

# ST RICHARD'S CATHOLIC COLLEGE

## Science News

Excerpts from Newsletters  
(September 2018 – present)



# Science News (September)

## SUGrE-1 Experiment

SUGrE-1 was an exciting opportunity for schools to take part in a real life space mission launched from a tiny island in the Pacific Ocean in April 2018. The St Richard's GEMS (Girls in Engineering and Maths) entered the competition which required that they design and produce a space bound item, representing the school. The object had to meet the dimensions' specifications *i.e.* a 3D shape with mass of less than 4g and volume of less than 4 cm<sup>3</sup>, basically the size of a sugar cube!



With help from Mrs White in Product Design, the team considered a number of shapes including a classic sugar cube style, but ultimately opted for a transparent Perspex tile of similar dimensions to a Scrabble tile. The tile was etched with the college shield and then had its mass reduced to comply with specifications by boring hexagonal holes. The tile was returned to the college at the end of July having been to space and the video footage was published on the internet in August.



The St Richard's tile is shown above (circled above in red), these two images being the clearest of our tile amidst the other 150 or so samples. The video footage clearly shows the rolling mass of small volume items, floating in microgravity aboard the NASA Water Recovery X-ray Rocket. The SUGrE-1 experiment launched to an altitude of 205km and attained a maximum speed of some 4000mph. Congratulations to Hannah Chan, who led the team.

## Farnborough Air Show: Futures Day Trip



On the last day of the academic year, St Richard's pupils attended Farnborough Air Show, the world's largest, which hosts school pupils for Futures Day on the last Friday of the show. The day's activities included an audience with Major Tim Peake, autographs and photos of the UK's most famous astronaut alongside an amazing aerobatic air display (and Space Café!) including the Battle of Britain Memorial Flight, a flying Harrier

and to finish off, we were treated to a VIP executive tour around a brand new Airbus A380 airplane – the absolute last word in luxury travel!

Hannah Chan particularly enjoyed the flying display, commenting 'Today was like the best experience ever, where we had an amazing time with things we had never seen before. We were close up to planes as they took off and landed (Red Arrows and Airbus A350). We also learnt a lot through workshops and pilots when we were asking them questions. It was a great first day of the summer holidays!' Aimee Lawrance enjoyed 'Seeing Tim Peake was really good and getting his autograph. Then we went around all the stalls and that was fun. I bought a plane hat and my favourite plane was pink'. Joe Baszczak thought 'It was a great experience especially when the planes were flying over us.'



Aaron

Douglas enjoyed the day reporting that *'I think the Farnborough trip was a great day out with lots of opportunities. I liked seeing Tim Peake and the Red Arrows.'*



Anthony Black thought *'It was really cool. We all had a great experience as we watched the planes fly, land and take off. We saw Tim Peake too as he did an interview. It was fun and I would like to go again!'* Nuala O'Rourke, *'really enjoyed meeting Tim Peake and finding out more about planes,'* with Nuala Andrews



agreeing that, *'It was very interesting to see all of the different planes (especially the Harrier!). It was a really good experience listening to Tim Peake.'*

### **Big Bang South East: STEMFest**

*I found STEMFest really fun and interesting. I learned things like: refraction, feather patterns, recycling, foot diseases, germ awareness, how to eat well and different birds of prey. My favourite part of STEMfest was the birds of prey because it was interesting and exciting to learn about the different birds. I would consider a career in STEM because the trip was lots of fun!* by Aimee Lawrance.



Talia Cahill agreed, adding *'We had loads of fun exploring the different exhibits and learning more about jobs that I only knew a little bit about. My favourite part was seeing the different birds of prey - hawks, eagles and owls. I find them fascinating and it was exciting to watch them hunt.'* Luca Hale-Stretton also really *'liked the bird show'*.

Ivan Doolan Tanner was one of the Amateur Radio Licence holders at the event and threw himself into proceedings. He reports, *'Not only did I get lots of freebies, I played with robots and did virtual reality welding! We ran an Amateur Radio stand (using St Richard's radio kit and special event callsign, GB4 SRC) and taught people about the history of it. Overall, I think it was even better than last year!'* Jack Gunson, who also qualified as Amateur Radio Licence holder, added, *'We could hear people from Wales!'* Joseph Roser had the furthest distance radio contact. He commented, *'I spoke to people in Switzerland using our radio kit. There were so many stalls with unique things and it was fun.'* Aaron Douglas described the event as *'a bolt! There were many activities to do and I personally enjoyed the airplanes and antennae!'*

#### **\*\*\*\*\* Extra-Curricular Science Activities \*\*\*\*\***

**Fab Fizzix - Tuesday 1.10 – 1.35 in Lab. 4 from 18<sup>th</sup> September**

Year 10 DoE volunteers supervise lunchtime physics fun for Year 8 pupils.

**St Richard's Amateur Radio Club (StAR Club) - Wednesdays 3.30 – 5.00 p.m.  
Lab 4 from 11<sup>th</sup> September**

Train for and take an Amateur Radio Licence at a friendly after-school club open to all years. Learn about electronics. Solder your own kits. New members welcome.

**Young Investigators - Thursday lunchtimes in Lab. 7**

Hands on practical science fun for Year 7.

**GEMS = Thursday 13.00 – 13.30 in Lab. 4**

Girls in Engineering and Maths club Exoplanets project until Christmas

**St Richard's Science Storyteller 3: Periodicity - Starting in January after-school**

More Able and Determined Year 7 Scientists. After-school cross-curricular STEAM Project. Earn CREST Awards

**On Tuesday, 9<sup>th</sup> October for World Space Week there are after-school activities – planetarium, launch of tracker balloons and space careers talks and more.**

# Science News (October)

**Royal Observatory Greenwich Trip:** Year 7 pupil Lily Holloway enjoyed the trip immensely, reporting, *'I really enjoyed the astronomy trip on Sunday. We went to many things including a planetarium, many gift shops, a market and the brass line separating the western and eastern hemisphere. The trip was to Greenwich and the drive went very quickly. I really want to go again as I enjoyed it so much!!'*



7F's Lucy Bateman and Edward Klein also enjoyed the day's activities, commenting, *'The trip consisted of three parts: the prime meridian museum (the courtyard), Greenwich market and the one and only planetarium. Everyone had a whirlwind of a time!'* The freedom of the trip was great. We could explore a whole area by ourselves making it a great opportunity to learn all about space.' Lucy thought, *'Today was amazing for me. Standing in between east and west was so*

*exhilarating. I learnt many new things and I love my new space socks!'* All of the pupils were fascinated by the planetarium show 'Phantom of the Universe: an exploration of dark matter, from the Big Bang to the LHC', The Year 7 pupils enjoyed watching the world walk by on the other side of the Thames, using the camera obscura, installed by early Astronomer Royal John Flamsteed for observing the sun.



Year 9 GCSE Astronomers comments included: *'The dark matter is very interesting as it is invisible yet everywhere; 'It was very interesting from the buildings to the dark matter.'* 'My favourite part of the day was going into the planetarium and learning about dark matter and where it is in the universe – EVERYWHERE!'



The market was also popular with many enthusiastic comments about the exotic (and expensive!) sweet shop and Ivan recommended the goat curry which he stated was *'delicious!'*

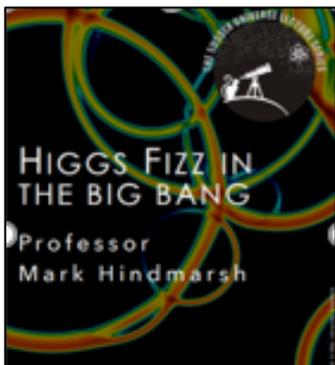
**Knit 'n' Natter:** Pupils and staff alike have been learning to knit in Lab 4 on Monday and Friday lunchtimes, making six inch squares which will ultimately be sewn together to make blankets. The blanket(s), scarves and other projects made by the 'Knit 'n' natter' group will be given to Oxfam.



**Open Evening:** Open Evening was very busy, showcasing all the amazing activities that science has to offer. In addition to perennial favourite activities (for some!) such as dissection, there were also colourful, crunching, fizzing, glowing, loud and sparky things going on across all the laboratories. In Lab 2 were pancakes à la DofE with takeaway 'constellations', StRATOS and enrichment displayed elsewhere.



Former St Richard's pupil, Megan Turley, accompanied her younger sister Charlotte to Open Evening and spent some time catching up with Dr Durkin. Megan passed her GCSE in Astronomy in 2013, inspiring her younger sibling while doing so. She went on to study physics, chemistry and biology at A Level and has plans to study in Oxford next year. Of her astronomy studies, she recalls it being '*really hard work but worth it in the end!*' Charlotte is really looking forward to studying astronomy – she also '*asks lots of questions*'.



**Sussex University Trip: Higg's Fizz in the Big Bang** The first Sussex University talk of the new academic year saw Professor Mark Hindmarsh explain the current scientific theories relating to the first few picoseconds of the formation of the Universe, in the Big Bang. In a simple analogy, he related the 'fizz' as the universe formed, to the instant release of gas from all parts of the liquid when an agitated fizzy drink is first opened. This proved to be a really effective comparison despite (or because of) its simplicity. The professor summarised supersymmetry in a simple and elegant way



with most of the pupils grasping the concepts discussed – on to next lecture in November!

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**Young Investigators** - Thursday lunchtimes in Lab 7

**GEMS** - Thursday 13.00 – 13.30 in Lab 4

**St Richard's Science Storyteller 3: Periodicity** – Starting in January after-school

**World Space Week** - Monday 8<sup>th</sup> - 12<sup>th</sup> October

**IET Faraday Challenge (Year 8)** – Wednesday 10<sup>th</sup> October

## \*\*\*\*\* Trips\*\*\*\*\*

There are 26 places available for each of the residential trips below.

Space Camp will cost £225 inclusive and Ethical Eden will be £250.

Deposits and staged payment is available this year via the Finance Office. Please use the on-line payment system to reserve a place on these trips, the link is: <https://www.scopay.com/login.html>

Please contact [finance@strichardscc.com](mailto:finance@strichardscc.com) if you require account login details.

**Please note this is not the same as ParentPay which is for school meals only.**

### Space Camp 2019

Residential trip to UK Midlands

8<sup>th</sup> – 10<sup>th</sup> April 2019

### Ethical Eden 10<sup>th</sup> Anniversary

Residential Adventure Trip to Cornwall

27<sup>th</sup> – 31<sup>st</sup> May 2019

### Texas STEM Space Camp 2020

Residential trip to Texas (for current Year 7 and 8 pupils) – October Holiday 2020  
(cost – tbc, but expected to be £1500-£1700 – payable over 2 years by instalments)



For information on any trips or extra-curricular science please contact Dr Durkin – [drdurkinj@strichardscc.com](mailto:drdurkinj@strichardscc.com)

# Science News (December)

## Space Week 2018

With a theme of 'Space Unites the World,' UN Space Week at St Richard's featured many space related activities. A 'Spot the Space Stuff' competition for the Lower School; space themed D.E.A.R. activities; the inflatable planetarium for pupils from both St Richard's and pupils from other Ogden partner schools; a telescope tour for GCSE Astronomers with Astronomy Adventures and solar observing for all. The week continued with an IET Faraday Challenge Day for Year 8, with a James Webb Space Telescope theme and a 'Careers in Physics' talk from Issy Pattenden, a friend to St Richard's since she joined us from Bexhill College for our first joint trip to CERN when she was studying A Level Physics.



## 'Spot the Space Stuff' Lower School Competition



There were six competition entries with all 20 images correctly identified and so the final winners and runners-up were judged on the quality and content of the tiebreaker paragraph. Congratulations to winner, Lucy Bateman of 7F, who took home the Newtonian Reflector Telescope with Solar Filter. Runner-up prizes were also presented to 7F's Edward Klein and 8H's Harry Fletcher. Well done, all!



**Space is... by Lucy Bateman, 7F.** *'To me, thinking about the size of space and how big we really are, I wonder what's out there. We are just floating in this infinite confusion full of planets, solar systems, nebulae, galaxies and universes. Scientists say that the universe is constantly expanding but what is it expanding into? That's what I think is amazing about space – how much we don't know!'*

**Planetarium by Will Harwood, 7O.** *"I went into a planetarium during the school Space Week. We went down to the gym after school with pupils from other schools and waited until the big blow up planetarium was ready. I really couldn't wait when someone said that it was narrated by Doctor Who (David Tennant). When we got inside it was pitch black and everything went silent. Then the video started. 'Space...' Throughout the show, there were many interesting facts about space, the James Webb Space Telescope, the big telescopes and lots more. Finally, the video ended and we all left the planetarium. Overall the experience was really fun and interesting and I would love to do it again."*



**Careers in Physics by Lily Holloway, 7I.** *"Issy (Pattenden) came to our school and talked about careers at Sussex University. She talked about how you can do a normal degree, then go on to a Masters and then a PhD to become a Doctor. She talked about their physics, maths, chemistry and science courses."*



*We could ask her questions and she answered all of them! She really inspired us and we hope to welcome her back soon!"*

### **IET Faraday Challenge: James Webb Space Telescope**

St Richard's played host to the IET Faraday Challenge for the second year running, with 36 Year 8 pupils competing in a STEM construction challenge based on the James Webb Space Telescope. Six teams spent the day designing, testing, constructing and then presenting a pitch for a landing module to accompany the JWST when it is deployed. The lunar module was to enhance the use of the telescope, adding an extra capability to the mission. All of the competitors enjoyed the day, developing design and construction skills while learning valuable lessons about planning, budgeting and, perhaps, most importantly, team work.

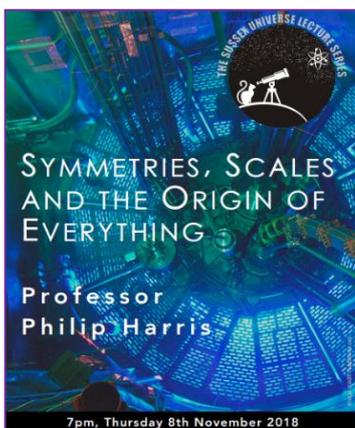


**IET Faraday Challenge by Jesmia Antonislas Ananthakumar, 8I.** *"I enjoyed taking part in the Science Faraday Challenge. It was very interactive and tons of fun (apart from our group's teamwork but we eventually got there!) Our task was to make something that we could add to the Optical Telescope Element which is a telescope that gathers and focuses light, mainly from the visible part of the electromagnetic spectrum, to create a magnified image for direct view, to make a photograph or to collect data through electronic image sensors. We were thinking like engineers of what we could add to the telescope to make it much better. It was a competition to see which team can make the best part. Unfortunately, my team didn't win but I think our end project was fantastic! It was very exciting and creative; I loved presenting our ideas to everyone else and it was a great pleasure to take part in an imaginative event".*



Congratulations to the winning team consisting of Harry Fletcher, Pearl Herriott, William Roser, Grace Sims, Evlampia Zacon and Maisie Scrivener who received a £10 Amazon voucher each and a 2018 trophy. One of the winning team, Pearl Herriott, said, *"I loved the Faraday Challenge as I learnt a lot about engineers and I had lots of fun."* Phoebe Garlick agreed that, *"It was fun and interesting"* and added, *"I definitely recommend it – it was amazing!"* A sentiment echoed by all.

8S's Grace Sims liked that they *"had different roles"* and 8O's Anthony Purvis thought, *"It gave us a good idea of what engineering does."* William Umel, 8U, thought, *"It was very good teamwork in our groups."*



### **Sussex Universe Lecture: Symmetries, Scales & the Origin of Everything by Professor Phillip Harris**

Ania Roby of 9H reports, *"We went to a lecture about scales where we were shown a rose bush up close and then it kept zooming out. We were then shown that if you spin something one way and then the other way, and they are symmetrical,*



*then it wouldn't really make a difference, but if you have a special feature that makes it different, then it does change. We were shown how our little planet may be big to us but as you zoom out you can see many more features like the way that the rest of the planets orbit the sun, and then if you zoom out further you see more of the galaxies and after seeing most of the galaxies and the way they are connected it all looks pretty much the same from there on."*

### **IET Jennison Lecture: 'Women in Human Space Flight' by Libby Jackson**

15 female pupils from Years 7, 8 and 9 visited the School of Engineering and Digital Arts in Canterbury for the annual IET Jennison Lecture. This year's esteemed speaker was **Libby Jackson**, currently the Human Spaceflight and Microgravity Programme Manager for the UK Space Agency. The lecture, entitled '**Women in Human Space Flight**' was preceded by a lavish reception buffet, which was warmly welcomed by the pupils. The lecture covered the history of women in human space flight, with a focus on the UK's first astronaut and first woman to visit the Mir space station, Helen Sharman. The talk highlighted the pioneering role many women have played in the space industry, and was designed to help inspire others to consider the sector as a viable career opportunity, where, at present, it is a heavily male-dominated environment. After the lecture, Libby took time to talk to each of the girls, signing copies of her book and posing for selfies.



*Annalysa Gower of 8F reports, "Libby Jackson is truly inspirational. She is living proof that dreams, although seeming faraway, can come true. When she was 7, she wanted to be a flight director for rockets. At the age of 17 she visited NASA and was really inspired. However, she didn't believe that her dreams were actually in sight. She thought that because she was a woman, she couldn't achieve her dreams. She persevered however and is now in charge of Mission Control in England (she is Director of Human Space Flight at UKSA). She is slowly changing society's views of what people can do. She believes that everyone can achieve their dreams no matter what gender, race, religion or nationality. Her motto is to always follow your dreams no matter how big."*

*Year 10 pupil, Hannah Chan's reflections are as follows, "Today's lecture was another amazing experience and truly inspirational. I loved her lecture this evening as it has guided me in my dreams of the future and about women participating in space. This year's lecture revisited some of the main characters from last year's lecture but went on to consider other inspirational women from Libby's previous book. New characters included other women who had participated in space exploration. My future has now opened up to me with the guiding lights of maths, physics, engineering and space."*



### **Knit 'n' Natter**

Pupils, parents, staff and even staff relatives (thanks Miss Glynn's Nan!) alike have contributed to the Knit 'n' Natter blanket project which has now produced its first blanket. Pupils have been learning to knit in Lab 4 on Monday and Friday lunchtimes, making six inch squares to combine into blankets for Oxfam. The group are rightly proud of their colourful community creation.



## Herstmonceux Telescope Supper



Adam Roby of 7R reports, "The Herstmonceux trip was very exciting because I learnt many new things about the tornado machine." Classmate Hugh Simpson agreed, adding that, "The telescope was awesome. The floor could lift up and you could see planets close up. There were lots of fun activities."

Leah Tamale, Emily Southgate and Lucy Bateman, all of 7F thought the trip was, "Fun and exciting", "... and educational and all the staff were really nice." They all enjoyed the levitating vacuum chair! Lucy, "Had a great time. The equipment and facts and activities were great fun and answered my questions."



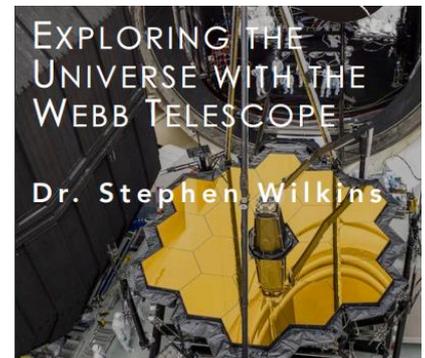
### StAR Club

7I's Ella-Marie Deeprise stumbled across StAR Club while waiting in Lab 4 to go to the Herstmonceux Telescope Supper trip. Ella really enjoyed the meeting reporting. "It was fun! We did a quiz and I came second! We then did some soldering – which I can do anyway – and I am now making a 3D Christmas tree. Herstmonceux was also lots of fun!"



### Sussex Universe Lecture: Exploring the Universe with the Webb Telescope by Dr Stephen Wilkins

7F's Peter John joined other keen MAD scientists at a talk about the NASA replacement for the Hubble Space Telescope, the James Webb Space Telescope. He reports. "It started to be built in 1997 and is eventually set to be operational on March 30<sup>th</sup> 2021. The reason it has been delayed is because they have to test the telescope (with simulated launch vibrations and the extreme temperatures of deep space). They have to do this because the telescope will be in a zone that no human has ever been to (Le Grange 2) and it won't be able to be fixed if it goes wrong."



William Mansbridge, 7S, described the talk as, "A ton of fun because we were learning about all the features of the telescope. He was answering all my questions too which made me understand it more!" 7F's Lucy Bateman also enjoyed the talk and was fascinated by the "mishaps and mysteries of the James Webb Telescope so far... I enjoyed the amazing talk about how the telescope will only be working in Infra Red and not visible light. I also enjoyed Dr Durkin telling us about the University of Sussex during the journey."

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### Space Camp 2019

Residential trip to UK Midlands - 8<sup>th</sup> – 10<sup>th</sup> April 2019

### Ethical Eden 10<sup>th</sup> Anniversary

Residential Adventure Trip to Cornwall - 27<sup>th</sup> – 31<sup>st</sup> May 2019



## Thank You for the Plants

A big thank you to the grandparent who donated house plants to the school, they are very happy in their new home. The pupils will be able to look at them under microscopes.

## Science News (February)

### Year 11: Engineering Education Scheme (EES)

EES is a scheme where a team of 4-6 Year 12 pupils work on a project for 6 months with an engineering company to answer a question set by the company. This year, St Richard's were invited to enter a team of Year 11 pupils to work with STEM Ambassadors, Tom and Emma, from local engineering company, Photek, in Hastings for our maiden outing.



The team of five have been enthusiastic participants in their project which involves modelling a mini neural network using Raspberry Pi and Python for coding. Our project was officially launched at St Richard's during a visit from the STEMSussex programme co-ordinator when the pupils were introduced to project management and team-working techniques. The team has been meeting weekly to develop their mini neural network. The team, namely Dilys Cornford, Aaron Davis, Allysha Nhandu, Sinnead Singson and Ruben

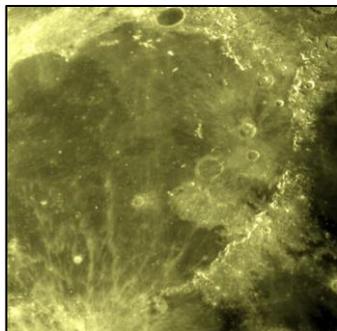
Muller-Perol, has also enjoyed visits to Photek (for a look around the factory and design lab) and a two-day visit to the University of Brighton's Inspiration Suite, where they were able to take advantage of the state-of-the-art workshop facilities in designing, building and testing their model. A final report must be prepared and submitted by the end of March and a final Celebration and Assessment will take place in a public forum in April. The assessment is by senior company engineers and students will graduate as Industrial Cadets at Gold Level.

The team were inspired by the working environment they encountered during their visit to Photek. Allysha reported, 'We were able to learn what the everyday life of an engineer could be. It opened my eyes...' whereas Dilys commented, 'I was surprised by the range of skills required (for STEM jobs)', meanwhile Ruben, 'really enjoyed looking at how production happens on the factory floor.' After the University workshop visits, Sinnead was, 'really proud of the progress we have made so far, even after things have gone wrong we've managed to find a solution by coming together as a team.' Aaron reported that he, 'learnt lots of new skills and how to use certain tools and pieces of equipment.'

More recently, Dilys has summarised the team's thoughts as follows: 'We all started the EES project as we were extremely interested in working with a company in order to collaborate on an unknown engineering project, which, in our case, happened to be dubbed a 'mini supercomputer'.

*So far, the project has presented a great opportunity to display our skills in science, problem solving and teamwork, and has given us the chance to go on trips to Photek, the company we're working with, as well as to the University of Brighton. It is an amazing opening for the future, in terms of further education and possible careers. We wish them good fortune as they complete the final stages of the build and testing and as they prepare for the project presentations.'*

## **National Schools' Observatory Image of the Month – December 2018**



Mare Ibrum or Sea of Showers by Aisling Eldridge, 9S. *'In Astronomy we were set up with accounts for the National Schools Observatory, I had used the attached software, LT Image, to manipulate images since September. I sent this image along with another image of the Moon and of M1 (the Crab Nebula). I went onto my Twitter account and on there I had a few notifications announcing that I had won 'Image of the Month' for December 2018. I was honestly so surprised and I really wasn't expecting it! I received a*



*20" x 20" canvas of it, of which I've decided to donate to Dr Durkin (who is very grateful!) and along with that I also received an astronomy careers booklet, a card and a certificate. I am so happy that I won and it really came as a big surprise to me.'* Further information about this 'spectacular Moon shot' can be found at

<https://www.schoolsobservatory.org/iom/1812>

## **Ogden Trust East Sussex Alliance**

St Richard's Science department hosted the second Alliance meeting which incorporated future planning and consideration of fun and exciting physics frivolities as part of the Liaison programme with 9 partner primary schools.



## **'Why I Love Science' Competition Rutherford Appleton Laboratories**



Three Year 9 GCSE Astronomy pupils, Florence Assetto, Ivan Doolan Tanner and Will Jones, made it through to the National Finals of the STFC 'Why I Love Science' competition. 15 finalists and their parents were invited to Rutherford Appleton Laboratories for a guided tour of the world class research facilities and to present their essay entitled 'Why I Love Science' to an invited audience of research scientists and representatives of the STFC.



Will's father, Mr Peter Jones, was, *'delighted that the pupils are finalists, chosen from hundreds of entries from schools across the country. I was proud of all of them!'* Will was pleased to have reached the finals saying, *'I found this trip to be very informative and fun, though the speech part was slightly nerve-wracking. My favourite part was giving the speech because it was very exciting and competitive to see who would win the prize. Though none of us won it was a very worthwhile experience.'* Florence's father was very proud too, marvelling at what *'a great opportunity'* it was.

Florence reported, *'I really enjoyed looking at all the facilities they had at the Rutherford Appleton Laboratories and it was very interesting to see the laser facilities and the parts of spacecraft from NASA that were sent back to the laboratory where they were made. It was really enjoyable to hear about why other people love science and I liked getting to share why I like science as well. I think this competition was a great opportunity for me and I thoroughly enjoyed participating in it.'*



*'The trip to the Rutherford Appleton Laboratory was great fun. When we entered we were treated to loads of fun things to do including messing around with magnets and seeing how the Van de Graaff generator affects aluminium plates; they fly! Not only were we able to do all that, we were then guided around their laboratories and got to see all of the things they worked on there. While we were there we found out they worked with NASA and were involved with a number of large scale missions. After all this, we then had to give our presentations to the rest of the winning students which was nerve racking but still super fun seeing what the other people had done. In conclusion, I think the whole thing was absolutely amazing.'* By Ivan

### Knit 'n' Natter

Has been relaunched for the New Year and still meets in Lab 4 on Monday and Friday lunchtimes between 1.00 and 1.30 pm. All are welcome - no experience necessary!



### Science Storytellers 3: Periodicity

Fifteen Year 7 MAD scientists have started their extra-curricular project in a third year of the very successful Science Storytellers vein. As 2019 is the 150<sup>th</sup> Anniversary year of the publication of the Periodic Table, the Periodicity project will be a STEAM project (Science, Technology, English, Art and Music) and pupils will enjoy after school workshops in all of these subject areas. Dr Littlejohns has given an insight into the history and development of the modern periodic table; Ms Mason will be orchestrating a performance piece using boom whackers in celebration of the original Newland's Law of Octaves, Miss Rowland will lead a creative writing workshop and there will be a very large periodic table appearing around the school building!



### Fab Fizzix

Lower school pupils have been enjoying making bubbles and estimating the speed of light with a domestic microwave and chocolate. The estimate is very close to the actual value and the resources taste yummy!



### StAR Club

Pupils have been practising their soldering skills with Steve Smith supervising, as they constructed a dipole flasher device (a blinking LED!). StAR Club lead, Phil Parkman, will be joining us intermittently as he has recently relocated, but will return to lead the amateur radio sessions. Pupils have been using the handheld radios to play 'Hunt the Fox' around the school building; practising their transmission etiquette en route, but also using the school radio to tune in to other countries' broadcasts. Codey particularly enjoyed, 'doing the practical stuff!'



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GEMS - Wednesday 13.00 – 13.30 in Lab. 4

St Richard's Amateur Radio Club (StAR Club) - Wednesdays 3.30 – 5.00 pm.  
Lab 4

Young Investigators - Thursday lunchtimes in Lab. 7

St Richard's Science Storyteller 3: Periodicity – Thursdays after school (Invited Year  
7s in Lab. 4)

**\*\*\*\*\* Trips\*\*\*\*\***

**Ethical Eden 10<sup>th</sup> Anniversary**

Residential Adventure Trip to Cornwall - 27<sup>th</sup> – 31<sup>st</sup> May 2019

There are 26 places for the Ethical Eden Trip (5 days and 4 nights full board) - £250.

There will be 30 Year 8 places for the 'Science in the City' Block Day Trip in July  
(B `n` B - details to follow) £70

Deposits and staged payments are available on-line this year. Should you wish to reserve a space on this trip then please contact [finance@strichardsgcc.com](mailto:finance@strichardsgcc.com) for an account login.