



SUMMER TERM 2022

This term has seen some exciting STEM work across the schools in Blaenau Gwent with many taking part in projects with EESW and Technocamps/Cardiff Met in addition to visits from STEM businesses and providers. Plans are underway for STEM enrichment for teachers and learners to commence in September.

The year has been unpredictable for everyone but we've been able to facilitate lots of sessions to enrich STEM experiences for the learners of Blaenau Gwent. We hope all schools will take advantage of what is on offer from us to develop the pipeline of talent in the region. Wishing you a happy and sunny summer!



CLUSTER UPDATE



Willowtown have had some great sessions again this term. Technocamps bridges for Y5 were excellent. Lots of useful information was shared and the learners enjoyed the making a bridge part too.

Also congratulations go to Willowtown for being successful with the first phase of the application process for a partnership grant from The Royal Society. They are going to research the possibility of growing tropical plants in Wales – we are looking forward to supporting them with this as it progresses!

THE
ROYAL
SOCIETY

If you would like more details on applying for a grant to carry out a research project, please get in touch.



Ebbw Fawr's Learning Resource Base enjoyed visits from the Eden Education Centre. They all enjoy coding and programming so thoroughly enjoyed their sessions. These images show how engaged they were, as well as independent work and team work. Seems there are some future digital experts there!

REQUESTS

If your school would like to plan any STEM based events, or would like us to facilitate any links with businesses or providers, please get in touch.

We have a bank of contacts who have pledged to support our schools and are waiting to get involved!

Also if you have any STEM related CPD requirements please ask for support.

USEFUL RESOURCES

Science Root Words

26 Science root word cards that can be downloaded.

<https://fabiodisalvo.com/2022/05/22/science-root-words/>

Santander and Twinkl

Curriculum for Wales linked resources for aged 5-11. The resources are free and help teach learners about money and how it impacts everyday life. They even feature Santander ambassadors, Ant and Dec!

<https://www.twinkl.co.uk/resources/adnoddau-cymraeg-welsh-resources/twinkl-partnerships-in-wales-partneriaethau-twinkl-yng-nghymru/cfw-santander>

CLUSTER UPDATE (Continued)

John Mewett, the Local Environment Quality Officer for Blaenau Gwent visited the River Centre. His original session was purely based on recycling, which went down very well with staff and learners. So much so, the learners were asking very important questions about why they don't recycle in school. As a consequence of this, John is now helping to facilitate and organise a bi-weekly recycling collections for them within the county - something they have been desperate to do for a while!

After the success of his visit, John was also snapped up to help with their topic this term of 'Under the Sea' where they've looked at pollution of plastics in oceans. John delivered another successful session with the learners talking about the importance of plastic pollution and the negative impact it can have on oceans, as well as discussing what they could do to help reduce the problem, such as litter picking, reusing plastics etc.

The learners then requested if John would come back and litter pick with them on the school yard, which he was more than happy to do. All learners were engaged and enthusiastic to make a difference to their school environment. The River Centre look forward to working with him again next year on some potential other projects. Perfect to show how ethically informed the learners are!

John Mewett is available to visit all schools. The presentation covers:

1. An overview and discussion on litter
2. Discussion on damage caused by litter
3. Why we should recycle
4. What the recycling process is
5. Table-top show of recycled materials
6. Litter pick around school or local area (depending on schools' requirements and H&S)
7. Handouts and goody bag for all learners to take away.

He can also deliver his presentation on the ocean and the damage that plastic waste is causing, it follows a similar layout as above but relative to the oceans. If you would like to have a visit from John, please get in touch.



Show Me The
Science

SHOW ME THE SCIENCE

Abertillery Learning Community jumped at the chance of having a workshop from Show Me The Science. The session covered:

- Seeing is Believing – looking at DNA extraction
- Microbial Culture – using general purpose agar plates to swab their finger/thumb and then a different site. The samples were then cultured to look at what each participant was harbouring.
- Career routes into Health and Life Sciences.

Feedback from teachers included:

"Learners found it engaging and informative, they were thrilled/excited with the experiment of discovering their own DNA".



"The workshop was well designed, keeping the interest of learners. Leaders and I had a lot of fun and learned a great deal. The presenter gave good real-life examples of where she had used Science in her job".

CLUSTER UPDATE (Continued)

Ebbw Fawr Primary have enjoyed a wide range of experiences to enrich their STEM learning this term.



They had a fantastic visit from Explorer Dome. The learners learnt all about the different forms of bubbles and how they are formed and how they can be made into different shapes. They were mesmerised by the bubbles!

Technocamps visited with sessions this term focusing on coding. Foundation Phase to Key Stage two used the programme known as Scratch to code and design different games and characters. Look at the concentration on those faces!



Year 3 and 4 enjoyed learning about Water and as part of their topic Discover Dwr carried out a STEM workshop. They learnt all about the way water gets to all the important buildings. They discovered how much water is used in our house during every day activities and learnt about water around the world.

Class 1 and 2 enjoyed their STEM workshop from Science Made Simple as they went on a journey with Izzy. They investigated floating and sinking while finding out about modes of transport and how they can move using different transport.



Nursery, Reception and Year 1 enjoyed their visit from Becky Ward, Blaenau Gwent's Biodiversity Officer which focussed on insects and habitats. They all learnt new facts about different insects around us with superb discussions and why insects are important.

PROVIDERS

Following on from the success of the insect/ minibeast workshops delivered by Blaenau Gwent's Biodiversity Officer across June and July, these will be offered to schools in September.

Workshops are available on Tuesday, Wednesday and Thursdays' (except Thursday 15th) throughout September.

Sessions are for all primary pupils (and any interested secondary pupils) (*for FREE if signed into an SLA with BG's Biodiversity Officer) and can run for a minimum of 1 hour per class.

For further information or to make a booking please contact Becky at Rebecca.ward@blaenau-gwent.gov.uk



MESSAGE FROM NDEC

Please see a message from NDEC for Primary Schools regarding their activities that are available in the new academic year.

NDEC have had excellent feedback this year from their event participation and school enrichment so get in touch with them soon as they always get booked up early!



National Digital
Exploitation Centre
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The National Digital Exploitation Centre now have limited availability to offer booking of our cyber-themed primary school activities from September 2022.

We are trying to do this in a way that schools book the full primary offering in one go, and year on year, so that learners receive repeat engagements around online safety, raising aspirations towards cyber/computing/STEM careers, and developing digital competency, throughout their primary schooling.

We also hope that this will support schools to meet the requirements of the digital competency framework, the new Careers & Work-Related Experiences guidance, and progression steps relating to online safety.

If you are interested in working with us from September 2022, please could you get in touch with us at ndeceducation@southwales.ac.uk so that we can discuss dates for booking in the following activities:

Group	Activity	Format	Skills/Objectives
Year 4	The Secret Chest	1.5-hour webinar delivered virtually by NDEC team	Digital skills, online safety skills, puzzles & computational thinking, cyber/computing careers messaging, gender diversity in STEM messaging
Year 5	Digital Forensics Project	5-week cross-curricular project, mix of teacher delivery, NDEC team delivery, and trips to the NDEC and the University of South Wales	Digital skills, online safety skills, speaking & presentation skills, raising aspirations towards STEM careers & university pathways, teacher learning, computational thinking/ problem solving/puzzle skills, teamwork
Year 6	Internet of Things Competition	5-week project, mix of teacher delivery, NDEC delivery & trip to the NDEC	Digital skills, cyber security concepts and terminology, design thinking, iterative design methodologies, speaking & presentation skills, teamwork, teacher learning
Digital Leaders	Cyber Heroes	2-hour virtual/in-person session delivered by NDEC with optional teacher-led follow up activity	Online safety skills (with optional activity: digital competency, teamwork, community support)

Please note we can cater for mixed form entry, just let us know! We also offer a transition activity with First Campus in the second half of the summer term and will be working with secondary schools to deliver this to their feeder primary schools, so we may contact you in the future about this too.

As always, **delivery of our activities is completely free to schools in South East Wales**, although the school will be expected to cover the cost of transport for any trips. Where cost is a barrier, we can look at alternatives/support on a discretionary basis.

Activities will be booked on a first-come-first served basis, so please get in touch ASAP.

Looking forward to hearing from you and hopefully working with your school on this!

Best wishes,

The NDEC Team

5G ENRICHMENT PROGRAMME

Some of our schools have been learning how 5G connectivity could transform the way we live and work with a new interactive Augmented Reality experience that is being delivered as part of the 5G Wales Unlocked programme, an innovation project co-funded by Welsh Government and various project partners.

The AR game, developed by Jam Creative Studios and delivered in schools by Technocamps allows learners to work in teams to unlock 5G connectivity around a virtual 3D town by carrying out fun STEM activities.

Played by small groups on iPads, the activities span some of the many different sectors that 5G connectivity will transform; Healthcare, agriculture, manufacturing, recycling and transport and enables learners to see a clear change in infrastructure as they walk around and explore in detail the large 3D virtual town environment.

Economy Minister, Vaughan Gething said: "The Welsh Government, through Tech Valleys investment, is proud to have led the delivery of the 5G Wales Unlocked project, which is accelerating 5G deployment across Blaenau Gwent and Monmouthshire. The 5G Enrichment Programme is one of the many fun and interactive ways to help develop the skills, knowledge and experience of our learners to benefit from an increasingly digital and changing economy". [Read the full article here.](#)



NEW INDUSTRY PARTNERS



Blackwood Engineering will deliver talks to the school on Engineering, will do Q&A sessions and can host potential site visits with spraying workshops. They can also help with STEM based careers fayres.



Price Waterhouse Coopers want to highlight their company has jobs related to accountancy, tax and also digital. Aimed at secondary, they can carry out careers talks, workshops, office visits and will attend events. They are keen to help with mentoring of Y10/11 learners who are considering this possible career pathway.



Sustainable Food Places want to engage with all ages with anything food related, especially sustainability. They will work off specific requests from schools. They will also offer sessions on Food Waste and their Sugar Smart Campaign. They will look at meal planning/budgeting and organise visits to local businesses to see what they do with food waste.

NEW PROVIDERS



The Royal Society of Chemistry have a huge range of resources readily available on their website. There are primary and secondary resources that are aligned to the curriculum and WJEC specifications. They are also open to requests for materials and staff training so please get in touch if this would assist in your planning.

University of
South Wales
Prifysgol
De Cymru

Academics can visit for sessions, covering all areas of Science & Engineering (subject to the availability of the academics). They are available for events if you have a particular need & can cover topics to help with ALN & referral units.



lightyear
foundation



Their immersive, creative sensory workshops use science to teach life skills to break down barriers to get more ALN/disabled learners into STEM. For learners aged 3 – 19, Sensory Science workshops give all learners the chance to explore through sensory learning.

If you would like take advantage of any of the opportunities shown, or if you have any questions or requests, please email us anytime:



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