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Building links in Wellington

A series of initiatives is underway in Wellington to help build links between local high schools, enterprise and tertiary institutes.

Futureintech staff organised student mentors from Victoria University to visit secondary schools to 'show and tell' their design portfolios, to help demonstrate and explain the design process.

Staff and students from these schools were also invited to a series of guest lectures, including one by renowned scientist Professor Paul Callaghan, Director of the MacDiarmid Institute for Advanced Materials and

Nanotechnology.

And we've helped arrange for Cam Trollope, a principal of Catch Design Collective in Wellington, to work with Year 12 design students at Queen Margaret College. Students have been following Cam's case study of a contract pitch, including working to a brief, research, consultation with client, and the pitch itself.

Technology Education launch

GIF – Technology Education, an exciting new programme to boost teaching and learning in technology education, was launched in Wellington in April by Associate Minister of Education David Benson-Pope.

Technology Education, a \$6 million investment by the MoE in the future of technology in New Zealand, has the strong support of Futureintech and IPENZ.

One of the biggest initiatives to come out of the project so far is Beacon Practice, whereby 13 secondary schools with innovative technology programmes were given extra funding, support and professional development for 2005/2006. Through Beacon Practice, these schools are developing top-class programmes and skills, which can then be shared with other schools around the country.



Futureintech has played a big role in the programme, helping organise the launch and facilitating the involvement of Wellington schools (see page 3).

Watch the *Education Gazette* for calls for expressions of interest for the second round of the Beacon Practice Project for 2006/2007.

Associate Minister of Education David Benson-Pope speaking at the Beacon Practice launch



Ambassadors in action

The best asset Futureintech can provide schools with is a Futureintech Ambassador - a young professional working in science, technology and engineering who can share the passion for what they do.

Why are they so valuable? Because they are young, enthusiastic, trained, and can relate to students. They can help with a range of classroom programmes, and show how subjects like maths, science and technology can be used in real jobs. All the research shows that this kind of hands-on interaction is the best way to inspire students and open their eyes to a range of career possibilities

Ambassadors in Auckland

St Thomas's Primary School in Auckland have been using Futureintech Ambassadors to give their students a taste of electrical engineering.

In this project they've been helping students to draw the electrical parts of a torch, and discuss issues such as solar power, why metals are used in circuits, and the different types of switches.

The next step is to give the students the opportunity to make some working circuits, and by the end of the unit they'll be making toys or tools which use a simple circuit.

The teachers involved have been mightily impressed, noting that while the Ambassadors may be great engineers, they're also "great teachers".

Not only has it been a rewarding experience for the students, but it's been a unique form of personal development for the Ambassadors, helping to build confidence and communication and presentation skills.

Thanks must go to the employers who have allowed their young staff to take a few hours off for this project - ERMA, URS New Zealand, and Transfield Services Limited.

Next term the school is studying earth science and plans to get an Ambassador with a science background involved.

More Ambassadors on the way

A fresh batch of Futureintech Ambassadors is on the way, with a series of training days being held around the country in May. The training days aim to prepare potential Ambassadors for working in a classroom, and cover a range of topics including:

- Background on Futureintech
- The programmes we support: Neighbourhood Engineers Award, Young Designer Awards, CREST and Bright Sparks
- What to expect in the classroom
- And even advice on dealing with the media.

The demand from schools for



Brent Martin from ERMA helps students with their circuits

Ambassadors has greatly increased this year, particularly in Auckland, Wellington and Christchurch where the programme is entering its second year.

If your school or class is interested in having Ambassadors involved, get in touch with your local Facilitator: www.futureintech.org.nz.

Auckland Ambassadors preparing for classroom work



tenzconference2005

Don't forget – the biennial Technology Education NZ conference is this October in Christchurch.

The five main aims of the Conference are to:

- identify technology career paths;
- demonstrate how practice is informed by theory;
- create opportunities for teacher motivation and development;
- have teachers teaching teachers;
- showcase students' work.

The conference will focus on upskilling teachers, with practical ideas for the classroom including planning, assessment, examples of students' work, and pathways students can take in technology. There will be a range of local venues to visit to see technology in action, and the usual lively social events, including the 'Winebar wobble' along Christchurch's strip.

The TENZ 2005 conference will also:

- launch the newly appointed TENZ Council;
- host teachers from the Beacon Practice Project;
- feature presentations from Royal Society Fellows; and
- showcase technology winners from the senior section of the Science and Technology Fair and School Enterprise scheme.

Futureintech is an initiative of IPENZ Engineers New Zealand and is funded by NZ Trade and Enterprise. Futureintech's aim is to promote careers and lift tertiary enrolments in technology, engineering and science.

www.futureintech.org.nz

Head of Department Day

As part of the Technology Education initiative the Ministry of Education is offering a one-day course in Christchurch on 4 October 2005, leading into the TENZ 2005 Conference. This course is for all Heads of Department and Teachers in Charge of technology education in secondary schools.

The agenda includes an update on technology education in the New Zealand Curriculum Project, the findings of various research, the latest on NCEA and scholarships, an introduction to GIF and the projects it's funding, information on Beacon Practice, and change management and leadership skills for technology education.

You can find more information about this day, and the entire TENZ 2005 conference by visiting website: www.tenz.org.nz

Working to Beacon Practice

Futureintech has been supporting the Wellington schools involved in the Beacon Practice project through arranging industry mentors, tertiary involvement and facilitating monthly meetings to discuss progress and share ideas.

These Beacon Practice projects include the redesign of lighting for an inner-city café/bar, looking at JAVA software, and entering Massey University's Robo Olympics. A plan of professional development has also been drawn up for the teachers involved.

Rebecca Wilson of Earthwork discussing ideas with technology students from Wellington College



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Neighbourhood Engineering takes off

Over 40 registrations of interest have so far been received for the Neighbourhood Engineers Award, one of the key programmes Futureintech promotes in schools. It's a big increase from 2004, and a very encouraging sign that Futureintech's work at grass-roots level is making a difference.

The Award is run by IPENZ, and involves individual teams carrying out technological practice to meet an identified need or opportunity in the community. Each team comprises a teacher, students and a volunteer engineer. Last year the winning projects included the redesign of a school playground, creating a habitat for pet snails, and a new drop-off zone for parents.

If your school is interested in finding out more please contact Megan Rodden at IPENZ, tel 04 473 2021, email mrodden@ipenz.org.nz.

The biggest scientific discovery of 2004?

According to the editors of Science journal 2004's biggest scientific discovery was that Mars once had vast pools of water, and could have harboured life.

The journal has just published its annual ranking of top ten scientific discoveries. At number two was the discovery of tiny humanoids on the Indonesian island of Flores. However it was the work of the Mars Rovers which "marks a milestone in humankind's search for life elsewhere in the universe".

See the full top ten 2004 at: www.boston.com

Change in organisational structure for TENZ

Technology Education New Zealand, the professional network which promotes and supports technology education, is branching out. Since its inception in 1996 the organisation has been administered by the Royal Society of New Zealand, but it has now been accepted as a Technical Interest Group of IPENZ – Engineers New Zealand.

IPENZ has long supported technology education, particularly through Futureintech, and the new relationship should bring many benefits. In formally welcoming TENZ into the IPENZ operating structure, Chief Executive Andrew Cleland invited members to participate in the wider IPENZ organisation.

The TENZ Trust Board and the TENZ National Council have expressed appreciation of the ongoing support for technology education provided by the Royal Society, and will remain one of its constituent organisations.

If you are interested in receiving TENZ's newsletter, send an email to tenz@ipenz.org.nz.

Futureintech's new home

Futureintech has a new home – along with IPENZ we have moved to new offices on the Terrace in Wellington.

Our new physical address is 158 The Terrace, while our phone, fax, email and PO Box numbers are unchanged.

www.futureintech.org.nz

Of course, Futureintech's website www.futureintech.org.nz remains at the same address. It has become New Zealand's leading one-stop shop for unbiased information on careers, tertiary courses, and scholarships in technology, engineering and science. It also features dozens of profiles of young professionals, their careers and employers.

It's aimed at students, parents, teachers, and careers advisors, and is a great resource for anyone interested in a career in technology, engineering and science.

The new Futureintech sign goes up – overlooking the end of SH1 in Wellington, a prime advertising position

