

Challenging Topics at GCSE for Early Career Teachers

Maths Hubs Network
Collaborative Projects 2020/21
NCP20-18



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.

HOW TO APPLY

Apply:
www.northnorthwestmathshub.org.uk

Email:
nnwmathshub@queenkatherine.org

DETAILS

What is involved?

Each Work Group will follow a 'workshop – school-based task' cycle, consisting of several workshops followed in each case by a specific school-based task. 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.

Time allocation for workshops will be the equivalent of three full days, but hubs will be able to arrange provision to suit local needs.

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 is the cost?

The Challenging Topics at GCSE project is **fully funded** by the Maths Hubs Programme so is **free** to participating schools.

BENEFITS

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

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.

Challenging Topics at GCSE Work Groups

Maths Hubs Network
Collaborative Projects 2020/21
NCP20-18

Additional Information

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.

Expectations of participants and their schools

Schools must be able to commit to the full academic year's programme. This involves a total of three days of face-to-face 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.

