



Focus on personal development and academic excellence in a happy school

ST MARTIN'S SCHOOL VISITS GOOGLE DEEPMIND



15 St Martin's School students attended DeepMind's facility in London, one of a range of activities undertaken by the school as part of its involvement in the Royal Society You and AI lecture series. Below is a summary written by three of the school's students:

iStock image of the main entrance of the Google headquarters in London King's Cross.

DeepMind is at the forefront of research into Artificial Intelligence (AI) and how its implementation can improve the world around us.

The first thing we noticed upon entering the building that housed the DeepMind HQ was how colourful, comfortable, and downright fun the office looked to be, from soft and unique furniture to how almost every pane of glass looking into the central space had pixel art made using sticky

notes. It was great to see so much diversity and inclusiveness amongst the employees and the relaxed and pleasant environment in which they worked; all part of DeepMind's company ethos.

We were given an introduction to Deepmind itself and learned just how much of modern day technology uses AI and how much more will use AI in just five years time.

All activities put on by DeepMind engaged us and involved us



participating in events such as the User Interface (UI) creating challenge, to socialise with an unknown team (made up of students from the other three schools attending) and working together in a work environment.

The Robotics Lab Tour was one of the most interesting parts of the trip as it allowed every student to question real engineers and coders who work for DeepMind on an AI project currently underway. A fascinating lecture was given by Piotr Mirowski, who explained how machine learning was developed and how machines can be taught from data, as well as how they can learn by themselves to complete tasks. We were fascinated to learn that computers struggle with tasks, such as differentiating between pictures of cats and dogs or working out how to play 2D computer games without being instructed beforehand. On the other hand, computers can get through so many calculations per minute, reviewing more data faster than humans ever can.

We were also given plenty of real world examples of AI and the use of it in modern technology. One of the examples that really stood out is how

Continues on page 2...

IN THIS ISSUE...

- Dementia Fundraising - p3
- Design Museum Visit - p6
- Open Evening - p8-9
- St Martin's has talent - p16

Google have used one of DeepMind's AI's on the energy systems that support one of their data centres, reducing its cooling bill by 40% helping them save money and most importantly resources, showing how they use the technology available to make systems more efficient, practical and environmentally friendly.

Throughout the day, every professional we met provided a real insight into how diversified and widely spread jobs in computing and AI are.

The instructors and computer scientists there presented their own journeys into DeepMind as an achievable and worthwhile goal for every student. They showed how coding was more than just a tool, it

was a life skill that can be utilised in multiple careers, both practical and commercial.

One thing that particularly stuck with us was something that the main speaker of the day Pitor Mirowski quoted from Thomas J. Watson: "If you want to increase your success, double your failure rate". This fits very well into machine learning as much as it does for a motivational speech. On failure and success for humans AI will fail hundreds of thousands of times at a task until they get it right, each time learning what it did right through either human supervision (supervised learning) or by something even as simple as a game score (reinforcement learning), or even sometimes through no feedback whatsoever (unsupervised learning).



The experience was educational and really showed us that AI will likely be one of the driving factors in industry in the future. It inspired us, and we are sure the others who attended, towards a career in the field and established the opportunities through which we can achieve our aspirations.

CYBER



At the Cyber re-coded event that we attended on Monday, we learnt many invaluable concepts like picking a combination lock (which is not as hard as you would think) which is a valuable skill. It is also relevant as hacking does take place at physical level - as not everything can be done remotely. As a class we all competed in a CTF (Capture the Flag), task which involved completing both trivia and computer based problem solving questions in a timed competition.

Cybersecurity, a budding industry in this country, is a field of computer science that involves multiple fields of knowledge on both the physical and technological level. In short, Cybersecurity is about keeping you and the companies that you work for as safe as is feasibly possible online.

Fraud and cybercrime costs the UK economy £11bn every year and it is estimated that extreme cyber-attacks could cost the UK up to £120bn. Hackers are everywhere online,

as we saw over the last American Elections, but there is no need to be worried GCHQ, (Government Communications Headquarters), are usually on it. GCHQ Have been solving our problems since they were working out of Bletchley Park in the 1940's up until today. Anyone with the skills can work at GCHQ; they say that they want talent "No matter what package it comes in". The average salary for a person working in cyber security is £87,000, showing the demand is high due to the specialist skills required.

The National Cybersecurity Agency is a part of GCHQ and work hard to defend the UK against attacks from foreign countries as well as helping the police to investigate crime happening in the UK and worldwide.

The HM Government's Cyber Schools Programme is an extracurricular programme for students introducing them into the field of security and cryptography; it aims to encourage them and show job opportunities relating to the subject of cybersecurity.

Mr Spencer, Teacher of Computing

DEMENTIA FUNDRAISING



On 19 October St Martin's School held a non-uniform day in aid of a charity called Dementia Adventure. Owen Barry and Michaela De Sousa (shown in the photo), are two members of the School Council, who chose this charity because it is local and dedicated to supporting people with dementia by helping them to get outdoors. By helping to raise funds, the charity can significantly reduce the cost of their fully supported dementia holidays and could make a holiday possible for somebody who might otherwise not be able to

afford to take a break. They also provide free dementia training for family carers and do research into the benefits of outdoor activity.

Dementia Adventure were thrilled to receive a cheque for £1,309.00, and hope other schools will follow St Martin's lead and look to support this amazing charity. If you would like further information on fund raising or dementia please contact Dementia Adventure on 01245 237548 or fundraising@dementiaadventure.co.uk

SIXTH FORM CHRISTMAS LUNCH

On Tuesday 18 of December 100 Year 13 students celebrated the start of Christmas by attending Ye Old Plough House for a three course Christmas dinner. Students wore Christmas Jumpers and were involved in a raffle, the afternoon was enjoyed by all.

Mrs Page Head of Year 12 & 13



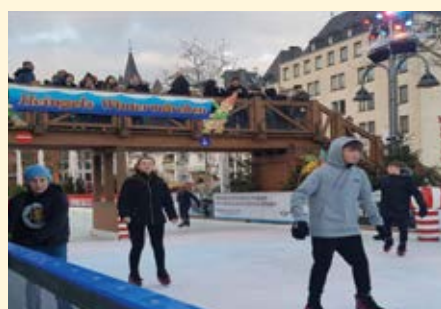
YEAR 9 CHRISTMAS MARKET TRIP TO COLOGNE 2018



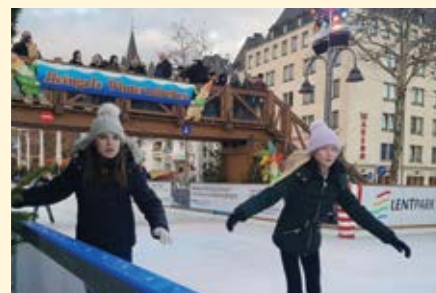
In December, 40 Year 9 students enjoyed the opportunity to visit the historical sights of Cologne and experience the unique Christmas markets in Germany. This has been the eighth MFL visit to Cologne and it was a great success as in previous years. The annual trip was accompanied by Mrs Mercer, Mrs Ballard, Mr Bourton and Mr Smith.



After a smooth and traffic free coach journey through France and Belgium we arrived on schedule at our destination in the centre of Cologne ready for our first meal in the youth hostel. Having unpacked and refreshed we went to visit one of Cologne's biggest Christmas Markets, located at the foot of the cathedral.



On the following day we were able to explore the cultural sights of this historic city. The first stop was the visit to the famous Cologne Cathedral, students climbed up the 533 steps



to the top to experience the stunning views of the city. Equally amazing was the inside of this gothic cathedral with its painted glass windows, arches and chambers. The rest of the morning was spent in the nearby Lindt chocolate factory. The tour guides gave us an interesting insight of how chocolate is made and students had the opportunity to try plenty of samples of different types of chocolate. After sampling the chocolate from the chocolate fountain and buying lots of goodies from the shop we went to the traditional ice skating rink at the Heumarkt Market. The evening was spent in the Hard Rock Café,

My favourite part of the trip was the ice skating because I finally learned how to skate. (Elisa Arunrase)



My favourite part of the German Christmas Market trip was the ice skating and bowling. I also really enjoyed the theme park. The rides were really exciting. (Maisy Iggulden)



relaxing and enjoying dinner with our friends.

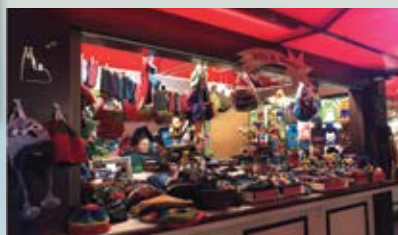
On Wednesday the group travelled to Koblenz to visit Marburg Castle which is situated on the banks of the river Rhine and Moselle. After the guided tour of the castle, including a visit to the torture chamber, we visited the famous Deutsches Eck, where both rivers meet and then had the opportunity to see the Christmas Market and town centre in Koblenz before we went bowling for the afternoon.

After completing our diary entries the next morning we spent the final day at Phantasialand, a local theme park where many of us tried out the fastest roller coaster in Europe and a great number of other exciting rides and attractions. In the evening, we visited the last Christmas market and bought the remaining presents for our friends and family.

All students had a fantastic experience and were able to use their language skills. We are looking forward to next year's trip.

Mrs Mercer, Teacher of MFL

The trip was very enjoyable and we went to the Christmas Markets nearly every day, so we could buy food, Christmas presents and souvenirs. The theme park was the last day also the fastest rollercoaster in Europe is there. Finally we went to the Chocolate museum where we got to eat lots of chocolates. Overall it was a great trip (Toby Rumbold)



I enjoyed the ice skating because it was a really big ice rink and also liked the Christmas markets because they were really traditional and pretty. (Evie Bennett)



DESIGN MUSEUM VISIT

Design & Technology students from Years 10, 12 and 13 travelled to London to visit the Design Museum in December. As well as viewing some of the most original and exciting products in the world today, students took part in a hands-on workshop which gave them the opportunity to look at and handle, the latest in environmentally friendly materials.



YEAR 5 DESIGN TECHNOLOGY EXPERIENCE AT ST MARTIN'S SCHOOL

In June the Technology Faculty hosted a new Design and Technology experience for Year 5 pupils from Ingrave Johnston, Willowbrook and Larchwood Primary Schools.

Historically we have always run this day with Year 6 pupils, but with the intention to get younger pupils learning skills in Design and Technology earlier and to challenge student's abilities we devoted these days to specialist areas of Design and Technology such as textiles and graphics to give the pupils insight into what we do at St Martin's in the Technology department.

Pupils spent the day working on a mini project called 'Build a Frog'. The first half of the day is devoted to textiles,

where many pupils got to use the sewing machine for the first time in order to design and make stuffed frogs. In the afternoon pupils took part in Graphics and they made packaging for their newly made stuffed frog. In both subject areas pupils also experienced the use of CAD/CAM by using the vinyl cutter to make iron on fabric letters and stickers for their packaging.

Help was on hand from current Year 12 technology students who have recently been selected as 'Subject Ambassadors', they helped students and answered questions about the school.

Pupils from all the primary schools that visited made some fantastic products to take home and said that they thoroughly enjoyed their day and could not wait to start secondary school.

A special thanks to our Year 12 subject ambassadors, George Baker (Product Design), Ria Kinnear and Eleanor Potter (Textiles) for their hard work and help on the day.

Mrs Varney, Head of Graphics & Mrs Fowkes, Teacher of Textiles

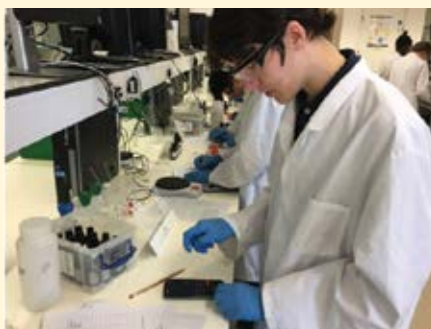


YEAR 12 BRISTOL UNIVERSITY CHEMISTRY TRIP

Students spent two days at Bristol University's chemistry department. A busy two days consisting of perfume making, determining the concentration of copper sulphate solution by UV spectroscopy, synthesis of benzocaine and extracting caffeine from tea. Students also enjoyed a fun lecture on atmospheric chemistry and a talk from two current postgraduates about their PhD research.

Great fun was had using the state of the art facilities and equipment. Students also enjoyed a visit to Zaza Bazaar, one of the largest all you can eat buffets in the country.

Mr Peacock and Miss Burgess



XUC STEM VISIT





OPEN EVENING





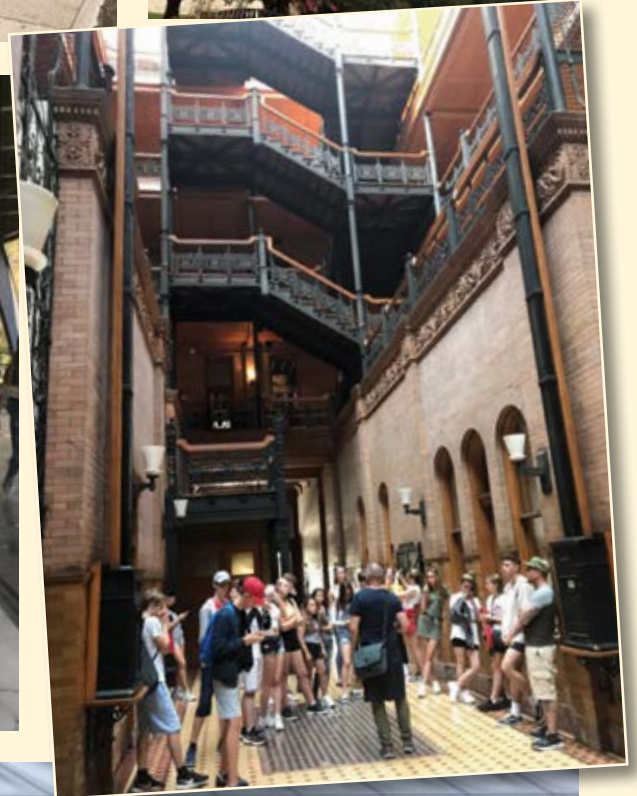
LOS ANGELES ART TRIP

Over the October half term Miss Levis, Mr Bethell and Mr Livingstone took a group of Year 11 art students to Los Angeles, California. During the visit the students were busy visiting many of the world famous art galleries, museums and art colleges. Notably the Broad Museum, Art Centre College of Design, The Norton Simon Museum, The Getty Museum, and the Los Angeles Museum of Contemporary Art. The students worked very hard to complete the

various tasks set at the workshops at each of these venues.

The students were also able to visit Universal Studios, go to a LA Kings hockey match and were taken on a street art tour by Street Artist Cindy Schwartzstein. The students really enjoyed the afternoon spent at Santa Monica pier, which provided some great photo opportunities.

Miss Levis, Teacher of Art





ETHAN METCALFE



Ethan is a member of Kazen Kai's National Competition Squad and has been competing in Kata and Kumite at a National level for just over two years. Ethan has received the most incredible news, that he has been selected to represent England as a member of the E.U.K.F England team. He has been selected to compete in two international competitions in 2019, the first, an international open in Malta in March and the second as part of a small squad, selected to compete at the World Championships to be held in Slovakia in June.

Well done Ethan, all the students and staff at St Martin's School are wishing you all the best.



BRENTWOOD SPORTS PERSON OF THE YEAR

Sophie Willson in Year 7 was recently awarded Brentwood's Young Sports Person of the Year.

She was nominated because she has amazing skills across a wide variety of sports which include, captaining her Year 6 mixed rounders team at St Mary's to win the U11 National Schools title, playing football for Southend United and representing Essex County Cricket in the age group above. Sophie has been involved in a huge number of sports for St Martin's School already,

regularly playing A team netball, basketball and football. In November Sophie ran as part of our U13 girls' cross country team who came 4th at the Regional Finals of the National Schools' Cup, narrowly missing out on qualifying for the National Final by one place. Sophie is an excellent role model for the girls in our community. Part of her nomination read "Sophie is respectful, courteous, resilient and perseveres throughout." Well done Sophie! You are a credit to your family and St Martin's School.



ST MARTIN'S SPRING INTO ZONAL FINALS OF NATIONAL TRAMPOLINING COMPETITION

Trampolinists from St Martin's School in Hutton were jumping for joy after their performances in the East Region Schools' Competition in Hatfield over the weekend.

Jared Smith in Year 9 performed exceptionally well in the U14 Elite Boys' event coming 1st overall.

Amber Goldstone and Paige Moroney both in Year 7 came 1st and 3rd respectively out of 42 competitors in the U13 Girls' Novice category. Eve Page and Emily Hillwood (Year 8) came 9th and 25th.

To decide the outcome of each team event the top three scores from each group of four competitors were added together. The Saint's U13 Girls' team finished clear winners for their category and, along with Jared, have now qualified to the zonal round of the competition. This takes place in January, again at Hatfield.

Head of Girls' PE, Mrs Swan, thanked ex St Martin's student Monica Dowling for coaching on the day and the parents for their fantastic support. "It was the first trampolining

competition for our four girls and they really enjoyed representing their school in this event. Jared has worked exceptionally hard in training for many years and to be placed 1st in an elite section is hugely impressive. They all thoroughly deserve their success."



ROYAL OPERA HOUSE VISIT

Textiles students from Years 10, 11 and 12 recently toured the Royal Opera House costume and set departments at the ROH site in Purfleet. As part of the visit students participated in a workshop run by the tutors of South Essex College's costume construction department. Two hours from starting the workshop students had completed a complicated pleating technique commonly used on ROH costumes.



SUMMER SHOW SHOWCASES STUDENT'S WORK

Visitors to the Summer Exhibition were treated to a wonderful display of work from Design & Technology, Art and Photography GCSE and A-Level students. Held annually, the exhibition showcases the fantastic work produced by upper school students throughout the year.



PRESS RELEASE – ST MARTIN'S HAS GOT TALENT

St Martin's School has launched its latest 'talented teacher' programme – to identify possible leaders of the future.

The secondary school, situated on Hanging Hill Lane in Hutton, has run the successful scheme for the past 10 years in order to develop talent from within and retain promising members of staff.

Seven candidates, representing a range of subjects, were chosen for the current academic year. Charley Barrell (PE, Science), Sophie French (Science), Nathan Griffiths (English, Media), Aodhan Lynagh (Psychology, Sociology), Eve Penhaligon (French), Megan Sheppard (Science) and Jade-ella Weatherley (English) will now attend a series of leadership workshops, aimed at developing the key skills needed to progress in the profession. In fact, some of the seven have already been promoted to positions of added responsibility at St Martin's School.

Deputy Headteacher, Dean Goddard, leader of the school's Talent Management Programme, said: "As a profession, teaching is often in the national press for all the wrong reasons at present. Funding, teacher recruitment and retention, the list goes on".

"Thankfully, our Talent Management Programme is a good news story and highlights what schools are doing to enhance their workforce. At St Martin's, we are constantly striving to add value to our teaching staff. So whether they go on to better things here or elsewhere, the profession ultimately benefits. It's a win-win situation."



St Martin's, which was awarded Outstanding school status by Ofsted in 2013, is home to 1,800 students and approximately 110 teaching staff. The school recently appeared in The Sunday Times 'Parent Power' supplement as one of the top five non-selective state schools in East Anglia.

Photo attached shows 2018/19 Talent Management Programme candidates: (back left to right) Jade-ella Weatherley, Eve Penhaligon, Sophie French and Charley Barrell; (front left to right) Aodhan Lynagh, Megan Sheppard and Nathan Griffiths.

For more information on this story, please contact Deputy Head, Dean Goddard on 01277 238319 or email at the following address dgoddard@st-martins.essex.sch.uk

SIXTH CONSECUTIVE WIN FOR MRS SWAN

St Martin's head of Girls PE, Mrs Swan was celebrating having won the National 040 Ladies Doubles title at the 24th English Masters Badminton Championships held in Hatfield. Mrs Swan, with regular partner Rebecca Panteney from Gloucestershire, beat Kate Ward and Wendy Taylor (Surrey) in the final 21-13 21-15.



The tournament result could have been very different when Mrs Swan fell in the first end of her first game against Debbie Beeston-Smith (Worcestershire) and Olga Bryant (Cambridgeshire). After a short injury break she was able to continue and finish the match winning 15-21 21-4 21-9.

More comfortable games followed as the pair beat Zoe Weller (Devon) and Fiona Rooke (Avon) 21-8 21-11 and Mitsuyo Mitsuyo and Catherine Weller (Sussex) 21-9 21-6 on route to the gold medals.

This is the sixth consecutive year Mrs Swan has won her age group for the National title in ladies doubles.