

## Futureintechinschools

A new way of supporting teachers and inspiring students has started in classrooms around the country.

### 2 Futureintech's classroom projects

Futureintech is a new initiative to provide curriculum-based support for technology, maths and science teachers.

Futureintech Facilitators are the face of Futureintech. They provide the link between schools and industry, a connection which can be a hugely valuable experience for students and teachers.

### 3 Futureintech in action

Facilitators are all trained teachers, so they know how busy and crowded the curriculum can become. That's why Futureintech is about curriculum support for maths, science and technology, rather than trying to push something new.

#### **What we do**

Futureintech supports technology, maths and science programmes by providing outside experts to help in the classroom. These are practical, classroom and curriculum-based projects with proven records of success. They encourage creative thinking, team work, responsibility and communication skills amongst students.

If your school is interested in finding out more about these programmes, get in touch with your local Facilitator who can answer any questions you might have.

#### **Futureintech Ambassadors**

To help run these programmes, we organise and train Futureintech Ambassadors - young professionals working in technology, engineering and science who have volunteered to help schools with these projects.

Having Ambassadors in the classroom

is an opportunity for teachers to learn as well as the students – about different careers available, and about the skills and knowledge relevant to the workplace and classroom.

This is a chance for students to hear from an expert, someone who uses subjects like maths, science and technology in their work, yet someone who is still relatively young and has good communication skills.

It can be a refreshing change in routine, and there is real satisfaction in seeing students achieve.

#### **What exactly is Futureintech?**

We're a government-funded initiative, run by the Institution of Professional Engineers (IPENZ). Our long-term goal is to encourage more students to take up a career in technology, engineering and science.

The success of Futureintech depends upon the links we can build between schools and industry. We now have over 23 different companies and organisations as official partners, including high-profile companies like Taits, Hubbards and Transpower.

And we have support from education groups like the PPTA, Technology Education New Zealand, the New Zealand Association of Science Educators and the Ministry of Education.

*Meet the Futureintech Facilitators: page 4*

*Find out more about our programmes: page 2*

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## Futureintech's classroom projects

Futureintech supports three classroom-based programmes - the Neighborhood Engineers Award, CREST, and Bright Sparks. They're about hands-on learning, and showing students how subjects like maths, science and technology are applied in work situations.

All can be included as part of the technology, science and maths curriculum, and all have proven track records of success. Many students have won awards, traveled overseas, won prizes for their schools and started tertiary study as a direct result. Want to know more? Get in touch with one of our Facilitators, who can help set up these programmes and arrange for Ambassadors to help out. We'd love to hear from you.



### CREST

[www.crest.org.nz](http://www.crest.org.nz)

Crest is an international awards scheme designed to encourage creative and practical student projects. It teaches students to be innovative, creative, and to problem solve.

Students can enter as individuals or teams, and there are four levels – First, Bronze, Silver and Gold. The use of an outside consultant (i.e. a Futureintech Ambassador) is recommended to help students with advice and support in keeping their project manageable.

Students can enter their CREST projects into regional Science and Technology Fairs and other competitions, and can also have them assessed for NCEA credit. Emphasis is placed on the processes used, not just the final result.



### Neighbourhood Engineers Award

[www.ipenz.org.nz/ipenz/careersed/neiheng/neawards.cfm](http://www.ipenz.org.nz/ipenz/careersed/neiheng/neawards.cfm)

Similar to CREST, except that it is a team project and it is a competition – the Institution of Professional Engineers (IPENZ) judges the reports submitted and awards prizes of up to \$2000.

The emphasis is on 'neighbourhood' – on practical, close-to-home projects that impact appreciably on the school or local community. Teams consisting of teacher, students and volunteer engineer or technologist are challenged to carry out technological practice to meet an identified need or exploit an opportunity in their school or community.



### ETITO Bright Sparks

[www.brightsparks.org.nz](http://www.brightsparks.org.nz)

The Bright Sparks programme has the goal of attracting students into hi-tech careers. It aims to identify and mentor young people into computing, bio-tech and hi-tech careers.

Bright Sparks offers an electronics programme as a full subject at senior school; there is a web and email based club, which encourages interaction and discussion, and industry links are encouraged through school and workplace visits, mentoring, competitions and prizes.

Bright Sparks also offers scholarships to talented university students and has the support of many industries in the electrical, technology and computing fields.



## Futureintech in action

An inner-city Wellington school is demonstrating how Futureintech Ambassadors can enhance student learning, and give a real sense of achievement.



Clifton Terrace Model School has a unique and precarious location, clinging to a steep hill in the middle of Wellington's Central Business District. Providing enough play space for the students has been an ongoing challenge, but one they are solving with the help of civil engineer Hannah Hyde.

The school has entered the Neighbourhood Engineers Award scheme, which offers prizes and awards for schools that use technological practise to meet a need in their community (see page 2 for more details). A design development team made up of Hannah and the students has been working on a plan to open up access to a tree-clad



bank, thus greatly increasing the available space.

By the end of term the team will present a report to the Board of Trustees taking into account student preferences, city council requirements, aesthetics, and options for structural support materials. They'll have also gained an excellent insight into the work done by civil engineers.

### A great learning experience

According to teacher Delia Glogowski, it's been a fantastic learning experience for the students.

"It's made the learning experience very real for the students. Hannah is able to answer questions and facilitate discussion in a way that I can't, because of her professional knowledge.

"And she's a role model in a way, being a female engineer. She has really given the students a better understanding of what an engineer does.

"The kids have been really positive, and the older students have been very keen to get involved, if a bit surprised by how much maths is involved!

"It's great for the students to be involved in a project that they see right through to the conclusion. They are very excited about seeing their new playground turned into reality."

"This is definitely a worthwhile project for other schools to be involved in. It has been very generous of her company (MWH New Zealand Limited) to give up Hannah's time like this. It's been brilliant, something we really couldn't have afforded without the help of Hannah, MWH and Futureintech," says Delia.

### DVD for technology teachers now available

A new DVD, *New Zealand People, Ideas and Technology*, for technology teachers to use in the classroom is available free via the Futureintech website.

The DVD was developed by New Zealand Trade and Enterprise, and has now been modified for classroom use by highlighting technological knowledge and practice.

High profile companies featured include Richard Taylor's Weta, Jade Software, and the Bioengineering Institute. It's a great classroom resource to inspire and educate students.

## Futureintech Facilitators

### Christchurch



**Neil Potter**

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"I've been a maths and science teacher for the last 15 years at high schools in both New Zealand and England. Prior to teaching I worked at the Southland Harbour Board in Bluff as an engineering officer.

"The Ambassador programme is up and running in Canterbury with several schools already taking the opportunity to get the local Ambassadors along to their schools. The Ambassadors are enthusiastic and looking forward to working with teachers and students in the New Year.

"Teachers planning for next year and interested in working with Ambassadors on their programme should get in contact with me."

### Wellington



**Phil Sadgrove**

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"I've joined the Futureintech team with a background in science, patents and teaching. This work allows me to help students get in touch with young professionals and their jobs, by:

- connecting students with their own career possibilities;
- giving reason and encouragement for investing more into their work at school; and
- providing a means to explore their future options.

"I'm convinced that by bringing students closer to the great things happening in creative and productive New Zealand workplaces, we'll all be rewarded as they excel in the future."

### Auckland



**Angela Hart**

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Phone 021-479 892

"Before taking on this challenge I taught technology at secondary school, specialising in electronics and control technology.

"My job as a Futureintech Facilitator is to:

- increase the number of students opting to take technology, engineering and science courses at tertiary level.
- inform students and their families of the many (often new) types of work now available in the fields of technology, engineering and science.

"The benefits of working with teachers and students to promote careers in technology, engineering and science are not just for potential employees – it's a lot of fun for those already practicing."

Futureintech's website [www.futureintech.com](http://www.futureintech.com) is a one-stop shop for information on careers, tertiary courses, scholarships in technology, science and engineering and features profiles of young professionals, their work and their employers.

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