

## Secondary: Challenging Topics at GCSE

### OVERVIEW

In many respects, the GCSE, first taught in autumn 2015 and examined in summer 2017, still feels new, and throws up new challenges for teachers and pupils alike. In 2017-2018 there was a Maths Hubs pilot project which explored ways of teaching those GCSE maths topics teachers found challenging to teach, and students found challenging to learn. In 2018-2019, this work will continue. Work Groups will explore effective ways of teaching some of these topics, both to address the immediate needs of the incoming KS4 pupils, but also, crucially, taking a longer-term view by considering development in KS3. The aim will be to get to grips with all the underpinning content of a topic, exploring misconceptions and effective pedagogical approaches for each element.



### WHO IS THIS FOR?

Secondary school maths teachers and Heads of department. Participants in the 2017-2018 Work Group are welcome to participate again.

### WHAT IS INVOLVED?

4 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.  
Through detailed study of one topic, teachers will develop a sharper understanding of what it means for teaching to be 'effective' and how this might be evaluated in class and through assessment in all its forms.  
Pupils 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

Collectively, the network of Maths Hubs across England work on projects around national maths education priority areas. One of those priorities includes the phrase 'supporting schools and colleges to address the immediate challenge of teaching the 9-1 GCSE.' 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 provides 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. This Work Group extends work started in all Maths Hubs in Autumn 2016.

## **EXPECTATIONS OF PARTICIPANTS AND THEIR SETTINGS**

It is imperative that participants attend **all** Work Group sessions and carry out a series of follow up tasks within their own classrooms related to teaching the challenging topic being explored.

Participants will also work with other members of their mathematics department, as appropriate to develop the teaching of the challenging topic.

Schools will be expected to commit to the release time for participants, and support them to action follow tasks when back in school.

## **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.

## **WHO IS LEADING THE WORKGROUP?**

This workgroup will be run by Mark Simmons, PGCE Maths Tutor, University of Nottingham.

## **VENUE**

The Minster School  
Nottingham Road  
Southwell  
Notts  
NG25 0LG

## **DATES/TIMES**

Tuesday 9th October 2018, 9.30am to 12.30pm  
Tuesday 15th January 2019, 9.30am to 12.30pm  
Wednesday 27th March 2019, 9.30am to 12.30pm  
Tuesday 21st May 2019, 1.30pm to 4.30pm  
Tuesday 9th July 2019, 9.30am to 3.30pm

## **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 Administrator, [j.naidu@minster.notts.sch.uk](mailto:j.naidu@minster.notts.sch.uk) tel: 01636 817 377.

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