

Every Maths Hub is again this year organising Work Groups within national projects. These span the school and college phases, and address a range of themes. All Work Groups are broadly similar in structure, with schools and teachers at hub level engaging in professional development activities around an agreed targeted outcome. Just as in earlier years, results and successes will be measured and evaluated, and will inform subsequent years' projects. Contact your local hub to find out which projects they are running.

HOW TO TAKE PART: If you'd like to participate in any of this work, then contact your local Maths Hub to find out where opportunities still exist: www.mathshubs.org.uk.

EARLY YEARS

Supporting effective transition from Reception to Year 1:

Best practice in Early Years can build a secure foundation in maths for transition into a teaching for mastery approach in Year 1. Work Groups in this project will consider the curriculum – what children need to know and understand, approaches to planning and the inclusion of all children, and appropriate resources and contexts for effective learning.

PRIMARY

Teaching for Mastery – Maths Hubs are exploring several models of practice:

- Establishing Work Groups of teachers from schools who are: (i) becoming 'mastery ready', (ii) who are introducing teaching for mastery, or (iii) continuing and embedding work started in 2018/19
- Refining understanding of lesson design, in Work Groups which make use of textbooks and the mastery professional development materials produced by the NCETM and Maths Hubs
- Exploring intervention in a mastery context, where Work Groups use case studies and research to devise effective interventions
- Considering how teachers can plan for the teaching of maths in mixed age classes, where Work Groups will use current work, resources and case studies in this area.

STRADDLING THE TRANSITION

Year 5 to 8 Continuity: Primary and secondary teachers collaborate on this project, to ensure continuity of mathematical learning from Year 5 to Year 8. Work Groups will take an aspect of the mathematics curriculum or a pedagogical approach as the focus for their work and use that as a framework for exploring improved maths progression for pupils between Years 5 and 8.

SECONDARY

Teaching for Mastery: What does effective mastery of maths look like for secondary school students? Work Groups will probe this area, with participants becoming 'Mastery Advocates' within their schools and developing their pedagogy and knowledge through bespoke support from a Mastery Specialist.

Challenging Topics at GCSE: Tackling GCSE Maths presents challenges for students and teachers alike. Work Groups will explore a single GCSE topic, establishing what the issues and the common misconceptions are, how these might be addressed, and how teaching in KS3 might improve understanding for this topic in KS4.

Mathematical Thinking for GCSE: Work Groups offer teachers and their departments nationally coordinated support to address the reasoning and problem-solving challenges of the maths curriculum and its assessment at GCSE.

POST-16

Supporting Post-16 GCSE resit: These Work Groups get to grips with a variety of methods designed to support teachers of students resitting their Maths GCSE.

The three Level 3 projects explained below are run by Maths Hubs in partnership with the Advanced Maths Support Programme (AMSP).

Supporting Core Maths: Teachers either new to Core Maths or looking to expand existing provision can join Work Groups exploring the philosophy and practicalities of this qualification.

Embedding Technology in Level 3 Mathematics: Effective embedding of technology in the teaching of Core Maths, A level Maths and/or Further Maths enhances teaching and students' conceptual understanding. These Work Groups provide teachers with practical advice to develop their own technology skills and their students' mathematical comprehension.

Developing Pedagogy in A Level Mathematics: The demands of A level Maths are explored, as participants develop knowledge of the content and requirements of the specification and understand the purpose of the overarching themes.

SPECIALIST KNOWLEDGE FOR TEACHING MATHEMATICS (SKTM)

There's more to subject knowledge than knowing how to do the maths yourself. Teachers and teaching assistants need to have a clear understanding of how children grasp and retain mathematical concepts. This year, Maths Hubs are running Work Groups in this area for EY practitioners, primary teachers, and TAs in primary schools.

ITT PROVIDERS

In each Maths Hub area, a network of ITT providers will be created, to develop working partnerships, spread good practice, and share work on mastery with trainee teachers.

LEADERSHIP IN MATHS EDUCATION

Every Work Group is led, at local level, by a teacher experienced in leading maths-specific CPD. Across the Maths Hubs Network, programmes exist to enhance this leadership capacity and to support those seeking to become local leaders of maths education (LLMEs). These programmes include:

- Developing Mastery Specialists in primary and secondary schools
- Running national workshops for maths SLEs to explore models to maximise school improvement activities, and learn from each other.
- Supporting teachers who have attained, or who are seeking to achieve, NCETM Accredited PD Lead status
- Maintaining local networks so local leaders of maths education can stay in touch.