

Summer Newsletter

North West Three Maths Hub

The lead school of Maths hub NW3- **St Mary and St Thomas CE Primary School, St Helens** (Lead school for the St Helens TSA and part of the Three-Saints MAT) was judged as **OUTSTANDING** in all areas in their recent Ofsted inspection.

Maths provision was seen as a particular strength of the school.

Inspectors commented:

“Mathematics is taught consistently and systematically in all year groups because of the high-quality training teachers receive. Teachers work with colleagues, including colleagues in other schools, to share their knowledge and expertise. Teachers use assessment very effectively during lessons to identify pupils who are struggling with basic calculations. Pupils use a range of resources and strategies to support their learning. Opportunities to consolidate knowledge and skills are reinforced effectively by teachers. Pupils apply their knowledge to solve increasingly challenging problems. Staff use questions skilfully to develop and probe pupils’ understanding. Pupils who spoke to inspectors explained their reasoning very eloquently and accurately.”

“Leadership of mathematics is outstanding. Leaders’ critical review of the way mathematics was taught identified accurately key areas for improvement. Leaders check that actions for improvement are carried out systematically and consistently across all year groups. They provide additional support for staff new to teaching when necessary. Teachers are regularly held to account for the progress pupils make and they conscientiously refine their plans to maximise the learning opportunities for pupils. Consequently, progress rates are improving rapidly.”

“In mathematics, in all year groups, pupils solve increasingly complex problems and challenges.”

“Leaders place a high priority on the continued professional development of staff. They demonstrate high levels of professionalism and share their passion for learning with staff and pupils. **Staff’s subject knowledge is extremely strong as a result of the focused training they receive.** Staff at all levels work with others, including colleagues across the MAT, to share their expertise. Staff new to teaching said they are very well supported by leaders and colleagues. Staff are proud to be part of this outstanding school.”



Continuing Professional Development Standard

National Centre for Excellence in the Teaching of Mathematics



“High-quality teaching is underpinned by teachers’ strong subject knowledge. This contributes to pupils’ exceptionally positive attitudes to learning across the school.”



Maths hub programme reach and increased capacity

The Maths Hub programme is expanding and developing due to the nature of it’s success in engaging an overwhelming amount of schools across the country. A full review has been taken place in conjunction with the DFE, NCETM and Maths Hubs to redefine areas. Ensuring all areas across the country now have a specific Maths Hub that they can engage with for all aspects of maths training and development. All maths hubs have been realigned.

NW Maths Hub 3 will now serve schools in the following areas: **St Helens, Wigan, Liverpool, Knowsley and Sefton.**

NW Maths hub 3 has been supporting the development of a new **Cheshire/Wirral Hub**. This hub will begin its work in September 2019 and will serve: Halton, Cheshire (West, East and Chester) and Wirral.

Both Maths Hubs will continue to work closely together on all future National and local projects. In addition to operating and working collaboratively with the other northern maths hubs and the maths hubs network as a whole!

For further information or clarification please don’t hesitate in contacting: Lisa Bradshaw, Maths Hub NW3 lead. Lisa.bradshaw@three-saints.org.uk

Primary and EYFS National and Local Projects

‘Teaching for Mastery’ – NW Maths Hub 3 supporting schools to develop an understanding of Mastery and working towards achieving this for all!

Mastery Readiness

The programme, led by a Mastery Readiness Lead, Claire Martin, began in summer 2018.

Overview

The maths lead and another teacher will attend training events throughout the year, averaging out at two per term. There will be two visits per term from the Mastery Readiness Lead to offer tailored advice and support.

Benefits

- The training includes an introduction to mastery, how to prepare a school to be ready to implement teaching for mastery, initial steps, both in leadership and in classroom teaching, and strategies to overcome potential barriers.
- Support for the head teacher in addressing leadership issues related to mathematics and contributing to raising standards.
- Opportunity to work closely with other schools also developing mastery readiness.
- Automatic acceptance onto the fully funded National Teaching for Mastery Programme after the initial 12 months.

So far schools from Halton, Wirral and Knowsley have benefitted from being part of this fully funded programme.

The next phase of this programme will target schools in Liverpool, Wigan, St Helens, Sefton and Cheshire areas.

This programme is FREE of Charge.

More information: <https://bit.ly/2W3dYCV>

Teaching for Mastery Specialist Teachers

16 Mastery specialist teachers are currently working on behalf of NW Maths Hub 3 supporting 173 schools on their Mastery Journey via the National TFM programme. Cohort 4 Mastery specialists have just started their training and will be supporting pilot schools in summer 2019.

Primary Maths Teaching for Mastery National Programme

The programme has already transformed maths teaching in thousands of schools, enabling children to develop deeper and more sustainable mathematical understanding. It is just as relevant for schools with a history of good Key Stage 2 maths results, as for those which struggle. More information can be found on the [NCETM website](#)

The CPD programme is free, with a £1,000 grant to subsidise supply cover when teachers attend local workshops run by trained Mastery Specialists, and financial help to buy maths textbooks. Applications are welcome from groups of schools, for example in MATs, as well as individual schools.

NW Maths Hub 3 received a total of **147** applications from the following areas; these schools will attend a launch in the summer term to begin the programme in September 2019:

Wigan- 19 (NW3)
Sefton- 12 (NW3)
Liverpool- 10 (NW3)
St Helens- 0 (NW3)
Knowsley- 25 (NW3)
Wirral- 27 (new Cheshire/Wirral hub)
Cheshire- 28 (new Cheshire/Wirral hub)
Halton- 17 (new Cheshire/Wirral hub)
West Lancs- 6 (new Lancashire/northern hub)
Warrington- 3 (supported by NW2)

This programme is FREE of Charge.

Primary Mastery Specialist Recruitment - Cohort 5

The window for the recruitment of Primary Mastery Specialists **will now open on Monday 29 April**.

Application details will be circulated via the usual networks and available on the [NCETM website](#).

Sustaining Mastery Programme

Schools that have been previously involved in the National Teaching for Mastery programme have been invited to participate in this work group.

Essential Criteria:

Each work group has an identified coordinator who ensures that:

- The group has an action plan
- The plan has to have agreed outcomes which includes clear identification of the mathematics or pedagogy to be covered
- All those in the group are responsible for reporting on the impact in their own school
- There is a point of contact with the hub
- There is a focus on leadership embedding TfM within their schools
- There is engagement with head teachers that leads to schools having structures that ensure that teaching for mastery can be developed throughout the school
- There are opportunities for head teachers to network with each other
- There are gap tasks for schools to do that are about embedding TfM across the school
- If teachers cannot attend the TRG, they will send another teacher in their place. There must be a representative.
- There will be some TRG events that include observation of lessons

Desirable Criteria

- There are opportunities for collaborative planning
- The Teaching for Mastery Lead or a Mastery Specialist may attend a group event-not leading but observing
- There is a launch meeting to explain the purpose of the programme and for the work groups to write their action plans
- Include research informed approach in classroom practice, share research or read relevant articles

Overarching goals:

- To further develop and embed Teaching for Mastery pedagogy in the classrooms of Work Group participants
- To further develop and embed Teaching for Mastery pedagogy in the classrooms of all (or specific year group) teachers
- To further develop and embed Teaching for Mastery pedagogy through strategic, organisational and systematic changes

This group is **FREE** of Charge.

For further information please contact Sarah McIlroy (Primary Mastery Lead) sarah.mcilroy@three-saints.org.uk



Want to keep up with everything that's happening in North West Maths Hub 3? Sign up for our mailing list here:

<http://eepurl.com/du2Inn>



or follow us on Twitter **@NWmathshub3**

China-England Exchange visit

Mastery Specialist teachers, Sarah Wilkins, Oughtrington primary school and **Doug Pitts**, Newfold CPS visited Shanghai last term for 14 days to learn from and share good practice with the Chinese teachers. During their stay Doug and Sarah had the opportunity to plan, teach and observe the children being immersed in teacher research group sessions.

On 12th January 2019, Newfold CPS hosted the two Chinese teachers, Ms Jie Chen and Ms Fei Hou, to continue the exchange visit.

Whilst they were at Newfold the teachers were based in the Y2 and Y6 classes and lead a number of 'open sessions'. Schools involved in the TFM programmes were invited to attend throughout the two-week period.

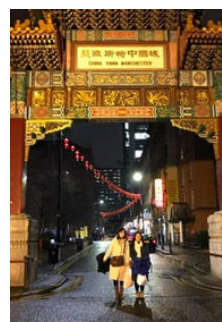
In total over 400 teachers and senior leads from across the NW attended one of the China/England Exchange - Modelling Mathematical Pedagogy Events.

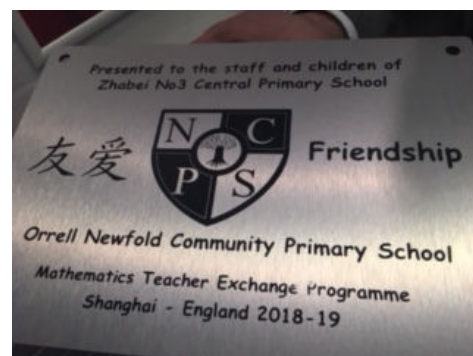
John Westwell, Director of the Maths Hub Programme from NCETM, Ian King and Suzanne Romano from DfE attended the showcase events on 23rd January.

Feedback from all sessions was extremely positive. Newfold staff and children did their school community proud, and represented the NW region (on behalf of NW Maths Hub 3) exceptionally well. The Mayor and representatives from Wigan MBC attended events throughout the week. We would like to thank all involved in making the exchange visit a resounding success.

A truly successful experience across England.

172 Chinese and English teachers exchanged this year. Direct benefit & mutual learning for 100s of schools and 1000s of students in both countries. Great to hear @NickGibbUK's passion to create a world class education for all students in England.





EYFS - Developing Mathematical fluency to raise expectation/number focus and progression (local project)

A significant amount of time has been spent by a number of EYFS practitioners on developing materials through classroom research and practice. An approach that is based on enrichment in conceptual understanding (rather than acceleration through mathematical content) has been designed and trialled by three teachers.

Research has been done into children's accumulation of early number concepts, with particular emphasis placed on the work of American based researcher Arthur Broody.



Within the materials designed, all children are expected to progress at a broadly similar pace through content, and differentiation is done through the processes and products expected, as well as through the development of thinking skills.

The approach has been identified by all involved as being highly effective, with a particular impact seen amongst struggling learners.

This programme has been successfully rolled out to over 106 settings and is now on phase 5 of the roll out which began in spring 2019.

The cost of the programme is £300 for the entire package. This is heavily subsidised by Maths Hubs

Phase 6 which will begin in Autumn 2019 is now full. Teachers and Senior leads will be invited to a launch in June 2019 to find out more.

EOI for phase 7 will be taken in September 2019.

Email lisa.bradshaw@three-saints.org.uk if you are interested in being part of this project in the future.

I Can Calculate... EYFS to Y1 Focussed (local project)

This project aims to help key groups of children to progress from using counting-in-ones to calculating strategies in early mathematics. We will identify the 'number sense relationships' that children must build to be able to manipulate numbers later; we will also explore how different calculation strategies are introduced to children. By developing a strong number sense and learning to manipulate numbers, children will experience early maths as finding patterns, being creative and thinking deeply, laying the groundwork for their future mathematical success.

In 2018-19, 22 schools have accessed this programme so far. A new cohort of 12 Sefton schools will take part in the summer term.

Further details to follow regarding an autumn term recruitment opportunity.

The cost of this programme is free of charge in the first instance.

EEF - Y2 Reasoning Project (collaborative project)

Although this probably seems a long time ago, we would like to thank the 20 schools from across the NW for taking part in the EEF Mathematical Reasoning Project between 2016 and 2017. The report has now been released by EEF and is available on their website.

The direct link is:

<https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/mathematical-reasoning/>



The programme had a positive impact on the pupils, irrespective of whether they were amongst the strongest or the weakest in the class at the beginning. By participating in the mathematical reasoning lessons, they made on average one extra month of progress than the children who did not participate in the programme. Although an extra month might seem a modest improvement, this was achieved without extra time dedicated to maths lessons and by teaching all children in the classroom. If you consider that the programme was delivered in about 12 lessons and children have about 180 mathematics lessons in one year this means that you changed less than 10% of what you did in the classroom and the children still progressed one extra month. The EEF concluded that this is a promising intervention and would like to see it implemented in more schools. The contribution made by all the schools, whether in the intervention or wait-list group, was extremely valuable and we hope that they are continuing to find benefit from the materials.

Excellent Maths Teacher Programme

We have now trained 110 teachers/Maths leads from across the NW in supporting them to build leadership capacity within their own school and beyond. Learning from the programme has been used to develop the participant and other teachers within their context ultimately impacting positively on them as a leader, staff in the school and pupil outcomes and attitudes to maths. The programme has proven to have significant impact for the staff receiving the training in terms of personally and professionally and has ultimately impacted on improving the provision for pupils that they teach.



We are currently training 40 teachers. This is an extremely popular programme and places are going fast. Please email Lisa Bradshaw if you or a member of your staff is interested in being part of this to begin in September 2019.

The overall aim of the programme is to share and develop effective mathematics practice across the NW providing a school led approach to improving teaching and leadership of mathematics.

For further details about booking on the programme for 2019-20 see here: <https://bit.ly/2UWPIG4>

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/resources/52060>

Primary Professional Development Materials from NCETM

Our popular mastery professional development resources for primary teachers have now been enhanced for number, addition and subtraction so that there's something for every year group. By the end of this term, the materials will cover the whole school year for every year group. **To view the resources:** <https://www.ncetm.org.uk/resources/46689>

EYFS Progression Charts - Now Available

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/resources/52500>

Intervention in a Mastery Context (local project)

NW Maths Hub 3 in association with the Every Child Counts Team has now trained 74 primary schools involving 194 participants in the Intervention In a Mastery Context programme (IMC).

This involved the teacher and TA, associated with the same class supporting each other to diagnose the mathematical gaps that existed within their class and being taught how to 'plug the gaps'. This intervention programme is written as a 'Keep up not catch up' intervention programme. As a result, the programme was 'tweaked' based on research and findings from previous cohorts. In the Autumn term of 2018-19 schools in Halton and 10 schools in Cheshire benefitted from this programme. This term we are extending the programme to Knowsley, Liverpool, Wirral and West Lancashire areas.

The expectation of the programme:

- The teacher and TA, working in the same year group, will attend ALL 3 days of face-to face training.
- It is aimed at Y3, Y4 and Y5 teachers/TAs.
- After each face-to face day the Teacher/TA will receive a ½ day release session to complete the diagnostic activities.
- Select a class that has the highest % of children below age- related expectations
- Ideally the TA will be strong and have some experience of delivering intervention, however this is not essential.

The cost of this entire programme is £400 which is heavily subsidised by Maths Hubs. This now includes 2x Maths PDL visits to your school and pre/post assessments.

Primary Maths and SEND (NEW innovation project for 2018-19)

Rationale:

Building on findings and feedback from the secondary SEND Work Group, it is evident that approaches to teaching, learning and assessment of SEND pupils need further exploring, particularly in primary to ensure that SEND pupils are included in the whole school approach to TFM.

A new programme will be developed focusing on P-scales and PIVATS (Performance Indicators for valued Assessment and Targeted Learning) and the Rochford review.

The project aims to:

- SENCOs/class teacher will develop, trial and evaluate approaches to teaching, learning and assessment of SEND pupils who are struggling to achieve mastery in the fundamental concepts which underpin all aspects of maths focusing particularly on P-scales and PIVATS (Performance Indicators for valued Assessment and Targeted Learning)
 - SENCOs/class teacher will develop pedagogical knowledge and understanding of the early stages of children's development of 'Number Sense'
 - Developing specialist subject knowledge when working with children with SEND
 - Developing teachers understanding of how specific learning difficulties, e.g. dyscalculia, can affect pupil's mastery of fundamental concepts
 - Develop the use of manipulatives and concrete modelling for SEND pupils
 - Use action research in teaching for mastery in the SEND context
 - Schools will develop a systematic and coherent approach to SEND provision as part of the whole school's mastery curriculum, so the participants will engage with all other staff, SLT, teachers and TA's to share their experiences and outcomes.
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- Schools will engage with parents to support their confidence and skills in supporting their child's learning in maths at home through games and activities
- Increase in SEND pupils confidence and attainment in mathematics due to effective teaching approaches. This will be evaluated using the Sandwell Early Numeracy Test pre and post programme for 3 case study pupils.

We are looking for **10 schools to be involved in this programme** from the following areas: **Sefton, St Helens, Liverpool, Wigan and Knowsley.**

Headteacher briefings to find out more will be held on:

Tuesday 18th June

Sefton venue TBC – 9:30 to 11:00am

Knowsley: The Suites Hotel, Ribblers Ln, Knowsley, L34 9HA – 1:30 to 3:00pm

Friday 21st June

Wigan: The Edge, Riveredge, Wigan , WN3 5AB – 9:30 to 11.00am

Further details to follow.

The programme will be **FREE of Charge**, this year whilst still in its development phase.

The programme will be led by Linda Lavagna-Slater

Target Audience: SENDCOs, KS1 and 2 Class teachers

Programme outline:

Participants will attend 1 full day and 3 half day development meetings to introduce, review and guide the programme.

Autumn term 2019

Develop programme with identified WG leads

Day 1 (TfM, assessment, SpLD, counting focus)

Spring term 2020

January ½ day (Mathematical language focus)

February ½ day (Number sense and fluency focus)

March ½ day (Early calculation focus)

During the programme participants will be given opportunities to:

- Develop an understanding of the fundamental concepts which underpin mathematics learning and how pupils with specific difficulties experience particular difficulties in making progress and mastering these concepts.
- Develop strategies' for addressing misconceptions or misunderstandings around the fundamental concepts
- Develop strategies to aid retention of understanding
- Support teaching and learning through the use of concrete modelling and manipulatives
- Be supported in disseminating the ideas and practices to the whole school staff
- Be part of and contribute to a collaborative and supportive network of teachers
- Prepare and run parent workshops to enable them to try out and enjoy 'mastery at home' activities with their children

If you are interested in securing a place on the Primary Maths and SEND programme please contact: Lisa Bradshaw (Maths Hub lead) – lisa.bradshaw@three-saints.org.uk



Aspiring Mathematics SLE Development Programme PRIMARY

This programme has been developed in response to requests from the Merseyside and Warrington Teaching School Network

The intended outcomes of the programme are:

- To equip all aspiring mathematics SLEs with the knowledge and skills to ensure maximum impact of school to school support.
- To share expertise and good practice and provide support within this learning community of aspiring mathematics SLEs.
- To enhance professional development as leaders of mathematics and SLEs.
- To ensure that SLEs provide consistent information and messages in their school to school support role.

The programme will consist of 3 CPD days which will focus on:

- Exploring in depth the key principles of teaching for mastery
- Providing effective school to school support with a focus on professional learning conversations, leading CPD in schools, identifying school needs, coaching and supporting schools to raise attainment in mathematics
- Keeping up to date with current research and initiatives in mathematics education

To take place on:

Day 1 - 24th January 2019, 9-3pm

Day 2 - 3rd April 2019, 9-3pm

Day 3 - 26th June 2019, 9-3pm

Cost: £50 per delegate to include: all course materials and refreshments.

Venue: Crosby Lakeside Adventure Centre, Cambridge Rd, Waterloo, Liverpool L22 1RR

Target Audience: Aspiring **Primary Specialist Leaders in Education** (SLEs)

To book a place please email: Paula Foster paula.foster@three-saints.org.uk

Primary Mathematics SLE Development Programme for Established SLEs

Following on from the success of the programme in 2017-2018, North West 3 Maths Hub are delighted to lead an accredited CPD programme for primary mathematics SLEs. **This programme is open to ALL SLEs from teaching schools across the NW region.**

This programme will equip SLEs with the knowledge and skills to ensure maximum impact of school to school support. It will enhance their professional development as leaders of mathematics and give them the opportunity to network and share good practice with a learning community of local SLEs.

The programme will consist of 3 CPD days which will focus on:

- Exploring in depth the key principles of teaching for mastery
- Providing effective school to school support with a focus on professional learning conversations, leading CPD in schools, identifying school needs, coaching and supporting schools to raise attainment in mathematics
- Keeping up to date with current research and initiatives in mathematics education

Key Dates:

• Wednesday 14th November 2018

• Tuesday 5th February 2019

• Tuesday 25th June 2019

Attendance at all three events will lead to accreditation by North West 3 Maths Hub.

This programme is FREE of Charge.

Venue: Halton Stadium

Previous delegates have commented:

“I would like to thank NW 3 Math Hub for providing training as it has been invaluable. I can honestly say that this has been the best and most effective CPD I have received to date.”

“Overall, I would say that my key gain has been the confidence I now feel when supporting other schools. I feel this programme has allowed me to provide effective training and advice as I now feel I can lead by example.”

“The information on the mastery approach has made things much clearer for me which has allowed me to support other schools with increased confidence.”

Primary Maths CPD opportunities:

Coming up in the Summer term:

Providing challenge for higher attainers, ensuring greater depth and meeting the higher standards.

Tuesday 7th May, 9-3.30pm, LKS2 (Years 3 and 4)

Thursday 9th May, 9-3.30pm, KS1 (Years 1 and 2)

Tuesday 21st May, 9-3.30pm, UKS2 (Years 5 and 6)

Further details: <https://bit.ly/2FpBdlf>

EYFS- Using a story/topic based approach to plan a mathematical sequence

Day 3 - Wednesday 22nd May 2019, 9-12 noon

Cost of 1 day CPD event is £150 per delegate, including all course materials and refreshments

Cost of 1/2 day CPD event is £70 per delegate, including all course materials and refreshments

To book places on any event contact: paula.foster@three-saints.org.uk | 07383089909

For full details of all our maths CPD visit: <http://bit.ly/2cWgFBV>

Primary Maths Subject Leader Network:

Thursday 27th June 2019 - 9.00am - 3.30pm, St Helens Hotel

Ensuring Challenge for Rapid graspers

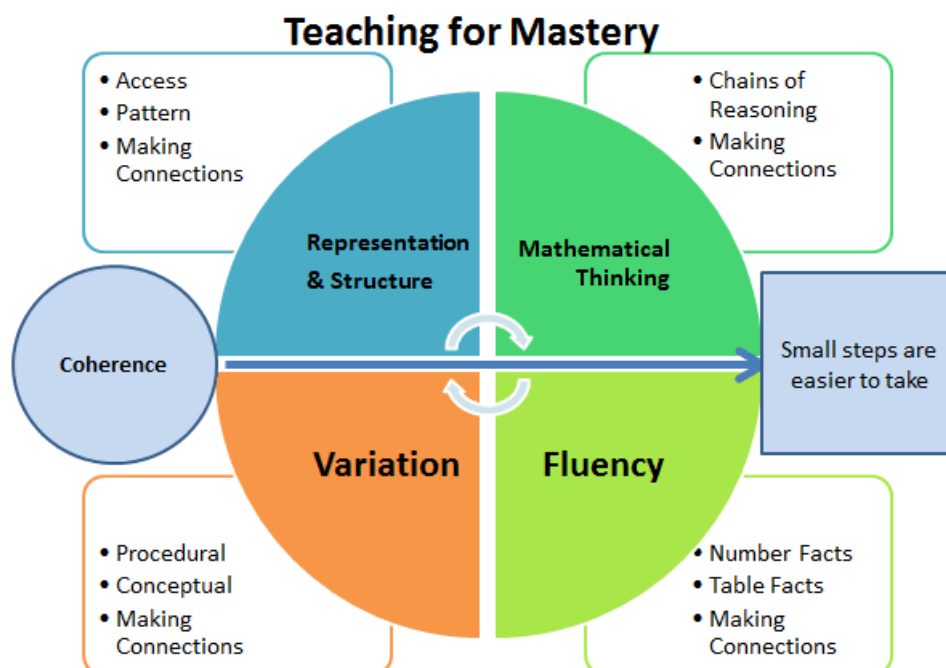
Effective mathematical transitions

Meeting the needs of all learners- providing 'keep up, not catch up' interventions, plugging the gaps to ensuring curriculum needs are met

Mathematical updates and current thinking.

Cost of 1 day CPD event is £150 per delegate, including all course materials and refreshments

To book places on any event contact: paula.foster@three-saints.org.uk | 07383089909



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. In 2017-18 sessions were delivered at a central venue drawing on primary and secondary schools from across Wigan, St Helens, West Lancashire, Sefton, Wirral and Manchester. The programme is being facilitated by a highly experienced Secondary maths lead - Lindsay Porter and Primary Maths SLE- Mary Anne Ramsbottom.

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.

NEW RESOURCE - to support the EEF Improving Maths in Key Stages 2 & 3 guidance report, they've just published a Red Amber Green (RAG) self-assessment guide. 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.



This project is free of charge.

This work group will run again in 2018-19 with a focus on Wigan, West Lancashire and Cheshire areas.

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>

FMSP: <http://furthermaths.org.uk/>

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

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

Power Maths: <https://www.pearsonschoolsandfecolleges.co.uk/Primary/Mathematics/AllMathematicsresources/Power-Maths/Power-Maths.aspx>

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

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

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



Teaching Schools Council
Every child is entitled to be in a great school

MEI Innovators in Mathematics Education

Maths HUBS

ACME Advisory Committee on Mathematics Education

POWER MATHS

Ofsted

AMET

Working with
National Centre
for Excellence in the
Teaching of Mathematics

FMSP Let maths take you further

JMC

MATHS NO PROBLEM!

Mα
The Mathematical Association
Supporting Mathematics in Education

ATM
Association of Teachers of Mathematics

(na)² MIC

NAMA
NATIONAL ASSOCIATION OF MATHEMATICS ASSISTANTS

[core:maths] support programme

Secondary National and Local Projects

Teaching for Mastery NCP - Mastery Lead Teachers and Work Group Schools

In 2019/20 all Maths Hubs are participating in a Network Collaborative Project addressing secondary mathematics teaching for mastery. As part of this project, Secondary Mastery Specialists in each hub area will be offering support to schools interested in developing teaching for mastery approaches in their maths departments. Each specialist who has completed the second year of their support and development programme will work with two departments. Maths Hubs are therefore now looking to recruit schools and their maths departments to participate in this exciting and innovative project as members of these Work Groups.

More information about the secondary teaching for mastery Work Groups is available on the NCETM website.

What is the background to these Work Groups?

In 2015/16, each Maths Hub identified a lead secondary school to participate in a China-England exchange, with teachers from these schools visiting Shanghai before hosting Shanghai teachers later in the year. The lead schools have continued to explore key lessons for developing teaching for mastery in secondary schools.

In summer 2016, Maths Hubs and the NCETM decided to build upon the successful Primary Mastery Specialist programme and develop a cohort of Secondary Mastery Specialists. Each Maths Hub recruited up to four teachers for the programme. In 2018/19, this cohort (Cohort 1) of some 100+ Secondary Mastery Specialists, after two years of working intensively on their own practice and developing their own department entered the third year of their programme. They have each been working with teachers from two departments throughout this year in a Work Group. In 2019/20 Mastery Specialists from both Cohorts 1 and 2 will be available to work with teachers from schools in a Work Group.

What is involved with being part of the Work Group?

Two teachers from each of two schools will become 'Mastery Advocates' in their own departments and will form the Work Group. They will work closely with a Secondary Mastery Specialist to understand the principles and practices associated with teaching for mastery and will begin to work in their own classrooms and then with teachers within their own departments to embed these principles and practices with the support of the specialist. Work will initially begin in Key Stage 3, but it is intended that this will extend to Key Stage 4.

Work will be bespoke for each department, tailored to the needs of the teachers and their own stages of development, but is likely to include:

- Mastery Specialists leading professional development sessions with the four Mastery Advocates (2 from each school) to enable them to understand the principles and practices associated with teaching for mastery
- Mastery Specialists supporting the Advocates to enable them to run professional development sessions for their department colleagues; this could include shared planning (and possibly co-leading) of sessions, with the intention that the Advocates take the leading role in working with their departments
- Advocates observing the secondary Mastery Specialist in the Specialist's own school
- The Mastery Specialist observing and giving feedback to Advocates – this might be of, and following, a lesson, a professional development session, a departmental meeting or a planning meeting
- Joint planning of individual lessons, sequences of lessons or longer units of work
- Mastery Specialists working alongside Advocates to support other departmental members, as appropriate
- Mastery Specialists working alongside Advocates to develop schemes of work and other departmental systems and structures to allow for a full teaching for mastery approach.

One of the Mastery Advocates from each school should be an experienced teacher with substantial responsibility in the department, and the drive and authority to lead change. This could be the Head of Department or Second in Department, the Key Stage 3 Lead or someone with a similar role.

The other Mastery Advocate from each school should have an interest in leading departmental developments and ideally would have substantial teaching experience, but in some circumstances could be a very keen, recently qualified teacher or a very committed non-specialist teacher.

What are the benefits for participating schools?

The Work Groups provide an opportunity for your school to engage in high-quality, sustained, collaborative professional development and participate in an important national project. The aim of these groups is to support participating teachers in developing teaching for mastery in their own classroom and across their department and to support the setting up of Teacher Research Groups (TRGs) in the participant schools. (Teacher Research Groups will comprise several or all members of the mathematics department and will typically explore aspects of pedagogy to determine what works well for them). As this Work Group is still in a development phase, it will also be important to learn lessons about the design and planning of TRG activities so that the processes can be refined for future use.

What are the expectations of participating schools and teachers?

Schools that wish to participate in the Work Group must commit to the following:

- The Work Group teachers will both be released to attend a minimum of four separate half-day meetings during the year (September 2019 to July 2020)
- The Work Group teachers will be released to participate in in-school meetings and development activities with the Mastery Specialist. The timings of these will be agreed locally and will amount to approximately four to six days between the two teachers during the academic year
- The Work Group teachers will engage in certain tasks (as planned and negotiated with the specialist) to support their ongoing professional development between each of the meetings
- The school's senior leadership will fully support the Head of Department and Work Group teachers to undertake these development tasks
- The Work Group teachers will contribute to the final reporting and evaluation of the Work Group. (Note: Feedback and comments, quoted from discussions and lesson observations, and data, qualitative or quantitative, will be anonymised before inclusion).

What are the costs for participation?

There is no fee or charge to participating schools to take part in this Work Group. The Maths Hub meets the cost of running the Work Group. Each department will receive £2000 to enable the Mastery Advocates to work with the Secondary Mastery Specialist and thus enable them to work within their own department.

Who can apply?

Any state-funded secondary school with an interest in developing mathematics teaching for mastery can apply. The school should identify two teachers (Mastery Advocates) who will be best placed to innovate in their own classroom and to lead developmental work across the department.

APPLICATIONS CLOSED 26TH APRIL 2019

How to apply

Schools interested in applying to be part of a Work Group in 2019/20 should complete the Expression of Interest form:

<https://bit.ly/2ZvYxp7>

Submit to Maths Hub NW3 if you are in the following areas: Liverpool, St Helens, Wigan, Knowsley and Sefton.

Wirral, Halton and Cheshire schools should also submit applications for NW3 in the first instance but will be supported by the new Cheshire/Wirral hub from September 2019.

Maths Hub staff will then make contact with more details about their selection process.



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

The aim will be for teachers to:

- appreciate the importance of looking further back in the locus of teaching rather than 'fire-fighting' in KS4.
- to analyse and unpick teaching issues underpinning some of the challenging topics and gain a deeper understanding of the pre-requirements for teaching them including the importance of pedagogical approaches
- understand and consider the implications for addressing these issues both in the immediate teaching of pupils demonstrating those difficulties but also the longer-term development of those skills across the curriculum.
- plan and teach more effective lessons that identify and address pupils' difficulties in relation to certain challenging topics.
- consider and implement changes to teaching across KS3 into KS4 so that pupils develop a more secure and deep understanding of those particular challenging topics.
- work collaboratively with colleagues both within school and outside to address these issues

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.
 - Tues 11th Dec 2018 1 - 4pm at Hotel Ibis Styles Haydock, 4 Piele Rd, Saint Helens WA11 0GR.
 - Thurs 17th Jan 2019 1 - 4pm at Hotel Ibis Styles Haydock, 4 Piele Rd, Saint Helens WA11 0GR.
 - Wed 20th Mar 2019 1 - 4pm at Hotel Ibis Styles Haydock, 4 Piele Rd, Saint Helens WA11 0GR.
 - Tues 18th June 2019 1 - 4pm at Hotel Ibis Styles Haydock, 4 Piele Rd, Saint Helens WA11 0GR.
- 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.

This programme will run again in 2019-20

Maths Hubs - the overall aim:

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

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.

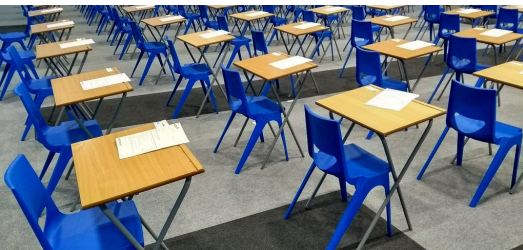
Recruitment rounds for this project will be opened in September 2018. We would particularly welcome applicants from Halton, Wirral, Liverpool Cheshire.

This programme will run again in 2019-20

This programme is FREE of Charge.

Supporting Post-16 GCSE resit

Further details to follow....



Secondary Heads of Department Meetings

Lindsay Porter (AQA associate and 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.

St Helens/Knowsley/Sefton and surrounding LAs: Thursday 27th June 2019 1-4pm, Rainhill High School, Warrington Rd, Rainhill, Prescot L35 6NY

Wigan/Bolton/Warrington and surrounding LAs: Thur 4th July 2019 1-4pm, Byrchall CPD Centre, Warrington Rd, Ashton-in-Makerfield, Wigan WN4 9PQ

Wirral and surrounding LAs: Tues 25th June 2019 1-4pm, Prenton High School for Girls Birkenhead CH42 6RS

Halton and surrounding LAs: Tues 2nd July 2019 1-4pm, Halton Stadium, Lower House Lane, Widnes WA8 7DZ

PRU/Special School Maths Network: Mon 24th June 2019 1-4pm, Oakfield Special school, Wigan

Details: <https://bit.ly/2MGmpTz>

These sessions are free of charge

Secondary Excellent Maths Teacher Programme NEW for 2018-19

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.

Sessions include 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.

The cost of this training is: £100 per session therefore £400 for the entire programme. This will include: all course materials, delivery, refreshments and lunch at all events. NW Maths Hub 3 will heavily subsidise this programme to ensure costs are kept at a minimum.

This programme has been extremely well received this year. 12 Secondary Maths teachers took part in this programme, with the final session taking place last term.

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. Marc Roberts, Cowley Language College, St Helens



EOI for this programme are now being taken for 2019-20.

See here further information: <https://goo.gl/pwSzdM>

Secondary Maths CPD Network (Whole school department opportunity)

As a result of extremely positive feedback from the previous 2 years, the secondary maths CPD network will continue in 2018-19. 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.

Summer Term 1: Wednesday 8th May 2019

Craig Barton @mrbartonmaths Mr Barton Maths Diagnostic Questions

Focus: In this workshop, Craig will reflect on what he has learned since the release of his book 'How I wish I'd taught maths', how the ideas he presented have evolved and developed, and what he is currently working on. This workshop will build on the one he presented at Rainford last academic year.

Summer Term 2: Date TBC

Andrew Blair @inquiryaths Head of Maths at Haverstock School and creator of the influential website www.inquiryaths.org

Focus: Here we will have an introduction to Inquiry Maths, how to run an inquiry in the classroom by looking and questions, conjectures, exploration and proof.

Full programme details: <https://bit.ly/2Bw0rhs>

Secondary Maths NQT Programme

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 across the patch.

Trainees will:

- Become more confident when planning and organising effective mathematical opportunities
- Have the opportunity to network with colleagues that are new to the progression
- Learn how to manage a smoothly run maths classroom, ensuring all learners are engaged
- Improve progressional understanding
- Have an improved understanding of what depth looks like leading to mastery
- Create and share good quality maths resources
- Motivate pupils to enjoy maths
- Learn to embed problem solving and develop reasoning opportunities in every lesson
- Reflect and evaluate practice ready to start their RQT year

This programme is being offered again in 2019-20.

Cost per individual session = £60.00. Total cost of attendance at all sessions (full programme 25 sessions) = £1,500

Details: <https://goo.gl/ay2Wqm>

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 Maths Hub NW3 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

Post-16 National and Local Projects

Post 16 Priorities for 2018 -19

- To develop a **Core maths network of teachers** to meet to share resources (aimed at teachers that sign up for AMSP courses for Core maths that we anticipate will run from September)
- To **Strengthen partnerships with all Teacher Training Providers** in our region and set up half day workshops for student teachers to get training on all Level 3 maths options open to students.
- Continue with **Making Sense of Maths** development programme.
- Continue with **Foundation Network meetings** that will run alongside Higher Tier Network meetings (aimed at those new to teaching GCSE or GCSE resit)
- Offer **in house CPD for large colleges** in priority areas for GCSE Resit
- **Developing A-level Teaching**
- **Developing parents as partners** - NEW innovation project

Further details to follow. For more information please contact Sarah Boyle: sarah.boyle@calderstones.co.uk

Supporting Core Maths- AMSP collaboration

Work Group 3 – TBC The University of Liverpool

Work Group 3 – TBC Xaverian College, Manchester

For further information about Core Maths Work Groups, please contact:

sarah.boyle@calderstones.co.uk – NW3 Post-16 Lead

m.bamber@liverpool.ac.uk – AMSP Regional Lead and Liverpool Work Group Lead

a.birch@xaverian.ac.uk – AMSP Regional Lead and Manchester Work Group Lead



AMSP and NW Maths Hub 3 Launch Event

Working in collaboration to improve mathematical provision, opportunity and engagement for all!

Wednesday 17th July - Liverpool (venue TBC)

Agenda

11.30-12.30pm: Arrival, light lunch and networking.

12.30-1.45pm: Welcome and introductions- AMSP and Maths Hubs personnel- How to get involved in FREE maths hubs programmes and access high quality professional development.

1.45pm-2.45pm: Exploring the market place and an opportunity to join Work Groups including maths competition.

2.45-3.30pm: Bobby **Seagull: The life-changing magic of numbers**

3.30-4pm: AMSP offer including what is Core Maths, evaluation and close.

Improving A Level Maths Pedagogy programme – In collaboration with NW1

Work Group 3 – TBC Xaverian College, Manchester

For further information about the Improving A Level Pedagogy Work Group, please contact;

esoper@csfc.bfet.uk – NW1 Post-16 Lead

a.jacques-williams@xaverian.ac.uk - Work Group Lead

Developing A Level Technology - In collaboration with NW1&2

Workgroup 3 - TBC Winstanley College, Wigan

Workgroup 3 - TBC Cardinal Newman College

For further information about the Developing A Level Technology Work Group, please contact:

esoper@csfc.bfet.uk – NW1 Post-16 Lead

vsims@loretogrammar.co.uk and Katie.Williams@Winstanley.ac.uk – NW2 Post-16 Leads

LHall@cardinalnewman.ac.uk – NNW Post-16 Lead

mjblaylock@aol.com – Work Group Lead (for both locations)

AMSP Update

Since the **Advanced Mathematics Support Programme** began in May 2018, they've been working hard to support schools and colleges with developing their provision for advanced maths qualifications.

The AMSP is a national programme funded by the Department for Education and managed by MEI. It continues the work of the Further Mathematics Support Programme and the Core Maths Support Programme.

The AMSP's central aim is to increase participation in level 3 maths qualifications – Core Maths, AS/A level Mathematics and Further Mathematics. We've already made some excellent progress, and you can read more about our work and achievements so far in this newsletter: <https://bit.ly/2Vt4T9B>

In-School 'Core Mathematics Roadshow' - Enrichment Opportunities for Y10 students

FREE 1-hour enrichment sessions held in your school, targeting Y10 students working towards GCSE grades 4 – 6. Focus on practical and real-world mathematics applications. For schools who are considering offering the Level 3 'Core Maths' qualification post-16.

- To help develop students' practical and real-world problem-solving skills.
- To help explain to schools the benefits of post-16 mathematics study, especially the Level 3 Core Mathematics qualification: <https://www.stem.org.uk/core-maths>

Further details:

Alongside the enrichment session with students, we would welcome the opportunity to spend some time with HoD / members of dept / SLT to discuss whether offering the Core Maths qualification in your school might be an option [Note: we DON'T promote the qualification directly to students]

Booking a visit: please contact Sarah Boyle: sarah.boyle@calderstones.co.uk (Post-16 lead for NW Maths Hub 3), or

Martin Bamber m.bamber@liverpool.ac.uk (AMSP Area Co-ordinator, NW)

Making Sense of Maths Programme

Following the success of last year, Maths Hubs NW1 and NW3 are delighted to be hosting 'Making Sense of Maths', a **FREE 5 day course running throughout 2018 and 2019**. This is a transformative course which has received great feedback and is suitable for teachers of GCSE Resit at colleges, those who are teaching students at the 3/4 borderline in schools and teachers in PRUs.

For further details please contact: Sarah Boyle: sarah.boyle@calderstones.co.uk

Connecting Initial Teacher Training with Maths Hubs

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 2018-19:

Edge Hill University, Liverpool Hope University, Liverpool John Moores and Chester University.

North West 3 would like to invite all primary maths lecturers, tutors, associate tutors and school mentors to be involved in Connecting ITT with Maths Hubs programme.

The programme comprises three face-to-face sessions and is designed for primary maths lecturers, tutors, associate tutors and school based student mentors who are involved in working with trainee teachers at university and on their school placements.

Throughout the programme, participants will engage in specific sessions focussing on:

- Understanding the work of Maths Hubs;
- Teaching for Mastery in mathematics-what this looks like in lessons and planning for mastery;
- Preparing trainee teachers for effective teaching of mathematics;
- Professional discussion and collaboration of practices across ITT providers to ensure that all primary trainee teachers are full prepared to meet the demands of teaching mathematics every day in school.

The dates for the programme are:

Day 1: Wednesday 13th February 9:00-3:00

Day 2: Wednesday 10th April 1:00-4:00

Day 3: Wednesday 5th June 1:00-4:00

Delegates will need to attend all three sessions. Venue to be confirmed.

Please note this programme is free of charge

If you wish to book a place, please email:

Paula Foster (Administrator): paula.foster@three-saints.org.uk

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 (TfM), 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 TfM 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.

Supporting sustainability within established Mathematics SSIF bids

Maths hubs across the country have been charged with supporting established SSIF Maths bids as funding/provision comes to an end. Maths hubs initially endorsed the school self-improvement bids to ensure all maths bids complemented the current work of maths hubs. As a way of ensuring sustainability maths hubs will be supporting capacity of current bids to ensure good practice is transferred, sustained and embedded where possible. Further information will become available in the autumn term.

