

BBO MATHS HUB NEWSLETTER

Term: Spring | Issue 4 | Date: 1 March 2023

NEWS FROM JO WALKER, ASSISTANT MATHS HUB LEAD AND SECONDARY LEAD

I cannot believe that we are already over halfway through the academic year with many of us thinking about the upcoming SATS, GCSE's, AS and A Level exams. As such I know that many schools are already thinking about 2023 to 2024, as is the Maths Hub. We are starting to recruit for the leadership and mastery programmes and you can find a lot more information about them in this newsletter.



For those of you with links to or working in further education colleges please note the new role of Further Education specialist that is available to you.

I would like to remind you that we are funded by the DfE so everything we offer is free to attend and the longer term mastery programmes come with funding towards release time. The pedagogies and ways of working that we help develop are tried and tested, research based and in line with the DfE's vision for effective mathematics teaching. Many of the deadlines are the 31st March so please do take a look so that you and your schools do not miss out.

Over the last few years I have either taken part or led many of the opportunities mentioned above and they have had a very positive impact on my teaching, confidence and leadership skills. Many of the teachers we have worked with have found that their experience has opened doors in terms of career opportunities..

We have about 65% of primary schools and 50% of secondary schools currently involved in our mastery programmes and we are starting to see a positive impact on the results from those who have been working with us as well as some positive mentions in Ofsted reports. If you would like to become a mastery specialist or your school would like to become a developing mastery school please do look at our website and the links in the newsletter.

If you are unsure about this, have any questions or feel that the needs of your mathematics teachers lie outside what we are currently offering please do e-mail the hub so we can talk. We are here to help.

CONTENTS

[Page 3 : BBO MATHS HUB CONFERENCE 2023](#)

[Page 5 : PROFESSIONAL DEVELOPMENT LEADERSHIP OPPORTUNITIES FOR 2023/24](#)

[Page 6 : TEACHING FOR MASTERY OPEN EVENTS](#)

[Page 7 : PRIMARY ARTICLE - Teaching for Mastery in mixed-age settings](#)

[Page 9 : SECONDARY ARTICLE - Seeing what students understand versus knowing what they have been taught](#)

[Page 13 : PRIMARY WORK GROUPS](#)

[Page 16 : SECONDARY WORK GROUPS](#)

[Page 19: CROSS-CURRICULAR WORK GROUPS](#)

[Page 20 : NCETM NEWS AND FEATURES](#)

[Page 21 : OTHER EVENTS AND OPPORTUNITIES](#)

BBO MATHS HUB CONFERENCE - 20 MARCH 2023

Don't forget to **book your FREE tickets** for the BBO Conference taking place on Monday 20 March. Excitement is already starting to build and tickets are going fast. With the line-up we have now secured, you won't want to miss what is set to be a fantastic day.

Once again, we will be holding the event online between 9am and 4pm and offering the chance for attendees to choose from a wealth of speakers across all phases of maths education.

We have secured a fantastic keynote speaker in John Mason, author of ***Thinking Mathematically*** and several other publications for the Open University. The rest of the speakers have now been finalised and we are pleased to be able to share the schedule of the day below:



9 to 9.30am: Intro and welcome from Maths Hub Leads, Jennie Forde and Jo Walker

9.30 to 11am: Key Note Speaker – **John Mason**: Using Tasks Richly

11 to 11.20am: Break

After the Key Note Speaker, you will be able to choose three sessions, one from each of the slots.

11.20 to 12.20pm: Break out session A

- **Gill Knight**: A whole school approach to teaching time tables
- **Amy How**: Why the heck should you use a REKENREK?
- **Lucy Dasgupta**: Understanding operations through mappings
- **Kelly De Santis and Alastair Johns**: Subject Leadership in Primary
- **Kathleen McBride**: Why Oracy Matters

BBO MATHS HUB CONFERENCE - 20 MARCH 2023

12.30 to 1.30pm: Break out session B

- **Professor Emeritus Anne Watson**: Fact families and functions
- **Natalie Ivey**: Empowering pupils to solve problems in KS2 and KS3
- **Emma Parr**: Building on Mastering Number in lower KS2
- **Dr Audrey Curnock**: Exploring Reasoning in the classroom
- **Kathleen McBride**: Why Oracy Matters

13.30 to 2.15 pm: Lunch

2.15 to 3.15pm: Break out Session C

- **Dr Gwen Ineson**: Generalising about Growing Patterns
- **Jean Knapp**: Retrieval Practice & Using Worksheets differently
- **Jackie Stoffels**: 'This isn't English Miss!'
- **Elizabeth Lambert**: Thinking Multiplicatively

3.25 to 4 pm: Thank you & Wrap up

We hope you agree there is plenty on offer to interest everyone. To book your place, please **go to our website**.

We look forward to seeing you on Monday 20 March!



PROFESSIONAL DEVELOPMENT LEADERSHIP OPPORTUNITIES FOR 2023/24

The NCETM and Maths Hubs are now accepting applications for five programmes designed to develop teachers as experts in teaching for mastery and the leadership of professional development.

The programmes are:

- **Primary Mastery Specialist**
- **Secondary Mastery Specialist**
- **Further Education Mastery Specialist**
- **Professional Development Lead**
- **School Development Lead**



What do the programmes involve?

All the programmes are designed to develop teachers as local leaders of mathematics education (LLME), who lead various strands of activity of their Maths Hub at a local level.

The Primary Mastery Specialist Programme is now in its ninth year, and the Secondary Mastery Specialist Programme is in its eighth year. The programme to develop Further Education Mastery Specialists is new in 2023; more information about it is available in our recent news item, [Mastery Specialists in GCSE Resit and Functional Skills](#). All Mastery Specialists are classroom-based practitioners who develop teaching for mastery in their own classrooms, and go on to lead Work Groups to support other schools or colleges and their teachers locally.

Professional Development Leads and School Development Leads are expert teachers of maths who have responsibility for maths-specific professional development beyond their own school.

How can you apply?

Follow the links above to visit the webpage of the programme you are interested in applying for, and download and read the information document. When you have secured the support of your headteacher/senior leader, complete the online application form. The closing date for applications is **Friday 31 March at 5pm**.

The BBO Hub is offering several opportunities to find out about Teaching for Mastery and how it can have a positive impact in your school by observing Maths lessons based on the Mastery Approach.

Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil's journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that's been taught to enable him/her move on to more advanced material.

If you are interested in applying to become a Primary or Secondary Mastery Specialist, these sessions will be a valuable opportunity to observe a maths lesson based on the Mastery Approach and ask the team at the hosting school about their own Mastery journey.

Click on the links below to register your place:

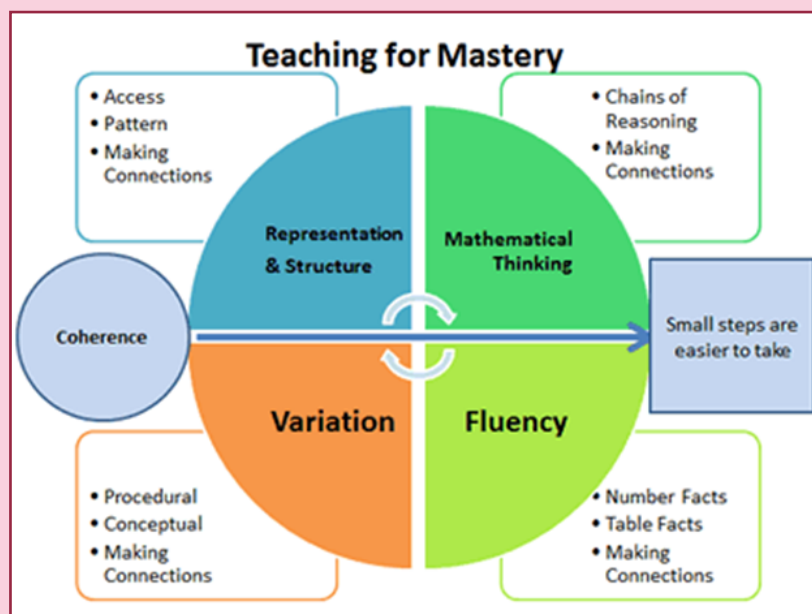
Secondary Open Lessons

CHENEY SCHOOL – 13 MAR 8.30am

WYCOMBE HIGH SCHOOL – 23 MAR 8.20am

WYCOMBE HIGH SCHOOL – 8 JUN 8.20am

SLOUGH AND ETON COLLEGE – 6 JULY 12.25pm



Teaching for Mastery in mixed-age settings

Jennie Forde, Primary Lead, BBO Maths Hub

In recent years, the BBO Maths Hub has worked with over 60% of primary schools in the region to adopt a teaching for mastery approach in mathematics. Teaching for mastery emphasizes deep understanding of mathematical concepts and skills, and encourages all students to achieve a high level of proficiency. However, when implementing a teaching for mastery approach in mixed-age settings, we recognise that teachers may face a range of challenges that need to be addressed to ensure that all students are able to make progress.



One of the main difficulties raised by teachers of mixed-age classes is the wide range of ability levels that teachers must cater to. In a mixed-age class, students can be at different stages in their mathematical development, which can make it challenging for teachers to provide appropriate instruction for each individual student. In addition, how do teachers of mixed-age classes manage class dynamics and ensure that all students are engaged and motivated?

A further challenge of teaching for mastery in mixed-age classes is the need to adapt materials and resources to suit the needs of different age groups. Teaching for mastery involves the use of structured, sequenced lessons and resources that build on previous knowledge and understanding. In mixed-age classes, teachers will need to modify materials and resources to ensure that they are appropriate for students at different levels of mathematical ability.

In reality, these questions and challenges are somewhat the same in all schools and settings developing a teaching for mastery approach and are key questions that we work on exploring and finding solutions together in our collaborative work groups within the teaching for mastery programmes. When considering these challenges, teachers and school leaders will need to adopt a range of strategies and approaches to support students' learning and progress. This may be in the use of flexible groupings in classes or closely monitored formative assessment to monitor students' progress and identify areas where they may need additional support or challenge. Ongoing evaluation of students' learning supports teachers to adjust their planning, considering the small steps that need to be in place to better meet the needs of each student.

Teaching for Mastery in mixed-age settings (cont.)

Jennie Forde, Primary Lead, BBO Maths Hub

While these are questions for all teachers, we recognise that teaching for mastery in mixed-age classes can present a particular challenge. The **Mastery Readiness** programme provides bespoke support for schools to develop the systems and culture needed to prepare for the implementation of a teaching for mastery approach. This heartening **case study** of a school in Northumberland taking part in the Mastery Readiness programme in provides further insights into what can be done through the power of working collaboratively, trying ideas and applying solutions in your own unique context.

The BBO Maths Hub are planning a Mastery Readiness programme for 2023-24 with mixed age schools in mind. If you are thinking of adopting or developing your teaching for mastery approach but face the additional challenge of mixed-age teaching, then please get in touch using this **contact form** or email **info@bbomathshub.org.uk** and we will get back to you. We are always looking to collaborate with schools and educators who are passionate about improving mathematics education for all students and would love to work with you.



References:

National Centre for Excellence in the Teaching of Mathematics (NCETM).

[Why Mastery Readiness isn't just 'mastery-lite'! | NCETM](#)

Seeing what students understand versus knowing what they have been taught

SECONDARY

Andrea Wickham Assistant Maths Hub Lead, Didcot Girls' School

Like many teachers of KS3 maths, I have done my homework on what maths students learn at primary school. I have spent endless hours thinking carefully about my small steps, my coherent curriculum and how I am building appropriately on what students have learned previously. The KS3 non-statutory guidance says that 'it is of paramount importance that teaching, at all stages, takes account of prior learning and the depth of understanding already achieved. Pitching teaching appropriately ensures that students are neither bored by repeating content which is already well understood, nor flummoxed by content which they cannot readily assimilate with their existing knowledge. Achieving this balance is arguably one of the most challenging elements of teaching'.

I do prior knowledge checks; I use starters and mini white boards to check understanding using questions I have thought about carefully to give me the information I need. This all helps me to know if my students can remember methods and facts and if they can explain why they work. What it doesn't always do is give me the information I sometimes ask myself when a student gives an unexpected or surprising answer – how are they seeing this maths?

Checkpoints, the diagnostic activities which NCETM have been creating are now over 250 in number and they are continuing to be developed. The aim is that teachers will use checkpoints to assess students current understanding and learn about the primary curriculum.

Having used checkpoint tasks with year 7 and 8 students, I have found that listening to students talk about and work on these tasks without feeling pressure to 'teach' them anything gave me much more insight into what sense they were making of the maths involved than more straightforward questions could give me.

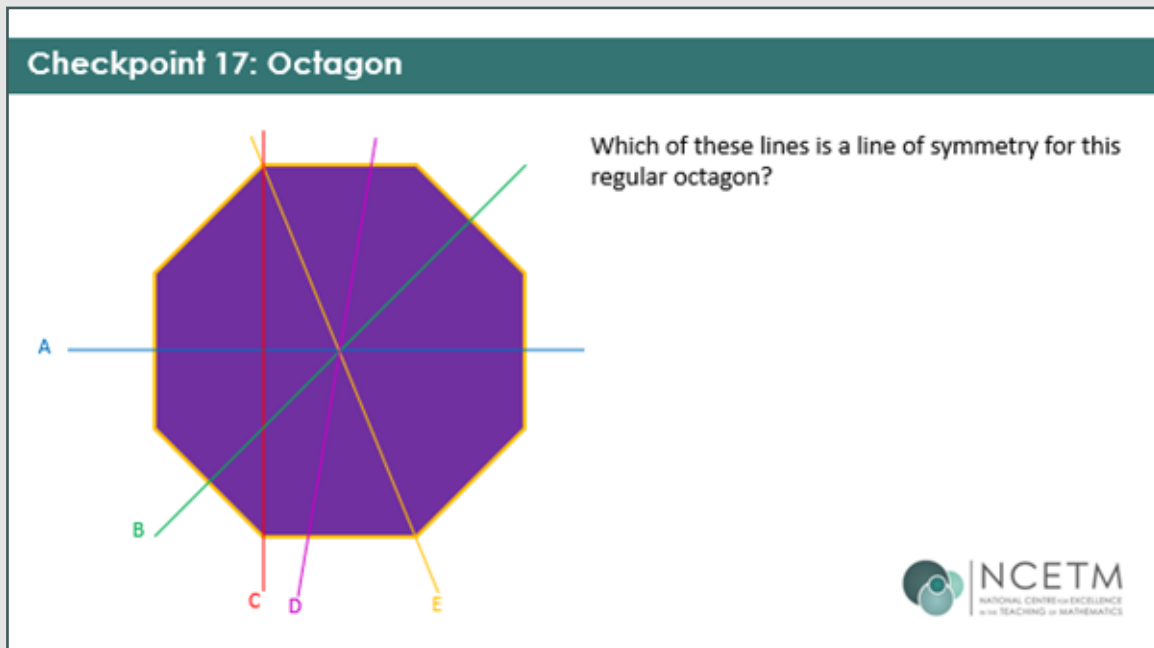
Below I describe some useful observations which came out of using two checkpoint tasks with a year 7 mixed attainment class.

I used the task below with a year 7 mixed attainment class hoping that I would get some good discussion and engagement. I found this simple looking task definitely encouraged students to voice their opinions, in fact, the discussion got positively heated!

Seeing what students understand versus knowing what they have been taught (cont.)

SECONDARY

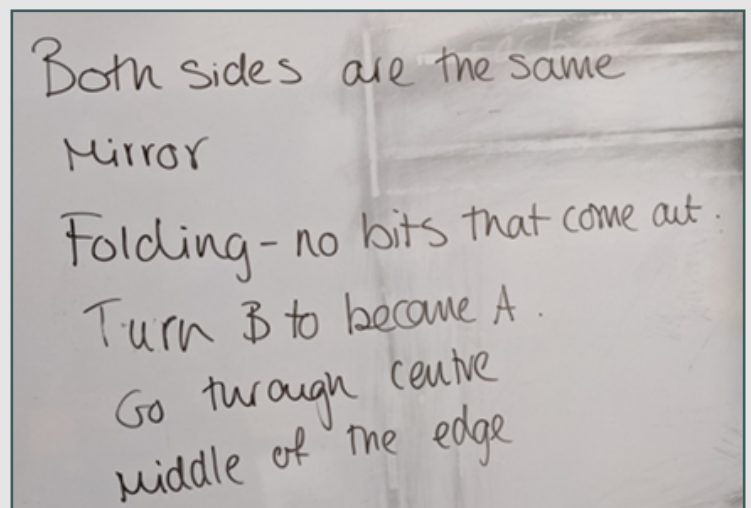
Andrea Wickham Assistant Maths Hub Lead, Didcot Girls' School



I was fairly sure that students would find deciding whether lines A, B and C were lines of symmetry straight forward and that E and D would be more contentious. However, some of the comments and explanations made early on made for a very interesting debate.

I initially asked students to write down yes or no for each line and I wrote their explanation of what made a line of symmetry on the board using their words (below).

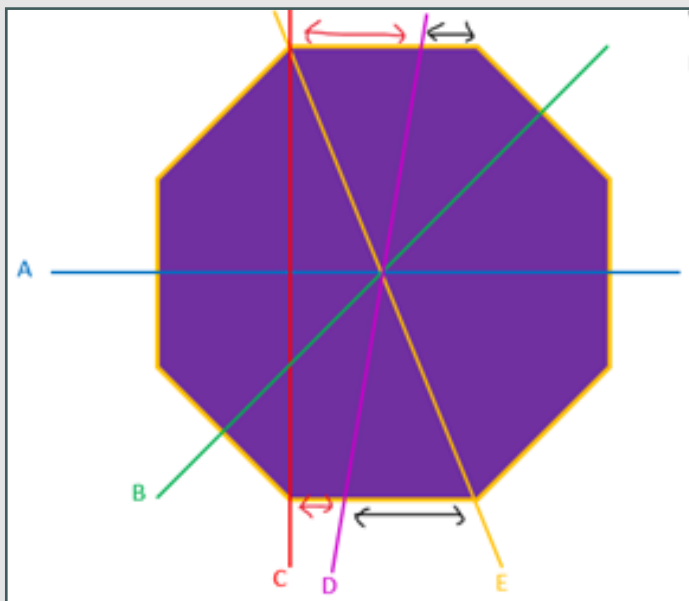
The most popular definition was that 'both sides are the same' so a line of symmetry could be identified if it cut the shape in such a way that the two 'halves' looked the same. This meant that the debate about whether D is a line of symmetry raged as many students were adamant that as the two halves created were the same, D must be a line of symmetry. Others were up on their feet trying to demonstrate that it isn't by looking at where line D cuts the top and bottom edges of the octagon (see below).



Seeing what students understand versus knowing what they have been taught (cont.)

SECONDARY

Andrea Wickham Assistant Maths Hub Lead, Didcot Girls' School

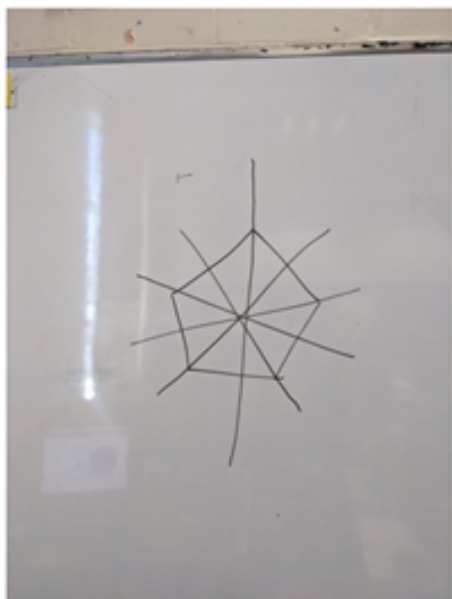


This still didn't help some who reasoned that the length of the arrows drawn top and bottom were the same in total.

The point one student had made about being able to 'turn B to become A' was helpful later on as it led some students to think about how else they could turn line A to create other lines of symmetry which led them to decide how many lines of symmetry there would be in total.

At this point I gave students an octagon which they could draw on and fold. Eventually we agreed that a line of symmetry must go through the centre, we should be able to fold along the line and there should be 'no bits that come out' and it can go through opposite vertices or the middle of opposite edges.

Checkpoint 17: Octagon



This octagon has eight lines of symmetry. Is it always true that a regular polygon has the same number of lines of symmetry as it has sides?

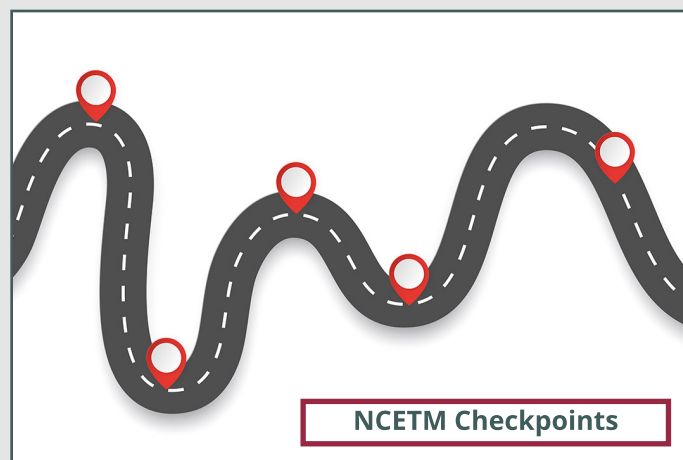
Seeing what students understand versus knowing what they have been taught (cont.)

SECONDARY

Andrea Wickham Assistant Maths Hub Lead, Didcot Girls' School

As we neared the end of the lesson, I revealed the final question on the checkpoint slide (above, with our whiteboard drawing). I found it interesting that the initial reaction of the majority to this question was no and I was given a pentagon as an example. One student confidently explained it was a no as a regular pentagon only has one line of symmetry which is vertical through the top vertex to the midpoint of the opposite side. Most instinctively agreed with this until another student pointed out that we could turn the pentagon so that the next vertex is at the top and draw another line of symmetry and so on until we have drawn five. It was interesting that despite the thinking they had done about the octagon, lots of them saw the pentagon as different – perhaps because it has an odd number of sides?

I would love to say that at the end of all my lessons I have to encourage students to leave because they are so keen to continue talking about the maths. In this lesson it was actually true and the information I gained about their current understanding was useful because it told me what they already know. It also showed me how they were seeing lines of symmetry and I would argue this is the information which helps a teacher to see how to help a student understand much more effectively. It can feel like there is never enough time to cover everything we need to teach and this is a reminder to me that sometimes it is worth stepping off the treadmill of carefully planned sequences of lessons to take the time to really explore what sense students are making of maths. If you are looking for a task or activity to do this which is more than surface level 'exploration', checkpoints can be a good place to look.



Primary Work Groups and Opportunities for 2023/24

PRIMARY

The Maths Hub Programme has PD opportunities for all teachers at all stages in their careers and across all phases. We are now beginning recruitment for projects running in 2023/24 and have details below of those currently accepting applications. Follow the 'More Info' links for further details on the opportunities or click 'Apply Now' to register for your place. Alternatively, contact us at info@bbomathshub.org.uk to discuss the best programme for you and your department.

All of our Work Groups are free.

MASTERY READINESS

Lots of schools are ready to start their mastery journey, and some would benefit from initial support before becoming part of the full programme. This diagram shows a school's journey towards mastery. Use it to determine where your school's journey starts (click diagram to show a larger version with more detail of the journey).

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.

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.

What is the cost?

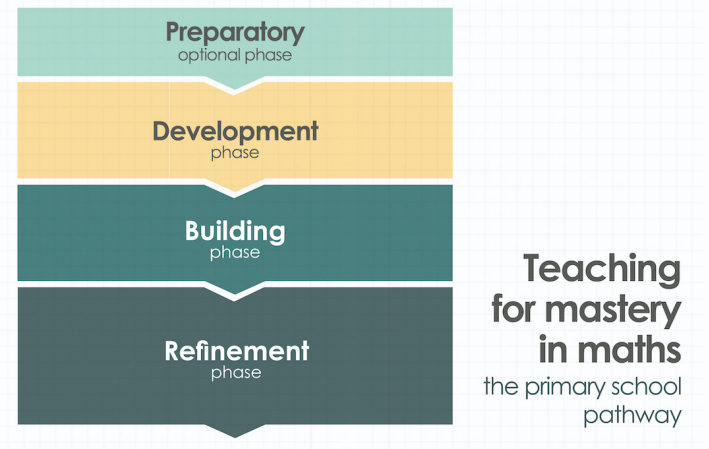
There is no charge for participation in this programme. However, schools must ensure that staff are released to engage in the workshops and school visits, and that the headteacher attends events where appropriate.

How can you find out more?

- Read a [case study](#) of a school that took part in the pilot Mastery Readiness Programme in Northumberland.
- Download or print a [flyer](#) for the project.

What should you do next?

If you are interested in taking part in this programme in 2023-24, applications are now open. Please complete the application form via the button below and we will be in touch in due course.



MORE INFO

APPLY NOW

PRIMARY TEACHING FOR MASTERY - DEVELOPMENT

If your school is ready to start developing a teaching for mastery approach, you can join a Work Group starting in the new academic year.

The Teaching for Mastery Programme is a professional development opportunity designed to support teachers like you to develop best practice in maths in your school. It is suitable for schools interested in implementing a teaching for mastery approach to maths.

What is involved?

Two teachers from each participating school join a Work Group, consisting of six or seven 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 programme is for state-funded primary schools in England. Two teachers from each participant school will attend six half-day meetings during the school year, and lead teaching for mastery development in their own school.

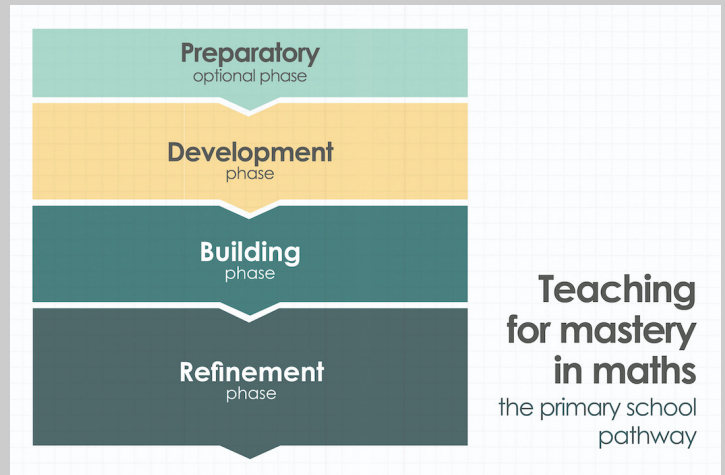
NB: Schools can only take part in this particular Work Group once. However, there are other Work Groups dealing with teaching for mastery which are available in the year after a school is in a Development Work Group and beyond. Talk to your Maths Hub about your options.

What is the cost?

The Primary Teaching for Mastery Development Work Groups project is **fully funded** by the Maths Hubs Programme so is **free** to participating schools.

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.

If you are interested in taking part in this programme in 2023-24, **applications are now open**. Please complete the application form via the button below and we will be in touch in due course.

[MORE INFO](#)[APPLY NOW](#)

MASTERING NUMBER

The Mastering Number project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.



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.

What is involved?

The 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.

There is an expectation that schools will provide a daily teaching session for all children of 10 to 15 minutes, in addition to their normal maths lesson. Lead Teachers in schools will also contribute to an online community to share practice and engage in critical reflection.

What will you learn?

- Your pupils will be able to clearly communicate their mathematical ideas
- You will develop a secure understanding of how to build firm mathematical foundations
- You will work to develop intentional 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

What is the cost?

The Mastering Number Programme is fully funded by the Maths Hubs Programme so is free to participating schools. Schools taking part in the September 2023 start cohort of this programme may receive physical rekenreks prior to the start of the programme subject to availability from the DfE. Digital rekenreks are freely available online.

Applications are now open for the next cohort of the Mastering Number Programme starting in Autumn 2023. Use the buttons below for more information or to submit your application:

[MORE INFO](#)[APPLY NOW](#)

Secondary Work Groups and Opportunities for 2022/23

SECONDARY

The Maths Hub Programme has PD opportunities for all teachers at all stages in their careers and across all phases. We already have several projects running in 2022/23 and have details below of those still accepting applications. Follow the 'More Info' links for further details on the opportunities or click 'Book Now' to register for your place. Alternatively, contact us at info@bbomathshub.org.uk to discuss the best programme for you and your department.

All of our Work Groups are free.

MATHEMATICAL THINKING FOR GCSE

This Work Group is for teachers of KS4 who want to further understand mathematical thinking, and devise related practical classroom strategies. Participants will be expected to lead developments in their own department and so should have the opportunity and authority to do this effectively. The project also offers an entry point into developing mastery approaches, or could support a department already involved in the Teaching for Mastery Programme.

What is involved?

Exam boards often note that, when students come to GCSE examinations, AO2 and AO3 are frequently poorly addressed. This Work Group is designed to meet teachers' needs in that it provides practical and theoretical elements to support the development of students' mathematical thinking, whilst offering a manageable structure for collaborative CPD.

The Work Group is structured around four meetings, with school-based tasks to complete and reflect upon between each meeting. Day 1 is a full day (or equivalent), with Days 2, 3 and 4 being around 0.5 days of input.

What will you learn?

- Your students will develop a range of strategies to allow them to get started on, and to think their way through, unfamiliar mathematical problems
- You will develop your understanding of the role of reasoning and problem-solving in the curriculum
- You will develop an effective repertoire of task types that give opportunities for mathematical thinking
- You will be equipped to develop strategies and approaches to support mathematical thinking within your department

The Work Group is based in the Oxfordshire area with the venue for the face-to-face meetings being Botley School, OX2 9JZ and the online meetings taking place between 4 and 6pm. It is being led by Dr. Audrey Curnock.

MORE INFO

BOOK NOW

SPECIALIST KNOWLEDGE FOR TEACHING MATHEMATICS - SECONDARY EARLY CAREER TEACHERS (Phase 1)

Phase 1 Communities in this project are for those identified as Early Career Teachers – teachers in their first or second year of teaching.

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 2021/22. Both projects offer high-quality subject knowledge and pedagogy maths support for ECTs, recognising the requirements of the ECF.

The communities formed as part of the project provide an opportunity for participants' conversation to remain focused on the teaching of maths, with teachers at a similar stage of their career.

What will you learn?

- Your students will be seen to elaborate when responding to questions, showing that their answer stems from a secure understanding
- You will identify essential concepts, knowledge, skills within the topic area and provide opportunity for all students to learn and master these critical components
- You will develop an understanding of approaches to assess students' prior learning, so that learning sequences are planned to take this into account

The topic that will be focused on in this group is multiplicative reasoning to include fractions, percentages, ratio and trigonometry. This Work Group is being led by Usman Nasir and all meetings are taking place online.

MORE INFO

BOOK NOW

SPECIALIST KNOWLEDGE FOR TEACHING MATHEMATICS - SECONDARY NON-SPECIALISTS

Are you teaching maths outside your own specialism? Or is someone in your maths department a non-maths specialist? Of course, there's much more to teaching maths than knowing how to do the maths. And it's not always obvious how teaching skills from other subjects can be adapted for the maths classroom.

Develop mathematical subject knowledge and understand the pedagogy that underpins the teaching of it

This programme is 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 who has not undertaken initial teacher training (ITT) in mathematics'.

If you are a headteacher or senior leader, and want to know more about the programme and its suitability for teachers in your school, watch this [video](#).

What is involved?

The programme is aligned to the NCETM teaching for mastery pedagogy and is based on six key themes:

- Structure of the number system
- Operating on number
- Multiplicative reasoning
- Sequences and graphs
- Statistics and probability
- Geometry.

Participants will explore these themes, supported by an experienced secondary practitioner.

The NCETM have produced a flyer which summarises the programme and its benefits.

[Download](#) it to share with colleagues.

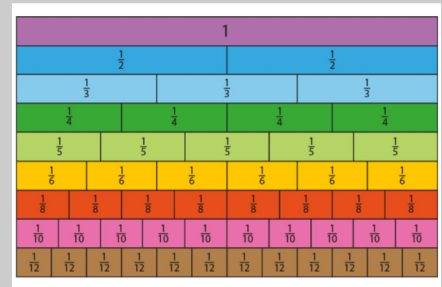
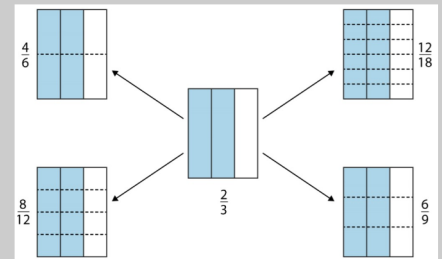
What do participants think?

- "This programme has deepened my understanding of the representations and given me new strategies that I can use with my students in the classroom" – Emily
- "It is helping me reflect as a teacher. I don't have a maths degree and although I can do the maths myself, it is all different from how I was taught before. My department has done a lot of work on teaching for mastery and this is helping me make sense of the work the faculty are doing" – Sam
- "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" – Jessica
- "In terms of planning lessons, I will now use the NCETM resources in my planning – I can now think more deeply" – Ali
- "As a non-specialist, this course has enabled me to use the correct terminology and assisted in the way I structure my lessons" – Simon
- "I am finding it really useful to see different ways of explaining or teaching concepts" – Su
- "I find this really helpful [...] it's the ways to deliver the content that I find most useful, and correcting my misconceptions" – Phil
- "It's making me see the different ways that concepts can be approached" – Jane
- "My subject knowledge has gaps in maths – I am learning a great deal" – Francesca
- "It's helping me build confidence, in particular with using correct vocabulary and learning different ways of delivering certain topics" – Carl

What about a head of maths?

- "From attending the programme, the non-specialist teacher's confidence in his maths and the teaching of maths has improved. The expectations of his students are now higher. During lessons, subject-specific language is being used by students and they are expected to explain their methods using this language. Manipulatives and representations are a regular feature of the teacher's lessons and this has supported students in understanding the structure of the maths" – Karen, Head of Maths Department

The second cohort of this project has recently started but we are still accepting new members. All meetings will be held online between 4.30 and 7.00pm. For full details and to secure your place, click on the Book Now button.



Secondary Work Groups and Opportunities for 2023/24

SECONDARY

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All of our Work Groups are free.

SECONDARY TEACHING FOR MASTERY - DEVELOPMENT

Whether you want to take a teaching for mastery approach in your own classroom and department, or introduce mastery in both your own school and beyond, we have a CPD opportunity for you. The NCETM and Maths Hubs are offering funded professional development activities, available in 2023/24.

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.

In a Teaching for Mastery Work Group, teachers collaborate with colleagues from local schools, and get support and guidance from a Local Leader of Maths Education (LLME). Participants also take away ideas to help students become more confident mathematicians, ready to tackle GCSEs and A levels, and begin to introduce and embed teaching for mastery.

Mastery Advocates

The fully funded programme enables you and another teacher from your school to become 'Mastery Advocates'. Initially you will be part of a Work Group for a year. You will also get in-school support from a Mastery Specialist. Beyond the first year, you will continue to work with your local Maths Hub and take part in a Work Group as you embed mastery across your department.

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.

What is the cost?

The Secondary Teaching for Mastery – Development project is **fully funded** by the Maths Hubs Programme so is **free** to participating schools.

What should you do next?

If you are interested in taking part in this programme in 2023-24, applications are now open. Please complete the application form via the button below and we will be in touch in due course.

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 secondary teaching for mastery
- You will begin to support the teachers in your department to develop teaching for mastery approaches in their practice

[MORE INFO](#)

[APPLY NOW](#)

Years 5-8 Continuity

Work Groups in this project aim to strengthen the transition from primary to secondary school by focusing on curriculum and pedagogical continuity over Years 5 to 8. Participants will explore a selection of high-quality resources: **Checkpoints**, Multiplicative Reasoning and Algebraic Thinking materials.

A central aim is the promotion of cross phase communication between teachers to address issues of maths curriculum and pedagogical transition as distinct from pastoral considerations. A key feature will be understanding how best to prioritise key aspects of the curriculum to help ensure pupils have mastered the fundamental understanding and skills they need to underpin their progression through upper Key Stage 2 and into Key Stage 3.

A lesson study approach is encouraged where all participants focus on a particular aspect of the maths curriculum and work collaboratively to develop this in their schools. Cross-phase classroom observation and discussion of practice are encouraged wherever possible.

Participants should be teachers of Years 5 to 8 in primary, secondary, middle school and all-through schools with some responsibility for curriculum development, e.g. maths leads / heads of department. Linked 'families' of schools are encouraged to take part: ideally teachers from secondary schools and their associated primary schools will work together.

The BBO Hub is currently running 2 cohorts of this project. please register for your chosen location below.

[MORE INFO](#)[BOOK BUCKS & BERKS](#)[BOOK OXON](#)

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



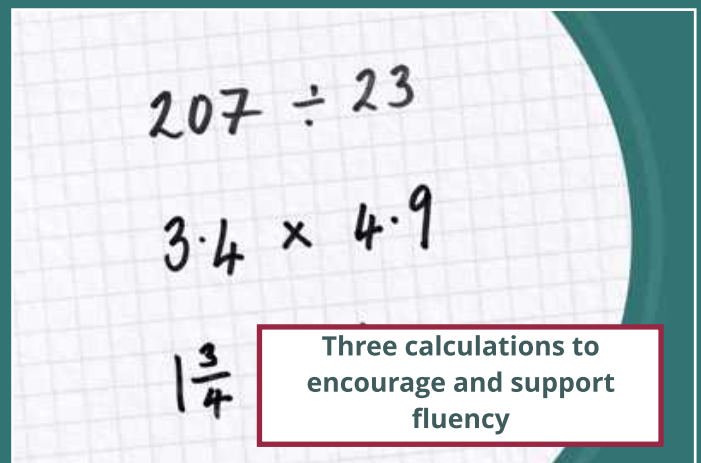
Opportunity to join new Years 5-8 Work Group

We are aiming to run a third cohort of this project in the Summer term and are keen to create a group with the primary and secondary schools within a single Trust or a geographical area with a view to tailoring our programme to suit the schools' needs. Whilst the core content will remain constant, there would be an opportunity to cover areas and topics that may be particular challenges faced within the area or Trust. The location and nature of delivery for the meetings could then be arranged to suit participating schools to minimise staff disruption and travel time.

If this is of interest to your school, please contact us via the button below to discuss this opportunity.

[CONTACT US](#)

NCETM NEWS AND FEATURES



OTHER EVENTS AND OPPORTUNITIES

NETWORK MEETINGS (IN ASSOCIATION WITH THE AMSP)

Bucks and Oxford Online Teacher Network 7th March, 4:30 - 5:45pm via Zoom



There will be focus on the following:

- Encouraging girls' participation in advanced mathematics
- Use key findings drawn from data and research to increase participation in Level 3 mathematics

Although the material is specifically pitched at girls, the ideas would be appropriate for all genders. The session will be led by Rachel Beddoes (@GirlsCount_2). Apply via this link <https://amsp.org.uk/event/10911/>

PRIMARY MATHEMATICS SUBJECT LEADERS SPRING CONFERENCE - LAST CHANCE TO BOOK

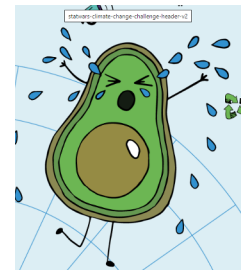
Primary Mathematics Subject Leaders Spring Conference - Reasoning and Challenge for All

- Date: Friday 17th March 2023 9:00 - 3:30pm
- Venue: Holy Family Primary Catholic School, Langley, Slough
- Cost: £160 after 10/2/23. Bookings close 3/3/2023

REGISTER NOW

PRIMARY ENGINEER - DATA CHALLENGE FOR SCHOOLS

Since 2005, Primary Engineer have developed an engineering curriculum that spans Early Years, Primary, Secondary and Further Education institutions. Their core aim is helping the development of children and young people through engagement with engineering, the promotion of engineering careers through inspiring programmes and competitions, the development of skills for teachers and practitioners, addressing the inequalities in engineering.



Primary Engineer develop a project-based learning approach to education free at point of use incorporating in-depth curriculum teaching resources and kit which enables children and pupils to engage with practical maths and science alongside creative problem solving and literacy. They provide strong links to engineers and the industries they work to facilitate an opportunity for both pupils and teachers to expand their knowledge of careers, career paths and opportunities. Their programmes and activities have a national footprint engaging over 65,000 pupils in the academic year 2021-22

STATWARS Climate Change Challenge.

The STATWARS: Climate Change Challenge empowers and educates pupils to tackle climate change by analysing datasets they capture themselves. Pupils use fabulous resources to calculate their own carbon footprint and analyse this data to identify three changes they can personally make in their daily lives to help tackle climate change.

Working in teams, pupils use their data skills to communicate these changes and try to encourage others to change their habits for the better of the planet. Every single pupil who takes part receives a graded certificate, and up to £5000 of eco-prizes for your School are up for grabs.

Thanks to the support of Primary Engineer's partners WPP, the STATWARS: Climate Change Challenge and all their supplied curriculum teaching resources are completely free for teachers to enter and is open to all schools in the UK.

To register and for more information, go to the event website.

EVENT WEBSITE