

Challenging Topics at GCSE

NCP20-18



Overview

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.

This project involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP).

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 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.

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

Challenging Topics at GCSE

Dates and Location – tbc - Sessions will be delivered online until further notice

Cohort 1

John Taylor High School, Dunstall Road, Barton-under-Needwood, Burton upon Trent, DE13 8AZ

Day 1

Day 2

Day 3

Cohort 2

Venue tbc – Lichfield/Walsall area

Day 1

Day 2

Day 3

What is the cost?

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

Who is leading the Work Group?

Vanessa Brown is an independent consultant with Inspiring Maths Education and is a NCETM PD Accredited Lead. She has over 18 years of experience delivering CPD in schools in Staffordshire and the wider West Midlands and is keen to work with schools to develop this key topic of proportional reasoning.

How to apply

Please complete the online [registration form](#)

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.

