



Support for Advanced Maths

The Smith Review of post-16 Mathematics in 2017 recommended that the government should continue to fund national support and professional development for AS/A level Maths, Further Maths and the new Core Maths qualifications. The review also recognised that many schools and colleges struggle to afford to deliver Further Maths and Core Maths courses economically. It recommended increasing funding for these subjects.

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The government's response has been to firstly announce £16m funding, over two years, for a national support programme for level 3 maths. MEI, which currently manages the FMSP, successfully bid for this new contract. The Advanced Maths Support Programme (AMSP) will continue the work of the FMSP, providing support for students and teachers for AS/A level Maths and Further Maths, as well as higher tier GCSE Maths and support for university mathematics entrance exams. In addition the new programme will provide support for schools and colleges to establish a Core Maths offer. The AMSP, starting in May 2018, will run for 2 years initially. FMSP support will transfer to the new programme during the summer term, see:

furthermaths.org.uk/amsp.

The DfE also recently provided more information about the Advanced Maths Premium. This extra funding will be paid to schools/colleges for each additional student studying level 3 maths. The aim is to help schools and colleges overcome some of the financial barriers to offering the full range of level 3 maths qualifications.

For many years the FMSP has supported schools and colleges to deliver Further Maths by providing professional development to increase teaching capacity, promoting to

students the benefits of studying maths, and by providing resources to enable Further Maths to be taught in a more cost effective way. However we know that in some institutions provision is threatened with being withdrawn as cohort sizes are small. Core Maths qualifications, designed for those students who pass GCSE Maths but decide not to take AS/A level Maths, are currently offered in relatively few schools and colleges. Post-16 funding currently provides no specific finance for this additional course, which is equivalent to an AS level and enables students to continue developing their quantitative and problem-solving skills alongside other A level subjects and so that they are better equipped mathematically for employment or university study. The potential growth in numbers of students taking Core Maths is huge.

The additional funding from the Advanced Maths Premium: furthermaths.org.uk/advanced-maths-premium together with support from the AMSP will help schools/ colleges to maintain or increase provision for AS/A Maths and Further Maths and encourage more schools/colleges to establish Core Maths.

Kevin Lord, Programme Leader.

Regional Events and Updates

Professional Development

AS level Mathematics: Mechanics

In response to requests we hosted a one-day course looking at the mechanics within the new A level Mathematics specification. Aimed at teachers who had not previously taught any mechanics the day concentrated on the topics which would be taught in Year 12. Newcastle Sixth Form College hosted the day which was attended by 14 teachers from around the region. Two of our Associates, Michael Gibson and Paul Wilson, presented the day with Michael shown below demonstrating some practical activities.



We hope to run a similar day this summer looking at the second-year A level Mechanics topics.

GCSE Higher Tier Content Day

We arranged a day for the Sunderland University PGCE students and invited interested teachers from local schools to also attend. The day looked at proof, quadratic functions, problem solving and geometry linked to the GCSE Higher course. Below are students and teachers working together to try some of the activities. Quotes from those attending were:-

“Some great ideas for lessons and part lessons”

“Good ideas to teach quite complex topics in accessible ways. Good resources and info on how to get more.”



Two-day GCSE E&E Courses

This was a repeat of the courses held last year looking at materials to enrich and stretch students taking Higher Level GCSE. Held in Darlington and Gateshead the teachers attending were given the opportunity to try activities which they then delivered back in their school.

The second day involved reporting back on this gap task as well as looking at more resources to take back to school. The resources covered topics including kinematics, proof, problem solving, quadratic sequences, turning points and graphs. The delegates commented on:-

“I really enjoyed the thinking mathematically work stations activity and getting hands on”

“Resources to use in the classroom combining different topics”



16-19 Network Meetings

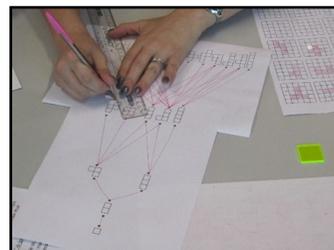
At the November meeting the agenda included a discussion on the progress and problems delivering the new A level Mathematics and Further Mathematics courses as well as support for STEP/AEA/MAT and the new TUMA examinations. The 25 teachers attending also had the opportunity to try some of the activities from the Maths Jam.

The meeting on 14th March had to be moved to the Dryden Centre in Gateshead due to the large number of staff wishing to attend.

11-16 Network Meetings

Held at Teesside University in Darlington the autumn meeting concentrated on providing the opportunity for delegates to try some enrichment activities devised by Jeremy Dawson which they could then deliver back in their school.

The meeting on the 8th of March looked at algebraic representations and means of introducing algebra as a continuation of some of the topics we looked at in the previous meeting, before focussing on Polyhedra as the basis for developing enrichment sessions. The next meeting will be on 28th June. For more information, please visit furthermaths.org.uk/NE_CPD.

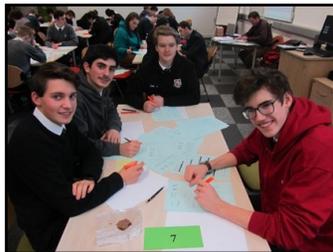
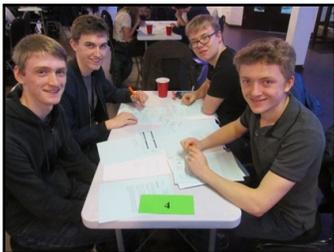


Regional Events and Updates

Enrichment for Students

Senior Team Maths Challenges

The region hosted 3 heats at Northumbria University, Teesside University and the Sjovoll Centre in Durham. 55 schools were represented at these events with the winning teams, RGS Newcastle, Durham Johnston, Queen Elizabeth Sixth Form College Darlington and Durham University International Study Centre Stockton, as well as Whitley Bay HS as a high scoring runner-up, going to the final in London.

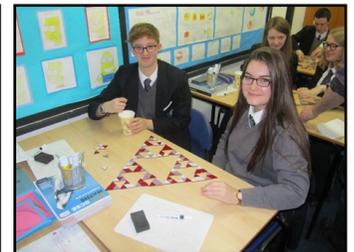


Christmas Lecture at Teesside University

250 students from 19 schools attended this year's lectures given by Ben Sparks and Dr Emily Grossman.

In-School Enrichment Sessions

Jeremy has developed a range of activities which he has presented at Wolsingham School, James Calvert Spence College and Walbottle Campus for students in Yr10 and 11.



Above are students at Walbottle and James Calvert Spence constructing their solutions to a fractal problem.

Below: Students at Wolsingham are taking part in a Maths Snack activity.



Other News and Events

Enrichment for Students

Problem Solving for Year 12/13 Students

We have again been offering half-termly Problem Solving Sessions for Sixth Form students on Saturday mornings at Gosforth Academy, Teesside University and Durham Sixth Form Centre. These sessions develop skills as an introduction to STEP type problems and are useful for any student considering a maths related degree course at university. The sessions are presented by Michael Gibson and Paul Wilson.

Below are photos of students working on a group activity and presenting their solutions to share on whiteboards.



Future Event

Mathsplosion for Year 10 students will again take place at the Centre for Life in Newcastle on 5th and 6th June. This is a whole-day event where students take part in a variety of activities from Mathematical Card Tricks, constructing Mobius Bagels and Astro-Navigation in the planetarium. Please contact Jeremy at your earliest convenience to book a place.



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North East Event Pages

For teachers:
www.furthermaths.org.uk/NE_CPD

For students:
www.furthermaths.org.uk/NE_enrichment

