of a new programme

Securing Foundations at Year 7 was designed to investigate how best to support lower-attaining students as they move from primary into secondary maths. In its first year, the programme was closely evaluated by the REI strand to gather evidence of impact and shape future work. 829 teachers and teaching assistants from 453 schools engaged, working with carefully-designed materials supported by professional development at national and regional level.

The aim was to explore whether equipping teachers of Year 7 maths with deeper knowledge of Key Stage 1 and 2 mathematical content could help them identify and address conceptual gaps. Early research findings show that this approach is already making a measurable difference. Baseline assessments highlighted an attainment gap in maths between students eligible for free school meals and their peers. By the end of the year, both groups had made progress, and the difference in performance had narrowed.

Teachers consistently reported improvements in student confidence and attitudes towards maths. On average, 62.7% of students were judged to have grown in confidence, rising to 81.2% in schools making the highest use of the materials. One teacher reflected: 'Students are much more confident and feeling more successful with their maths.'

The evaluation also identified gains in access to the curriculum. 53.7% of students were reported to have progressed sufficiently to engage with a suitable Key Stage 3 curriculum. One teacher noted: 'Some of the students have made really good progress on times tables and multiplicative reasoning. This was really holding them back in accessing the KS3 curriculum.'

The impact extended to participating teachers' understanding of KS1 and 2 mathematical content, and to their classroom practices. Mandy, who taught students on the 'support' pathway, described how her beliefs and expectations were also challenged: 'My expectations of those students at the start of the year was so low. And I look back and think, "shame on me". I would never have anticipated [...] that today they could successfully convert mixed numbers and improper fractions without a trick. What it's done is changed my expectations of these students.'

While challenges remain, including timetabling and accountability pressures, the appetite for the programme is clear. As one participant explained, looking ahead to further implementation: 'We're planning to embed elements into our Y7 scheme of work from September as part of wider curriculum changes. It's our plan to change our 'nurture group' scheme of work to use mainly Securing Foundations materials.' Following positive evaluation, Securing Foundations at Year 7 will continue to be offered through the Maths Hubs Network, enabling more secondary schools to take part and more students to benefit.

02 Problem solving in a teaching for mastery context

TEACHER

Sam Shutkever, primary teacher, Deputy Maths Hub Lead and Research & Innovation Theme Lead (RIL)

MATHS HUB

West Yorkshire Maths Hub

Sam Shutkever is a primary teacher and Deputy Maths Hub Lead at West Yorkshire Maths Hub. He is also the national Research & Innovation Lead (RIL) for one of the seven Research & Innovation themes explored across the Maths Hubs Network this year – how to support problem solving within a teaching for mastery context.

To investigate this theme, Research & Innovation (R&I) Leads worked with teachers in 14 Work Groups in hubs across England. For these groups, the focus was on the day-to-day classroom practices teachers use to develop pupils' problem-solving skills, attitudes and mindsets. Sam explains that when pupils encounter non-routine problems, such as in SATs or end-of-unit assessments, they may struggle to know what to do.

As the exploration of the R&I theme progressed and teachers discussed problem solving in their Work Groups, three areas of focus emerged. One was how to provide all pupils with access to problem solving. Another was how teachers can model their thinking, making reasoning and decision-making visible. A third examined how problem types and worked examples are selected and sequenced, and the impact this has on learning. Also highlighted was ongoing inequity in access, with some previously lower-attaining pupils having little opportunity to engage in reasoning or open-ended tasks.

> ***"If we want pupils to be confident problem solvers, we need to deliberately teach them how to approach the unknown – not just when we have time at the end of a lesson."***

At hub level, sessions included live model lessons, collaborative planning and resource analysis. Sam explained, 'There was lots of variety in how R&I Leads worked with teachers to approach problem solving, but all of them came back to the same core challenge: how do we make time for problem solving, and how do we support all pupils to access it meaningfully?'

Next year, this R&I theme will continue with a refined focus: Mathematical Habits for Solving Problems. It will build on this year's findings by attending to the habits pupils need to develop, including resilience, perseverance and flexible thinking.

'Teachers are often told to build resilience in pupils, but what does that actually look like? What should I say or do in the moment to support a pupil who is stuck? We want to explore what the research says, and what this might look like in real classrooms.'

Sam hopes the work will lead to classroom video examples and practical tools to support Maths Hubs and teachers nationally in embedding problem solving as a natural and essential part of maths learning.

Maths Hubs Programme Annual Report 2024/25 Research, Evaluation and Impact

03 Developing subject leadership through LLME collaboration

TEACHER

Linda Lavagna-Slater, Research & Innovation Lead

MATHS HUB

North West Three Maths Hub

Linda Lavagna-Slater has extensive experience leading a range of professional development for North West Three Maths Hub. This year, she drew on that experience to lead Research & Innovation activity for her fellow LLMEs, focusing on developing subject leadership through collaboration.

Linda's work with her own LLME community at North West Three was part of an overall R&I theme designed to help Maths Hubs strengthen subject leadership in schools by focusing on the development of LLMEs. Linda's group looked particularly at strengthening LLME confidence and skill in applying a range of professional development models. These included collaborative planning, coaching and facilitating post-lesson activities.

'In previous years, I've led Research & Innovation work with teachers, so having LLMEs as participants was quite a different way of working,' Linda explained. 'It was also the first time hubs had done this kind of research within the LLME community. The participants were all Work Group Leads already supporting schools through the Teaching for Mastery Programme. They told us informally that they would welcome support in using different professional development models more effectively.'

Each LLME within Linda's community selected a professional development model to explore in depth, with common themes emerging. One was the need to ensure participants, not facilitators, do most of the talking in teacher research groups. Another was the challenge of engaging passive participants and ensuring equal contributions from all.

Small-group coaching was especially impactful: 'They really appreciated the space to reflect, share experiences and coach one another. That's something we've taken forward into our planning for next year's LLME events.'

'The findings are feeding into a new toolkit for LLMEs across the country'. 'It's been a great opportunity to explore how LLMEs themselves benefit from continuing professional development, and how that, in turn, strengthens leadership in schools.'

> ***"If we support and develop our LLMEs, they will take that into their schools and share it with their own maths leads. It's a ripple effect."***

Maths Hub Leadership

In 2024/25, the Maths Hubs Network continued to support thousands of schools and teachers, led by the 40 hubs that cover the whole of England.

Each hub partnership is led by a designated Lead Institution, which ensures there is a leadership team and operational infrastructure. This includes hub managers, coordinators and administrative staff who ensure that programmes are well run and reach schools in every local authority area.

At the centre of hub delivery are the local leaders of mathematics education (LLMEs), a growing community of experienced teachers and leaders who design and deliver school and professional development. In 2024/25 there were 1,945 active LLMEs nationally. With expertise ranging from Early Years to post-16, they act as the essential bridge between national priorities and classroom practice.

Engagement with schools remained high. In 2024/25, approximately 61% of primary schools and 62% of secondary schools in England took part in at least one Maths Hub professional development opportunity.

Strategic Boards
Every Maths Hub is guided by a Strategic Board, which provides independent oversight and ensures that the hub's work reflects both national priorities and local needs. Membership is designed to be broad and representative.

Strategic Boards offer advice to Maths Hub Leads, drawing on local intelligence to help shape priorities. They provide scrutiny and challenge, ensuring that programmes are well targeted, inclusive and effective. Boards also support hubs in their self-evaluation, reviewing progress against delivery plans, engagement levels and the quality of professional development.

> ***"Being part of the Strategic Board has opened up opportunities to work with other headteachers, not just in maths but across the school. That networking has been really valuable."***
>
> **Secondary headteacher and Strategic Board member for Archimedes NE Maths Hub**

A vital part of their remit is to ensure that hubs are responsive to local circumstances while remaining aligned with the national vision. For example, Strategic Boards review the extent to which pupils from disadvantaged backgrounds are being supported through hub activity, or how new national programmes are being embedded locally.

Members gain from sharing best practice and building local networks, helping to connect colleagues across phases and sectors and drive improvements in education across their region.

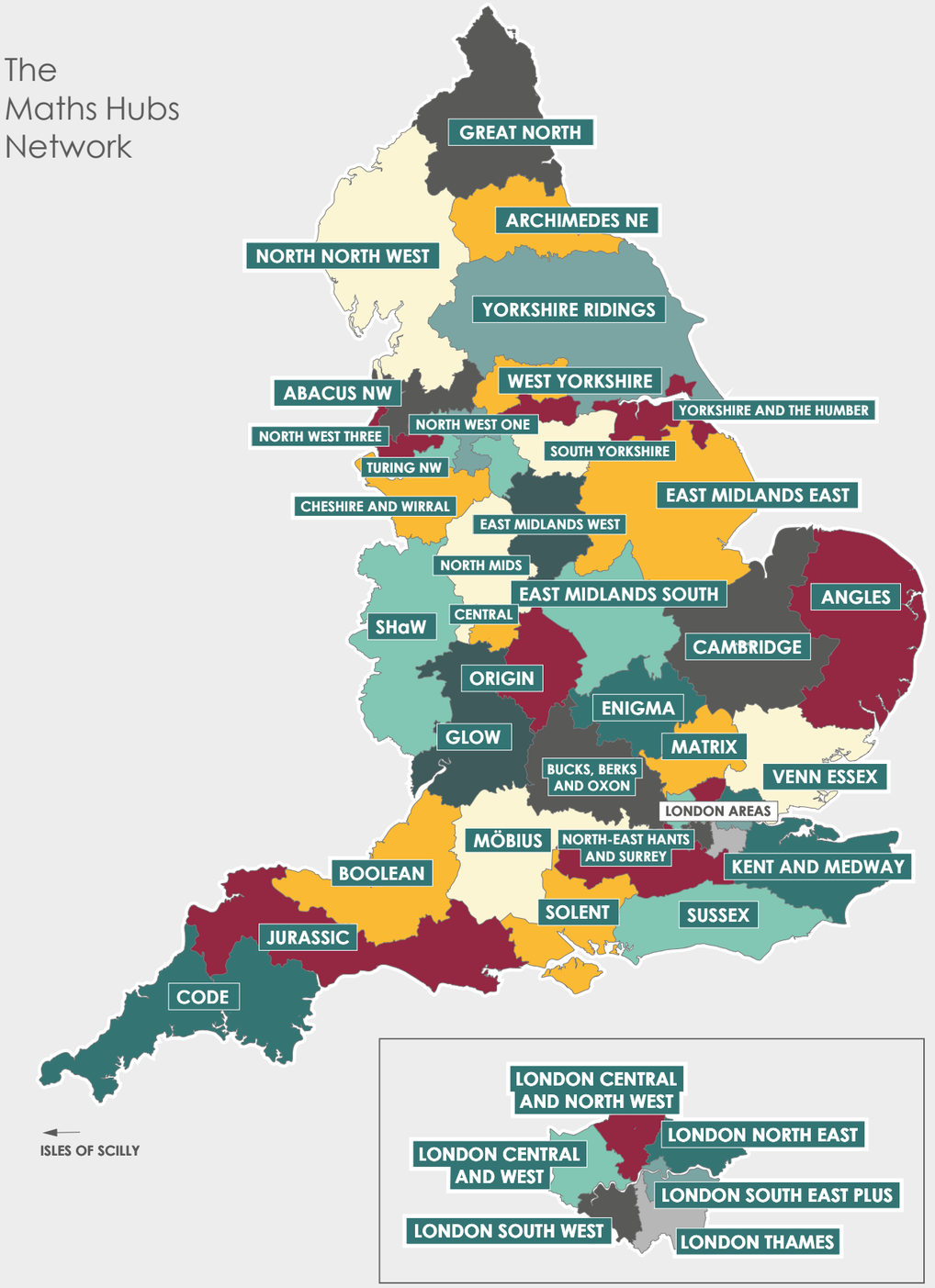
1,945

Total active LLMEs

1,039

Active Mastery Specialists, all of whom are LLMEs

The Maths Hubs Network



> *"The tailored nature of the support ensures that it directly addresses the specific needs of the school."*
>
> **Targeted Support in Maths recipient school**

> *"Once again I believe the biggest impact the SKTM has on students is via the confidence that has developed in the non-specialist teachers to not only engage students with the maths they are teaching, but also to have the confidence to know how to approach teaching a topic."*
>
> **SKTM Cohort Lead**

A DECADE OF IMPACT

> *"I'm a different teacher because of this programme. The students are happier, they feel safer to take risks in my lessons, and across the department students are retaining their knowledge. Our GCSE results this year were phenomenal, and that's because of the collaborative planning and professional development we've done through the Maths Hub. It's completely changed the way we teach."*
>
> **Secondary Mastery Specialist Programme participant**

Funded by

Department for Education

The NCETM is led and delivered by Etio (formerly Tribal Education Services), with MEI as a key partner.