



Work Group Summary 2021/22

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East Midlands East Maths Hub Work Group Summary 2021/22

Primary schools:

Work Group	Project Summary
<u>Mastery Readiness Work Groups</u>	For schools who are not yet ready to join the Teaching for Mastery Development Programme and who meet the eligibility criteria, Mastery Readiness Work Groups focus on two key areas: <ul style="list-style-type: none"> • the development of effective leadership that will remove barriers and put in place structures to support change and teacher professional development in relation to teaching for mastery • development of classroom culture and attitudes to mathematics that will support a teaching for mastery approach, both on the part of teachers and their pupils.
<u>Primary Teaching for Mastery Development Work Groups</u>	This is part of the continuing programme to develop teaching for mastery in mathematics in primary schools. Each Maths Hub has a team of Primary Mastery Specialists who have taken part in national training. Each of these specialists leads a Work Group of 6 or 7 schools in developing their approach to teaching for mastery.
<u>Primary Teaching for Mastery Embedding Work Groups</u>	This work group is for those schools who participated in the previous year's Development Work Groups and involve scaling up teaching for mastery approaches from the lead participants' classrooms to ensure practices across the whole school are consistently adopted. This involves working with school leaders and classroom practitioners and establishing systems of professional development which support continual improvement and refinement within and across schools.
<u>Primary Teaching for Mastery Sustaining Work Groups</u>	This project brings together all the schools across the network that have previously participated in Readiness, Development and/or Embedding work groups. The focus is on helping primary schools to sustain their teaching for mastery approach for mathematics. It seeks to establish continuing support for collaborative planning and specialist subject knowledge development in primary schools and leadership within the school.
<u>The Mastering Number Programme</u>	The project aims to secure firm foundations in additive relationships and the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number that exemplifies good number sense. Attention will be given to key knowledge and understanding needed in Reception classes and progression through KS1 to support progression in the future. The Work Group Lead and lead participants will be supported by central training and resources. There is an expectation that teachers will provide a daily teaching session for all children of 10 to 20 minutes, in addition to their normal maths lesson and contribute to an online community to share practice and engage in critical reflection.

Secondary schools:

Work Group	Project Summary
<u>Secondary Teaching for Mastery Development Work Groups</u>	<p>This Work Group forms part of an overall Teaching for Mastery Programme designed to develop secondary mathematics departments that are well-led, high-performing and provide high quality professional development through collaborative working.</p> <p>Two teachers from each of the Work Group schools will become ‘Mastery Advocates’ within their own departments. They will work closely with a Secondary Mastery Specialist to understand the principles and practices associated with teaching for mastery and will be encouraged and supported to work with teachers within their own departments to develop and refine these principles and practices.</p>
<u>Secondary Teaching for Mastery Embedding Year Support</u>	<p>The Secondary Teaching for Mastery Embedding Year Support is available for those departments who participated in the previous year’s Secondary Teaching for Mastery Development Work Group, and who are beginning to embed their work on teaching for mastery. The Mastery Advocates (designated previously in the Development Work Group) will work closely with an assigned Mastery Specialist to help them embed teaching for mastery approaches across the whole department. The focus will be on constructing or refining a coherent development plan and supporting and leading the whole department in realising the aims of that development plan. The school will also be part of a Secondary Teaching for Mastery Embedding and Sustaining Work Group with other schools.</p>

<p><u>Secondary Teaching for Mastery Embedding and Sustaining Work Groups</u></p>	<p>Secondary Teaching for Mastery Embedding and Sustaining Work Groups are for all departments that have previously participated in Teaching for Mastery Development Work Groups and all Cohort 1-4 Mastery Specialist Departments.</p> <p>The focus will be on working on their planned developments as well as sharing and critiquing them with a group of schools in a professional learning community.</p> <p>This Work Group forms part of an overall Teaching for Mastery Programme designed to develop secondary mathematics departments that are well-led, high-performing and provide high quality professional development through collaborative working.</p>
<p><u>Secondary Subject Leadership Work Group</u></p>	<p>The purpose of this project is to offer focused support to secondary heads of department/subject leaders, to enable them to better understand and implement teaching for mastery approaches across their department, and to develop in their role as leaders of both pupils learning and teacher professional development.</p> <p>Participants in their first year of this project will be part of Work Groups exploring common themes, with bespoke adjustments appropriate to local contexts and needs.</p> <p>In the second and subsequent years of engagement, participants are expected to continue their participation as part of a Maths Hub-led subject leadership community.</p>
<p><u>Secondary Maths MAT Leads: leading and developing mathematics teaching</u></p>	<p>The purpose of this programme is to offer focused support to those who lead mathematics across multiple schools within a MAT to enable them to better understand and develop effective maths pedagogy approaches across those schools. The project will also support participants to develop their role as a leader of system change, curriculum change, and teacher professional development. This programme is suitable regardless of whether there is a MAT-wide approach to maths or whether schools determine curriculum approaches individually.</p> <p>Whilst it is recognised that those who lead maths across a MAT are often the subject lead for both primary and secondary, the key focus for this programme is their work with secondary teachers, although consideration will be given to transition and how the different phases relate to each other. Additionally, focusing on developing skills with one phase is likely to impact positively on work with other phases.</p> <p>Participants will engage with a centrally-led programme offered nationally, with the potential for regional provision dependent on numbers.</p>

<p><u>Y7 – 11 Coherence Work Groups: approaches to key topics</u></p>	<p>This project focuses on participant teachers working together to analyse, deconstruct and trace through the curriculum a selected key topic area, developing insight into effective teaching approaches, and considering the implications for longer term curriculum design.</p>
<p><u>Y5 – 8 Continuity Work Group</u></p>	<p>Work Groups in this project aim to strengthen the transition from primary to secondary school by focusing on curriculum and pedagogical continuity over Years 5 to 8. Central to the Work Group is the promotion of cross phase communication between teachers to address issues of maths knowledge and learning transition as distinct from pastoral considerations. The multiplicative reasoning resources and draft algebra resources provide a mathematical focus to the work, although individual Work Groups are free to focus on a different aspect of the KS2/3 curriculum.</p>

Post-16 institutions (including 11-18 schools):

Work Groups	Project Summary
<p><u>Supporting Post-16 GCSE Re-sit Work Groups</u></p>	<p>Work Groups in this NCP will explore effective ways of teaching key content to GCSE re-sit students, and effective ways of working with teachers of post-16 re-sit GCSE in the context of Covid recovery. Participants will, through collaboration and experimentation, deepen their knowledge and understanding of the curriculum demands of GCSE Maths and their awareness of pedagogical approaches that best support students taking GCSE for the second time.</p> <p>Participants' departments will, through shared good practice, become more effective at teaching GCSE re-sit, for example by wider and more confident use of teaching approaches such as bar modelling, multiplicative reasoning, realistic contextualisation or teaching for mastery approaches.</p>
<p><u>Developing Core Maths Pedagogy Work Groups</u></p>	<p>These Work Groups give teachers opportunities, through collaboration and experimentation, to develop improved teaching approaches that support the open-ended problem-solving skills Core Maths students need to develop, and to share these with departmental colleagues. Participant departments will support the role of Core Maths in promoting contextualised problem-solving and links to teaching in other subject areas.</p>
<p><u>Developing A Level Pedagogy Work Groups</u></p>	<p>This work group provides national support for the effective development of pedagogy in the teaching of A level Mathematics to support Covid recovery, to enhance the quality of teaching and the conceptual understanding of students, and the development of participants as leaders of A level teaching professional development in their own school or college.</p> <p>It aims to develop and sustain local communities of practice involving collaboration between teachers in developing pedagogy in their teaching of A level Mathematics.</p>

Local Leaders of Mathematics Education:

ITT /SKTM:

Work Group	Project Summary
<u>Strengthening Partnerships with ITT providers Work Group</u>	<p>One of the strategic goals of the Maths Hub Programme is for Maths Hubs to work with a range of partners to support effective initial teacher training for maths trainees. Work within this project takes place in conjunction with leaders of maths provision in ITT institutions to strengthen partnerships and work collaboratively to support the deepening of understanding of teaching for mastery for ITT trainees. This work group operates on a wider regional basis in partnership with East Midlands West and East Midlands East Maths Hubs. Anyone involved in the training of ITT students is able to be part of this project.</p>
<u>Specialist Knowledge for Teaching Mathematics (Early Years Teachers) Programme</u>	<p>The purpose of the programmes in this project is to support Early Years teachers in developing specialist knowledge for teaching mathematics, thus enabling them to understand, teach and support pupils in maths in the classroom. There are two types of SKTM Early Years pathways:</p> <ul style="list-style-type: none">• Pathway One: Number Patterns and Structures• Pathway Two: Pattern, Shape, Space and Measures. <p>Each pathway has three core elements, three associated pedagogy sessions, and a task to support the transition from theory to practice. There is also a final core unit that aims to review quality provision. The intention is that each pathway would be the equivalent of a four-day programme. Participants could be encouraged to do one pathway one year and the other the following year.</p>
<u>Specialist Knowledge for Teaching Mathematics (Primary Teachers) Programme</u>	<p>The purpose of the programmes in this project is to support primary teachers in developing specialist knowledge for teaching mathematics, thus enabling them to understand, teach and support pupils in the maths classroom.</p> <p>The programme is based on five core primary modules:</p> <ul style="list-style-type: none">• Policy and impact on practice, Number sense, Additive reasoning, Multiplicative reasoning, Fractions.

<p><u>Specialist Knowledge for Teaching Mathematics (Primary Teaching Assistants) Programme</u></p>	<p>The purpose of the programmes in this project is to support primary teaching assistants (TAs) in developing specialist knowledge for teaching mathematics, thus enabling them to understand, teach and support pupils in the maths classroom.</p> <p>This year, it will focus on the following mathematical areas:</p> <ul style="list-style-type: none"> • What is effective in the learning and teaching of mathematics? • Number sense (part 1), • Number sense (part 2) • Additive reasoning • Multiplicative reasoning • Fractions.
<p><u>Specialist Knowledge for Teaching of Mathematics (Primary Early Career Teachers)</u></p>	<p>This project is designed to support Early Career Teachers (teachers in their first two years of teaching)</p> <p>It is expected that the local offer will select from one (or more if multiple NCPs are running) of the following themes:</p> <ul style="list-style-type: none"> • designing effective learning and teaching in mathematics (building early number concepts) • designing effective learning and teaching in mathematics (additive reasoning) • designing effective learning and teaching in mathematics (multiplicative reasoning). <p>The aim of this community is to work deeply on one area of maths, drawing in the associated pedagogy, and will include lesson analysis and lesson design. It is expected that this work would be linked to the Early Career Framework so could be viewed as a two-year offer.</p>
<p><u>Specialist Knowledge for the Teaching of Mathematics (Secondary Early Career Teachers)</u></p>	<p>This project is designed to support Early Career Teachers (teachers in their first two years of teaching)</p> <p>It is expected that the local offer will select from one (or more if multiple NCPs are running) of the following themes:</p> <ul style="list-style-type: none"> • designing effective learning and teaching in mathematics (structure of the number system) • designing effective learning and teaching in mathematics (operating on number) • designing effective learning and teaching in mathematics (multiplicative reasoning) • designing effective learning and teaching in mathematics (sequences and graphs) • designing effective learning and teaching in mathematics (statistics and probability) • designing effective learning and teaching in mathematics (geometry) <p>The aim of this community is to work deeply on one area of maths, drawing in the associated pedagogy, and will include lesson analysis and lesson design. It is expected that this work would be linked to the Early Career Framework so could be viewed as a two-year offer.</p>

<p><u>Specialist Knowledge for Teaching Mathematics (Secondary Non-Specialist)</u></p>	<p>The programme will support non-specialist teachers in developing specialist knowledge for teaching maths, thus enabling them to understand, teach and support pupils in the maths classroom. The programme is aligned to the NCETM teaching for mastery pedagogy and is based on six key themes:</p> <ul style="list-style-type: none"> • Structure of the number system • Operating on number • Multiplicative reasoning • Sequences and graphs • Statistics and probability • Geometry.
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Professional Development:

Programme	Summary
<p><u>NCETM Professional Development Lead and Accreditation Programmes for Early Years, Primary, Secondary and Post-16 (Advanced Level, Core Maths)</u></p>	<p>Participants undertake to plan, lead and evaluate a professional development programme for a group of teachers during the course of the programme, and to record their planning, evaluation and reflection in an Accreditation Evidence Document (AED). Successful completion of the programme and satisfactory completion of all tasks and related paperwork will result in the participant being accredited as an NCETM Accredited PD Lead. Beyond the core programme, participants will have the opportunity to pay to work with the University of Chester and gain an academic award (PG Cert) for completing an enhanced version of the programme.</p>
<p><u>NCETM School Development Lead Programme</u></p>	<p>This project aims to support mathematics leads whose role is to lead change in a school or group of schools other than their own; refining their approaches to maths school development work including drawing on the expertise of, and aligning more with approaches used in, the Maths Hubs Programme.</p>