



Spring Newsletter

North West Three Maths Hub

January 2021



A New Year Message from the North West Three Maths Hub Team

Happy New Year to you all! I hope you have all managed to have a nice Christmas break, and a well-earned rest.

During possibly the most 'different' start to a term we have experienced as educators, we wanted to write to you all to clarify and explain a few things which we hope will reassure you.

Firstly (and most importantly) we recognise that now, your attention must (and should be) turned to your school community and managing that everything that switching to remote learning brings. This is no mean feat and certainly not without pressures and strains. As you are facing these professional and personal pulls over the next few weeks, we wanted to remind you that we are here to support you.

NW3 Maths Hub is a tremendous team of inspirational teachers and leaders and the one thing that we learned from March to July was that there is still a thirst for teachers to develop professionally and we know in your hands, they really will learn from the best.

We continue to believe that the work we offer is a real bright spot in the region and we would like that to remain the case as we all navigate through these times.

We feel that it is important to continue with our offer of professional development for teachers in the region. Therefore, we intend to carry on as normal (or as we had planned with online delivery). At this stage, we hope that all sessions will be able to go ahead, with some adjustments to meet your current circumstances. This may mean that you need to tweak start times, alter any gap tasks in this interim period, shorten content or feel that dates need moving. If this worries any of you, please do get in touch straight away; we are here to support and help and we don't want anyone to feel alone in this. Again, please be open with us about your situations so we can ensure that the support we offer is of maximum benefit to you and your schools.

We hope that your staff will be able to continue to engage in some way with our work. We aim to be as flexible as before. We can support with remote learning and providing guidance to help teachers and pupils access high quality resources that are readily available.

In the meantime, stay safe, look after yourselves both physically and mentally, be kind to yourselves and do keep in touch with us.



Maths Hubs - the overall aim:

Maths Hubs work together to support primary through to post 16 practitioners to have the chance to change/influence maths education across the country.

Support for Remote Learning

NCETM and Maths Hubs online resources available:

Materials to support teachers and schools planning and delivering maths teaching in school and remotely at both primary and secondary level are available from the NCETM. All are accessible from the dedicated **Covid support page**: <http://bit.ly/3o9z9ke> on the NCETM website.

For primary schools and teachers, the 180 **primary video lessons**: <http://bit.ly/3o6wOpZ> produced during the first lockdown are still available. Each lesson has an accompanying teacher guide, and PowerPoint slides of the lesson for teachers to adapt themselves.

There are also resources linked to the **DfE guidance** published in July 2020. These include **ready-to-use training materials**: <http://bit.ly/2Y4vk5c>, a short introductory **video**: <https://bit.ly/2MiOKCh>, and a **suite of 79 PowerPoints**: <http://bit.ly/35xlaOq> focusing on the ready-to-progress criteria found in the DfE guidance. Additional training materials addressing the **transition between Year 6 and Year 7**: <http://bit.ly/2Y2YyBg> are also particularly relevant when pupils in Year 6 have had their maths learning disrupted.

For **secondary schools**, an evidence-based **guidance document**: <https://www.ncetm.org.uk/classroom-resources/adapting-maths-teaching-for-the-covid-19-period/> to support discussions about recovery curriculum content and pedagogy is available, along with a series of **'Planning to teach...' videos and PowerPoint slides**: <http://bit.ly/3c3UVUc> offering advice on teaching crucial KS3 topics. CPD materials include a **one-hour training session**: <http://bit.ly/2Y2YyBg> to help understand the implications for Y7 of the DfE primary guidance, and six **Departmental Workshops**: <http://bit.ly/3qGqrLS> for any teachers able to engage in collaborative professional development.

The **40 Maths Hubs**: <https://www.ncetm.org.uk/maths-hubs/> which support all state-funded primary and secondary schools across England are continuing to offer support and online professional development. Get in touch with your **local hub**: <https://www.ncetm.org.uk/maths-hubs/find-your-hub/> to find out more.

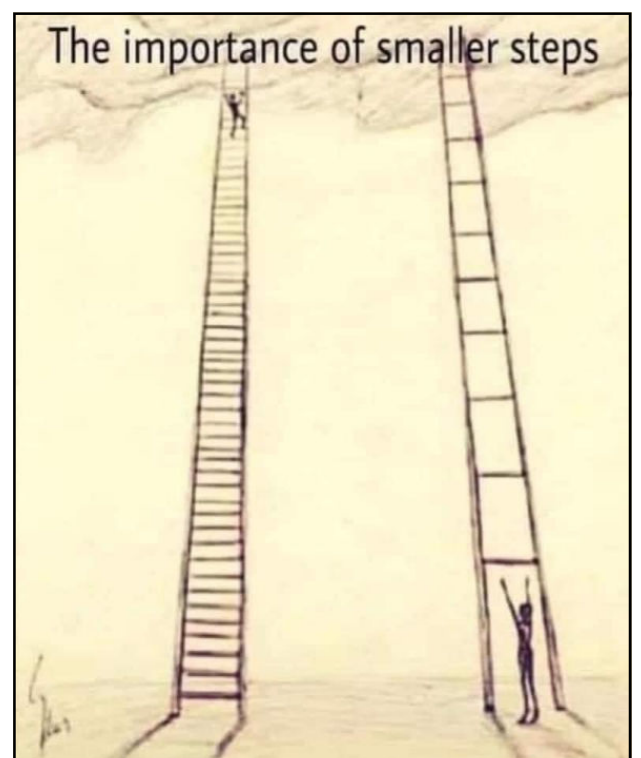
GOOD NEWS - The Impact of Teaching for Mastery in Primary Schools

Improving international results for primary maths

TIMSS results published last term, well done to Primary Teachers, improvement by 10 points and now **8th in the world**. It's not just the increase but we see great things happening in the context of **Teaching for Mastery** in our interactions with teachers, exciting times for primary maths!

Country	Average Scale Score
³ Singapore	625 (3.9)
[†] Hong Kong SAR	602 (3.3)
Korea, Rep. of	600 (2.2)
Chinese Taipei	599 (1.9)
Japan	593 (1.8)
² Russian Federation	567 (3.3)
[†] Northern Ireland	566 (2.7)
² England	556 (3.0)

There are 3 birds on another branch. How many birds are in the tree?	$8+3=11$
2. Jane has 12 crayons and Kim has 7 crayons. How many more crayons does Susan have than Kim?	Who is Susan?
3. There are 8 fish in the pond. 7 fish swam away. How many are left in the pond?	$8-7=1$



Primary and EYFS National and Local Projects

Supporting Resources

Ready to Progress Criteria

This document is a well-researched, evidence based (John Hattie) resource for Primary teachers focusing on key concepts to aid recovery and build firm foundations for pupils in Years 1-6. This document will help to level the playing field and provide very clear guidance on what and how to teach the most important concepts.

<https://www.gov.uk/government/publications/teaching-mathematics-in-primary-schools>

All Maths Hubs Work groups continue to support teachers and leaders in using this document effectively to ensure the children continue to have a deep understanding of Mathematics whilst focusing on the key concepts.

Exemplification of Ready-To-Progress Criteria: GET THE RESOURCES NOW!

The NCETM have provided training materials to help primary teachers understand the new DfE Primary Mathematics Guidance. These are available now: <https://bit.ly/35xlaOq>

The PowerPoints provide ready-to-use training sessions ideal for Autumn term insets/staff PD. A suite of 79 Power point sides, each one focusing on one of the ready to-progress criteria in the new DfE Primary mathematics national curriculum guidance for KS1 and KS2.

EYFS Progression Charts

There are six key areas of early mathematics learning, which collectively provide a platform for everything children will encounter as they progress through their maths learning at primary school, and beyond: <https://www.ncetm.org.uk/in-the-classroom/earlyyears/>

Numberblocks Support Materials

NCETM have been expanding their support materials for the CBeebies programme Numberblocks, which now cover all of Series One. They've also added two documents giving an overview of each series, the storylines, and the mathematics addressed. To view the resources: <https://www.ncetm.org.uk/classroom-resources/eynumberblocks-support-materials/>

Primary Professional Development Materials from NCETM

Our popular mastery professional development resources for primary teachers have now been enhanced for number: addition, subtraction, multiplication, and division so that there is something for every year group. The materials cover the whole school year for every year group. To view the resources: <https://www.ncetm.org.uk/teaching-for-mastery/masterymaterials/primary-mastery-professional-development/>

A MATHS HUBS WORK GROUP IS

- comprised of a group of schools who work on something together, normally over the large part of a school year, typically with one or two teachers from each school acting as lead participants
- led by a teacher or former teacher, expert both in the area of maths education in question and in leading teacher professional development
- normally part of a national collaborative project, which supports the Work Group Leads and seeks to ensure lessons are learned from around the country.

Maths Hub Work Groups - Get Involved!

EYFS:

Building Firm Foundations - This Work Group is aimed at schools who are currently developing mastery across their school. Work Groups in this project aim to secure Early Years' best practice and build firm foundations for all children by the end of Reception year. Practitioners and senior leaders will develop their understanding as to how Early Years Best Practice feeds into a teaching for mastery approach and supports progression through the school.

If you are interested in joining this Work Group in the future, please contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk

EYFS SKTM (Subject Knowledge Teaching of Mathematics) - This Work Group is now full. Details of this will be re-released in the summer term in preparation for September 2021 start.

Primary:

TEACHING FOR MASTERY - A whole school approach

Where is your school on the 'Teaching for Mastery' Pathway?

Why not join a Work Group to develop the Mastery approach and meet the needs of ALL learners in your school...these Work Groups are bespoke and FREE of Charge?

Pathway Overview - further details: <https://bit.ly/39ZFUzM>

1. **Preparatory phase** - Mastery Readiness Programme
2. **Development phase**
3. **Building phase** - Embedding Work Groups
4. **Refinement phase** - Sustaining Work Groups

Benefits of ALL the Programmes

- **National focus** and collaboration
- ALL Work Groups focus on the use of the **Ready to Progress Criteria** (supported by the National Curriculum)
- **Free of Charge**
- Regular Teacher Research Groups (TRGs) led by qualified Teaching for Mastery Specialists
- Teaching for Mastery lead practitioners allocated to ALL schools to ensure the programme remains **bespoke and flexible to meet the needs of YOUR school**, whilst supporting/encouraging **collaboration** with other local schools
- It is **YOUR agenda** - professional development to suit YOUR schools needs
- A blended PD approach - **face to face and online** provision to suit
- **Textbook funding** may be available in the 'Development' stage. This will be communicated directly with your schools from the DFE
- **Leadership (at all levels) support to monitor** and continue to review the Teaching for Mastery approach
- **Subject knowledge development** for the WHOLE SCHOOL
- **Progressional and pedagogical understanding** developed with ALL staff

Other Primary Work Groups

- **Primary Teachers SKTM (Subject Knowledge Teaching of Mathematics)**
- **Teaching Assistants SKTM (Subject Knowledge Teaching of Mathematics)**

Feedback from a TA in January 2021:

have absolutely loved this course. We are completely in a state of disarray (during covid restrictions), but this course has renewed my enthusiasm in maths and helped me find exciting ways to teach and support children. The pace and interaction throughout each session felt just right – not too much. I must thank Linda for her friendly and yet informative approach. Like children, most adults fear maths, but Linda made us feel very comfortable and able to join in. Thank you. Looking forward to session 3!!

- **Excellent Maths Teacher Programme** - for more information: <https://bit.ly/3ha2SGb>

Primary Maths Subject Leader Meetings

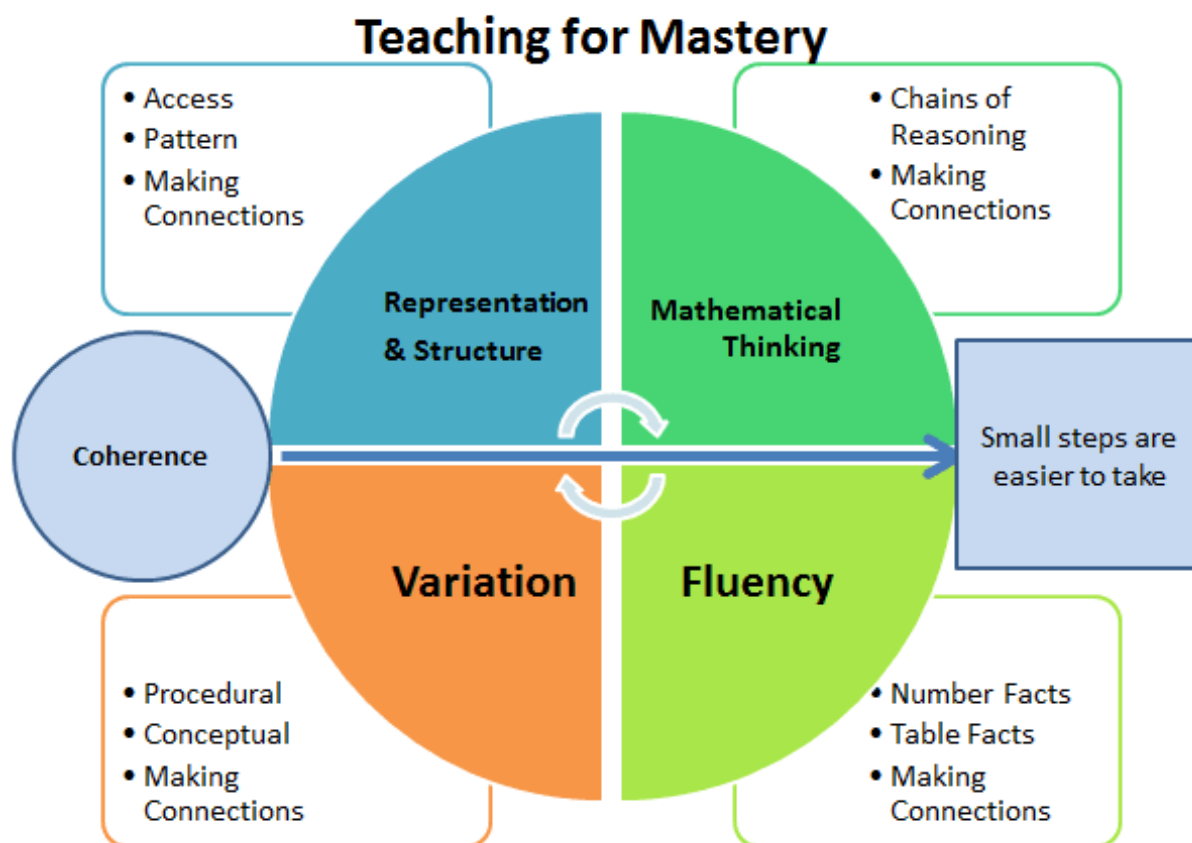
Friday 7th February 2020: 9.00am – 3.30pm **Online**

Themes include:

- Assessment of Mastery; moderation and standardisation
- Using ongoing tests and formal assessments and tracking progress
- Mental maths and how to ensure consistency across school
- Mathematical updates and current thinking.

Facilitator: Tara Loughran

Further details: <https://bit.ly/35sw6xG>



Mastery	Mastery with Greater Depth
<p>Two friends share 12 sweets equally between them. How many do they each get? Write this as a division number sentence.</p> <p>Make up two more sharing stories like this one.</p> <p>Chocolate biscuits come in packs (groups) of 5. Sally wants to buy 20 biscuits in total. How many packs will she need to buy? Write this as a division number sentence.</p> <p>Make up two more grouping stories like this one.</p>	<p>Two friends want to buy some marbles and then share them out equally between them.</p> <p>They could buy a bag of 13 marbles, a bag of 14 marbles or a bag of 19 marbles. What size bag should they buy so that they can share them equally?</p> <p>What other numbers of marbles could be shared equally? Explain your reasoning.</p>



NCETM Assessing Mastery Y2

Teaching for mastery favours building firm foundations based on deep understanding, not rushing through more content in less time. Join a funded Maths Hubs Work Group for sustained CPD and bespoke in-school support.

Secondary National and Innovation Projects

Y5-Y8 Continuity Programme

This programme includes: 3 face-to-face training days and 2 school visits. The programme is aimed at Y5, 6, 7 and 8 practitioners.

Sessions include:

- Sharing of work samples- cross phase moderation/standardisation- expectations explored
- Learning walks- school based focused visits
- Agreeing common, precise mathematical language
- CPD opportunities for the development of teacher subject knowledge and activity ideas around the four areas of calculation, algebra and fractions
- Teaching for Mastery- how to incorporate the 5 big ideas- exemplification and expectation
- CPA models used and scaffolds explored to ensure appropriate support and challenge is being provided across the two key stages
- Identifying gaps and next steps.

KEY RESOURCE - to support the EEF Improving Maths in Key Stages 2 & 3 guidance report, a Red Amber Green (RAG) self-assessment guide has been published. It sets out what 'ineffective', 'improving' & 'exemplary' practice can look like for each recommendation: <https://bit.ly/2Mv4rUJ>

This will be used as part of the project.

To express and interest in joining the Work Group please contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk

Paula Foster - paula.foster@three-saints.org.uk

This Work Group is free of charge.

This work group will run again in 2020-21 with a focus on Wigan, St Helens, Knowsley, Liverpool and Sefton areas.



The Secondary Teaching for Mastery Programme – An Overview

There is a national target for half of the secondary schools in England to engage with the Teaching for Mastery Programme. To meet this target, it is vital, not only that individual teachers develop teaching for mastery approaches, but also that the department as a whole has systems, policies and ways of working which are compatible with teaching for mastery and allow for the collaborative professional development structures which are needed in order to develop and embed these approaches and to sustain them in the long term.

The **NCETM Teaching for Mastery Programme** aims to do this through two overlapping and connected programmes:

- The Secondary Mastery Specialist (SMS) Programme
- The 'Develop/Embed/Sustain' Programme



The Develop/Embed/Sustain Programme

In the 3rd year of the SMS programme, specialists support schools in the Teaching for Mastery Development Work Group to develop their own practice and systems. In subsequent years, these schools join the Embedding and Sustaining Work Groups.

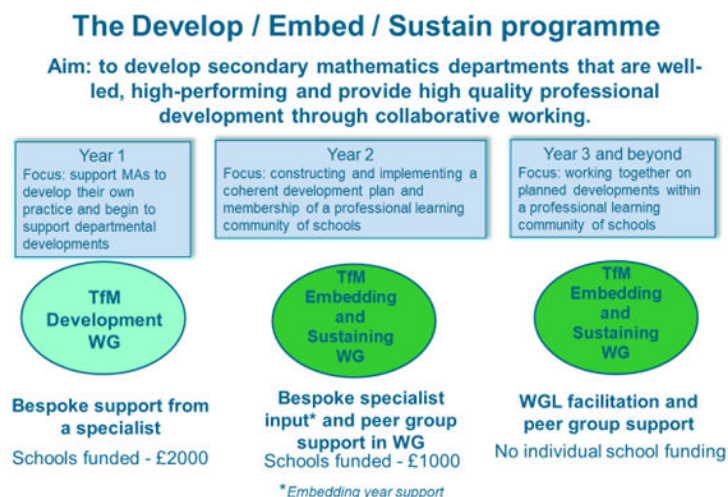
All schools are committing to a programme which aims to:

- Support the construction of a coherent and ambitious departmental action plan focusing on the need of their pupils and teachers
- Put in place a structure for professional development based around collaborative working which supports sustainable and long-lasting development
- Further support departments by offering the opportunity to join a professional learning network of schools all working on their classroom and departmental practice

Year 1: Support for Mastery Advocates to develop their own thinking and practice and to help them begin to support departmental developments (Developing WG)

Year 2: Support for constructing and implementing a coherent development plan and an opportunity to share ideas and network through membership of a professional learning community (Embedding and a Sustaining WG + Embedding Year support)

Year 3 (and beyond): working together in a professional community of schools to support sustained development (Embedding and Sustaining Work Group)



Mastery	Mastery with Greater Depth
<p>Some counters are placed in a bag. You win if you pull a red counter out of the bag. Which of these would you choose?</p> <ul style="list-style-type: none"> • Bag A has one red counter and two blue counters • Bag B has ten red counters and twenty blue counters • Bag C has 100 red counters and two hundred blue counters <p>Explain your thinking.</p>	<p>Consider two football teams who have not yet played each other, but who have both won their last ten games. If they now play each other, which of the following do you agree with?</p> <ul style="list-style-type: none"> • Both teams have an equal chance of winning the match. • The game is likely to be a draw. • The game is likely to be close but one of the teams will probably win. • Their previous wins can't tell us anything about what's likely to happen when they play each other. <p>Explain your thinking.</p>



NCETM Assessing Mastery KS3

Useful Secondary Resources

Free and nationally accredited resources

Teaching and curriculum guidance for secondary teachers as schools fully re-open - <https://www.ncetm.org.uk/in-the-classroom/support-for-schools-addressing-ongoing-coronavirus-impact/support-for-secondary-teachers/>

Secondary PD materials - <https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/secondary-mastery-professional-development/>

Secondary assessment materials - <https://www.ncetm.org.uk/classroom-resources/assessment-materials-secondary/>

NCETM link to Mastery section (Primary and Secondary - applications and resources) - <https://www.ncetm.org.uk/teaching-for-mastery/>

Challenging Topics at GCSE

What are the strategic goals of the Maths Hub for this project?

To support schools and colleges to address the challenge of teaching the 9-1 GCSE. In particular to explore approaches to teaching a chosen topic that proved challenging in the new GCSE, and also improve department professional development processes for doing this.

Through this we will explore and evaluate at these levels:

- What approaches work well in the classroom?
- What approaches work well in supporting department PD?
- What strategies are effective at Work Group level?

This Work Group is FREE of Charge to all schools.

Schools chosen to participate in the Work Group will commit to the following expectations:

- Participating teachers will attend 4 half day workshops
- Teachers will fully engage in all tasks and development activities in between meetings
- Teachers will contribute experiences, ideas and resources to develop pedagogy around the chosen challenging topic

All sessions are online at the moment.

Expressions of Interest are now being taken.

Please contact Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter: lindsay.porter@three-saints.org.uk



Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding.

William Paul Thurston

Secondary Heads of Department Meetings

Throughout 2020-21 we are pleased to be able to offer termly Head of Maths network meetings for schools across the NW3 region – St Helens, Wigan, Knowsley, Sefton and Liverpool.

Lindsay Porter (Secondary Maths lead) will continue to deliver this network. This is an opportunity for all Heads of Department to come together to review and share approaches to current national and local initiatives.

Wednesday 10th February 2021 3.30-4.45pm - **Online via Zoom**

PRU/Special Schools - Tuesday 9th February 2021 - **Online via Zoom**

Further details: <https://bit.ly/33leMIz>

This network is free of charge.

Mathematical thinking for the GCSE

This Work Group offers teachers and their departments nationally coordinated support to address the reasoning and problem-solving challenges of the mathematics curriculum and its assessment in the new GCSE. Many departments will be considering not only the long-term development of these skills across KS3 and into KS4, but also the immediate needs of current KS4 pupils facing the challenges of the new GCSE. This Work Group aims to support both these aspects through professional development activities focusing on practical and accessible classroom-based approaches. Participation also offers the opportunity to develop departmental professional development processes and produce longer-term improvement plans.

Who is this for? All secondary schools wishing to begin or continue a programme of professional development to address the teaching and learning implications of the new curriculum and GCSE. Ideally, each school will send two members of department (at least one of whom is experienced and has some leadership responsibility) to maximise the impact of the professional development within the department.

What is involved? 4 x half day workshops focused on developing reasoning and problem-solving skills in all lessons .

Gap tasks between the workshops will include Lesson Study, allowing wider department participation in the professional development.

There will be an evaluation process focusing on the impact of activities on pupils and the wider department.

Recruitment rounds for this project are open now. We would particularly welcome applicants from Liverpool, Wigan, Sefton, St Helens and Knowsley.

This Work Group is FREE of Charge.

To express an interest in this programme, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter - lindsay.porter@three-saints.org.uk

Supporting Post-16 GCSE resit

There is now a large and growing number of Post-16 GCSE Resit students, predominantly in FE colleges. GCSE Mathematics is still unfamiliar to many teachers in FE Colleges and Sixth Form Colleges and with a timeframe for resit delivery over 8 months rather than two (or more) years, centres are faced with a number of substantial difficulties.

Intended outcomes: participating teachers and their departments will:

- Develop teaching and learning approaches/pedagogy to promote student engagement with the revised curriculum
- Develop teachers' confidence and competence in teaching the new GCSE as a resit in Post-16 (often limited to an 8-month course)
- Share practice and resources which are effective with this group of students (e.g. through SoW, CPD, collaborative planning), so that these approaches become embedded as departmental practice
- Increase localised support and collaboration with local schools and FE institutions
- Use gap tasks/ TRG style meetings to model and disseminate research and practice

Who should attend? Teachers of GCSE maths resit students in 11-18 centres and FE institutions.

What is involved? Four half day workshops (2-4pm).

Dates: 27/01/21, 22/02/21, 26/04/21, 06/07/21

All sessions are **Online via Zoom**

This Work Group is FREE of Charge.

To express an interest in this programme, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter - lindsay.porter@three-saints.org.uk

Secondary Excellent Maths Teacher Programme (Innovation)

Who is it for?

These sessions are aimed at excellent maths teachers who have the potential and drive to achieve excellence in maths practice and the ability to develop others.

4 full day sessions to include:

What does outstanding maths practice look like?

- Understanding how practice has changed at Key Stage 2 and the need to build on this at Key Stage 3
- Developing problem solving, reasoning and fluency throughout Key Stages 3/4
- Effective monitoring to determine impact
- Tracking of progress and skills to inform action planning and next steps
- Exploring and developing assessment
- Providing effective feedback
- Lesson structures, planning and questioning

Delegates will be involved in 3 'Gap tasks' linked to practice in their own schools.

This programme is free of charge

This programme was extremely well received in 2019-20. 18 Secondary Maths teachers took part in this programme.

Participant feedback:

Just wanted to pass on my thanks to you for the running of what has been an outstanding 4-day course. The course has genuinely changed the way I plan a number of lessons and has more than sparked my interest in 'mastery'. Your knowledge is second to none and your enthusiasm is contagious! Both of which made the course a great success.

Expressions of Interest for this programme are now being taken for 2020-21.

To express an interest in this programme, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter - lindsay.porter@three-saints.org.uk

See here for further information: <https://bit.ly/3IXWKEy>

Secondary CPD Network - Whole School Development Opportunity

WE WILL BE BACK SOON!!!

As a result of extremely positive feedback from the previous 4 years, the Secondary Maths CPD network will continue in 2021-22; due to COVID restrictions this cannot go ahead this year. Whole Secondary Maths departments meet on a half termly basis to explore key mathematical themes. All themes have been selected based on need. Secondary Maths departments from across the NW have had the opportunity to engage in high quality CPD from experts in their field. It has provided an opportunity to network and share good practice. This network has been a huge success with over 25 secondary maths departments attending on a regular basis.

Full programme details will be published soon. All sessions will resume in autumn 2021.

Save HUBS PROJECTS 2020/21

HOW TO TAKE PART
If you wish to participate in any of this work, contact your local Maths Hubs to find out how your school can get involved. enquiries@mathshubs.org.uk

EARLY YEARS	PRIMARY	STRADDLING THE TRANSITION	SECONDARY	POST-16
<p>Primary Maths Hubs offer a range of opportunities for schools to develop their maths teaching. The work opens the school and college phases, and address a range of themes, all with a focus on developing practice, with schools and teachers all having engaging in professional development activities, research, shared good practice, and so on. In the future, results and success will be measured and evaluated, and will inform subsequent year projects. Contact your local hubs to find out which projects suit your school.</p>	<p>Primary Maths Hubs offer a range of opportunities for schools to develop their maths teaching. The work opens the school and college phases, and address a range of themes, all with a focus on developing practice, with schools and teachers all having engaging in professional development activities, research, shared good practice, and so on. In the future, results and success will be measured and evaluated, and will inform subsequent year projects. Contact your local hubs to find out which projects suit your school.</p>	<p>Straddling the Transition offers a range of opportunities for schools to develop their maths teaching. The work opens the school and college phases, and address a range of themes, all with a focus on developing practice, with schools and teachers all having engaging in professional development activities, research, shared good practice, and so on. In the future, results and success will be measured and evaluated, and will inform subsequent year projects. Contact your local hubs to find out which projects suit your school.</p>	<p>Secondary Maths Hubs offer a range of opportunities for schools to develop their maths teaching. The work opens the school and college phases, and address a range of themes, all with a focus on developing practice, with schools and teachers all having engaging in professional development activities, research, shared good practice, and so on. In the future, results and success will be measured and evaluated, and will inform subsequent year projects. Contact your local hubs to find out which projects suit your school.</p>	<p>Post-16 Maths Hubs offer a range of opportunities for schools to develop their maths teaching. The work opens the school and college phases, and address a range of themes, all with a focus on developing practice, with schools and teachers all having engaging in professional development activities, research, shared good practice, and so on. In the future, results and success will be measured and evaluated, and will inform subsequent year projects. Contact your local hubs to find out which projects suit your school.</p>

SPECIALIST KNOWLEDGE FOR TEACHING MATHEMATICS (SKTM)

ITP PROVIDERS

WHO LEADS THE WORK?

Covid-19 Recovery

Supporting recovery of the education system after the pandemic.

MATHS HUBS OPPORTUNITIES FOR 2020/21 NOW AVAILABLE

New projects offer something for your own professional development or to develop maths teaching across your department or school.

<https://www.ncetm.org.uk/news/maths-hubs-opportunities-for-2020-21-now-available/>

Early Career Development Programme (Innovation)

A key aim of this work group is to support teachers new to the profession to ensure they are providing a strong curriculum, teaching and professional development practices that can be shared amongst the departments they are working in and across the Hub region. This Work Group has run successfully for the past two years and we intend to review and evaluate this programme on an annual basis to ensure we are continuing to meet the needs of all Maths Secondary NQTs and RQTs across the patch.

This Work Group is free of charge

This has proven to be a really popular Work Group. For more information and to join the group follow the link

Details: <https://bit.ly/3m1U9tq>

To express an interest in this Work Group, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter - lindsay.porter@three-saints.org.uk

Early career teachers – what you need to know

NCETM feature article: [Early career teachers – what you need to know \(https://www.ncetm.org.uk/features/early-career-teachers-what-you-need-to-know\)](https://www.ncetm.org.uk/features/early-career-teachers-what-you-need-to-know) looking at the resources on the NCETM website that might be useful for trainees, NQTs, RQTs, and those working with early career teachers.

Education is the most powerful weapon which you can use to change the world.

Nelson Mandela

Secondary Mastery Readiness Programme (Innovation)

Teaching mathematics for mastery at primary school has been developing for a number of years and secondary schools need to be equipped to ensure that the children coming through are taught with a focus on the same five big ideas. Using the successful primary mastery readiness programme as a model, this has been adapted for secondary schools and is aimed to give teachers an in depth look at two of the five big ideas.

Who should attend? Teachers of secondary maths departments that are interested in learning more about teaching for mastery, collaborative planning and observing mastery in action.

What is involved? 4 remaining afternoon half termly meetings with gap task activities between each workshop

Session 1: Focus on variation topic area 1 ONLINE Mon 25/01/21 2-4pm

Session 2: Focus on variation topic area 2 ONLINE Wed 17/03/21 2-4pm

Session 3: Focus on representation and structure topic area 1 Tue 27/04/21 2-4pm

Session 4: Focus on representation and structure topic area 2 Thur 24/06/21 2-4pm

Session 5: Focus on coherence Tues 13/07/21 2-4pm

Each session will be followed by a 'gap task' for teachers to lead/deliver a session to students linked to the theme. They will be expected to disseminate ideas/concepts with colleagues within their department and return to the following session with evidence of findings to review/reflect and evaluate learning to develop practice further. All sessions will model and exemplify mathematical content via a big idea across the two key stages thus showing how it can be easily adapted and adopted. Participants will receive national updates ensuring their practice remains current/relevant to ensure students are getting the best possible opportunities.

This Work Group is free of charge

Full programme details: <https://bit.ly/2Rc5Y1F>

To express an interest in this Work Group, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk or Lindsay Porter - lindsay.porter@three-saints.org.uk

Secondary Maths and SEND (Innovation) – NEW for 2020-21

Overview

Secondary schools have made a significant commitment to teaching for mastery in their curriculum planning. This Work Group will consider the nature of Teaching for Mastery pedagogy as it relates to pupils with SEND.

Participants will consider how teaching for mastery approaches can be applied to supporting pupils with SEND in secondary settings, particularly the use of representation & structure and planning for coherence. Materials specific to needs will be developed and trialled to be shared across the hub region.

Who is it for?

Secondary Mathematics teachers (a Teaching assistant working with the Mathematics teacher is also welcome). The teacher attending the Work Group should have some experience and expertise in teaching for mastery and be able to disseminate. It is recommended that schools have participated in a TRG Teaching for Mastery Work Group, but this is not essential.

Expectations of participants and their schools

Teachers will be required to attend 3 workshops across the year. They will complete intersessional tasks between each workshop session and reflect on their classroom practice.

This Work Group is FREE of Charge. There is no application form.

To express an interest in this Work Group, contact:

Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk

**Every day is a new beginning.
Take a deep breath and start again.**

Useful links include:

NCETM: <https://www.ncetm.org.uk/>

North West 3 Maths Hub website: <http://www.nwmathshub3.co.uk/>

Nrich: <http://nrich.maths.org>

Maths No Problem: <http://www.mathsnoproblem.co.uk/>

Maths Associations: <http://www.nwmathshub3.co.uk/associations.html>

CMSP: <http://www.core-maths.org>

MEI: <http://www.mei.org.uk/>

Power Maths: <http://bit.ly/3a8vldM>

AMSP: <http://furthermaths.org.uk/amsp>

STEM: <https://www.stem.org.uk/>

Teaching Schools Council: <https://www.tscouncil.org.uk/>

ACME: <http://www.acme-uk.org/home>

Ofsted: <http://www.ofsted.gov.uk>

Education Endowment Foundation: <https://educationendowmentfoundation.org.uk/>



Post-16 National and Innovation Projects

Want a department-wide improvement in maths teaching?

Three projects are running in partnership with **Maths Hubs and the Advanced Maths Support Programme (AMSP)**. For those who teach maths at Level 3, why not join a Work Group looking at **Embedding Technology?**

If you are an experienced teacher, you could take part in the project **Developing Pedagogy at A level**, to ensure you and your colleagues are delivering high-quality teaching which enhances your students' conceptual understanding of topics.

A project Supporting Core Maths offers Work Groups for teachers looking to develop effective teaching approaches and increase student numbers.

For those who deliver **GCSE resit**, a project is available to support you too.

NW3 Maths Hub will also be running a **KS5 Network** starting this term. The networks will run on a termly basis at 5 different locations, across the NW3 patch- St Helens, Knowsley, Sefton, Wigan and Liverpool. The networks will provide a balance of sharing good practice, responding to local and national agendas. NW3 Maths Hub will facilitate the meetings and will invite local and national experts in their field. **This network is FREE of CHARGE.**

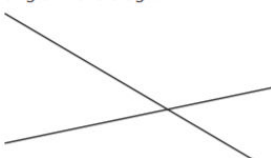
For more information about any Post 16 Work Groups please contact **Sarah Boyle (Level 3 Lead):** sarah.boyle@calderstones.co.uk and/or **Lisa Bradshaw (Maths Hub Lead)** lisa.bradshaw@three-saints.org.uk

AMSP Links

GeoGebra in the Maths classroom - Online Self-paced study from the AMSP: <https://amsp.org.uk/events/details/7544>

Desmos in the Maths Classroom - Online Self-paced study from the AMSP: <https://amsp.org.uk/events/details/7544>

STEM Learning page: <https://bit.ly/2LZn8RI>

Mastery	Mastery with Greater Depth
<ol style="list-style-type: none">1. Draw a line 5cm long2. At one end of the line mark an angle of 108°3. Draw a line 5cm long from this end of the line, towards the 108° mark4. Repeat steps 2 and 3 until your lines join up <p>Which polygon have you drawn? How do you know?</p>	<p>Four children are practising using a protractor. They each measure a different angle in this diagram.</p>  <p>Alled says, "My angle is 42°" Ben says, "My angle is 40°" Cassidy says, "My angle is 107°" Dietmar says, "My angle is 140°"</p> <p>Without measuring, which one of these children do you think needs help with using a protractor? Explain how you know.</p>



NCETM Assessing Mastery KS3



Want to keep up with everything that's happening in North West 3 Maths Hub?

Sign up for our mailing list here:

<http://eepurl.com/du2lnn>

Work Group to strengthen partnerships with ITT providers

North West 3 Maths Hub are delighted to be working in partnership with local ITT providers to support the effective recruitment, preparation and development of teachers of mathematics.

The following universities are committed to being engaged in the work group in 2020-21:

Edge Hill University, Liverpool Hope University and Liverpool John Moores

Professional learning linked to this work stream:

For ITT providers: an understanding of the work of their local Maths Hub and the National Maths Hubs Network, including Teaching for Mastery, and the potential impact on their trainees.

For Maths Hubs: to ensure that there is the opportunity for collaboration and professional discussion of practices across ITT providers

For ITT trainees: some input on the principles of Teaching for Mastery will impact on their subject knowledge and understanding of the connections in mathematics. In particular, the application of the theory of variation to intelligent practice in the classroom and the importance of carefully crafting lessons based on small steps in key learning.

For further information please contact Lisa Bradshaw - lisa.bradshaw@three-saints.org.uk

This Work Group is FREE of Charge

About our work

As a Maths Hub we provide support to all schools in the area and the NW, across all areas of maths education, including:

Recruitment of maths specialists into teaching.

Initial training of maths teachers and converting existing teachers into maths.

Co-ordinating and delivering a wide range of maths continuing professional development (CPD) and school-to-school support.

Ensuring maths leadership is developed, e.g. running a programme for aspiring heads of maths departments.

Helping maths enrichment programmes to reach a large number of pupils from primary school onwards.

For further information in relation to National and Local work streams that North West 3 Maths is involved in please visit:

<http://www.nwmathshub3.co.uk>

Alternatively, please don't hesitate to contact:

Lisa Bradshaw (Maths Hub Lead) lisa.bradshaw@three-saints.org.uk

Sarah McIlroy (Primary Mastery Lead) sarah.mcilroy@three-saints.org.uk

Lindsay Porter (Secondary Mastery Lead) lindsay.porter@three-saints.org.uk

Sarah Boyle (Post-16 Lead) sarah.boyle@calderstones.co.uk

Sarah Makin (Admin) sarah.makin@three-saints.org.uk

Debs Ayerst (Online Services Admin) debsayerst@nwmathshub3.co.uk



Follow us on Twitter **@NWmathshub3**
