

Spring 2018

MCA

6

Newsletter



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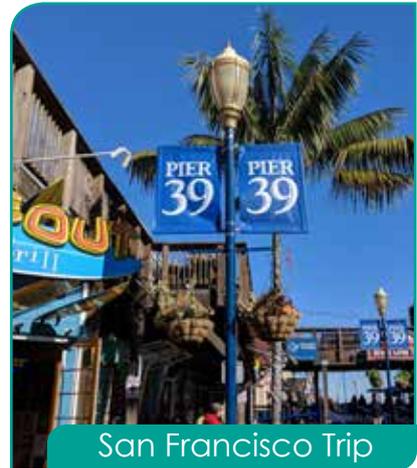
Mildenhall College
ACADEMY



MCA⁶ have 38 different courses to choose from...



World Book Day



San Francisco Trip



Gig Night

MCA⁶ is in the top 10% nationally for PROGRESS



Welcome to the Spring edition of the MCA⁶ Newsletter

Year 11 & 12
Higher
Education
Evening

Wednesday
9th May
2018

6- 8pm



January saw the launch of the “MCA⁶ Star of the Month” award in response to our student voice asking the MCA⁶ teachers to praise the students more frequently.

The “MCA⁶ Star of the Month” will be awarded monthly to one Sixth Form student who has gone above and beyond in their studies or their contribution to life at MCA⁶.

Finlay Boyle was awarded the “MCA⁶ Star of the Month” for January for all his efforts in the Cipher Challenge (you can find out more about the Cipher Challenge on page 4 of this newsletter), his mentoring work with Year 11 Maths students and for his own achievements within his subjects.

Emily Dobbin was awarded the “MCA⁶ Star of the Month” for February in recognition of her gaining a conditional place to study Paramedic Science at

St George’s, part of the University of London. St George’s is an incredibly competitive university and Emily fought off stiff competition to gain her place. All this whilst also caring for her father and continuing to ensure she works hard in Sixth Form.

As we are now drawing toward the end of March, the teachers at MCA⁶ are nominating their “MCA⁶ Star of the Month” for March and we look forward to announcing the winner on all our social media platforms.

Katie Sanders-Pope
Director of Sixth Form

Right:
Finlay Boyle



Mrs Sanders-Pope and Emily Dobbin

Visitors Giving Guidance on Studying Creative Subjects



On the 14th of December 2017, we were fortunate enough to have two representatives, Zoe and Robyn, from Gloucester University's outreach programme come to speak to a group of students about studying creative subjects.

The talk included information about the kind of courses available and then information about personal statements, portfolios and interviews. After some guidance, the students attending the talk were all challenged to say something they would include on their personal statements about themselves.

What was also really beneficial was the guidance on what they should include in a portfolio, something most students applying for creative subjects will be asked to provide.

As Zoe and Robyn are recent graduates of creative subjects they could offer advice that was up to date with a real insight in to what universities are looking for.



Nuffield Research Placements



Students at MCA⁶ have many exciting opportunities to become involved in during both term time and the school holidays. Nuffield Research Placements provide the opportunity to work alongside professional scientists, technologists, engineers and mathematicians over a four to six-week period during the summer holidays. The placements are highly regarded by prospective universities; the students carry out valued research tasks and are required to write a report at the end of the placement.

Before Christmas, Helen Spencer from the Nuffield Foundation visited MCA⁶ to talk to our Year 12 STEM students about the application process and benefits of taking part in the Nuffield Research Placements. As the application deadline approaches, three of our students have applied and will shortly find out if they have been offered a placement.

Interview with ‘Student of the Month’ - Finlay Boyle



Finlay is the recipient of our first Student of the Month award. In an interview with Ms Cooper he explains how working on the Cipher Challenge resulted in this award.

How did you find out about the Cipher Challenge?

My Maths teacher, Mrs Smith, thought it was a good idea as it combined both Computer Science and Maths.

What did the challenge entail?

Every week there was an easy and hard cipher to decode before midnight, though three weeks was the maximum time allowed to submit answers. If you solved the challenge within this time you were awarded points, anything from 5 to 100 with more points awarded to solving the harder ciphers in the quickest times.

Who did you work with?

Originally 10 students signed up, but 5 came each week. Everyone was a mathematician but I was the only Year 12 student. We all got on really well and no one had ever attempted anything like this before!

What preparation did you do to ‘beat the cipher’?

I tried to predict the next cipher by looking at a list of possible ciphers and preparing how to break them. This meant a lot of time researching the codes and I used algorithms to write ‘auto solvers’ to help crack the easier codes more quickly – giving us more time for the difficult ciphers. Through my research I discovered many techniques which I then put into practice or adapted to help us solve the challenges.

How did you ‘crack the codes’?

Everyone knew the Caesar Cipher which was used first but we then had to utilise

statistical techniques such as the Index of Coincidence and the Chi Square Test to identify the type of cipher. Using my auto solvers left us more time to work on the harder cipher.

Did you have any difficulties?

Some of the later challenges were really difficult and involved more than one alphabet in the code! Also the organisers adapted ciphers to make them unique which made it increasingly difficult to predict the code. The final cipher took us three weeks to crack.

How well did you do?

We came 1st in Eastern England and 13th in the UK and I’m very proud of our results. I felt it was worth all the long nights’ preparation and the time spent on the day the ciphers were released. I’m also proud of being awarded the Student of the Month.... It’s nice being recognised for all my hard work.

Has this experience influenced your career choice?

I’m now working on the GHCQ challenge and am looking at an intelligence related career.





WORLD BOOK DAY

We didn't let snow stop our World Book Day celebrations!

The Sixth Form are celebrating books and reading all through March and there are several opportunities to get involved in our activities.

The first activity was our book quiz (do you know who wrote the Famous Five books...or which crime writer has sold over four million books?).

In the MCA⁶ Reading Challenge students are challenged to widen their reading and books have been donated as prizes. There are two displays: one is 'The Book I'd Like to Share' and the other 'MCA⁶ Recommended Reads' to encourage students to read books they might not ordinarily consider.

The final activity was Book Art where unwanted books or magazines were turned into pieces of art by folding pages or cutting. We had a workshop and the staff had a great time learning a new skill!



Stephen Clarke - Football Ambition



Year 12 student Stephen Clarke is making quite a name for himself in the footballing world!

Stephen has always played football and joined the Sunday League with Ipswich development and played for Ipswich Elite Under 16s. From the age of 14 Stephen has been refereeing matches, generally a couple of games at the weekend in the Suffolk and Cambridge area.

This experience led to him becoming a referee with the Suffolk Football Association. He is currently on the Thurlow Nunn Youth League list and referees regularly at Ipswich Town and as well as this he also coaches and is currently studying in his own time for his Level 2 in

Coaching.

Recent experience includes being on line with Ipswich Town vs Charlton Athletic and he was part of the match day squad for the Ipswich Town vs West Ham under 14s match.

It is with great pride that Stephen informs us that he has recently been asked by Suffolk FA and Sudbury Academy to go to America this year as the official referee. Stephen is already lined up to go to Portugal in June this year to be part of the Ibercup International Youth Football Tournament in Estoril.

As if refereeing and coaching wasn't enough to keep Stephen busy he is also studying Triple Sport and undertaking an EPQ (Extended Project Qualification) at MCA⁶.

Stephen's long term ambition is a career in football, either refereeing or coaching. He studies for his refereeing and coaching courses in his own time but says that Mildenhall College Academy provides a lot of support to allow him to balance his studies and his football interests, allowing

him time off to sit the final exams as well as to attend football matches.

We wish Stephen the best of luck and will keep you posted on his progress!

RAF Talk

On Wednesday 14th March 2018 we were visited by Flight Officer Lawrence Page to talk about careers in the RAF. He spoke about the many different career options within the RAF and explained the new opportunities with the regiment for female applicants. Lawrence left West Suffolk College three years ago to join the RAF as an officer. He completed a 34 week training course before becoming the youngest troop commander in the RAF based at RAF Honington.

The students were engaged and asked some interesting questions.



Fire & Rescue Service Visit



On Wed 25th January the Uniformed Public Services students visited the Fire Station at Bury St Edmunds. This fire station is one of only four fully staffed fire stations in Suffolk.

We were met by Gavin the Commander of White Watch. This watch has seven firefighters including one female. Gavin showed us around some of their varied vehicles including the standard fire unit and the fire unit with a crane platform that can extend to 30 metres vertically and 16 metres horizontally.

This vehicle when purchased by the Brigade cost in excess of £500,000 but to replace now would cost £1million.

The station also has a specialised vehicle that tows a variety of inflatable boats to cope with floods and was used extensively by our crews in the Somerset floods a couple of years ago.

One of the most interesting parts of the visit was seeing and handling some of the specialised machinery used primarily at road traffic collisions. Some of the cutting equipment, used for opening up vehicles, was so heavy that we struggled to carry them for any length of time. We also used the individually held heat sensor 'guns' used to locate people inside burning buildings where smoke makes it difficult to see clearly.



We were amazed by the variety of equipment each vehicle carries – it seems as though there isn't any type of emergency they couldn't respond to.

Our visit ended with Gavin explaining that for the first time in many years Suffolk Fire and Rescue Service are about to initiate a recruitment drive for up to 30 full time fire-fighters. I would recommend the Fire service as a career as it seems exciting, varied and challenging. We also sensed the satisfaction they feel working closely together as a team and helping make Suffolk a safer place.

Silicon Valley Trip

During the February half term twenty four students from Years 9 to 13 were taken on an experience of a lifetime to Silicon Valley, San Francisco by Mr Sexton, Mr Kelly and Mrs Willingham from the ICT Faculty.



At six a.m. on the morning of Saturday 10th February the students arrived at MCA and boarded the bus headed for Heathrow. After landing at San Jose airport we had an hour and a half journey to our hostel. After unpacking and having a bite to eat we had a quick meeting before the weary travellers headed off to bed ready for a day at the animal and theme park, Six Flags Discovery Kingdom, the following morning.

To get to Six Flags we took a coach ride over the Golden Gate Bridge which was a good opportunity for some photos. We had a leisurely start to the day and the students had a good time wandering around the park looking at the animals as well as getting on as many rides as possible.

On Monday we were met by our tour guide who took us on a walking tour of

San Francisco. We started out by taking a path behind the hostel which allowed some fantastic photo opportunities of the Golden Gate Bridge and Alcatraz. We travelled on the cable car where we were pulled up the hill towards the cable car museum to see how this amazing system works. We walked over towards Pier 39 to see the sea lions and took a short tram ride to the ferry building market place. We had a walk through China town before our guide finished the six mile tour by leaving us at the Westfield Centre where the students could relax with a bit of retail therapy.

Tuesday was our first set of visits to places linked to the famous 'Silicon Valley'. We started with a guided tour of Stanford University where a number of famous faces in technology, such as Bill Gates of Microsoft and Larry Page

and Sergey Brin of Google, started their careers. From here we took a short bus trip to the architecturally brilliant Apple Visitor Centre where we were met by staff who give us a brief introduction to the Apple store. There was an impressive model of the Apple Park which used Augmented Reality to show some parts inside the building. Our last stop on Tuesday was to the TECH museum which had a range of Science and Technology exhibits. Most of these were interactive and the two hours there flew by for staff and students alike.

Wednesday was our last full day in San Francisco and we started the day with a visit to the Intel museum which allowed students studying Computer Science to see how Moore's Law has been evident throughout the history of computers.

From here we took a short trip to the NASA Research Visitor Centre to see some of the artefacts that have been to space before moving on to the Computer History museum where students were able to see how computers have developed over a number of decades.

We finished the day with a guided tour of Google. Our tour guides were current staff at Google and they showed us different areas of their campus and answered a number of questions

related to what work life is like (yes they do get food provided and have sleep

pods to take naps and they do have games rooms to relax in).

Thursday was our leaving day. We had the morning to ourselves so we decided to go back down to Pier 39 to do some tourist shopping and have a last chance

to wander around San Francisco. Students and staff thoroughly enjoyed the trip but a special thanks must go to Mr Kelly and Mrs Willingham who gave up their half term to help Mr Sexton on this memorable trip.



Emily Dobbin and the DIY SOS Big Build

The team totally reconstructed our house and it's fantastic! We now have room to socialise and it's lead us to doing more things together. I also have a wonderful bedroom where I can relax by myself if I want to.

Unfortunately dad was in hospital during the build and only came home in January 2018 but he was really pleased to see his new

room. He had a big smile on his face and really loves it! Dad is a lot calmer now and seems less frustrated. His room includes a custom made bed that moves him automatically during the night which adds to his comfort level and my Mum doesn't have to get up multiple times in the night any more. Dad's room has an ensuite so showering and toileting is much easier. He even has his own TV so he has more to do which is much better for him. The house has purified oxygen pumped into the air which also has made a big difference. We hope this

means that dad doesn't get so many chest infections and so far he's not had one this year.

Our new home is fabulous and has completely changed our lives. I'm so grateful to everyone who helped during the build and so thankful that we were chosen and cannot wait to see the build later this year on the TV!



Fitzwilliam Museum Work Experience



On Friday 16th February 2018 I took part in a taster day of work experience at the Fitzwilliam Museum, Cambridge.

When we arrived we were split into three groups and we then did a series of activities. First we had to

arrange the steps of creating an exhibit into the correct order before planning our own exhibit containing objects from the Fitzwilliam's collection that we had been asked to select prior to the day. This was made difficult as our objects had nothing obvious to do with each other. The group I was a part of finally managed to make a tenuous link with War and Peace.

After this we took a tour of the Museum of Zoology which has been closed to the public for five years for renovations. We were taken behind the scenes and even shown Charles Darwin's personal beetle collection. We learned how specimens are preserved and the history behind how some

objects made their way to the Fitzwilliam, including some lucky finches which could have ended up as fishing lures.

After a quick lunch break we were given a lecture on coins and medals by the museum's resident expert. Next the groups broke off and had three separate talks. One was about the art in the galleries and the way it is interpreted, the next about preservation of art and the last, and my favourite, a look at the Founders Library and some of the artefacts it houses. This included the signature of Henry VIII and a beautiful illuminated page.

by Katie Costello, Year 12



Football

The Sixth Form footballers were victorious against Stowupland in the County Cup on Thursday 15th March 2018 and have progressed to the semi final of the competition. Final score 4-2.

Well done boys!

Gig Night

On Thursday 15th March 2018 MCA⁶ musicians hosted a Gig night to raise funds for their Summer Ball in June

The evening was well attended and everyone had a good time.

Keep an eye on twitter and Facebook for future MCA⁶ events.





MCA **6**

Mildenhall College Academy
Sixth Form Centre
Sheldrick Way
Mildenhall
Suffolk
IP28 7JX

Tel: 01638 714645
email: reception@mca.atrust.org.uk
www.mildenhall.atrust.org.uk
Twitter: @MCA_Six
Facebook: @MildenhallSixthForm
Instagram: @mca_six



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