



# Particle Physics at WHSB



Seven members of Year 13, who are all participating in the CERN Beamline for Schools project, were treated to seminars about the latest developments in particle physics research in February. The students attended an all-day event and had the opportunity to share ideas with experts in the field, and to try their hands at using the complicated data analysis software used at CERN to visualise particle collisions. In the Summer Term, these students will be submitting an experiment proposal to CERN, using what they learnt at the masterclass, in the hope that their experiment is the one chosen to be conducted. If successful, the students will embark on an all-expenses-paid visit to CERN in Geneva and perform their experiment using a real high-energy proton beam. We wish Eisa Anwar, Oliver Coe, Myles Randall, Max Rigby, William Thornley, Ben Turner and Ryan Wilkins the very best of luck.

For the past two years, we have arranged for Year 12 students to undertake a trip to Geneva so that they can visit the Large Hadron Collider. In previous years, just ten lucky students (chosen at random from all those that applied) were able to go. This year, the School has managed to book 20 student places with CERN during the October Half Term. The trip typically involves two nights away and visits to other famous landmarks. In the past, students have had tours of the UN Headquarters, the ICT Discovery Centre and the Red Cross Headquarters. Last year, over 30 students submitted an application for one of the ten available places on the trip. This year, with double the number of students able to go, the odds are in your favour if you would like to secure a place. Hopeful pupils are advised to watch out for the September edition of the Westcliff Diary for full details and prices. Mr Dalby will need applications from students within the first two weeks of September. For more details in advance of the Autumn edition of the Westcliff Diary, keep watching the Physics Department's Twitter feed (@whsbphysics). Details will be tweeted as soon as they are available.

*Mr K Dalby, Head of Physics*

# The Bloodhound Project



The Bloodhound Project is a global Engineering Adventure. This is attempting to achieve a land speed record of 1000 mph to inspire the next generation of engineers. Earlier this year a group of Year 9 pupils visited PROCAT in Basildon where a full scale model of the Bloodhound was on display. Ambassadors from the Bloodhound Design and Development team gave demonstrations of the technology used in the car, and our group were given a personal viewing and had the opportunity to drive the Bloodhound simulator! With the

first high speed test runs of the car scheduled to take place on the Hakskeen Pan in the North West of South Africa in 2015, this was an informative and well-timed visit, making a large group of our pupils aware of the diverse geological, mathematical and scientific disciplines which have been brought to bear on this project.

## WHSB moves to electronic ticketing

For many years, WHSB has required paper-based forms to be returned from the Westcliff Diary to apply for tickets for events. Moving forward we are introducing electronic ticketing and this will now be the primary way to obtain tickets for the events that we run. There are a number of benefits to individuals of introducing this new system, including:

- The ability to book tickets at any point in time;
  - The ability to make payments by debit/credit card;
  - E-tickets will be sent immediately by e-mail or to your mobile phone, or paper tickets will be available for those unable to make use of e-tickets;
  - Flexibility to book tickets by telephone if you are unable to use the internet;
  - Events, such as our popular Toy Making days, will be available on a first-come, first-served basis.
- We have partnered with TicketSource, a specialist ticketing provider, and we have managed to introduce this at no additional cost to parents or students.

However, if you choose to book by telephone or to receive your tickets by post, a handling fee will apply to cover costs.

To book tickets for any of our events please go to <https://www.ticketsource.co.uk/whsb> to see what is available, or use the QR code below.

We hope that you will support us in this important step forward, but should you have any queries then please do not hesitate to contact me.

*Mr D Partridge  
Director of Resources & Support  
Services*



# FROM THE DESK OF THE HEADMASTER

## Capital Development Projects

The Sixth Form Building is progressing and the first layer of the roof has been installed along with 50% of the glazing and the majority of the cement panel walls. The first fix for mechanical and electrical works has also begun. It is anticipated that the building will be watertight by the end of March and completed by the end of June. Difficulties with sub-contractors and the sensitivity of the exterior cladding to weather conditions have delayed the completion of the Science Building, but the cladding is now almost complete which will mean that the scaffold can soon be removed.

These capital development projects will substantially improve the quality of our facilities. As I have done on previous occasions, I would like to take this opportunity to thank my colleagues involved in the project for their hard work, with a special mention for Mr Gershinson, Vice Chairman of Governors, who has provided considerable support and expertise in helping the School to progress the project. We have also been fortunate to have Mr Partridge, Director of Resources, and Mr Westwick, Project Manager, who have both assisted greatly in resolving difficulties, and in anticipating and preventing problems. I would like to thank the pupils, parents and staff for their forbearance in the face of some disruption.

## Forthcoming Examinations

All of the staff, including the Headmaster and members of the Senior Team, continue to meet with students to offer support and guidance to them as they prepare for the forthcoming GCSE and A Level examinations. Once again, the School has provided a broad range of Examination Revision Classes for our GCSE and A Level students during the Easter holiday.

The GCSE and A Level Examinations are demanding and the outcomes will have a significant impact on the range of future opportunities available to our students.

I give all our GCSE and A level students my best wishes for their examinations this summer.

## Tabula Returns

The latest edition of the School's Journal, Tabula, will be distributed to the School Community in the Summer Term. Tabula provides a medium for sharing some of the best work by students and staff in the fields of Arts, Science and the Humanities. This edition contains a splendid article considering topics as varied as 'The Arab Spring', 'Perceptual Knowledge' and 'The Power of Data'. In addition, the Journal provides excellent examples of students' work in the fields of poetry, art and literature review. I would like to extend my thanks to all contributors, and my particular thanks to James Snell, Year 13, who promoted and led the production of this edition of the Tabula, ably supported by Ms Mackay, Key Stage 3 English Co-ordinator, and Mr Partridge, Director of Resources & Support Services.

## Weekend Rugby and Football: Assistance Needed

In recent weeks, the School has been unable to staff its weekend fixture programme. The School is keen to retain weekend sport for its pupils and has advertised locally for professional coaches. We hope to appoint some sports coaches to join us at the beginning of the new Academic Year. However, we would welcome volunteer assistance from parents with an interest in, and preferably experience of, managing and assisting student rugby and football teams. Weekend sport is of enormous benefit to our pupils and I would be grateful for support in retaining it as part of the School's provision.

We anticipate that parent volunteers would work alongside our coaches to support the teams. It is understood that volunteers may not be in a position to

commit to every Saturday, however we would be seeking to establish a pool of people and so reduce the overall commitment required from individual persons. Those parents who are interested in offering assistance should contact Mr Partridge, Director of Resources and Support Services, via the School's email address.

## Staff Changes during the Spring Term 2015

There have been a small number of changes to staffing during the Spring Term 2015.

Mr Wilkinson, who has made an enormous contribution as an Assistant Head and Mathematics teacher across the last seventeen years, moves on to the position of Headmaster at Spalding Grammar School, Lincolnshire. He will leave us on 30 April 2015. We thank him for his service and congratulate him on his promotion. The return of Mrs Marsh, Head of Mathematics, and the imminent departure of Year 11 and Year 13 will allow us to provide continuity for Mr Wilkinson's classes.

Mr Fleet, who has previously taught at the School, joined us in the Spring Term to replace Mrs Brown. Miss Gowler and Mr Bishop, who both taught Mathematics, left us at the start of the Spring Term. Mr Bishop has retired from teaching and Miss Gowler has left to explore other opportunities. Mr Owen, Mathematics teacher, left at the end of the Spring Term to pursue a career as an Actuary and Miss Kittle will be leaving at the end of May to take up a position as a Mathematics teacher in Sheffield. We have retained the service Mr Rahman, a Mathematics teacher for the remainder of the year.

The School was delighted to appoint Mrs Weller as our Careers Adviser, Mrs Burden as our Teaching Assistant Supervisor and Mr Smith as a Caretaker. These appointments followed the departure of Mrs Morenas-Jones and Mr Pearson during the Autumn Term. Mr Brett, the CCF Senior Staff Instructor, will retire at the end of March and his role will be taken by Mr Braddon.

*Headmaster*

## Old Westcliffian Association News

I am pleased to report that the Old Westcliffian Association is in robust health, and we are keen to hear from more younger Old Westcliffians who wish to become involved, join the Committee and help run it. We have been pleased to extend a warm welcome, in 2014, to 25 new members, of which 22 have been school leavers from the last academic year and, of these, four have been ladies.

Given our successful Sixth Form is now attracting girls in increasing number, we hope that they will join the OWA on leaving the Sixth Form. We have been trying to make the Association more female-friendly and now offer brooches incorporating the School logo in addition to ties and cufflinks.

Last year, we held a successful Annual Dinner at which there were 38 school leavers, which included four ladies. I am indebted to Mr Cass for his support in encouraging so many to lend their support. Our guest speaker was David Simmons, a former successful Radio One DJ, globetrotting executive and OW. This year, our Dinner will be on 11 September in the School Hall. Our speaker will be Nigel Holdcroft, local solicitor and former leader of Southend Borough Council, and OW. It would be great to break the 100 barrier this year. If you have not been before, why not get up a party and come along? You will not be disappointed!

We have congratulated the School on the formation of a successful Combined Cadet Force and for which we have been pleased to make a donation. We shall be making a further donation towards a CCF honours board.

Lastly, I repeat my appeal, not just for new members, but for OWs to help run the Association. It is, after all, your OWA and we need you to take it forward!

*Mr T Birdseye  
Honorary Secretary*

## Westcliff Ladies: Race for Life

On 12 July 2015, a "pink army" of around 25 female staff and members of our families will run, jog or walk the Chelmsford Race for Life 5K. We have started training in earnest, and our objectives are to get a little fitter and raise money for Cancer Research, a charity working to help fight a disease of which many of us have personal experience through friends and family members. We have set ourselves a target of £2000, and if any parents or students would like to sponsor us, the link is <https://www.justgiving.com/WestcliffLadies15>. Alternatively, you can sponsor us by texting WHSB50 £3 to 70070. We last competed as a WHSB team back in 2011, and back then we raised almost £3,000 including Gift Aid. Any donations will spur us on to train harder. Finally, we would like to organise a team kit to help us to embrace our inner Jo Paveys, so if any parents know of a company which could potentially sponsor a T-shirt for us, please get in touch with me via the School Office. Thank you for your support.

*Mrs J Williams  
Senior Teacher: Staff Tutor*

## Successful Study Strategies at GCSE

Pupils, the Staff at the School and parents all have a significant role to play in ensuring that progress and attainment is maximised throughout the Middle School years and that this ultimately leads to success at GCSE. Taking the pupils' role first, they will be more motivated with their studies if they have chosen a goal to which they aim. This may take the form of pursuing higher education at a particular university or gaining admission to the Sixth Form to study at Advanced Level. Whatever it is that they are targeting, it will help them to focus on their work and give them a sense of purpose for doing well. Concentration and paying attention in lessons is, of course, essential to grasp

the concepts and to thoroughly understand the subject material that is being covered. Self-discipline and personal organisation are necessary attributes to ensure that homework and revision assignments, to support the work that is being done in the School, are completed by the deadlines set, and taking a pride in the presentation of their material, and themselves, creates a good impression.

Subject teachers will obviously teach pupils the topics that they need to know to cover the various specifications, and the Middle School Pastoral team are on hand to monitor their progress. They will provide a variety of support measures and guidance if it is felt that a particular pupil needs them, for any reason, to help keep them on track and meet their target grades. A very important aspect of preparation for their GCSEs is, of course, an organised constructive revision programme and we advise them on strategies to maximise the efficiency of their revision time.

Parents can play an important role here as well by ensuring that there is somewhere their son can work at home in an environment conducive to study. It is also important that he is not allowing his concentration to be disturbed by the distractions of social media, text messages, iPods, games consoles and the like. Providing encouragement and showing an interest in his studies is also motivating. If parents wish for advice on any aspects of study strategies for GCSE please contact the Middle School Pastoral Office which will be pleased to assist.

*Mr A Farrell  
Head of Middle School*

## UCAS Programme

Continuing to build on a programme established over nine years to support applications to the most prestigious universities, the School will host its annual Oxbridge Conference in June. Admissions tutors, academics, staff and students from Oxford and Cambridge will visit the School to talk to potential applicants on a range of issues. They will seek to demystify the application process, and the notorious interview, as

well as providing concrete advice on the extra preparation expected over the summer of those who would seek to study at these ancient institutions. We have already, this year, conducted a tour of Cambridge University for Year 11 boys and members of Year 12 who are new to the School. We have also held an Education Evening for Years 10 and 11 to examine Sciences at University, recommended students for the Senior Physics Challenge, hosted by the Cavendish Laboratories, Cambridge and the Cambridge Law Faculty Study Days and supported applications for the Eton College, UNIQ (Oxford) and Sutton Trust Summer Schools which take place this term as well as encouraged participation through London University "Taster" Courses. Additionally, the School secured bookings for a number of Year 12 students at various Masterclasses hosted by Cambridge University.

In addition, across the current academic year, we have provided opportunities for the Sixth Form to hear from external experts about options for taking a gap year, studying abroad and Student Finance.

We have booked places for the entirety of Year 12 on the UCAS University Superfair held on Wednesday 1 July at the Anglia Ruskin University campus at Chelmsford.

Our annual Higher Education Evening for all members of Year 12 and their parents will take place in the School Hall on Thursday 25 June at 7:30pm.

*Mr R Stevens*  
Higher Education Coordinator

## Year 5 Festival of Education

On Saturday 14 March, Westcliff High School for Boys once again opened its doors to local primary school children, their parents and primary school colleagues. On this occasion, it was to host 125 Year 5 pupils at the Westcliff Centre for Gifted Children, Festival of Education. The day included lessons in Science, Mathematics, English, Art, History and Russian for the children.

In the afternoon, the parents went back to school themselves as they had their own seminar with the Heads of English and Mathematics at the School delivered sessions on how parents could best support their child through the 11+ examinations and the transition to secondary school. WHSB's own Joshua Seal in Year 7 spoke to parents about his transition from primary to secondary school with passion and honesty.

The event proved to be a great success, with Victoria Cooke, Primary 5 teacher at Darlington saying *"The day was really useful and informative to see the sessions provided for Year 5 pupils. The children were having a fantastic time and I am keen to promote future events for pupils at our school. The 6th formers assisting in the sessions and showing us around were a real credit to the school."*

A local parent and Primary Governor said *"A thoroughly enjoyable, participative opportunity for Year 5 pupils from local primary schools to get an insight into life within a selective grammar school."*

Westcliff High School for Boys launched the Westcliff Centre for Gifted Children in 2010 as a means of introducing primary aged children and their parents to the Grammar School environment, breaking down barriers and myths about Selective Schools in the process of enhancing the learning of the children. Each term, the School runs a free 11+ program, but this was the first Festival Day which also included activities for Primary teachers and parents. Details of the summer programme will be on the WHSB School website and will also be sent out to primary schools within the catchment area very soon.

*Miss K Rankin*  
Assistant Head: Director of Lower School Studies

## A Day in Toy Making

**Saturday 20 June 2015**

Our ever popular Day in Toy Making returns again for the Summer Term. The day is open to Key Stage Three pupils who will have the opportunity to manufacture a mechanical Bi-Plane

automated toy. Movement is provided through a crank handle which drives a series of cams and followers. The charge of £37.50 for each pupil is inclusive of materials. These Days are often over-subscribed and, therefore, early booking via the electronic ticketing system is advised.

*Mr N Senior*  
Head of Design & Technology

## WHSB Uniform Shop

The School provides uniform through its own shop. This arrangement has existed for a number of years and parents appreciate its convenience. We have found that by selling uniform and certain books, bags and other essential items for School in-house we can offer a convenient location, a personal service and keep prices at a competitive level. An order form and price list detailing items and sizes available are downloadable from the School website under the Uniform Shop sub-heading within the Secure Parents' Area.

Pupils can hand in their orders to the School Office. These will then be prepared for collection as soon as possible. The shop, located in the East Basement, is open for purchases to be made by parents and pupils on Thursday afternoons from 3.45pm to 4.45pm during term time.

Please note that for all orders required before the end of this Summer Term, order forms together with payment must be handed in to the School Office no later than Tuesday 14 July 2015. The last day on which the shop will be open prior to the summer break is Thursday 16 July 2015.

The Uniform Shop will open at the end of the summer holiday, prior to the start of the Autumn Term 2015 on the following dates:

Date	Time
Friday 28 Aug	9.30am to 1pm
Tuesday 1 Sep	9.30am to 1pm
Wednesday 2 Sep	9.30am to 1pm

Please note that the shop will be very busy during these times. To avoid any delay and inconvenience, it is advised that uniform orders for current students are submitted wherever possible prior to the end of this Summer Term. Queries regarding uniform orders should be directed to Mrs Clarke in the Uniform Shop via email [clarkej@whsb.essex.sch.uk](mailto:clarkej@whsb.essex.sch.uk)

*Mrs J Clarke  
Uniform Shop Manager*

## Support the School through the Pupil Fund

As you will no doubt be aware, School Funding is becoming a hot topic in the news. Over the next few years, schools will receive a flat or reduced settlement from the Government, and due to the funding structure, this is felt most acutely in schools that do not have a large number of disadvantaged children. As a School, we have always taken a prudent approach to financing our activities but there can be no doubt that the climate is becoming increasingly challenging.

All schools are being encouraged to seek funds from elsewhere and we are no exception. One way in which we do this is through privately letting out our premises to third parties. We are mindful that our first priority must always be to provide high-quality education to our students, but these additional activities take place outside of school hours in order to contribute financially towards the School's running costs.

Our shrinking resources mean that funding from the Government must be spent on essential expenditure; however we need to offer much more than the essentials. We are grateful for the continued support we already receive from parents and would welcome further support from parents for the Pupil Fund through new subscriptions, increasing existing subscriptions, or making a one-off donation.

The Pupil Fund really does make a

difference. For example, the School currently has two minibuses that are used for educational and extra-curricular activities. These vehicles are now twelve and nine years old respectively and will need replacing in the near future. The minibuses are in daily use, and are well-maintained, but they are reaching the end of their useful economic life. The cost of each replacement minibus would be between £20,000 and £30,000, depending on the age of the vehicle obtained and this is something that the School would appreciate donations towards.

The Pupil Fund is able to receive both one-off donations and regular Standing Orders, and all eligible donations can be Gift Aided, which allows us to receive approximately 25% additional income from the Government.

If you would like to support the School financially or would like more information on how to support the School, then please contact me, on 01702 509406 or email [partridge@whsb.essex.sch.uk](mailto:partridge@whsb.essex.sch.uk)

*Mr D Partridge  
Director of Resources & Support Services*

## Learning Computing Programming

Over the past twenty years, there has been a rapid expansion in the computer industry. At the end of 1993, there were 623 websites on the Internet. Today there are over 1.2 billion. Programming started out as a way to simplify complicated mathematical problems, but today programming is used everywhere. Programming supports doctors to save lives, creates self-driving cars so you do not have to worry about learning to drive, records languages that are at risk of becoming extinct, creates algorithmic jewellery and creates amazing special effects in films, such as Gollum in Lord of the Rings. In fact, at the Associated Press (AP), "robot journalists" write news articles. They are so well-educated in AP's Style Guide that they publish about 3000 articles per quarter, all the while being able to contextualise data to make it interesting. The point is that programming is such a useful skill, regardless of

whether you are interested in Computer Science in general. Recently, students in the Computing Department have created an online textbook in Java (which according to the Institute of Electrical and Electronics Engineers (IEEE) is the best programming language to learn) for GCSE Computing students. However, it has proved so comprehensive that an absolute beginner can approach the subject, and it has been published online at [java.divshot.io](http://java.divshot.io). Therefore, the staff in the Computing Department encourage all students to learn to program.

*Mr A Rahman  
Head of Computing*

## School Production: Agatha Christie's A Murder is Announced

**16 and 17 April 2015, 7.30pm**

On 16 and 17 April, one of Agatha Christie's classic 'who done it?' murder mysteries comes directly to the Westcliff Theatre for two nights only. In the small town of Chipping-Cleghorn, an announcement in the local paper states the time and place when a murder is to occur in Tristan Blacklock's (Alex Kelly) Victorian house. The victim is not one of the house's several occupants, but an unexpected and unknown visitor. What follows is a classic Christie puzzle of mixed motives, concealed identities, a second death, a determined Inspector (Ben Wimsett) grimly following the twists and turns, and trusty old Miss Marple (Lucy-Anne Hickey) on hand to provide the final solution at some risk to herself in a dramatic confrontation. The cast have been hard at work and under the careful direction of Angus Easener, the show promises to be a splendid evening's entertainment.

*Mr De Lausen  
Teaching Assistant*

## Inauguration Review



We are pleased to report that WHSB has been granted its own independent CCF, becoming (in February 2014) the first independent Combined Cadet Force under the Government's Cadet Expansion Programme. This programme is designed to increase the opportunities for state school pupils to benefit from the cadet experience. Indeed, while the Cadet forces have a long history within the independent schools they have had limited exposure within state schools.

Having first formed a partnership with an independent school partner, Brentwood School, in October 2012, the School's Combined Cadet Force has now been granted independence and becomes the newest CCF in the United Kingdom. We are a pioneer of this new cadet force model and are particularly proud of our achievements as a state school.

This historic achievement was celebrated with a formal event on 12 February 2015. The celebration included a special assembly, a parade, a demonstration introductory session to potential cadets and a buffet dinner. The Inauguration Event included guests from across Essex and across 49 (now 7) Brigade. These included the Mayor, Cllr Chris Walker and his wife, Mrs Janet Walker, Contingent Commanders from other local CCF units,



local Headteachers, and senior military figures from 49 Brigade, notably the Colonel of Cadets, Col Peter Christian.

The inspecting officer was Col Gary Wilkinson, Commander of Colchester Garrison who, in addressing the parade, said:

*"May I firstly commend all of you on your excellent turnout, bearing and standards of drill, you are a credit to yourselves and your school and you should be duly proud..."*

*"May I congratulate you all: Headmaster, staff, instructors and boys for collectively achieving what you have achieved, to be at the very forefront of a new wave of independent Combined*



*Cadet Forces in schools...*

*"Welcome to the Armed Forces Community of Essex and also the United Kingdom; the Armed Forces Community Comprises: cadets (CCF and ACF), university officer training corps, reservist and regular servicemen and women, Veterans and the families of those groupings that I have mentioned.*

*"You have all demonstrated in reaching your achievements of today, of independent CCF status on a long and committed journey, and your quality of parade and turnout today, that Westcliff High School for Boys are now independent and stand-alone, worthy members of the Armed Forces Community.*

*"So welcome – your 'faith and fortitude' has been rewarded!"*

The event received substantial local and regional media coverage, including newspaper articles in at least five local newspapers, a local radio segment including interviews with the the Headmaster, Col Wilkinson, our Contingent Commander and cadets on BBC Essex, and news items on ITV Anglia, broadcast on Monday 16 February 2015. Links to this coverage, and speeches given during the event can be found on the School Website.

Having celebrated its formal inauguration, our CCF continues to grow from strength to strength.

*Captain Bleakley  
Contingent Commander*

## CCF Summer Camp

**4 – 11 July 2015**

This year, cadets from Years 10-13 will be going to the CCF Central camp in Wathgill, Yorkshire for the first time as an independent CCF. The camp will consist of a rigorous and exciting programme including adventurous training, navigation, field training exercises, assault courses, live and blank firing and an inter-contingent competition.

*Captain Bleakley  
Contingent Commander*

## Field Days

**Friday 24 – Sun 26 April 2015**

On Saturday 25 April, our most recent intake of cadets will undertake a day of watersports at the Grangewaters Outdoor Education Centre in which they will be able to extend themselves in a series of new and challenging activities. Furthermore from Friday 24 April to Sunday 26 April, the Year 10 cadets will accompany Culford School CCF on a 48 hour Field Training Exercise in which they will be able to fire blank ammunition, in addition to practising their skills in the field. This will be invaluable preparation for the Summer Camp and allow cadets to take upon themselves leadership roles.

*Captain Bleakley  
Contingent Commander*

# FRONT AND CENTRE CCF FRONT

## CCF Dinner and Passing Out Parade

Friday 26 June 2015

The CCF will, once again, celebrate our achievements with a special parade, following which parents, family and friends are invited to join the cadets and other guests for our Annual Mess Dinner.

*Captain Bleakley,  
Contingent Commander*



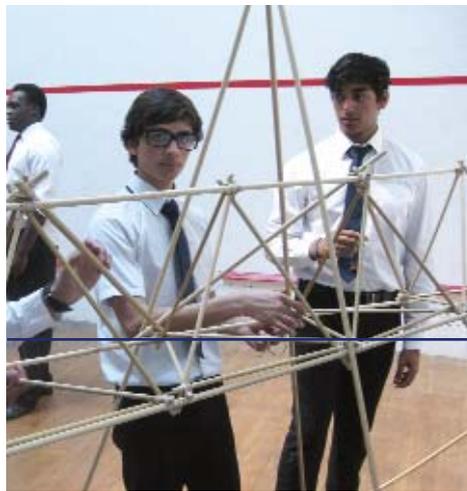
# SLICES OF PI: MATHEMATICS

## Architecture Workshop

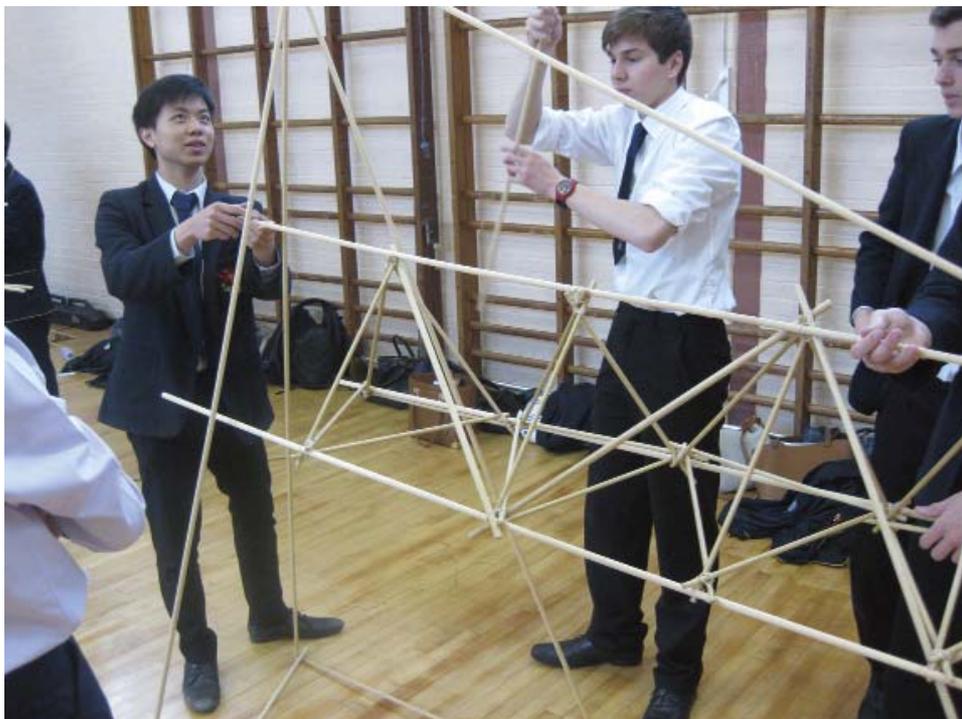
Wednesday 17 June 2015

Once again, the Mathematics Department will be running an Architecture Workshop for all students in Year 12 on 17 June 2015. Students will be given the opportunity to work in teams to create a bridge from dowel rods and elastic bands.

In previous years, we have seen designs ranging from brilliant to bizarre. I am sure this year will be no exception. It is a great opportunity for students to apply their mathematical and logical thought processes in a kinaesthetic environment,



and the chance to work as a team will provide students with an opportunity to experience a project generation process first hand.



## Help Clubs and Extension Clubs

A series of very successful Mathematics Help Clubs runs during Monday and Thursday lunchtimes for Key Stage 3 and 4 pupils, and Tuesday and Friday lunch times for Sixth Form students. Anyone in the respective Key Stages is welcome to attend, where they might discuss problems with either Sixth Form Mathematics tutors or Mathematics teachers. It is suggested by the Department that, when preparing for a unit test, pupils may wish to do some of the exercises towards the end of the chapter they are studying. This is a perfect opportunity for pupils to come with queries relating to these exercises in order to better prepare for the upcoming unit test.

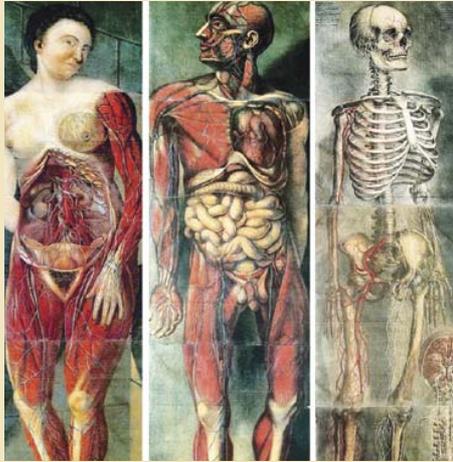
The Mathematics Department also runs a series of extension clubs for those students wishing to further explore Mathematics. We emphasise that this is not an ability-based club; any student wishing to explore more of the subject are welcome to attend regardless of ability. The Key Stage 3 club runs on Tuesday lunchtimes, the Key Stage 4 club on Wednesday lunchtimes and the Key Stage 5 club, which focuses on STEP questions for entry into a Mathematics course at the best universities, is held on Thursday lunchtimes. Please feel free to pop along if you are looking for a challenge.

*Mr M Dowding  
Acting Head of Mathematics*

# LECTURES & TALKS LECTURES

## Dr Richard Barnett on The Black Death

Thursday 23 April 2015



Inspired by the ideals of the French Revolution, 19th Century doctors and surgeons sparked another revolution; one that transformed our understanding of the human body in health, disease and death. Drawing on the vivid and gruesome images in his award-winning book, *The Sick Rose*, Dr Richard Barnett will tell the story of the making of modern medicine.

Dr Barnett is a writer, teacher and broadcaster on the cultural history of science and medicine. He has taught at the universities of Cambridge and London, and in 2011 he received one of the first Wellcome Trust Engagement Fellowships. His first book, *Medical London*, was a Book of the Week on BBC Radio 4, and he has made many appearances on British and American TV and radio.

Please note: this talk will include drawings and engravings of dissected human bodies.

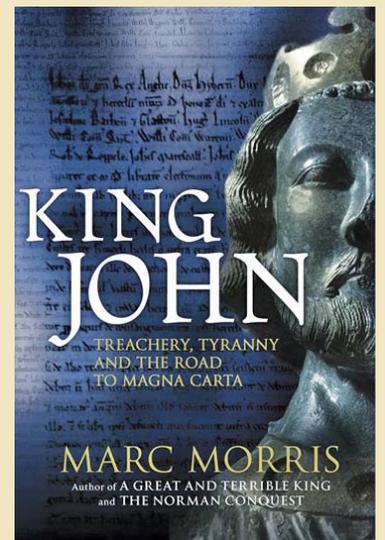
*Miss M Slater, Teacher of History*

## Humanities Evening: Dr Marc Morris on *King John and Magna Carta*

Thursday 30 April 2015

Dr Marc Morris will be speaking on the evening of Thursday 30 April 2015 at 7.00pm on the topic of King John and Magna Carta, so re-read your 1066 And All That to check up on this “bad king” on the occasion of the 800th anniversary of the most important document in English constitutional history. In the afternoon, all Year 7 pupils will also have a presentation by Dr Morris on Castles. Marc Morris is an historian and broadcaster, specializing in the Middle Ages. Following the success of his bestselling biography of Edward I, *A Great and Terrible King* (2008), he has recently completed a major new book, *The Norman Conquest* (2012). A definitive new account of King John will be published in 2015. In 2003, Dr Morris presented the highly acclaimed six-part series *Castle* for Channel 4 and wrote its accompanying book (now published in paperback by Windmill). He has also contributed to history programmes such as *Time Team*, as well as other shows on both television and radio. An expert on medieval monarchy and aristocracy, Dr Morris has written numerous articles for *History Today*, *BBC History Magazine* and *Heritage Today*.

*Mr R Stevens, Head of Politics*



## Professor Nessa Carey on Epigenetics

Wednesday 24 June 2015

In the Summer Term, we are delighted to be able to host Professor Nessa Carey on the afternoon of Wednesday 24 June. Professor Carey, an associate of Imperial College London and consultant from the drug company Pfizer, will present a lecture on epigenetics, an emerging science that was the subject of her first book. Epigenetics surfaced from the shadow of the human genome project and has come to explain many mysteries of inheritance, such as how environmental events in one generation appear to modify the DNA of subsequent generations— which has major medical implications. In her new book, Professor Carey considers another theme, ‘Junk DNA,’ which represents a catch-all term for regions of the genome that do not encode proteins and were once (but certainly no longer) considered redundant. Both books are favourites of Sixth Form Biologists in their pursuit of wider reading. The presentation will be aimed at those in Years 10-12 and we hope to also invite students from neighbouring schools to this prominent event.

*Dr D Martindill,  
Second in Science*

# S & TALKS LECTURES & TALKS

## Art and Design Evening Wednesday 8 July 2015

The Art and Design evening will take place this year on Wednesday 8 July at 7.30pm.

The Design and Technology work on display will reflect a variety of technical skills and processes using wood, metal and plastics and techniques such as aluminium casting, brazing, metal inert gas welding, vacuum forming and electronics will be in evidence. Exhibits from our youngest designers will include imaginative solutions to festive decorations, steady hand games and MP3 amplifiers. Our older designers will provide creative and well engineered solutions to a wide range of problems which demonstrate a high level of craft skills. Come along and see, for example, a BBQ stand, a range of seating devices, an office desk, and a range of storage devices. Our Young Engineers will present work undertaken with the Engineering Education Trust and Selex Galileo, a local engineering company.

The Annual Art and Design Exhibition will once again showcase some extraordinary Art created by our students. We have seen a real 'renaissance' in the Art Department in the last two years and we are now, not only producing work that is of a profoundly personal nature and of technical sophistication level, but we are also achieving some incredible examination results at AS, A2 and GCSE. This year, we will be featuring our unique A Level portfolio pieces in which students create Visual Installations based on a theme of 'Identity' or a 'personal investigation'; we have a 'Mad Hatters Tea Party', an 'Anderson Shelter' with an unexplored bomb, a 'Coffee House', a 'Womb' room, a 'journey' of images housed on a revolving door which archive the relationship between a much loved auntie and niece, a response to the oil industry, magnificent hands that tell a story through gesture, a funeral pyre in 'Homage' to the death of Rock, and a monumental house and central heating system that explore the concept of what is the Heart of a Family. We will have Year 10 Art responding to our local coastline, Year 9 creating urban landscapes, Year 8 showing off their facial landscapes and Year 7 exhibited their responses to the everyday object.

*Mr T Sinnott, Head of Art / Mr N Senior, Head of Design & Technology*



## UCL visits WHSB Computing Department



Towards the end of the Autumn Term, Laszlo de Brissac, first year UCL Computer Science undergraduate and President of the UCL Entrepreneurial Society, visited WHSB to lead a Computing & Entrepreneurship Day. He represented UCL and presented his own educational experiences to Year 8, before answering questions on what it was like to be a Computer Science undergraduate. He then took a coding class for Advanced Level students, informing them how coding, along with an entrepreneurial mind, can lead to exciting career paths. He said at the end of the day: "I was really impressed and thrilled to see how this generation of students has a real interest for coding and the impact it will have on our society. I strongly believe that universities such as UCL should constantly try and help these schools to grow and promote computing."

*Mr A Rahman, Head of Computing*

# PARENTS' ASSOCIATION NEWS

## Adventure Island Wristbands

Discounted wristband vouchers for Adventure Island, one of Southend-on-Sea's main visitor attractions, are available through the PA again this summer. Each wristband voucher purchased from the PA can be exchanged for an all-day 'Big Adventure' wristband (for those 1.2m or over in height). Vouchers will be issued to pupils following submission of an order form

together with full payment. For further details or to request an order form, please contact the Parents' Association via email: [pa@whsb.essex.sch.uk](mailto:pa@whsb.essex.sch.uk)

## Sports Day Cake Sale and Summer Band and BBQ

We will be running our ever popular Pimm's Stall selling alcoholic summer

punch and soft drinks at the School's annual Summer Big Band and BBQ event on Friday 3 July. We look forward to seeing you.

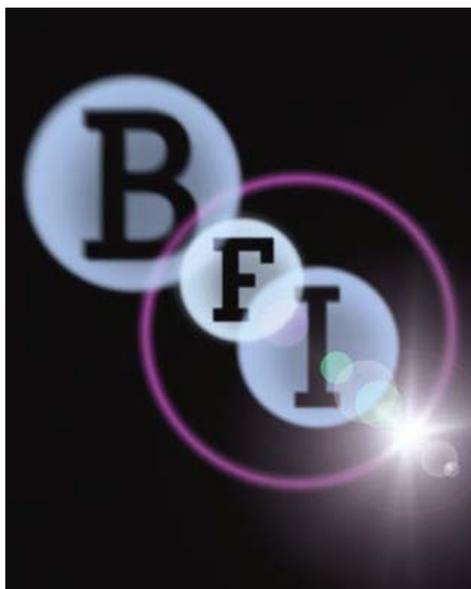
Additionally, the PA will be represented at Sports Day supporting the School on Tuesday 7 July serving refreshment, providing complimentary fruit and selling quality, tray-baked cakes priced at 50p each. All proceeds will go to the School.

**We look forward to seeing you at both events.**

*Mrs J Clarke  
Chair of the Parents' Association*

# TRIPS & VISITS TRIPS & VISITS

## Sixth Form French visit to the British Film Institute: A Retrospective



On Friday 23 January, nine Sixth Form students had the opportunity to spend the day at the British Film Institute in London. The event was designed specifically for pupils studying French in Year 12 or Year 13 and was entitled *Le Cinéma Français: an Introduction to French cinema for A-Level students*. Given that our Year 13 pupils are studying the film *Le fabuleux destin d'Amélie Poulain* this year for their A2 Speaking examination, this was a fantastic opportunity to deepen their cultural knowledge and their technical vocabulary. They were accompanied by myself and our French Language Assistant, Guillaume. Most students made their own way to the venue near Waterloo station, and we were then warmly welcomed by the BFI staff who provided us with a booklet outlining the day's sessions.

The auditorium was filled with students from other Sixth Forms from London and its outskirts. The morning session provided us with a general overview of the evolution of French films since the invention of cinema by the Lumière brothers. We were also shown several extracts from key eras of the French "seventh art", as we call it in France. *Les*

*vacances de Monsieur Hulot* by Jacques Tati and *Les 400 coups* by François Truffaut were among the films displayed. The pupils were encouraged to take notes and write down their answers to challenging questions. After a brief lunch break on the banks of the Thames, the afternoon session was devoted to the film *Paris* by Cédric Klapisch, a French director who is very popular among the younger generation. Everyone thoroughly enjoyed the screening and hopefully the whole day will have encouraged the pupils to keep up their interest for world cinema and return to the BFI for other events.

*Miss Y Toudic, Teacher of French*

## Great War Battlefields Tour

10-13 July 2015



This summer will see the 25th annual visit organised by the History Department for Year 9 students to the French and Belgian battlefields of 1914-1918.

As usual, the focus will be upon the British experience of warfare on the Western Front. The first day will be spent in the region around Arras, the site of a major offensive in early 1917 and notable for the complex network of underground tunnels dug in the chalk soil prior to the assault on Easter Monday. One whole day will be spent studying the Somme battlefield, and the circumstances which led to the 60,000 casualties on 1 July 1916. We are very fortunate once again to have secured the services of historian

Andy Robertshaw. He is already well known to students as a consequence of his numerous visits to the School, and we look forward to hearing his own views on the much discussed abilities of Field Marshall Douglas Haig. A further day will be spent in the vicinity of the Belgian town of Ypres where four major battles were fought, most notoriously the Battle of Passchendaele in the wet Autumn of 1917.

Interest has been heightened by recent events to commemorate the War's centenary, and we await the visit with anticipation.

*Mr D Maughan, Teacher of History*

## Ski Trip to Maria Alm, Austria: A Review

This year, the School stayed at the Eberalm Youth Hotel in Maria Alm, Austria for our annual ski trip. This has a superb location right on the slopes and next to a chair-lift giving access to the whole resort. Ski school met outside the hotel and our pupils were able to start skiing immediately. The advanced groups managed to complete the Konigstour, twenty miles of skiing, from one end of the valley to the other. All involved had a great time, as the weather gave us blue skies every day.

Next year we have chosen the same company, Team4, to organize our trip, and we have booked a youth hotel in Hoch Fugen, Austria. We look forward to another enjoyable trip next year.

*Mr L Despres, Ski Trip Organiser*





# TERM SUMMERTIME IN THE S

The Spring Term was an exceptionally busy one in the Science Department and we look forward to another three months of academic activities and exciting extra-curricular pursuits.

## Visit to Wellcome Trust Sanger Centre

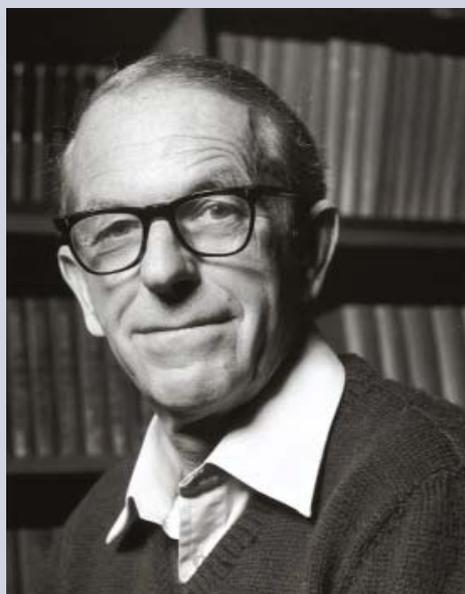


Mrs Barber arranged for a group of 30 Year 11 pupils to visit the Wellcome Trust Sanger Centre near Cambridge in February. This facility, dedicated to genome research, is famous for the major part it played in the multinational effort to sequence the human genome. The day began with an introduction to the work of geneticists at the Institute, before we were given a presentation about pathogenic research by a resident researcher. Following a short break, we participated in a collaborative activity which gave us an insight into how DNA mapping actually works. The day concluded with a guided tour of the impressive facilities at the site, which included a detailed explanation of the workings of the multi-million pound sequencing machines. The trip was a useful accompaniment to our GCSE studies, and was a very enjoyable and stimulating day.

*Daniel Sanders,  
Year 11*

## Visit to Cambridge Science Festival

Building on our theme of DNA and efforts to unravel its sequence, Year 12 Biologists visited Cambridge in March for our seventh consecutive annual visit during its Science Festival. We attended a superb lecture celebrating the long life of the



double Nobel Laureate, Professor Frederick Sanger (1918-2013). Professor Sanger, a modest man who shunned the limelight, discovered how proteins and DNA could be ascertained, opening up a huge number of possibilities in medical and evolutionary biology. This was a fascinating insight into the man behind the science, and also gave our students an early taste of a concept from the A2 Biology course.

*Dr D Martindill,  
Second in Science*

## Visit to Orierton Field Studies Centre



The Department is delighted to once again offer our Year 12 Biologists the annual trip to Orierton Field Studies Centre in Pembrokeshire. Between Monday 13 July and Saturday 18 July, students will undertake an intense

ecology course that will see them investigating several different habitats, to carry out research and apply all the statistical tests needed for the A2 course. The Field Studies Council, responsible for the Centre, provides excellent tuition in ecosystems ranging from sand dunes to rocky shores; sites we are unable to provide at School. There is also an opportunity to visit a local farm and question the farmer regarding agricultural practices. This is a superb opportunity for our students to learn ecology theory and apply it to real situations.

*Mr L Despres,  
Teacher of Biology*

## Medicine at WHSB

Medicine and related degrees remain a popular choice of university course among WHSB students and plenty of opportunities exist for students' wider engagement with this subject:

In March, twenty Year 12 students interested in Medicine and Biomedical science spent a Sunday at the Addenbrooke's Hospital in Cambridge. In a day packed with activities, we encountered the stories of neurosurgeons and their patients, heard lectures from leading scientists at Cancer Research UK and tried out some of the simulator equipment being used by medical practitioners during key procedures.

We are very proud of the contribution our Sixth Formers make to our in-house Medical Society. Many students, not least Luke Thomas, Jake Weeks, Rohan Misra and others have given much of their time coordinating and contributing in this way. Some students continue their involvement after they leave the School.

On Wednesday 15 April, we are delighted to welcome back to the School two Old Boys, Ali Abdaal and Suhail Aslam. Both are Oxbridge medicine undergraduates who will host a seminar on their experiences, three years into Medical School.

# SCIENCE DEPARTMENT SUMME



Ali and Suhail have had remarkable success in setting up a business to pay their way through their studies, BMAT Crash Courses Ltd, which helps prospective students prepare for the university entrance exam. Originally conceived to be a worthwhile summer job to pass the time during university summer holidays, the success of the course was far greater than they could have ever imagined. They now run sold-out courses in Oxford, Cambridge and London and have recently hosted events in Singapore and the Netherlands. This event will primarily be aimed at Year 11 pupils with a budding interest in studying Medicine, and interested pupils should approach Kavin Kugan or Alex Moxom in Year 11 for further information.

*Dr D Martindill,  
Second in Science*

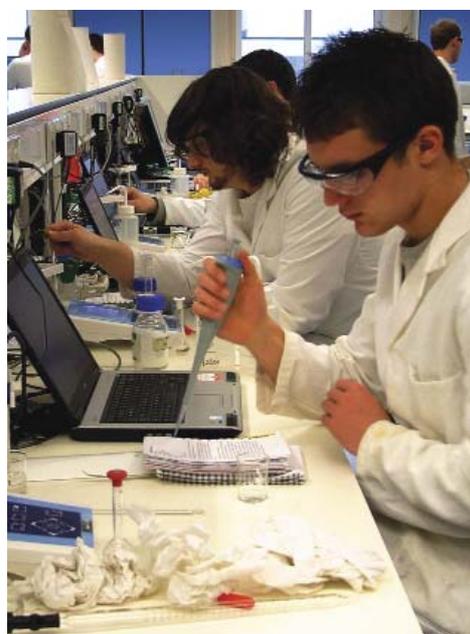
## DNA Day Saturday 2 May 2015



A Saturday event in May promises to provide an opportunity for some of our Year 7 and Year 9 pupils to undertake fascinating hands-on laboratory work. For Year 7, 'DNA Day' will return for a group of 20 pupils on the morning of Saturday 2 May, while during the afternoon 'Dissection Day' will commence for a similar number of Year 9

pupils. DNA Day will involve pupils undertaking laboratory work to extract their own DNA from a cheek cell swab, investigate antibiotic resistance in bacteria and analyse the human genome using real data. Prizes will be available for the pupils who are judged to have worked in the most scientific manner. Dissection Day will see pupils dissect a whole rat, a sheep eye and a sheep heart, and will provide pupils with an opportunity to encounter some of the anatomical aspects of the GCSE Biology course they will follow next year. Both events are priced at £15 per pupil to cover the cost of resources.

*Dr D Martindill,  
Second in Science*



In February, Sixth Form students were fortunate to be able to attend an evening demonstration lecture at University College London on the subject of mirror-image molecules. These are chemical substances that can exist in two isomers, 'left-handed' and 'right-handed' forms, and have applications in a range of techniques in Chemistry, Biology and Pharmacology. Developing on our extra-curricular provision, we are providing an opportunity for Advanced Level Chemistry students to attend a prestigious course in July of this year. A group of 45 Sixth Form students will attend the University of Bristol ChemLabs for a three-day residential visit, and will be given the opportunity to work in state-of-the-art undergraduate laboratories, as well as attend lectures and demonstrations run by university staff. Across the three days, students will

isolate caffeine from tea leaves, design and make their own fragrance involving ester chemistry and synthesise benzocaine. The trip offers a unique opportunity for our most senior students to experience first-hand what a degree in Chemistry can offer, and enhance their practical skills in preparation for the A2 Synthesis unit.

*Mr D Hill,  
Head of Chemistry*

## Physics Experience at Jesus College, University of Cambridge

In March, a group of Year 12 students attended the Cambridge Colleges' Physics Experience at Jesus College. In the morning, the students were introduced to the university application and admissions procedures, which compared the differences between university courses, tips and advice on the admissions process, finance-related issues and more general information about life at university. They then received a tour of the college and wider sites in Cambridge, including the Cavendish Laboratory, where they undertook a mechanics experiment. We also encountered new online resources for A-Level Physics students, with some questions written by our very own Dr Machacek.

*Mr H Tresidder,  
Teacher of Physics*

## Engineering Programmes

Mr Easby, one of our Science Technicians, continues to work tirelessly with our budding engineers to develop their knowledge of solving real-world problems with scientific knowledge.

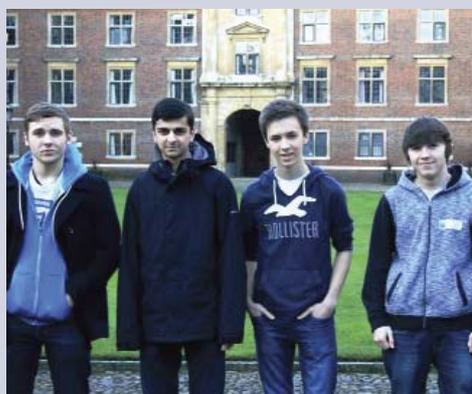
- **In our Rocketry pursuit**, three teams of students are building rockets to compete in the Essex County Rocketry competition. The teams must each build a rocket which will carry a raw egg to a height of 800 feet and parachute it,

# TMENT SUMMERTIME IN THE S



undamaged, back to earth. The flight duration must be between 46 and 48 seconds, and points are lost for each foot more or less than the target height, and each second more or less than the prescribed flight duration. Teams whose egg is damaged are disqualified. The teams will have the opportunity to make up to three practice flights before the final which is to be held at Stow Maries Aerodrome on Saturday 16 May.

• **The Engineering Education Scheme (EES)** is a programme which links teams of four Year 12 students and their teacher with local companies. Selex ES have



sponsored teams from Westcliff for a number of years, and this year Eisa Anwar, Mathew Hamberger, Zach Hanselman and Charlie McGee are designing a 'protector,' a device which will be used to deter intruders. Sensing an intruder, the protector will issue increasingly hostile warnings advising the intruder to withdraw, including spraying coloured dye, then an irritant, before finally 'shooting' the intruder. The boys demonstrated their system to judges at Anglia Ruskin University in late March and we are awaiting their feedback.

One of our EES projects sponsored by IPECO, has involved a team of four

students working on a design to improve the release and locking mechanism of an Executive Aircraft Seat. The team's final submission went on to win a number of awards, including Best EES project in the South East, Best CREST Gold Award project in the Eastern Counties and the Chelmsford Science and Engineering Society's Technical Design Award 2014.

Additionally the students have been selected to present their project at the National 'Big Bang' Science and Technology exhibition at the NEC in Birmingham this summer. We congratulate Joe Slade, Roman Carlile, Yen Nguyen and Alex Young and wish them every success at the upcoming event.

• **The Ford Challenge** involves two teams of five Year 10 pupils embarking on an Engineering challenge set by the Ford Motor Company. The challenge is to build an unpowered vehicle which can carry an egg down a steep ramp and towards a brick wall. The vehicle must stop as close to the wall as possible without either hitting the wall or breaking the egg. No electronics are allowed to be used; the vehicle must be brought to a halt by purely mechanical purposes. The teams will demonstrate their solutions at the Ford Test Centre at Dunton on Friday 24 April.

## In other news...

**The Science Roadshow** takes place as part of Wednesday afternoon enrichment activities. A group of Sixth Form students take Science demonstrations to local junior schools for pupils in Year 5. The children are divided into three groups and carry out practical work in the three disciplines of Biology, Chemistry and Physics as a carousel. In Biology, they take their own cheek cells, mount them on a slide and view them under a microscope. In Chemistry, pupils have been looking at flame tests and applying concepts of forensic science to the activities. In Physics, they have built simple series and parallel electrical circuits. This year, we have visited eight different schools and encountered over 500 children. This means that our Sixth Formers have repeated their carousel over 50 times and we would like to put on record the School's thanks for their hard



work. It is pleasing that we have returned to schools visited in the past, but we have also been out to some schools new to the Roadshow. These are Leigh North Street, and Thorpe Greenways and Edward Francis. The show is very popular and schools need to book early if they want us to visit next year.

*Mr L Despres,  
Teacher of Biology*

**National Competitions**, in all three Sciences, have been a major focus of the Spring Term. These are aimed at GCSE



and Advanced Level students who wish to extend their talents; the papers ask questions which are often far beyond the material students encounter in class. In offering questions on a wider syllabus, it allows students to demonstrate their knowledge and to be suitably rewarded and publicly recognised through the award of medals and certificates. Very recently, Dr Martindill and Mr Adams have respectively organised for Year 10 and Year 11 pupils to undertake the Biology and Physics Challenges, while in the Sixth Form we have pursued the Society of Biology's Olympiad (organised by Mr Despres) and the Royal Society of

# SCIENCE DEPARTMENT SUMME

Chemistry's Olympiad (Mr Hill) and the University of Oxford Physics Olympiad (Mr Adams). These are competitions entered only by a small number of students nationally. While we are awaiting results for Chemistry and Physics, we are very pleased to announce that of the 22 students who were entered, two students (Alexander Norman and Matthew Solomons from Year 13) received a Gold Award in the Biology Olympiad, five students received a Silver Award (Joel Collins, Joseph Gamage, Emily Noone, Faez Ramjan and Katie Wagstaff from Year 13) and four students received a Bronze Award (Jonathan Hall, Will Hawkins, Michael Vose from Year 13 and, in Year 12, Thomas Mansfield). In addition, seven students achieved a Highly Commended Certificate, which was no mean achievement. Alex Norman has been invited to take part in Round 2, and we wish him every success. The Science Department is very pleased to see the involvement of so many of its students in these competitions and we look forward to entering once again next year.

Finally, **Mentoring**, provided by a Sixth Former for younger pupils, is an important part of our provision in Science. We would like to acknowledge the hard work of the many students in the Sixth who have given up their time in this way. If any further members of the Sixth Form would like to mentor a younger pupil, or assist in a classroom, please contact the relevant Head of Department.

*Dr D Prendergast,  
Head of Science*

## Flusurvey and CREST Awards

This year, three members of the Year 12 represented the School in the 'Flusurvey' pursuit, an online system for measuring influenza trends in the UK. In contrast to traditional surveillance methods, Flusurvey collects data directly from the general public, rather than via hospitals or GPs.



This is particularly important, because many people with flu fail to visit a doctor so do not feature in traditional flu surveillance. Since last October, Muntaha Naeem, Victoria Humphries, Michael Clements and Alistair Kelly-Gibbs have been working with the London School of Hygiene and Tropical Medicine providing statistical data on influenza trends. The data the students provided is very valuable as it is thought that, although influenza is notorious for proving fatal to older people, it is the younger generations who are the main carriers of the virus.

Mrs Barber has coordinated an extra-curricular activity for Year 8 pupils interested in how improved biological understanding is helping to combat the life-long health condition of diabetes. Two teams of pupils carried out research into the disorder, and why it is that over half a million UK citizens are living with the disease without knowing it. Frankie Evans, William Skeldon, Sarthak Das, Alan Sounthararajah, Ben Bave, Harinihan Gowrethasan and Aryan Karnik produced presentations which could be used to raise awareness of the condition, putting into simple language how the hormone insulin is produced by the pancreas, and how this allows glucose to enter cells. They also looked at dietary changes which could help control it. The two groups so impressed representatives from the British Science Association with the quality of their work that they were both awarded a Silver CREST Award.

*Mr R Easby,  
Science Technician*

## WHSB students correct Cambridge Physics answers

We are delighted that a large contingent of our Sixth Form students signed up for a new venture which could see them getting paid for revising Physics. Over the last two years, the Isaac Physics Project at the University of Cambridge has been funded by the Department of Education to offer support and activities in

Mathematics and Physics problem-solving. Their aim is to raise the standard of engagement and aspiration of the nation's budding physicists, engineers and mathematicians by exposing them to deeper and more mathematical ways of learning Physics, with support provided. While the website [www.isaacphysics.org](http://www.isaacphysics.org) contains much to stretch and challenge the young scientist, the Isaac Physics team was keen to provide resources to a wider variety of students and teachers. They have now published a book of Physics exercises to help students master the concepts they are introduced to in their A Level courses, with the website providing a facility for them to check their answers. However, in a project of this kind, there are bound to be errors remaining in the published resources (especially the answers). At the request of Professor Mark Warner, FRS, who leads the Isaac Physics Project, WHSB students have a head start on using this material before it is nationally released. The first student to find each error will be given a £25 voucher, courtesy of the Isaac Physics team. We have already been informed of two students' successful bids, and we hope that this profitable venture may spur more students on to try the questions in the hope of spotting further mistakes.



The School's early involvement in this project owes much to our Director of Sixth Form Studies, Dr Machacek, who has co-authored the book for the Isaac Physics Project. Already a published author, Dr Machacek and a former colleague were invited by Professor Warner to produce the material for the Isaac Project. We congratulate Dr Machacek on this superb publication and thank him for arranging early access to all the materials for WHSB students. This is a significant project which should do much to promote improvement in the quality of Physics education nationally.

*Headmaster*

# MUSIC AT WHSB MUSIC AT WHSB

## Summer Chamber Recital

**Thursday 14 May 2015**

Pupils, teachers, parents and friends are invited to join us at the Chamber Recital, which promises to showcase some of the School's finest soloists and ensembles. Some of our performers will include Marcus Kelly (Year 9) playing the trumpet, Peter O'Sullivan (Year 11) playing a fiendishly difficult piano duet on the piano with Mr Camillo, and Niamh Chauhan (Year 10) performing For Latin Lovers by Chappel on Violin. We are also delighted to welcome back the String Group and we are promised a number of modern-day 'classics'. We hope to see you at this Chamber Recital in what guarantees to be a spectacular evening.

Tickets are priced at £4 for adults and without charge for pupils.

*Mr A Camillo,  
Assistant Director of Music*

## Vivaldi by Candlelight at St Martin in the Fields

**Thursday 11 June 2015,  
7:30 pm**

You are warmly invited to join the Music Department on a trip to St Martin-in-the-Fields in what promises to be an exciting concert by the London Musical Arts Orchestra and Ensemble. This candlelit event will include two works by J.S Bach: His Double Violin Concerto and the famous Jesu, Joy of Man's Desiring which is sure to delight audience members. The concert will also feature Pachelbel's well known Canon in D, as well as the accompanying Gigue. The concert will not be too firmly rooted in the Baroque era, however, deviating to the Classical period with Mozart's Divertimento in D. The concert will finish with an exciting performance of Vivaldi's Four Seasons. This atmospheric concert is priced at £28 per student or parent,

which includes a coach trip going to the venue and back to School. There are only 33 tickets available for this event and we will operate on a first-come, first-served policy.

*Mr A Camillo,  
Assistant Director of Music*

## BBQ with the Big Band

**Friday 3 July 2015, 7.00pm**

Join the WHSB Big Band and other music groups in ushering in the summer with lively music and delicious food. The performers of this anticipated annual event will entertain the crowd with a selection of jazz and swing favourites, while hot dogs and burgers are prepared on the grill. After a long academic year of working and studying hard, pupils, parents and staff are encouraged to let off some steam by hitting the dance floor and enjoying themselves, in what is sure to be an unforgettable evening's entertainment.

This event is open to all, costing £16 for adults and £13 for pupils, including food. Tickets are £7 for adults and £4 for pupils excluding food.

*Mr T Derrick  
Director of Music*

## Summer Sinfonia Concert

**Wednesday 15 July 2015,  
7.30pm**

This concert will be the last opportunity for some senior members of the Westcliff Sinfonia to perform, having collectively devoted hundreds of hours of practice during their time in the ensemble. It is fitting then, that the final Sinfonia concert of the year will be as ambitious as ever, with a complex programme featuring music spanning the Baroque, Classical and Romantic eras.

The concert will begin with a performance of Handel's The Arrival of the Queen of Sheba, taken from his

oratorio, Solomon, and arranged by the Music Department for an expanded orchestra, allowing all members of the Sinfonia to play this famous work. The oratorio is based on the biblical tales of King Solomon the wise, with the excerpt performed opening the third act, depicting a state visit from the Queen of Sheba to Solomon's kingdom. The work has achieved fame outside of the context of the oratorio, and was used in the opening ceremony of the London Olympics in 2012.

The following piece is from a composer whose works are often played by the Sinfonia: Tales from the Vienna Woods was written by Johann Strauss II in order to recall the folk music created by the inhabitants of the titular woods. The dance style of the waltz, in who's popularising among the Viennese aristocracy the Strauss dynasty played no small part, originally came from the humble villages of the area, and here Strauss attempts to reconcile the cosmopolitan success of the style with its provincial origins.



The concluding half of the concert will feature the last of Haydn's London Symphonies, Number 104. The work was written and premiered in London and its success prompted the German composer to write in his diary: "The whole company was thoroughly pleased and so was I. I made 4000 golden pennies on this evening: such a thing is possible only in England." The symphony is an excellent example of Classical form, demonstrating the capacity Haydn had for negotiating mood and wit within the constraints and conventions of the period.

*Mr T Derrick  
Director of Music*

# SPORT AND THE HOUSE SYSTEM

## Review of the Spring Term

This year's Rugby has produced a mixed set of results. The Year 7 team is developing although few of the team members have played before. We encourage the pupils to continue to attend practices and further their interest and experiences by participating at a local rugby club outside of School. The Year 8 team has improved greatly across the year and they were emphatic winners of their Essex cup group and enjoyed a good quarter final against Fitzwimarc School. Unfortunately, they were defeated by a strong Davenant team in the semi-finals. The same team also excelled at the Essex Sevens tournament and they should be delighted with their runner-up result after an exhausting day of rugby. The Year 9 team has had some very good wins across the season, scoring some superb individual and team tries. Unfortunately, the team has suffered from lots of injuries to key players which has disrupted their momentum against stronger opposition and they lost at the Essex Cup quarter-final stage.

Year 10 had a successful start to the season enjoying several victories in the Natwest Cup. Throughout the season they have developed as a team and enjoyed a weekend tour to Leicester, where they beat Leicester Grammar School. Year 11 was knocked out of the Essex cup by a strong Robert Clack team. The 1st XV team has endured a rather turbulent season. They were beaten 5-3 in a very close game with SEEVIC in the Natwest Cup and consequently took part in the Vase competition. They then played some excellent rugby to progress to the last sixteen in the region, where they defeated a very strong Langley Park side from Kent. They have progressed into the Essex cup quarter-final where a rematch with SEEVIC awaits them. The team has progressed across the season and has grown into a mature group of young sportsmen. In Football, the First XI has been rather inconsistent, exiting both cups early and losing some fixtures in the league. They have, however, recovered their position and, with strong performance at the end of the season, they still (at the time of writing) harbour faint hopes of making the league play-offs. The Second XI has been slightly more impressive and lie second in their league. Year 7 look forward to the recommencement of their friendly fixtures, after a very quiet winter. Years 8, 9, 10 and 11 have all progressed to the semi-finals of their respective Borough Cup competitions. Year 10 remain our last hope in the South-East Essex Cup. The Year 9 team were incredibly unlucky to lose 3-2, in extra time, to two-time Essex Cup champions Southend High School for Boys in the quarter-final of the South-East Cup. Overall, the School has good reason for optimism, with six different teams still in the running as the cup competitions reach their conclusions.

Year	Rugby					Football					Basketball		
	P	W	D	L	PD	P	W	D	L	GD	P	W	L
<b>7</b>	5	1		4	-15	7	1		6	-21	7	4	3
<b>8</b>	16	11	1	4	+243	5	2		3	+2	7	2	5
<b>9</b>	6	4		2	+97	6	4		2	+15	6	2	4
<b>10</b>	8	3	1	4	-96	6	4		2	0	7	3	4
<b>11</b>	3	2		1	-29	4	2	1	1	+2	5	3	2
<b>1st team</b>	11	7		4	+246	16	8	2	6	+17	4	2	2
<b>2nd team</b>						13	7	3	3	+6			
<b>Total</b>	<b>49</b>	<b>28</b>	<b>2</b>	<b>19</b>		<b>57</b>	<b>28</b>	<b>6</b>	<b>23</b>		<b>36</b>	<b>16</b>	<b>20</b>

We look forward to the return of both Cricket and Athletics in the Summer Term. In Athletics, the School will once again, enter the National Track & Field Cup competition and will endeavour to reach the National Finals with both the Year 8 and Year 10 teams. In Cricket, we will compete in the Essex Cup competition in all age groups and the Year 8 team will represent Essex in the Banbury National Cup after being crowned County Champions last season.

Mr D Phillips  
Head of Physical Education

# HOUSE SYSTEM SPORT AND TH

## Pupil Leadership Opportunities at WHSB

This year, the School has undertaken a review of all the current schemes on offer in which pupils can exhibit and develop leadership skills and qualities. WHSB offers many ways in which the pupils can become involved in 'the process of social influence, which maximises the efforts of others, towards the achievement of a goal'. Working under this definition, the School seeks to develop vital life skills such as communication and collaboration in order to facilitate this process. Indeed many of these qualities are inextricably linked with our own Learner Profile, with both seeking to augment the other.

As previously mentioned, the opportunities are many and

diverse. The ways in which pupils are able to assume leadership roles include (but are not limited to): Sport; Music; CCF; Duke of Edinburgh; Drama; Sixth Form Activities; the House System and numerous other schemes such as School and Subject Prefects.

The next steps in developing the leadership agenda of WHSB is to centralise the regulation of all of these activities and, more importantly, to develop our approach to promoting and publicising these schemes in order to increase the awareness, and subsequent involvement, of the pupils.

*Mr L Groves, Head of Kestrel House*

## Visit to St George's Park – National Football Centre of Excellence

On Friday 13 March, a group of 23 Advanced Level Physical Education students spent two days visiting St George's Park, the National Football Centre and experienced life as an elite performer. St George's Park is set in 330 acres of land, is home to 24 National teams and is also the Football Association learning hub.

The trip was designed to enhance students' knowledge of Sports Science and its application in the elite sporting environment. Students undertook a range of high quality testing in the Perform Sports Science Department and they examined ways to improve their own sporting performance. They carried out Altitude Chamber training, VO2max testing, Firstbeat heart rate monitoring and Wingate power testing in a practical manner. Students also looked at refining their performance through the analysis of the biomechanics of their sprinting technique, examined the use of deep water running suits and undertook a full functional movement analysis to improve mobility, stability and flexibility. Students completed their experience on the Saturday afternoon with a hydrotherapy session involving the use of contrast baths to aid recovery.

Students also dined out in Burton on the Friday evening and enjoyed the array of facilities with an overnight stay in the on-site Hilton Hotel including the spa and gym, gaining the benefit from the luxurious surrounding this provides. This proved to be a memorable trip and a hugely enriching experience for all the students involved.

*Mr D Phillips, Head of Physical Education*

## Dads-and-Lads House Golf Event

This year, we are changing the format of the House Golf Event to encourage more pupils to get involved and allow a little parent participation. The event will take place at Garons Park Golf Complex on Friday 12 June. Tee-off times will be from 4.30pm.

There will be two competitions, played over nine holes which require a pupil at the School and an adult known to them, but even though the headline reads Dads and Lads, it could just as easily be Mums and Sons, Granddads and Grandsons, Uncles and Nephews, and so forth.

### Golfer and Putter Pairs

This competition will require one golfer, who will take all shots onto the green, and a non-golfer 'Putter' taking all putts. This is a great opportunity to involve non-golfers, as everyone can putt!

### Texas Scramble Pairs

This competition will be for pairs of golfers who make their

way around the course, but only using the better ball. Both players take a turn from the better ball lie.

Both competitions will be determined using the Stableford Points system, with the lower golfer's handicap being used to calculate the points.

Members of the Old Westcliffian Association are also welcome to join the event and represent their House. To take part, they must have a School-aged player in their pair, but this does not need to be a member of the School.

The cost of this event is £24 per pair and will include tea/coffee/squash and biscuits at the end of the round. Please use the Westcliff Diary reply form to indicate your participation. I look forward to seeing you there.

*Miss K Rankin  
Assistant Head: Director of Lower School Studies*

# THE HOUSE SYSTEM SPORT AND

## Year 7 Charity Cake Sale

The youngest members of the WHSB community have been fundraising for their annual Charity Week to raise money for the main school charities – The Aaron Lewis Foundation and Macmillan Cancer Support, as well as the Mind Charity, which was selected by Year 7.

The Year 7 boys started their week in March with a collective Sponsored Silence and went on to delight the entire School with an impressive array of homemade cakes and bakes every day for a week. The total funds raised have exceeded £3,000 and this reflects the generosity of the pupils and parents at WHSB.

Each year, the Charity Week Committee select a national charity and a more local beneficiary, close to the heart of WHSB, as the recipients of the School's generosity. Whilst most people are aware of the fantastic work Macmillan does in supporting cancer patients and their families, many may not have heard of the Aaron Lewis Foundation. The Aaron Lewis Foundation is a charity set up in memory of Lieutenant

Aaron Lewis and is committed to supporting local and military charities through sporting & social endeavours. On 15 December 2008, Lieutenant Aaron Lewis, of 29 Commando Regiment Royal Artillery, as well as WHSB Old Boy, was killed in action in Afghanistan; he was just 26 and on his first operational deployment.



A full review of Charity Week 2015 will be included within the Autumn edition of the Westcliff Diary.

*Miss K Rankin*  
Assistant Head: Director of Lower School Studies



## The House System: Spring Term Review

During the Spring Term, three major House sporting events have taken place, Basketball, Rowing and Rugby Sevens.

The House Basketball competition was very close. Merlin House were placed 4th overall due, in part, to its failure to field teams in either Year 10 or 11. Osprey House placed was 3rd and should be congratulated on an impressive win in the Year 8 competition. Harrier House, who won both the Year 7 and 11 competitions, narrowly missed out on first place which went to Kestrel House who won the Year 9, 10 and Sixth Form competitions.

This year's House Rowing event was completed using a different format. To increase participation and make for a more interesting event, each Year group had thirty minutes to row as far as they could. During this time the teams could change rowers as often as they wished to maintain a

constant pace. A cumulative distance was then calculated. After all year groups had been given the chance to compete, the distances ranged from between 18,430 meters and 23,850 meters. The winning House on this occasion was Harrier House.

There are many more events coming up during the Summer Term, including House Drama, Badminton, Cricket, Table Tennis, Geography, History and, of course, our annual House Sports Day. Pupils are reminded that their House collects points for participation and therefore if they have not taken part in an event this year they should speak to their Year representative to find out what events will be taking place in the future.

*Mr D Shoemith*  
House Coordinator

# SUMMER TERM 2015 CALENDAR

## SUMMER TERM

Mon 13 Apr	<b>Staff Development Day</b>
Tues 14 Apr	<b>Summer Term begins, 8.45am</b>
Thurs 16 Apr	School Production: <i>Murder is Announced</i> , 7.30pm
Fri 17 Apr	School Production: <i>Murder is Announced</i> , 7.30pm
Fri 17–Sun 19 Apr	Silver DoE Practice Expedition Weekend, South Downs
Mon 20 Apr	Year 8 Parents' Evening, 4.00pm–6.00pm
Thurs 23 Apr	Black Death Evening Lecture, 7.00pm
Friday 24 Apr	Issue of Year 7 Reports
Thurs 30 Apr	Year 8 Junior Mathematics Challenge
Thurs 30 Apr	Marc Morris speaks to Year 7 on Castles
Thurs 30 Apr	Dr Marc Morris Lecture, <i>Magna Carta</i> , 7.00pm
Mon 4 May	<b>May Bank Holiday</b>
Sat 9 & Sun 10 May	Bronze DoE Practice Weekend, Danbury
Thurs 14 May	Summer Chamber Recital, 7.30pm.
Sat 23–Sun 31 May	<b>Half Term</b>
Mon 1–Fri 5 Jun	Year 7-10 Internal School Examinations
Thurs 4 Jun	Year 7 Geography Trip to Southend
Thurs 11 Jun	Music Trip: Vivaldi by Candlelight, departs 5.00pm
Wed 17 Jun	Year 12 Mathematical Architecture Workshop
Sat 20 Jun	Day in Toy Making
Tues 23 Jun	<b>School finishes at 12.50pm.</b> Open Evening for Year 5 Pupils, 6.00pm – 8.45pm

## SUMMER TERM

Wed 24 Jun	Open Evening for Year 5 Pupils, 6.00pm – 8.45pm
Thurs 25 & Fri 26 Jun	Sixth Form Induction
Thurs 25 Jun	Year 12 Higher Education Evening, 7.30pm.
Fri 26 Jun	CCF Passing Out Parade & Dinner
Sat 27 Jun–Fri 3 Jul	Year 12 Geology Trip to the Isle of Arran
Wed 1–Sat 4 Jul	Silver DoE Assessment, Peak District
Wed 1 Jul	Year 12 Higher Education SuperFair in Chelmsford, 9.00am – 3.30pm
Thurs 2 Jul	New Year 7 Parents' Evening, 7.00pm
Fri 3 Jul	New Year 7 Pupils' Induction Day, 9.00am – 3.20pm BBQ with the Big Band, 7.00pm, Main Hall
Sat 4–Sat 11 Jul	CCF Annual Summer Camp
Mon 6–Wed 8 Jul	Year 12 Chemists Visit to Bristol University
Tues 7 Jul	Sports Day
Wed 8 Jul	Art, Craft & Design Evening, 7.30pm
Thur 9 Jul	Issue of Year 7 and Year 9 Reports
Fri 10 Jul	<b>Enrichment Day</b>
Fri 10–Mon 13 Jul	Year 9 Visit to WWI Battlefields, France & Belgium
Sunday 12 Jul	Race for Life 5K, Hylands Park
Mon 13–Sat 18 Jul	Biology Field Trip to Orierton
Wed 15 Jul	Summer Sinfonia Concert, 7.30pm, Main Hall
Fri 17 Jul	Issue of Year 8 and Year 10 Reports
Wed 22 Jul	<b>Summer Term ends, 2.45pm</b>