

Maths Conference – Friday 14th June 2024

PRIMARY

Workshop Title and Description	Workshop Leads
<p>Workshop A: Effective use of manipulatives and representations</p> <p>This interactive workshop provides the opportunity to explore how and when we can use manipulatives and representations across the Primary phase to deepen pupils understanding of a variety of mathematical concepts.</p>	<p>Ben Stanley Primary Mastery Specialist and Work Group Lead for East Midlands East Maths Hub</p>
<p>Workshop B: Oracy in Maths</p> <p>This session will give an overview of the Oracy Research and Innovation Work Group. We will explore: maths talk; sustaining shared thinking and dialogic teaching approaches. We will also explore a range of strategies and resources that support mathematical thinking.</p>	<p>Erica McGinley Primary Mastery Specialist and Work Group Lead for East Midlands East Maths Hub</p>
<p>Workshop C: Questioning Techniques - How can the Ready to Progress materials be used to support a scheme?</p> <p>This workshop will explore how the DfE Non-Statutory Guidance and NCETM Curriculum Prioritisation Materials can be used alongside existing schemes of work to support teachers with effective planning and assessment.</p>	<p>Zoe Whetton Primary Mastery Specialist and Work Group Lead for East Midlands East Maths Hub</p>
<p>Workshop D: Maths Provision in EYFS/Year 1</p> <p>This workshop will explore the importance of planning for mathematical mastery within the indoor and outdoor environment. It will explore how to support children in EYFS and KS1 to apply, consolidate and enrich their mathematical knowledge and skills.</p>	<p>Kirsty Stewart and Jayne Carter Work Group Leads for East Midlands East Maths Hub</p>
<p>Workshop E: NRich</p> <p>Although Ofsted frequently highlights concerns regarding the provision of problem-solving in schools, the issue persists. To help schools deliver consistently high quality, engaging problem-solving experiences for their learners, NRICH has launched Problem-solving Schools; an exciting new initiative featuring the Problem-solving Schools Charter (a helpful framework, developed with teachers, covering five key aspects of provision) and accompanying support and resources. In this hands-on session, the Director of NRICH Dr Ems Lord will share her top tips for making the most of Problem-solving Schools, and NRICH's free resources in general, to support every school to value, nurture and celebrate problem-solving skills.</p>	<p>Dr Ems Lord Director of NRICH</p> <p>Dr Ems Lord undertakes research into mathematics education and has taught mathematics across the key stages, from Early Years to A Level Further Mathematics.</p>

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CROSS PHASE

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<p>Workshop F: Maths Anxiety</p> <p>Maths anxiety is associated with reduced attainment and avoidance that can ultimately define career decisions and opportunities. This workshop will give an overview of factors that predict maths anxiety and contribute to the development of it. Focusing on empirical evidence, it will also cover potential approaches to reduce maths anxiety from a psychological perspective.</p>	<p>Dr Thomas Hunt and Dr Dominic Petronzi</p> <p>Internationally recognised researchers in the field of maths anxiety. They undertake work in the Mathematics Anxiety Research Group at the University of Derby.</p>
<p>Workshop G: Bar Modelling</p> <p>This session will explore how the bar model can be used as a core representation all the way from the Early Years to GCSE. We will look at how we can represent mathematics through this versatile model and how we can help students understand key structures from basic addition to algebraic expressions.</p>	<p>Liam Bielby and Clair Horner</p> <p>Assistant Maths Hub Leads for East Midlands East Maths Hub</p>
<p>Workshop H: Creating an inclusive and accessible classroom to support learners with SEND</p> <p>The aim of this session is to raise awareness of the key pedagogical features as a way of ensuring that all learners can access and engage with the maths curriculum. We will look at strategies and adaptations that can be easily used to engage and motivate pupils with a wide range of SEND to achieve their maths potential.</p> <p>The session will highlight:</p> <ul style="list-style-type: none"> - How to create an inclusive environment - Strategies to scaffold learning - The importance of language - How to use the ideas of Piaget and Vygotsky as key features in your classroom practice - A variety of lessons that can be used with a range of learners 	<p>Alan Edmiston</p> <p>Alan began teaching secondary science in 1991 and became involved in a maths project in 1997 that allowed him to teach in Key Stage 1 and 2. This experience enabled him to better support the lowest attaining students in Key Stage 3 and since then he has become interested in supporting SEND learners. Currently he is involved in SEND work for the Maths Hubs as a Research and Innovation Lead and most of his teaching over the last few years has been in Special Schools and Alternative Provision settings.</p>

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SECONDARY/POST-16

Workshop Title and Description	Workshop Leads
<p>Workshop I: Coherence Across Subjects During this session, we will explore the fundamental mathematical concepts embedded within cross-curricular subjects.</p> <p>We will identify challenges in teaching mathematical concepts across subjects and explore potential solutions. By the end of the session, you'll not only have a clearer grasp of the cross-curricular opportunities but also a toolkit of practical solutions to enhance your teaching methods.</p>	<p>Olivia Rose Work Group Lead for East Midlands East Maths Hub</p> <p>Katie Staples Maths Teacher, Redhill Academy</p>
<p>Workshop J: "Comma, not a full stop" Emma will explore how the <i>Cross-phase Supporting Learners to Achieve a Level 2 Work Group</i> is supporting teachers of previously lower attaining students in Y10/11 and Post-16. The Work Group aims to improve outcomes for all by considering continuity of maths pedagogy for these learners.</p>	<p>Emma Bell Director for Post-16 GCSE/FSQ NCETM</p> <p>Emma has taught and managed maths in Secondary Schools and Further Education, as well as leading PGCE studies for teachers in the lifelong learning sector. She specialises in professional development for teachers of post-16 GCSE and Functional Skills maths.</p>
<p>Workshop K: Mathematical Thinking and Reasoning Targeted at Lower Attaining Students. During this workshop we will explore ideas and resources to encourage Mathematical thinking and problem solving in lower attaining groups across KS3 and KS4.</p>	<p>Susan Wall Retired Maths Teacher specialising on Rich Tasks</p> <p>Kate Auld Assistant Maths Hub Lead for East Midlands East Maths Hub</p>
<p>Workshop L: Algebra Tiles Algebra tiles can provide a means by which students can visualise and represent algebraic expressions, these manipulatives have the potential to offer students an accessible way of understanding and using symbolic algebra. Students can then apply the understanding they have gained from experience with the tiles and test this out in new situations that involve negative terms with the more abstract representations of expressions and equations. In this session I will discuss and share my experiences of introducing the tiles and work through a number of topics including expanding, factorising, solving and even higher GCSE topics e.g. completing the square. They have truly revolutionised the way I teach these topics and I have seen a much better engagement in lessons and the deeper understanding the pupils gain ensures the information lasts in their memories longer.</p>	<p>Claire Cooke Assistant Maths Hub Lead for East Midlands East Maths Hub</p>

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SECONDARY/POST-16

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Workshop M: Core Maths During this workshop we will explore the Level 3 Mathematical Studies Qualification (known as core maths). This is an opportunity to explore the content and why this should be offered to Post 16 students.	Alex Poll Professional Development Lead
Workshop N: NCETM Professional Development Materials at Key Stage 4 In this session we'll think about mathematical functions, what they are and what it means to get better at them. We'll use some classroom tasks from the NCETM's Key Stage 4 Professional Development materials to explore and consider the growth of functions through the secondary curriculum.	Richard Perring Assistant Director for Secondary NCETM As well as classroom experience, Richard has worked in ITE and written and produced a variety of resources. He now works across a range of Secondary Programmes for the NCETM.
Workshop O: Prime Factor Tiles During this practical, hands on workshop we will explore how prime factor tiles can be used to further explore mathematical structure in related concepts across Key Stages 3 & 4.	Louise Elder Assistant Maths Hub Lead for East Midlands East Maths Hub