



Levelling Up: Maths at Northumbria University: our first year (AY 2025-2026)

In 2025/26, Northumbria University took part in *Levelling Up: Maths* for the first time, delivering the short version of the programme. It was a new venture for our Mathematics team, co-led by Dr Matteo Sommacal, Dr Costanza Benassi and Dr Benoit Huard, and we approached it with enthusiasm and a great deal of care, determined to make it a success.

In the autumn we invited Mathematics undergraduates to apply as near-peer tutors, and around ten came forward. Choosing four was difficult, as every applicant would have been appointable. Once DBS checks and contracts were in place, the four tutors joined us for five training sessions in February and March. We worked through the IMA's session material together and talked about how to run a session. The last training session, on pedagogy and teaching techniques, was supported by NUSTEM, Northumbria University's group working to widen young people's participation in STEM.

Our two partner schools were Kenton School and Whitley Bay High School. We agreed the calendar with their teachers face to face and shaped it around their year. The sessions paused for the May examinations, and we moved Logarithms and Exponentials earlier so that it came before the students' Year 12 assessment. From late April, our tutors travelled to the schools after the school day for an introductory session and five tutoring sessions. Each group met with the same tutor every time, which gave them the chance to get used to tackling problems together.

The programme closed on 1 July with a day on our campus for all 30 students. They began with a final tutoring session in their small groups. The day continued with a talk on university life and careers in the mathematical sciences, a tour of the campus, and a mathematics workshop. For many of the students it was a first real glimpse of what studying mathematics at university is like.

What struck us most was how much both sides gained. The school students engaged with challenging mathematics alongside role models only a few years older than themselves. Our tutors, in turn, impressed us throughout with their professionalism, reliability and commitment, and grew visibly in confidence as the weeks went on. Both schools have told us they would like the programme to continue, possibly for more of their students, and other schools in the region have since approached us. The programme has also given us a meaningful way to show what Mathematics at Northumbria offers, and to strengthen our relationships with local schools. With the agreement of the IMA and Dr Tony Hill to run the programme for three years, we are looking forward to our second year.

In the students' words

In feedback collected at the end of the campus day, 17 of the 20 students who responded, out of the 30 who attended the event, said the day had given them a positive experience of university life. Twice

as many said they felt confident about what studying Mathematics at university involves as before the day. Among their comments:

“Good, helped me understand complicated applications of integration.”

“Great explanations, kept us thinking the whole time.”

“Very insightful into maths at university, interesting subjects.”

Year 12 participants, anonymous feedback, 1 July 2026

In our tutors' words

“The *Levelling Up: Maths* short course is invaluable experience to anyone looking into teaching. It gives a new perspective on the learning process.”

“I applied for the *Levelling Up: Maths* program because I thought it would be a rewarding experience. All the training was well presented and the session on communication was particularly helpful. I think it helped my communication skill in presenting ideas that I fully understand but others might not. I would highly recommend the programme.”

UG tutors, Mathematics, Northumbria University

Acknowledgements

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We are deeply grateful to Northumbria University and to the School of Engineering, Physics and Mathematics for supporting the delivery of the initiative. Our thanks also go to the colleagues across the University who made it possible: the GMB team, who facilitated the delivery and the campus day and assisted with the donation; the HR team, who supported the tutors' recruitment and contracts; and the NUSTEM team, who supported the tutors' training. Finally, we thank the teachers at Kenton School and Whitley Bay High School, whose cooperation made the delivery run so smoothly.

Dr Matteo Sommacal, Dr Costanza Benassi, Dr Benoit Huard

Northumbria University 2025-2026 *Levelling Up: Maths* Team