

# Secondary: Challenging Topics at GCSE

## OUTLINE

Work Groups in this project will focus on participant teachers working together to 'unpick' (i.e. analyse, deconstruct and trace through the curriculum) a challenging topic from GCSE Mathematics.

Participants will develop insight into the associated difficulties and misconceptions to support teaching in the short term, but also consider the implications for longer term curriculum design.

## DETAILS

### WHAT IS INVOLVED?

Each Work Group will follow a 'Workshop - School-Based Task' cycle. Workshops will provide opportunities for teachers to identify and analyse a key challenging topic area, to work collaboratively to develop pedagogical approaches to it, and to evaluate and discuss after teaching. There will be school-based tasks for participants to engage with between each meeting.

### WHO CAN APPLY?

Participants should be secondary school teachers of GCSE Maths. Ideally two teachers will attend from each participating school. Teachers who have previously participated in Work Groups in this project are welcome to take part again in 2020/21.

### WHAT ARE THE EXPECTATIONS?

Schools must be able to commit to the full academic year's programme. This will likely be a blend of face-to-face and online support this year. support across the academic year, as well as classroom and school-based activity.

Participants must also be supported by their school leadership to explore outcomes from the project with other colleagues in their school.

### COVID RECOVERY

The school year 2020/21 will be substantially affected by the impact of the coronavirus outbreak. The knock-on effects on school life and teachers' working lives can't be predicted with any certainty. So, all Maths Hubs work will be flexible and adapt to changing realities. There's likely to be more live online collaboration, often including use of video, for example. In addition, Work Group content will be adjusted to address schools' recovery from coronavirus-related disruption alongside work on the central maths subject matter of each project.

### WHAT IS THE COST?

The Challenging Topics at GCSE Work Group is fully funded through the East Midlands East Maths Hub so is free to participating schools.

### WHO IS LEADING THE WORK GROUP?

Kate Auld, Minster School - Secondary Maths Hub Specialist

### HOW TO APPLY

 [www.ememathshub.org](http://www.ememathshub.org)

 [enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

 01636 817 377

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## ADDITIONAL INFORMATION

### INTENDED OUTCOMES

Participants and their schools will:

- develop a deeper insight into the maths that underpins learning in a challenging topic, through unpicking and analysing the topic.
- develop a deeper insight into the key issues and misconceptions behind the topic.
- identify misconceptions and plan a series of lessons to support students in the topic area.
- use and evaluate appropriate pedagogies to teach the topic area.
- work with their departments to unpick and analyse topics to inform collaborative planning and development of schemes of work.

### THE WIDER CONTEXT

Feedback from teachers and GCSE exam analysis indicates there are key areas of the curriculum that students continue to find challenging. While teachers will need to address students' immediate difficulties with regard to such topics, there is also the recognition that these issues are often rooted in earlier learning, and this forms a key focus for these Work Groups. These Work Groups address strategic goals relevant to secondary schools, specifically: supporting schools to address the challenges of teaching GCSE Maths so that all students develop deep knowledge, understanding and confidence, and are well prepared for progression to post-16 education.

### SESSION DETAILS

All sessions will be online until further notice.

Wednesday 2nd December 2020 - 1.30 to 4.30pm

Wednesday 10th March 2021 - 1.30 to 4.30pm

Wednesday 16th June 2021 - 1.30 to 4.30pm