

2023/24

Maths Hubs Professional and School Development Opportunities

Discover fully funded subject-specific opportunities to support professional learning for teachers and development for departments and schools.





MATHSHUBS
CENTRAL

What opportunities does the Maths Hubs Network offer?



Again this academic year, the 40 Maths Hubs across England are offering a wide variety of professional development opportunities to individuals, departments and schools.

All of the projects involve teachers developing their knowledge and pedagogy for maths teaching, whilst collaborating with their peers and putting their new knowledge to work in their classrooms. Most also aim to influence classroom and collaborative practice that benefits maths teaching and learning across a department or school.

These professional development opportunities are coordinated by the NCETM (National Centre for Excellence in the Teaching of Mathematics) and the Maths Hubs Network, which consists of 40 hubs that cover the whole of England and serve all state-funded schools and colleges.

For 2023/24, there are over 30 different projects available. Generally, teachers will work alongside colleagues from other schools, in a small group led by a local experienced teacher with expertise in professional development and the school phase in question. A small number of projects involve larger groups, coordinated and led regionally or nationally. Meetings are a mix of online and face-to-face. The work takes place over an extended period, across two or three school terms, which allows for experimentation and experience-sharing within the group. Many projects include a parallel objective of embedding improved practice, leading to more secure learning across a department or school.

Participants will be involved in either **Work Groups, programmes or communities**, according to the experience offered to participant teachers (see page 3). However, all offer fully-funded, high-quality professional development, and the chance for participants to become more effective teachers of maths.



Types of activity

<h2>Work Group</h2>	<p>Work Groups support schools to bring about school- or departmental-wide development in maths. Lead participant teachers from the schools collaborate locally with their peers to focus on this school-wide change, along with the associated practice development and professional learning. Work Groups are led by a teacher (or former teacher) expert, who is experienced in both maths education and in leading teacher professional development.</p>
<h2>Programme</h2>	<p>Programmes support individual teachers or leaders of maths in their professional development. There are two types: Specialist Knowledge for Teaching Mathematics (SKTM) programmes, where individuals develop specialist knowledge to improve their practice; and Local Leaders of Mathematics Education (LLME) development programmes, to equip practitioners to lead work with teachers and schools. Both involve participants joining a cohort of colleagues from other schools or colleges, and exploring centrally produced NCETM materials.</p>
<h2>Community</h2>	<p>Professional learning communities also emphasise supporting individual teachers or leaders of maths in their professional development. Participants collaborate formally and informally, over a sustained period of more than a year, to deepen their understanding of maths culture, curriculum, pedagogy, and professional development. Community Leads establish a professional learning culture that supports professional dialogue and mutual support, offering their own expert input where appropriate.</p>



How can you get involved?

Discover the projects your local Maths Hub is offering – details of all the projects are in this catalogue. Then get in touch with your hub to book your place. Contact details for your hub are on the next page.

The Maths Hubs projects provide something for everyone and every school. Don't miss out!

Welcome

Your local Maths Hub is:

Central

The professional development we provide is fully funded, meaning it is **free** for the participant or the participant's school/college.

The Lead School for the hub is:

Bishop Challoner Catholic College

Some of the professional and school development activities in this catalogue take place in face-to-face meetings. Others happen online. In most cases you will be working together with colleagues from schools in your area.

To find out more about the Work Groups, programmes and communities on offer with your hub, check the details in the box on the bottom left corner of each page.

You can also contact us directly at the Maths Hub, or visit our website.

We look forward to hearing from you.

Central Maths Hub Team

Contact

Hub Email:

mathshub@bishopchalloner.bham.sch.uk

Hub Lead:

Sachin Jethwa

S.jethwa@bishopchalloner.bham.sch.uk

Hub Coordinator: Dawn Barbier

Hub Administrator: Sarah O'Connor

Phone Number: 0121 414 4161

Website: www.centralmathshub.com





MATHSHUBS

CENTRAL

We serve all state-funded schools in the areas of:



The professional development we provide is fully funded, meaning it is **free** for the participant or the participant's school/college.

Central Maths Hub

@CentralMathsHub

Supporting Maths professionals across the Central region through free and funded support. Working with schools in Birmingham, Sandwell and Dudley.

📍 Bishop Challoner, Birmingham centralmathshub.com

📅 Joined September 2014

6,393 Following 7,985 Followers





Click items to jump to pages

Contents

Discover details of all these professional development opportunities in this catalogue

Professional Development for Primary Schools and Teachers

Mastering Number at Reception and KS1 Work Groups
Mastering Number (Embedding the Impact Community)
Mastering Number at KS2 Work Groups
Mastery Readiness Work Groups
Primary Teaching for Mastery Development Work Groups
Primary Teaching for Mastery Embedding Work Groups
Primary Teaching for Mastery Sustaining Work Groups
Years 5-8 Continuity Work Groups

Professional Development for Secondary Schools and Teachers

Secondary Teaching for Mastery Development Work Groups
Secondary Teaching for Mastery Embedding Year Support
Secondary Teaching for Mastery Sustaining Work Groups
Secondary Maths Subject Leaders Community
Secondary Maths MAT Leaders Community
Years 5-8 Continuity Work Groups

Professional Development for Post-16 and Teachers

Developing Core Maths Pedagogy Work Groups
Developing A Level Pedagogy Work Groups
Cross Phase – Supporting Low Attainers to Achieve a L2 Qualification in Mathematics Work Group

Leadership Development Opportunities

NCETM Professional Development Lead Programmes
NCETM School Development Lead Programme
Secondary Maths Subject Leaders Community
Secondary Maths MAT Leads Programme

Mastery Specialist Programmes

Primary Mastery Specialist Programme
Secondary Mastery Specialist Programme
Post-16 GSCE/FSQ Mastery Specialist Programme

Specialist Knowledge for Teaching Mathematics Programmes

Early Years Teachers Programmes
Primary Teachers Programmes
Primary Teaching Assistants Programmes
Primary Early Career Teachers Programmes
Secondary Early Career Teachers Programmes
Secondary Non-specialist Teachers Programmes
Secondary Teaching Assistants Programmes
Core Maths Teachers Programmes

Professional Development for ITT Providers

Strengthening Partnerships with ITT Providers Community

Fully funded

Mastering Number at Reception and KS1

Supporting pupils to develop good number sense

A national programme now in its third year

What is involved?

This programme focuses on the key knowledge and understanding needed in Reception classes, and progression through KS1. Participating schools will receive central training (online and face-to-face) and a wealth of pupil-facing resources.

These resources will provide teaching materials for four short sessions each week, aimed at developing children's fluency and flexibility with number. Lead Teachers in schools will also contribute to an online community to share practice and engage in critical reflection.

Who can take part?

Lead participants from Work Group schools will be three teachers – one each from Reception, Year 1 and Year 2 – known as Lead Teachers. Some support will also be given to subject leaders and headteachers. Where appropriate, Lead Teachers are expected to support the other teachers in their year group.

This programme and its Work Groups are open to all schools that have not yet engaged with the Mastering Number Programme.



Find out more

Search **mastering number at reception and KS1** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will develop and demonstrate good number sense
- You will develop a secure understanding of how to build firm mathematical foundations
- You will work to develop teaching strategies focused on developing fluency in calculation and number sense for **all** children
- You will develop understanding and use of appropriate manipulatives to support your teaching of mathematical structures

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Mastering Number Embedding the Impact

Support for schools that have already engaged in Mastering Number

What is involved?

This community is for schools who have already engaged in Mastering Number. One nominated Lead Teacher will receive support to make Mastering Number a permanent element of the school curriculum.

The Lead Teacher will engage in an online learning community and have continued access to all teaching materials, recording of central sessions, and sample teaching videos.

Who can take part?

This community is open to all 2022/23 Mastering Number schools who are engaged in a 2023/24 Teaching for Mastery Work Group (or have a formal expression of interest in working with the hub on teaching for mastery in future years). It is also open to schools who engaged in Mastering Number 2021/22 who have not previously engaged in this community.



Find out more

Search **embedding mastering number** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will show confidence in exploring additive relationships
- Your pupils will make good progress towards the Early Learning Goals and year group expectations
- You will work with colleagues either in your school or in a local school to better understand how the Mastering Number resources can enhance teaching
- You and your school leaders will build on the learning of the first year of involvement to embed and sustain the practice in future years

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Mastering Number at KS2

Work Groups

Secure firm foundations in multiplicative relationships

What is involved?

Knowledge of multiplication and division and its applications forms the single most important aspect of the KS2 curriculum, and is the gateway to success at secondary school. This project enables pupils in Years 4 and 5 to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense.

Teaching materials will be provided to cover five short sessions a week, with participants expected to support colleagues in their year groups to use the resources with all Year 4 and 5 classes.

Who can take part?

This project is for schools that are involved in Mastering Number at Reception and KS1, and are also in a Sustaining Work Group. Lead participants from Work Group schools will be two teachers – one from each of Year 4 and Year 5. Support will also be given to maths leads and headteachers.



Find out more

Search **mastering number at KS2** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils in KS2 will develop automaticity in multiplication and division facts through regular practice
- You will develop an understanding of how pupils progress in their knowledge and understanding of multiplicative concepts
- You will work as part of a professional learning community to refine your practice
- You and your school leaders will develop Mastering Number at KS2 as part of the curriculum in Years 4 and 5

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Mastery Readiness

Support for primary schools that want to adopt teaching for mastery in maths, but would benefit from a staged approach

What is involved?

Schools with additional challenges need bespoke support to ensure their systems and cultures are conducive to a teaching for mastery approach. Those who are not yet ready to join a Teaching for Mastery Development Work Group will prepare for implementing a teaching for mastery approach which is embedded and sustained across the whole school. This will involve receiving support from Mastery Readiness Leads, and developing classroom culture and attitudes to maths that will support a teaching for mastery approach, both on the part of teachers and their pupils.

After the year-long programme, Mastery Readiness schools will be ready to progress into Development Work Groups and beyond.

Who can take part?

Schools will have an identifiable barrier to being able to successfully implement teaching for mastery at present. Barriers may include an Ofsted grading of RI or Inadequate, poor pupil progress in maths, serving an area of low social mobility, or issues in the school that have meant the implementation of sustained change has been difficult.



Find out more

Search **mastery readiness** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will demonstrate an improved mathematical mindset and potential to progress in the subject
- Your school leaders will promote a collaborative learning culture amongst staff in order to make improvements to the teaching and learning of maths
- You will put into practice the school's shared vision for what maths will look like in your school
- You will try new approaches to teaching maths and reflect on the impact of your changes regularly, so that you can share good practice beyond your own classroom

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Primary Teaching for Mastery

Development Work Groups

Be part of the continuing programme to develop teaching for mastery in maths in primary schools

What is involved?

Two teachers from each participating school join a Work Group, consisting of around six local primary schools. Each Work Group is led by a trained Primary Mastery Specialist. Work Groups meet regularly to plan, observe and discuss teaching for mastery. In between meetings, teachers explore mastery approaches in their own classrooms and across their school.

Support is provided from a local classroom-based Mastery Specialist who leads the group. This model of professional development involves hands-on learning and peer-to-peer support. It is evidence-based and designed to support substantial long-term change.

Who can take part?

This is for state-funded primary schools in England. Each school must send two teachers to half-termly school-based teacher research groups. Each term, the Mastery Specialist will visit each of the schools.

In 2023/24, those teaching in special schools will have an enhanced offer that will enable them to network with other schools in a similar context.



Find out more

Search **developing mastery work groups** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Pupils will show a positive attitude towards maths and enjoy learning the subject
- Leaders will develop a common vision, culture and set of principles which support teaching for mastery
- Teachers will enhance their maths subject knowledge with an emphasis on progression within key areas of maths
- Teachers will cultivate a deep understanding of the principles and pedagogies related to teaching for mastery

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Primary Teaching for Mastery

Embedding Work Groups

Collaborative professional development to support schools in their second year of teaching for mastery

What is involved?

Work Groups in this project will support schools to scale up teaching for mastery approaches from individual teachers' classrooms, ensuring whole-school practices are consistently adopted. There are at least five workshops across the year, plus support from a Mastery Specialist.

Those who have been in a Development Work Group become part of this project, focusing on systems and culture to support teaching for mastery, as well as support for school leadership and subject leadership.

Who can take part?

This is for schools who have previously participated in a Development Work Group. All must show a strong commitment to embedding teaching for mastery approaches, and at least the lead teacher from the Development Work Group must have already started using mastery approaches. The school leadership team including the headteacher must also be involved, to ensure there is a whole-school commitment.



Find out more

Search **embedding mastery work groups** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You will enhance your mathematical subject knowledge, emphasising key areas of maths
- You will plan, teach and reflect on lessons with a mastery approach
- Your school leaders will understand the school-wide structures which enable staff to develop mastery approaches
- You and your school leaders will establish systems to support ongoing professional learning within school

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Primary Teaching for Mastery

Sustaining Work Groups

Support for schools to make teaching for mastery 'business as usual'

What is involved?

This is for primary schools who have previously been involved in a Development or Embedding Work Group, or who are Mastery Specialist schools.

Sustaining Work Groups are a permanent form of support where schools can focus on continued improvement, consistency and refinement of teaching for mastery. Teachers, maths leads and headteachers are all involved, looking at collaborative planning and subject knowledge development. The expectation is that schools remain in a Sustaining Work Group for many years to come.

Who can take part?

Schools will have previously participated in a Development Work Group and might have received support for embedding mastery. Participating schools must show strong commitment from their leadership for sustaining mastery approaches, and for most teachers to have already started using these.

Each school will have a lead participant in the Work Group, normally the maths lead. At different points in the year, other teachers will also participate.



Find out more

Search **sustaining mastery work groups** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You and your school will enhance your mathematical subject knowledge, emphasising key areas of maths
- You and your school will plan, teach and reflect on lessons with a mastery approach
- You and your school will understand the school-wide structures which enable staff to develop mastery approaches
- You and your school leaders will establish systems to support ongoing professional learning within school

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Years 5-8 Continuity

Work Groups

Strengthen the transition from primary to secondary school

What is involved?

Work Groups in this project focus on curriculum and pedagogical continuity over Years 5 to 8. Participants will collaborate with colleagues from across KS2 and KS3, working on mathematical tasks together and reflecting on the resulting activity and learning.

Sessions will take place in KS2 and KS3 settings, offering the chance to see tasks in the context of a classroom. School-based activities between meetings encourage participants to make use of the resources with their own pupils.

Who can take part?

The project is for those who teach and/or have responsibility for the curriculum in Years 5-8. Participants may be subject leaders or teachers with responsibility for transition in a school. They need to be supported to try out different tasks with their students and be released to attend three full-day workshops.



Find out more

Search **years 5-8 continuity** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils in KS2 and KS3 will demonstrate a positive attitude to maths
- You will make common use of approaches, representations and language across phases
- You will deepen your knowledge and understanding of the curriculum across KS2 and KS3 and the expectations of pupils at the end of each Key Stage
- You and your cross-phase colleagues will collaborate on issues of curriculum and pedagogy as a normal part of your schools' transition practice

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.





There has been a massive improvement in children being able to access the curriculum. It's helped that staff knowledge has greatly improved, and having structure has helped this to happen across the school.

Participant teacher in a Mastery Readiness school



Fully funded

Secondary Teaching for Mastery

Development Work Groups

Professional development to enable you to introduce teaching for mastery across your maths department

What is involved?

Secondary maths teachers whose schools want to introduce teaching for mastery can nominate two teachers ('Mastery Advocates') to join a Work Group. Mastery Advocates then form part of a locally-based group of teachers who meet regularly to develop professional knowledge and expertise, and receive bespoke support.

Teachers will collaborate with colleagues from local schools, and get support and guidance from a Secondary Mastery Specialist, to introduce and embed teaching for mastery in their department.

Who can take part?

This programme is for state-funded secondary schools in England. Mastery Advocates should be teachers with the commitment, experience and authority to lead developmental work across a maths department. The support of the Head of Maths, and the headteacher or a member of SLT, is also essential.

In 2023/24, those teaching in special schools will have an enhanced offer that will enable them to network with other schools in a similar context.



Find out more

Search **secondary teaching for mastery** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will begin to develop teaching for mastery approaches within your own classroom
- You and your head of department will begin to develop an understanding of the practices and principles aligned to teaching for mastery
- You will begin to support the teachers in your department to develop teaching for mastery approaches in their practice

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Secondary Teaching for Mastery

Embedding Year Support

Enhanced support for maths departments in their second year of introducing teaching for mastery

What is involved?

This project is for those departments who participated in the previous year's Secondary Teaching for Mastery Development Work Group, and who are beginning to embed teaching for mastery. Mastery Advocates will work closely with an assigned Secondary Mastery Specialist to embed teaching for mastery approaches across the whole department. Specialists will provide three days of support tailored to each school.

The focus will be on constructing or refining a coherent development plan, and supporting and leading the whole department in realising the aims of that plan. The school will also be part of a Secondary Teaching for Mastery Embedding and Sustaining Work Group with other schools.

Who can take part?

Participation is for maths departments in schools that took part in a Secondary Teaching for Mastery Development Work Group in 2022/23. Lead participants will ideally be the Mastery Advocates who participated in 2022/23 Work Groups.



Find out more

Search **secondary mastery embedding year support** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will begin to develop teaching for mastery approaches across your department
- You and your department will collaborate to create coherent curriculums in a culture of professional learning
- You will produce a development plan and professional development programme for the department

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Secondary Teaching for Mastery

Sustaining Work Groups

A vibrant professional learning community to reflect upon and develop mastery approaches

What is involved?

This project is for departments who have previously participated in Development Work Groups. While the Mastery Advocates from these departments will be significant members of the Work Group, the whole department is a member of this professional learning community.

Each Work Group will have a focus for the year. The four foci for 2023/24 are: developing mathematical thinking; developing coherence; developing mathematical coherence for learners across maths and science; and a bespoke teaching for mastery focus.

Who can take part?

These Work Groups are for all departments that have previously participated in Mastery Development Work Groups and all Cohort 1-6 Mastery Specialist Departments. The two lead participants continue to be Advocates who have participated in a Development Work Group and key teachers from a Mastery Specialist's department, but particular Work Group sessions may sometimes be joined by participants' departmental colleagues.



Find out more

Search **sustaining secondary mastery** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will continue to develop teaching for mastery approaches consistently across your department
- You and your department will collaborate to create a coherent curriculum in a culture of professional learning
- You will develop and implement a coherent and ambitious sustained development plan

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Secondary Maths Subject Leaders Community

A CPD community designed specifically for secondary heads of maths

What is involved?

This project provides an opportunity for participants to deepen their understanding of teaching approaches, of their wider roles, and of their capacity with their colleagues to transform secondary maths learning.

They will work collaboratively with other subject leaders, discuss developments and engage with research, and use this experience to inform their work in leading and developing maths education in school.

Who can take part?

The project is for secondary heads of department/subject leaders, and is open to heads of department in schools already involved with Maths Hubs and to those who are not yet involved. In their first year of engagement with this project, participants will be part of a Work Group. In subsequent years they will be part of a Maths Hub-led subject leadership community.



Find out more

Search **secondary maths subject leaders community** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You will promote and develop a shared vision, culture and set of principles for teaching and learning in maths
- You will ensure coherence in the curriculum and provide support for teaching for mastery across the department
- You and your department will establish collaborative ways of working to support ongoing developments
- You will develop in your ability to lead change

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS

Fully funded

Secondary MAT Maths Leaders Community

A CPD community designed to support those leading maths across multiple schools

What is involved?

Now in its third year, this project supports those who lead maths across multiple schools within a MAT. Participants will deepen their understanding of effective pedagogical approaches, of their wider leadership roles, and of their capacity with their colleagues to transform secondary maths teaching and learning.

New participants will complete a bespoke programme, and those continuing the project will develop their work together as a community. There will be opportunities for new and continuing participants to work together, so all can benefit from central provision and the opportunity for practice exchange with peers.

Who can take part?

The project is for those who lead maths across multiple schools within a MAT, including at least one secondary school. This includes MAT maths leads who are continuing from previous years, and new participants. To better engage in the programme, participants are encouraged to have at least one school in a Secondary Teaching for Mastery Work Group in 2023/24, but this is not essential.



Find out more

Search **secondary MAT maths leaders community** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You will promote and develop a shared vision for effective teaching and learning in maths
- You will work with subject leaders across your MAT to lead and manage maths teaching effectively, and to develop teaching for mastery approaches within your own department
- You will understand the benefits of collaborative professional development for sustained development of professional knowledge and practice
- You will understand effective models of maths teacher professional development, the rationale for using them, and the evidence that supports them

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.





I can't imagine teaching any other way!

Secondary Teaching for Mastery Development Work Group participant



Fully funded

Developing Core Maths Pedagogy

Work Groups

Develop improved teaching approaches for Core Maths

What is involved?

These Work Groups give teachers opportunities, through collaboration and experimentation, to develop improved teaching approaches that support the open-ended problem-solving skills Core Maths students need to develop, and to share these with departmental colleagues. Participants will design and trial classroom activities, sharing and reflecting on their experiences with others in the Work Group.

The project involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP).

Who can take part?

Participants should be experienced teachers of Core Maths from schools and colleges in at least their second year of teaching Core Maths. Where appropriate, participants will be expected to work with colleagues in their own department.



Find out more

Search **developing core maths pedagogy** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will gain raised awareness of the use of maths and statistics in everyday life
- You will teach mathematical concepts and processes effectively through contextualised problem-solving
- You will understand the philosophy of Core Maths
- You will support your school/college in developing clear ways of communicating and promoting its Core Maths offer

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

Developing A Level Pedagogy

Work Groups

Develop improved teaching approaches for A level Mathematics

What is involved?

This project explores and deepens participants' pedagogic content knowledge, empowering teachers to enhance their classroom practice and to influence department-wide A level teaching. It is an engine for improving student understanding of A level Maths, and driving their subsequent success. Participants will design and trial classroom activities, sharing and reflecting on their experiences with others in the Work Group.

The project involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP).

Who can take part?

Participants will be established teachers of A level Maths who are looking to deepen their pedagogical understanding. They must be teaching a current A level Maths group.

This Work Group would be particularly useful for those who may have already completed other A level subject knowledge and pedagogy CPD.



Find out more

Search **developing A level pedagogy** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will have a deeper conceptual understanding of the A level Maths content
- You will understand the purpose of the Overarching Themes, including use of technology, and their impact on teaching and learning in A level Maths
- You and your department will have a better understanding of how ideas behind teaching for mastery can be used in the classroom
- You and your department will have a deeper understanding of content pedagogic knowledge for A level Maths

The **Work Groups** are fully funded by the Maths Hubs Programme and the AMSP, so are **free** to participating schools/colleges.



Fully funded

Cross Phase – Supporting Low Attainers to Achieve a L2 Qualification in Mathematics

Work Groups

What is involved?

This is for teachers whose students will study up to Level 2 maths across secondary and post-16. Teachers of Years 10 and 11, and of GCSE Maths resit and/or Functional Skills Maths, will develop ways to support students who need to study maths beyond age 16 to achieve a L2 qualification.

Work Groups will focus on developing transferable teaching techniques aligned to teaching for mastery. Participants will attend three full-day workshops and complete practice-based tasks between sessions.

Who can take part?

This is for teachers of GCSE Maths, and for those teaching GCSE Maths resit and/or Functional Skills Maths. Participants may be based in secondary schools, UTCs, FE colleges, Sixth Form colleges, schools with post-16 provision, or other post-16 settings.



Find out more

Search **ncetm cross phase supporting low attainers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will demonstrate a positive attitude to maths
- You will ensure that lesson design and pedagogy demonstrate a secure knowledge of curriculum continuity and sequencing
- You will understand the importance of consistency of language and representations relating to specific curriculum areas
- You and your colleagues will make collaboration a normal part of transition, supporting students continuing to work towards a L2 maths qualification

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools/ institutions.





The Maths Hub should be a regular part of CPD every year. Collaborating with a wider network of teachers is extremely valuable.

Participant in Developing A Level Pedagogy Work Group



Fully funded

NCETM Professional Development Lead Programme

Accreditation for those who lead professional development for teachers of maths

What is involved?

The PD Lead Programme is designed for participants who are working with other teachers to enhance teaching and learning of maths.

Participants benefit from the equivalent of three one-day workshops (face-to-face and online). The completion of an Accreditation Evidence Document, which facilitates critical reflection on participants' learning and the professional development they design, deliver and evaluate over the year, is also required. Participants will design, lead, review and refine a programme of support for maths teacher professional development, drawing upon a range of evidence-informed models and activity.

Who can take part?

These phase-specific programmes are for expert teachers of maths (all phases from Early Years to post-16) who have existing commitments and responsibility for designing, leading and evaluating maths teacher professional development, and who will lead maths professional development beyond their own institution.



Find out more

Search **ncetm professional development lead programme** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You will design, lead, review and refine a professional development programme
- You will critically evaluate your own professional development programme against your intended outcomes
- You will identify key principles of maths CPD design and the implications of these for the programme you design
- You will recognise the key distinction between teachers' knowledge of maths, and teachers' knowledge of teaching maths

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

NCETM School Development Lead Programme

Support for maths leads whose role is to lead change in a school or group of schools other than their own

What is involved?

This programme is specifically designed to enable the leaders of maths school development to enhance leadership capacity and capability in the schools they support. It will provide regional support through workshops (face-to-face, run regionally across England, and online), practice development activities, and an online community.

Participants design and lead a maths school development initiative, working with school and subject leadership. They must maintain a reflection and learning log, and a record of their initiative.

Who can take part?

The programme is for colleagues working with school and subject leaders to improve maths teaching and learning in a school or group of schools other than their own. It will benefit those with previous experience of developing maths leadership capacity, or those new to the role. Usually, participants will have completed the NCETM PD Lead Programme. Participants must commit to the full programme of activities and will need the support of the headteacher of their own school and/or MAT.



Find out more

Search **ncetm school development lead programme** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You will develop your knowledge of a range of maths school development strategies and know why, when, and how to use them effectively
- You will strengthen your knowledge of the evidence base that underpins school development and change management
- You will design and lead collaborative maths school development initiatives
- You will increase your awareness of the skills needed by a maths school development lead and have a deeper self-awareness in relation to the role

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.





It has forced me to reflect and recognise my thinking. You gradually develop, and the reflection along the way makes you realise how much you have grown, and holds you to account

School Development Lead Programme participant



Fully funded

Primary Mastery Specialist Programme

Mastery Specialists are classroom-based practitioners who develop expertise in mastery and in leading maths-specific professional development

What is involved?

The Mastery Specialist Programme is for primary teachers with a passion for maths. In the first year of the programme, three residentials – one in each term – provide an opportunity to develop understanding the Five Big Ideas of teaching for mastery in depth and to focus on the specialist subject knowledge required to design lessons that unfold the maths for all children.

Between residentials, as a classroom teacher, specialists will be able to apply their learning to the context of their own classroom and school, reflecting with others what the impact of learning has been on pupils.

Who can take part?

Participants should be experienced primary practitioners with the capacity to lead change in their own schools, and to develop as leaders of professional development in other schools. Their headteachers commit to supporting them and to developing teaching for mastery in their schools.



Find out more

Search **primary mastery specialist programme** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will show a positive attitude towards maths and enjoy learning the subject
- You will demonstrate deeper subject knowledge and greater understanding of the principles behind teaching for mastery
- Your colleagues will begin to develop teaching for mastery approaches
- Your school will develop policies and systems which support a teaching for mastery approach

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Secondary Mastery Specialist Programme

Mastery Specialists are classroom-based practitioners who develop expertise in mastery and in leading maths-specific professional development

What is involved?

The Secondary Mastery Specialist Programme enables secondary maths teachers to become experts in teaching for mastery, so they in turn can develop maths departments that are well-led, high-performing, and provide high-quality professional development through collaborative working.

Over a minimum of three years, participants first work on their own understanding and practice, then with their own department, then with other departments as a Local Leader of Maths Education for their Maths Hub.

Who can take part?

Any teacher (excluding ECTs) who is teaching maths in a state-funded secondary school and who wishes to develop both their own classroom practice and their skills in leading professional development with others can apply to become a Secondary Mastery Specialist.



Find out more

Search **secondary mastery specialist programme** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will develop and refine your classroom practice in line with the principles of teaching for mastery
- Your colleagues will, over time, begin to develop teaching for mastery approaches
- Your department will have a clear understanding of the leadership and management support required to develop teaching for mastery

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Post-16 GCSE/FSQ Mastery Specialist Programme

Become a Mastery Specialist in Further Education

What is involved?

Practitioners of post-16 GCSE Mathematics resit and/or Functional Skills Maths can become Mastery Specialists, initially developing their own teaching for mastery approaches, then supporting others to do the same.

The programme has an initial training year, followed by a second year and beyond in which specialists support others. It equips participants with the knowledge and skills to develop highly effective approaches to the teaching of GCSE Maths resit and Functional Skills Maths, using the principles of teaching for mastery.

Who can take part?

The programme is for practitioners of post-16 GCSE Maths resit and/or Functional Skills Maths who are currently employed in a post-16 setting and regularly teaching maths to students aged 16-19.

Participants must have at least two years' experience teaching post-16 GCSE/FSQ maths, with the capacity to lead change within their own institutions. They may be based in FE colleges, Sixth Form colleges, or other post-16 settings.



Find out more

Search **post-16 GCSE/FSQ mastery specialist programme** online or contact your local Maths

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will develop a secure and connected understanding of the maths they are learning
- Your students will report increased confidence in using maths
- You will develop classroom practices aligned to the principles of teaching for mastery, as exemplified for the post-16 GCSE/FSQ sector
- You will, over time, become part of the Maths Hubs LLME Community

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools/institutions.



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS



I feel I have a much deeper understanding of teaching for mastery and it has really helped my own professional development which I will enjoy cascading back to my colleagues.

Primary Mastery Specialist



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Early Years Teachers

Develop mathematical subject knowledge and pedagogy

What is involved?

This programme is designed to improve the subject knowledge and pedagogical knowledge for all practitioners teaching and supporting the learning of early maths.

There are two types of SKTM Early Years pathways: Pathway One: Number Patterns and Structures, and Pathway Two: Pattern, Shape, Space and Measures. Each pathway consists of the equivalent of four days, spread out over a minimum of two terms. Professional learning and practice development continue throughout, with participants introducing new ideas into their daily practice.

Who can take part?

This project is for Early Years teachers who would like to develop their specialist knowledge for teaching maths to Reception pupils. It may be particularly relevant for teachers that have moved phases or have not received maths-specific training.



Find out more

Search **early years SKTM** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will demonstrate a positive attitude towards maths, being willing to have a go, persevere, and share their mathematical ideas
- You will explore and increase your use of a range of pedagogic approaches that will support pupils in engaging with and developing their maths
- You will understand how maths opportunities can be developed across all areas and in everyday routines

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Primary Teachers

Develop mathematical subject knowledge and pedagogy

What is involved?

This project is designed to improve the subject knowledge and pedagogical knowledge for all practitioners teaching and supporting the learning of primary maths.

There are two pathways: Number, and Spatial Reasoning. Each pathway consists of the equivalent of four days, spread out over a minimum of two terms. Professional learning and practice development continue throughout, with participants introducing new ideas into their daily practice.

Who can take part?

This programme is designed for primary teachers who would like to develop their specialist knowledge for teaching maths. This may be particularly relevant for teachers who have moved phases or have not received maths-specific training.



Find out more

Search **SKTM primary teachers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will positively engage with maths that challenges them
- Your pupils will be able to explain their maths and their mathematical thinking using appropriate language
- You will identify pedagogical approaches that will enhance teaching and learning, and know how to plan for these
- You will enhance your maths subject knowledge with an emphasis on the key concepts in each mathematical area covered

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Primary Teaching Assistants

Develop mathematical subject knowledge and pedagogy

What is involved?

This project is designed to improve the subject knowledge and pedagogical knowledge for all practitioners supporting the learning of primary maths.

It supports primary teaching assistants who are supporting maths to develop specialist knowledge for teaching maths, to build on the primary maths national curriculum, and to develop distinct pedagogical decision-making which will impact on their practice when supporting maths. It takes place over the equivalent of four days.

Who can take part?

This programme is designed for primary teaching assistants who are supporting maths, and who would like to develop their specialist knowledge for teaching maths. This may be particularly relevant for new TAs or TAs who have not received maths-specific training.



Find out more

Search **SKTM primary teaching assistants** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will positively engage with maths that challenges them
- You will identify common misconceptions and ways of addressing these to help pupils master important concepts
- You will develop an understanding of key principles and approaches associated with teaching for mastery

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Primary Early Career Teachers

Develop mathematical subject knowledge and pedagogy

What is involved?

Two maths-specific subject knowledge projects are available to support primary Early Career Teachers (ECTs) – one is for ECTs who have not yet participated in this project, and one is for those who participated in 2022/23. Both projects offer high-quality subject knowledge and pedagogy maths support for ECTs, recognising the requirements of the ECF.

This programme strikes a balance between developing teachers' maths subject knowledge and pedagogical content knowledge, alongside classroom practice to support the learning of maths. Participants will attend the equivalent of up to four days of sessions, focusing between sessions on the use of tasks in the classroom.

Who can take part?

Phase 1 is for those identified as Early Career Teachers – teachers in their first or second year of teaching. Phase 2 is for those in the early part of their careers. They will have engaged with Phase 1 before engaging with this phase.



Find out more

Search **SKTM primary early career teachers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your pupils will be seen to elaborate when responding to questions, showing that their answer stems from secure understanding
- You will evaluate and adapt existing resources to enable them to be used to meet the needs of pupils
- You will develop an understanding of approaches to assess pupils' prior learning, so that learning sequences are planned to take this into account

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Secondary Early Career Teachers

Develop mathematical subject knowledge and pedagogy

What is involved?

Two maths-specific subject knowledge projects are available to support secondary Early Career Teachers (ECTs) – one is for ECTs who have not yet participated in this project, and one is for those who participated in 2022/23. Both projects offer high-quality subject knowledge and pedagogy maths support for ECTs, recognising the requirements of the ECF.

The programme will build on the knowledge gained during initial teacher training. This will be achieved by focusing on one area of maths in detail: multiplicative reasoning for participants in Phase 1, and sequences and graphical representations for participants in Phase 2.

Who can take part?

Phase 1 is for those identified as Early Career Teachers – teachers in their first or second year of teaching. Phase 2 is for those in the early part of their careers. They will have engaged with Phase 1 before engaging with this phase.



Find out more

Search **SKTM secondary early career teachers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will reason with increasing confidence in response to effective questioning within the classroom
- You will consider task and lesson design, with your students' needs in mind
- You will notice aspects of teaching for mastery within a given task or lesson, and be able to articulate their purpose

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS

Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Secondary Non-specialist Teachers

Highly-regarded professional development offering secondary non-specialist maths teachers valuable CPD focusing on subject knowledge and pedagogy

There are significant numbers of people teaching maths in secondary schools without specialist initial teacher training. This programme supports non-specialist teachers in developing the specialist knowledge (the blend of subject knowledge and pedagogical knowledge) for teaching maths.

It is designed to take place over the equivalent of six days.

Who can take part?

This programme is provided for non-specialist teachers of maths in state-funded schools who fit the following definition: A non-specialist teacher of mathematics is 'a teacher that is currently teaching some mathematics or has commitment from a headteacher/executive head to teach some mathematics within the next year, who has not undertaken initial teacher training (ITT) in mathematics'



Find out more

Search **SKTM secondary non-specialist maths teachers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

The SKTM Programme offers participants:

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will increase your confidence in planning for progression in maths
- You will improve your subject and curriculum knowledge of secondary maths

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Secondary Teaching Assistants

Develop mathematical subject knowledge and pedagogy

What is involved?

This programme is designed to improve the subject knowledge and pedagogical knowledge of all TAs supporting the learning of secondary maths.

Participants will focus on using precise mathematical language, representations, and reasoning within the topics: addition and subtraction; multiplication and division; ratio; and fractions. They will also carry out follow-up tasks in school to enable practice transfer to the classroom. The programme will take place over the equivalent of four days; participants must attend all sessions.

Who can take part?

This is for teaching assistants who work predominantly with students in the KS3 maths classroom or who lead intervention sessions with groups of students. Participants' schools should already be engaged with a Teaching for Mastery Work Group, and this programme will complement this provision.



Find out more

Search **SKTM secondary teaching assistants** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will demonstrate a positive attitude towards the learning of maths
- You will use appropriate mathematical language and representations with confidence
- You will develop your understanding of how to adapt resources to meet students' needs
- You will develop an understanding of how algebra relates to the generalisation of number

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS

Fully funded

Specialist Knowledge for Teaching Mathematics (SKTM)

Core Maths Teachers

Support for teachers new to teaching this qualification

What is involved?

This programme supports teachers in developing specialist knowledge for teaching Core Maths and increases their confidence in teaching the course. The programme forms part of the overall Advanced Mathematics Support Programme (AMSP) and Maths Hubs Core Maths professional development offer.

The principal focus is on Core Maths subject knowledge and pedagogy, and the programme will be based on six key themes: using contextualised problem-solving; applying Fermi estimation and modelling; developing critical analysis; making sense of finance; using the pre-release materials; exploring statistics.

Who can take part?

This programme is for teachers who are in their first two years of teaching Core Maths and are teaching a Core Maths class during the academic year 2023/24.



Find out more

Search **SKTM core maths** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- Your students will gain raised awareness of the use of maths and statistics in everyday life
- You will plan lessons/sequences of lessons to promote student understanding, confidence, and progress
- You will understand the philosophy of Core Maths, with its approach to maths through contextualised problem-solving
- You will understand how online learning and technology can be used to support Core Maths teaching

The **programme** is fully funded by the Maths Hubs Programme and the AMSP, so is **free** to participating schools.



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS

Fully funded

Strengthening Partnerships with ITT Providers

A professional learning community for ITT providers and Maths Hub leadership

What is involved?

This project aims to form an established group of ITT representatives across the sector who are committed to developing communities of practice in order to review and evolve their provision.

Any work undertaken will be in conjunction with the leaders of maths provision in ITT institutions, to strengthen the partnership and agree actions that will support the deepening of understanding of teaching for mastery for ITT trainees at an award level. Activity may include working across hub boundaries and collaborating in larger regions.

Who can take part?

Participants will be from the ITT community; they should be directly involved in ITT with a responsibility for maths. They will represent the various ITT providers across the hub region so may include HEI, SCITT and School Direct, and represent different phases of ITT including EYTS, QTS (primary and secondary), and post-16.



Find out more

Search **strengthening partnerships with ITT providers** online or contact your local Maths Hub:

mathshub@bishopchalloner.bham.sch.uk

Benefits

- You and those responsible for maths provision at your institution will review your practice and programme
- You will aim to ensure trainees have some understanding of designing lessons informed by mastery principles
- Maths Hubs leaders will have a dynamic awareness of the local ITT provision and its school-based partnerships
- Maths Hubs leaders will create opportunity for collaboration and discussion across ITT providers, and use it to inform hub work

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating institutions.

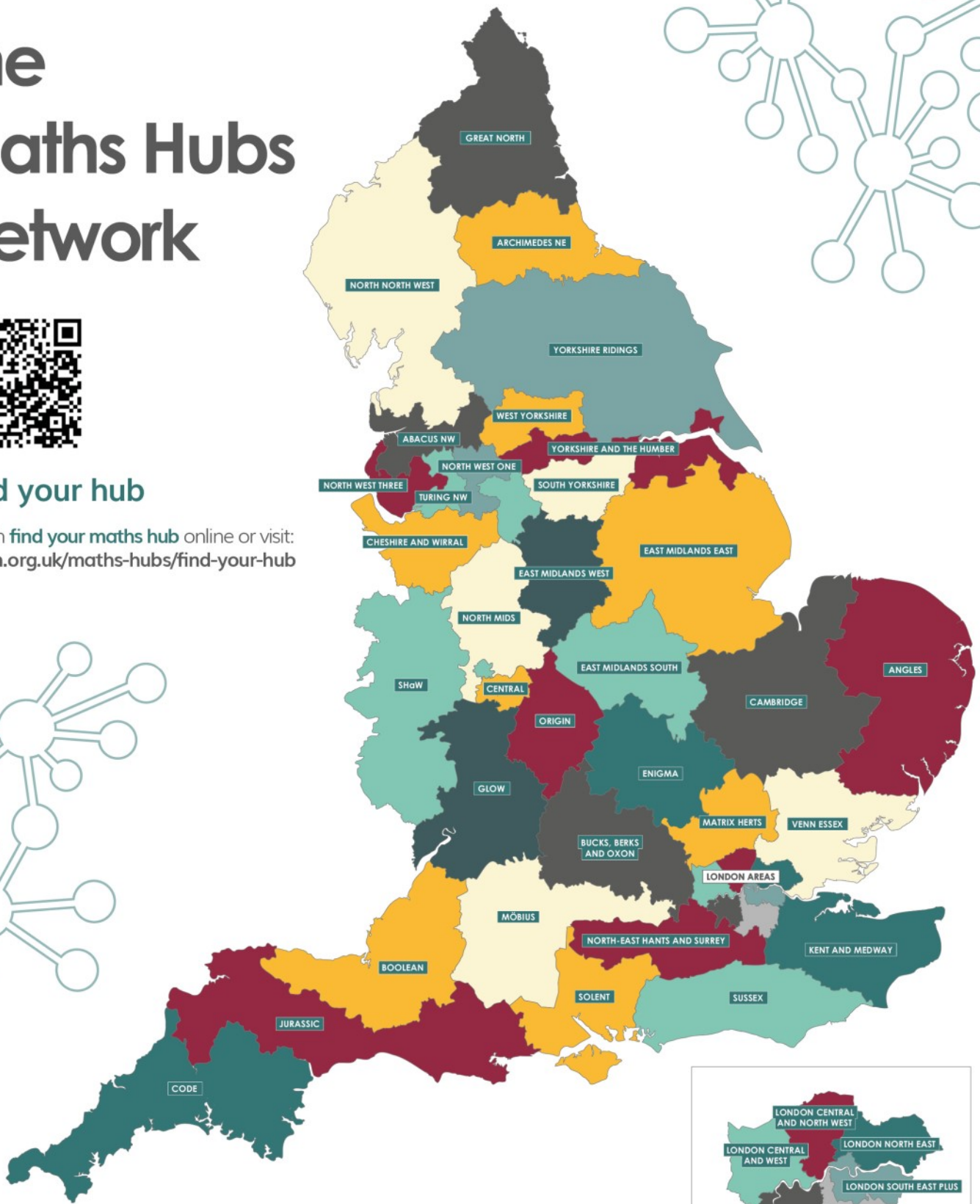


The Maths Hubs Network



Find your hub

Search **find your maths hub** online or visit:
ncetm.org.uk/maths-hubs/find-your-hub



NCETM
NATIONAL CENTRE FOR EXCELLENCE
IN THE TEACHING OF MATHEMATICS



“ My knowledge of how to teach Core Maths has deepened as a result of participating in the Work Group. ”

“ All the teachers in our school try new approaches to teaching maths and reflect on the impact of their changes regularly so that they can share good practice beyond their own classroom. ”

“ As a result of participating in the programme I have developed my understanding of transition. ”



“Excellent programme. Very professional and approachable Mastery specialist. To support my department to embed this approach further, I am interested in further opportunities to continue with this and/or other similar programmes through the Maths Hub Central.”



Central Maths Hub

Challoner House | Institute Road | Kings Heath | Birmingham B14 7EG

E: mathshub@bishopchalloner.bham.sch.uk

W: www.centralmathshub.com