

## Timeforabreather?Yeahright!

With the foundations laid in 2004-2005, our Futureintech Ambassador initiative really took off in 2006. Now 2007 looks to be a great year.

**3** Supporting and celebrating excellence

Happy 2007, and welcome back to the start of a new school year, in which we at Futureintech look forward to being involved.

Our seven Futureintech Facilitators have been working over the summer to recruit a new cohort of enthusiastic young Ambassadors from a wide range of industries who are keen to support science, maths and technology in the classroom.

Through our links with both industries and schools, Futureintech is in a unique position to provide teachers with inspiring young people working in jobs directly linked to their subject area, to demonstrate to students the real world applications of their study.

Futureintech Ambassadors are technologists, scientists and engineers from a diversity of fields – from food development to software design – who volunteer to spend time in schools, supporting the curriculum through their practical expertise, assisting with projects, giving presentations and describing their jobs to help promote these essential and exciting areas

2006 was a very good year, with large increases both in the number of Ambassadors recruited and schools making use of them. Ambassadors have been active at all levels, in both primary

and secondary schools, from one-off presentations to continuous support.

The youth of our Ambassadors appears to be a significant bonus, as students are able to relate to people only a few years further down the track than themselves, but nothing seems to have a greater impact than their enthusiasm.

The responses from teachers have been enormously encouraging and indicate the very real need for the kind of contribution our Ambassadors are able to make. Here are just a few samples of the work of our Ambassadors, in Maths, Technology and Science classes in 2006:

### Mathematics and the land

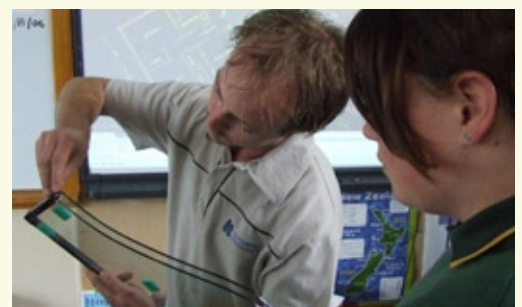


Students at Bucklands Beach Primary School, South Auckland, were introduced to the exciting real-life possibilities of maths by Bruce Frith, a land surveyor at Fraser Thomas Ltd.

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**"IT WAS A FABULOUS PRESENTATION that was perfect for what the kids needed. My class was buzzing afterwards about what they were going to include in their energy efficient houses and how they were going to draw them. Colin did an amazing job and geared it at a level they could all understand which was great."**

**Emily Hartwig, Murrays Bay Intermediate**



Colin Dryland, surveyor, Hutchinson Consultants, at Murrays Bay Intermediate

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Extension Mathex students at the school were given a presentation on land surveying and the mathematical skills it requires, with clear explanations and demonstrations of how the land is measured for maps, and the importance of this in people's lives. Props passed around the classroom helped to retain the students' attention!

## Science and the stars



NASA Scientist Jack Bacon spoke to students in Invercargill and Dunedin in June last year about his work and the impact that recent advances in communication have made on it.

One student mentioned to Otago Facilitator Bernadette Hannagan that the presentation had made her reconsider her future career directions and continue her study of sciences and mathematics, because she realised how relevant and dynamic the subjects are.

**"AT THE TECHNOLOGY PD DAY some students came in and talked about the impact made upon them by visiting design technologists. They were absolutely fired up with the fact that they had been able to liaise with 'real' technologists."**  
*Barbara Warne, Howick College*

**"THE NAVY PERSONNEL WERE professional at all times, obliging and extremely adaptable. They related well with the students while delivering the information, which the students could relate to both personally and practically."**

*Peter Cleal, Papatoetoe High School*

## Technology and our tummies



Food technologist Jo Jenkins, from Griffin's, had an ongoing connection with last year's Year 12 and 13 at Wainuiomata High School.

After an initial visit in which she described her experiences over her first 18 months in new product development, Jo returned several times to the school to provide support and advice, to help food technology students with their projects, and to lead a tour of Griffin's biscuit factory in Lower Hutt.



Teacher Jocelyn Reddy noted a marked improvement in the quality

of the student work as a result of Jo's involvement.

## Contact your local Facilitator now!

To discuss how a Futureintech Ambassador could be made use of in your classroom, please contact your local Futureintech Facilitator, who will be happy to talk through the possibilities with you.

### North Auckland

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## Supporting and celebrating excellence

Futureintech supports a number of programmes which enable students to fully engage with science and technology, both within and beyond the classroom.

### CREST



Creativity in Science and Technology, or CREST, is an international awards scheme administered by the Royal Society of New Zealand. With opportunities for involvement at a wide range of educational levels, CREST enables students to gain authentic experience in technological practice or scientific investigation.

Students are encouraged to work on projects focused on finding solutions to genuine practical problems with relevance to their lives. Working with consultants from industry, they gain both problem solving skills and an awareness of a wider range of careers within the science and technology spectrum. At the same time, by keeping a detailed record of every stage of their project, students learn to self-evaluate.

**First CREST and Team First CREST Awards** are for practical project work by students usually at Year 6-8 levels.

**Bronze CREST and Bronze Team CREST Awards** are awards for independent projects by students at the Year 9-10 level.

**Silver CREST and Silver Team CREST Awards** are awards for challenging projects by students usually at the Year 11-12 level.

**Gold CREST Awards** are for advanced projects by students at the Year 12-13 level.

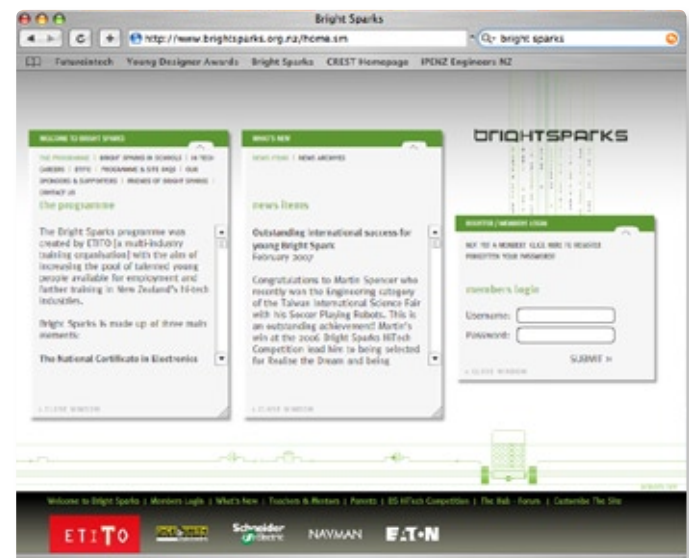
Students begin with small entry-level projects and build up to large research or technological practice projects that can take up to 18 months at Gold level, and have the potential for genuine new discoveries.

In Years 6-13 the awards can be incorporated into general science or technology classes, or offered as an extra curricular endeavour.

At every level students are encouraged to work at their own pace and to fulfil their own individual potential, rather than competing against other participants. Innovative, original thinking is rewarded.

To find out more on how your school can become involved in CREST, please contact Jessie McKenzie, email [jessie.mckenzie@rsnz.org](mailto:jessie.mckenzie@rsnz.org), phone 04 470 5789. Or visit the CREST website [www.crest.org.nz](http://www.crest.org.nz).

### Bright Sparks



Bright Sparks is a national programme which recognises achievement in electronics, software and computer control.

Participants in the Bright Sparks programme can discuss their interests with other students in an online forum; get advice on projects from fellow participants or knowledgeable mentors, or obtain information on tertiary study and career opportunities.

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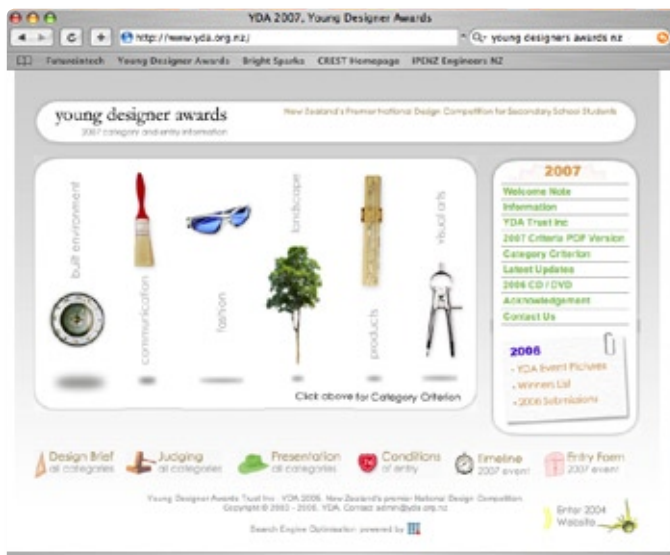
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Bright Sparks is directly involved in schools through the implementation of the National Certificate in Electronics Technology qualifications. These can be delivered at Year 12 or Year 13 level, but the pathway can begin much earlier. NCET encourages the emergence of talents which may not be apparent in other areas of the curriculum, and provides a valuable stepping stone to careers in technology, engineering and electronics.

For further information on the NCET programme or the benefits offered by Bright Sparks please contact [brightsparks@etito.co.nz](mailto:brightsparks@etito.co.nz).

The Bright Sparks website is [www.brightsparks.org.nz](http://www.brightsparks.org.nz).

## Young Designer Awards



The Young Designer Awards aim to encourage the creative flair of New Zealand students, and to promote design as a career. The annual Awards challenge secondary students to create original, functional designs in seven categories:

- Built Environment
- Communication
- Electronics
- Fashion
- Landscape
- Products
- Visual Arts.

There is significant recognition of success, with cash prizes, study allowances, assistance, and scholarships awarded, including:

- \$1,000 to the winner of the Young Designer of the Year Award plus a scholarship for further education
- \$250 to each category winner (Supreme Award)
- \$200 to the best senior in each section
- \* \$150 to the best Intermediate in each section
- \$100 to the best Junior in each section
- \$250 (three prizes) for the most innovative use of recycled materials in projects submitted in the Product Design, Fashion Design and Visual Art categories (Terra Nova Foundation, Plastics New Zealand Awards)
- \$200 (three prizes) for the most innovative use of plastic materials in projects submitted in the Product Design Section categories of Furniture, Consumer Product, Furniture and Lighting (Plastics New Zealand).

Lincoln University will offer a scholarship to the Supreme winner in Landscape Design. This will cover first-year fees at Lincoln University's School of Landscape Architecture.

Last year more than 630 students entered the Young Designer Awards from 75 schools throughout New Zealand. This year's Awards Presentation will be held on 13 October 2007.

Entries close on 1 June 2007. There is a fee of \$45 per entry. Full details are available at [www.yda.org.nz](http://www.yda.org.nz).



A winning entry in the Young Designer Awards 2005.

## Futureintechnews

### Injury break almost over

After a painful start to the year, when she fell and broke her arm in early January, Otago Facilitator Bernadette Hannagan hopes to be able to return to work in the next month. She has been unable to be as active as usual in creating links between schools and Ambassadors so far this year, but is looking forward to returning to classrooms and industries as soon as possible.

Meanwhile the administrative team based in Wellington would like to assure teachers in the Otago area that we are available to provide any additional support as necessary. Please do not hesitate to contact us on [admin@futureintech.org.nz](mailto:admin@futureintech.org.nz) if there is any way in which Futureintech can help your school.

### New publications

A new range of careers brochures is to be launched this year, produced by Futureintech in collaboration with industry partners. The brochures, aimed at secondary school students, will focus on ICT, Food Technology, Chemical Engineering, Electronics, Science and Surveying.

Each will offer an overview of the field, descriptions of the different careers possible within it, advice on necessary qualifications and profiles of young people currently working in the industry. While each brochure will be individually produced, the concept is of a similar layout to our current highly popular brochure on engineering, pictured above.

The Computer Society of New Zealand, the New Zealand Institute of Food Science and Technology, the



Royal Society of New Zealand and the Society of Chemical Engineers New Zealand have all indicated their interest in contributing to the written material, ensuring that the

[www.futureintech.co.nz](http://www.futureintech.co.nz)

Futureintech's website contains a wealth of information for students, parents, teachers and careers advisors. It has profiles of young people working in technology, engineering and science, and the companies they work for, along with information on different courses, careers and scholarships available.

information is up to date and comes directly from the industries involved. We look forward to distributing the new brochures in schools in May.

### 2007 Conferences

The year is already filling up with education conferences across the country, so here are a few dates for the diary. Conferences can be a valuable means of professional development, as well as an enjoyable chance to meet fellow teachers and discuss practices and experiences.

**TRCC Primary Science Conference 2007** will be at Christchurch College of Education on 12-13 April, and at the Epsom Campus of the University of Auckland on 17-18 April. This year's conference title is Enhancing Science Understanding with Literacy Practices: Using and Creating Texts, and is suitable for all primary and intermediate teachers of science. See [www.trcc.org.nz](http://www.trcc.org.nz).

**CHEMED**, the NZASE conference for secondary school chemistry teachers, will be held on 1-4 July at the University of Auckland, in conjunction with the annual meetings of chemistry education sub-committees of NZIC and RACI. 'CHEMED007 - where chemical agents bond' will provide lots of opportunities for involvement in both the serious and not so serious aspects of chemical education. For further details see [www.cce.auckland.ac.nz/conferences/index.cfm?S=CCE\\_CHEMED07](http://www.cce.auckland.ac.nz/conferences/index.cfm?S=CCE_CHEMED07).

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**The Power of Ten**, the tenth bi-annual conference of the New Zealand Association of Mathematics Teachers, will be held at St Cuthbert's College, Auckland, from 25-28 September. Open to all maths educators from early childhood to tertiary level, the conference provides the opportunity to share ideas and experiences, as well as keeping up with classroom trends and practices. For further details see [www.nzamt.org.nz](http://www.nzamt.org.nz).

The biannual **TENZ Conference** will take place on 2-5 October 2007 and is entitled: TENZ Technology Education New Zealand leading the Way: The nature of technology, technological knowledge, technology practice.