



KING'S MATHS SCHOOL

AUTUMN TERM 2016

YEAR THREE

Welcome back to King's Maths School, and to the end of 2016. This year, our student-set values have sat at the heart of everything we have done. Curiosity, Ambition, Compassion, Tenacity and Integrity define for us not just behaviours but a way of being, and exemplify the powerful learning culture that is so pervasive at our school. We have this term integrated a cohort of 79 new students, and we hope you enjoy reading about how they have reinvigorated the school in this newsletter.

COMPETITION TIME

The Autumn term is filled with individual and team mathematics competitions, and the school's fantastically talented students have once again excelled in these. The Senior Maths Challenge creates quite a buzz at the school; particular congratulations go to the 42 students who won Gold medals. A massive 19 students qualified for the British Maths Olympiad too.

King's Maths School won the regional heats of the Senior Team Maths Challenge for the third year running with Tom Wilkinson, Cameron Croucher, Katherine Horton and John Harber representing the school. Simon Singh, the acclaimed pop-maths author, launched a new competition in the UK this year called "Who wants to be a mathematician?", which features fast and furious problem solving in a 15 minute multiple choice quiz. We had more students in the second round (ten) than any other school and are proud that John Harber has made it to the third and final round to be conducted in the new year. Simon was so impressed he visited the school to congratulate the students!

MATHS OLYMPIAD FOR GIRLS

In November, students had the chance to take part in the Mathematical Olympiad for Girls, a challenging paper set by the UKMT. An impressive ten of our students earned Certificates of Distinction, which are awarded to the top 25%

of participants. Our congratulations go to Yuan Chen, Hannah Gleed, Katherine Horton, Emma King, Phoebe Linane, Natalie Pounanov, Bex Shantry, Thalia Shearn, Ping Zhang and Siana Zhekova. Moreover, Katherine and Siana's exemplary performances earned them a place on the UKMT's list of the country's high scorers.

PHYSICS OLYMPIAD

Just before half term, 22 brave year 13 students took part in the British Physics Olympiad A2 Challenge. Only the best young physicists are able to successfully tackle the questions, which test the ability to extend ideas well beyond A Level. 12 students gained a Merit, and 9 were invited to sit the next and final round – we await their results!

VEX ROBOTICS COMPETITION

Our new Vex Robotics Club impressively won their first regional competition, returning with a rather cool trophy. They designed and made a x-drive fitted claw robot, which battled its way to victory in game of Vex Starstruck. Well done!

Weekly Maths Challenge: A 10×6 bar of chocolate has troughs dividing it into 60 squares of chocolate. Show that it always takes the same number of breaks to separate the chocolate bar into 60 individual squares. Is this true for any sized rectangular chocolate bar?



Above: Maths Olympiad for Girls Participants and students taking part in our new Sport Programme

STUDENT COUNCIL

The Student Council has welcomed two new members following the Year 12 election in October – Nikolas Aguilar (Wellbeing and Equalities) and Ken Charles (Events Officer). The Student Council coordinate Fresh Fruit Friday with Edgar's Fruit, a drop-in for students to share their views and coordinating 'House Week' at the end of term with the hugely anticipated House Quiz and the House Carol singing.

SALVETE!

Latin club has made its debut at KCLMS, with students learning about Latin language and Roman culture in Pompeii using the Cambridge Latin Course stories. We have discovered the wonderful world of noun endings for different cases, explored a few Latin phrases which have made their way into the English language and become familiar with the banker Caecilius and his family. Three intrepid students sat the Stage 4 Attainment Test and passed with flying colours – optime! Fitting in with the festive season, can you guess which Christmas carol's Latin name is "adeste fideles"?

TEENEY SWODD

In the run up to our Christmas break our Drama Club staged their own musical adaptation of Sweeney Todd – Teeney Swodd! Six cast

members brought its audience to fits of laughter through their charming originality and wit, rap battles, song and some pretty impressive acting. This was the original 2016 festive show that shouldn't have been missed.

KEYNOTE SPEAKERS

The first external speaker this year, Malcolm Reynolds from Google DeepMind, spoke to students about machine learning and the exciting progress being made in the field. On the back of this, we will be attempting to create our own machine that learns to play noughts and crosses. Coming up next year we have broad range of speakers from different mathematical fields, including: an astronomer, an economist, a code-breaker from GCHQ, an engineer, a data analyst and a mathematically inclined theatre director.

NEW SPORT PROGRAMME

Our sport programme has now expanded to 9 different sports. Many students have tackled new challenges for the first time, including a brave group who have tried their hand at mixed martial arts. Other sports on offer are football, basketball, running, table tennis, walking, badminton, gym and climbing. The climbers have pushed through blisters and aching muscles, and many are now taking on fairly advanced climbs at the Vauxhall Climbing Wall.

OUTREACH PROGRAMME

Our enrichment programme for students in years 10 and 11, which aims to widen participation in A level Further Maths, continues to be very popular: we had well over 500 applicants for about half as many places. Students attend evening classes once a fortnight, often hurrying here straight from school. Year 10 have been working on scale factors – connecting topics such as percentages, trigonometry and proportion – whilst in year 11 functions and sequences have been explored in some detail. Students attending these sessions come from well over 100 different schools, and enjoy the opportunity to discuss mathematics with like-minded individuals from other schools.

PROFESSIONAL DEVELOPMENT

20 teachers from a whole array of schools attended a King's Mathematics Forum on "Learning to love the hypothesis test". Dan Abramson guided them through the statistical processes involved here and attendees enjoyed sharing their ideas and experience of teaching this material. Our "Further Mathematics Course", now in its fourth year and funded by the Goldsmiths' Company, continues to be popular, and there was much animated discussion about unusual applications of Proof by Induction at the most recent training day.