

Specialist Knowledge for Teaching Mathematics Programmes

(Early Years, Primary, Teaching Assistants)

Programme Information Sheet

NCP 19-24



Overview

Work Groups in this project – which are available for Early Years practitioners, primary teachers, and TAs at EY and primary – will develop their mathematical subject knowledge in conjunction with understanding the pedagogy that underpins the teaching of it. Understanding of mathematical structures will be explored so participants gain a detailed understanding of how children learn early mathematical concepts.

This is a continuation of NCP17-14 and NCP18-20/21 and the Early Years pilot project. This year, the developed resources will be trialled across the Maths Hubs Network with the aim of refining the materials to create a standardised modular programme which can be designed to address local needs.

Who is this for?

The programme is aimed at individuals or groups of individuals who would like to develop their specialist knowledge for teaching mathematics. This may be particularly relevant for teachers/TAs new to teaching mathematics.

It is available for practitioners, teachers and TAs across EY and primary.

What is involved?

Classroom practice will develop through a series of gap tasks where participants try out activities to promote depth of understanding, reasoning and fluency; these might include pupil interviews, lesson study and work scrutiny. Research and evidence are used to inform their practice and participants are encouraged to share these more widely in schools to support discussion on current policies and approaches.

The programme will have the following elements:

- Independent study and setting-based work including gap tasks and evaluation
- Online discussion as part of a professional community.

Intended Outcomes

As a result of this project, participants will not only be able to 'do' mathematics, but will also have the appropriate pedagogical knowledge to teach and support their pupils well. Participants will develop both their knowledge about maths and knowledge about the teaching of maths, developing better pedagogy and being aware of how pupils learn, and how to teach the content most effectively. Classroom practice will develop through participants' engagement with gap tasks between meetings, trying out activities with pupils to promote understanding, reasoning and fluency.

TAs will develop knowledge of the pedagogy of maths teaching and understand how children think and where their misconceptions stem from. Participants will understand the role that certain representations, models and manipulatives can play in the development of pupils' understanding of number and calculation, particularly place value and proficiency. Those involved will get better at working within classes and with small groups of pupils; they will gain knowledge of practical ways to apply the skills and understanding developed during the programme.

The wider context

The Maths Hubs Network, across England, works on national projects by running local collaborative Work Groups of teachers around national maths education priority areas. One such priority is to improve the subject knowledge of all adults in maths classrooms.

Work Groups use a common evaluation process, which collectively provides a body of evidence on the project's outcomes. Your participation in this Work Group will contribute to your own professional learning and that of your colleagues, as well as contributing to the improvement of maths education at a national level.

Expectations of participants and their schools

Participants are expected to be working as classroom teachers or teaching assistants. TAs should be working in a classroom environment and/or involved with individual or small group support and intervention

All participants are expected to attend all the sessions and complete gap tasks in their schools between the sessions. They will also be asked to keep a learning log for their own use and contribute to the national evaluation process, probably through a short online survey after the Work Group has finished.

Funding

There is no cost to schools to join this work group and all sessions and resources are free of charge.

Who is leading the Work Group?

John Dudgeon and Nick Tinsdeall – University of Cumbria

If you're interested, what next?

Please email NNWcoordinator@queenkatherine.org to register your interest.