

Engineering



Non Sibi Sed Aliis
'Aiming at Excellence'

ISSUE 9 // APRIL 2010

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TRANS- FORM

THE ENGINEERING NEWSLETTER
FOR BALSHAW'S C.E. HIGH SCHOOL

Well here we are again. We have been redesignated as an Engineering Status School and we have set new targets and an extended community vision for the next 3 years. You will have seen that Transform goes from strength to strength and we are delighted that this is our 9th edition.

Our circulation grows and we try and encourage more people to write articles as wide ranging as National Anniversaries to events in school to interesting articles all from an Engineering perspective.

Keep sending us your thoughts and archive material from former Balshavians. That is how Balshaw's becomes living history.

Happy Reading.

Yours sincerely

J M Venn Headteacher

BLACK AND DECKER



■ 1910 - 2010: THE ANNIVERSARY OF THE TOOLS WE KNOW AND USE AT HOME, AT WORK AND AT SCHOOL BUT HOW DID THEY COME ABOUT.

Two young entrepreneurs S Duncan Black and Alonzo G Decker founded a small machine shop in Baltimore, Maryland. They called it the Black & Decker Manufacturing Company. Their shop has grown beyond anything they could have imagined.

Today Black & Decker is a global marketer and manufacturer with products marketed in over 100 countries, half of which are outside the United States. The company is the world's largest producer of power tools and accessories. Have a look at home or at school to see them.

1934 SCHOOL TRIP

■ IN CASE ANYONE WONDERS ABOUT THE TRIP POEM IN THE LAST ISSUE,

it was not written by any student at Balshaw's.

My how things change! After our articles in the last Transform about trips, we were sent the following from the family of Harry Rowland Ashurst who died in March 2009 and went on this trip from Balshaw's Grammar School in February 1934:

- Trains have got quicker
- Charabancs have certainly changed.
- School trips have definitely become more adventurous.
- We bet there was no Educational Visits Co-ordinator in those days.
- We wonder what risk assessment they had to do?
- School attire?? Not often do our trips go in uniform these days.

I am sure that at 13 he had equally as much fun though as they do now.

BALSHAW'S GRAMMAR SCHOOL LONDON EXCURSION. FEB. 27th.

Proposed Itinerary.

Pupils starting from Preston must be at the main entrance by 8. 40 a.m. Each person must report at once to the group leader.

School attire must be worn by all.

No one must leave their particular group during the day without permission from the group leader.

Approx times.

- | | | |
|------------|---|---|
| 8. 57 a.m. | Train departs from Preston. | Wigan depart 9. 20. |
| 1. 0. | Arrive Euston. | |
| | Proceed by charabanc along Tottenham Court Road, Charing Cross Road, Shaftesbury Avenue to Piccadilly Circus and the Royal Academy. Britisha Exhibition of Art. | |
| 2. 30. | Leave Academy. | |
| | By charabanc along Haymarket to Trafalgar Square. Via Strand and Fleet Street to St. Paul's Cathedral. | |
| 3. 30. | Return via Embankment to Westminster Bridge. | Houses of Parliament and Westminster Abbey. |
| 3. 30. | Charabanc to Admiralty Arch, Whitehall. | |
| | Walk along The Mall to Buckingham Palace and Constitution Hill to Hyde Park Corner. | |
| 4. 15. | Walk through Hyde Park along Rotten Row, past the Serpentine to Marble Arch and Burn Tree. | |
| 4. 55. | Arrive Marble Arch. Tube to British Museum. Those who do not wish to take the Underground may proceed by charabanc | |
| 5. 30. | Leave British Museum and proceed to Euston by a circuitous route. Arrive Euston 6. p.m. | |
| 6. 10 | Train departs from Euston back to Preston. | |
| 10. 3p.m. | Train arrives in Preston. | |

SKIPTON CASTLE 6TH JULY 2009



■ ON 6TH JULY 46 YEAR 7 STUDENTS ACCOMPANIED BY MR BARRETT, MR NOLAN, MRS MAKINSON, AND MRS WILSON WENT

on the Year 7 annual History trip to Skipton Castle and Bolton Abbey. After leaving school we went on a magical mystery tour through the Ribble Valley and into Yorkshire. Mr Barrett, our tour guide for the day gave a superb commentary en route highlighting all the sights. On arrival in Skipton we were escorted around the castle by our guides who told us all sorts of weird and wonderful things about the castle which dates back to the 13th century. We saw arrow slits, cannons, 6ft thick stone walls, the long drop toilet passage (pooeey), trip steps for invaders and secret passages. We learnt how some modern day phrases came about. Did you know that the bedtime rhyme "Good night sleep tight, don't let the bed bugs bite" dates from the 13th century. Servants would tighten the ropes on their master's bed so that they were able to sleep on a snug mattress – "Good night sleep tight". The "Don't let the bed bugs bite" refers to the mice, rats and bugs that would crawl up the bed post into bed with you – lovely!! Also bread was baked in a stone oven (those medieval people were way ahead of their time!) and when it was taken out the bottom

half, which was burnt, was cut off for the poor people and the rich got the upper half or the "upper crust". This term is still used to refer to wealthy people in society today.

We were able to see how the castle had developed technologically through the ages with the development of weapons. This technology had helped the castle inhabitants to defend themselves for hundreds of years from early wooden bows and arrows during the Norman Conquest to swords, muskets and cannons in the English Civil War five centuries later. We also visited the smelly dungeons and nearly left a few of our pupils there. Before we left the castle pupils had a quick trip to the Castle shop and purchased their own weapons which were used later in the day for an archery competition and a re-enactment of the Battle of Hastings!

After lunch we went on to see Bolton Abbey and the state it was left in after Henry VIII stripped it of all the lead slates from the roof, stained glass windows and marble altar during the Reformation. We then had a mad dash to the coach before the heavens opened and we nearly got drenched. On the way home Mr Nolan threatened to entertain everyone with some of his corny jokes! A good day was had by all!

LEVEL 1 SPORTS LEADERS UK



■ A TEAM OF PUPILS AT BALSHAW'S CE HIGH SCHOOL HAVE SUCCESSFULLY COMPLETED LEVEL 1 SPORTS LEADERS TRAINING. THE

qualification is run by the British Sport Trust and Mrs B Jackson, Balshaw's School Sports Coordinator, organised

for 20 year 10 pupils to study the course. It involved the pupils learning how to develop the skills for leading sporting activities. They studied for a total of 30 hours after school and had to organise and lead a 1 hour session of sport as part of their practical. The boys chose to have a Year 7 inter house softball tournament and the girls had a year 7 inter house rounders tournament. 100 year 7 pupils took part and it was a great success. Mrs B Jackson said, "Our Sports Leaders have been excellent role models for our younger pupils showing a mature attitude and impressive organisational and motivational skills throughout. The large numbers of year 7's who attended the summer tournaments were testament to the quality of preparation and leadership displayed by the year's candidates. They thoroughly deserve their awards."

Due to the success of this group, 20 more year 10 pupils are working towards the qualification this year.

LIVERPOOL UNIVERSITY

■ TODAY I FOUND OUT LOTS ABOUT COURSES AND CAREERS STEMMING FROM MARINE BIOLOGY. I FOUND THAT ONLY TWO THIRDS OF

marine biology students go on to work in a field of marine biology, whilst the other third generally become police officers, army cadets, bankers or work for the Environment Agency.

Professor Frid pointed out that a marine biology degree was an excellent background for someone hoping to obtain a career in environmental affairs.

We were told that after doing the marine biology degree for three years I would have to go on to do a masters and then a PhD. I was also told that if I wanted to work abroad permanently then I should do my degree in this country and then go to the selected country (Australia) to do the masters and PhD.

I would spend three years doing the marine biology degree (18-21) and then one year doing the masters (21-22) and then three to four years doing the PhD (22-25/26).

I was told that there are many different fields of marine biology, like a researcher or a professor or a government adviser, personally I would like to aim to be a researcher.

The professor talked about how as a youngster he aspired to be a diver in Florida but found out after he had done all his courses that he would much prefer to take a different career path and has greatly enjoyed travelling the world and enjoys his job at Liverpool University now. This shows that marine

biology is a flexible and versatile area of science.

He said that the proportion of days at sea to days in the lab was that for everyday I spend at sea I spend one to two weeks in the lab analysing the data and specimens I collected.

A PhD student took us into the labs and said that if I did well enough that I could get sponsored to do my PhD and therefore have all my expenses paid for and earn £13,000 tax free for living expenses. She knew this as this is what she is doing at the moment.

All in all I think the day has given me some extra motivation to do what I want to do. I also think I would like to go to Liverpool to do my degree in marine biology but then go to Australia to do the rest. It has also helped me choose the subjects I will take at college (Biology, Chemistry, Maths, Geography and Art), so I'm glad I went.

By Jonathan Shuttleworth



THE WORLD'S LARGEST COFFEE MORNING



■ A LARGE NUMBER OF PUPILS TOOK PART IN THE WORLDS LARGEST COFFEE MORNING ON FRIDAY 25TH SEPTEMBER IN AID OF

MacMillan Cancer Support. The whole school was invited to attend the event held in the school hall. A variety of different cakes were donated by both staff and pupils. These were served with either squash or coffee. The event was organised jointly by the Lower School Council and GCSE Food Technology students. With the help of support staff and pupils the event raised over £85.



AND THE AWARD GOES TO...



■ YES THE DARWIN THEME RAN THROUGH OUR LOWER SCHOOL QUIZ

this year on 21st October. 15 teams took part from Years 7 and 8 for a special Darwin plaque for each participant. There were picture

rounds including a Science Picture Round, Food and Drink, Sport, General Knowledge, History, RE, Geography Rounds as

well as having to know facts about the life and work of Darwin and why this is being celebrated 200 years after his birth.

A great deal of fun was had, and at times the scores were very close but this is how they ended up.

1st – Clayton 3 – 67 marks

2nd – Clayton 4 – 65 marks

3rd – Farington 4 – 64 marks

Thank you to Mr Melling for the plaques and for all the support that tutors gave them.

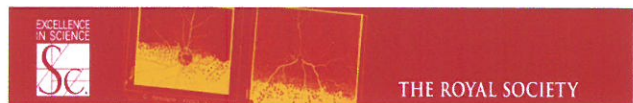
MORE AWARDS!

■ CONGRATULATIONS TO CAROLINE MOLYNEUX WHO HAS BEEN AWARDED A ROYAL SOCIETY HAUKSBEE AWARD FOR

excellence in supporting science, technology, engineering and mathematics for 2010.

As part of its 350th anniversary in 2010 the Royal Society is recognising the unsung heroes in these subjects for their work and commitment supporting the UK science base. The Hauksbee awards recognise and reward individuals who have excelled in their roles.

The awards are named after Francis Hauksbee who was



Isaac Newton's laboratory assistant at the Royal Society. During his time as president Newton appointed Hauksbee as curator and instrument maker, and Hauksbee later became a fellow in his own right in 1705.

So Caroline is one of a long list of recipients over the last 350 years – even longer than Balshaw's has been in existence. Well done. You deserve it.

The award ceremony is in March.



LS

November 18, 2009

Ross scoops honour by Royal appointment

A LEYLAND teenager has won the Duke of Edinburgh Award's highest honour.

Ross Cottam, 19, of Evergreen Avenue, received the Gold Award in recognition of his achievements during a gruelling 18-month period of numerous challenges.

The former student of Balshaw's C of E High School and Runshaw College took part in the Duke of Edinburgh Award whilst he was an air cadet at the 92 Chorley Air Training Corps.

Ross said: "The honour is really rewarding for all the effort I've put in over the last one-and-a-half years."

The teenager had to prove himself over five sections of a difficult programme.

From hiking 52 miles through Bavaria, playing for Chorley Rugby Football Club, building model aircrafts, volunteering as Leyland URC Cub Scout leader, before finishing with a week-long stint at Frimley Park Military Leadership Course. Ross said: "It was defi-

By Lee Starsfield



'NICE': Prince Philip

nately worth all the hard work. It will give me an advantage when looking for jobs in the future and help with my dream of joining the Royal Air Force."

Speaking enthusiastically of the D of E Award, he added: "It's great for promoting different attributes

in young people, just to give them an edge in life regardless of their background."

Ross was presented with his gold certificate from the founder of the D of E Award himself, HRH Prince Philip, at a ceremony in St James's Palace, London.

He said: "Prince Philip was really nice. We started talking about university and what I did there."

Ross's dad, Andrew, attended the ceremony and the gold award winner says his entire family has been really supportive throughout.

He is now studying mechanical engineering in Newcastle, but hopes his achievements will help him become a part of the Royal Air Force in the not too distant future.

The Duke of Edinburgh Award is a youth charity for anyone aged 14-24, aiming to help them succeed regardless of their background by teaching life skills through adventure.



HIGH FLIER: Ross Cottam completed his Duke of Edinburgh Gold Award while an air cadet

DARWIN PRESENTATION

■ ON WEDNESDAY 11TH NOVEMBER MS STEPHANIE SINCLAIR FROM THE WELLCOME TRUST CAME UP FROM LONDON TO JUDGE THE YEAR 10 PRESENTATIONS ON THE LIFE AND WORK OF DARWIN. THIS WAS A SUPERB EVENT AND CAME AT A GOOD TIME FOR REVISION FOR

Year 10 separate science GCSE exam.

Presentations included home made videos, powerpoints, cartoon images as well as talks and powerpoint, all created by the pupils.

With topics varying from the life, work and voyage of Charles Darwin to the Evolution of Communication and the Evolution of Chocolate, it was no wonder that everyone learned such a lot.

Parents, Governors, Staff and Pupils were all part of the audience and Stephanie was very impressed indeed and is going to roll out our ideas for other national programmes.

Well done to all involved.

*Dear Miss Molyneux,
I would just like to congratulate you and your students for a wonderful evening.*

As always the students were a wonderful example of the high standards of your school. It was so good to see so many students willing to put so much time and effort into preparing their presentations and to come back in an evening and make their presentations. The media portrays children of this age so differently yet your students all appeared to be smart, intelligent, articulate and hardworking and I am sure that you and Miss Venn were very proud of their achievements.

As an ex marketing manager for ICI I have seen many professional presentations and I can honestly say that the standard of all the presentations this evening was very high. The range of styles was very good, choices of music always appropriate and the IT skills used quite stunning. I also was amazed at the confidence and ability the students showed in their presentations. Standing in front of an audience of that size and making a formal presentation is not for the faint hearted yet ALL of the students appeared confident and unphased. What a wonderful skill they are gaining before they join the work place.

Once again many congratulations and thank you for the opportunities you give to our children to develop these skills.

Christine Adams.

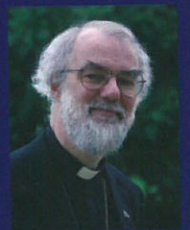


THE ARCHBISHOP OF CANTERBURY PAYS A VISIT...TWICE!

■ ENGINEERING ANY LARGE EVENT IS NOT EASY, BUT A LOT OF WORK WENT INTO THE VISIT OF THE ARCHBISHOP OF CANTERBURY DR ROWAN WILLIAMS TO THE BLACKBURN DIOCESE IN NOVEMBER. THE SCHOOL WAS LUCKY TO BE

involved on two occasions. Firstly the Head Miss Venn had lunch with him at Bishop Rawstorne Language College and then representatives from Governors, parents and pupils went to the Diocesan Eucharist on Saturday 7th November at Blackburn Cathedral.

Representing the school Jenny and Christopher Mather were 2 of only a limited number of pupils chosen to represent the youth in the area. They were excellent ambassadors.



LICENCE TO COOK

■ PUPILS IN KEY STAGE 3 FOOD TECHNOLOGY ARE FOLLOWING A NEW PROGRAMME OF RESOURCES DEVELOPED BY THE BRITISH

Nutrition Foundation. The programme will become compulsory for all schools from September 2011. It involves an increased amount of practical lessons which are supported by powerpoint's and recipes. These can be seen on the schools Moodle site. All the resources are vibrant and use very up to date ideas about healthy eating and food hygiene.

The programme also has an interactive website. The pupils are given their own password and independently work through tutorials and tests. This reinforces the work covered in the Food room.

Mrs Thomas is a trainer for the programme and other secondary school teachers have attended 3 very successful training sessions at Balshaw's. Miss Venn is a member of the Head Teachers Steering Group for the programme.

The feedback from pupils about the programme has been fantastic.



'MAKE IT' CHALLENGE

■ ON THURSDAY 4TH DECEMBER A GROUP OF YEAR 10 PUPILS WENT ON THE BAE ENTERPRISE 'MAKE IT' CHALLENGE. THE DAY

got off to a slow start with a minibus flat battery but after that it was all on the up.

The event revolved around the designing and making of an unmanned emergency vehicle. The first task was to allocate jobs to the team members in our group.

With the competition rising each team had to design and produce a prototype of an emergency vehicle made from polydrens. By lunch 4 team members had to make it through the menacing metal maze. With only a metal detector to assist us and £5,000 lost for every time we went over the metal. With the maze overcome, it was time to clock down and get our pitch sorted.

With our stomachs filled and only half an hour to go we felt the pressure building on our shoulders. Posters, leaflets and websites were produced to market our company.

The moment of truth drew nearer as each group waited nervously to hear their name drawn out of the hat. As Balshaws was announced four members made their way to present in front of the judges. After the judges questions we breathed a sigh of relief, all we had to do was wait for the decision.

After the teams had pitched their ideas, there was a tense couple of minutes while we waited for the dragons to choose the winners. The first prizes to be awarded were individual prizes, and Gina Wren won one for teamwork. Then it was time for the main prizes. There were prizes for the top three



teams and the top two would go through the regional finals. Imagine our excitement when the judges announced we had come 2nd! We were very proud and happy that we will be going to the finals in April.

Gina Wren, Caroline Wood, Siobhan McCann, Zoe Rutter

THE HISTORY OF BARCODES

■ HAVE YOU EVER THOUGHT ABOUT BARCODES AND HOW IMPORTANT THEY HAVE BECOME IN OUR LIVES, AND ESPECIALLY IN

supermarkets. Millions of items every day are scanned in to machines all over the country, not least in supermarkets.

Over 90 Balshaw's students packed hundreds of thousands of articles into bags at Morrisons on 28th November aiming to raise money for a new minibus. We raised £1776 in 10 hours. Members of staff, parents and governors joined them throughout the day. We heard the bleep as barcodes passed the scanner.

The idea of barcodes started as long ago as 1948 when Bernard Silver overheard a president of a local food chain asking someone to research a system to automatically read product information. He and Norman Woodland tried Morse code and formed the first one on sand on the beach.

"I just extended the dots and dashes downwards and made narrow lines and wide lines out of them." He used a 500-watt light bulb shining through paper on to a tube.

This was patented on 20 October 1949 (sixty years ago). In 1951 Woodland moved to IBM and tried to interest them in developing the system. IBM thought it was something for the future.

In the mid 1970's the National Association of Food Chains established the US Supermarket Ad Hoc Committee which set guidelines for barcode development and created a symbol selection subcommittee to help standardise the approach. They developed an 11 digit code to identify any product. The committee sent it out to tender to several groups like Singer, National Cash Register, IBM and others.

Woodland was set up in new facilities in North Carolina by IBM to lead the development.

At first they were printed on pieces of adhesive paper and attached by hand. Sometimes when printing the ink got smeared so they made the code taller.

NCR installed a testbed system. On 26th June 1974 Clyde Dawson bought a 10 pack of Wrigleys Juicy Fruit gum and it was scanned by Sharon Buchanan at 8.01am. The pack of gum and the receipt are now on display at the Smithsonian Institution.

Economic studies projected a saving of over 40 million dollars if these were accepted but because the scanning machines were expensive, no one wanted to move first. By 1977 there were fewer than 200 grocery stores with scanners.



Then they realised the benefits and the information can lead to better servicing of customer needs. This led to 10-12% increase in sales and 1-2% decrease in operating costs which meant lower prices.

By 1980 the technology was being adopted by 8000 stores per year.

BENEFITS OF BARCODES

In point-of-sale management, the use of barcodes can provide very detailed up-to-date information on key aspects of the business, enabling decisions to be made much more quickly and with more confidence. For example:

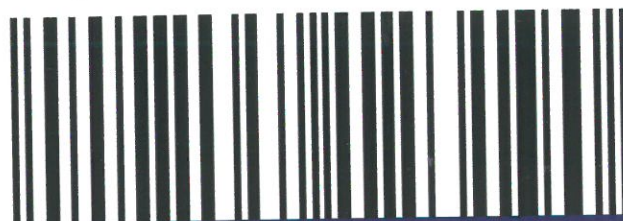
- » Fast-selling items can be identified quickly and automatically reordered to meet consumer demand.
- » Slow-selling items can be identified, preventing a build-up of unwanted stock.
- » The effects of repositioning a given product within a store can be monitored, allowing fast-moving more profitable items to occupy the best space.
- » Historical data can be used to predict seasonal fluctuations very accurately.
- » Items may be repriced on the shelf to reflect both sale prices and price increases.

This technology also enabled the profiling of individual consumers, typically through a voluntary registration of discount cards. While pitched as a benefit to the consumer, this practice is considered to be potentially dangerous by privacy advocates.

This is BALSHAWS written in EAN-13 barcode symbol (the symbol used by Morrisons).

So every time you go shopping just remember the uniqueness of the Barcode!

Congratulations to all our bag packers.



ON THE NATIONAL STAGE

■ SPORTS ENGINEERING IS A RAPIDLY DEVELOPING AND EXCITING AREA OF

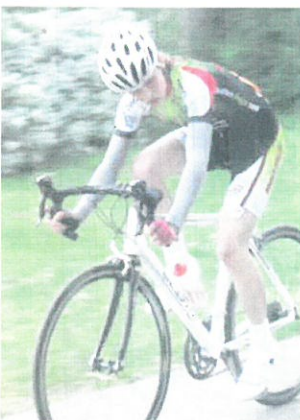
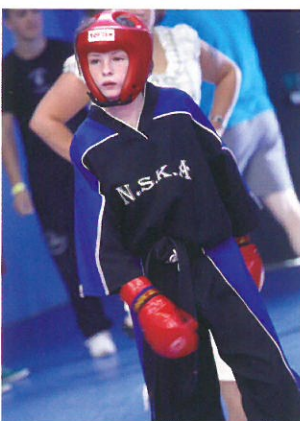
engineering, associated with sporting activity. The primary aim of a sports engineer is to enable all athletes, whether elite or recreational, to enjoy injury-free sport with improved performance.

Here at Balshaw's High School we enjoy the privilege of working with such athletes. Take Kati Williams for example, a year 11 student who has represented her county, the region and is now on the national stage as an English Schools Athlete. Amongst other disciplines she competes in the 80m Hurdles and has recently enjoyed huge success in the UK School Games where she came a very creditable 7th in the U17 age group.

Kati has talked of the evolving equipment and clothing within her discipline. Compression socks worn by the athlete reduce the build-up of lactic acid and accelerate blood circulation. They help to prevent muscle fatigue and soreness, enabling faster muscle recovery after training, competing, or injury. She wears specialist spikes built in a way that forces the runner to run on their toes; and 'skins' – specialist clothing that enhances circulation and reduces lactic acid build-up. These garments also optimize body temperature in warm and cool conditions and draw moisture away from the skin.

The hurdles themselves have also been engineered and are made generally out of plastic and aluminum and have to be weighted so they have adequate toppling force.

Similarly, Ashley Smith, in year 10, who has competed in an Intercounties Cross Country National Competition and was placed in the top half of her age group, has discussed the clothing and equipment she uses on a regular basis. Her cross country spikes are much sturdier than other spikes and have much more grip on them and she is often registered in such competitions on a chip, which is then worn around the ankle and acts as an



electronic timing device.

Zoe Armstrong (Year 10) and her brother, Robert (Year 7) are both at National level within cycling. Zoe takes part in road racing, mountain biking and cyclo cross and recently won the U14 National Championships. Each discipline requires a different bike, all of which are engineered differently. Zoe's cyclo-cross bike has 'knobbly' tyres which give better grip on muddy and slippery surfaces and has more brake clearance in comparison to other bikes so that mud does not get stuck in the brake blocks. When mountain-biking she uses a bike with thicker tyres for grip and a different suspension for travelling over rough terrain. She wears specialist shoes, designed to grip the pedal or ones that are easier to pull the feet out of when dismounting and picking up the bike itself.

Abi Slater, also a year 10 student, is currently at national level within Dressage. She has been placed each time in the top ten in the National U25 Championships. Likewise, Abi has specialist clothing. Jodhpurs can be 'sticky' to help the rider, particularly at beginner level, to stay in the saddle. However, equipment is mainly engineered for the horse rather than the rider. Horses wear specialist boots and bandages to protect their ligaments and prevent injury. They also wear magnetic boots to circulate the blood through the night and after competition and the saddle has air in the flocking panels which make it lighter on the animal's back.

Finally, Kodi Dearden is a year 9 student who is the 4 times U16 British Kickboxing Champion, having fought in England, Ireland and Spain. Her equipment involves focus pads, kick pads, footpads, shin pads and hand pads – all designed to cushion impact and keep competitors protected.

The world of sport is ever-changing and evolving. However, it is primarily the innate ability, the commitment, the dedication and the drive to succeed of these exceptional students that has got them to where they are now. We wish them every success in the future and look forward to seeing them in the Olympics!

ROTARY PHOTOGRAPHY COMPETITION

■ WE USE CAMERAS ALL THE TIME NOW, BUT THAT WAS NOT ALWAYS THE CASE. THE ENGINEERING OF THE CAMERA HAS

developed massively over the last 120 years since celluloid film was manufactured by George Eastham in 1889 for his first camera which he called the 'Kodak'. It came pre-loaded with enough film for 100 exposures and needed to be sent back to the factory for processing. In 1900 came the Brownie that introduced the concept of the snapshot and various models of these remained on sale until the 1960's.

The first photograph was made in 1814 using a sliding wooden box camera made in Paris, but it was not permanent and faded. There was a device as long ago as 1021 recalled in the book of optics that talks of using a pinhole or lens to project an image of the scene outside on to a viewing surface. The earliest cameras were room sized with space for one or more people inside.

Nowadays most of us use a digital camera which is a camera that takes video or still photographs digitally by recording images via an electronic image sensor. Digital cameras can do things film cameras cannot, displaying images on a screen immediately after they are recorded, storing thousands of

images on a single small memory device, and can delete images to free storage space. Some can crop pictures and edit images. In some ways they operate in the same way as film cameras using a lens with a variable diaphragm to focus light. Digital cameras are incorporated into many devices ranging from PDA's and mobile phones to vehicles. The Hubble Space Telescope and other astronomical devices are essentially specialised digital cameras.

The following pupils have been extremely successful in the Rotary Photography Competition.

YOUNG PHOTOGRAPHERS INCLUDE:

Winner of 11-13 Competition: *Thomas Hughes*

Winner of 14-17 Competition: *Thomas Brereton*

Highly Commended: *Holly Brooks (11-13)*

Paige Chappelow (14-17)

Also commended and certificate winners are: *Chloe Seddon, Grace Thompson, Rory Black, Rachel McAndrew, Holly Jackson, Joshua Lonsdale.*

Well done. Are you a photographer? Why not enter the next Rotary Photographer of the Year Competition. For full details see Mr Crabtree.

LIGHTS, CAMERA, ACTION

■ SOMETIMES, IN AN AGE WHERE THE VAST MAJORITY OF THINGS WRITTEN AND SAID ABOUT PEOPLE OF OUR AGE GROUP ARE OF

a negative nature, it's easy to lose sight of what a vast array of different talents we have here at Balshaw's. However, as the Talent Show on Tuesday, November 2, proved, there can be no denying the amount of ability at this school.

A modern Balshaw's tradition, the show was organised entirely by the Prefect Body, who put in hours of work and effort to get the show on the road, to use a phrase. The fine-tuning of such events is easily overlooked, but, apart from one unforeseen technical hitch, the evening ran smoothly and represented a brilliant evening of entertainment, highlighting Balshaw's talent with the aid of a great deal of technology.

All in aid of Children in Need, the sound and lighting system was, once again, put through its paces with terrific lighting sequences to accompany the electrifying acts, the smoke machine was regularly deployed to add to the atmosphere, and a good time was had by all. How much of the evening would have been possible without the digital sound and lighting system, amplification, microphones, a superb opening video, curtain drawers and so much more? These are just a few of the engineering factors that helped raise a magnificent £430 for charity, making a wonderful show possible.

Without the technology, and the tireless endeavour and hard work of the acts, the prefects, and all of the behind-the-scenes assistants, the show and its smooth-running couldn't have gone ahead – another thorough success for Balshaw's!

Jack Hepworth

WEATHER WEEK 2009

■ YEAR 7 ENJOYED A FUN AND FUNCTIONAL MATHS WEEK WITH ALL THEIR LESSONS RELATED TO THE THEME OF WEATHER.

Pupils had the opportunity to become a weather forecaster, write holiday brochures and compare the weather from

around the world.

Pupils enjoyed working with different teachers and seeing how their maths is useful in the real world of work.



NUCLEUS

BALSHAW'S SCIENCE NEWS

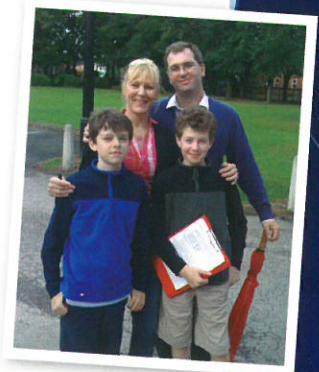
AN UPDATE OF PAST AND FUTURE TRIPS, NEW EXCITING TECHNOLOGY AND FACILITIES

DARWIN TREASURE HUNT!

■ FAMILIES FROM BALSHAW'S TOOK PART IN THE DARWIN TREASURE HUNT IN JULY TO SOLVE CLUES INCLUDING A TRIP TO LEYLAND LIBRARY TO FIND FACTS ABOUT DARWIN'S BEAGLE

voyage and a visit to Leyland Museum where the "Seeing is Believing" Science exhibition was held.

All treasure hunters arrived back at Balshaw's with a wealth of knowledge about Darwin and enjoyed Dinosaur biscuits and juice provided by the Science Department's very own Mrs Rutter. The winners received their very own First Day Cover of this year's special edition Darwin stamps. Well Done to everyone who took part!



IS SEEING BELIEVING? THE ART OF SCIENCE

■ THROUGHOUT THE SUMMER MONTHS THE ROYAL SOCIETY EXHIBITION WAS HELD AT THE

Leyland Museum as part of Darwin Year. It is the first time that the Royal Society has ever held an exhibition outside of London. Dr Felicity Henderson from the Scientific History Department came up to the North West to officially open the exhibition.

Students from Balshaw's visited the museum during Science lessons to see one of the first ever drawings of Siamese twins, sketches of objects viewed under Dr Robert Hooke's microscope and some of the earliest known drawings of the features of the moon. Dr Henderson spent an afternoon at Balshaw's where she explained to students where the exhibits originated. We heard fascinating tales of the men of Royal Society who would experiment with newly invented contraptions in order to answer scientific questions including "What is in the air?" and "What do things look like close up?"

YEAR 9 CAMELOT TRIP!

■ PUPILS CELEBRATED THE END OF THEIR YEAR 9 EXAMS WITH A TRIP TO CAMELOT!

Where is the Science in that?! Well, pupils visited the Rare Breeds Farm in the Theme Park which is home to rare breeds of sheep, pigs and birds along with a falconry display. Don't forget about the Physics of the rollercoasters... did you know that the Nightmare ride reaches speeds of over 40mph!



THE WOLFSON FOUNDATION

■ THE WOLFSON FOUNDATION IS A CHARITABLE ORGANISATION SUPPORTING PROJECTS ACROSS THE FIELDS OF SCIENCE

and technology, medical research and health, education and the arts, currently allocating some £35 million per annum. In September Balshaw's was visited by the Honourable Mrs Janet Wolfson de Botton CBE. Stop Press! £30,000 grant obtained. More in next issue

NUCLEUS

BALSHAW'S SCIENCE NEWS

PLUGIN 2 ENGINEERING!

e-on

SEPARATE SCIENCE STUDENTS IN YEAR 10 AND 11 ENJOYED A WORKSHOP PRESENTED BY THE ENERGY GIANT E.ON WHICH EXPLAINED HOW ENERGY REACHES OUR HOMES. STUDENTS HAD TO SOLVE PROBLEMS INCLUDING HOW TO INSTALL A CIRCUIT BREAKER, HOW DOES A wind turbine work and what happens when electricity cables become damaged? The Engineers from E.On were looking for team work skills from the Balshaw's students and presented a prize to the team that worked best together!

A great time was had by all and we would like to thank E.On for coming along to Balshaw's to present their workshop.



YEAR 11 PUPILS START NEW GCSE

YEAR 11 PUPILS STARTED THEIR GCSE IN APPLIED SCIENCE IN SEPTEMBER. THEY WILL STUDY modules in Forensic, Sport and Food Science.

As part of their Forensic studies pupils learn how to secure a crime scene. This includes preventing contamination of evidence, photographing, identifying and labeling evidence and analysing footprints, fingerprints, blood stains, poisons, ink stains and much more.

At Open Evening the Applied Scientists produced a display of their work, showing off their skills to parents and Year 6 pupils.



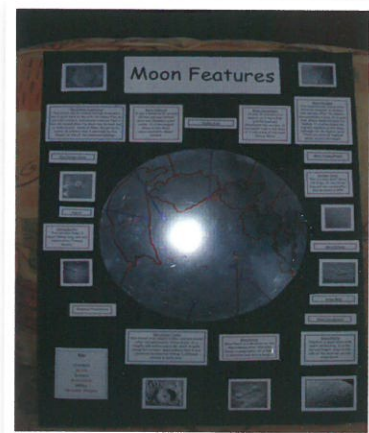
ASTRONOMY GCSE

Reach for the Stars!

THE FIRST EVER GCSE ASTRONOMY STUDENTS RECEIVED AMAZING

results in August!

100% A*-C Grades! Audrey Isherwood, our adult student from Runshaw college achieved an A* grade whilst 8 year old Kimlam Nguyen gained a C grade! Congratulations to Year 9 student Henry Andrew who received the GCSE Astronomy Achievement prize at Speech Night. Well Done to all our Astronomers!



GET INTERACTIVE IN THE CLASSROOM!

AS PART OF BALSHAW'S REDESIGNATION AS AN ENGINEERING COLLEGE THE SCIENCE DEPARTMENT HAVE BEEN FORTUNATE

enough to receive "ActivInspire" handsets to enhance Teaching and Learning in Science lessons. The devices, which look like a mobile phone, allow pupils to text answers, vote in a multiple choice quiz or simply answer "True or False" during a lesson and their answers are shown and analysed on the whiteboard. Teachers can see who needs further help,

see whether the topic has been fully understood by everyone or simply set a revision quiz that everyone can interact with. The handsets give an opportunity for all pupils to be involved in activities at once. We are particularly excited about using the Handsets to practice for GCSE Module examinations which are multiple choice! So far the students have found them a fantastic resource!



BALSHAW'S DURING THE WAR YEARS 1939-45

■ AS I ARRIVED AS A YOUNG, SOMEWHAT NERVOUS NEW STUDENT, A SACHEL AND A GAS MASK SLUNG OVER MY SHOULDER TO

begin the Autumn term 1939 in a relatively new Balshaws Grammar School, I was overwhelmed by its size and its hordes of much older and taller students. My parents, I now realise, were so proud that I was the first member of the family to have a grammar school education and, of course, many years later, I realise how fortunate I was for that experience. They must have denied themselves so much to give me that golden opportunity. Did I ever thank them? I hope I did, but probably not enough! We, the new intake, plus the remainder of the 300 students met in the Main Hall for an introductory service and assembly. The importance of the new school year was emphasised, and then the school was dismissed to begin their studies, but we remained to be given a pep talk by the Headmaster, before progressing to our respective form rooms to meet our form teachers. Throughout my education I had a great respect for my 'friend', Mr Parry!

It soon became apparent WE WERE AT WAR.

The grass-covered, completely camouflaged air raid shelters had been built during the summer vacation on the north side of the 1st XV Rugby pitch. The Army soon arrived to be encamped in a large sand-bag encircled dug-out with an anti-aircraft gun in place, on part of the precious girls Hockey pitch.

The intermittent ringing of the school bell signalled a quick, orderly procedure to our own designated shelter, but most importantly with our gas mask over one's shoulder. The whole class sat on wooden benches, facing each other, with monkey-like gas masks in place. How I wish I had had a camera! Daylight bombing of Leyland had begun in 1940. I now realise the vulnerable position the school was situated in – mid way between the well camouflaged Euxton Munitions Works (The Royal Ordnance Factory which has now become Buckshaw village) and the industry of Leyland (Leyland Motors works off Golden Hill Lane and in Farington). A note here that I feel is of importance – just before the war, as an Eccleston farmer's son, I had befriended a German student, who was 'studying' on the next farm. A great guy, so I then thought, but it transpired that he was a member of the well-indoctrinated Hitler Youth organisation who had infiltrated our country to pinpoint strategic targets when war broke out. Balshaws must not have

been on his list! He was arrested, never to be seen again. I often wondered what happened to him.

The marauding German U-boats in the Atlantic were sinking our food-laden Merchant Navy at an alarming rate. 'DIG FOR VICTORY' was most essential and introduced immediately. The school must continue to be fed at midday! The bottom Rugby pitch was de-sodded, dug, and planted with potatoes, cabbage, Brussels sprouts, turnips, and marrow which grew on the removed sods. Marrows grow large and by the dozen, and soon appeared on the school menu several times a week. I never want to see marrow on my plate ever again!!!

As I progressed into Senior School I had to take part in Air Raid Precaution Duties. The German Air Force had begun to shower certain selected areas with incendiary bombs. 'Our school must not burn down' was the motto of the day. With two other Balshavians, I joined the Maths Teacher, Mr Watkinson, in taking turns to patrol the school throughout the night. Balshaws was not a target! I was on the Friday rota.

The tide of the war began to turn. We were on the offensive and we senior boys used to rush into the Main Hall to join certain of the staff to hear the 'One o'clock News' on the radio, reporting the Eighth Army's advance in North Africa, the Normandy Invasion (D Day), and the Army's progress across France and into Germany. Throughout these troubled times our education had to continue. Most of the male staff were in the armed forces and the majority of the tuition was arranged by our very dedicated female staff. However, occasionally, there was sadness in school. During morning assembly we were sometimes informed of the death of a former pupil – killed in action. Many of the students went directly into the forces on leaving Balshaws – many into the Royal Air Force Volunteer Reserve (RAFVR). Some of them were known to me but I cannot now remember their names. What a loss of talent!

The war ended as I left Balshaws to continue my education in St. Peter's College, Birmingham, after which I joined the Royal Army Education Corps for a while. I am proud to be an ex-Balshavian with its high moral values instilled in me as I journeyed through life.

May your school continue to grow from strength to strength. NON SIBI SED ALIIS.

James Moon

WARHAMMER CLUB

■ DID YOU KNOW THAT WARHAMMER CLUB IS ALIVE AND WELL AT

Balshaws! They meet every Tuesday after school. In case you are wondering what Warhammers is it is a tabletop miniature war game set in a science fantasy universe. Warhammer 40,000 was created by Rick Priestley in 1987 as the futuristic companion to Warhammer Fantasy Battle. The game gives rules for urban, planetary siege and large-scale combat respectively.

Our members assemble and paint individual 28mm scale miniature figures that represent futuristic soldiers, creatures and vehicles of war. These are collected to comprise squads in armies that can "fight a battle" against those of other players. The players decide upon a scenario from simple skirmishes to complex battles involving defended objectives and reinforcements. Each player physically moves the models across the table and the actual distance between models plays a role in the outcome of combat. The outcome is determined by tables and the roll of a dice. The battle can last anywhere from half an hour to several days and can be strung together to form a campaign. You may have heard of Orks, Eldars, or the magazines about them White Dwarf and Imperial Armour. A real feat of Engineering!

If you want to come and join us or see games in action just come to Room 2 at 3.30pm on a Tuesday.



ALEX BIBBY

■ SPORT HAS ALWAYS FEATURED HIGHLY IN THE LIFE AT BALSHAW'S.

It can lead to all sorts of futures. We heard recently of Alex Bibby who has just completed his Physical Training Instructors Course for the Commando Training Centre Royal Marines.

Alex is now 26 and joined the Marines in 2001. He is now on Commando training at Lymptone Camp in Devon. He is interested in Sport and Circuit Lesson Plans, perhaps we can invite him back to do circuit training with us as we didn't have it when he was a pupil.

During the course he did a lot of rope climbing and running.

He recently undertook the course and this is what they said about Lieutenant Corporal Bibby.

"His completely non-emotional approach to the course coupled with his constant miserable facial expression has often left other course members completely baffled looking exactly the same whether just waking up in the morning or just finishing a fireman's carry. He was by far the most consistent man on the course taking all aspects of the course in his gigantic stride."

Well done Alex. You weren't miserable when at Balshaw's.



SPEECH NIGHT

■ SPEECH NIGHT IS ALWAYS A TIME OF CELEBRATION OF ALL THAT IS GOOD ABOUT BALSHAW'S - AS A SCHOOL WITH A LONG



tradition of excellence, a church school and an Engineering Specialist School. This year we welcomed Tom Bidwell back to give the awards, certificates, trophies and plaques.

It was fantastic to see him again and he gave a first rate speech, his English teacher Mrs Hoolahan would have been proud of him. We shouldn't be surprised that he can construct an excellent speech as he is now a script writer for the BBC. You may have seen some of his episodes of Casualty, Eastenders or Holby City. Tom will have built upon his experience of hospitals and doctors to write these scripts.

When Tom was 14 he was diagnosed with Non-Hodgkin's Lymphoma and had to have lots of treatment and chemotherapy whilst taking his GCSEs at Balshaw's. Tom was an inspiration even at school and gained 5 GCSEs. He wrote

a book of poems which was published by Waterstone's at the time. He then went on to Runshaw and after 'A' levels went to the University of East Anglia to study Literature and Drama.

From there he wrote a play for Radio 4 which we all listened to in school, and once the BBC heard of his work, he got accepted on to the BBC's Writers Academy. A group of 30+ staff and Governors went to see the World Premiere of his play "Company Along the Mile" at the Lowry Theatre which was excellent.

Tom's advice to last year's Year 11 and the present prize winners was excellent. It included asking yourself

- Everyone knows nothing
- What would Elvis do
- Don't look sideways
- Don't be afraid to make mistakes
- Pull your shirt out of your shorts, pull your socks up and put your hand up - "If you are the hardest working man in that room everyone is going to love you."

A real inspiration and someone who has aimed at and achieved excellence. We are so proud of you.

TIDDLYWINKS AT FOREST SCHOOL!!



■ FOREST SCHOOLS ORIGINATED IN SCANDINAVIAN COUNTRIES WHERE CHILDREN CARRY OUT MUCH OF THEIR

learning outside in forests and woods. Based on the Scandinavian model, they have been developing quickly in this country in recent years and a comprehensive training for Forest School leaders is being carried out across the country with Lancashire now taking a keen interest in training leaders, particularly in early years.

Connecting with the environment, sensory exploration outside and risk taking are essential to children's learning and development, particularly in the early years. Outdoor play is now an essential requirement of the Early Years Foundation Stage and all children must have daily access to the outside.

Forest Schools are designed to encourage & inspire individuals of any age through positive experiences and participation in engaging, motivating and achievable tasks and activities in a woodland environment, helping to develop personal, social and emotional skills such as



independence, self-discovery, confidence and self-esteem. Children develop relationships, teamwork skills and a wide variety of curriculum skills and understanding.

The Tiddlywinks teacher is now a qualified Forest School leader and we have been bringing groups of children to the 'forest' here at Balshaw's twice a week since the beginning of October. Every child will have the opportunity to experience 'Forest School' at least once every two weeks throughout the year they are in Tiddlywinks. We will arrive in all sorts of weather and carry out lots of different activities including bug hunts, building shelters, designing and making homes for animals and hiding games. Each session includes a story or rhymes time in the circle area and a snack before we leave.

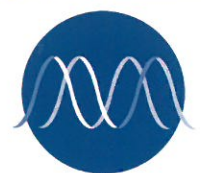
Children and staff work together throughout the year to make the area 'our own' for the times when we are using the site and we would like to offer a very big thankyou to Miss Venn and Mr Temmen for agreeing for us to use the site and for the support we have had in preparing it for our children to use. The site is ideal for our needs and the walk has become part of the learning experience for the children.

Gill Conway

Tiddlywinks Pre-School, Leyland Methodist Infant School

3 MORE YEARS

■ SEPTEMBER SAW NOT ONLY THE START OF THE NEW SCHOOL YEAR BUT THE ARRIVAL OF SOME GOOD NEWS. BALSHAW'S HAD BEEN REDESIGNATED AS A SPECIALIST SCHOOL IN ENGINEERING.



Engineering

MEMORIAL GARDEN

■ ON MONDAY 30TH NOVEMBER WE HELD A DEDICATION SERVICE FOR THE MEMORIAL GARDEN. THE SERVICE WAS LED BY REV.

David Gibb of St Andrews and Rev. Duncan Clarke of St Ambrose. Each of the 160 guests had a candle dedicated to a loved one and Mr and Mrs Masterman and their family lit the candles as the choir sang. It was a spiritual, moving and memorable evening, so much so we plan to hold the event every year. The garden is dedicated to all pupils, staff, family and friends of Balshaws we have lost over the long history of the school.

The design is based on a gold medal winning show garden at the RHS Flower Show at Tatton in 2005. A rendered wall 1 metre high encapsulates the main planting area. Raised above the ground it brings the plants closer to the people in the garden and incorporates seating in semi-private bays.

Here you can sit and relax, enveloped by plants. Summer foliage and flowers give way in autumn to black and red berries, fading in winter to leave the stunning white bark of the birch trees and a host of evergreen plants and shrubs; this garden is designed to be attractive all the year round.

The building of this garden over the last few years, raising the funds and overcoming the considerable logistical hurdles epitomises the spirit, strength and dedication of the Balshaw's Community pupils past and present, friends, families and the local community.

We believe the memorial garden will be a place to remember, to contemplate, a breathing space, an oasis of calm amid the hustle and bustle of daily school life.

Our readers have been following the building of the memorial garden at Balshaw's for some time. We had Ainscough's cranes lift stones, flags and soil at different times over the top of the building.

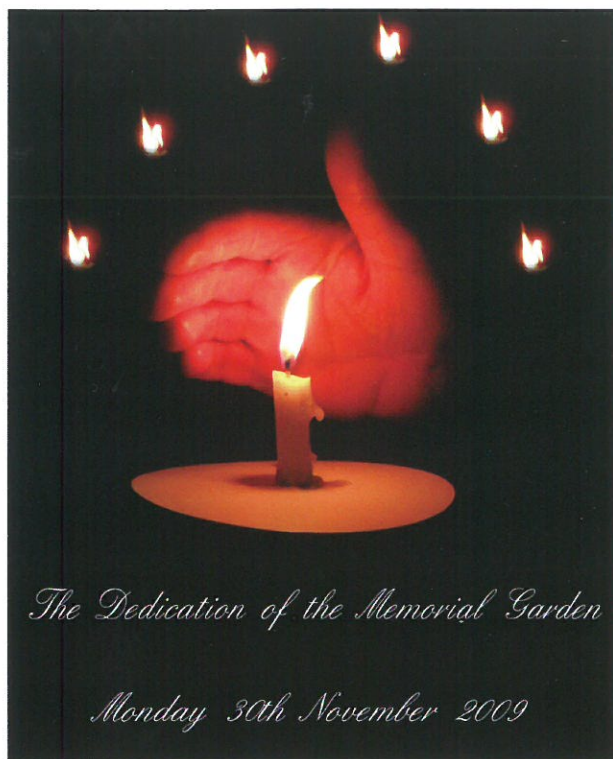
Well, we are delighted that it is now finished and was dedicated on Monday 30th November 2009.

The design is an unusual one. What does a public space mean to you? A lively hub for people to meet, stop and chat? Or a breathing space, an oasis of calm amid the school bustle? The Altered Outlook garden is all of these things.

A rendered wall encapsulates the main planting area. Raised above the ground, it brings the plants closer to the people in the garden, and incorporates seating in semi-private bays. Here you can sit and relax, enveloped by plants.

Tim Callaghan has worked really hard and not only worked with the design, but put in 100's of hours, planting, clearing and moving soil (with some parents and pupils) and laying the stones around the flags.

Monday 30th November marked the dedication and seemed a fitting day being St Andrew's Day. Over 160 people



The Dedication of the Memorial Garden

Monday 30th November 2009

came and many others dedicated candles to loved ones.

Rev Gibb and Rev Clarke took the service. Our prayers and readings reminded us that Jesus came as a light into a dark world. We remembered with gratitude the lives of those we love and are no longer with us, particularly remembering those former staff and students from Balshaw's.

Former students came who were pupils in the 1940's, 1950's, 1960's, 1970's, 1980's, 1990's and since 2000. Mr Ingram, former Headteacher, was there together with past and present staff, parents, governors and pupils.

The Paschal Candle from St Ambrose was lit and Mr and Mrs Masterman and their family lit the first candle for Ryan and then the lights from candles were passed on remembering former pupils like Louise Worth, Sandra Duxbury, Susan Hodgkinson, Jennifer Croft and many others.

Former staff Barry Sanderson and Geoff Aston were also remembered.

It was a cold crisp night but the candles glowed and flickered as the Choir sang the following song:

Jo Venn and Tim Callaghan talked about the origin and purpose of the garden and how it will be used by the chaplain, individuals and groups to lead us in reflection, worship and inspirational aspects of school life.

It was such a special evening that we intend to have an annual service to mark the beginning of the Christian Year remembering loved ones.

*Light the candle watch its flame
Flickering, shimmering in the dark.
Guide us to a brighter future.
Shine a light to lift up our hearts.*

*When the world is cruel and dark
Families suffering, torn apart
Guide us to a brighter future,
Shine a light to lift up our hearts.
no more evil, no more fear,
no more sadness, no more tears.
peace will come, peace will come.*

*Picture in the soft glow
A word that's meant for you.
Hopes and dreams and wishes
Can come true.*

And God said, "Let there be light," and there was light.



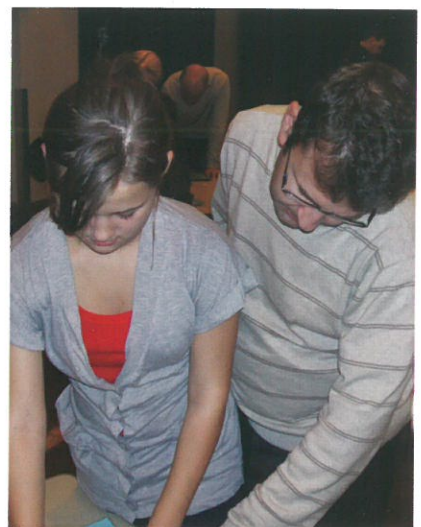
*The LORD is my light and my salvation - whom shall I fear?
The LORD is the stronghold of my life - of whom shall I be afraid?*

*Jesus said, "I have come into the world as a light, so that
no one who believes in me should stay in darkness".*

"Arise, shine, for your light has come, and the glory of the LORD rises upon you

YEAR 7 MATHS FEST

THURSDAY 15TH OCTOBER, 2009



■ **IT IS USUAL FOR THE WRITER OF REPORTS SUCH AS THESE TO BEGIN WITH THE LINE, "IT WAS WITH GREAT TREPIDATION THAT WE SET**

off for the 'dreaded' maths event....." However in this instance, it could not be further from the truth.

Maxine and I could not wait to get there and hopefully win some chocolate! Long time since Easter, still several weeks until Christmas.

Our optimism was born from the fact that three years ago I attended a similar event with Ashley – older daughter, also likes chocolate – and found the evening to be both enjoyable and achievable, even for mathematics strugglers like ourselves.

Although the format was similar (and why change it?), the staff once again showed great passion in their work. Led by Mrs Purcell, activities ranged from the energetic, to the head scratching, to the frustrating – but always enjoyable.

I was very impressed by the number of staff present. It was a wonderful opportunity for our Year 7 Angels/Devils* (delete as applicable) to show off their new school and their favourite

teachers, in a relaxed environment.

If I had been a fly on the wall of the staff room at the beginning of term, I believe that I would have heard Miss Venn say:

"Ok staff, Year 7 Maths Fest. From participant feedback, I know that everyone who attends really enjoys the event, and I also know that it will not be fabulously attended due to people being scared of maths. The timing and the format of the event make it a valuable and worthwhile exercise which we must continue, and I am sure that all Maths staff will continue to promote and support it....and by the way, I'll take you all out for a meal afterwards!"

In summary:

This is a very enjoyable event in which everyone can play a full part and experience success in maths as a family. More people should attend – if only for the posh biscuits, instead of the Smartprice ones at home!

David Smith

(Strangely also labelled 'Competitive Dad' by Mrs Bishop)



BALSHAW'S GOES VIRTUAL

■ A BIG PART OF WHAT WE DO AT BALSHAW'S WITH OUR ENGINEERING STATUS IS TO WORK WITH THE WIDER COMMUNITY AND

especially our partner primary schools. We are always looking for new ways to help our partner primary schools and to share the resource and experience we have. An exciting example of this was a recent project we did with Leyland Methodist Junior School.

Year 3 pupils worked with Mr Melling and their class teacher Miss Newsham to design and make a door sign for their bedroom at home. What made the project different was the fact that Mr Melling didn't visit Leyland Methodist to talk to the pupils and neither did the pupils ever visit Balshaw's. The whole project was done through video conferencing and e-mail. The pupils designed their door signs on software provided by Balshaw's and then they e-mailed their designs to be made on the D&T department's

laser cutter. The completed door signs were then delivered to Leyland Methodists.

During the project Mr Melling and the pupils held several video conferencing sessions to discuss ideas and to show the children how to use the software to draw their ideas. They were also shown the laser cutter working so they could understand how the door signs would be made.

The idea behind the project was to look into how easy it would be to create the virtual link between schools so that in future we could work together more easily. Visits are an important part of what we do but they take a lot of time and effort to set up. Through the virtual link we hope to develop the 'day to day' contact between Balshaw's and partner schools and increase the impact we have.

Mr Melling

ECO-ENGINEERING



■ THE WORLD IS FACING MANY CHALLENGES OVER THE COMING YEARS AND ONE OF THOSE IS THE HARM WE ARE DOING TO THE

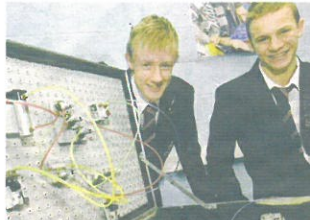
environment. We all have a role to play to reduce the impact we are having but the people we need to fix the big problems such as clean energy and climate change will be engineers and scientists.

To increase the pupils awareness of what engineering can do to make a difference we have created the Eco-Engineering group. The foundations of the group were laid last year by the hard work of several people including Mrs Bowden our business manager. The group's purpose is to look into ways that the school can be more sustainable and have less of an impact on the environment. We have built into our Engineering phase 2 plan a budget for the group and a series of targets.

Lots of projects are in the pipeline including growing our own food, enhanced recycling and producing our own clean energy. Keep your eye on upcoming Transform editions for regular Eco-Engineering updates.

Mr Melling

TRAINING 2000



■ LEARNING WAS MADE FUN FOR BALSHAW'S

students who visited Training 2000 in Blackburn. They were taught about everything from engineering and construction to dental nursing and healthcare.

Over the coming months, both year 11 and year 9 pupils will be making important decisions about their futures. To help make those life-changing decisions, Training 2000 hosted the events to encourage pupils to make the right choices.

A total of 950 pupils from across the area attended the 'Time to Innovate and Grow' (T2IAG) event where they were able to gain practical experience in a range of occupational areas.

The pupils took part in hands-on activities such as spraying vehicles in the automotive department, checking their blood pressure in the healthcare department and making dental impressions in the dental area.

Balshaw's pupil James Latty, 15, added: "I would like to go into either electrical or mechanical engineering so I know an Apprenticeship is the way forward for me. Today has been beneficial in giving me a glimpse of things to come."

We hope that their Engineering dreams come true. Thank you to Mr Temmen and Mrs Neville for taking the students to Training 2000.



THE POWER OF A SIMPLE GIFT

■ **FOR MANY, MANY YEARS MISS AMBROSE HAS BEEN ORGANISING THE FILLING OF SHOE BOXES FOR OPERATION CHRISTMAS CHILD.**

This is an initiative of Samaritan's Purse - which is a Christian relief and development organisation which works through local churches overseas to proclaim and demonstrate the love of God amongst communities in need in Africa, Eastern Europe and Central Asia. Don't forget kindness is the language which the deaf can hear and the blind can read.

It is the world's largest children's Christmas project -

devoted to spreading love, joy and smiles to children in parts of the world who really need them.

Sadly this was the last time Miss Ambrose organised this as she gave up her job last year but 101 boxes were collected by her and Mrs Rutter and were picked up before Christmas. Particular thanks to Mrs Henderson and Mr Crabtree's tutor group who donated 8.

We hope that just as Miss Ambrose spread happiness in school, our shoe boxes will spread happiness to boys and girls all over the world.

