



**Berkeley  
Green  
UTC**

**WEEKLY NEWSLETTER  
3-MAR-23**



### **Headteacher's Update**

We have had a very positive start back to the new term. UTC students have returned full of energy and motivation for the term ahead, and we are seeing our year 11 and year 13 students really focus on their preparations for mocks and the final exams.

This week we have started our mock exams, and it is fantastic to see our students taking them so seriously. One of our core UTC values is having a positive attitude, and all of the students who have taken mocks this week have demonstrated this value. The vast majority of students were fully prepared for their exams and had all of the correct equipment. Thank you to parents and carers for your support with this.

On the last day of the previous term we were joined by North Tower Consulting and Mira Showers to lead our employer projects. They brought with them around 20 employees to work with our students, and once again every one of our students acted maturely, professionally and with a positive problem-solving attitude. A number of students were given work experience and apprenticeship opportunities based on the work completed and the conversations they had with the employers.

Gareth

## Student Celebrations

Last term was full of successes and great achievements by our students. 10 Waterman Aspen dominated the term and beat 11 Intel to the attendance trophy for this term by 0.6% and a grand total of 95.1%. As it was the end of term, we had 3 Choco lotto draws one for 100% in the previous week, one for 100% this term and 1 for 100% this year. In the weekly draw we have 234 students enter and the lucky winners were Toby Jenkins, Jack Lyons, Archie Brooks and Munashe Jim. In the draw for this term, we had 99 students with 100% attendance and the lucky winner there was Tomos Diaz. Finally in the 100% this year draw we have 32 students who have still not missed a single day and the winner of that draw was Finn Pegler.

As ever our students take great pride in displaying our values and this was very apparent in key stage 4 this term. It was a very close-run competition with the top 3 tutor groups only being separated by 14 points! but in the end 10 Reinshaw came out on top with 319 points, 10 waterman Aspen were second with 317 and 11 Intel third with 305. Key stage 5 was a slightly different story and 12 Mira dominated this competition with 160 points which was 42 more than their nearest rivals 12 Atkins. Well done to all for their contributions. This weeks values champions were:

10 Lockheed Martin: **Jack Carter**  
10 MOOG: **McKenzie Sheere**  
10 Renishaw: **Finn Peglar**  
10 Waterman Apsen: **James Sweeting**

12 Atkins: **Elijah Dewick**  
12 Mira: **Ethan Sweet**  
12 Rolls Royce: **Kyristian Branka**

11 Intel: **Theo Turner**  
11 Sempre: **Evan Dufield**  
11 Versarien: **Alex Evans**

13 CGI: **Matthew Billings**  
13 CSA: **Junior Lewis**  
13 Versarien: **Toby Hodges**

## International Women's Day

On Wednesday March 8<sup>th</sup> schools and organisations around the country will be celebrating International Womens Day. One of our employer partners - AND.Digital - have invited our female students to an event in Bristol during the evening of the 8<sup>th</sup> March. This event is part of their *AND She Can* initiative aimed at creating opportunities for young females in the world of STEM. It is a free event and if you are interested in finding out more please see the attached flyer and book tickets via [this](#) link.

## Maths Challenge

Congratulations to all those Y10 and Y11 students who were bold enough to tackle the UKMT National Maths Challenge. Channelle Milligan got a Bronze award and the following students all got silver awards: Joe Cox, Tomos Diaz, Jack Lyons, Rhys Surman and Katie Voyce. This a great achievement as it is a challenging problem solving test. Congratulations also go to Jack Whitehorn in Y12 who got a Merit in the Senior Kangaroo.



*100 cyber security students took part in a project led by North Tower Consulting.*



*Year 12 engineers have been discussing the best way to efficiently use water in shower design.*



*Our F1 in Schools team have been discussing the best way to build their prototype.*

## Key Stage 4 Curriculum Update

*In GCSE Geography this week we have been looking into the different types of natural hazards.*

*Jo Brown – Teacher of Geography*

## EcoSchools

Before the half term, Active Ecology were visited by Melanie from the Energy from Waste site on Javelin Park. She explained how non-recyclable waste is processed and incinerated to produce electricity to supply to 25,000 homes. The students learned about some chemical processes the exhaust smoke goes through to remove heavy metals and other contaminants before being released into the air. We learned that, sadly, if recycling is contaminated with food or non-recyclable waste, the whole lorry full cannot be recycled. Our students asked some great questions, with Archie Fowles suggesting that the energy released could be linked to new electric carports, which are currently only available in limited numbers.

## Rights Respecting Schools Update

This week we have been looking at article 17- children and young people should be able to access information, particularly from the media. They should be able to get information from many places— from their country and beyond. We have linked this article to World Book Day which was celebrated on 2nd March this year. World Book Day was created by UNESCO on 23 April 1995 as a worldwide celebration of books and reading. In countries around the world it is celebrated on the anniversary of that date, but in the UK it is generally marked on the first Thursday of March. Spending just 10 minutes a day reading and sharing stories can make a crucial difference to your future success and is fun for all involved. That's why World Book Day continues to encourage children and young people to read for pleasure through its work with authors, illustrators, publishers, bookshops and libraries.

Here at the UTC the Rights Respecting Schools Student Council wishes to start a book swap to encourage reading. If you have a book you do not mind donating, please pass it to Jo Brown. It would be really lovely if you could write a short summary to go with it to help students decide on a book to read. We are very low on donations presently. Lastly, thank you to all those donated to Marah, the homeless charity on our non-uniform day last term. The UTC donated £213 to this worthy cause. Marah were very pleasantly surprised by the donation and wishes the very best and thank you to us all at the UTC.

## Mock Interviews

On Tuesday 14<sup>th</sup> March from 14:20-16:20 we are running mock interviews for all year 10 and 12 students. This is a fantastic opportunity for our students to meet professionals and practice interview technique in preparation for the next stages for their professional lives. We are still looking for a few more volunteers to help us with this, so if you (or anyone you know) is interested in helping by interviewing a small number of students then please email the office and we will contact you.

## Key Stage 5 Curriculum Update

*This week year 12 digital students have been using Immersive Labs to study Cyber security risks to organisations, how risk is measured and how risks can be mitigated.*

*Paul Shaddick – Teacher of Digital*

## Upcoming Dates

**w/c 27<sup>th</sup> February** – Year 11  
and year 13 mocks

**15<sup>th</sup> and 16<sup>th</sup> March** – Third and  
fourth days of the national  
teacher strike

**31<sup>st</sup> March** – Waterman Aspen  
employer project

**31<sup>st</sup> March** – Last day of term

**15<sup>th</sup> April** – First day of new  
term

**16<sup>th</sup> May** – Date of first summer  
exam



*Our Active Ecology group met with  
Melanie for the Energy form Waste site  
on Javelin Park.*

## Apprenticeships

### Cyber Attack Digital Project – North Tower Consulting

North Tower Consulting is a specialist management consultancy based in Cheltenham providing expertise in the growing Cyber Tech sector. Founded in 2019, the company has grown significantly and signed the Armed Forces Covenant in September 2021. Their services encompass software solutions, project management, service management, systems engineering, cloud computing and cyber security.

The project launched in C11 with a presentation from North Tower which outlined their company practices and introduced the working apprentices. The task set for students was to respond to a cyber-attack scenario in which the school had been targeted and its data had been stolen by a masked hacker. Each team shared out the roles of Ethical Hacker, Communications Leader, Team Leader and Researcher and had to overcome the challenges of communicating with each other across classrooms and working together to coordinate an effective response to the threat.

Students presented back to the employers at the end of the day and were tasked with outlining the incident management measures that they took to ensure the least amount of damage was caused and the right people were informed. They also had to pinpoint how the hacker accessed the BGS system, the vulnerabilities that were exploited, and the security measures that the team would put in place to mitigate further risk. Communications leaders for each team were put in charge of liaising with 'the press' and releasing the facts of the scenario without causing panic.

North Tower Consulting were deeply impressed by the professionalism and quick thinking of the students and praised the fluency with which they applied their knowledge under pressure. They were amazed at the high standard and quality of the students' final presentations and commented on their outstanding maturity as young professionals.

### SLT Parent Meeting

On Thursday 16<sup>th</sup> February at 17:00 we hosted our latest parents information meeting. For this meeting we shared information about the mock exams beginning this week, and the final exams that begin in May. The recording is still available and can be accessed via [this](#) link.

- [GE Aviation Engineering Degree Apprentice](#) – GE Aviation systems LTD, Cheltenham, £20,255.00
- [Software Engineer Apprentice](#) - Raytheon UK, Bristol, £20,000.00
- [Level 3 Information Communication Technician Apprentice](#) – BT, Bristol, £19,422
- [Level 4 Network Engineer Apprenticeship](#)- BT, Bristol, £19,422
- [Level 6 Digital Technology Solutions - Network Engineer](#) – BT, Bristol, £19, 422
- [Cyber Security Technical Professional \(Integrated Degree\)](#) – Atkins, Bristol, £24,000 Funding
- [Building Services Design Engineer \(Degree\)](#) – Atkins, Bristol, £24,000 Funding
- [Civil Engineer \(Degree\)](#) – Atkins, Bristol, £27,000 Funding
- [Digital And Technology Solutions Professional \(Integrated Degree\)](#) – Atkins, Bristol, £25,000 Funding
- [Electro-Mechanical Engineer \(Non-Degree\)](#) – Atkins, Bristol, £27,000 Funding
- [Nuclear scientist and nuclear engineer \(integrated degree\)](#) – Atkins, Bristol, £27,000 Funding
- **\*To apply** for one of the ATKINS South West and Wales apprenticeships listed above, please register for an account here: [https://atkinscandidate.ambertrack.co.uk/apprentices2023/CandidateLogin.aspx?utm\\_source=statics.teams.cdn.office.net&source=statics.teams.cdn.office.net](https://atkinscandidate.ambertrack.co.uk/apprentices2023/CandidateLogin.aspx?utm_source=statics.teams.cdn.office.net&source=statics.teams.cdn.office.net)
- [Civil Engineer Degree Apprentice](#) - BG&E Consulting Engineers Ltd, London, £20,000 - £24,000
- [Degree Apprentice Aerospace Engineer](#) – Belcan, Bristol, £16,500.00

## **Water Conservation Engineering Project – Mira Showers**

Kohler Mira was founded in 1921 and created the world's first thermostatic shower valve. As the UK's leading shower brand, Mira is a household name and currently employs over 700 associates nationwide. In 2021, to mark the centenary of the brand, they committed to a 100 step 'Better Planet' action plan to reduce their impact on the environment at every stage of their product lifecycle. From recycling the water during product testing, to removing single-use plastic in their packaging, they aim to achieve NetZero by 2035.

The day commenced with a short presentation from Mira Showers apprentices and representatives. Their introduction to the company included an overview of their apprenticeship routes and the worldwide operations of Kohler Co. which spans across 6 continents.

The project launched with a water-crisis scenario inspired by the January 2021 World Economic Forum Report which listed the water crisis as the #5 global risk in terms of impact to society. Students were asked to consider the world on its current trajectory towards 2030, where 1.6 billion people are estimated to lack access to safe drinking water, 2.8 billion will not have safe sanitation, and 1.9 billion will lack basic hand hygiene facilities. In addition to this, students were given the factors of hotter summers and drier winters, where safely managed water would become scarcer on a global level, and severely impact quality of life in domestic as well as commercial and public premises.

Students were asked to design a shower system which would allow its users to effectively clean themselves with just 1 Litre of water. Sanitation issues were at the forefront of the design brief along with design solutions for how the water limit would be controlled, a story board of the product's conception, and a five-minute presentation which would be delivered back to their peers and the employers.

The representatives from Mira Showers were amazed to see how quickly the groups sprung into their design research. Experience from past projects was being effectively deployed in each room and group roles and tasks were soon assigned by the students themselves. Materials, shower designs (both real and science-fiction), pump systems, filtration devices and sanitation methods were being considered and researched while the designers for each team began work on their concepts in Fusion 360 and SketchUp. Winners have yet to be announced, however some of the favourite designs for the day included a Gyrostatic Shower, fully animated for the presentation, and an intensely researched Filtration and Pump System Shower which factored in flow rate, material costs and quality, optimising water dispersal for re-collection.

The project was an enormous success and has provided students with insight to water systems engineering. It is estimated that 100 billion to 120 billion cubic metres of water can be saved in 2030, just by optimising efficiency of our water facilities. Mira Showers were deeply impressed by the maturity, knowledge and creativity of our students in tackling this very real issue which professional engineers around the world are already working to problem-solve and will be pleased to announce their winners very soon.