



JCB SUPPORTS NEW HYDRAULIC ARM

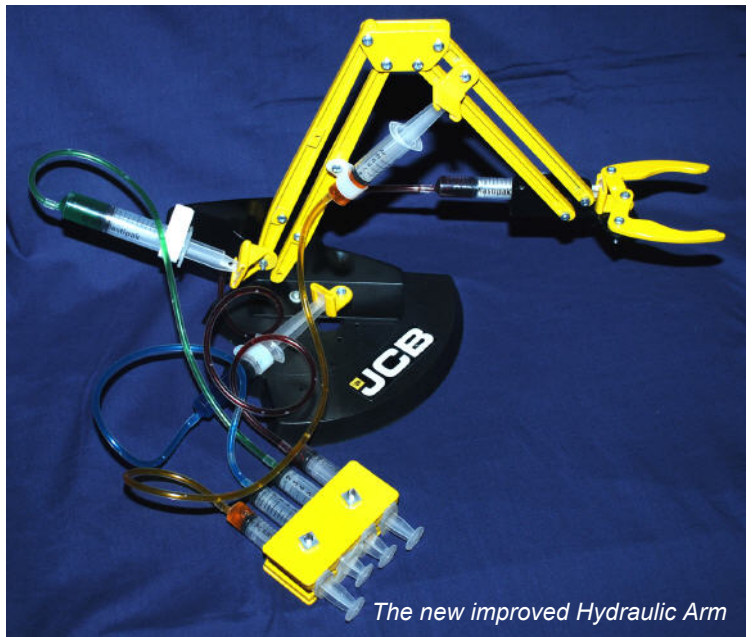
The Hydraulic Arm has always been one of the most popular of the Imagineering models.

Now through sponsorship by JCB, one of the world's leading manufacturers, a vastly improved design has been produced from plastic components. As well as looking smarter, this model is simpler to assemble, using clips rather than screws.

The project is highly relevant to the real-world engagement as hydraulics feature in most of JCB's extensive range of over 300 products.

The model has featured in many sessions of 'Hydraulics for Frolics' where teams of four have made up the kits from sub-assemblies against the clock.

David Yates, one of the team negotiating with JCB, said: "This has been a great opportunity for us to improve the hydraulic arm and JCB's very generous support has enabled us to produce a much better design using plastic parts. The new kit will be supplied in the 2011/12 academic year."



The new improved Hydraulic Arm

JCB is one of the world's top three manufacturers of construction equipment, employing 7000 people on four continents, with a major facility at Rocester in Staffordshire.



The 'old' model

CLUBS ARE GOOD FOR KIDS - it's official!

The annual Imagineering Teachers' Survey on the Effectiveness of Clubs has revealed that the Clubs approach continues to provide benefits for children at all levels.

From a healthy response of 52 schools, teachers revealed that 74% of the children in their Clubs showed an improvement in self-confidence with a 46% (and a further 48% 'maybes') showing improvement in science and maths.

From 605 pupils (mostly KS2) there were a healthy 125 (21%) who expressed an interest, at that early age, in becoming an engineer. David Yates, who co-ordinated the survey, said: "It was gratifying to know that the Clubs continue to provide all-round benefits to young people's development as well as sowing some seeds, we hope, for the growth of future engineers."

WELCOME

to the third issue of
The Imagineer!

Full of news, views and tips.
Don't forget to let us know
what else you would like to
see in the newsletter





THE NEW IMAGINEERING WORKSHOP!

Bob Young, Clubs Tutor, reports on the success of the new Imagineering Workshop he has developed for use at Imagineering events.

The Royal Bath & West Show in early June saw the introduction of the 'Make & Take' Imagineering Workshops on a dedicated activity stand by the Clubs. The 'Make and Take' concept, a proven key element in the success of the weekly after school Clubs for 9-12 year olds is taken a stage further by offering it to children who attend our Fairs and other public events.

Tool-boards and selected project kits such as the Steady Hand Game and Bench Micrometer along with drawings and instructions, all under the supervision of experienced tutors, give the youngsters an opportunity to get hands on with real tools and engineering. By making the model - which they can then take home - they learn a bit more about engineering, as well as having fun, and hopefully be inspired to take up engineering as their chosen career.

Below: Dads are often happy to join in and help too!



Above: the workbench displays all the tools clearly marked and also contains small containers for screws, nuts and bolts. The workbench is easy to transport. Youngsters are also taught Health & Safety issues involved in handling tools.

The sessions last approximately 30 minutes, give the accompanying adult an insight into the Imagineering ethos and hopefully encourage their children to 'make things'. The workshops also provide an additional platform for recruitment for tutors plus a greater understanding for those visitors to the event interested in getting new Imagineering Clubs started.

Below: George Wilson and his sister Harriet proudly display the Micrometers they made in the Imagineering Workshop on the Clubs stand at the Royal International Air Tattoo, RAF Fairford in July.



FIRST OVERSEAS CLUB OPENS!

Switzerland, known for its glorious mountainous scenery, clocks, chocolate and industry, now boasts its first Imagineering Club.

Gerhard Schmidt, a retired engineer, is now into his second term in the town of Baden, near Zurich. He is hopeful that the Club can be integrated into the school plan in the future and he is optimistic that the enthusiasm of the children and their parents will win the day. Their expansion depends on more tutors and Gerhard is exploring all his contacts in industry – we wish him well.



Above: Gerhard with his Imagineering Club - in Switzerland!

NEW SUPPORT FOR IMAGINEERING

It has been an exciting year with a number of new organisations lending their support to Imagineering in one way or another, including EDF Energy, Engineers Without Borders, JCB, Airbase - even Frankie & Benny's! Let's hope the trend continues in 2012!





NEW MODELS and NEW DEVELOPMENTS

Report by David Yates



HME Technology Ltd is now doing a great job sourcing, packaging and delivering the kits for both Junior Engineering and Inter-Engineering projects. This, coupled with the development of plastic parts and standard components, has simplified the supply of the kits and Karen Cookes, our administrator at South Worcester College, continues to organise the details of their distribution.

The supply of kits as a pack for each term continues to enable the costs to be reduced and although the order of projects in the schedule allows the pupils to develop the skills progressively, the order in which they are carried out is at the discretion of the tutor.

We now include the **Robot Duck** with the Term 3 pack so that this fun project can be carried out at the end of the final term.

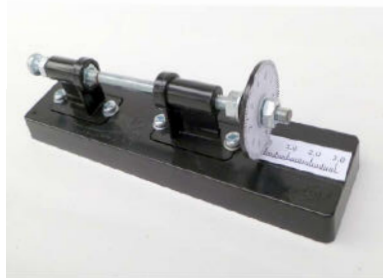
We are now including a **Bridges Project**, below, in the **Inter-Engineering** schedule because of the great success we have had with it when tried as a pilot.



It will be in the form of a competition to make a bridge from a minimum number of Art Straws spanning a given distance and taking a specified load.

To avoid destroying the bridges when tested, the construction of a device for measuring their loaded deflection is included.

There continues to be development of all the projects and with the help of the MTA (Manufacturing Technologies Association) the **Micrometer**, below, now made in plastic, has been simplified and looks much more like a bench unit used in industry.



Some schools have had difficulty in constructing the **Telescope** and so it has been decided that the normal supply will be changed to a simpler AstroMedia version, right. However we still have a good stock of the original Opittec model and could supply this on request.



The performance of the **Bloodhound Jet Car**, above, has been improved by further weight reduction and the body is now much easier to fit with screws holding it to the terminal block.



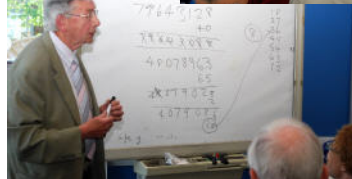
Left: current version

TUTORS HAVE GRAND DAY OUT AT SYMPOSIUM

Earlier in the year a number of Clubs Tutors travelled from across the region and beyond to spend a very enjoyable day at the annual Tutors' Symposium, this year held at the Imagineering Jaguar Land Rover Education Business Partnership Centre at Gaydon, Warwickshire.



Following a welcome from Chairman, Bob Shanks and introduction by Bob Young, there were updates from Alastair Graham Bryce and David Yates, lively discussions in break-out sessions on various topics, and informative and entertaining presentation on 'Fun with Maths' by John Turner, former Head Teacher at Alcester Grammar School. There was also a guided tour of the Partnership Centre and its facilities by its Manager, Peter Lock and David Bray, highlighting the opportunities for 'Look, Touch, Play' and the exciting hands-on activities for school groups from Key Stages 2, 3 and 4.



Visitors were able to view the comprehensive range of equipment and projects available to students at this modern purpose-built education facility, managed by Imagineering and supported by Jaguar Land Rover. After a buffet lunch, visitors were able to visit the Jaguar Land Rover site, the nearby Heritage Centre or take a 4 x 4 Land Rover ride.

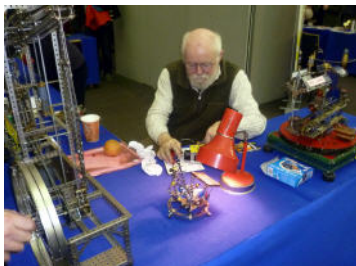


IMAGINEERING IN ACTION IN 2011

This year has been a busy one for the Imagineering event team with a host of events particularly throughout the summer months.

LONDON MODEL ENGINEERING EXHIBITION - January

Imagineering took extra space and its traditional Clubs stand with activities was joined by IMarest, REME and Michael Denny, below, with his Meccano collection.



BIG BANG - national event ExCel Centre, London - March

A small Imagineering team flew the flag at this glossy event which attracted many blue chip companies and 30,000 visitors over three days. Imagineering's 'Hydraulics for Frolics' workshop, above, for the EDT, was as popular as ever.

IMAGINEERING FAIR, Royal Bath & West Show - June (right)

A record 25,000 visitors around Imagineering alone, with a record number of participants - the team came home with another Gold Award - its 4th in a row - for Best Feature in Show, thanks to the hard work of all the participants.



RNAS YEOVILTON INTERNATIONAL AIR DAY - July

Saw eight of the Bath & West participants supporting Imagineering in the Royal Navy's display hangar, left. Over 10,000 visitors came through the hangar throughout the day.

ROYAL INTERNATIONAL AIR TATTOO, RAF Fairford - July

Imagineering shared a marquee with the RAF and some regular supporters for a hectic weekend - 7-10,000 visitors through the hangar - with mixed weather but exciting action both in the hangar and in the air - including the BLOODHOUND Super Sonic Car as centrepiece, right. There were TWO Royal visits over the weekend - from HRH Prince Michael of Kent and the following day, HRH the Duke of Kent.



IMAGINEERING FAIR @ AIRBASE, Coventry - August

This brand new Midlands Fair was held at the classic aircraft museum, Airbase, at Coventry Airport and TV personality Trevor Baylis, left, joined in the fun. A cold windy weekend, the event was a success with positive responses from participants and visitors - although overall visitor figures were disappointing.

DATES FOR 2012

Imagineering has had an exciting and action-packed year and a number of dates have been pencilled into the 2012 diary already where Imagineering will hopefully be taking part:

20-22 January 2012

Alexandra Palace, London

**LONDON MODEL
ENGINEERING EXHIBITION**

15-17 March 2012

Nat Exhibition Centre, Birmingham

**IMAGINEERING at BIG BANG
National Finals**

30 May -2 June 2012

Royal Bath & West Show,
Somerset

IMAGINEERING FAIR

23 June 2012

Ilchester, Somerset

**RNAS YEOVILTON
INTERNATIONAL AIR DAY**

7-8 July 2012

RAF Fairford, Cirencester

**ROYAL INTERNATIONAL
AIR TATTOO**

We always need plenty of volunteers! It is very rewarding and great fun to help out with simple activities for youngsters and manning the Imagineering Clubs stand.

Anyone interested in signing up to help or for those who would like to know more, contact Joy Smith, Publicity Officer for Imagineering, on email: joy.jcm@btinternet.com or T: 01562 631466

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www.imagineering.org.uk

For comments please email:
Joy.jcm@btinternet.com

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DON'T FORGET.....

There are opportunities for schools to visit the Imagineering Jaguar Land Rover Partnership Centre at Gaydon, Warwickshire for half and full day sessions and National Grid is still funding the exciting Grid @ 75 Challenges! For more information contact Peter Lock on 01926 643497 or E: schools@jaguarlandrover.com.

