



KING'S MATHS SCHOOL

AUTUMN TERM 2019

Outward Bounds

Welsh drizzle, wooden cabins and a dip in the freezing water of the River Dyfi were just three of the many firsts for King's Maths School on our Outward Bounds trip for year 12 students. 64 brave students and 7 enthusiastic members of staff embraced nature's beauty and mastered the challenges of team-building activities ranging from kayaking and climbing to cooking a fresh meal out in the wilderness. We set out to develop resilience, build collaborative skills and to gain an appreciation for the outdoors, and returned having had much fun and with a shared pride in having survived the December cold!

Competitions

Our students have excelled in a variety of mathematical competitions this term. The Senior Mathematics Challenge results were our best ever: 63% of students achieved a Gold award (awarded to the top 10% of participants nationally), and

an incredible 25 of our students achieved automatic qualification to the British Mathematics Olympiad Round 1.

33 female students participated in the Mathematics Olympiad for Girls, our largest ever turnout, and over half achieved a Distinction award. Special mention must go to Lianne, whose name was published in a list of high scorers on the UKMT website.

In November, KCLMS stormed to first place in the regional final of the Senior Team Mathematics Challenge. Congratulations to Ahad, Vishal, Chester and Stazi who will compete in the national finals in February. In computing, 84 students sat the Bebras challenge, with Patrick and Kao qualifying for the National Finals in Oxford. 23 students also progressed to the Oxford TCS challenge which will happen in March.

Lastly, ten of our students qualified from the Year 13 Physics Challenge for Round 1 of the Physics Olympiad competition, where 2000 of the best physics students in the UK sit a challenging 2 $\frac{3}{4}$ hour paper. Nine

of the ten were awarded a medal, which means they were in the top 50%, and Ahad achieved a coveted 'Top Gold', which means he qualifies for Round 2 of the Olympiad in January.

Mental Health Day

On 10 October 2019, students and staff at KCLMS participated in World Mental Health Day, an event which aims to educate and raise awareness of mental health issues. With encouragement from the student council, students came to school wearing yellow items of clothing to promote mental health awareness and the prevention of suicide.

Culture Afternoon

To mark the end of the Autumn term, KCLMS students took part in a culture afternoon, which included activities and trips chosen to broaden their cultural horizons and encourage them to try new things. Most popular was the origami workshop, led by Dr Chu, and the visit to the Sci-



Gary and Maria on the Outward Bounds trip, and KCLMS students wearing yellow for World Mental Health Day

ence Museum in South Kensington. Students also took part in visits to Tate Modern, the British Museum and London Transport Museum, while another group watched the French new-wave film 'Cleo from 5 to 7'.

Alessio Figalli

This term's full schedule of speakers featured Fields Medalist Alessio Figalli, who delighted students with his invigorating talk on optimal transport. It was fascinating to see how this classic problem has evolved and has recently seen so many applications. We also had the opportunity to hear from the Institute of Physics' John Parsons about Quantum Technology, as well as data analyst Simon White who shared his insights about the value of mathematicians across all sectors. We then welcomed Sian Culley, a research associate at UCL studying nuclear fission in yeast. In the latter half of the term, we heard from Sanjay Joshi, the CEO of SoGive and Finsimco, who considered the ways that he could have a significant pos-

itive impact alongside a lucrative career. Our keynote speaker, Rita Kakati Shah, shared her experiences as Founder and CEO of Uma, while Ben Dixon outlined his journey from consultancy to the Centre for Effective Altruism in Oxford. Engineering Society also hosted Alister Draffin from SSS Gears and finally, Peter Marshall of Ericsson and Nandita Joshi (Year 13) talked about the new opportunities available with 5G.

Gender Action

Having previously signed up to Gender Action (an initiative formed by the University Council of Modern Languages, KCL, the Institute of Education and the Institute of Physics), KCLMS has been awarded Gender Action Initiator status, recognising our efforts to challenge gender stereotypes and put gender equality at the heart of policy and practice. The Autumn term has seen members staff attending training on unconscious bias,

establishing a staff forum to discuss gender issues and setting up a hugely popular new Feminist Society. A rich programme of talks from teachers has already been scheduled, covering topics including intersectionality, book reviews, subverting stereotypes and a review of gender-based research on the brain. We're excited for students to get involved in delivering sessions next term!

WEEKLY MATHS CHALLENGE

Six children, each with a tennis ball, stand in a circle. Simultaneously, all of them throw their tennis ball to another of the children, with each child choosing at random who to throw to. What is the probability that each child has exactly one ball thrown to them?