

the pinnacle



ISSUE 13 | OCT 2013

Showcasing exceptional work by students from Princethorpe College and Crackley Hall School



ANYONE CAN BE
COOL
BUT
AWESOME
TAKES PRACTICE



to issue 13 of
The Pinnacle,
 a celebration of outstanding
 achievement by students across
 the Princethorpe Foundation.

This issue mostly celebrates great achievements from last term in subjects such as Technology, Science, History, Maths, Sport and Drama (as well as some more recent news from students already making their mark this new academic year). We are particularly excited about a new initiative called the da Vinci Programme... read on to find out more! The design for our front cover comes from Lower Sixth Art student Katie Brown. We love the composition and her use of colour for reminding us of those long summer days...

We hope you like the mini *Minnacle* mag inside too, with inspiring examples of work from all ages and disciplines – from battery powered cars to butterfly hatching – there's something for everyone!

Thanks go to my trusty Sixth Form editorial team, Emma Litterick for her photography and press releases, staff at Crackley Hall for sending through material for the *Minnacle* pages, continued support from Marketing Manager Melanie Butler and the superb design work by Debbie at DamDesign.

As usual *The Pinnacle* will be here to celebrate outstanding work, so keep sending in articles and news of success! We value every student's contribution and reward you all with plenty of house points. E-mail your work to: pinnacle@princethorpe.co.uk



COVER BY
 KATIE BROWN, L6

Be inspired!

HELEN PASCOE-WILLIAMS

Co-ordinator of the da Vinci Programme

NRICH

Last term whilst still in Year 10, Jacky Galbiati produced the best solution to a mathematical problem set by the University of Cambridge on their *nrich* website.

Charlie Gilderdale, a representative for the NRICH Mathematics Project at Cambridge University, thanked Princethorpe College's Maths department for sending in Jacky's solution, confirming it to be the best they had received and so added it to the collection. Jacky's solution can be seen at: www.nrich.maths.org/5468?part=solution.

WELL DONE
 JACKY!



Technology & Design

Josie Brazier and Tom Bull are two of our outstanding young designers. Both demonstrate a creative and imaginative flair for design and have shown real commitment, interest and passion for the subject. They are highly skilled and realise their ideas using their chosen materials expertly. Josie specialises in Textiles Design whilst Tom has focused on the material area of wood within Resistant Materials. Their work was displayed at last term's Art, Photography and Design exhibition.

Josie Brazier GCSE Textiles – Mermaid Dress

For my Textiles projects I designed and made a dress based on the theme of a little mermaid. I chose this because I am interested in musical theatre and thought that it would present me with a challenge that I would enjoy. The dress is designed to be worn by one of the cast.

I loved making the dress, particularly the testing and manufacture of the frills that went onto the dress. I am building on this experience by taking A-Level Product Design and am looking forward to improving my skills working with Textiles as well as developing skills working with other unfamiliar material areas. I also hope to increase my knowledge about designers and their innovative products.

The thing I really love about Technology is having the opportunity to be creative and the freedom to develop and expand on my own designs.

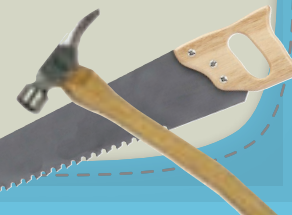


Tom Bull GCSE Resistant Materials Technology – Butcher's Table

For my GCSE I designed and made a Butcher's Block kitchen table. I decided to do this project because I thought it would be interesting, enjoyable and I wanted to produce a piece of furniture good enough to be used at home. I really enjoyed the practical part of the project and I am really proud of what I have produced.

I now study A-Level Product Design and I am looking forward to immersing myself in the process of designing and making new products, looking at innovative design and hopefully working with materials other than wood.

I really enjoy the practical side of the subject, specifically working with resistant materials.



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INSIDE PULLOUT
 THE MINNACLE
 INSIDE PULLOUT

CHEMICAL COMPOUNDS

CALCIUM
COPPER

MANGANESE
IRON



Last term Year 12 Chemists took part in a workshop run by the University of Leicester.

Last term AS-Level Chemists took part in The Spectroscopy in a Suitcase Workshop putting their newly developed analytical skills to the test. Pupils were asked to identify the structures of eight different compounds by preparing and running samples for infra-red spectroscopy and utilising mass spectrometry data. Their aim was to become forensic chemists and solve a murder from trace evidence.

Pupils had to identify key functional groups in the compounds and important fragmentation patterns. The university also provided modelling software to show the pupils how the infra-red frequencies affect the vibrations of the bonds in a compound, therefore producing identifiable peaks on the spectrum.

The Royal Society of Chemistry's Spectroscopy in a Suitcase scheme is an outreach activity which gives school students the chance to learn about spectroscopy through hands-on experience. As well as covering the principles of spectroscopic techniques, the activities use real-life contexts to demonstrate the applications of the techniques eg:

- Forensics
- Identifying unknown substances at festivals
- Running samples on motor racing fuels

Delivered by the students/lecturers from the University of Leicester, the event has a strong emphasis on encouraging school pupils to consider studying chemistry and the career opportunities available.

The following pupils took part in the workshop:

- | | |
|--------------------|--------------------|
| ELIZABETH BRADBURY | MADDIE GILL |
| ED BROTHERTON | TIM GUNN |
| JULIAN LOSCOMBE | JOE HOLMES |
| PATRICK MILLS | JACK HOWARD |
| BEN PEARSON | JAMES IVES |
| OSCAR THORNTON | ALASTAIR JENKINSON |
| NADINE WHITE | OLIVER WILTSHIRE |
| MILUN DULAY | |

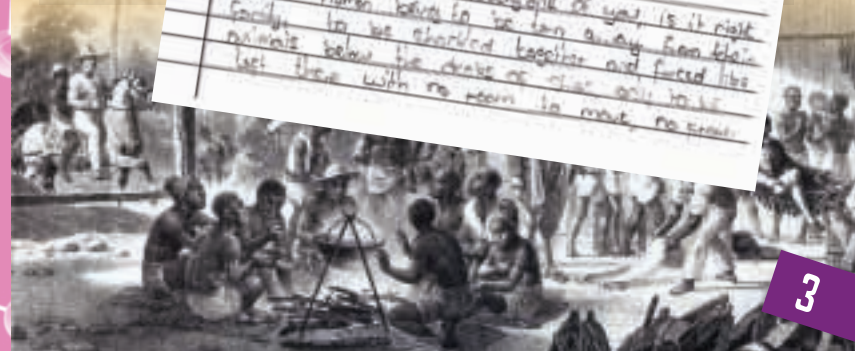
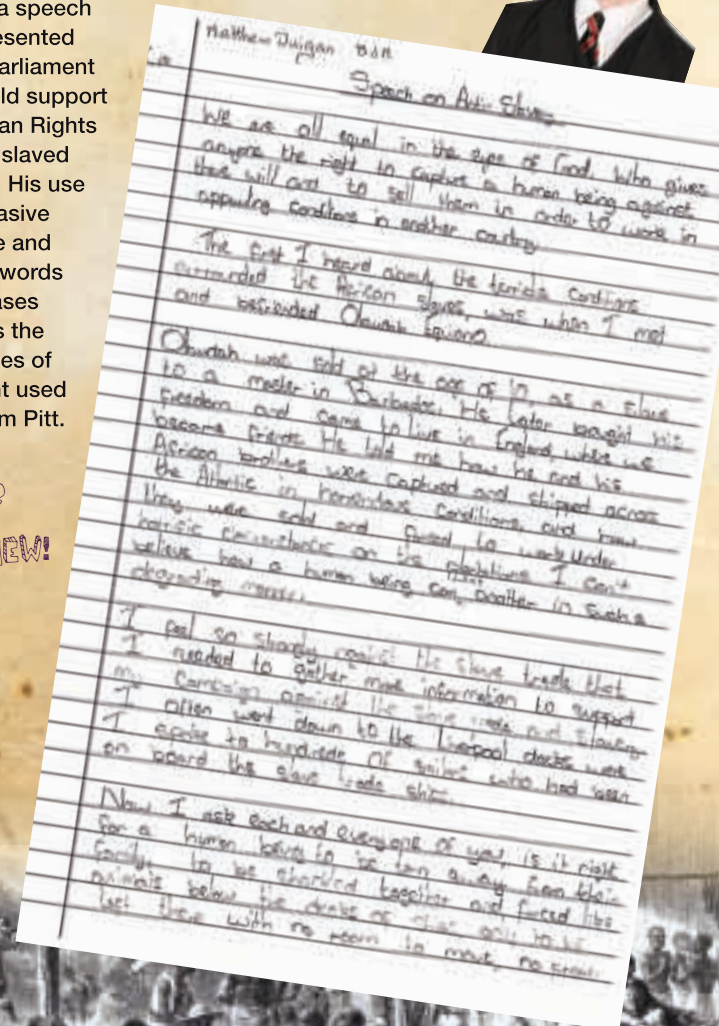


ANTI SLAVERY

As part of a group independent learning project on the Abolition of the Slave Trade in Year 8 History last term, groups chose to gather evidence to use in a well developed campaign argument directed at stopping the Slave Trade and eventually the Act of Slavery in the early 19th Century. For his part in this demanding challenge, 13-year old Matthew Duigan chose to prepare a speech to be presented before Parliament that would support the Human Rights of the enslaved Africans. His use of persuasive language and emotive words and phrases emulates the techniques of argument used by William Pitt.



SUPER WORK MATTHEW!



HEROIC HOCKEY

Six straight wins against fierce competition saw Princethorpe's U15s Girls' Hockey Team win the Loughborough Festival of Sport 2013 Shield on 21 September. Captain Bethan Ellis praised the squad for their skills and team work. "We all get on well together so we transfer this onto the pitch. Charlie was excellent in goal only conceding two for the whole tournament. Our passing and attack have really developed too."

Despite injury in the fifth game with Emily Palmer being taken off with a dislocated shoulder and the ensuing absence of a coach on the side lines Princethorpe battled on heroically to finish their final game against Loughborough High U15 A team convincingly with a 3-0 score.

Player of the tournament has to go to Regional and County player Ella Bromley who scored a magnificent twelve goals with Bethan Ellis taking a further four. Newly appointed Coach Miss Dani Black was jubilant with Princethorpe's early season victory.

"With four County players and three of them also playing at Regional Level this squad are a force to be reckoned with. They had a scare in the first game against Sheffield with the clock ticking and no goal being scored but they stayed calm to put their strategies in place to come through with a 3-0 win. Local rivals Bablake provided another hotly contested game but all credit has to go to this fine young squad who have a great season ahead of them."

Image shows Princethorpe Hockey Squad: Ella Bromley, Bethan Ellis, Jo Stanley, Alenka Young, Emily Palmer, Charlie White, Laura Humphries, Mollie Hughes and Hannah Malam.

"WITH FOUR COUNTY PLAYERS AND THREE OF THEM ALSO PLAYING AT REGIONAL LEVEL THIS SQUAD ARE A FORCE TO BE RECKONED WITH."



SKEET SUCCESS

In his debut performance as a member of the England Junior Skeet Team Princethorpe College pupil Isaac Marsden is enjoying the sweet taste of success. He achieved the top England score at the recent Home International Tournament against fellow shooters from Scotland, Northern Ireland, Wales, Ireland, Jersey and The Isle of Mann. Over the two day competition held at Bisley National Shooting Centre Isaac shot a total of 144/150 rounds leaving him just one point adrift of the overall winner.

Under the watchful eye of dad Nick, who also doubles as his coach, the youngster from Birdingbury has made remarkable progress in a sport that he only began two years ago.

"It's all about focus and practise by repetition," he concludes. "Shooting gets more rewarding the better you become so I guess it's that which drives me forward."

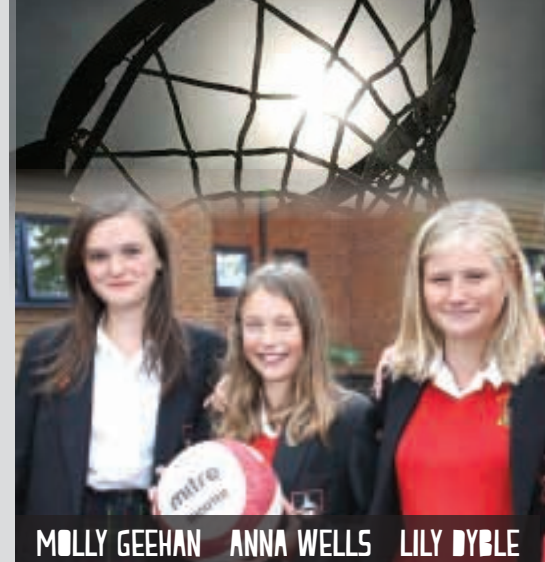
Having already represented the Warwickshire Junior Team Isaac took part in the England Shooting Selection rounds earlier in the summer. His massive 372/400 score impressed selectors enough to secure him a team shirt as one of the youngest in the age group of 16-21 years.

With A-Level studies to contend with and the hope of securing a place at Oxford to read Maths the Princethorpe student is looking forward to further success in the Autumn competition before the Skeet season draws to a close.

"I've got my eye on the Nationals Inter-County and Regional Tournaments and will then carry on training with my dad over the winter."

Princethorpe College Director of Sport Neil McCollin described Isaac's achievement, "Isaac is a modest student who would happily keep his success close to his chest. We are very proud of this fabulous result and look forward to watching his skills develop."

"I'VE GOT MY EYE ON THE NATIONALS INTER-COUNTY AND REGIONAL TOURNAMENTS AND WILL THEN CARRY ON TRAINING WITH MY DAD OVER THE WINTER."



MOLLY GEEHAN ANNA WELLS LILY DYBLE

TERRIFIC TRIO

Princethorpe College is congratulating a trio of Year 8 sporting stars: Molly Geehan, Anna Wells and classmate Lily Dyble have successfully trialed for the U14's Warwickshire Netball Academy.

Following three separate trials plus an extensive all day screening programme the girls were delighted to receive the news that they had been accepted. The outcome is especially sweet considering they are a year under the age group category.

Molly, who plays Goal Shooter, only took up the sport at the start of Year 7 making her swift trajectory to County player all the more remarkable. Goal Defence team mate Lily Dyble is well known for her fighting spirit on court.

College Coach Mrs Debs Brookes comments that 'nothing will get past Lily if she can help it!' Goal Attack Anna Wells who Mrs Brookes describes as 'one of the most outstanding netball players I have seen at such a young age' completes the trio who will be representing Warwickshire. Princethorpe's U13 netball team looks set to achieve new heights this coming season with three county players under their belt.

DREAMS ARE MADE OF

On Thursday 12 September, the Princethorpe College Senior Rugby Squad was lucky enough to spend the day working with former England Captain, British Lion and World Cup Winner, Lewis Moody. Moody led a training session in which he focused on the breakdown area, an area in which Moody excelled during his playing career. The first part of the session was a warm up based on decision making. Moody then moved on into a series of drills based on the clearing out at the breaking in order to produce quick ball. He showed the squad new techniques, recalling on all his experience from his 71 international caps. The next drill was to do with slowing up opposition ball at the breakdown. This was a physical contact drill that required complete commitment from the squad and in true 'mad dog' attitude the intensity was enormous. To finish the session, a forwards vs backs touch game was organised with Moody playing on the forwards team. In the end it was the backs who were victorious thanks to the lessons learnt earlier on in the session. Overall the senior squad all thoroughly enjoyed the opportunity to work with such an experienced and knowledgeable ex-professional and learnt a huge amount from the training.

Following this was a Q and A. Many people were interested to know his experiences from his professional career and what it was like to win the World Cup.

Moody spoke of his passion for the sport, a game he has played since he was five. He commented modestly that he may not have been the fastest or the best player when he was younger but he was committed and that was what made the difference. "I didn't want to look back and think, if I'd have put in a bit more effort, could I have achieved more?" Lewis explained, "It's all about commitment."

Moody cited Will Carling, Jonny Wilkinson and Walter Payton among some of his own favourite players, reflecting with admiration on the impact Jonny Wilkinson has had on the game. "I'm not kidding you, he would get up at six in the morning and practice kicking for two hours before the training session, two hours after, at lunch...just phenomenal. His commitment has become legendary. He just wanted to make sure he had covered every eventuality – kicking in the rain, the heat, from far away and from close range – he felt the enormous pressure he was under and he didn't want to let his team down."

When asked if he was ever nervous of coming up against any particular players, Moody explained he was never nervous of the big guys but rather the small, fast guys! And with that, he praised our very own Year 11 student Adam Smith who managed to thwart Moody's efforts at a break away in the training session, describing him as a great young talent.

There was a chance for photos and autographs with many people obtaining signed photos at as valuable memorabilia. The day was a huge success enjoyed by all, and credit for this must go to the star guest who was very impressive throughout the day. The Senior Rugby Squad will hope to put what they learnt into practise throughout the rest of the season and hope to emulate on a smaller scale the success that Lewis Moody enjoyed throughout his career.

By Patrick Mills

1st XV Captain 2013-14



LEWIS MOODY WITH JON FITT, ED HESTER, OSCAR THORNTON AND PATRICK MILLS



Dramatic gains in LAMDA Examinations

Nineteen budding thespians put themselves through the paces of learning prose, poetry and dramatic pieces in preparation for Princethorpe College's first ever cohort of LAMDA (London Academy for the Dramatic Arts) examinations.

Image shows (from left) Top Scoring Distinction LAMDA pupils with teacher Mrs MacDonald: Sol Elliott, JJ Van Wyk, Alana Eckland, Miriam Isaacs and Lily Blunsom-Washbrook (Not pictured Suzie Hazlewood, Emma Dewhurst and Alfie Thomson)

Results have now been received for the examinations taken in March and LAMDA tutor Mrs Mary MacDonald has expressed her pride in each of her student's achievements. With eight top grade Distinctions, ten Merits and One Pass the 100% success of the pupils from Years 7-11 reflects the hard work that each of them committed to in order to receive such recognition.

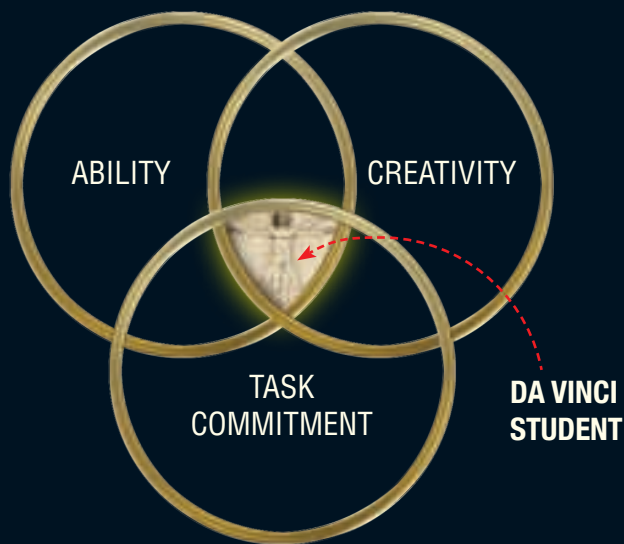
Examination specialist areas ranged from Level 2 Solo Grade 4 Acting to Level 1 to Grade Three Speaking Verse and Prose to Reading for Performance, Grade 3.

Visiting examiner Mrs Cathy Sullivan praised the range and breadth of material presented by the examination candidates. As Mrs MacDonald says,

"It is not an easy thing to do. These youngsters prepared their work with me in a safe and supportive environment on a weekly basis; to then put themselves into a performance arena in fairly close contact with an examiner can be quite daunting. However, these results are an excellent building platform for our future plans for LAMDA. I am so pleased for all of the students."

Something **new** and **exciting** is happening at Princethorpe College...

THE DA VINCI PROGRAMME



Princethorpe College has recently launched an exciting new initiative called *The da Vinci Programme*.

The aim of the initiative is to encourage students to embrace knowledge across a range of disciplines and to develop their capacities as fully as possible. Inspired by the notion of the **Renaissance Ideal** and Alberti's declaration that 'a man can do all things if he will', pupils are being encouraged to pursue broad interests, profound knowledge, and to achieve wide ranging accomplishments.



To find out more: visit the Princethorpe VLE; click on the Departments tab; go to the da Vinci page; and watch our introductory **da Vinci** movie.

Mindset: the new psychology of success

by Carol Dwek is at the heart of this new initiative, where the concept of fixed and growth mindsets have been brought together in a powerful trinity. Those of us with a **Fixed mindset** believe intelligence and ability are set, fixed and there is nothing you can do to change them; whereas those with a **Growth mindset** believe that while we may be born with certain factors which affect our intelligence and ability, including the environment into which we are born which may or may not nurture certain skills, we are completely able to change those skills and develop them as much as we wish to. The da Vinci Programme seeks to bind these two mindsets together and provide a platform from which students can really achieve their potential.

Princethorpe College has brought together the two opposing mindsets in a simple trinity pioneered by Joe Renzulli's **Three-Ringed Concept**. Named by The American Psychological Association as one of **the 25 most influential psychologists in the world**, Joseph Renzulli is Director of the National Research Centre on the Gifted and Talented. His research has focused on strength-based assessment, the identification and development of creativity and giftedness in young people, and models for personalized learning. A focus of his work has been on applying the pedagogy of gifted education to the improvement of learning for all students.

'Research on creative-productive people has consistently shown that although no single criterion can be used to determine giftedness, persons who have achieved recognition because of their unique accomplishments and creative contributions possess a relatively well-defined set of three interlocking clusters of traits. These clusters consist of above average, though not necessarily superior, ability, task commitment, and creativity.'

It is important to point out that no single cluster "makes giftedness." Rather, it is the interaction among the three clusters that research has shown to be the necessary ingredient for creative-productive accomplishment.'

(Renzulli, 1978)



Fixed Mindset
intelligence and talent are fixed at birth



Growth Mindset
intelligence and talent can go up or down

'Research on creative-productive people has consistently shown that although no single criterion can be used to determine giftedness, persons who have achieved recognition because of their unique accomplishments and creative contributions possess a relatively well-defined set of three interlocking clusters of traits.'

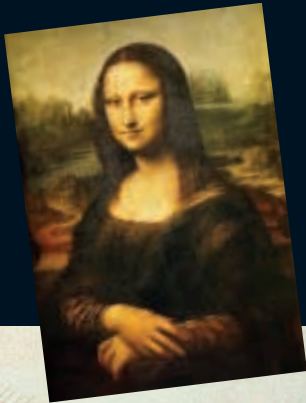
Joe Renzuli's Three-Ringed Concept

BOTH 'GENERAL' AND 'SPECIFIC' ABILITY - ECHOES OF 'FIXED MINDSET'



HERE'S YOUR RENAISSANCE IDEAL

HERE'S WHERE THE 'GROWTH MINDSET' COMES IN



...and creativity?

'Business leaders want people who are creative, who can innovate, who can think differently, who can work in teams and can communicate...So the economic imperative for creativity is absolutely clear. There is a big cultural imperative too because the world is getting more complicated, connected and more challenging...

And finally there is a personal imperative...In the end it's about people finding fulfilment in their own lives, that their lives add up to something, that they have purpose and meaning...'

Sir Ken Robinson, published by NACE, Spring 2013.



Flow

Mihaly Csikszentmihalyi is a Hungarian professor of psychology noted for his work in the study of happiness and creativity, but best known as the architect of the notion of flow.

In his seminal work, **Flow: The Psychology of Optimal Experience**, he outlines his theory that **people are happiest when they are in a state of flow – a state of concentration or complete absorption with the activity at hand** and the situation (1990).

The idea of flow is identical to the feeling of being in the zone or in the groove. The **flow state is an optimal state of intrinsic motivation**, where the person is fully immersed in what he or she is doing.

To achieve a flow state, a balance must be struck between the challenge of the task and the skill of the performer. If the task is too easy or too difficult, flow cannot occur. Both skill level and challenge must be matched and high; if skill and challenge are low and matched, then apathy results.

Published by NACE, Spring 2013

da Vinci points

Teachers at Princethorpe College will ensure tasks are being set which stretch students and allow them to **demonstrate** their **ability, creativity** and **task commitment**. Where these three interlocking traits are demonstrated, a da Vinci sticker will be awarded (equivalent to three merits). We will quickly build up a picture of our da Vinci students and reward them in a number of ways.

It is hoped that this new focus will help to reinforce a culture of mastery, creativity and task commitment in the College. It is an ideal that all our students should aspire to! To endeavour to develop one's capacities as fully as possible – to be a Renaissance Princethorpeian!

ability, creativity and task commitment



Sheridan on

Course for Career in Biochemical Engineering



JAKE SHERIDAN, L6

During the summer holiday I attended a biochemical engineering introduction course at University College London (UCL), organised by the Smallpeice Trust, a charity that aims to promote engineering careers to young people. The course was to introduce us to the many areas of biochemical engineering and the career opportunities it opens. Everyone was extremely friendly and welcoming and the course was very well organised, making the experience very enjoyable and valuable. It gave me an insight into university life and

gave me many skills that will be useful for my future. We participated in many activities including lectures, research tasks, experiments and tours which were all highly enjoyable. It gave me an idea of what university work involves, and gave me many skills that are applicable to my A-Levels such as how to do independent research, give presentations, work in a team and take efficient notes. We did work on many topical issues including the development of an AIDS vaccine and therapeutic technologies, which was very interesting and useful. Overall the experience was enjoyable and useful and is definitely worth looking in to.

Summer School for Girls

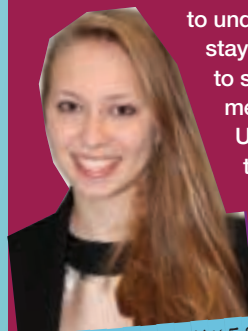
After taking part in a couple of rounds of the UKMT Maths Challenge, I was invited to one of the many summer schools held annually around the country.



I was offered a place at the Summer School for Girls at Oxford University, where I spent a week at Balliol College, attending lectures about various mathematical problems and theories that the forty of us girls had never even heard of before.

We were encouraged to push ourselves and were taught things such as Catalan Numbers, Modular Arithmetic, the Pigeonhole Principle and how to prove geometric theories that were discovered thousands of years ago. Although these were all very difficult, the challenges they posed were interesting and it was rewarding to finally solve a problem after pages and pages of working.

The summer school also provided the chance to understand what university is like – staying in the halls of residence, going to sessions at the Maths Institute and meeting new people from across the UK. It was an incredible opportunity to be given this insight into what life is like while studying a degree and the course itself has definitely furthered my interest in pursuing Mathematics at a higher level.



MADDY WIGMORE-SYKES, L6

EXTENDED PROJECT SUCCESS

PRINCETHORPE COLLEGE STUDENTS HAVE DONE IT AGAIN!

With areas of research ranging from Robin Hood to Robots, last year's Upper Sixth EP students have yet again excelled at this highly valued qualification. Daisy Donaldson's Artefact and Rhiannon Edwards' Dissertation were both awarded 100% and an A* with Bethany Leigh and Sophie Jones' Dissertations achieving firm grade As. Superb work girls!



Former Upper Sixth students Sophie Jones, Daisy Donaldson and Bethany Leigh (Rhiannon Edwards not pictured)

It is certainly interesting to note that universities are valuing the Extended Project Qualification more and more. The University of Southampton has recently announced new admissions criteria regarding the EPQ. From now on all applicants for their Humanities and Human & Social Science Courses undertaking an EPQ will be offered one grade reduced from their traditional offer in exchange for an A in the EPQ. Correspondence from the university states, 'It is our hope that this will send out a clear message to students that we value the EPQ, and appreciate the hard work that goes into completing one. We also hope that this will serve to encourage more students to undertake the EPQ... We have an increasingly compelling evidence base that students who did well at the EPQ settle in well to their undergraduate study.' It will be interesting to see if other universities follow this example...

'WE HAVE AN INCREASINGLY COMPELLING EVIDENCE BASE THAT STUDENTS WHO DID WELL AT THE EPQ SETTLE IN WELL TO THEIR UNDERGRADUATE STUDY.'

The College was also proud to receive news of results gained by a small number of Year 9 students who undertook the Level 2 EP as part of a pilot scheme last year. With one A*, four As and a B, Alana Eckland, Bethan Ellis, Rhiannon Jenkins, Alistair Robinson, Oliver Mottershead and Josh Horswill were thrilled at their results! Their research areas included Euthanasia, Children's Rights, Capital Punishment, Rights of Indigenous Tribes and Ethics of Horse Racing. Well done to them all for their commitment and enthusiasm. We look forward to following their journey in the Sixth Form when we hope they will undertake the Level 3 EP!



Alana Eckland, Bethan Ellis, Alistair Robinson, Oliver Mottershead and Josh Horswill. Rhiannon Jenkins (not pictured).

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