

Secondary: Challenging Topics at GCSE



OVERVIEW: Feedback from teachers and GCSE exam analysis indicates there are key areas of the curriculum that students continue to find challenging. This Work Group will explore effective ways of teaching some of these topics, both to address the immediate needs of the incoming KS4 students, but also, crucially, taking a longer-term view by considering development in KS3. This year there will be a particular focus on algebra and negative numbers.

The aim will be to get to grips with all the underpinning content of these topics, exploring misconceptions and effective pedagogical approaches for each element. The approaches also contribute towards the development of a generic process which departments could use as a 'toolkit' to lead the improvement of teaching and learning in any identified area of the curriculum students find challenging.

WHO IS IT FOR?

Secondary school maths teachers and Heads of department. Participants in the 2018-2019 Work Group are welcome to participate again.

WHAT IS INVOLVED?

- Four half day workshops, followed by 1 full day workshop in the Summer term.
- Gap tasks.

INTENDED OUTCOMES

- Teachers will hone their ability to analyse what it is about certain topics that makes them more challenging, and be able to apply these analytical skills more widely in the curriculum.
- They will deepen their understanding and classroom practice in relation to teaching and learning styles, most appropriate to effective learning in the particular topic areas.
- Departments will have a model for improving the teaching and learning and curriculum provision for any area of the curriculum their students find challenging.
- Students in the participant teachers' classes will become more confident in their own skills and abilities, developing a deeper and more connected understanding of prior content, thus enabling them to better tackle the challenging topics.

THE WIDER CONTEXT

This national collaborative project focuses on one of the national maths education priority areas relating to '*supporting schools and colleges to address the immediate challenge of teaching GCSE mathematics.*' Each Maths Hub participating in a national project runs a local Work Group, where teachers come together over a period of time to work on areas defined by the project. All Work Groups are subject to a common evaluation process, which collectively provide a body of evidence on the project's outcomes. So, your participation in this Work Group will contribute to your own professional learning, and that of your school colleagues, as well as making a contribution to the improvement of maths education at a national level.

EXPECTATIONS OF PARTICIPANTS AND THEIR SETTINGS

- Attend the Work Group sessions and carry out a series of follow-up tasks within their own classrooms related to teaching the challenging topic being explored.
- Work with other members of their maths department, as appropriate, to develop the teaching of the challenging topic.
- Contribute to Work Group evaluation processes by completing session evaluations and a participative summative report.

WHO IS LEADING THE WORK GROUP

The Work Group will be run by Mark Simmons - Assistant Professor, University of Nottingham.

VENUE

The Minster School
Nottingham Road
Southwell
Nottinghamshire
NG25 0LG

DATES/TIMES

Tuesday 2nd October 2019, 9.30am to 12.30pm (Minster)
Wednesday 15th January 2020, 9.30am to 12.30pm (Minster)
Monday 9th March 2020, 9.30am to 12.30pm (Minster)
Wednesday 22nd April 2020, 9.30am to 12.30pm (University of Nottingham)
Wednesday 1st July 2020, 9.30am to 3.30pm (Minster)

FUNDING

The programme will be fully funded through the East Midlands East Maths Hub, however there will be a £15 per session fee for non-attendance to cover costs.

IF I'M INTERESTED, WHAT NEXT?

To reserve your place, please use the link below to our online booking system. For further information, please contact Julie Naidu, Maths Hub Coordinator, j.naidu@minster.notts.sch.uk tel: 01636 817 377.

BOOK NOW