

CERN

Where do you find the coldest place in the solar system? And what about the hottest place? Chances are you didn't answer "a concrete tunnel 100m below the Swiss countryside." EIC students were fortunate enough to recently visit the mind-bending installation that is the Large Hadron Collider in CERN, Switzerland, where the technical feats almost defy belief. Liquid helium cools the apparatus to temperatures lower than those in outer space, causing the 27km long machine to shrink by 80m when in use. When the collisions do occur, the temperatures generated are thousands of times greater than those found in the centre of our Sun. To generate such collisions, protons are accelerated to such a speed that they could travel from here to Neptune in a little under 10 hours. (Bear in mind that when man travelled to the moon, it took about 3 days to get there!) And this is before you account for the fact that all of this takes place in a machine constructed 100m below ground spanning the border of two countries.

Cramming as much as possible into the time we had, we started with an early morning particle physics lecture that gave the students a fairly immediate intellectual wake up. We were then swiftly whisked off to SM-18, the cryogenic magnet testing facility. Here, the magnetic components that guide and streamline the proton beams are tested down to the -271.5°C temperature that is required for the LHC to operate. From there, we were then taken back across the border into Switzerland to visit the ATLAS control room. ATLAS was one of the two detectors used in 2012 to confirm the presence of the Higgs Boson, and we got to see the astounding control room where monitoring of this vast collider (25m tall and 45m long, all 100m underground!) takes place. We were also lucky enough to see a 3D movie taking you right inside the detector itself, allowing you to sit and watch some of



"I think it will be some time before we truly understand the scale of the achievement we were fortunate to witness"

the fundamental particles go whizzing over your shoulder, all in glorious 3D!

After lunch we were back into the action, with a visit to the LHC control room, complete with variable transparency windows that would, at the touch of a button, change from a normal window into an opaque surface for video playback, itself an impressive piece of kit. This was followed by a stop at the control centre for the AMS - the antimatter detector currently operating upon the International Space Station. Here, we were able to see a live data stream from the AMS module,

as well as a live video feed from the ISS (which our tour guide claimed wasn't very interesting - the dangers of familiarity, I guess!). It was pretty impressive to see detections that had taken place just 45 minutes previously on the ISS being displayed right before us!

Finally, it was time for the main event - a 93m descent underground to see the vast Compact Muon Solenoid (CMS), the other detector alongside ATLAS used in the Higgs discovery. 25m long, 15m in diameter and weighing in at just over 12,500 tonnes, the engineering feat to construct such a device, in such a location, is simply phenomenal. And that is just the detector itself; we also got the chance to see the huge computing infrastructure that supports such a massive device, the likes of which would give an IT manager nightmares! All too soon, it was time to return to the surface and the icy evening air. Suffice to say, there was a

lot to take in, and I think it will be some time before we truly understand the scale of the achievement we were fortunate to witness.

My thanks to Mr Brierley and Miss Marin for accompanying the trip, and I speak for the whole group in thanking Mr Griffin for the time he invested in organising the visit. The project makes an essential contribution to keeping humankind on the path of curiosity and intelligence: a timeless project to advance human knowledge, to continue an endless quest to learn where we are from, and why the Universe is as we see it today.

Pete Willis

High Achievers



Nineteen EIC students have been awarded High Achievement Certificates by Cambridge and Edexcel examination boards. They have been recognised for attaining the highest subject marks in 2013 for GCSE, IGCSE, AS level or A level in Spain, Europe or internationally in the following subjects: Spanish, Geography, Fine Art, PE, Computing, English Language and English Literature. Congratulations on these outstanding achievements.

Yvonne Stevenson



@ECIMarbella



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iPad Pilot Update

Over the past three months the Year 8 students have all been involved in the 1:1 iPad pilot programme. There is a huge amount of evidence from many top universities and educational research centres as well as from schools like EIC to show that students learn and retain more when working with iPads 1:1 in class, from the beginning of Key Stage 2 throughout the school. In particular, the evidence points towards the fact that *how* this technology is incorporated into the curriculum is just as important as the technology itself. That is why, at EIC, we decided to run a pilot with a single year group and ensure the students are benefiting. We wanted to find solutions to the problems that were bound to occur, before attempting to move to a 1:1 iPad model throughout the school.

Presentations are an excellent way for students to consolidate research or revise a topic. The act of making the presentation, giving it and watching other students giving theirs means students learn through visual, auditory and kinaesthetic methods, helping ensure the material is more easily recalled. Students have been using the iPads for presentations and there is no doubt that the touch screen makes putting presentations together much quicker, allowing students to spend less time working around software and more time focused on the actual content. As Dasha commented, "We can make presentations easily without leaving the subject classroom." Previously students would have needed to go to one of the IT Labs to make a presentation whereas now they can make the presentation and present it wirelessly using Apple TV to the rest of the class.

The iPad has also allowed students to add to traditional learning methods and they are now using video, voiceovers and animation as part of their everyday school life. Making a video involves research, writing script, making the movie and of course, watching it back multiple times and being impressed with their abilities, which again utilises many different learning styles.

Another word that came up often



when we asked students to reflect on the improvements the iPads have made for them was responsibility. Sara commented, "It has made me more responsible and organised as I have to remember to bring it in charged each day."

It is interesting that one of the main words to come out of the pilot is 'fun'. When asked about using them all of the students mentioned that learning with an iPad was fun, whether they were talking about interactive learning games, research, presenting or typing up notes and, as we all know, if something is fun we always learn more. I think we can say that, thus far, the iPad pilot has been a resounding success.

I will leave it to Arina to sum up the general feeling of the students: "I love my iPad because it helps me in many subjects. Life is better with technology. Thank you EIC!"

Remember to follow @EICMarbella on Twitter to keep up with the iPad pilot as well as other EIC news as it happens.

Simon Horsey

Polar Bear Challenge

A dark and overcast sky greeted the EIC BEARs on FRIDAY 10th January for the first ever January POLAR BEAR.

It had been assumed that the rescheduled event would lead to the number of participants, voluntarily dragging themselves out of bed so early, dwindling considerably.

However, 78 students, parents and staff arrived at the start zone, eager and keen to test both their sanity and immune systems, as the sun began to rise. It was clear from the onesies, bright lycra and 118 vests, that many of the participants had dressed themselves without the assistance of light!

The darkness was soon ignited by the speed at which Jack



Cusack, James Musgrove and the Fernandes brothers set off around the undulating course. My thanks and appreciation to all the volunteers who helped marshal and lifeguard the event.

However, the day belongs to a certain Dr Walker. As a scientist I am sure, like many, she has a personal and professional fascination with the compounds and structures of various chemicals and living organisms. However, Dr Walker helped uncover a new uncharted compound. It cannot be touched, smelt or tasted and is intangible to all living organisms known to mankind. I think all spectators from today would agree, through her completion (in a onesie!) of the hilly course, the freezing cold swim and arrival on dry land, she instantly earned the highest commendation of them all. ...RESPECT! Dr Walker I bid you a *warm* welcome to club POLAR BEAR!

WINNERS

Boy - Jack Cusack
Staff - Ali Gibson
Dad - Andy Oliver
Girl - Ella Golding
Mum - Hestia Fernandes

Nearly 400 hundred euros has been raised for the RED CROSS by this collective act of lunacy, so my thanks and congratulations to you all.

Alastair Gibson

EIC Christmas Concert



Many people have commented that the 2013 EIC Christmas Concert was the best ever and I would agree it is certainly the best I have seen since being at EIC; the students really excelled themselves. This concert was the first performance of the newly formed EIC String Quartet who played the Overture to William Tell (probably better known to some as the Theme to the Lone Ranger) and Pachelbel's Canon in D. As I commented to the audience at the concert, equally as impressive as their ability to play the music was the intonation of the students: a very difficult skill well executed by the quartet. A group of Year Seven students performed their pop song,

written by Daniella Lerner during music lessons as part of the Opus One course as well as performing a song in French. Also featured were several soloist as well as the Wind Quintet and Junior Choir. The orchestra were also on particularly good form playing J. S. Bach's Toccata in D Minor and Palladio by Karl Jenkins, closing the show by accompanying the audience in a roof-raising version of Winter Wonderland. All proceeds from the concert were used to purchase items to donate to the Red Cross Christmas appeal. Follow the EIC Music Department on Twitter @MusicEIC.

Simon Horsey

Sixth Form Show

A Touch of Class at Fawlty Towers!



On Thursday 5th December this year's Sixth Form Show was a sell-out performance which took place in our very own Fawlty Towers Hotel set on the Costa Del Sol. Guests were invited to enjoy their stay at the hotel while the plot centred around the memorable TV characters. Due to other academic demands and the impressive talent from which we could choose, the audience were treated to 2 Basils and 2 Majors, superbly portrayed by the very talented Jamie Elsby and Jack Lee, and 2 Sybils (played by Courtenay Hallett and Ximena Guisjarro Poinçot) who shared the roles. The outstanding performances by all of the Fawlty Towers characters could give any West End actor a run for their money! Using some of the original TV series, the episodes were adapted and added to, showcasing our usual Sixth Form Show tradition of comedy sketches, dance

numbers, songs, and talents as a touch of class was added to our very own - *Farty Towels!*

Some of the highlights included Michael Peach and Tristan Hidalgo Hopson's recreation of Mr Bean's performance of *Chariots of Fire* at the London Olympics Opening Ceremony as well as a phenomenal gymnastics routine on the pommel horse from Chris Bailey and Michael Peach whose beautiful and ultra-flexible twists and body shapes to Sarah Brightman's *Time to Say Goodbye* appeared almost humanly impossible!

Fawlty Towers also provided us with some fantastic hotel entertainment, music and dance performances including a classical piano piece by Chopin, Merel Huisman on saxophone and Charlotte Floyer's vocal talent in their beautiful rendition of *Baker Street* and our EIC Proclaimers (Leo Hogan and Daniel Porter) with a comical rendition of *I would walk 500 miles*.

Finally, one that will go down in the history of Sixth Form Show sketches is the Horizons Teachers' Debate which was written by the extremely creative Oscar Tabizel with scarily impressive impersonations of Mr Hickman, Mr Willis, Mr Long, Don Carlos, Miss Jackson, Mr Horsey and David. It almost seemed as if the teachers themselves were taking part in the spoof debate!

Many congratulations must go to all the Sixth Form students who were involved in this year's show for the magnificent performances they gave that again showcase the hard work and talent here at EIC which allows the history and tradition of the Sixth Form Show to continue to such a high standard. We would like to thank everyone involved in the show, both staff and students on stage and behind the scenes, for making it another success!

Iwona Molyn

Geography Trip to London



This year's AS level visit to London gave us an opportunity to study and assess first hand the sweeping changes that are still being made across the four Olympic Boroughs that surround the

Queen Elizabeth Park. Both the scale and size of the projects surprised some of the students with a couple of them getting lost in the Westfield Shopping Centre, Stratford! The social and economic impacts are now beginning to be assessed and the benefits will take a while to be fully appreciated and felt. The fieldwork and data collected from our four day visit has and will be significant as it challenged our opinions and helped consolidate the places and conflicts that we had covered in lessons. We also had time to travel across London and take in some of the more traditional sites along Whitehall and Chinatown. For some students there was even an opportunity to visit potential universities! Many thanks for all your help and support.

Mr Long and Miss West

The protons that travel around the CERN apparently do so at .99991 of the speed of light: nearly 300 million metres per second. We may never know at what velocity some of our top Sixth Form runners would have completed their race at Sunland, however, the very fact that Claudio, Clare, Mischa and Gary would not be able to compete in the championships meant our Sixth Form team needed some new faces. As you may guess our 'replacements' were to perform to a similarly high level, which speaks volumes for the strength and depth available in the school. My personal congratulations to Samuel, Cavan,

Cross Country



Jamie, Toby, Sam, Charlotte, Luna and Grace who deservedly won the boys and girls Sixth Form races with such panache that we await confirmation of the land speed records that were actually set.

UKMT Senior Maths Challenge

Last term, a select group of mathematical heavyweights once again took on the rigours of the UKMT Senior Maths Challenge. Taking students way beyond the standard syllabus material, the Maths Challenge places huge emphasis on mental arithmetic, logic and lateral thinking, and has long been a stiff challenge for even the most able 'A' level student. In recent years, the Maths Challenge has been a happy hunting ground for EIC, with at least one student obtaining an elite Gold Certificate in each of the last 3 years. This year proved to be no exception; just before the Christmas holiday, we were fortunate to hand out 13 certificates from 16 entrants, an 81% strike rate. For comparison, the UK average is 40%. A special mention to some notable achievements: both Damian Lewis and Clarinde Esculier managed to achieve certificates despite the Maths Challenge taking place right in the middle of their university entrance exams, while Gold Certificate winner Th ea Zabell obtained a score that placed her in the top 6% of entrants internationally. There was also 'Pink Ikea Table Award' winner Jeroen Rijks, although the story is too long to discuss here - you'll have to ask Jeroen!

Once again, the Maths Challenge has given some of our top academic performers the opportunity to compete against a global audience, and once again they have performed exceptionally. At the time of writing, the Intermediate Maths Challenge for Years 9 to 11 is just round the corner, so I look forward to bringing news of more certificate winners in the near future.

Pete Willis

Fantastic performances from the boys and girls in Years 5 through to 13 saw EIC crowned overall champions for the 10th year in a row. A simply superb achievement. Well done to all race winners and particularly all students who made the top ten places as in some races there were over 50 participants. EIC competed against 9 other International Schools and the first three places went to:-

EIC - 165 pts

SIS - 94 pts

Aloha College - 54 pts

Congratulations and well done (again) team EIC!!!!

Alastair Gibson

Primary Chess Tournament

Primary pupils responded enthusiastically to the opportunity to sign up for both lunch time chess club AND after school chess lessons this year. All that enthusiasm led to the first ever EIC Pri-



mary School Chess Tournament, especially for our younger pupils. Thirty-one small competitors showed off their skills in the first round in the Library on 13th January. The final match of the Primary Tournament will be played in the Library on 18th February just before the final match of the 2014 EIC Chess Tournament.

Margaret Sutcliffe

Fencing

Éxito de los esgrimistas del EIC en el IV Torneo Internacional de San Roque de Esgrima y II Torneo para menores de 12 años en Chiclana (Cádiz)

David, Hamish Kamaie y Oliver Simmons han conseguido un nuevo trofeo de esgrima para el Colegio.



Hamish Kamaie y Oliver Simmons medalla de oro en el Torneo organizado por la Asociación Gerónimo de Carranza en Chiclana (Cádiz).

Los alumnos del EIC David, Hamish y Oliver han conseguido un nuevo trofeo como ganadores de la prueba infantil de la competición con el fin solidario de aportar juguetes y alimentos para familias desfavorecidas. También obtuvieron sendas medallas de oro Hamish y Oliver en el II Torneo realizado en Cádiz con más de 120 participantes de todas las provincias andaluzas.

Estos resultados continúan poniendo de manifiesto el buen nivel deportivo del EIC en este caso en la disciplina de la esgrima.

Foundation Stage & Key Stage 1 Christmas Show

WOW! This years Primary Christmas Key Stage 1 Show was AMAZING!

We always have high expectations of ourselves but in the plot of our show this year we had high aspirations for Penguin Pete!



Key Stage 1 had Penguin Pete 'flip flopping' his way to the North Pole to visit Santa. Penguin Pete learnt his lines well, as did all the other children, and although there were a lot of words to the songs they managed to remember them all, even the Early Years and Reception children.

The children's costumes were delightful right from the small penguins, which waddled their way around, to the monkeys, camels, reindeers and narrators.

The children were, as always, brilliant and showed great talent in acting, singing and dancing. They worked really hard with staff and parents (thank you for helping them to learn their lines!) to pull it all together and from the parental feedback all the hard work was well worth it. Well done to all the staff, parents and children for putting on such a great show!

Key Stage 2 Christmas Show

FANTASTIC! This year's Primary Christmas Key Stage 2 Show was STUNNING!

As always we have high aspirations and in the plot of our shows this year we had high targets for Santa!



Santa was made, by the A team, to lose weight! The children were, as always, brilliant and showed great talent in acting, singing and dancing. Each class did a specific workout class for Santa and it was great to see everybody fully involved. It was a novel script and very up-to-date, starring Strictly Come Dancing, Master Chef and unusual (but highly humorous) Christmas songs. Santa and Mrs Claus deserve a special mention as their acting skills were simply fabulous!

All the children worked really hard with staff and parents, and from the comments as people left, all the hard work was well worth it. We had many parents saying it was the BEST show they have seen and how they are looking forward to the next! So, we have set the bar high and only need to think about how we can improve on it for next year. No pressure then!

Car Museum

On January 21st, Year 3 visited Málaga's Museo Automovilístico. We have been reading 'The Hodgehog', a fantastic story about a brave hedgehog trying to cross a road safely. During the trip, we admired some amazing cars and learnt about the development of transport through history. We also took part in activities to remind us about keeping safe on the road. It was a brilliant day, made even better by the excellent behaviour of the Year 3 children.

Miss Laura and Miss Kaly

