

SIXTH FORM NEWSLETTER

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BRYN CELYNNOG

Comprehensive School
Nurturing Success



NEW BUILD OPENS

6TH FORM CENTRE OF EXCELLENCE

We were delighted to finally take possession of our fabulous new Sixth Form Centre on 6th November 2023.

Our new accommodation is everything that we dreamed of, and so much more! Our Sixth Form students now have a bespoke study area and catering facility, creating a wonderful environment in which to enjoy Sixth Form life. We feel very privileged.

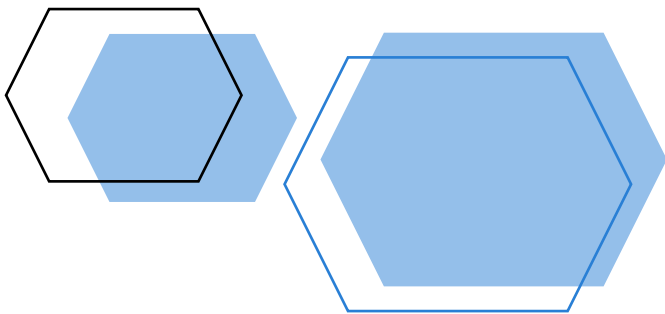
Debra Baldock
Headteacher



SUTTON TRUST

SUMMER SCHOOL

Every year, students have the opportunity to apply for the Sutton Trust Summer School. Last year, two year 12 students successfully gained a placement. There are over 40 different courses, from Archaeology and Anthropology to Veterinary Medicine. With over 15 hours of teaching at undergraduate level, they got the chance to dive deep into subjects that they were passionate about. The academic sessions also provided them with material to use in their personal statements. They felt the programme showed them that university was the right choice for them and that they could cope with an entirely new place and making friends. When you join us in Bryn Celynnog Sixth Form, you will have the opportunity to apply and gain an amazing experience!



SSS

MEDICAL WORK OBSERVATION SCHEME

PRINCE CHARLES HOSPITAL ■ EMILY MOULE, YEAR 13



Sixth form has provided me with the opportunity to undertake amazing work experience placements, the most notable being a 1-week placement in a local hospital which gave me an insight into the career of a doctor and introduced me to the realities of the job. This placement took me all around the hospital. I spent a morning on the wards where I met and spoke to different patients, an afternoon in A&E which showed me the range of injuries and people that walk into the hospital daily, and even spent time in theatre witnessing an ERPC surgery. The placement also provided me with essential skills during an afternoon of CPR training. The school's support and encouragement surrounding this week was incredible and the experience for me as a student was hugely beneficial.



HANDS ON CHEMISTRY

CARDIFF UNIVERSITY

In July, some members of our Chemistry class visited Cardiff University for the day to attend the 'Hands-on Chemistry' experience, in which we were able to utilize their advanced facilities.

The first part of the day was structured around the inorganic lab. Under the supervision of a professor and multiple PhD students, we carried out two titrations – an acid-base double titration and a redox titration. This session allowed us to use university-grade equipment to perform these practicals, and enabled us to pull skills from the Year 13 course that we were developing at the time. Having the PhD students present ensured the titrations were carried out smoothly and any calculations from the results we gathered were completed correctly.

After this, we were fortunate enough to use the university's organic labs to execute a synthesis of methyl 3-nitrobenzoate. This opportunity was second-to-none, as we do not have access to this level of equipment in school. Components of this practical included creating our nitrating agent, obtaining a re-crystallised product, measuring melting point, and the use of IR Spectra. Whilst the method of the synthesis was time-consuming, the reward was found in our melting point and IR spectrum results matching the expected results. Again, the PhD students were around to support us with this meticulous practical and answer any questions we may have had.

The trip was rounded off with a short talk by Senior Lecturer in Physical Chemistry, Dr Emma Richards. Dr Richards explored the multitude of avenues which stem from chemistry. She explained that whilst a chemistry degree is seemingly limited to pure chemistry, these principles can actually be used to branch out into specialisms such as biochemistry, material chemistry, chemical engineering, environmental chemistry, and many other career paths which can be suited to your preferred niches within the subject.

As students, 'Hands-on Chemistry' provided us with the opportunity to hone both our practical and theoretical skills and allowed our inspiration to flourish under career paths tailored around chemistry itself.



LAW

ANEIRA MORGAN, YEAR 13

In year 12 our class was given the opportunity to partake in a sentencing workshop, led by a member of the Crown Prosecution Service (CPS), which allowed our class to review scenarios and decide on what sentence the defendant should receive for the crime they committed. This hands-on approach enabled us to expand our overall knowledge on key aspects of our course, in addition to preparing us for the scenario application question on our exam paper.

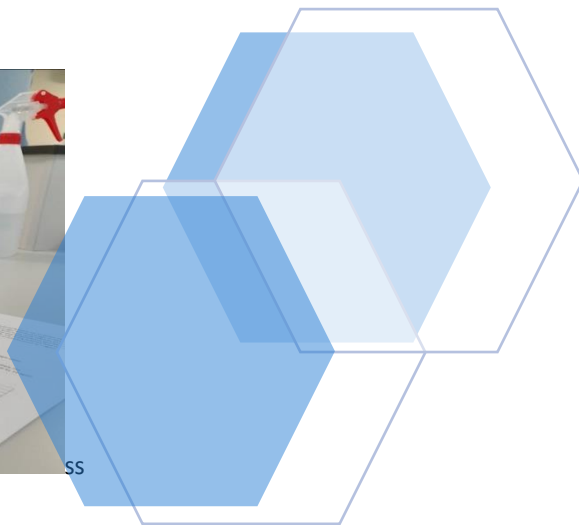
In addition to participating in workshops, our class was provided with the incredible opportunity to take a trip to Cardiff Crown Court in year 12. The trip was particularly insightful and enabled our class to gain a better understanding of how legal processes, such as the trial process, function. We began our day with a private tour of the courts by a court usher, which allowed us to get an insight into rooms – such as the library and sheriffs room - that are generally closed to the public. Whilst on our tour, we also got to meet the Recorder of Cardiff. This was an incredible opportunity as she discussed her personal experiences and talked to us about her journey from becoming a solicitor to eventually becoming the Recorder of Cardiff – a highly respectable role to have. After our tour we were taken into a court room to witness a case first hand. Whilst watching the trial we observed the prosecution barrister conduct a cross examination of the defendant which was an incredible sight to witness.

These fantastic experiences continued into our second year of the course, first beginning with workshops revolving around the topics of the CPS and bail, and then continuing with the opportunity to present a bail application in front of the audience of a district judge. The bail workshop, led by detective Jones and defence solicitor Mr Williams provided our class with an enhanced understanding of the bail process, which is one of the primary topics of the Year 13 course. After we received the informative presentation we were given the task of writing our own bail application from the perspectives of prosecution and defence solicitors. This enjoyable and interactive task allowed us students to gain a fascinating first-hand experience of one of the many roles a solicitor has. We were then granted the opportunity to present and submit our bail applications in front of a local district judge. We found this to be especially interesting as the unique experience challenged us students to individually consider the facts of our case and deliberate whether or not we believed the defendant in our respective cases deserved to be bailed.

CRIMINOLOGY

JESSICA POWELL, YEAR 12

Criminology is a great way to open up opportunities for the future and has been very interesting to learn. It is a Level 3 Diploma and teaches you about campaigns, criminological theories and more. It opened up an opportunity where students went to the University of South Wales where we had a lesson on public services, policing, forensics and criminology. On this trip we had been given a crime scenario in which we had to try and find the culprit. The public services session made us look at the different perspectives of those involved, whereas policing used simulation learning as a method to find evidence in the suspect's house. Forensics then taught us how to lift fingerprints from objects, whilst criminology enabled us to discuss why the person may have committed the crime.



NUFFIELD RESEARCH EXPERIENCE

UNIVERSITY OF SOUTH WALES

During the summer of Year 12, I was provided with the opportunity to undergo a 2-week research placement, delivered by Nuffield in the University of South Wales. This research placement was based on Microbiology, in which I investigated the effects of vaping on the oral microbiome. The basis of the placement was one week of in-lab work and a second week set as independent time to work on a post-lab report. During my time in the labs, I was able to use a plethora of university grade equipment in order to successfully carry out my research, such as channel Eppendorf pipettes and Oxoid nutrient agars. I was also required to collect samples from willing participants outside of the lab to complete my project. The week in the lab extended my confidence to work independently, and to trust my scientific knowledge and skill set when producing my own work. I built on my organisation skills also, as keeping track of samples and sterile equipment was vital in ensuring reliable results. This week was overseen by a PhD level mentor, who offered any support necessary. [ELLA PRICE, YEAR 13](#)

In the Summer of 2023, I undertook a Nuffield Research Placement on: "The effects of vaping on the oral microbiome and bacterial growth". I felt excited and intrigued to take part in such topical research with a group of likeminded students. My placement included 2 weeks of lab-based work at the University of South Wales. This involved gathering a wide range of data, including the minimum inhibitory concentration of various bacteria to nicotine and different vape flavours. We learned various lab techniques throughout the fortnight and used new equipment, such as a spectrometer. Once all of the data had been gathered in the labs, our supervisor outlined the structure of our scientific reports. We then wrote up our research, including an analysis of the data and drawing conclusions from our results. We also created a poster each, detailing a specific part of our research. This allowed each student in the cohort to further investigate their favourite part of the project and resulted in a wide range of posters being created, despite us all carrying out the same main research. [MOLLY PRICE, YEAR 13](#)

My admiration of the tenacity, perception and depth of knowledge held by researchers prompted me to complete a Nuffield Research Project during the summer break of 2023. Hosted by Dr. Sky Redhead at USW, I investigated the correlation between the number of soil-dwelling bacteria with antimicrobial resistance genes and the concentration of fertiliser used on the fields from which I obtained my samples.

This was a valuable hands-on experience that furthered my understanding of molecular procedures such as DNA extraction, gel electrophoresis and qPCR; an exciting change of pace from theoretical learning. This intersected with microbiological techniques such as aseptic technique, serial dilution & microscopy, which gave me a new appreciation of how different specialisms may converge to provide new insight into our relationships with the world.

Individual analysis of data was encouraged so every participant created a unique scientific report and poster using academic papers to test and validate the conclusions of our critical thinking. We found that using slurry from cattle treated with antibiotics provokes resistance to synthetic substances that would otherwise never be observed in the natural environment. This could have negative implications for humans, exacerbating the AMR crisis in the medical setting. [REBECCA JONES, YEAR 13](#)

CHARITY

SIXTH FORM FUNDRAISING EVENTS

Throughout our time in Sixth Form, we have carried out many activities aside from our studies in order to raise money for charity. Allowing the students to organise enjoyable events meant that we could develop our relationship with our peers and the staff, whilst making a notable difference in the community.

In November of Year 12 we held a whole school pyjama day and bake sale to raise money for Children in Need and Velindre. This event ran through the whole day and was a success for all parties involved; we managed to raise £780.87 for each charity. After the success of our first fundraising event, we continued to raise money for Velindre in the March. This event was expansive – we held a multitude of activities to involve the whole school. This entailed penalty shootouts, raffles (with a list of unique prizes), bake sales, and themed non-uniform days. This week-long fundraiser allowed us to provide Velindre Cancer Charity with a grand total of £2,000. Following this, a Rugby Event was held to raise money for our beautiful new sporting facilities. Raffleing, auctioning sportswear, and a Q&A with Gethin Jenkins led this evening event to gather a staggering amount of over £3,000.

We also held smaller scale fundraisers for Sixth Form and staff. For example, we have held Coffee Mornings for Macmillan. For a small section of the morning with lots of homemade cakes we managed to raise £107.

As our final event as Head Students, our team organised another bake sale and Halloween-themed dress up day for Hope Rescue Charity. We were so proud to have raised £709 as our last charity event as 2022-23 Head Team. Right through our time in Sixth Form, our ventures have caused us to become a truly tight-knit cohort. We ended up raising over £3000 for various charities, and another £3000+ for the new facilities in the school. From weekly bakes, to decorating our own area for Christmas, the Sixth Form experience is truly moulded around community and friendship.

