



YAMAZAKI MAZAK HOSTS TUTOR SYMPOSIUM

Machine toolmaker Yamazaki Mazak UK Ltd played host to the Imagineering Clubs Tutors Symposium at its Worcester plant late last year.

It was to be a memorable and informative event and the delegates heard from a parade of speakers presenting diverse views of engineering and how Imagineering is successfully fulfilling its role, inspiring the next generation of engineers.

Right: The delegates were treated to a guided tour of the Worcester plant and saw at first hand its cutting edge technology.



The delegates were welcomed by **Marcus Burton**, Managing Director, Yamazaki Mazak UK, who raised the major issue of wrong perceptions of manufacturing, and how the UK's standing in the world is much higher than is generally believed. He affirmed the importance of introducing young people in schools to the exciting engineering career opportunities available.



Bob Shanks, Imagineering Chairman, opened the Symposium with an outline of the current situation for the Imagineering Foundation, recent lobbying at the House of Lords, new initiatives and partnerships and also the ongoing challenge for funds.

Alastair Graham Bryce, Clubs Coordinator and Hon Secretary of Imagineering, presented the delegates with a comprehensive

review of Imagineering Clubs, the expanding network and plans for its continued growth.

He highlighted new partnerships such as the Engineering Development Trust, underlining Imagineering's reputation as a quality service provider. He outlined the marketing efforts at Fairs and public events designed to increase tutor recruitment.

Continued on page 2

WELCOME!

....to the first issue of the *The Imagineer!*

We hope to publish this newsletter regularly, interspersed with special email bulletins to keep you up-to-date and informed of new developments and changes to kits and instructions, as well as future events. If you have any comments or news you would like to see reported in your newsletter please do get in touch - contact details on page 4.



MEP visits Coventry Club

Mr Malcolm Harbour MEP for West Midlands, dropped into Our Lady Of Assumption Primary School in Coventry recently to see the school's Imagineering Club in action.



He commented: "It was great to see an enthusiastic class of future engineers. The future of the UK in Europe will be as a creative skills-driven high-tech economy. We will be dependent on young people who want to deploy their skills in their school life."

The enthusiastic pupils were busy learning how to solder safely prior to making models and Katrina Kirkwood, pictured here, demonstrated their new skills. The pupils also showed him the aeroglide, compass and steady hand game completed earlier.



Continued from front page

Alastair pointed out that of the 150 Clubs now running over 90% were run in primary schools and over 90% were run by engineers in spite of the increasing challenges to find engineer tutors, although a number of new links with companies were proving fruitful.

Looking forward he explained that although finances remained tight and the core team was stretched, the main objective was to continue to grow the Clubs network and provide more children with the Imagineering experience.

The Symposium then heard different perspectives of Imagineering Clubs from **Emily O'Toole** (see story below) a former Club member, **Tony Conway**, a Club Tutor and **Celia Naylor**, a former Head Teacher at a school with an Imagineering Club (seen here with Tony).



Tony described some of the challenges of being a Tutor including dealing with the school and behaviour issues in the Club. "But the pleasure of seeing children's delight at making something that works makes it all worthwhile."

Celia explained how Imagineering is an excellent way to broaden the Curriculum and provides children with a new language, skills, knowledge and opportunities and a sense of achievement.



Above: Bob Young, Symposium organiser, Alastair Graham Bryce, Richard Earp, Bob Shanks.

The final speaker was **Richard Earp**, Education & Skills Manager, National Grid, keen supporters of Imagineering. He presented National Grid's own initiative inspiring future engineers - "Engineering Our Future" and research that illustrated that many parents, teachers and youngsters were unsure about what an engineer does and the importance of exposing young people to engineers through work experience and visits to schools by engineers.

YOU HAVE YOUR SAY!

The recent questionnaire circulated to Club Tutors produced interesting results with comments on a wide range of subjects. All are being considered by the Clubs Committee and following are responses on just a few of the issues.

KITS INSTRUCTIONS

There were a number of complaints about the instructions particularly the clarity of the illustrations, quality of print and inconsistencies and inaccuracies in the text.

The Clubs Committee is aware of these and changes are already in hand.

GENERAL QUALITY CONTROL

A number of issues were raised on the quality control in production of some of the kits.

Changes have already taken place with the Morse Code Buzzer and Compass (see p 3); the Robot Duck is to be replaced by the Rocket Car and the new Micrometer is being reviewed.

NEW THEMES & PROJECTS

Interesting subjects were proposed for new projects and themes - from solar power, renewable energy and the environment to bioscience and water rockets!

The Committee constantly keeps the project portfolio under review but before it introduces new projects we try to ensure that all the 'wrinkles' have been removed. In the meantime the Inter-Engineering range of models - which includes a Wind Generator - is available for those youngsters who have progressed through the Junior range and are looking for something more advanced.

TEACHERS NOTES

Some Tutors feel these are too advanced and beyond children's capabilities.

These are meant for Tutors and Teachers as an aid from which they can draw additional information and any material appropriate for the children in their particular Club. Please let us know any simplifications you would like to suggest.

CHALLENGES

The main challenges seem to centre around managing the children, their behaviour, attention (or lack of it) and coping with preparations and flow of questions.

Guidance notes and tips are available for tutors on classroom skills and working with children. Behaviour is primarily the teacher's responsibility. Please let us know if this is not effective.

Alastair Graham Bryce on
E: algebry@talktalk.net or
David Yates on
E: deyates@btinternet.com.

COMMUNICATIONS

Many Tutors felt that communication with the Clubs Committee could be improved as they felt they were not kept well-informed (or in good time) of changes and new projects.

The Clubs Committee has taken this on board and will be communicating more regularly via email, bulletins and the new newsletter.

The Proof that Imagineering works!

One of the stars of the Symposium was one of the very first Club members, **Emily O'Toole** living in Church Lench, near Worcester, at the time.

She is now studying engineering at Jesus College, Oxford and attributes this directly to her time in the Imagineering Club at her school.

During her inspiring talk she said: "At the age of seven I was fortunate enough to attend an Imagineering Club at first school

and this was the inspiration for me to study engineering at university. The Club provided the foundations to my understanding of the concept of

design, build and test now integral to my engineering thinking. The Club enabled me to have a clear picture of where I wanted to head with my future studies and ultimately career. The essential qualities required for engineering were instilled in me early on in the Club."





WHAT'S NEW IN CLUB PROJECTS.....

*an update
from David Yates*



The 2009/10 season has seen a number of changes to the projects both in the Junior and Inter-Engineering sectors. Perhaps the most important has been the change in the supplier of some kits.

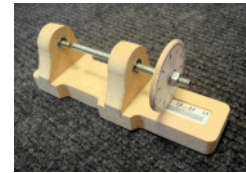
HME of Bromsgrove which services schools with technical equipment and has a network of customers in the education field, is now making and packaging some of the kits. It is hoped that they will eventually supply and distribute all the kits.

HME is permitted to market the kits outside the Clubs scheme under the Imagineering banner with shared profits to the Imagineering Foundation.

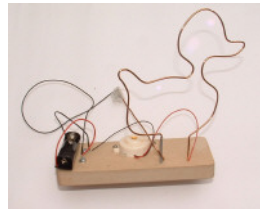
Up to now HME has supplied the Steady Hand Game, the new Micrometer and the Bloodhound Rocket Car. We are currently discussing their packaging and supplying more of the projects next year.

Changes to existing kits -

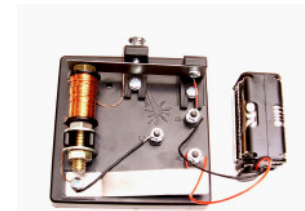
The **Steady Hand Game**, supplied by HME, includes a battery clip attached to the base, but is identical to the earlier design.



The new **Micrometer** (above) avoids the splitting of the MDF but has screwed inserts that do not locate to the spindles adequately. HME is currently looking at a better arrangement.



The **Bloodhound Rocket Car** (below) has taken the place of the Robot Duck which regrettably has been discontinued because of the unreliability of the supplier. Some improvements to the Rocket Car are planned for next year.



To make some of the projects more cost-effective, we have changed the **Compass** and **Morse Buzzer** to use plastic parts and standard metal components. The re-designed **Morse Buzzer** incorporates the key and buzzer on the same base plate. The MTA (Manufacturing Technologies Association) has kindly funded the dies for the plastic parts and this has reduced the cost of these kits significantly.

Instructions - The illustrations in the kit instructions are gradually being changed to line drawings to improve their clarity.

ENGINEERING VISITS

In order to encourage Club visits to engineering companies, Dave Elliot has volunteered to act as National Co-ordinator. To facilitate this, a database is being compiled of companies that are prepared to support this activity. If you are aware of any organisation willing to participate, could you please provide the name of the company and a contact name to Dave at dave.elliott@yahoo.co.uk. Most companies currently involved (and Dave can provide you with an up-to-date list) are Midlands-based, so we would welcome participation from enterprises in other areas of the country. If your Club is interested in an engineering visit, Dave will advise you on how to organise the event.



The **Compass** now has a standard aluminium case sourced commercially and a cover that keeps the card in place.



IMAGINEERING CHAIRMAN WINS IET AWARD

Mr Bob Shanks, a chartered engineer and Chairman of the Imagineering Foundation has received a prestigious award from the Institution of Engineering and Technology for his work encouraging young people to take an interest in engineering. Bob was presented with the Sir Monty Finniston Award for Achievement in Engineering and Technology by the President of the IET, Professor Christopher Snowden and Kate Bellingham, former presenter on BBC's 'Tomorrow's World' at a ceremony at Lord's Cricket Ground in London. Bob is one of the co-founders of Imagineering and he also runs an Imagineering Club in Coventry.

Picture: Bob with Casey-Leigh Wyatt and her twin sister Chelsey-Jade, aged 7, two members of his Club at Our Lady of Assumption Primary School, Coventry.





THE NEXT STAGE.....

ALASTAIR GRAHAM BRYCE, provides an update on **INTER-ENGINEERING**, the more advanced option.

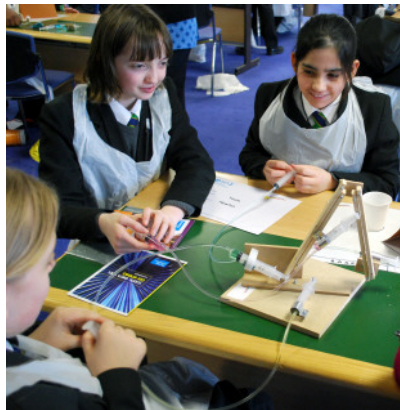


Inter-engineering was developed 3 years ago as a year series of kits for Clubs aimed at the beginning of secondary school - Years 7 and 8. Envisaged as a follow-on from the Junior Engineering series with fewer but more sophisticated models, in fact for most participants it is their first experience of Imagineering. The current schedule includes:

- * Solder practice
- * Electric Car
- * Resistor Calculator
- * Windmill Generator
- * Kre8 Robot
- * Hydraulic Arm
- * Robo Car

Recently the Hydraulic Arm has been adapted to 'Hydraulics for Frolics' for teams of 3 to build and use in a Challenge in 1-1.5 hour sessions. The arms have been re-used in 8 sessions so far.

The number of secondary schools with Inter-Engineering Clubs has remained steady at under 10. We would like to see more so if you find any interest please contact Alastair on
E: algebry@talktalknet



NEW HORIZONS

The Imagineering Foundation is widening its horizons and offering a variety of Imagineering experiences for schools, particularly those not yet running their own Club. It has joined together with a long-time supporter to run what is now the Imagineering Jaguar Land Rover Partnership Centre at Gaydon in Warwickshire.

Peter Lock and Paul Salter run two programmes for KS2 and KS3 children both delivered in day or half day sessions during school time.



Firstly, taught modules based on specialised equipment at the Centre for parties of up to 30 children in topics such as Control Engineering. Also included usually is a visit to JLR engineering development units on the Gaydon site. Transport in the local area is also available.

The second programme delivered though at-school sessions for up to 70 pupils includes **Imagineering Challenges** and **Imagineering Tasters**. Challenges are exciting STEM activities such as Structures, Gravity & Sail Buggy and the Young Engineers' **K'nex Challenge**. Tasters derive from Clubs projects (and may be 'make, test and take') such as Flight, Steady Hand Game and 'Hydraulics for Frolics'. These can also be delivered in Summer Schools.

If your school is interested in any of these additional Imagineering experiences - if or you know of a new school yet to experience Imagineering, contact **PETER LOCK** at
E: challenges@imagineering.org.uk

IMAGINEERING NEEDS YOU!

Calling all volunteers!

Imagineering is running some exciting events this summer !

IMAGINEERING FAIR

Royal Bath & West Show, Shepton Mallet,
Somerset - 2nd - 5th June.

This is a big show and for two years running the Fair has won a Gold Award for Best Feature in Show. Over 20 high profile companies support Imagineering at this event.

ROYAL INTERNATIONAL AIR TATTOO

- in partnership with the RAF -
RAF Fairford, Gloucestershire - 17th -18th July

At both events there is a large Imagineering Clubs stand - to promote the initiative and recruit new tutors and with some simple activities.

WE NEED VOLUNTEERS! So if you have a free day in the summer and would like to help on the Clubs stand or with general activities please contact **JOY SMITH**, who is involved with organising both - on
E: joy.jcm@btinternet.com. **ALL HELP VERY WELCOME!** and there is of course free ticket/pass to the event for each volunteer.

WATCH THE WEB!!!

The Imagineering web site is under-going a transformation and should be up online in the next couple of months. This bright new web site will be easier to navigate and there will be a lot more information, regular updates and news. All tutors will be contacted when the new site is live! And don't forget the Forum - your very own network to keep in touch with other tutors!

There will be a new web address but in the meantime keep in touch with:

www.imagineeringweb.co.uk

'The Imagineer' is published by the
Imagineering Foundation
Reg Charity No: 1087783

The content of this newsletter
was correct at time of publication

www.imagineeringweb.co.uk

For comments please email:
Editor@imagineering.gb.com

© Imagineering Foundation May 2010

