# Year 11 Physics Challenge (12<sup>th</sup> March 2024)

This year saw a return to the local Year 11 Physics Challenge, sponsored by the Ogden Trust. None of the local schools took up the challenge to compete this year so the competition was an in-house affair between 11x1 Einstein (Mr D'Mello's group) and 11y1 Bohr (Ms Cleaver's group).

The rounds were varied, ranging from Physics Dingbats, practical challenges, physics timeline of discoveries, challenging questions and general knowledge. The teams performed neck and neck on all the rounds except the historical timeline where Ms Cleaver's group created an unbridgeable 13 point lead and they went on to win this year's Trophy.

#### **Final Result**

11y1 Bohr (Alice Ellison, Assir Isswiasi, Oscar Martyn, Kwame Atuah) 76 points

11x1 Einstein (Amy John, Ethan Lane, Viktoria Pawlowska, Mohamad Ismail) 59 points.

Mr D'Mello

The winning team



# SCIENCE NEWS - THANK YOU TO THE VINTEN TRUST

Once again the school's Science Department has benefited from the continuing generosity of the Vinten Trust and its STEM ambassador for St Benedict's, Mr Derek Langley. Each financial year we are given an *ad hoc* grant of £500 enabling us to buy equipment that would be above and beyond our normal departmental budget.

This year we have been able to make two significant purchases. One, a compact 2-channel digital storage oscilloscope (pictured), which will replace our ancient and bulky oscilloscope that has become somewhat temperamental in its old age.

The other is an electric ice crusher. Our present method of crushing ice is very much a manual procedure involving a lot of physical effort, so our new electric crusher is a much-appreciated labour saving device!

Mr Gregory



He/she is a good egg- English – we see eggs as wholesome so a good person but in other languages other food staples are used for this idiom.

un pezzo di pane- Italian a piece of bread

If someone is un pezzo di pane in Italian you might say they're a good egg in English.

son un cacho de pan - they are a piece of bread - Spanish

But in French, food is not used for this idiom.

C'est un bon gars, on peut compter sur lui. He is a good lad, we can count on him. - French

Mrs Dalby - Head of MFL



## **Exam Invigilators Needed**

Salary: Grade 2 point 3 £11.79 per hour

plus holiday allowance

Job Term: No guaranteed hours

Appointment: Casual

Place of work: St Benedict's Catholic School,

**Bury St Edmunds** 

We are looking for reliable and responsible persons who are available to work primarily during the exam seasons (January, May, June and November). The ideal candidate will be flexible; have effective communication skills; and be able to remain calm and confident while invigilating our pupils during external exams, mock exams and controlled assessments.

This is a casual post with variable days and times, primarily in January, May, June and November.

In return, you will be supported by a successful and collaborative staff and be part of a school highly regarded for its academic success and supportive atmosphere. Applications are reviewed on receipt so an early application is advised.

Closing date: Ongoing

Interviews: As and when suitable applications are

received

Further details: St Benedict's Catholic School

sbuchan@st-benedicts.suffolk.sch.uk or 01284 753512



#### Careers Live! with Year 7s

#### <u>Careers Live - sharing experiences as a: Magician, Police</u> <u>Officer, Archaeologist and Brand/Account Manager</u>

Over the past couple of weeks, as part of their PSHE 'World' curriculum, students in Year 7 have enjoyed *Careers Live* lessons delivered by Miss Hahn, with special guest speakers. The latter included three-time Magic Circle champion, magician Matthew Le Mottee, PC Lee Andrews-Pearce and our very own Mr Harrison and Mrs Kennedy. Each guest spoke about their career journey and experience with reference to the 3Cs: communication, connection and confidence.

Matthew Le Mottee astounded us with an array of magic tricks and shared anecdotes about finding creative solutions on the spot when things might not go to plan; PC Andrews-Pearce enlightened us about the educational and training opportunities within the Police Force (he is now a trained Drone pilot) and the protective accessories he carries when on duty; Mr Harrison excited students about finding ancient treasures and shared insights into strange burial practices from his career journey as an Archaeologist; and Mrs. Kennedy revealed the true cost of advertising and marketing for top brands (£millions!) and how fashion buyers predict future trends - two seasons in advance!

Our Year 7s learned more about Labour Market Information (LMI), making choices in careers and what it takes to work in these professions. We all learned something new and needless to say, there are now some budding magicians, police officers, archaeologists and advertising managers in our midst!

Míss Hahn



# **Lotus Chief Technical Specialist**

On Thursday 21<sup>st</sup> March, we enjoyed a comprehensive and thought-provoking Careers Talk by Dr Damian O'Flynn, Chief Technical Specialist at <u>Group Lotus</u>, on the different disciplines in Engineering, his area of specialism - Automotive engineering - and the challenges facing engineers in the future. Dr O'Flynn outlined his own career path through university and postgraduate studies, his work on Formula 1

designs and his current focus on developing chassis technology and vehicle dynamics. We learned about the spectrum of roles available within the Engineering industry from research, design and simulation programming to the actual building and refining of components and vehicles. Dr O'Flynn also spoke about apprenticeship routes, membership of the <a href="Institute of Mechanical Engineers">Institute of Mechanical Engineers</a>, recruitment processes and his recent experiences of driver-less vehicles in China! Are aeroplanes really next?! A great talk was rounded off perfectly with us meeting a whole new Lotus model car (mid-2023) in the flesh!

Míss Hahn





## Year 12 MFL Debating Competition

Tuesday 19<sup>th</sup> March saw the regional round of the MFL Debate Competition organised by The Institut Français and hosted by The Perse. Year 12 students from eleven schools from across the eastern region came to Cambridge to compete in three debates, entirely conducted in the target language and with the prospect for the winning team to progress to the national finals in London. Teams had to prepare 2 minute arguments for and against each of the three motions, conduct a 4 minute 'strife' and 1 minute conclusion all in French. Our team of Arabella Coward, Jagoda Napieraj, Bea Price and Cosi Bagnall (who sadly couldn't participate due to being a native speaker) faced The Leys and narrowly lost by one mark when they debated for "Les langues régionales sont une menace pour l'unité et l'identité de la France." For their second round, they debated against "Accéder à l'euthanasie devrait être un choix" and lost against Uppingham. The girls did really well but only four teams could progress to the next round. We look forward to them competing again next year for the Year 13 competition!

Mr Richmond

#### **SCIENCE NEWS**

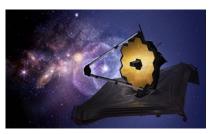
On Thursday 21<sup>st</sup> March a group of 34 Year 11, 12 and 13 students visited the Cambridge Physics Centre to attend a lecture in the famous Cavendish Laboratory, given as part of the Centre's 6<sup>th</sup> Form Lecture Schedule. On arrival at 5pm the students were able to take part in various problem -solving physics activities laid on by Isaac Physics and then, at 6pm, it was time for the main event.

The students were given a 40 minute lecture by Dr Charlotte Simmonds, a researcher at Cavendish Astrophysics (University of Cambridge) – "Unveiling the Mysteries of the Early Universe with JWST". Launched on Christmas Day 2021 the JWST (James Webb Space Telescope) is a giant leap forward in our quest to understand the Universe and our origins. Webb is examining every phase of cosmic history: from the first luminous glows after the Big Bang to the formation of galaxies, stars, and planets to the evolution of our own solar system. It is also examining the atmospheres of distant exoplanets seeking signs of the chemical building blocks of life.

JWST, using its infrared observations, is able to 'see' back to the earliest years of the Universe and events that have never been seen before. The Universe is now 13.7 billion years old and full of stars and galaxies. Howev-



er, for its first 370,000 years after its Big Bang beginning, the Universe was just filled with a hot, dense fog of ionised gas. As the Universe cooled and expanded the first neutral atoms formed, the most important being the simplest - hydrogen. There then began a long period known as the 'Dark Ages', so-called because of the absence of stars. Over time regions cooled and collapsed, igniting the nuclear fusion of hydrogen in their cores and leading to the first stars and galaxies, around 400 million years after the Big Bang . This was truly a "Let There Be Light" moment.



The first stars also significantly altered the chemical makeup of the cosmos. Through nucleosynthesis in the cores of these short-lived stars—which may have been as much as 1,000 times more massive than the

sun—and as a result of powerful supernovae, a fraction of the universe's initial constituents of hydrogen and helium were converted into carbon, oxygen, iron and other heavier elements. About 1 billion years after the Big Bang this particular phase, known as the 'Epoch of Reionisation', was complete and light across much of the electromagnetic spectrum could travel unimpeded through the cosmos, eventually revealing the universe as we see it today.

Our visit was organized and accompanied by Mr D'Mello, our own Teacher of Physics, and funded by the generosity of the Ogden Trust that also supports Isaac Physics and the University of Cambridge. The students engaged enthusiastically in the problem solving and listened with

great interest to Dr Simmonds' description of the early Universe.

Some question why we spend so much time, effort and money on this exploration of the Universe? My answer is always to quote the late cosmologist Carl Sagan who said: "Somewhere something incredible is waiting to be known."

Mr Gregory

### **UCAS Discovery Day**

On Monday 18<sup>th</sup> March, all our Year 12 students attended the University Discovery day at the ExCel Centre in London which has kickstarted their university research into courses and institutions. Nearly 200 universities were present, with additional representatives from the armed forces, apprenticeships and the world of work. There were talks on student finance and how best to choose a course. Our sixth formers were wonderful in asking questions at the different stands and were excited by the prospect of many freebies that were being distributed. The number of prospectuses and tote bags that were brought onto the coaches was incalculable!

After Easter, the Year 12s will begin their focused research for higher education but please keep an eye on chosen institutions as university open days will start being advertised on websites.

Mr Richmond

#### **Head of House**

As we move towards Easter, it is with real pride that we can announce our new Heads of House: Phoebe Harper-Davies, Maksym Budzan, and Clotilde D'Mello. Each Head of House will be supported by two deputies who will have their own focus: Henry Baldock, Aleksandra Bulacz, Nija Paul , Cosima Bagnall and John Feeley.

We look forward to how these outstanding Year 12 students will create a unique feel to their house through raising money for charities and involving students from Year 7 through to Year 12 in both sporting, and academic activities.



Mrs Wray

## **Prize for top UCAS Personal Statement**

Year 13 student Dmytro Heyzerovskyy was awarded a prize from Imperial College London for his university application. He, alongside a few other students from across the

country, were awarded a book on engineering that he was instructed to bequeath to his sixth form library upon finishing his A-level studies. We are all very proud of his achievement.

Mr Richmond



# Modern Languages Open Day at Cambridge University

On Friday 15<sup>th</sup> March, our Year 12 French and Spanish students spent the day at the Sidgwick Site experiencing various lectures on a wide range of topics which were all delivered by the language faculty staff. Students sat on a course presentation of Modern & Medieval Languages, History & Modern Languages and Linguistics. We were then treated to a tour of the MMLL Faculty Library and the Linguistics Labs, which were then followed by talks on the year abroad, learning languages from scratch and linguistics. After lunch in King's College refectory and a tour of both its chapel and library, students chose to attend 'What makes me me? A perspective from early modern France? Delivered by Dr Tim Chesters or 'Nazi Culture' with Dr Martin Ruehl. Our students found the talks engrossing and were engaging in many conversions with the student ambassadors and lecturers. It was a wonderful experience for our language learners and certainly inspired many of them to pursue languages at degree level.

Mr Richmond





## Reporting your child's absence

If your child is unwell or has an appointment e.g. dentist/doctor could you please leave a message by 9.00am including the reason for the absence via:

Phone: 01284 753512 and Choose option 1:

And then choose option 1 for students in year 7-11

And option 2 for student in the sixth form

Email: attendance@st-benedicts.suffolk.sch.uk

For information on what to do if your child has COVID-like symptoms please see the following link for NHS guidance:

https://www.nhs.uk/live-well/is-my-child-too-ill-for-school/

If you do not telephone us, we will text you at home or at work. Please note the school operates a first-day response to absences.

If, in exceptional circumstances, you need to request permission for your child to be absent from school during term time, you should complete a **leave of absence application form (please see link below)**, at least three weeks in advance, stating the reason why the absence must be taken in term time.

 $\frac{https://www.st-benedicts.suffolk.sch.uk/attachments/}{download.asp?file=74\&type=pdf}$ 

Thank you very much.



### **United Nations Talk**

Friday last week, 3 members of 6<sup>th</sup> Form went to St Edmundsbury Cathedral to listen to a Lecture by DAME BARBARA WOODWARD DCMG OBE who has proud Suffolk origins. She is the British Permanent Representative to the United Nations based in New York, and she explored parallels between the Magna Carta and the UN Charter.

During a time of continuous change and threat she further analysed the prescience of these historical written documents, and their enduring legacy and relevance today.

Mr Murphy

