

Maths Hubs Network Collaborative Projects 2020/21 – NCP20-21A

## Developing Pedagogy in A Level Mathematics

For all current teachers and leaders of A Level Mathematics



*Our Work Groups this year will address student and schools' recovery due to coronavirus-related disruption in addition to the main Work Group objectives. It is recognised that Work Groups may need to be adapted and offer some flexibility in order for schools and participants to complete the work required. Sessions for this Work Group will initially be held online, hopefully with a face to face meeting in the summer term. This will be hosted in the Bristol area and attendance is interchangeable with the face to face in the Bath area (different dates). For schools who are unable to attend either of the potential face to face sessions, an extra online session will be provided.*

This Work Group involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP). It will provide support for the effective development of pedagogy in the teaching of A level Mathematics to enhance the quality of teaching and the conceptual understanding of students. Its aim is to develop and sustain regional communities of practice involving collaboration between teachers. The focus is on developing pedagogy in A level Maths teaching, and developing participants as leaders of A level teaching and professional development in their own school or college.

### What is the cost?

The Work Group is **fully funded** by the Maths Hubs Programme and the AMSP so is **free** to participating schools/colleges.

### What does it involve?

The four sessions will initially be held online to support the current position in schools. The group will be designed to meet the specific needs of the range of experience of participants. There will be gap tasks and a commitment to sharing good practice and developing your skills. Participants will work collaboratively with colleagues from other schools and will be expected, where appropriate, to work with colleagues in their own department.

### What is the specific focus?

Participants are expected to attend all four sessions - this is about continued discussion and development and sharing best practice across the schools involved rather than a one-off PD day but each session will have a specific focus.

**SESSION 1 & 2: Cognitive Load in A-Level Mathematics.** We are very excited to have Nathalie Vernon from the AMSP deliver a one hour session on Cognitive Load and what it means in your maths classrooms. The workgroup itself is aimed at A Level teachers but this session could be suitable for your whole department to sit in on. A follow up session will take place where participants will discuss what changes to their practice they have experimented with as a result of session 1. Time will also be spent discussing the upcoming A Level exams.

**SESSION 3 & 4: What makes a good dynamic graphing question:** The perfect mix of technology and pedagogy. Dynamic graphing packages like Desmos, Geogebra, Autograph and more offer a new way to revisit old questions - but what makes a good question designed within these packages? Again with guests from the AMSP we will look in depth not so much how to use the software on a technical level but how to ask a great maths question.

**Expectations of Participants and their Schools** - Schools must be able to commit to the full academic year's programme, with senior leadership releasing the same nominated teacher(s) for a total of four workshops across the academic year, as well as classroom and school-based activity. The department will also support the participating teachers to summarise the impact of Work Group participation as part of the professional development and Work Group evaluation.

**Session Dates: (2.30pm – 4pm)**

**Session 1: Tuesday 9<sup>th</sup> February 2021 (Natalie Vernon - Cognitive Load)**

**Session 2: Tuesday 9<sup>th</sup> March 2021**

**Session 3: Tuesday 4<sup>th</sup> May 2021**

**Session 4: Tuesday 29<sup>th</sup> June 2021**

To book your place on this work group please click [HERE](#)

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