I hope that you all had an excellent break!

Happy Diwali and Sal Mubarak to families that celebrated the New Year this week.

We started the week with a visit from Challenge Partners. Ms Spencer has the following feedback to share from the visit:

We had a Challenge Partners’ Review on Monday, Tuesday and Wednesday this week. A lead reviewer, plus a team of four reviewers (who are senior leaders in schools from across the UK), spent three days in school. They observed lessons in all year groups and subjects from Reception to Year 13, met with staff, students and governors and looked at students’ learning and their outcomes over time.

We were absolutely delighted with the feedback and the recognition by the external reviewers of the strength of INA’s culture and ethos and the quality of provision. They also highlighted the extremely positive impact of some of the things unique to INA such as BRIDGES, Harkness learning, the Big Band project and our enrichment programme, all of which contribute to developing INA students into highly resilient and effective learners.

It is really pleasing to receive a validation of the school’s work from an external review team, however we are as keen as ever to continue to develop and improve our provision. I would like to congratulate our staff and students and express huge gratitude to all of our staff members for their hard work and unwavering commitment to INA.

I look forward to sharing the report with you once it is published.

We also welcomed Andreas Bilianos, a civil engineer from John F Hunt as part of our Speakers’ Programme. Further details about the talk is included later on in newsletter. We thank Andreas for his time, energy and enthusiasm.

Year 13 students were also fortunate enough to have Sarah Mullen from the LSE to advise our students on study options at LSE, student life and the application process. A huge thank you to Sarah for reaching out to us and supporting our students in this way.

Our Year 13 will receive their exam results and any revised UCAS predictions on the 15th of November and we will ask for students to share their intentions around final choices soon after. Please ensure that you have talked this through at home.
The Year 12 exam timetable is as follows:

<table>
<thead>
<tr>
<th>Times unless stated</th>
<th>Mon 11th Nov</th>
<th>Tue 12th Nov</th>
<th>Wed 13th Nov</th>
<th>Thu 14th Nov</th>
<th>Fri 15th Nov</th>
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<td><strong>Morning</strong></td>
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<td>P1</td>
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<td>Mathematics</td>
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<td>Further Maths</td>
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<td>Paper 1</td>
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<td>Paper 1</td>
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<td>P3</td>
<td>Swap lunch</td>
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<tr>
<td>Unit 1</td>
<td>Paper 1</td>
<td>Physics</td>
<td>Paper 2</td>
<td>Paper 2</td>
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<tr>
<td>40 mins</td>
<td>75 mins</td>
<td>Physics</td>
<td>75 mins</td>
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<td>P4</td>
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<tr>
<td>Applied Science</td>
<td>Geography</td>
<td>Applied Science</td>
<td>Mathematics</td>
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<tr>
<td>Biology</td>
<td>Paper 1</td>
<td>Physics</td>
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<td>Unit 1</td>
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<td>P5</td>
<td>History</td>
<td>English</td>
<td>Mathematics</td>
<td>Further Maths</td>
<td>English</td>
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<tr>
<td>90 mins</td>
<td>Paper 1</td>
<td>Paper 2</td>
<td>Paper 2</td>
<td>Paper 2</td>
<td>Paper 2</td>
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<tr>
<td>Drama - Othello</td>
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<td>Prose –</td>
<td>90 mins</td>
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<td>(Handmaid's Tale)</td>
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I know that students will be revising hard and thinking carefully about how to demonstrate their learning during this week. Research shows that the most effective learners space their learning over time. It is really important that students revise fully for these exams so that it will be easier for future exams going forward.

Finally, a reminder that next week is Family Week. As is usual during Family Week, all enrichments, interventions and staff meetings are suspended so that staff can get home at a reasonable time in the evening to spend quality time with their families and friends. We hope that you are also able to take advantage of this.

With best wishes,

Ms Alibhai, Vice Principal and Head of Sixth Form
On Tuesday 29th October, Sarah Mullen from the London School of Economics and Political Science (LSE) came to speak to some of our sixth form students (both year 12 and 13), to introduce the LSE to them and to offer some valuable advice on personal statements and UCAS.

The LSE is a relatively small institution, with only 5,000 undergraduate and 6,000 post-graduate students. It offers 41 undergraduate programmes, a great many of which are joint-honours, including combinations such as Economic History and Geography and Anthropology and Law. The students are drawn from over 140 different countries and 37 world leaders have either studied or taught at LSE.

As well as talking about the need to meet the basic entry requirements, Sarah emphasised the importance of the personal statement as a way for LSE admissions tutors to make decisions about who receives offers. She strongly advised students to ensure they have checked that the courses for which they apply are ones they will genuinely enjoy following at degree level and that their personal statement reflects this. She cited the example of students who apply for the Geography course at LSE stressing their passion for physical geography - however, the LSE Geography course is purely focused on human geography – and clearly this kind of failure in research makes it an easy decision to reject an application.

As there are 20,000 applicants for 1,700 places each year at LSE, it is important for applicants to ensure something more than excellent predicted grades makes them stand out. Sarah encouraged students to demonstrate their enthusiasm and commitment to a course by engagement in the kinds of super-curricular activities we, as a school, have also promoted from day one of sixth form.

Other helpful pieces of advice were on the need to link both disciplines when applying for joint-honours degrees rather than writing one paragraph on one subject and one on the other; and the recommendation to write about one activity in depth, explaining its relevance to the course applied for, rather than merely listing a range of activities, however impressive.

Sarah’s talk also included some helpful guidance regarding accommodation, finances, and the value of participation in student activities; especially taking on positions of responsibility as a way of distinguishing oneself from the competition when applying for jobs.

LSE has Open Days on 29th April and 2nd July 2020 and there is also a student shadowing scheme for which students can apply - these, along with taster days, are all good ways of getting a feel for any university.

We are grateful to Sarah for her time and insights and she, in turn, was impressed by the numbers of students prepared to stay on for a talk after school and for their attentiveness. She has kindly offered to answer any queries students may have about LSE, and Ms Joy is happy to provide Sarah’s email to students with such queries.
Speakers’ Programme

This week we were delighted to welcome Andreas Billianos, a project engineer at John F Hunt as our guest speaker. Andreas’s presentation was very insightful for all students, especially the aspiring engineers amongst us. Andreas discussed how broad the engineering field is and the different roles that can be tailored for anyone interested in engineering. He also spoke about the importance of female students chasing their dreams in a field which is often mistakenly called a man’s job.

On a more general note he emphasised the importance of education at university as it can open various doors. Andreas also referred to the INA BRIDGES programme and how the various dispositions will assist students in challenges they will face. Furthermore, Andreas highlighted how although a demanding degree and career can pose challenges, these challenges can be overcome when studying and doing something we enjoy. Moreover, in this insightful presentation he also highlighted that challenges are part of life; at the end of a dark tunnel there’s always light which goes to show despite all the hardships ultimately there is always positivity and happiness at the end.

Written by Aemy Rehman – Year 12

Wednesday, 13 November 2019, 6:00PM - 7:00PM
Museum of London

Keyhole Surgery Pioneers
Professor Roger Kneebone

Roger Kneebone is Visiting Professor of Medical Education at Gresham College and Professor of Surgical Education and Engagement Science at Imperial College London. His clinical career has ranged from trauma surgery in Southern Africa to general practice in Wiltshire and he has a longstanding fascination with education and simulation.

This lecture examines how minimal access (‘keyhole’) surgery has revolutionised medicine in just a few decades. By re-assembling teams of long-retired surgical pioneers from the 1980s and inviting them to re-enact early procedures using realistic simulation it will document the ups and downs of an extraordinary decade.

Using video footage and interviews, Professor Kneebone will show how surgeons, radiologists, nurses and instrument manufacturers developed completely new ways of working. Their successes, their failures and their challenges continue to resonate today.

No reservations are required for this lecture. It will be run on a ‘first come, first served’ basis. Doors will open 30 minutes before the start of the lecture.
Maths Supercurricular Activities and Resources

Cambridge University

- [https://www.undergraduate.study.cam.ac.uk/events/masterclasses](https://www.undergraduate.study.cam.ac.uk/events/masterclasses)
  General page for booking master classes. Check back periodically. Free to students receiving FSM. £20 to others.
- [https://www.undergraduate.study.cam.ac.uk/events/mathematics-masterclass](https://www.undergraduate.study.cam.ac.uk/events/mathematics-masterclass)
  Link to last year’s maths masterclass in April. Likely to run again this year. Check back periodically.

Oxford University

- [https://www.maths.ox.ac.uk/study-here/undergraduate-study/outreach/years-12-13](https://www.maths.ox.ac.uk/study-here/undergraduate-study/outreach/years-12-13)
  Great opportunities already up, including a one-day conference for girls on 17th January 2020 – deadline 8th November, and UNIQ Spring and Summer Schools – applications open in December.

Imperial College

- [https://www.imperial.ac.uk/be-inspired/student-recruitment-and-outreach/schools-and-colleges/students/on-campus-activities/programmes/maths-online-programme/](https://www.imperial.ac.uk/be-inspired/student-recruitment-and-outreach/schools-and-colleges/students/on-campus-activities/programmes/maths-online-programme/)
  Online platform for students thinking of studying maths. Open to both Y12 and Y13.
- [https://www.imperial.ac.uk/mathematics/undergraduate/degree-courses-and-admissions/outreach/](https://www.imperial.ac.uk/mathematics/undergraduate/degree-courses-and-admissions/outreach/)
  Last year’s dates. Likely to run again this year. Check back periodically.

Kings College, London

- [https://www.kcl.ac.uk/events/mathematics-taster-day](https://www.kcl.ac.uk/events/mathematics-taster-day) - 4th December
- [https://www.kcl.ac.uk/events/christmas-lectures-2019](https://www.kcl.ac.uk/events/christmas-lectures-2019)

Queen Mary, University of London

- [https://www.qmul.ac.uk/maths/outreach/outreach-activities--events/](https://www.qmul.ac.uk/maths/outreach/outreach-activities--events/)

University College, London

- [https://www.ucl.ac.uk/maths/outreach](https://www.ucl.ac.uk/maths/outreach)
  Including London Maths Outreach – weekly meetings.

Social Mobility Foundation

- [https://www.socialmobility.org.uk/](https://www.socialmobility.org.uk/)
  The social mobility foundation run maths and engineering careers days, as well as an Aspiring Professionals Programme. General criteria are FSM and 5 7s or above at GCSE. They will consider others on a case by case basis.

Royal Institution


Read about maths in the media and in books

- Plus online magazine: [https://plus.maths.org/content/](https://plus.maths.org/content/)
- [https://mathblog.com/mathematics-books/](https://mathblog.com/mathematics-books/)
- Follow Marcus du Sautoy on Twitter
Join us for the Ark Apprenticeship Expo 2019!

Attend insight workshops delivered by some of the UK’s top apprenticeship providers, including Google, Capgemini, PWC and the Cabinet Office and find out whether an apprenticeship is the right path for you. Up to 150 places are available for Year 12 and 13 students from Ark schools.

When?  20th November (13:00-16:15)
Where?  Google Academy (123 Buckingham Palace Rd, Victoria, London SW1W 9SH)
How do I sign up?  Fill in this form by 8th November:  https://bit.ly/2oCSd1H
From Supercomputing to Quantum Computing: Perspectives from UCL & CERN

14 November 2019, 6:15pm–7:30pm

Delve into the current state-of-the-art and explore the future of High-Performance Computing. This evening event hosted by the UCL Institute of Communications and Connected Systems will explore supercomputing with a perspective from CERN, along with looking into the future, at the potential capabilities and applications of Quantum computing.

Speakers will be Dr Niko Neufeld, Deputy Project Leader CERN and head of IT infrastructure for the LHCb experiment, and Professor John Morton, Professor of Nanoelectronics and Nanophotonics, and director of the UCL Quantum Science and Technology Institute.

The talks will be followed by a moderated panel with questions open to the floor.

All are welcome to join this event which will be followed by a reception for attendees meet and continue the discussion.

Sick individuals and sick populations in the molecular genomics era

19 Nov 2019, 17:00–18:00

Speaker: Professor George Davey Smith from the University of Bristol

Epidemiology is being transformed by the ability to incorporate molecular genetic markers into large-scale population studies. Given the intuitive link between genomics and personalised medicine, this might be expected to steer the epidemiological enterprise away from population health thinking epitomised by Geoffrey Rose. This presentation will propose that, far from this being the logic of the union of epidemiology and genomics, such developments simultaneously strengthen our ability to identify population-level intervention targets and to construct a rigorous theory of how group and individual influences on health act together.

The series of Geoffrey Rose Memorial Distinguished Guest Lectures are held in memory of Professor Geoffrey Rose, CBE (1926-1993), who was a highly influential epidemiologist whose seminal publications included “Sick Individuals and Sick Populations” (1985) and The Strategy of Preventive Medicine (1992), which had an impact that went well beyond the field of epidemiology and into that of public health. Previous guest speakers at these popular lectures have included Professor Albert Hofman (2017), Professor Sir Richard Peto (2015), Professor Sir Michael Marmot (2013) and Professor Jeremiah Stamler (2011).

Free to attend but you must register on Eventbrite beforehand.
To protect the systems that sustain life on earth, we need to do more than just reimagine the economy – we have to change everything. From one of the original thinkers of the program that helped ignite the US Green New Deal campaign, Ann Pettifor explains how we can afford what we can do. We have done it before – and can do it again.

Ann Pettifor (@AnnPettifor) is the Director of Prime, an Honorary Research Fellow at City University, a Research Associate at SOAS and a Fellow of the New Economics Foundation. Her new book is The Case for the Green New Deal.

This event is free and open to all with no ticket or pre-registration required. Entry is on a first come, first served basis.

Post-truth, disinformation, bots, trolls, ISIS, Putin, Trump... we live in a world of media manipulation run amock. To understand the new propaganda, and what to do about it, we need to grasp both the cultural and technological dynamics in play, which is what this panel sets out to do.

Peter Pomerantsev, author of This is Not Propaganda – Adventures in the War Against Reality will be joined by Joanna Kavenna, author of new tech-dystopian novel Zed, and Dr Martin Moore of Kings College London, author of Democracy Hacked: How Technology is Destabilising Global Politics, to grapple with both the philosophical and computational dramas of the disinformation age.

Joanna Kavenna is a British novelist, essayist and travel writer.

Peter Pomerantsev is co-director of the Arena project and Senior Fellow at the Institute of Global Affairs, LSE. Peter is an author, TV producer and media expert.

Martin Moore (@martinjemoore) is Senior Lecturer in Political Communication Education and Director of the Centre for the Study of Media, Communication and Power at King’s College London.

This event is free and open to all with no ticket or pre-registration required. Entry is on a first come, first served basis.
Economy and Ethics in the Cosmic Process

18 December, 5.30pm

THE HUXLEY MEMORIAL LECTURE by Professor Chris Hann, Max Planck Institute for Social Anthropology

When, late in life, T.H. Huxley returned to the themes of evolution and religion, he did so with a focus on ethics. But his audience was puzzled (and Herbert Spencer dismissive): how could morality be explained in Darwinian terms if man’s destiny was to combat the amoral laws of the “cosmic process”? These issues are still with us. While Huxley paid little attention to political and economic institutions, this lecture will consider the historical materialism of that era and arguments for socialism (rejected by the liberal Huxley). How can human societies evolve a healthy balance between private and collective property, market and redistribution, efficiency and equity, economic maximization and ethics? The difficulties will be illustrated with reference to the rise and fall of a State Farm in the western zone of the Great Hungarian Plain (Danube-Tisza interfluve).

This event is free but you must register on Eventbrite to attend.

Surgery, statistics and science

28 Nov 2019, 17:00–18:00

Professor Eric Lim will share how mathematics transformed his career from bewildered medical student to international clinical opinion leader.

Eric Lim is a Professor of Thoracic Surgery at Imperial College London, a pioneer and specialist in minimally invasive (single-port) thoracic surgery. He graduated from Sheffield University, and completed a higher degree in Medicine and a Masters in Medical Statistics. His higher surgical training was undertaken at the Royal Papworth Hospital in Cambridge and the Royal Brompton Hospital in London.

Mathematics is the fundamental basis of clinical decision making. In medicine, every day of the working life of a doctor is spent evaluating the probability of a diagnosis, estimating benefit of treatment, calculating the risk of harm, and predicting prognosis. As a doctors’ careers progress, clinical decisions are less reliant on textbooks and more on acquisition and synthesis of published evidence (evidence based medicine).

For many doctors, statistics was either not taught or presented from a pure mathematics perspective obscuring the link to medicine. As a result, many excellent clinicians do not recognise the importance of statistics in their clinical practice and have limited ability to evaluate the medical literature. Without a strong foundation, they will struggle to effectively discuss management options and involve patients in clinical decisions in a fast-paced world where applied statistics, coding and artificial intelligence becomes the norm.

In his inaugural lecture, Professor Lim will share how mathematics transformed his career from bewildered medical student to international clinical opinion leader. He will discuss difficulties doctors experience in making clinical decisions and the challenges they face in the interpretation and uptake of new medical information. He will provide views on the limitations of conventional (frequentist) statistics in medicine and the increasing role of artificial intelligence.

Free to attend but you must register on Eventbrite beforehand.
What is ‘Corbynomics’? The emerging political economy of the British left

18 November 2019, 18:30–21:00

Jeremy Corbyn was elected as leader of the Labour Party promising a break with a ‘neoliberal consensus’ that, his supporters argue, has dominated Britain for the past forty years.

Even though Labour’s Corbynite turn demonstrated an endurance and electoral potency unanticipated by many mainstream commentators before the 2017 General Election, the agenda of a prospective Labour government remains under explored. In contrast, within the Left itself there have been urgent debates on the ideal policies of a socialist government and the best strategies to replace ‘neoliberalism’. Left-wing writers and think-tankers now discuss proposals like the ‘Preston Model’ and a ‘Green New Deal’ with increasing confidence and excitement.

At this event, we will hear from some key figures in the development of the new economic thinking pursued by the Labour leadership. This panel will introduce the emerging political economic settlement, dubbed ‘Corbynomics’ by the Economist, and interrogate its ideas, strategies and prospects.

Register on Eventbrite to attend

While refugees drowned in the Mediterranean, the UK Government proudly proclaimed that its aim was to create a ‘hostile environment’ for undocumented immigrants. Meanwhile, the UK voted to leave the EU against a backdrop of claims that ‘swarms’ of migrants were entering the country.

Despite the outcry over the Windrush scandal and study after study confirming that immigration is not damaging the UK’s economy or putting a strain on public services, it continues to be blamed for many of the UK’s ills. How did we get here?

‘Hostile Environment’, offers a compelling answer and illuminates the dark underbelly of contemporary immigration policies. Talking to politicians, immigration lawyers, and immigrants themselves, Maya Goodfellow examines the evolution and impact of the UK’s draconian immigration policies over the last fifty years.

In this event Maya will be discussing ‘Hostile Environment: How Immigrants Became Scapegoats’ in conversation with Tim Bale, Co-Director of the Mile End Institute.

Maya Goodfellow is a writer, academic and broadcast commentator. She has written for The New York Times, The Guardian and the New Statesman, among others, on a range of issues including UK politics, gender, race and migration. She has a PhD in race and racism from SOAS, University of London, and she is the author of Hostile Environment: How Immigrants Became Scapegoats.

Register on Eventbrite to attend
Data and politics are now inseparable: data is not only shaping our social relations, preferences and life chances but our very democracies.

This event will discuss how the exponential accumulation of data from everyday online and offline activities raises tensions about who has the rights to produce and own such data.


**Chair: Professor Engin Isin, Queen Mary University of London**

Engin Isin was a professor of social science (1996-2002) and Canada Research Chair (2002-2006) at York University, and a professor of politics at The Open University (2007-2016) before joining QMUL as Professor in International Politics in 2017.

His research and teaching focus on doing international politics: the ways in which people constitute themselves as actors or subjects of international politics through performances, movements, and struggles.

Engin is a chief editor of Citizenship Studies and is the editor of a book series Frontiers of the Political with Rowman & Littlefield International.

Register on Eventbrite to attend

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A science festival, three engaging talks and an interactive panel discussion to educate children and adults about medical research at ICH

This event is in collaboration with the NIHR Great Ormond Street BRC and a EDI/Athena Swan public engagement initiative.

The UCL Great Ormond Street Institute of Child Health (ICH) was founded in 1946. It is an academic department full of teachers, scientists, medical doctors, laboratory staff, data analysts and, at its core, a support service network that helps us deliver world class children's health research. We are the research institute for Great Ormond Street Hospital (GOSH) and in partnership with University College London (UCL) we form the largest concentration of children’s health research in Europe.

Our current research ranges from developmental biology, to genetics, to immunology and epidemiology.

Aimed at a general audience and targeting 15-17 school children, this landmark lecture series hopes to inspire a new generation of scientists. Our science festival and meet the scientist luncheon aims to deliver real insight into what research life is like at the Institute and what a career in medical science could look like for you.

For more information on what lectures are being offered, and to register, follow the link on Eventbrite.

*Please note, it is not guaranteed that you will get approval for an LOA to attend this event. Priority will be given to MDV applicants and other students with a proven commitment to this field of interest.*