

LANGTON NEWS

March 2009

Issue No. 142

Editor: Susan Begg

Peter Hatfield Young Scientist of the Year 2009



$m \rightarrow 0$
 $\frac{z}{l} = 2\sin\theta$
 $0 \leq \frac{z}{l} \leq 2$
 $\sigma = \frac{1}{\sqrt{3}} \approx 0.577$
 $\frac{z}{l} = \frac{2}{3} + \frac{2}{3}\cos(2\sin\phi + \cos\phi) + \sin\phi$
 $\frac{2}{3} \leq \frac{z}{l} \leq \frac{2}{3}\sqrt{3}$
 $\mu = 1$
 $\sigma = \sqrt{\frac{12(\pi-4)}{27\pi} - 1} \approx 0.102$

$\mu = 1$
 $\sigma^2 = \frac{4(8m^2 + 4m\pi + \pi^2)}{3(m+1)^2\pi^2} - 1$
 where
 $h = mr$

$z = \frac{4V}{A}$
 $l = \frac{V}{S}$

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 $0 \leq \frac{z}{l} \leq 2$
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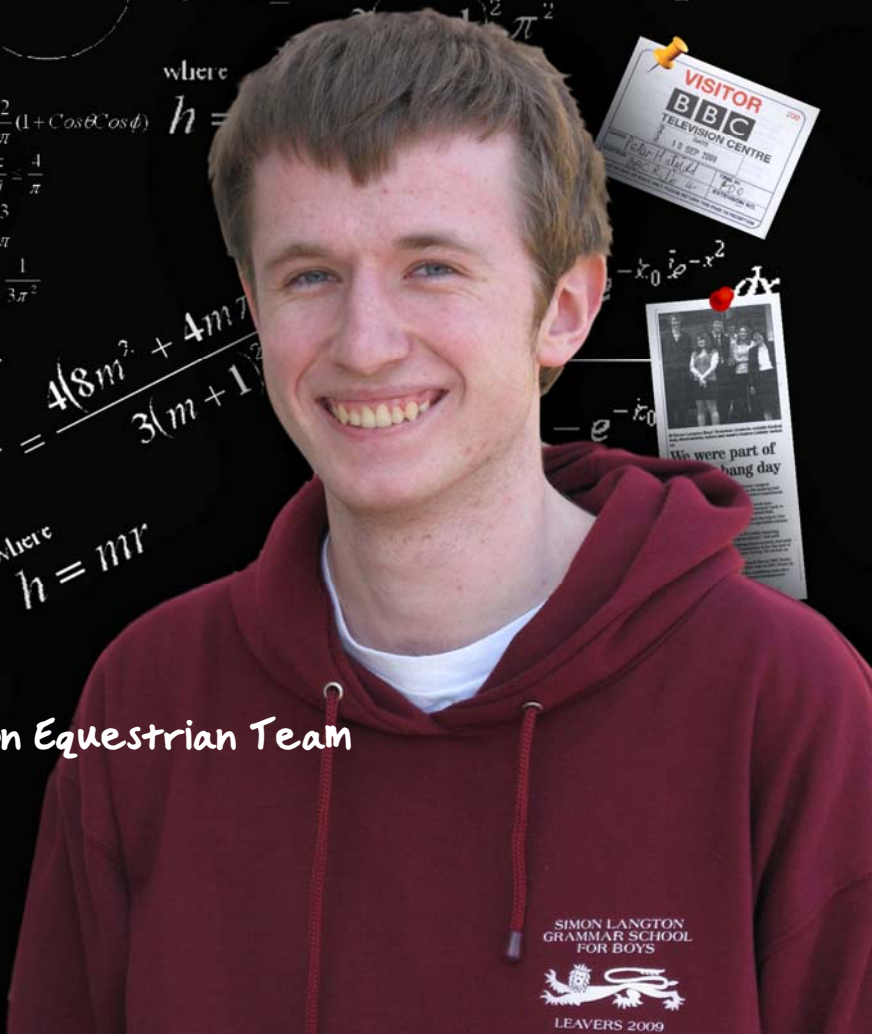
$\mu = 1$
 $\sigma^2 = \frac{4(8m^2 + 4m\pi + \pi^2)}{3(m+1)^2\pi^2} - 1$
 where
 $h = mr$

$\frac{z}{l} = \frac{2}{\pi}(1 + \cos\theta\cos\phi)$
 $\frac{z}{l} = \frac{2}{\pi} - \frac{4}{\pi}$
 $\mu = \frac{3}{\pi}$
 $\sigma^2 = \frac{1}{3\pi^2}$

$\mu = 1$
 $\sigma^2 = \frac{4(8m^2 + 4m\pi + \pi^2)}{3(m+1)^2\pi^2} - 1$
 where
 $h = mr$

VISITOR
BBC
 TELEVISION CENTRE
 13 SEP 2009
 Peter Hatfield
 Langton Grammar School
 For Boys

We were part of
 ... hang day



Also in this edition

Red Nose Day Fun
WIN FREE LUNCHES!

Riding High with the Langton Equestrian Team

Mr Scarlett goes nuts

Star Centre News

Trips, Debates, Football

And ... MUCH MUCH MORE!

SIMON LANGTON
GRAMMAR SCHOOL
FOR BOYS



LEAVERS 2009

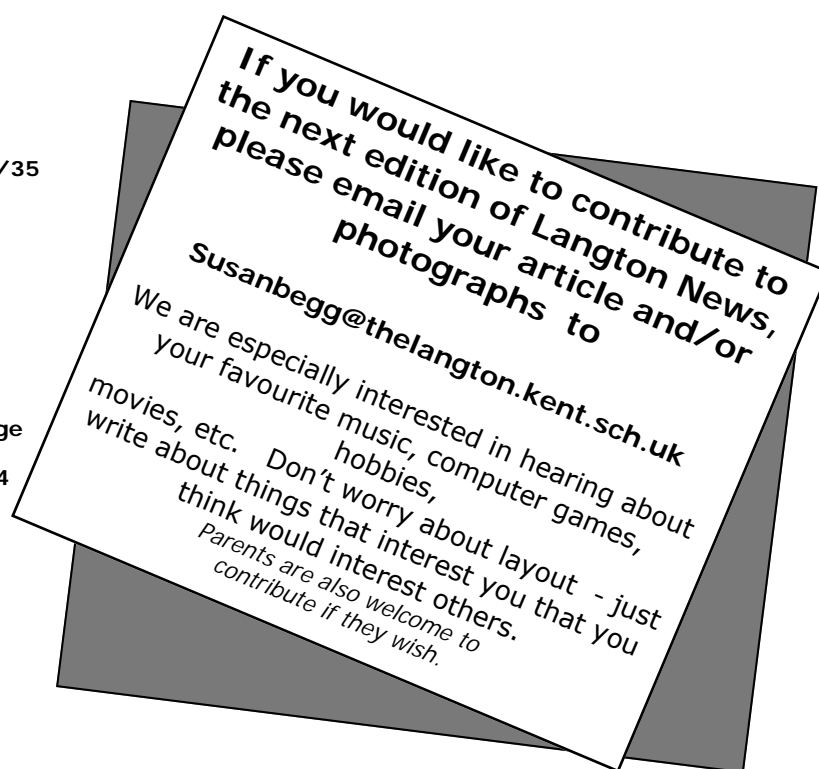
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FROM THE HEAD

During recent months we have gradually introduced several innovations to the subjects studied at the Langton and to the styles of teaching and learning we use. These changes to the Langton Curriculum reflect longstanding concerns over the appropriateness and relevance of the National Curriculum and examination syllabuses, as well as reservations over the prevalent approach to teaching often found in schools.

There is a widespread concern about the usefulness of the curriculum offered in schools and at the Langton we have been particularly worried that the available syllabuses do not adequately prepare our students for academic study at university and for their chosen careers.

Linked to these concerns about the curriculum there is a debate about the usefulness of the increasing emphasis on target setting and league tables which now dominates the education agenda. Whilst there may be some value to this emphasis, it is increasingly apparent that the prevalent culture in schools has become so dominated by attention to league tables that teachers are

spending more and more of their time teaching pupils how to take tests and instructing them on how to pass exams. Whilst it may be the case that more young people achieve examination successes in schools, it also seems that this has been at the cost of students becoming engaged in rich, valuable and worthwhile learning experiences which will have a permanent impact on their future personal and professional lives.

The formal review of the Langton curriculum began a little over a year ago and we all agreed that our curriculum should not be based around considerations about what has to be taught to meet examination targets or to cover the National Curriculum. Rather, we considered those attributes we want to see in our students by the time they leave school. We all agreed that the qualities of altruism, creativity, integrity, respect, reflection, resourcefulness, resilience, independence and collaboration are those which parents, schools and society in general should most value for our young people and those which we should seek to promote.

Our review led to a consideration of how best to construct our curriculum so that we could address these qualities, whilst being mindful that following published syllabuses and achieving examination successes are still a necessary part of the education system and serve as the principal measure enabling students to move on to the next stage of their education.

We have largely retained the subjects traditionally taught on the curriculum, but offer a range of approaches to learning. In Year 7, for example, boys regularly learn in three-hour lessons (in science, drama, history and

geography) and have completed an extended project embracing English, citizenship, history, geography and RE. These approaches to learning have taken our students beyond the traditional curriculum and have allowed them to achieve a much greater depth in their understanding of issues and ideas than is normally the case in first years of secondary school. Our aim has been to enrich and enhance the boys' learning and we have deliberately avoided a policy of accelerating students through the early years of secondary school simply to allow them to begin GCSEs early. Our first evaluations of this new work in Year 7 have been very positive and we are now considering how such enhanced learning can be extended into years 8 and 9.

In Years 10 and 11 (Key Stage Four) we have also been concerned about the academic diet offered by GCSEs which can often be stale and uninspiring. Furthermore, a system designed for youngsters of the entire academic range of 16 year-olds often fails to challenge or motivate the most able. An even greater concern has been our desire to ensure that our students encounter and consider a range of fundamental ideas which we believe should be at the foundation of any learned and thoughtful young adult moving on to the Sixth Form and university. A year ago we introduced a History of Ideas course to our current Year 11 students. The course is an ambitious one, based on university style lectures and covering complex and difficult topics; the Renaissance, the History of Modern Art, The Enlightenment, The Development of Modern Science, The Scientific Revolutions of Newton and Einstein, Theoretical Physics

and the theories of Marx, Freud and Jung. There are, of course, no qualifications available for GCSE students in these topics and they cannot be found on the National Curriculum but the History of Ideas has emerged as one of the most successful innovations in the school and our students seem not only to have enjoyed the course, but have gained a great deal in terms of appreciating and understanding a range of complex and fundamental ideas and have begun to develop the kind of academic vocabulary that characterises the better under-graduate.

Significant changes have also taken place in the Sixth Form, especially in the science department. We have adopted a policy whereby we spend 10-20% of Sixth Form lesson time going outside and beyond the content of published

syllabuses, giving students an authentic insight into the content and styles of learning they are likely to encounter at university, as well as providing an idea of the relevance of subjects in their lives beyond university. In the science department we seek to model for our students the activities and working practices of academic and research scientists; the work on astronomy and cosmic rays in the physics department (the Star Centre) and the MBP² project in biology provide very clear examples of how the experience of real rather than artificial science can engage students and bring about dramatic results in the quality of their work.

Over the next few months we will evaluate our curriculum fully and consider whether we should implement any further developments. Already we have evidence which suggests

our approach to the curriculum works, as an increasing proportion of our students have gained places at the country's better universities and comments from university admissions tutors suggest that Langton students often have a critical edge to their thinking which makes them stand out from other students with similar academic qualifications.

It is of greatest importance that our students enjoy their time at the Langton and acquire the skills and attributes which will bring them future success. Whilst such qualities are not easy to measure we will consider these in our evaluation.

I would value any contributions from parents and students to our evaluation.

Dr Matthew Baxter

In Loving Memory of Daniel Bryson

The death of year 12 student Daniel Bryson after a short illness has left a deep sense of sadness for all those linked to the school.



Dan's funeral was held at the Langton, for it was here where he was content, where he found his friends and where we saw him grow into the impressive young man who made his family and all at the school proud to know him.

Dan was an example of the school's greatest asset, a typical Langton boy; a youngster who had grown into an engaging, confident and cheerful young man with an irreverent sense of humour and blessed with a comfortable and easy manner with adults and peers alike.

The past few weeks have been hard for Dan's closest friends, the group of boys he'd grown up with David Wood, Adam Woolcott and Michael Mansfield as well as his girlfriend Tori. I have been touched by the strength of feeling from within the school and particularly from Dan's classmates who have been a great source of strength to those who have found the loss of Dan most hard to bear.

On learning of Dan's death all those connected with the Langton felt their hearts bleed and, as a parent, I know I represent all Langton parents in expressing our sympathy and support for Dan's mother and father and for his younger sister Megan.

Dragon Horse Author tells Students “ It’s all about PASSION, PLANNING AND PERSEVERANCE”

On Friday 13th March, author Peter Ward was in School to talk about his book *Dragon Horse*. He gave 2 sessions in the Library to a packed audience of boys from years 7 to 10.

Dragon Horse was reviewed in the magazine 'Books For Keeps' and described as "Quite an extraordinary debut novel: it may well be considered one of the most remarkable books of 2008". It is an epic fantasy about two brothers in the Ancient Chinese Empire involving a choice of good and evil. At the heart of the book lies the unravelling of a secret. He explained how he had deliberately set out to write a big book and after reading the Prologue which sets the scene, spoke about what had inspired him.

The first thing was the perception of dragons and the contrast between the Western idea of dragons as scary, fire-breathing monsters and the Chinese idea of a divine mythical creature which brings abundance, prosperity and good fortune and which is beautiful, friendly, wise and capable of influencing our lives. The dramatic possibilities of this contrast and the 'What If' idea that they could be changed are what excited him and led him to combine this with the legend of the dragon horse.

Secondly, the setting of the story is something for which he has long held a particular fasci-



nation. The Silk Road was the ancient trading route from China to the Eastern Mediterranean, and was over 5000 miles long. In 800 AD during the T'ang dynasty, while Britain was in the Dark Ages, China had an advanced culture. It was into this universe that he placed his story of Rokshan and Lushan and their quest.

The last part of Peter Ward's talk was about creative writing and here he spoke about the three P's:- 1) Passion – the need to believe passionately in what you are writing about so that others will want to read it, 2) Planning – keeping to the idea of the linear narrative of a beginning, middle and end – and to save hours of wasted effort! 3) Perseverance – especially when the publisher scraps something or requires you to re-write something! Each session finished with questions. Here we learnt that the original title for the book was not Dragon Horse but Houses of the Winds, that it has already sold over 7000 copies, been translated into German, Spanish and Italian and that there will be a sequel!



Eclipse is here!

On 23rd March the Library started using a new system for issuing books. Eclipse is a system especially designed for Secondary Schools and should be a great improvement on the current system.

In order to make the transfer to Eclipse as smooth as possible, **all** books currently on loan should be returned by the end of term on **3rd April**.

This includes all books which are overdue and consequently there will be a fines amnesty from now until the end of term. Books may be borrowed for the holidays but must be issued on Eclipse once all loans on the old system have been cleared. Book searches can also be carried out on Search Star which will be available on the Library computers.

Reading Records

As part of this year's celebrations for World Book Day boys from Years 7 – 11 were asked to think about the books they have read and come up with a list of records – the longest, the shortest, the funniest, the saddest, the most unusual and the one they have read most often.

Harry Potter and the Order of the Phoenix by J.K. Rowling was clearly the most popular long book with 96 votes, although J.R.R. Tolkien's *Lord of the Rings* (44) and *Brisingr* by Christopher Paolini (23) were also favourites.

The shortest books were those read at primary school or before and included *Mr Men* (24) and *The Very Hungry Caterpillar* (20) but the winner was **Biff and Chip** with 30 votes.

The funniest was ***The Secret Diary of Adrian Mole Aged 13 ¾*** by Sue Townsend (34) along with *The World According To Jeremy Clarkson* (18) and *Captain Underpants* (15).

The saddest books were those set during the World Wars - *The Boy in the Striped Pyjamas* by John Boyne (20), *Goodnight Mr Tom* by Michelle Magorian (23) and Michael Morpurgo's First World War story *Private Peaceful* (49).

The most unusual book was *The Curious Incident of the Dog in the NightTime* by Mark Haddon (54) with *Captain Underpants* (11) and *The Series of Unfortunate Events* (9), *Mortal Engines* (8) and *Artemis Fowl* (8)

Many boys said they did not read a book more than once but the favourites amongst those who do like to enjoy a book a second time were *Cherub: The Recruit* by Robert Muchamore (31), *Holes* by Louis Sachar (9) and *Eragon* by Christopher Paolini (9).



Newspapers for Schools

The school is now registered with Newspapers for Schools. This means that we have a licence to photocopy newspaper articles as well as access to online articles on www.newslibrary.newspapersforschools.co.uk. Staff can set up individual accounts and students can share a single account.

Boxtops for Books Tokens

The Library is still collecting the tokens from Nestles Cereals which can be exchanged for free books and the deadline for this year is fast approaching. Last year we were able to get a set of Dorling Kindersley books for the Library – so please remember to bring in your tokens to School as soon as possible

BURGESS LEAD THE WAY AT PLAYTIME

By Mrs P Walters

It was fun. It was entertaining. We laughed. Merriment abounded but since when has Friday afternoon during term time meant to be fun? Do parents really expect their sons to be laughing and cheering during lessons? Of course they don't – but Mrs Moore insists on everyone enjoying themselves during the House Drama Competition.

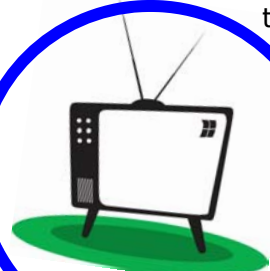


MACKENZIE

The Importance of Polar Bear Repellent .

Director: Izzie Gilbert. Cast: Ben Walker, George Needham, William Thomas-Sam, Bhaven Mistry, Will Rajan, Casper Latham, George Flatman, Adam Fraser, Jack Mason, Charlie Knights.

Mackenzie House decided to challenge the audience which started with Robots and a hint of *Terminator* but somehow became an anarchic farce that amused the audience, or at least those who like to see people rolling around the stage or throwing sweets at the audience or just a bit of mayhem. There was a strong sense of good actors desperate for a more achievable script.



HARDMAN

Television Time

Directors: Emily Spedding, Patti Porteous, Felix Wenn

Cast: Greg brown, Matty Guarino, Josh Moore, Jimmy Howe, Dom Coulson, Byrne Mayo, Daniel Creaser, Michael Doswell, Jordan Bennett, Tarkan Diamont, Yazad Sethna, Shivam Sharda, Elliot Cutts

This had a very lively script; it included *Family Fortunes*, *Ready Steady Cook*, *Big Brother*, *Bear Grills*, actors who really knew their lines, technology intelligently used and thus it was very well-received by the enthusiastic audience.



SHARP

The Curse of the iPods (*with thanks to the Pirates of the Caribbean*) Directors: Bethany Neame, Will Morish, Danny Wood, Charlie Hawley. Cast: Ton Lunn, Theo Fagan, Oliver Braddy, Robin Prestley, Joe Noble, Michael Williams, Josh Turner

Oliver Braddy and Joe Noble had a chance to lead a very strong cast on the Isle of Demerara. The opening sequence hollered at the audience, 'WATCH THIS!' And we did – the costumes, the over-acting, the entirely unbelievable plot and the sheer enthusiasm of it all, accompanied by energetic music and sound effects.



BURGESS

Snow White and the Vertically Challenged People.

Director: Tim Benfield. Assistant Directors: Illyaz Hajat, Ashley Kemball-Cook, Jack Summerhayes. Cast: Louis Sharrock, Charlie Marriott, Dan

Sherrington, Sam Kittle, Jordan Edmunds, George Benson, John Wilson, Dan Judge, Oliver Neil, Tom Gunn, Sam Greenstreet, Rory Welsh, Stanley Allen.

This was exactly what is required in house drama – entertainment! The script (except for the cheap jibe about poor, misunderstood Mrs Watlers) was excellent, the dwarves were very funny and Boris was LOL! Special mention must be made of John Wilson's Dopey and the fact that Snow White (Louis Sharrock) can't mime and doesn't suit a dress. The audience roared and applauded – it was like being in a theatre watching a low-class panto – because we all thought it was a winner – and it was.

YOUNG SCIENTIST OF THE YEAR

Below: Peter poses for an official photograph with his new trophy



Year 13 student Peter Hatfield has won the Young Scientist of the Year title in a competition which culminated in his presentation at the Queen Elizabeth II Exhibition Centre, Westminster. Peter impressed the judges with his design for a cosmic ray detector, work which was said to stand head and shoulders above the competition.

Peter's work on LUCID, the Langton Ultimate Cosmic Ray Detector, formed the basis of his entry into the competition which was devised by the Department for Innovation, Universities and Skills. Coordinated by the British Science Association the competition set out to raise the profile of science and engineering in the UK and the panel of judges included Colin Blakemore, professor of neuroscience at Oxford and Warwick universities and Trevor Bayliss, the inventor of the wind-up radio. Peter received a magnificent glass and steel trophy from Science and Innovation Minister, Lord Drayson, who said 'It is extremely encouraging to see the number of entrants that have taken part in this competition. I've seen some really exciting and innovative projects and

really want to congratulate Peter on his success. It is great to see a young scientist inspired to experiment with ideas and apply science and technology to real life scenarios.

'I really want to bust the myth that science is boring and geeky – it is far from it. This competition has highlighted the reality of science today, it's exciting, fascinating and shapes all our lives. Young scientists today will shape our future tomorrow – which is why competitions like this are so important to celebrate young British talent.'

In a video link to the ceremony Prime Minister offered his personal congratulations and said he was looking forward to meeting Peter in the future as he was certain that he would go on to do great things in the world of science.

As well as the trophy Peter also won:-

- a personal cash prize of £5000
- a trophy
- a framed certificate
- a netbook computer
- a once in a lifetime trip to NASA Space Centers in Florida and Houston.

Peter will also have the opportunity to represent UK youth science and engineering at events and visits in the UK and abroad; including a visit to the cutting-edge research facility, Diamond Light Source.

Following the award ceremony Peter and his fellow competitors had tea at 10 Downing Street before they attended a private party at the Ministry of Sound nightclub in London.

As if all this wasn't enough, a short while after he had come back down to earth, Peter received an email from the Director of Development of the Royal Institution of Great Britain offering her personal congratulations on his achievement. She said that she had heard Peter on the Radio 4 'Today' programme saying that his initial inspiration for science had come from watching the Royal Institution Christmas lectures and that she had 'choked on her cereal in excitement'. She went on to say that the Royal Institution would be marking Peter's association with them by

awarding him an Honorary Fellowship to be conferred on him by Baroness Greenfield after a private tour of the Institute.

Peter's Projects

Peter has found a way of working out the shape of flares on distant stars by looking at their colour. Flares are explosions in a star's atmosphere, many times more powerful than a nuclear bomb. When they occur on the Sun, the Earth may be bombarded by cosmic rays, which can interfere with electronics and prove dangerous to astronauts. Peter's second project, a satellite experiment will study, and perhaps even help to predict, the intensity of these bombardments.

What's next for Peter? He has been offered a place at Trinity College, Cambridge to study mathematics and his ambition is to work as a researcher at CERN in Geneva. Langton News wouldn't be surprised if he collected a couple of Nobel Prizes along the way!



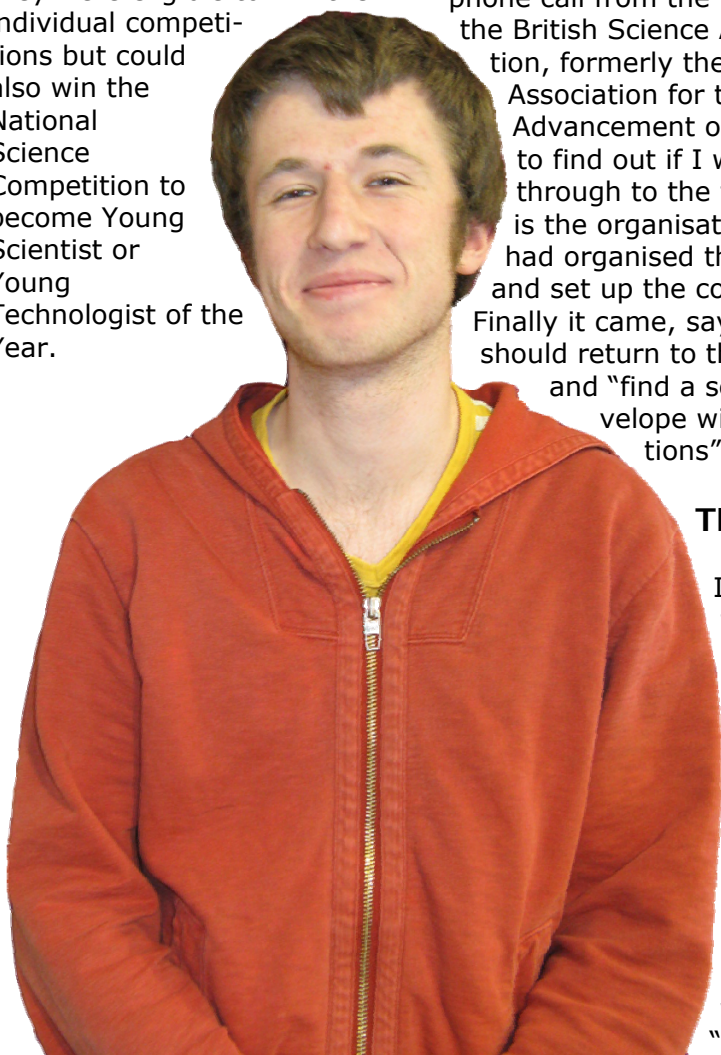
Above: Peter with the Minister of Science and Innovation, Lord Dryson, outside No. 10 Downing Street

The Big Bang Fair

by Peter Hatfield

Going up to London on Tuesday evening I had little idea of what was going to happen over the next intense three days! I set out hoping to enjoy myself but didn't dream for one minute about actually winning!

The event, the Big Bang Fair, was designed to be an overarching event for all youth science. It was held in the massive QEII conference centre, right opposite the Houses of Parliament and Westminster Abbey. There were 200 other competitors there, 30 of who were direct entrants like myself who had been picked out of 140 people who had applied for the competition. The other 170 were finalists from other competitions like CREST and the Young Engineers club, so they were eligible to win their individual competitions but could also win the National Science Competition to become Young Scientist or Young Technologist of the Year.



Wednesday

The first morning I came in early for an appearance on GMTV, and then started setting up my display and meeting some of the other competitors. There was a series of judging over the day with various senior scientists coming round the stalls and talking to you for about half an hour. There were also specialists who weren't judges (but knew a lot about their subjects) coming round and putting you through your paces! Then later in the afternoon the "mystery guest" turned out to be the Duke of York, Prince Andrew, who gave a short speech and moved around the exhibition hall.

Mrs Parker and I then spent a nervous evening waiting for a phone call from the Director of the British Science Association, formerly the British Association for the Advancement of Science, to find out if I was through to the finals. This is the organisation that had organised the event and set up the competition. Finally it came, saying that I should return to the hotel and "find a sealed envelope with instructions"!

Thursday

I then had to go in early again the next morning and move all my display to the top floor for the final interview with the "celebrity

panel of judges", Colin Blake-more, Marcus du Sautoy, Kate Bellingham, Vivienne Parry and Jim Al-Khalili, all of whom are famous scientists.

The interview was more focused around the "ambassadorial role" that the position would entail, unlike the earlier interviews, which had focused on my project, the work with the Plasma Physics and LUCID. Questions were like "Should scientists be involved in politics?" and "Would it have been better that the general public were unaware of the Large Hadron Collider or the actual scenario that they were aware but thought it extremely dangerous?".

By now extremely tired, I spent a short time recovering in a special lounge at the top of the Centre, looking out on a spectacular view. Mrs Parker and I then had a dazed wander around the rest of the event, each display of which really deserved a much more proper look. Just to pick out a few, we met up with the Faulkes Telescope people, met Oscar the robot (who some of you might know from the Kent Festival of Science) and also managed to get a free seismograph for the school!

Later that afternoon the other 5 finalists and myself went to Downing Street for tea. We met Lord Drayson, the science minister, and Mrs Darling, wife of Alistair Darling. We got a tour around where cabinet meetings are held and our cockney guide let us in on a few inside stories of the house, including the secret passageway upstairs!

After that, we headed back to the conference centre for the awards ceremony, presented

by Kate Humble, best known for presenting "Tomorrows' World". I tensely waited while all the CREST, Young Engineer, QinetiQ and Faraday awards were presented, leaving the six of us right to the end. When they announced that I had won, I think I just stopped breathing, it was so unbelievable! I can't remember anything of the few minutes after that, but I must have managed to get up onto the stage and accept my trophy from Lord Drayson.

Then we all headed to the buses to go to the Ministry of Sound, a top nightclub in London. They had fire sticks, glow sticks, street dancing and drinks in test tube shots! Mrs Parker especially got down to some pretty good raving! It was an incredible end to an incredible day!

Friday

Now the business really started! Up at 5.30 to meet the Jaguar the BBC had sent for me to appear on the Today Program on Radio 4 (I'm starting to get quite familiar with their layout now!). Then back to the conference centre only to receive half a dozen phone calls for interviews with various websites, newspapers and radio stations.

At lunchtime I was live again on BBC Radio Kent. Then spent some time meeting and greeting the top organisers of the event, and posing for endless photos. We finally finished at about 3 and had a well earned rest! Carrying about 10 large bags between the two of us we made our way back to the train station and found that there were no seats so everything had to go on the floor! Mentally and physically exhausted, I practically fell asleep lying on the floor of the train in my suit, but we made it back with (almost) no breakages.

One final interview with Radio

5 live over the phone at home and I could relax!

The Aftermath

Since then I've had a few more interviews with local press and so on, and also had a page devoted to me in The Times. Kevin Warwick, who I cited as an inspiration when I was young on Radio 4, invited me to come to his university and see his labs. He is the "worlds first cyborg" and has micro-chips implanted in his skin that feed directly into his nervous system, which allow him to control electronic objects directly with his mind. His wife has a similar system and they can communicate electronically without exchanging words. He has also done a famous experiment in which was linked up to a sonar device and experienced a new sense, similar to echolocation. The Royal Institution was also listening, and heard that I mentioned their Christmas Lectures. They have invited me up to London to receive an honorary Fellowship. This most importantly means I can use the letters "FRI" (Fellow of the Royal Institution) after my name! I also have a visit to the Diamond Light Source, a £260m research facility in Oxfordshire, lined up and invitations to various other events throughout the year, including next years Big Bang Fair in Manchester. Lord Drayson, Science Minister, has also recently said he might be visiting the school in the near future!

I owe a giant thank you to lots of people for this, but in particular Mrs Begg and Mr Pledger for huge support in helping me make a beautiful display. Literally everyone who came round said what a fantastic display, so a huge thanks to them. And, of course, Mrs Parker who actually went up to the event for three days with me and had of course given me the

opportunities over the last two years so that I had something to display! I also think that this also says something about how good the opportunities are within the school to go where you want to go with your ideas – no where else but the Langton would I have got the support to do this amazing science.

My Project: Plasma Prominences

Imperial Project

This is a research project with Steve Rose, Head of the Plasma Physics Group at Imperial College London. In it, I've developed a method of using the ratios of two intensities of wavelengths of light to work out what shape the solar flares in distant stars are. This piece of mathematical modelling is in the process of being published in a proper scientific journal.

LUCID



The Langton Ultimate Cosmic ray Intensity Detector is an experiment that Adam Sandey, Tom Stevenson, Rachel Powell, Rachel O'Leary, Cassie Warren and I have designed. It uses Medipix chips from the Large Hadron Collider in CERN to detect high energy particles in outer space that are produced by solar flares and is being launched into orbit in 2011 with SSTL.

Riding High

Three Langton students are currently having a very successful time competing around the county as the Simon Langton School for Boys Equestrian Team. Ben Murphy (and his horse Handsome Harvey), Henry Dingle (riding his horse Eric) and Daniel Busbridge (with his horses Buzzlines Woodlands Boy and Buzzlines Elizabeth) have already competed in three dressage competitions and been placed each time. The first competition was in Sandhurst in Kent where they competed against stiff opposition and in the pouring rain) to come a creditable 8th position. Then, in January, it was off to Robertsbridge, near Tenterden for Ben and Daniel (unfortunately on the day Henry went down with a bout of sickness). The boys were decked out in new hooded tops which had been presented to them by the Langton Parents' Association and their horses were sporting new saddle pads emblazoned with the Langton Lion which had been donated by local Engineering firm the Concrete and Corrosion Consultancy Practice Ltd.

Ben was placed 4th in his class and Daniel 2nd and 4th in his two classes which resulted in the team being placed 4th overall.

Onwards and Upwards!

The boys then entered their third competition run by the West Kent (Meopham) branch of the Pony Club in Detling on 8th February. Despite the weather forecast being for sleet and snow it was a gloriously, if cold, sunny day.

Unfortunately, luck was not with Daniel as he was diagnosed with Pneumonia in

the week preceding the event so Henry gallantly stepped into the breach and rode his sister's pony, Bert as the third Langton team member. All three horses went well and the team were delighted to see that Ben on Harvey had been placed in 1st position, Henry on Eric had been placed 2nd and Henry on Bert had been placed 8th – putting the team in the winning spot of the day!

When not competing as the boys are all members of the East Kent Hunt Branch of the Pony Club. Ben has owned his horse for the last 14 months and during the 2008 season he participated in British Eventing (dressage, showjumping and cross country) and had some great successes often

competing against well known Olympians such as Pippa Funnell and Laura Bechtolsheimer. Henry has owned Eric for just under a year and has been hunting every week throughout the 08/09 season and regularly competing at Tetrathlon (shooting, swimming, running and riding). Daniel has been competing on his two horses at British Dressage with much success; he is also on the south east region BYRDS squad. Daniel has recently won the Open section of the Area 11 Dengie Dressage Final at Golden Cross in Sussex. His win takes him into the Championships which are being held in April at Warwickshire College





I write to offer my appreciation to Simon Langton Grammar School for facilitating my secondary level (senior four) studies in 2004. I am glad to say that it helped me to make it to Uganda's top university to pursue a Bachelor of Science degree in surveying. I would also like to say thank you on behalf of my fellow students who also benefited from the funds from your school. Please forward my appreciation and thanks to all the staff, students and the rest of the school community.

Yours truly
Okello Polycap
 Makerere University Kampala Uganda

It is always nice to get a 'Thank You' letter and this one was received by the school a few weeks ago from Okello Polycap, a former student from Dr Obote College, the Langton's partner school in Uganda. The generosity of the Langton students enabled Okello, and many other Ugandan students to receive an education that may otherwise have been denied them.

A Little Light Reading

Dr Carmody our head of chemistry has gone into print again. After publishing many articles in the A level chemistry magazine "Chemistry Review" and a book of resources for AS chemistry called "Hydrocarbons, Haloalkanes and Alcohols", has now published an A2 chemistry equivalent. It is called "Carbonyls, Amines and Analysis". It is published by Phillip Alan Updates, part of Hodder International



Maths is Magic!

by Biff Sharrock 9S
 How often have you heard the words 'maths' and 'fun' in the same sentence? Not much? Well, on Friday 27th

March, The Langton

was visited by mathematician Andrew Jeffery.

The eccentric mathematician, wearing a suit plastered with numbers, dazzled dozens of students with his tricks and poor sense of maths humour - what did the 0 say to the 8? Nice belt! GROAN!!!



His interactive talk engaged Years 8-10 throughout the day. One trick, delightfully ignoring all health and safety rules(!), involved turning a flaming piece of paper into a coin. A BIG thank you to Mr McCrae for organising such a spectacle: we will now be expecting our maths lessons to be just as entertaining!

By Year 12 students Richard Smith and Guy Bates



Eight Langton Boys, accompanied by Messrs Fox, Butler and Moffat staff went to Brussels in February. We joined five other schools across Europe in the Home of the European Union to present the Comenius Project to four MEP's.

The Comenius project aims to promote the student voice and the empowerment of the student through Student Unions and various other committees. Additionally, it is about learning from others in order to enhance our own school environment. Projects like the SU Card and a survey about school and European awareness, as well as more general ideas about developing student involvement have come from this.

Angela Merkel visited Bertha von Suttner, our partner school in Berlin, and expressed her interest in the project and invited us to present to a group of MEP's at the European Parliament.

Having been to Berlin in September, in order to prepare a "highly sophisticated" presentation (including a cheesy video) we had little idea how the presentation would come together. After several surprisingly productive meetings, we had produced a magnificent PowerPoint presentation to take to Brussels.

On our arrival in Brussels we embarked on an exploration of Brussels. By 10 pm we found

ourselves in a grubby Chinese restaurant (the suggestion of "fluent" French speaker Ben Abrams) but we survived. The next morning we went to a spacious EU office. Here we had a final meeting about what our presentation consisted of and who was saying what. Cultural and Linguistic differences were overcome to produce a good presentation.

We then had the afternoon to ourselves so we wandered around Brussels visiting the Grand Place and the Mannequin Pis. The next day we went to the offices of the European parliament and had a tour around the buildings by an MEP. The most exciting part of the tour was sitting in on the Committee for Internal Affairs, Justice and Civil Liberties. The topic of discussion was sharing data between member states and the logistical security problems. We got to see the legendary translation service working and used it ourselves to understand the delegates speaking.

The presentation itself was a success. Our chosen speakers delivered the presentation well. The four MEPs seemed to appreciate it and were pleased that the project was breeding Europhiles. We then subjected the MEPs to a barrage of questions concerning European policy and politics in general which they seemed only too keen to answer in a rather formidably pro European way. We learnt an amazing amount about the structure and ideas behind the EU.

After our presentation we again wandered into town and found a sleazy cheap fish restaurant. We survived this too. The trip was extremely interesting and probably the most European we could ever get. We were in an international group presenting to MEPs in the centre of Europe.

Parfait.

How the Langton Conquered Kent



In a competition that dates back to 1973, The Langton has never won the Kent schools football association cup at junior (Years 7-11) school level.... UNTIL NOW!

On Thursday 19th of March at the Belmont stadium, Whitstable, The Langton beat Beths Grammar two goals to one.

After a strong season last year we were awarded a bye in the first round before meeting Marsh Academy in the second round. The campaign got off to a flying start beating Marsh academy 12 goals to nil, a very sound starting point.

Our second opponents were a physical Pent Valley team, that had we taken our chances we would have buried in the first few minutes.

In the end an 8-2 victory was a fair reflection. Confidently going into the next round saw us play a local derby against Canterbury high. Very kindly Mr Peto stepped in to cover Mr Raines and witnessed the team commandingly put seven past the high school. Probably the

goal of the season came in that game when a perfect team move was expertly headed into the net by Callum Hooper. Final score 7-1. Not knowing what to expect the Langton went into the quarter finals slightly apprehensive and were held to a tight 3-1 against Hundred of Hoo. The pick of the goals came from an extremely long ball from William Annot that gave Nicholas Hope the opportunity to slot past the keeper.

Last year the district cup was host to a very tight final between the Langton and Herne Bay High so on seeing that our semi-final was against them we had to give it everything. On one of the worst days of weather this year the Langton were just too strong a force and wiped the floor scoring seven and playing very strongly at the back.

The Final

From the start of the match the Langton seemed very sluggish and posed no threat to the Beths' back line. Following a slight defensive mix up a Beths striker latched on to a

through ball to place it low into the net. But for a string of fine saves from Hadler the Langton would have been several goals down. We went in to half time 1-0 down. A strong half time team talk from Mr Raines sparked a notable gear change.

Everything now was with the Langton and after a lot of firm pressure a Josh Holness cross was handled in the area. Jack North brilliantly converted the penalty to put the game right in the balance. Staunton and Annot really began to boss the centre of midfield with Samson Maagbe and Jamal using their lightning pace to scare off the Beths players.

Sam Curd, Dom Wood, Dan Picton, Ben Berry and Toby Vaughan all made a solid appearance. With only minutes left an inspired substitution put Nick Hope in the spotlight to score a blinding header from a superb Josh Staunton corner. When the full time whistle blew a sense of elation was felt across the team.

Anyone teaching members of 12LM on Friday 13th March probably wished they had brought their sunglasses with them. Not only was it a beautiful spring day but Mrs Moore's tutor group all came dressed in the most garish outfits they could put together - with green tights clashing with pink skirts, orange shirts with turquoise jeans and yellow hats with purple hair. Mrs Moore, without doubt the most sartorially elegant member of staff, admitted that she found it hard - very hard - to put on her own Red Nose outfit of yellow, red, orange and blue. 'It was for a good cause but it still grieved me to go out looking so terribly uncoordinated' she told Langton News.

Mr Lovelock wasn't looking his usual dapper self either when he took his place in the Langton Stocks at lunchtime. He was one of the brave members of staff who agreed to be pelted with wet sponges by anyone who had paid £1 for the pleasure. All over the school

students and teachers were doing something funny for money. To name a few:-

Steven Saunders (right) acted as goalie for anyone paying to take part in a penalty shoot-out. Harry Wynne (below right) spent the day wearing big blue flippers and Jamie Porter who wore all sorts of strange things on

his face (below left)



Perhaps the bravest of all was Mr Lyttle who agreed to have his legs waxed, live on stage. To see the results you really need to go on-line and download the Langton News in colour as the black & white photo opposite doesn't really show the red-rawness resulting from having his leg hair ripped out by its roots. Naturally, Mr Lyttle said 'it didn't hurt' but as he was crying at the time we chose not to believe him! Well done to everyone who took part. The money raised will help a lot of people all over the world.

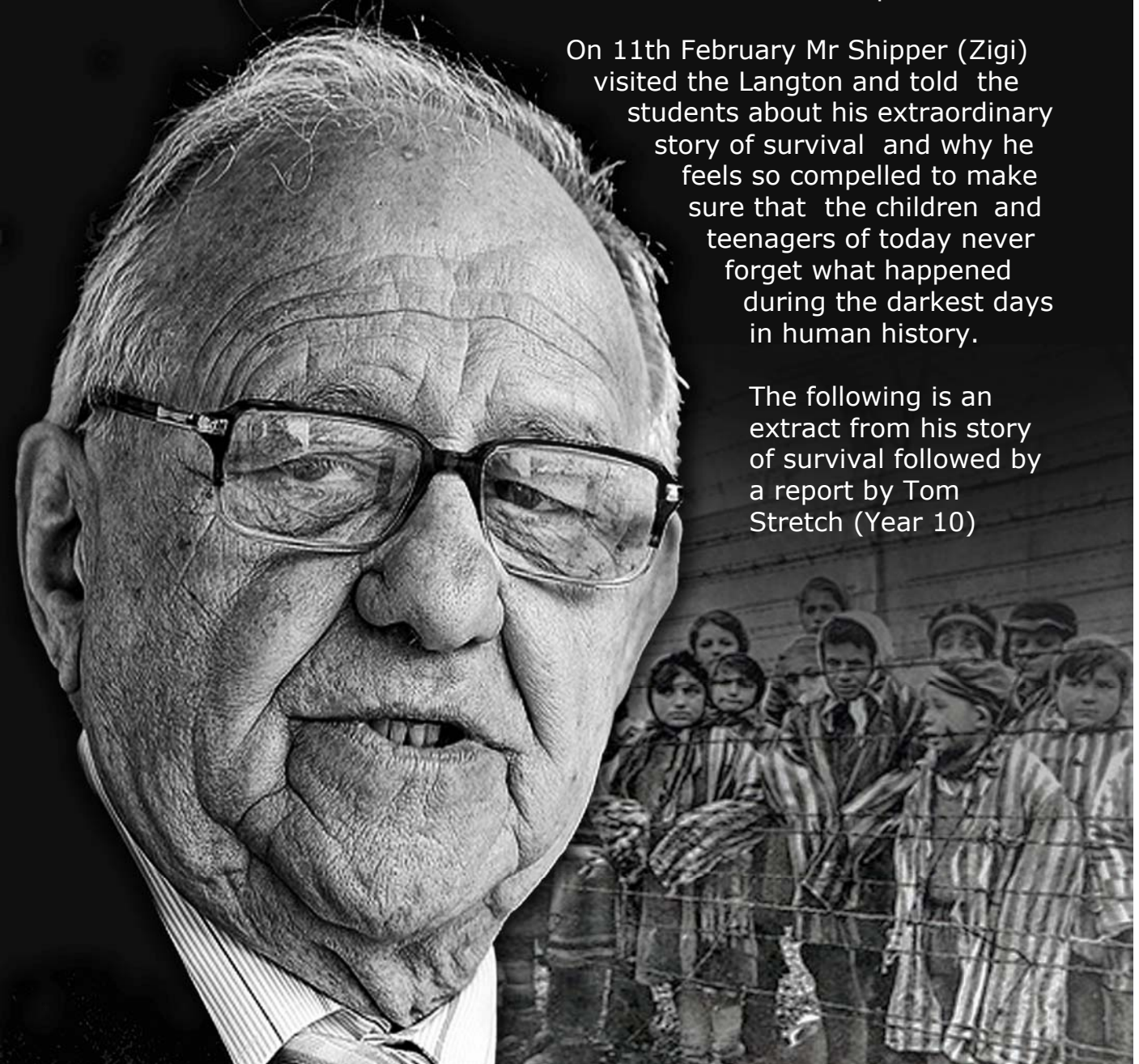


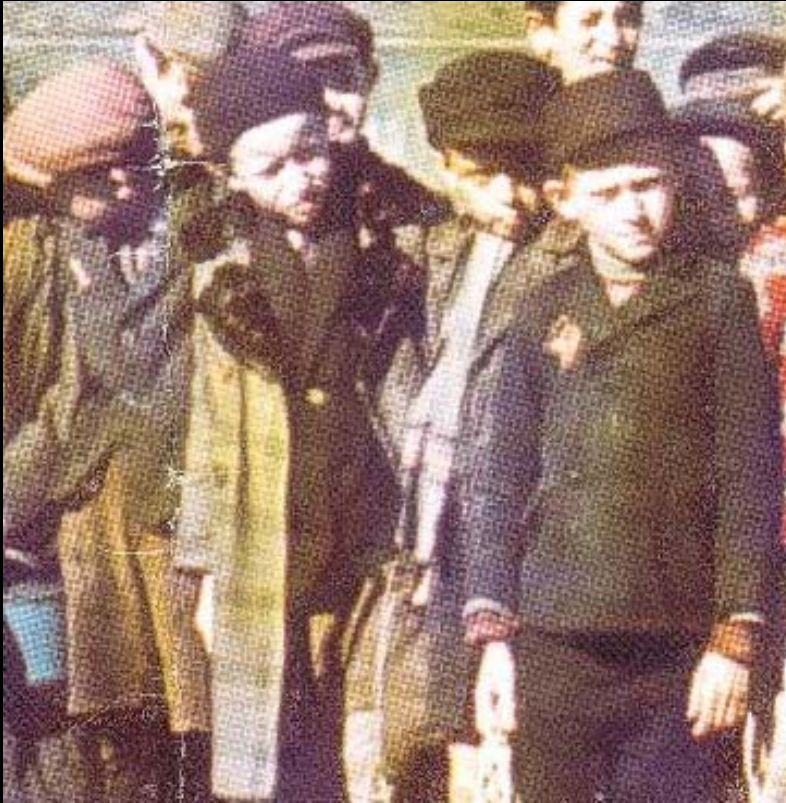
A SURVIVOR'S STORY

Zygmunt Shipper was born in 1930 in Lodz, Poland. In 1939, together with the whole Jewish population of Lodz, he was moved into the Ghetto. He remained there, working in appalling conditions of near starvation, until 1944 when he was sent to Auschwitz concentration camp.

On 11th February Mr Shipper (Zigi) visited the Langton and told the students about his extraordinary story of survival and why he feels so compelled to make sure that the children and teenagers of today never forget what happened during the darkest days in human history.

The following is an extract from his story of survival followed by a report by Tom Stretch (Year 10)





I remember waking up one morning three days after war broke out to find my father standing beside my bed. He told me that the Germans were coming and that he had to go away. That was the first time I realised that I wouldn't have a mother or a father. (*Zigi's parents were divorced and he lived with his father and grandparents.*) Later we had news that my father had managed to get to Russia. After a while he returned to Poland and tried to get back to Lodz to be with me but he was only able to get to Warsaw. That was the last time I had news of him.

Within a short time the Germans came into our town and life as I knew it changed completely. We were frightened to leave our homes and food was becoming very scarce. Soon a decree came out stating that all Jews had to leave their homes and go and live in a designated area. Any non-jews living in the area were ordered to leave. I was 10 years old when my grandparents and I found ourselves in one room on the second floor of an apartment block. The toilet was in the yard below as was our only water supply.

Between November 1939 and April 1940 the whole Jewish population of Lodz (approximately 150,00 people) were settled in the Ghetto and then the gates were closed. Nobody could get in or out.

Food was very scarce and, as he was extremely orthodox, there was very little food that my grandfather could eat and consequently he became weak and ill and died, leaving just me and my grandmother. It



was at this stage that all Jews were ordered to wear a yellow star on the front and back of our clothes at all time. I got a job in a metal factory which meant that I received a ration book, enabling me to obtain small amounts of food, such as bread, rice, flour and sugar. It wasn't long before the rations started to get smaller and smaller and people started dying from malnutrition.

Periodically the Germans would come into the ghetto and round up Jews to be sent to the labour camps. They came in big lorries and went to house to house taking men, woman and children. On one of these raids I was taken away and slung onto a lorry. I don't know how I did it but I managed to jump off.

In 1944 the Germans decided to liquidate the Lodz Ghetto. They decided to move all the people who worked in the metal factory, including me, to another factory in Germany. We were allowed to take one suitcase each and were put on cattle trucks. My boss from the factory made sure I was all right and had it not been for him I don't think I would have survived the journey. We had no water to drink and it was terribly hot. The train stopped in the early morning.

The guards opened the doors and we were told to get out and leave our belongings on the train. We had arrived at Auschwitz Concentration Camp.

The sky was hazy and there was a terrible smell. In the distance we saw chimneys with smoke coming out. At that time we didn't realise what it was but rumours started spreading that it was a crematorium. I didn't know what that meant.

We were made to undress, shaved, disinfected and put into communal showers. Then we were given striped suits with numbers on. We were given black coffee and a slice

of bread morning and evening. We slept three to a bunk.

After a couple of weeks an order came that the whole transport of 500 people from the metal factory were going to another camp. Again, we were put onto the cattle trucks and taken to a place called Stuthoff, near Danzig. Conditions were as bad, if not worse, as in Auschwitz. It got so bad after a while that I didn't think I would survive. One day some German officers came in and said they wanted 20 boys to work in a labour camp. I volunteered to go. We were taken by passenger train to a place called Stolp where we worked and lived in a railway yard. Working on

the railway yard meant that there were chances to steal food.

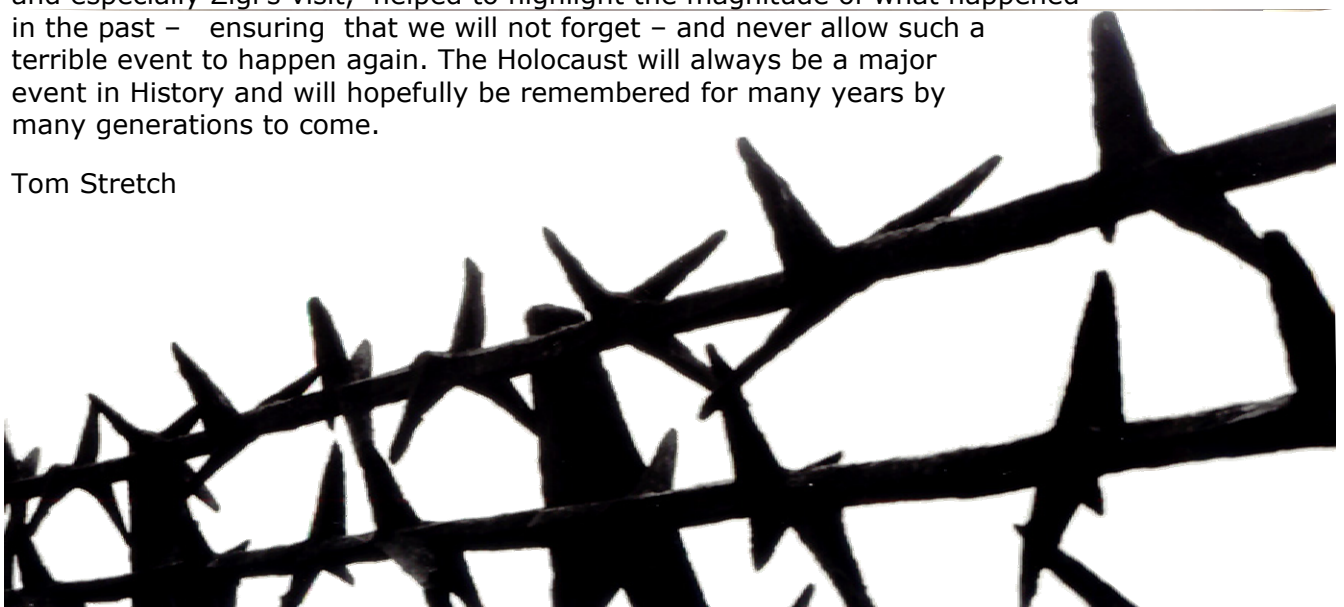
One day five men managed to steal some cigarettes from a train that was going to the front. They were caught and put into a small room for a week. The Germans rounded up the whole camp and brought out the 5 men to be hanged in front of us. Before the Germans had a chance to kick the stools from under their feet each of the men jumped off the stools, perhaps so as not to give the Germans the satisfaction of killing them. This was just one of the many horrors I was witness to.



Earlier this term students from Years ten and eleven were extremely privileged to hear the incredible story of a holocaust survivor. As Zigi stood and told his tale of uncertainty, horror and survival the pupils sat in amazement at the breath-taking events described in absolute detail, right in-front of them. We were shocked to hear what Zigi and his family experienced in the ghetto and how he survived the conditions there and then in the concentration camp, which were his homes for the war years. The horror and reality of life during WW2 were brought to life as he recounted the daily events which were his reality. His moving, personal account kept all the pupils interested for forty minutes; they were hooked on every word he spoke as he described his early life.

Zigi also spoke following the holocaust memorial service, which was held in Westgate Hall, and included a presentation by Sam Day on *Auschwitz 'The Final Solution'*. Thirty pupils from Year ten represented the school at the service which paid respect to, and commemorated, to all the men, women and children who lost their lives in the concentration and work camps. All Year 10 History students also had the chance to visit the Imperial War Museum and see the Holocaust memorial exhibit, which led you through the events and described what happened to the twelve million people who suffered under the brutality of the Nazi regime. The talk, Memorial Service and especially Zigi's visit, helped to highlight the magnitude of what happened in the past – ensuring that we will not forget – and never allow such a terrible event to happen again. The Holocaust will always be a major event in History and will hopefully be remembered for many years by many generations to come.

Tom Stretch



OpenDay

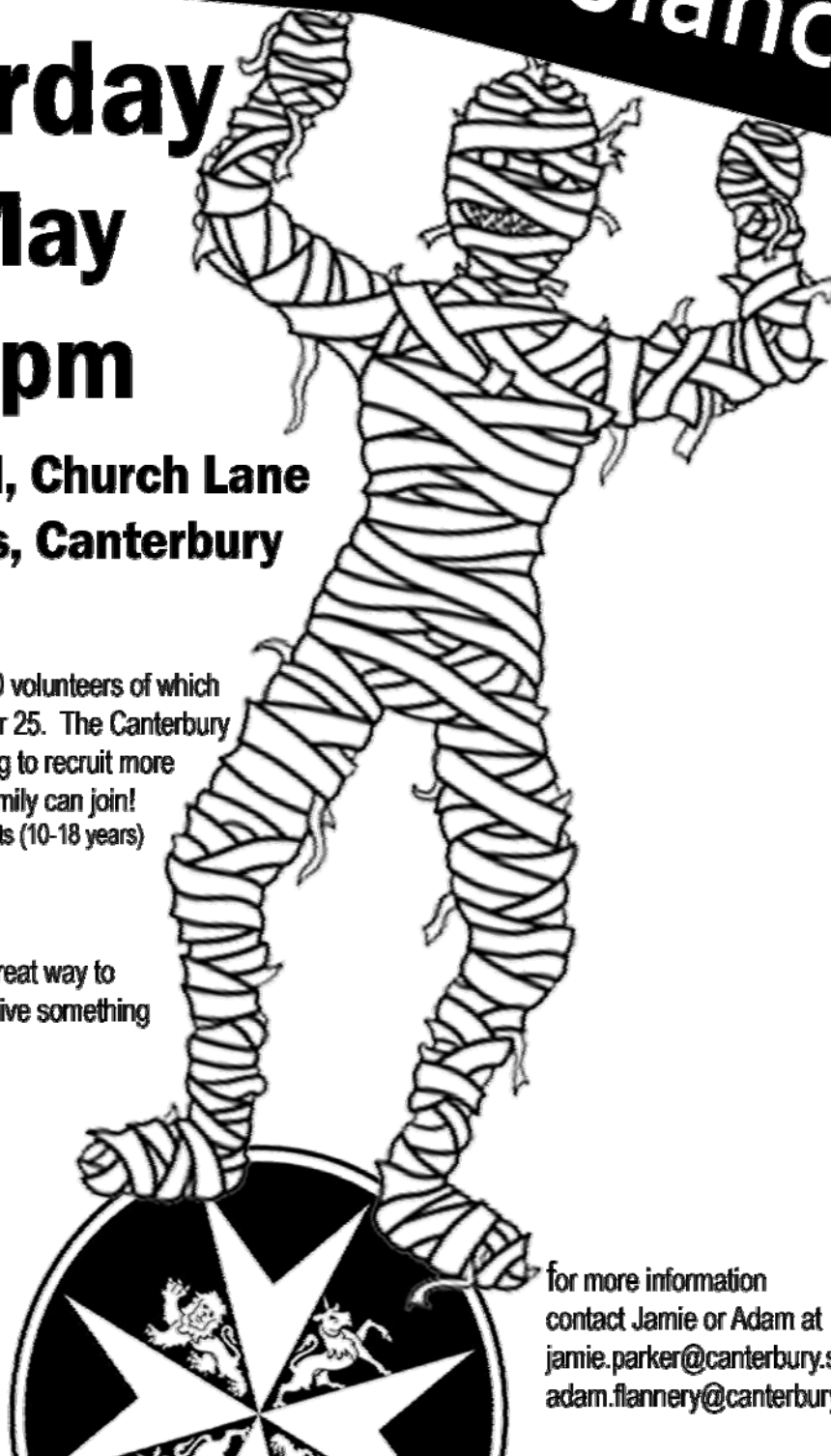
St John Ambulance

Saturday
2nd May
10 - 4pm

St John Hall, Church Lane
St Mildred's, Canterbury

St John has over 45,000 volunteers of which more than half are under 25. The Canterbury division is always looking to recruit more members - the whole family can join!
Badgers (5-10 years), Cadets (10-18 years)
Adults (18+ years).

Being a volunteer is a great way to make new friends and give something back to the community.



for more information
contact Jamie or Adam at
jamie.parker@canterbury.sja.org.uk
adam.flannery@canterbury.sja.org.uk

Star Centre LATEST NEWS

By Dr B Parker



LUCID will fly and work in 2011! This was the feeling we had from our last visit to CERN when we took Surrey Satellite engineer David Cooke with us to meet the Medipix team. The system David envisages will link up the detector chip with space qualified electronics on the satellite. This will beam down to our mission control at the Langton! The Medipix team at CERN were happy that we are making good progress. We have somewhat reorientated the detector chips with a view to providing clearer directionality. We'll be able to look at high energy particles from deep space and say where they have come from – a gamma ray burst there, a supernova here. These new developments mean we could make a significant contribution to astroparticle physics research.

The school based project where we put an individual detector in schools, CERN@school, is moving on at relativistic speeds. Queen Mary, University of London, is extremely supportive in helping us store the potentially huge amounts of

data on a server as part of the Particle Physics GRID. The GRID is the amazing computer network to handle the data from the Large Hadron Collider. Queen Mary is the centre for the GRID PP, the UK part of the GRID. The scope of the Earth based project could rapidly expand as we extend our collaborations across the world. Scientists from Houston, Canterbury New Zealand, Alberta Canada, Prague and Holland have all expressed interest in linking in with our cosmic ray project. They run different cosmic ray experiments which involve placing huge scintillation boxes on the tops of buildings and picking up larger areas of cosmic rays. We want to find a way to put this huge wealth of data into a common format so we can collaborate.

We're hoping that 'Houston, we have a problem' will not apply to us! Larry Pinsky who we work with in CERN and Houston worked in the Apollo programme and was in mission control when that message came down from Apollo 13!

COMING SOON THE LANGTON GUIDE TO THE UNIVERSE

PART III

We are busy planning our stand for the Royal Society Summer Science Exhibition and would like to invite any parents and students to an introduction to the workings of the **Langton Research Group**. This is the all encompassing name for research based activities within the Science Department. The evening will give you a taste of the proposed show at the Royal Society Summer Science Exhibition and will include contributions from LUCID, the Imperial Plasma Project, Faulkes observing, MBP² and the Chemistry project. The date for this Langton Guide to the Universe part 3 is Thursday 7th May, 7 – 8.30pm. Please email office@thelangton.kent.sch.uk if you would like to come.

DESIGN A LOGO COMPETITION

The Langton Research Group will be putting on a display at the Royal Society Summer Science Exhibition and need an eye-catching logo to go on their T-Shirts and publicity material.

The Logo should be white on a dark blue background and incorporate all aspects of the Langton Research Group (LUCID, MBP², Chemistry Research, Faulkes Observing, Plasma Physics)

The name

Langton Research Group
must also be included (no abbreviations)

Entries to Dr Parker by 30th April



WAR! WHAT IS IT GOOD FOR?

a political nature. You may remember mention in the local press of his nomination for the Mercury Music Prize in 2004, an award of considerable distinction.

Jumping forward to the twenty-first century the controversial conflict of our time is the Iraq War. A contemporary of both Costello and Wyatt from the 1980s Billy Bragg has been at the forefront of the British opposition with his songs including the thought-provoking 'The price of oil'. He has been joined by a number of other less mainstream artists such as The Unpeople, Asian Dub Foundation and The Rub whose songs have been interlinked with speeches by well known anti-war voices such as John Pilger, Tariq Ali and Tony Benn. However they are not alone as more well-known bands and artists have also voiced their disapproval. The list is ever increasing but includes the likes of George Michael, Pink, Gorillaz, The Chemical Brothers, The Beastie Boys, Green Day and Paul Weller to name a few.

What is clear is that for Iraq just like Vietnam the level of opposition to the conflict can be measured by the airplay of the music it creates. A new generation faced with a new conflict is asking itself the same question as before, 'War, what is it good for?' And in doing so the link between protest and song goes on.

Mr Butler is building a database of political songs, so if have some let him know about them.

Spotify users can obtain a playlist of some songs mentioned in this article by following this link

<http://tinyurl.com/warsongs>

A good question and the first line of 'War' by Edwin Starr a 1969 song of drama and intensity that depicted the general distaste felt by many towards the Vietnam War. It is one of the most famous anti-war songs and as such takes its place alongside many other well known pieces from the last one hundred years of popular music.

Music is often the tool of the protester and rarely is that protest more powerful than when it signals its opposition to a war felt to be unfair or unjust. Anti-war songs have a rich history, both the English and American civil wars have been immortalised in folk songs passed down from generation to generation. This tradition was continued into World War One where the aptly titled 'Hanging on the old barbed wire' questioned the fairness of so many young men's deaths in the trenches whilst their Generals made decisions from the relative safety of their offices well behind the lines.

The almost total public support for World War Two meant that protest through song was relatively unheard of on both sides of the Atlantic, and this remained the case especially in Britain for a considerable period. In the USA this was altered by the advent of the most sung about war of all time, Vietnam. The protests started in the early 1960s with the folk based music of artists such as Joan Baez and Phil Ochs and continued throughout

the decade and into the early 1970s. This explosion of dissent is explained both by the controversial nature of the war itself, but also by the way in which popular youth culture changed during the period. Anti-war songs of note from this time include 'Universal Soldier' by Donovan and 'Eve of Destruction' by Barry McGuire. Perhaps the most famous of the anti-war singers of this period was Bob Dylan, seen by many to be the undisputed king of protest music. Classics such as 'Blowin' in the wind' and 'The times they are a changin'' are still widely known today.

In Britain the late 1970s and early 1980's saw an increased interest in protest at military policy both at home and abroad led by bands such as The Clash. My personal favourite is 'Oliver's army' by Elvis Costello released in 1979. The title refers to Oliver Cromwell's New Model Army, an earlier version of the modern British army. The song itself criticizes the British army for targeting disadvantaged young men leaving secondary school and sending them to trouble spots around the world to fight for causes they have little understanding of. A later song by the same artist 'Shipbuilding' warns of the dangers of the Falklands War, and this song has some connection with us at the Langton. It was successfully covered by Robert Wyatt an old boy of the school who, although now based in the USA, continues to produce music of

LUCID TEAM MEET LORD BRITISH

The UK space industry meets up at the UK Space Conference held at Charterhouse School once a year. At last year's conference we found out we had got through to the final of the Space Experiment competition, this year we were presenting on LUCID to a full hall of students. Peter Hatfield, Tom Stevenson, Matthew Leach and Emily Claudet gave an excellent presentation.

Stuart Eves from Surrey Satellite Technology Limited who set up the Space Experiment competition with the British National Space Centre was delighted that our students could enthuse to the full conference about the fantastic progress they have made.

Richard Garriott, famous computer game designer and developer was also in the audience having just given an inspirational talk about his twelve days in space last October. He was very interested in the LUCID detector and our plans to have a network of detectors across the world and said he would like to have one in his home in Texas! (His home, called Britannia Manor, is famous for its amazing architectural features including an observatory, secret passages, and a dungeon to name just a few of its unique features.)

As we drove him in the minibus up to lunch he told us stories of the famous parties he gives. I'm not sure whether the students were more excited

about chatting along with a second generation astronaut or the fact that he is happy to 'endorse' the LUCID project.

This is a fantastic boost for the project and we look forward to welcoming him onto the Langton Research Group stand at the Royal Society Summer Science Exhibition at the end of June. He will be in London at a big space conference at the same time and hopes to come along to our exhibit.

All of you who are planning to design the logo for the Langton Research Group bear in mind we will need to get a shirt made for Richard Garriott with 'Cosmonaut' on the back and he is happy to wear the team shirt!

Dr B Parker



LORD WHO?

Garriott was born in Cambridge, England, and raised in Nassau Bay, Texas.

He is the son of scientist Owen K Garriott who became an astronaut and flew with Skylab 3 and Space Shuttle mission STS-9.

Garriott is known as Lord British in *Ultima* and General British in *Tabula Rasa* and is a significant figure in the video game industry.

He was originally a game designer and programmer, but now engages in various aspects of computer game development.

Richard produced his first published game, *Akalabeth* in the summer of 1980 while working at a ComputerLand retail store.

In the early 1980s, Garriott developed the *Ultima* computer game series (sequels after the first were numbered, such as *Ultima II*, *Ultima III* and so on). Originally programmed for the Apple II, the first was published by California Pacific Computers, and sold in Ziploc plastic bags to interested parties. The second part was published by Sierra On-Line. By the time he developed his third installment, the games had such a large following that Garriott (along with his brother, Robert, and father and others) established Origin Systems, their own video game publisher, to handle the publishing and distribution of his title, now available on several platforms.

Origin went on to become one of the most influential game developers in the history of

video games.

In September, 2007, Space Adventures announced that Garriott would fly to the International Space Station in October 2008 as the sixth space tourist, reportedly paying 30 million dollars. On October 12, 2008, Garriott became the first offspring of an American astronaut to go into space, and the second person to wear the British Union flag in space. The Soyuz docked with the station on October 14, and Garriott returned to Earth on October 24 aboard the Soyuz TMA-12 with two members of Expedition 17, cosmonauts Oleg Kononenko and Sergei Volkov.



Space Training



Garriott as 'Lord British'

CAUTION!

This article may contain NUTS!

Mr Scarlett looks
at the facts
behind the
headlines



My brother and I shall never forget our first (and last) chemistry set. I shudder to think of some of the contents even now. Where was 'Health and Safety' back then? After reading the manual and the warnings, especially the warnings, we were naturally curious. Having decided that the prescribed experiments were a little 'limp', we proceeded with our own research'. The rest, as they say, is history.

A simple innocent trial inorganic reaction and in an instant the whole room required redecoration. I regained normal hearing after three days. My brother, of course, has never been the same since.

So at the age of nine, I was filled with a sense of awe for chemistry. It was with awe and wonder that the early alchemists attempted trans-mutation of the elements, yet despite constant failure, they continued to the bitter end. Familiar scenes from old tomes include bubbling retorts, unusual animals hanging from the roof and all manner of convoluted glass-ware, fire and vapour. That was not however the end of an era. The great Sherlock Holmes is known for his penchant for chemistry, his laboratory/flat at 221B Baker Street and all his bizarre apparatus and paraphernalia.

Children are notorious for their curiosity, their awe and wonder at the unknown. Yet something odd happens soon after they engage in secondary education. In year 7 they see

science as exciting and fascinating as did those alchemists of old. In year 10 or 11, at most schools generally speaking, the very thought of a science lesson can be a real downer. A mere handful of students take it up at 'A' level. We have witnessed the closure of University Physics and Chemistry Departments up and down the country for lack of students. Why? I call this 'The Learning Crunch'. Is this familiar?

Furthermore, this disenchantment with science does not seem to be the case at The Langton. I marvel at the incredible numbers of our sixth form who can't get enough! At the recent Yr. 11 parents evening I was delighted to see the sheer number of hopefuls from my own classes desiring to take up chemistry next year.

I have just spent a highly successful and inspirational day at a conference hosted by the RSC, (Royal Society of Chemistry) with presentations and workshops provided by LGC, (The Laboratory of the Government Chemist), Pfizer and DSTL, (Government Agency on the Forensic Analysis of Explosives), not that I needed any more encouragement! The same question was posed. Why are so few students interested in taking chemistry at 'A' level? Interestingly enough, the RSC have recently been published in a broadsheet on research that they have done into science education entitled, 'How 'Dumbing Down' Science Has Failed a Generation'.

I see the many sixth form students at the Langton engaged in the MBP² biology research, one team of which I supervise, and I see those involved in the Lucid Project with the Star Centre, all of whom are engaged in extra-curricular work normally only seen at University. They are energised and well motivated! We do not 'Dumb Down' at The Langton! We 'Wise Up!' Our aims may seem lofty but they are regularly fulfilled, often with a bit extra!

Those who produce league tables' are supposed to reflect the 'Value Added' to students by the school but they do not even pretend to understand or attempt to measure this level of 'Value Added'. Their tables do not cater for achievement of excellence. They are accustomed to measuring their own failure. Their tables measuring areas of failure are not required here.

Where is the column for data for; 'Massive student entrance to Oxbridge/Russell Group Universities', 'Winners of the National Science Student of the Year Award', 'Students designing new satellite components to be sent into space by NASA', 'Students appearing on National News on account of unequalled excellence in Science', 'Value added for students achieving predicted grade of 'A*', 'Over 150 Students taking up 'A' Level Physics, Chemistry or Biology'? How about columns for; 'Staff winning MBE'S, Honorary Doctorates, Rolls Royce Awards for Outstanding Contributions to Science Teaching', 'Staff Winning Hundreds of Thousands of Pounds for Investment into Further Amazing Projects etc, all in one year flat', 'Staff and students collaborating with nationally and internationally famous people/ institutions/bodies/universities, in groundbreaking new research to be published in scientific research papers', 'Students visited by Nobel Prize Winners'? Again the list seems endless.

We are now experiencing 'The Credit Crunch', 'dumbed down' jargon for 'Recession'. The fact is that few people have any concept of excellence. If those responsible for the League Tables did, they would probably say that it is unfair because not everybody can achieve it. They have never had to generate wealth themselves, or employ people using their own funds. They think that because a lot of money is spent, a good job well done will automatically result.

They throw enough money at something that needs to be fixed, to ensure that they can not be accused of not doing something about it. The quasi-qualifications they may have would not impress Mickey Mouse and certainly are not founded upon any original authority or wisdom.

Their 'knowledge' is as ephemeral, effete and banal as their fascination with all the wrong things. 'Quick fixes' are the order of the day. I learned recently that some teachers will now be trained in six months flat!

An amused pupil of mine yesterday showed me the government 'Health and Safety' warning on the back of a packet of peanuts. It read, 'WARNING! MAY CONTAIN NUTS!'. I'm sure we all know where the 'nuts' are.



*Left:
A Langton student recreates Mr Scarlett's very first
Chemistry experiment. Please do not try this at home!*

Now, turn over to read all about Mr Scarlett's involvement in the PDE5 project and why he has kept us all in the dark ... until now.



why Mr Scarlett believes that “You Can Never be Too Young to be a Research Scientist”

Early last year, Drs Carmody, Poole, Williamson and I entered into discussion of ideas to engage the terrific minds of our sixth form chemists. Eventually, I was volunteered to lead a project so enviably audacious that the planning alone won the Certificate from Rolls-Royce exhibited. Ideas developed and the project codenamed 'PDE5' was born. It is a collaboration between a global mega-giant and Simon Langton Grammar School for Boys. Due to the sensitivity of the subject matter, the confidentiality required that I had to keep everybody in the dark pending clearance.

Dark Matter-Dark Chemistry

Physicists tell us that we are surrounded by 'dark matter' or matter which, at least, can not be seen. Its presence is revealed by the revolving motion of galaxies which appears to be too fast (they should fly apart on account of centrifugal force) and also by gravitational lensing. So the effects can be seen, but not the matter. They can, however, see or measure most of the quantities to which their units, which decorate their subject, refer eg length, acceleration, light, temperature, voltage etc. Biologists can see their dissected rats, photomicrographs of cells,

organelles, furry animals, organs etc. This, you see, is where the subject of chemistry for the most part presents chemists with problems which the other sciences encounter less frequently. Our subject deals almost exclusively with the interactions of the electrons in the outermost energy levels of atoms. No one has ever seen an atom, let alone an electron. The lack of resolution of any type of microscope known precludes this. No one has ever seen an ionic or covalent bond.

We have never seen our elusive subjects! We teach using models and analogies. No analogy is perfect and eventually they all break down. As we present the subject we create an elaborate sweeping staircase of approximations, ever getting nearer (hopefully) to the truth. A dark matter indeed! I shall return to this matter later.

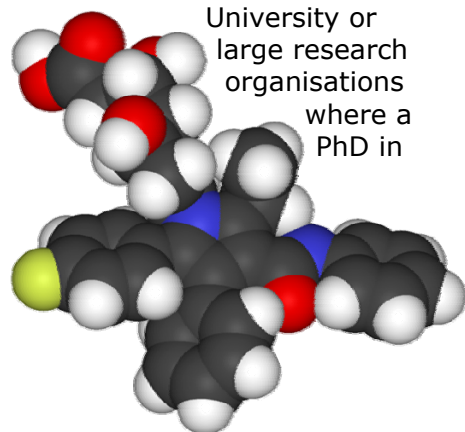
The Chemistry Set

If those pioneers of old had known about this project they would never have wasted time trying to produce gold from base metals, when in fact there are far more lucrative transmutations to dabble with! In fact, in a sense, they are still alive and strong. Their alchemy is called 'organic chemistry' but their tools of synthesis have not actually changed much.

The tools of analysis have increased in number (and expense) though and the use of GC (gas chromatography), MS (mass spectrometry), GCMS (a fusion of the latter two), IR SPEC. (infra-red spectrometry) and NMR (nuclear magnetic resonance spectroscopy), are commonplace at good Universities and large research companies. A compound is synthesised, isolated and analysed to make sure of its identity. This is known as 'three step synthesis'.

Most of these substances fail to go any further, but some later become multi-million pound pharmaceuticals such as 'Viagra'. The ongoing quest for all manner of better medicines, pesticides, nanoparticles and substances to solve all manner of problems becomes greater every year. One is not surprised to see these advanced techniques being used and mastered at

University or large research organisations where a PhD in



chemistry is a prerequisite to entering the front door.

Yet surely enough, once a week, a team of our very own fantastic, budding Year 12 crackers perform 'three step syntheses' and led by our splendiferous, magnanimous, incombustible, incomprehensible, Year 13 super-trouper, acquire 'hands-on' experience in the use of the above mentioned techniques long before their time, with surprising results! All of the Year 12 set have had a good run at making paracetamol. Laurel Bunker, Elidh Krishnan and Tomo Brumfit-Kuroshi are in the last stages of the synthesis of a painkiller called benzocaine. Matthew 'Krakatoa' Richards has certainly taken things to new heights and has literally given chemistry a new ceiling.

They are the shining embodiment of what, not so long ago was a lofty plan. Did I mention 'Health and Safety'? Good, that's got that off.

The Langton PDE5 Project

We are particularly grateful to Pfizer Global Research and Development in Sandwich. Whilst researching new cardiovascular drugs years ago, the unusual effects of Viagra were discovered by accident. It is just one of a huge happy family of structures named 'statins'. They occur in the secondary metabolism of plants along with 'sterols' and 'stanols'.

Our Year 13 chemists are working with Drs Armour and Owen from Pfizer PGRD, gaining experience second to none on live running research on new statins. This involves the use of software unique to Pfizer which actually models drugs in cyberspace and is actually capable of accurately visualising, in three dimensions, the structures in action within the active sites of enzymes. It is an enviable piece of kit lovingly named 'Move it!'. Having used this and witnessed the power of this program, I would not be surprised if other pharmaceutical companies have not made it the subject of extremely well funded industrial espionage! Most of the time, it is kept safely behind the formidable defences and protocols at PGRD, Sandwich.

Despite the obvious security issues, this has not stopped Pfizer from offering to bring it in to school on laptops for our students to use! Even this had to be shrouded in secrecy from the outset. When students quizzed me about the Rolls-Royce award, I simply had to tell them that patience was a virtue and follow that up with, 'If I told you, I'd have to kill you'. Speaking about security, when our highly perceptive Deputy Head, Dr MacKay, asked me about my father, John Scarlett and about his putative leadership of 'M16', I had no option, other than to tell him the truth. Strangely enough, neither 'M16' or 'M15' actually exist. If

you peruse the 'SIS' website afforded by the Secret Intelligence Service, you will discover the same. This can be found at 'www.sis.gov.uk'.

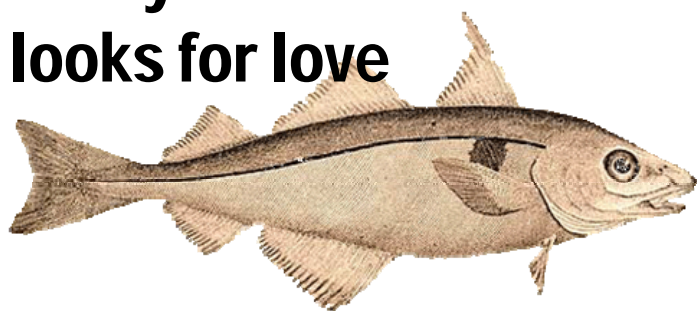
We have already modelled and scrutinised two compounds which were subsequently sent for further analysis to the 'Diamond Ring' particle accelerator synchrotron in Oxfordshire. This uses a highly specialised form of x-ray diffraction to visualise molecules within enzymes, amongst many other things.

When Year 13 student Matthew Richards baptised me with a deluge of roasting hot vitriol, the class did not notice a small tear in my eye. Even if they had, they may have mistaken it for symptoms of the exquisite pain as my spattered flesh smouldered and was cremated. Was this nostalgic 'deja vue'? Was this familiar?

The ceiling in C4 has finally stopped fizzling and smoking but I clearly detect the serene aroma of excellence.

This project is one small step for The Langton but a giant leap for schools in this country. Walt Disney once said, 'If you can dream it, you can do it!'. Just another cycle in the 'Circle of Life' in the legacy of 'The Lion King of Education'.

Harry the Haddock looks for love



I love dancing but I have no legs.
If you have legs but hate to dance,
give me a call. 012043
778345231089 ext 2.



Hockey

1st XI – Kent Cup semi-finalists, East Kent Schools' Hockey League winners
 2nd XI - East Kent Schools' Hockey League winners
 Under 16 – Kent Cup finalists (1-3 vs Eltham College)
 Under 15 - East Kent Schools' Hockey League winners
 Under 14 – Kent Plate finalists vs Duke of York's or Chatham House
 Under 13 - East Kent Schools' Hockey League winners
 Under 12 - East Kent Schools' Hockey League winners

Football

Under 15 – District Cup semi-finalists
 Under 14 – District Cup semi-finalists
 Under 13 – Kent Cup winners (2-1 vs Beths GS), District Cup winners (7-1 vs Herne Bay)
 Under 12 – Kent Cup joint winners (2-2 aet vs Beths GS), District Cup finalists vs QES or Abbey)

Basketball

Under 19 – National Cup Division 2 last 16, Kent Cup finalists vs Canterbury High
 Under 12 – Kent Cup finalists vs Harvey GS or Bexley GS

Rugby

Under 14 - Kent Sevens Shield winners

Dr Mackay has got loads of phones



He'll have yours too if you use it inside the school

Phones used inside any of the school buildings at any time will be confiscated. Use it and lose it.

Langton Students Lead the Way in Embassy Debate



At the end of October, our German teacher, Frau Brodkorb, asked if Mike Eles and I, would like to go to Berlin, to lead a debate at the British embassy with partners from a German school, the Bertha von Suttner Oberschule. We jumped at the chance and were soon preparing our speeches, getting to understand the details of combating global warming. We flew to Berlin in November and were introduced to our partners, Max and Dominika. After lunch, we only had an hour to compare notes and rehearse our speeches before it was time to rush to the Embassy to meet other students. By now Max, Mike, Dominika and I were all becoming rather nervous, which was not helped by the size and grandness of the Embassy interior. We settled ourselves on the podium, checking our notes and watching the audience file in.

After a short introduction by the Deputy Ambassador it was time for the first speaker, Dominik. She argued that the EU leads the world in combating global warming. She spoke about the uniqueness of the EU's cap and trade system (which allows richer nations who do not reach their full quota of allowed emissions to 'sell' this theoretically unused emission on to developing nations, who exceed their quota). She also spoke about Britain being the first country to bring the issue of global warming up with the UN Security Council and how Britain will be introducing a binding legal contract to cut emissions – something which has never been done before.

The first speaker of the opposition was Max. He was acting as a Greenpeace representative and

raised the issue that the EU does not help other countries by giving monetary aid to develop their own green technologies. He said that helping others was part of being a leader in a field, not just being the best yourself. He argued that he was opposed to the cap and trade system as it enabled everyone to pollute more than necessary. He believed that if a country exceeded the target they should not be able to buy their way out and that there should be stricter consequences.

Then it was my turn. I was acting as a Peace Envoy representing various Peace Organisations. I spoke about the problems third world countries will face due to global warming and raised the point that not only would this create great suffering but there would also be tension between the affected and unaffected nations which could result in wars. There could also be wars over resources such as food and fuel. I spoke about the EU helping these poorer countries, by giving, for example, the African Energy Union access to some of their research on green energy technology.

Finally, Mike delivered a great speech from the perspective of a banker for the opposition. He raised the point that the EU is not at present in financial terms the leader in combating global warming as the USA far outspends anyone else. He said that the EU simply does not have the funds to be leaders in combating global warming and that in the present economic situation it would not be prudent to aspire such a position.

In round two of the debate we were able to question each other. We debated further on the merits

of the cap and trade system and the validity of the comment that the EU was not helping other countries.

The discussion was then opened to the floor. Many excellent questions were asked, such as: What kind of impact is the financial crisis having on the EU's role and how is it affecting the problem worldwide? If the EU is not the leader, who is? There were so many questions that we went over the allotted time and had to make quick closing statements, summarising our arguments and making a final appeal that our view of the statement was correct.

While the jurors left to decide the winners, the audience was asked to show which side they had been persuaded to by raising their hands. It was an exact tie! When jurors re-entered they announced that Dominika and I the winners. All of us were given a large dictionary as a prize and we had a lovely time chatting to the audience members in the adjoining hall. It was a wonderful day and I enjoyed it very much.

Mike and I are both very grateful to everyone who made our stay possible, both those in England and in Germany. Special thanks go to the teachers of our school and our partner school, Frau Brehm and Frau Brodkorb, for all the effort they put in. Thanks also to the UK German Connection, the Heinz Schwarzkopf Stiftung and the British Embassy for enabling this debate to take place. It was a wonderful opportunity for both of us and we learned a lot, made great friends and had a lot of fun.

Burns Night



The Burns Night celebration on 23rd January was again a huge success. The Bursar, Bob Crick, organised a wonderful evening, which was enjoyed by pupils and parents alike. Special thanks go to Gaye Austin and the Caterlink staff who produced and served a fabulous, traditional, Scottish meal, which included haggis that was piped in by Callum Diamond and paraded by Eilidh Krishnan. The silverware for the tables was kindly provided by Howe Barracks and looked very elegant on the beautifully dressed tables. Head of Maths, John McCrae, acted as compare for the evening and the Head Students Nat Clark and Rachel O'Leary gave excellent toasts. Poems were read by the Assistant Head, Ken Moffat and Head of Drama Loraine Moore and Lorna Braddy and Emily Temel from the music department provided musical entertainment.

The evening ended with traditional Scottish dancing led by Stan and Sue Larking, who had provided lessons in the run up to the event. Thanks are

extended to all those who contributed to the smooth running and organisation as well as all those who took part.

Wine & Wisdom

The Wine and Wisdom on 21st March was extremely well supported by students and parents. The Quiz-masters Ben Abrams, Joe Mooney and Dan Fisher produced excellent questions and have kindly offered to organise another Wine and Wisdom in July – look out for the date.



Lockers

The PA have contributed £5000 towards the new lockers and are delighted that they are in place, look great and are being used and well looked-after

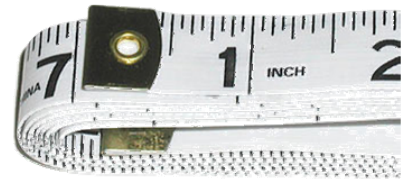


Noticeboard

Following the AGM the PA have revamped the noticeboard in the entrance and have updated the PA logo. Thanks are extended to Biff and Guy Sharrock and Susan Begg for their creativity in designing the new logo.

Help Needed For the Uniform Event on 16th June

The Uniform Event is to be held on 16th June from 2.30 pm to 6.00 pm. Helpers for measuring, collating orders and selling tickets for the Summer Fun Day are needed so if you have any time available please contact Catherine Langley on catherinelangley@fsmail.net.



Contact Details

Catherine Langley – Chairperson
catherinelangley@fsmail.net

Maggie Hewett and Madeline Edwards – Vice Chairs
maggie.hewett@sky.com
mads1963@hotmail.com

Caroline Stretch - Secretary
carolinestretch@tinyworld.co.uk

Uniform Shop Contact
Carol Day – 01227 709364

MBP² - the adventure continues...

By Dr Colthurst

We have had a very busy couple of months with the MBP² project. March 4th saw the second collapsed curriculum day for our Sixth Form students.

Feedback from the first training day had revealed that many of the students wanted a more hands-on session – whilst it had been an important stage to see the techniques being demonstrated and to learn the science behind the work, they now wanted to get stuck in and actually do the experiments themselves. To this end, we borrowed a huge stack of equipment from the Biosciences Department at the University of Kent (and a couple of lecturers and post-doctoral students) and gave our students the chance to run their own affinity purification columns, pour their own gels, carry out their own restriction digests and generally become very familiar with the techniques they need to master for the rest of the project.

The day ran very smoothly, with over 50 students attending (there was a flu-bug doing the rounds at the time) and we were able to run a brief session at the end of the day to share our results and

see the progress that had been made.

One highlight of the day was a visit by BBC Radio Kent – there was a live radio broadcast from Lab C7 that went out on the Dominic King lunchtime show. My wife and I were interviewed about the project and how it had all started. Then Jerome Condry and Jess Nielsen (two of the Team Leaders) were asked about what work was being carried out and what impact it was having on their future academic career choices. All quite exciting – but a bit rushed, the reporter only arrived ten minutes before we were due on air!!

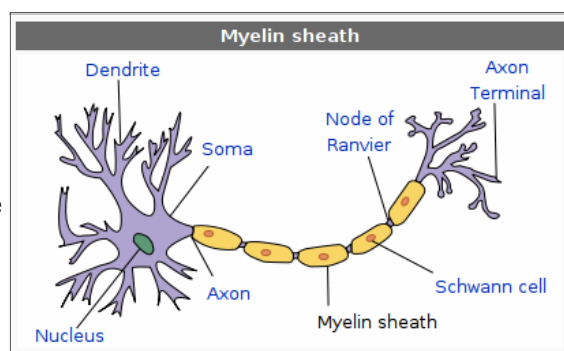
Following the success of the second training day, we made a return visit to the Biosciences Department at UKC to give a presentation in their FIRE-Bio seminar series. This time, our Team Leader students had to present a five minute summary of their work so far and how it fitted into the overall aims of the project. The lecture theatre is one of the larger ones at the University and it was quite full – and I am pleased to report that all of our students performed brilliantly, giving very confident accounts of their exploits so far. It seems our

hosts were very impressed with the confidence, knowledge and frankness of our students – no, not every experiment works first time, the staff at the University are only too well aware of that, but it has been a steep learning curve for our students!

Finally (for now) we hosted a lecture by Dr Stephen Sawcer from the University of Cambridge. He is a highly experienced senior researcher working on a project which is trying to identify new genes associated with MS. His work involves looking for differences in the genes of individuals suffering from MS compared to a control population – very much a needle in a haystack task. He delivered his talk to around 70 of our Sixth Form Biology students and pitched the talk at exactly the right level. He then answered a range of questions in great detail. This was the first lecture organised specifically for MBP², but the second lecture is already arranged – Professor Austin Smith (again from the University of Cambridge) will be giving a talk on his work on the possibility of the use of human stem cells in MS treatments on May 18th.

A (very) brief explanation of Multiple Sclerosis

Multiple sclerosis (MS) is the most common neurological condition among young adults in the UK, affecting approximately 85,000 people. It is possible for MS to occur at any age, but in most cases symptoms are first seen between the ages of 20 and 40. Women are almost twice as likely to develop MS as men. MS is a condition of the central nervous system (the brain and spinal cord), which controls the body's actions and activities, such as movement and balance. Each nerve fibre in the central nervous system is surrounded by a substance called myelin. Myelin helps the messages from the brain travel quickly and smoothly to the rest of the body. In MS, the myelin becomes damaged, disrupting the transfer of these messages. There are four main types of MS: benign MS, relapsing remitting MS, secondary progressive MS and primary progressive MS. The symptoms of the condition are numerous and unpredictable, and they affect each person differently. Some of the most common conditions include problems with mobility and balance, pain, muscle spasms and muscle tightness. For more information go to www.mssociety.org.uk





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Free Grand Prize Draw

which will take place at the end of the summer term.

AND

Answer the questions below correctly and you could

WIN FREE LUNCHES FOR A WEEK!

1. What is the main ingredient in Toad in the Hole?
2. Which nuts are ground up to make marzipan?
3. What is Sarsparilla?
4. What are dried plums called?
5. What does the term 'brut' mean when referring to wine?
6. What name is given to someone who won't eat any food of animal origin?
7. What does the abbreviation UHT stand for?
8. What name is given to a two-coloured cake, usually covered with almond paste?
9. Which of the following is not a type of bean? - Kidney, butter, haricot, savoy
10. During a lifetime, how much food does the average person eat? 5, 15, 25, or 35 tonnes?

Hand the form in below to reception by 30th April. The first correct entry drawn

- | | |
|---------|----------|
| 1. | 6. |
| 2. | 7. |
| 3. | 8. |
| 4. | 9. |
| 5. | 10. |

Name Form



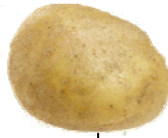
Where does it all come from?



Richard Ash
Thanet



LJ Betts
Offham



Michael Rout
Romney Marsh



S Gibson
Canterbury



J Collingwood
Wittersham



Kent Produce
Deal



Watts Farms
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cold dessert, fresh
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why not try our new
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D I E T

You could treble your weight overnight!

if you drive your son to and from school everyday and would be interested in joining a carpool scheme, please send the following details to Susan Begg at the school (susanbegg@thelangton.kent.sch.uk)

Your name, your son's name, your son's form, your address (including postcode) and your telephone number.

This information will be passed on to other parents who live in the same area as you do who have also signed up for the scheme so that you can contact each other to make your own carpool arrangements



save money, save time, save the planet