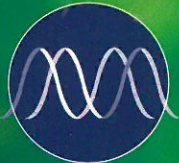


ISSUE 2 // SEPTEMBER 2006



Engineering



Non Sibi Sed Aliis
'Aiming at Excellence'

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TRANS- FORM

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

WELCOME to our second edition of Transform, continuing to celebrate the many exciting events, activities and facilities that have been made possible through the Engineering Status of the school.

Once again the magazine is packed with articles from our sponsors, the local community, Runshaw and St Andrew's Church.

This edition includes the overwhelming acclamation from Ofsted that Engineering is embedded across the curriculum and particularly embraced by the Christian ethos of the school.

We hope that you will enjoy this issue and feedback your comments and ideas for the future.

Yours sincerely,

J M Venn, *Headteacher*

EASTER ASSEMBLY

Balshaw's always holds Assemblies to mark the important times in the Christian Year.

Easter is no exception and this year Mrs Wilson provided a very moving powerpoint based on Jesus of Nazareth, which outlined the events leading up to Christ's death. The explicit pictures meant that

the reality of his suffering really meant something to so many of our students. A Year 11 pupil was heard to say "I did not realise that it was as horrific as that". Another said "Why did God let this happen?" This allowed the deeper question to be answered and meant that we could break up for Easter being fully aware of the suffering and death of Jesus followed by the glorious resurrection.



SPIRITUAL SUPPORT FOR YOUNG PEOPLE

This September sees the start of a new venture between Balshaw's, Runshaw College and St Andrew's Parish Church as Ruth Taylor begins her work as Youth Chaplain.



For the last few years Blackburn Diocese has been encouraging Church of England Schools to employ Youth Chaplains as a way of supporting the pastoral and spiritual development of young people. Inspired by this, Mike Sheehan, the Principal of Runshaw got in touch with Miss Venn and David Gibb (Vicar of St Andrew's and a Foundation Governor) and together they approached the Diocese to see if they could jointly employ a Youth Chaplain who will work at all three organisations. With the support of the Diocese,

earlier this year, after advertising, shortlisting and interviewing, Ruth Taylor was appointed, with the unanimous approval of the youth panel who helped to interview her.

Ruth was a student at Runshaw College herself, so she knows the territory there. She then went on to study English at Oxford University, where her love for the performing arts developed. Having worked for Youth for Christ and led their Performing Arts Team, Ruth is no stranger to working in schools and has found drama, music and dance to be great vehicles for exploring the big issues of life, and the Christian message.

Speaking to *Transform*, Miss Venn commented, "We are really looking forward to having Ruth with us in her capacity as Youth Chaplain. She has already spent a day at Alton Towers with over 200 of our youngsters, and attended New Intake Evenings with our new Year 7. We are aiming to strengthen the spiritual aspects of the School."

A VIEW FROM THE INSIDE

On 6 July past and present Chairs of Governors, Site Manager and the Head visited Wymott Prison to observe the production of our new gates and railings by the Engineering Department of the Prison.

A group of Category 'C' prisoners have made a fantastic job of producing wrought iron gates and railings using all the engineering processes.

We saw the various machines used and saw the production from beginning to end. Mr Turner spoke to us about the systems at Wymott and the training opportunities. Many of the prisoners involved were

taking NVQ levels 1, 2 and 3 in Engineering. The links that we had already made were increased and other possible projects were discussed. We learned of the other schemes they have, including training cleaners, and doing laundry for outside firms and other prisons.

The gates and railings are to be a reproduction of the 1930's style and are likely to outlive the pupils!!

We were so impressed by the craftsmanship and feel that the £25,000 raised by the Balshaw's Association to pay for this has certainly been money well spent.

We look forward to seeing them in situ, and we shall be sending pictures of the gates and railings to the prisoners involved, with our grateful thanks.

VERY GOOD WITH OUTSTANDING FEATURES

Well. Ofsted came and went. It was a hectic two days but the new framework means there is not a lot of time for worrying. It is a little like going to the dentist – intense pain but not for long!

How did we rate as a Specialist Engineering School? The Ofsted and the Diocesan reports includes the following statements.

- The school's specialist engineering status has enabled many departments to gain access to additional resources.
- The impact of the specialist status is spoken of highly by staff of a partner Special school whose curriculum is strengthened by its link with the high school and whose pupils make excellent use of its facilities.

• In addition, specialist status has led to better ICT provision for all.

• The school has identified links between its Christian distinctiveness and its status as an engineering college with the result that pupils are aware of the impact of faith on working life. For example, pupils have reflected on God as an engineer, considered ethical issues during engineering workshop activities and identified church buildings where modern technology has been used to provide an environment that promotes reflection and worship.

So, why not now read the full report which is on the DfES website and our own website.

J M Venn
July 2006

ALL OUR YESTERDAYS... AND TOMORROWS

Balshaw's embarked on a unique journey this year with members of Year 11. For many years we have been trying to create a Year Book.

This year we had the opportunity of joining with "Celebrating Life" to produce a multi-media DVD of our Year 11 with a profile of each person, and photographs from the early days of starting primary school right up to the glitz of the Leavers' 'Do'. Pictures of them in and out of school, video clips

of social dance in Year 7 or entertaining others at the Disco were all included. Hair-raising moments (literally) at Alton Towers and Mr Woodcock in the talent show all added to the enjoyment. This together with their aspirations for the future and newspaper articles made a superb presentation.

The Verdict – Outstanding. Not our verdict but that of the Ofsted Inspectors who saw it as part of the development and wellbeing of the individual.

We look forward to our next one... we have already got some DVD footage and photos!

ENGINEER GIRL WEBSITE

Did you know that the first mobile phone was produced in 1973 and weighed about the same as a bag of sugar and that Ada Byron Lovelace, the daughter of the famous poet Lord Byron, wrote the first computer program in 1843.

These are some fun facts that appear on the Engineer Girl website. It is an American site promoting engineering to girls and young women. It has pages including 'Why be an engineer', 'Great achievements',

'Cool links', 'Women engineers', 'Careers' and 'Fun facts'.

This site is a must if you want to find out what engineers do and how you can get involved. There are lots of links to sites about space, medicine, the environment and communications, so you can find out how engineers explore the galaxy, help people, protect the planet and connect the world.

There is also a link to a 'sister' site called 'Celebration of Women in Engineering' which has more information for parents, teachers and students.

A Cannell [www.engineergirl.com]

SPECIAL THANKS!

The school is eternally grateful for the continued work of Barry and Eileen from Crossways Day Centre. They come in to school every Friday and are invaluable with the help that they give us.

Barry works within Technology and Engineering counting stock, organising materials and cutting

wood. Eileen can be found in the school office, stamping books, shredding confidential materials, photocopying and stapling.

They are a joy to have in school and long may it continue.

J M Venn, Headteacher

ENGINEERING CHALLENGE DAY TAKES OFF

On July 14th the whole of the Y7 of Balshaw's and Moor Hey took part in a special day of activities that introduced them to powered flight.

The exciting day was the result of a collaboration of ideas between the Design and Technology, Science and Maths Faculties together with BAe Systems, formally British Aerospace. During a stimulating launch John Turner, chief test pilot for BAe Systems challenged the pupils to build a powered aircraft that could stay in the air for as long as possible. Such an aeroplane, it was pointed out, could be used in search and rescue missions or relief operations where a natural disaster has occurred.

The day was organized so that all the pupils worked with the Design and Technology Faculty to build a model aircraft from a kit and then to test and modify it. This challenge inspired the pupils to be fully involved, which led to an excellent standard of work. The pupils also worked with the Science Faculty to explore the principles of flight and completed a series of 'hands on' experiments. During lunch pupils had the opportunity to examine a micro light

aircraft that Miss Molyneux had arranged to visit the school.

At the end of the day a champion pair of model aircraft engineers had to be found and a fly off took place between the tutor group winners. At the exhilarating finale the whole of Y7 witnessed CU2 pair, Christopher Musgrave and Josh Fisher triumph with an outstanding time of 11.9 seconds. BAe graduate engineer Dave Gethin who had worked with and been impressed by the pupils during the day presented them with official BAe models of Hawk jets. After being presented with his award Christopher announced that when he left school he was going to 'be an engineer and join the RAF', a young man for whom the first Engineering Challenge Day had made a huge impact! Congratulations to all pupils who took part and a big thanks to the staff involved and to BAe Systems for their support.

Next year it is intended that both Y7 and Y8 will take part in Challenge events as Engineering Specialist School status continues to introduce new events and experiences to the pupils.

D Melling

Director of Engineering



ISAMBARD KINGDOM BRUNEL

2006 marks the 200th Anniversary of the Isambard Kingdom Brunel. He was one of the nineteenth century's most inspirational and versatile engineers. Year 10 and 11 GCSE Social and Economic History students learnt all about him. His anniversary was also marked in Assembly.

But who was Isambard Kingdom Brunel?

Isambard Kingdom Brunel was born in Portsea, Portsmouth on 9th April, 1806. He was the only son of the French civil engineer, Sir Marc Isambard Brunel and Sophia Kingdom hence his unusual name.

What is he famous for?

He is famous for his work on the Thames Tunnel, the Clifton Suspension Bridge and the Hungerford Bridge.

He was responsible for the design of several famous ships. The Great Western, launched in 1837, was the first steamship ever to engage in transatlantic service. The Great Britain, launched in 1843, was the world's first steam-powered passenger liner. It was originally going to be called 'The Mammoth' because of its size. The Great Eastern, by far the biggest ship ever built up to that time and the first transatlantic passenger steamship. It made the Bristol to New York crossing in an amazing 15 days.

The work for which he is probably best remembered is his construction of a network of tunnels, bridges and viaducts for the Great Western Railway.

What was he like?

Isambard Kingdom Brunel was a short, neat man, who stood just over 5 feet tall. He seems to have been self-conscious about his height, and he favoured tall top hats to make himself appear taller. He was a workaholic, often labouring 18 hour days and sleeping at his office in Duke Street.



When did he die?

In 1859 Isambard Kingdom Brunel died. The world lost one of its truly great engineering masters. Thousands attended his funeral.

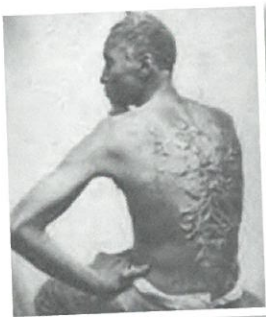
What else was happening then?

In the same year as Brunel died the following happened: - Darwin's *The Origin of the Species* was published, Robert Stephenson died, the steam-roller was invented and Merrell invented the electric washing machine

Things you never knew about Brunel

- Brunel could draw a perfect circle
- Winston Churchill "Beat" Brunel in the "Best Briton of all Time" BBC Poll by more than 56,000 votes
- The Tunnel does not shine on the 9th of April (Brunel's birthday), but the 6th - It is one of the few things ever "Early" on the National Rail
- The Screw propellor he designed and built was found to be only five percent less efficient than a computer-designed model.
- In 2006, the Royal Mint struck a £2 coins to "celebrate the 200th anniversary of Isambard Kingdom Brunel and his achievements". The Post Office issued a set of commemorative stamps.

HISTORY AND THE USE OF ICT



Year 10 Modern World History GCSE students have used this picture in their coursework on slavery. They had to think of five questions they would wish to ask the man who is a slave.



Year 7, 8, 9 and 10 have played "History Who wants to be a Millionaire" on the Romans, Henry VIII, Causes of World War I and Appeasement. Very few needed to phone a friend!

Year 7, 8 and 9 have played interactive History games in class on the School's History website – the most popular are "Fling the teacher", "Walk the Plank" and "Penalty shoot out"! Many teachers have been flung! Year 10 have looked at sources, essay writing and revision techniques on History GCSE websites such as Spartacus, John D Clare and History Learning Site.

ENGLISH ARTICLE

In 2004 Balshaws received engineering status which has been used in a number of subjects, to help enhance learning.

In English we have been supplied with an interactive whiteboard and a new digital camera. We have used the digital camera to assess our speaking and listening assignments which have been performed to the rest of the class. Once we have given our presentations, we have played them back to the rest of the class so that we can do peer assessment. This helps us to learn from our mistakes so that we can improve the grade of our next speaking and listening assignment by listening to what our peers have said. In class, we also have the advantage of having an interactive whiteboard – this has helped us when

we have been making notes on our coursework. For example, when annotating the three soliloquies in for our 'Romeo and Juliet' coursework, the board has enabled us to annotate the soliloquies as a class therefore getting more opinions about the work at hand. The board also made our analysis of the shootout scenes for our Media assignment much more effective because we were able to target specific sections and analyse them more in depth. On the whole, both the digital camera and the interactive whiteboard have been very effective in helping to increase the learning which takes place in our English lessons.

Written by Charlotte Coles-Bradshaw and Lauren Cragg

MATHS



Maths Challenges 2005 – 2006

Again pupils at Balshaw's have had many successes in Maths Challenges over the year.

The Year 7 team travelled to All Hallows in Penwortham to take part in the Lancashire Maths Challenge District final. Our team finished in third place.

Balshaw's Maths Department hosted the South

Ribble Year 9 Able and Talented Mathematics Challenge. After completing 9 activities including constructing shapes and paving patios the Balshaw's team were declared the winners.

Pupils from Years 7, 8 and 9 took part in the national UK maths challenge. A total of 9 gold certificates were awarded with many others gaining silver and bronze awards.



Year 6 Visit the Beach at Balshaw's Maths Department

On the 4th and 5th of July the Maths department was transformed into a holiday destination.

Year 6 pupils from Leyland Methodist and Woodlea Junior Schools took part in a transition challenge.

The event is organized to give them an idea of the fun and challenges that await them at secondary school. The pupils participated in different activities including programming a "roamer" around an island and solving the problem of how to get an entire family to an island with a dinghy built for two!



Year 9 pupils buddy up to help Moorhey pupils

The Maths department have established a close link with Moorhey Special school in Lostock Hall. After year 9 completed their SAT's six pupils have been helping the pupils at Moorhey to improve their Maths skills.



Year 10 new GCSE Exam

In 2008 the exam system changes to 2 tier of entry for Mathematics instead of the 3 tier that we have been used to. The Department have successfully purchased using Engineering status money textbooks to follow this new scheme for assessment. Pupils in year 10 now have begun using these books in preparation for their Exam in 2008.



Learning Support event 13th July 2006

World cup fever spilt over into the Maths Department when pupils from year 7 & year 8, along with 14 pupils from Moorhey took part in a challenge with activities all related to the World Cup. They had to work out the price of their football team and write cheques to buy their players, played football team bingo and programmed the roamer to visit different stadiums in Germany on a large map. Everyone seemed to have a great time and were not too disappointed that England had already been knocked out of the World Cup!



Maths Master classes for year 6 pupils

Able year 6 pupils from our primary feeder schools were invited again this year for a series of four lessons leading upto key stage 2 SAT's. The pupils discovered how to find and use the formula the area and circumference of a circle and about the rules of algebra.



WELCOME TO THE LATEST EDITION OF NUCLEUS THE SCIENCE AND ENGINEERING NEWS PAGES

BALSHAW'S PUPILS VISIT THE PLANET MARS!

On July 6th the Science Department took 95 Year 9 pupils to Manchester for a fun packed day. First we visited the IMAX Cinema which has one of the largest screens in the country. Sharks in 3D was a fabulous film — jellyfish, turtles and of course huge sharks so close you could almost touch them! Later we

travelled across the city to the Museum of Science and Industry where the MarsQuest exhibition was out of this world!

Everyone experimented with the exhibits, took a ride on the simulator and even spotted some famous faces on Coronation Street! A great day out!

The girls are happy — they've just spotted
Craig from Coronation Street!



Heather might be feeling dizzy
— she's just been on the gyroscope!



3D glasses at the ready... the sharks are coming!

Want to see more pictures? Want to find out about other Science Trips?

Visit our website: www.balshawshigh.co.uk and click on SCIENCE!

You can find out more about the Manchester Museum of
Science and Industry at: www.msim.co.uk

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TRANSFORM

TOAST, TEA AND... REVISION???

As part of the preparation for their GCSE Modular Science exams in June, 50 Year 10 pupils attended a REVISION BREAKFAST at 7.00am on the morning of their exam! Free toast, tea, coffee, crumpets, exam tips and advice were available and for the first time in years Year 10 gained 100% attendance at all Science GCSE exams this year. **WELL DONE!**



Channing and Katie do some serious studying with coffee in hand!



Hannah, Helen and Sharlean are raring to go!

THE RUBBISH RACER CHALLENGE!

During the summer term a team of 6 Year 7 pupils have been building a "Rubbish Racer": a model racing car made totally out of rubbish! Graham Clarke, Ben Farrar, Jack Davies, Jack Hepworth, Liam Winder and Andrew Stables have spent their lunchtimes putting together the racer that will race along a 6 metre course safely carrying an egg to the end. Find out in the next issue how the team perform!



"The Balshavian" with its 2nd place trophy

SCIENCE CLUB NEWS

With Year 7 Editor Graham Clarke

Hello again everyone and welcome to Science Club News. In the summer term we have been watering our sunflowers everyday. At the end of the year the largest sunflower wins a prize! So far Jack Davies has the tallest one. We recently had a visitor from the University of Liverpool who studies people's faces and voices and works out why people prefer different accents or faces. It was very interesting and Science Club members' faces will be used in future research at the University!

My final word in this edition will be to the new Year 7s joining Balshaw's in September — Join Science Club next year. There are lots of good experiments and exciting things to do!

BACK TO THE FUTURE!?

As the major engineering employer in Central Lancashire, Leyland Trucks Ltd was delighted to be asked by Balshaw's High School to support its bid to achieve specialist Engineering College status in 2004.

Following the initial financial sponsorship the Company has continued its involvement through membership of the Steering Committee which has guided the implementation of the school's Engineering plan.

From Leyland Trucks' perspective it is vital that students gain an appreciation of how world class engineering plays a part in all of our lives. If this appreciation then leads students to recognise the

worthwhile and successful careers they can follow as professional engineers so much the better. Each year we recruit a number of young people after A Levels as sponsored engineering students and also others after graduating with engineering degrees. One of our most recent recruits is Nic Isherwood, an old Balshavian, who left the school in 1999 and graduated from Loughborough University in 2005.

We see our relationship with the school as mutually beneficial. A current project which should help both of us will see students developing and producing perspex document holders which are used for communication purposes in all of our team areas.

We are very impressed by what has been achieved throughout the school through the specialist funding and extend our best wishes to all of the students, staff and governors for continued success in Engineering.

On 7 April I was delighted to be invited to represent Leyland Trucks at the opening of the new Engineering block. It was an added personal pleasure for me to attend as an Old Boy of the School (Class of 1977).

I approached the front entrance with some trepidation since it was my first return in 20 years. But I needn't have worried as I was met with a very warm welcome from Head Teacher Jo Venn and then to my surprise Mr Ingram, my Head Teacher from 1977. As I had arrived a little early I was taken to meet Mr Banks who was at Balshaw's with my elder sister. After a bit of reminiscing he was kind enough to show me round the rest of the school before the opening.

What was apparent to me as I walked around was that the school is still very recognisably Balshaw's, retaining many of the traditions and the same ethos it held in my day. When I then saw the very impressive new developments, resulting from the specialist Engineering status, it was clear that the school has also been able to make wonderful progress in respect of facilities and curriculum provision. To make all of these changes whilst retaining the best of the school's traditions is a remarkable achievement, of which the staff, governors and students can be very proud.

The opening event was an excellent way of recognising what has been done. It was a most enjoyable day.

Peter Jukes
Leyland Trucks

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TRANSFORM