



TENZ is the professional body that:

- fosters the development of Technology in the New Zealand Curriculum.
- develops and maintains national and international links between Technology education professionals and with the wider technological community.
- supports professional, curriculum, and resource development in Technology Education.
- encourages research in Technology Education.
- organises a biennial National Technology Education Conference.
- operates as a special interest group that operates within IPENZ Engineers New Zealand

For details of TENZ membership see [www.tenz.org.nz](http://www.tenz.org.nz)

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# T-NEWS

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# Challenge trial a winner for all

The 2009 NZIFST/CREST Student Product Development Challenge – where senior students develop new food products for an industry client – was highly successful and will be offered again next year.

**T**HIS YEAR, A COLLABORATION BETWEEN the New Zealand Institute of Food Science and Technology (NZIFST), CREST, Massey University and Futureintech saw an extended trialling of the Student Product Development Challenge in a small number of schools in Auckland.

The Challenge required teams of Year 11 or 12 students to develop a new food product for an industry client, following the process defined in the Team Silver CREST Awards – which is very similar to the product development process used by the food industry.

The idea is to underline the Science and Technology basis of Food Technology and demonstrate how the two curricula can be linked, by giving students the opportunity to work with professional food technologists on a fun, creative, challenging project, to develop a new food product.

Seven teams from five schools were involved – a total of 24 students. Some teams were all Food Technology students, others also had some Chemistry students.

Each team was mentored by a CREST ‘consultant’ – a Futureintech Ambassador who is a food scientist, technologist or engineer. The Ambassadors guided the students through the product development process, from idea generation, through consumer surveys, prototype development, packaging development, product manufacture and labelling. Most teams visited their Ambassadors at work, and two used manufacturing facilities there.

The students were also supported financially by the food industry – each team received \$250 sponsorship from an NZIFST member/organisation.

The students completed their projects in September, and were assessed by a team of four CREST assessors (all Fellows of NZIFST) at the Massey University Open Day on 12 September. All seven teams achieved the Team Silver CREST Award. The judges were very impressed with the quality of the projects; one NZIFST Fellow rated them on a par with the work of some university students.

At a function hosted by NZIFST on 21 October 2009, the CREST awards were presented and the winners of the Challenge were announced. Guest speaker Dick Hubbard, one of the first Food Technology graduates from Massey University, founder of the Hubbard breakfast cereal company and past mayor of Auckland pointed out that a Food Technology degree can take you anywhere, even to the mayoralty!

The teachers involved in the Challenge found the experience extremely beneficial, particularly the five



*The winning DelicAsia team from Westlake Girls' High School with supervising teacher Merryl Hamling.*

sessions of professional development support provided by John Grigor of the Institute of Food, Nutrition and Human Health (IFNHH) Massey University.

In this series he covered the new product development process used by the food industry – idea generation and screening, consumer testing, developing a business plan, prototype development, sensory evaluation, processing and packaging, and preparing for launch.

“Being involved in the Challenge was extremely valuable for both me and the students,” said Sandy Goonan, of Carmel College. “As a teacher, the professional development sessions provided useful background knowledge and ideas for a variety of activities that students could do that reinforced those carried out by food technologists.”

“The opportunity for the students to work with Ambassadors and be partnered with food companies gave their projects authenticity and real meaning. This has given

them an insight into what happens in the industry and the career opportunities that are available. It has also led to potential contacts and a continuation of the project for one of my students going into Year 13 next year.”

“I love the Challenge,” said Carolyn Norquay of St Kentigern College. “It challenges me and provides students with the opportunity to work within an authentic context with a practising technologist. They learn so much – communication, planning, about the Griffin’s manufacturing line, and the importance of quality control. The Challenge provides the students with many more opportunities than classroom practice can offer. Kate (one of the students) will be enrolling in Food Technology at Massey, so bonuses all round.”

“The professional development support from John was a fantastic opportunity. All Food Technology teachers would benefit from attending these sessions, especially those of us with no industry experience.”

Jessie McKenzie of CREST says: “CREST is a New Zealand international awards scheme administered by the Royal Society of NZ. It is designed to encourage students to be innovative, creative, and to problem-solve in Science and Technology. This has certainly proven to be the case in this year’s Student Product Development Challenge.

“CREST teaches students to be innovative, creative and to problem solve, and is highly motivational. CREST can inspire, from an early age, an enduring passion for science and technology. It is very pleasing to report that at least two of the students who have been involved with the Challenge have now opted to study Food Science/Technology at Massey University. It is very pleasing that at least two of the students involved have now opted to study Food Science/Technology at Massey University.”



The Smoosli team from Carmel College with teacher Sandy Goonan.

“Another success of the challenge is how different organisations and individuals have worked together, in a highly collaborative way, to provide an immensely positive, constructive and holistic learning opportunity. The outcomes of this collaboration are extraordinarily positive for all concerned.”

As a result of the success of this trial, it will be offered to a limited number of schools in Auckland again next year. NZIFST and CREST are also working with Massey University Palmerston North and Futureintech to roll it out to a small number of schools in the lower North Island.

CREST and NZIFST are working with Otago University and Futureintech to offer the 2010 Otago Food Science Challenge to invited Dunedin secondary schools.

For the final reports from the teams, see [www.nzifst.org.nz/careers/students.asp](http://www.nzifst.org.nz/careers/students.asp) and [www.crest.org.nz/silver.htm](http://www.crest.org.nz/silver.htm).

**2009 NZIFST/CREST STUDENT PRODUCT DEVELOPMENT CHALLENGE**

**WINNER**

*DelicAsia*, Westlake Girls’ High School – a frozen meat-filled dumpling-style snack product. Teacher: Merryl Hamling.  
 CREST Consultant: Fiona Greig from Beef + Lamb NZ  
 Sponsor: NZIFST Fellow Jerry Wellington  
 Judges: “This product recognises the fusion of east/west cuisines and offers flavours of the west in a product form from the east. This team demonstrated great understanding of their cultural differences to create a product that crosses cultures and meets many needs.”

**HIGHLY COMMENDED**

*Pavlova Pronto*, Carmel College – an instant pavlova mix, better than the Australian import! Teacher: Sandy Goonan.  
 CREST Consultant: Tony Vranjes, NZ Sugar  
 Sponsor: Kerry Ingredients (NZ) Ltd

*Smoosli*, Carmel College – a healthy breakfast snack for teenage girls, comprising a muesli and yoghurt berry smoothie combination. Teacher: Sandy Goonan.  
 CREST Consultant: Seema Datt, The Warehouse  
 Sponsor: AgResearch

*Waffle Waffle*, Pinehurst School – an instant waffle mix  
 CREST Consultants: Estee Mathias & Deidre Light, Easiyo  
 Sponsor: NZIFST Dairy Division

*Pink Panther ice cream*, St Cuthbert’s College – an ice cream for children, with an added health benefit. Teacher: Fiona Gillies.  
 CREST Consultant: Bronwyn Munro, Tip Top  
 Sponsor: NZIFST Dairy Division

*Vibez*, St Kentigern College – a range of biscuits for teenagers, with the potential to be processed on manufacturing line 3 at Griffin’s Foods. Teacher: Carolyn Norquay.  
 CREST Consultant: Shelley Banham, Griffin’s Foods  
 Sponsor: Hawkins Watts Ltd

*Apricot Munchy Muesli*, Westlake Girls’ High School – a healthy, ‘just add water’ breakfast product for adolescent girls. Teacher: Elizabeth Beaumont.  
 CREST Consultant: Fiona Hedley, Colmar Brunton  
 Sponsor: Hubbard Foods Ltd

# Risk-taking rewarded with online success

This year, the highly successful Bright Sparks Awards competition moved online for the first time – it was a move that could well have been a risky one. In the end, it was successful beyond all expectations.



People's Choice winner Logan Glasson's 'Spinning LED Display' – see [www.brightsparksawards.org.nz/finalists/13-14-years/logan-glasson-2](http://www.brightsparksawards.org.nz/finalists/13-14-years/logan-glasson-2)

**“THE LIVE EVENT WAS A FANTASTIC EXPERIENCE** for those attending,” says Ross Peterson, Bright Sparks Manager and competition organiser, “but the logistics of it were quite challenging for the organisers.

“We had to get busy people from the high-tech industry there to do the judging and the presentations, and because we were flying people in from all parts of the country there was quite a significant financial cost associated with it.”

Although the event traditionally attracted significant media interest, Ross was sometimes disappointed in the actual number of stories that made it into the papers and onto TV screens.

“One of the features of Bright Sparks is that it’s an online programme,” says Ross, “and when we did our review last year we decided that it might be time to more fully embrace that technology and go online with the competition.”

“We weren’t quite sure how it would work out, but the consensus was that we should give it a go.”

Ross says that not only has the move turned out to be a cost-effective one, but he was staggered by the level of interest generated – with web statistics showing over 7,000 hits in four weeks (of which 4,000 were five-minute sessions or longer) and page views of 48,000.

He was also encouraged by the level of media interest – with 42 articles running in national and regional newspapers supplemented by three TV sessions and two radio spots.

“This year we made the judging a two-stage affair – cutting the entrants down to an elite group of finalists in each

category created a lot more interest right around the country”

“Another innovation we were able to bring in this year by moving online was to introduce a ‘People’s Choice’ award. We could record unique votes on individual projects and in the end there were over 1300 votes cast in this section – which gives another indication of the level of public interest involved.”

Interestingly, Ross can also point to a drop in the organisational commitment involved on his part leaving him with more time to focus on engaging parents and students in the process.

“The online environment enabled us to engage the wider community this time – teachers, students, families and friends. And by giving them the opportunity to post comments on the projects, and vote for their favourites, it was a whole new level of engagement.”

The interest generated over the competition period resulted in a flush of new Bright Sparks members, a number which is confidently expected to grow as more people tap into the site to see what the students have been doing – all of which augers well for further rapid growth in participation next year.

“After this year’s experience we know that we’ve got a model that will work. It’s a tool that can be further developed for minimal cost and we’re looking forward to building on it for next year,” says Ross.

Visit the competition website at [www.brightsparksawards.co.nz](http://www.brightsparksawards.co.nz) to view the impressive range of prize-winning projects and get additional competition information.

# Welcome . . .

**T**HIS WILL BE THE LAST **t-news** before our election and therefore possibly my last as TENZ Chair. So I thought a little reflection might be a good idea.

This has been a pretty torrid and frantic year at times but generally positive from the secondary perspective, especially with the development of the alignment contract – to ensure achievement standards better reflect the curriculum, and the consolidation of positive relationships between all technology subject associations with the formation of TESAC. Techlink continues to develop resources and material to support Technology education, particularly at secondary level.

I am feeling less positive about Technology education in the primary sector unfortunately, especially with the MOE latest moves to remove all subject advisors from School Support Services except in the areas of literacy and mathematics. I would therefore like to signal TENZ's commitment to maintain and develop further support for the primary sector. By making

a strong commitment in the primary sector we signal to the wider education community the importance of Technology education and also ensure secondary students of the future are well grounded in Technology.

The next Council meeting will be a face-to-face one in Wellington in early February 2010. At this meeting we will be developing strategies and indicators for our draft strategic plan. It will be in this document that support for the primary sector will be developed and planned for.

Recently a very close family member took ill and I am reminded how important our health is to us. Hopefully you will all be able to have a much needed break over the summer. The Council would like to wish you all and a very Merry Christmas and a Happy New Year.

**Wendy Fox-Turnbull**  
*Chair, TENZ National Council*

## COUNCIL ELECTIONS

This year we have six nominations for five vacancies on the Council. TENZ members on the database have been emailed candidate information and details of the voting procedure. If you have not received this, please contact [TENZ@ipenz.org.nz](mailto:TENZ@ipenz.org.nz).

**Closing date for online voting: 16 December.**

## TENZ Regional News

### TECHNOLOGY EDUCATION 2010 AND BEYOND



Malcolm Howard, Regional Chair of TENZ Waikato/Bay of Plenty, reports on a successful Term 4 meeting at Matamata College on 2 December.

A group of about 50 teachers gathered to hear presentations by Niall Dinning and Cliff Harwood on future directions for Technology education. The meeting included a dinner put on by the Matamata College Food Technology Department which gave the teachers present ample opportunity to socialise between speakers.

"Niall outlined some key messages for 2010 from the Ministry and gave an update on the various projects underway to support Technology education," said Malcolm, "and Cliff covered the implications of this for the classroom, giving a vision of what Technology education might look like under the new curriculum."

At the end of his first year as Chair for the region, Malcolm commented that Technology education seemed to be in good heart in Waikato/Bay of Plenty. "There was a good 'feel' at the meeting, and when we called for nominations for the TENZ Regional Committee for 2010 several teachers put their names forward," he said.

# Technological Practice Project gathers momentum

Over the course of this year Niall has been promoting the professional development opportunities available through the GIF Technology Education Technological Practice Project (TPP). This initiative offers funding assistance to groups wishing to undertake specific curriculum or qualifications-related PD in their region.

NOVEMBER SAW A BURST OF TPP ACTIVITY with two of the workshops involving input from Invercargill-based National Technology Professional Development Facilitator Cheryl Pym.

The TENZ Southern South Island group, in association with the College of Education, organised a workshop in Dunedin on 25 November.

"This workshop targeted Year 7-10 teachers in the region," says Cheryl. "The main aim was to spend some time coming to grips with the nature of progressions in technological practice, and to get some common understandings on what that looks like."

The day started off positively with an entertaining and informative presentation by one of the regional Futureintech ambassadors.

"People got stuck in and asked lots and lots of questions and a couple of teachers who had actually used Ambassadors in the classroom spoke very highly of their experiences – particularly in the Digital technologies field," said Cheryl.

For the first part of her presentation, Cheryl introduced "some generic stuff looking at progression in technological practice", targeting some of the terminology to ensure common understandings. Then in the afternoon the group focused on actual student work.

However, before this, Cheryl got teachers involved in activities looking at the 'Knowledge' and 'Nature' strands. "They looked at the evidence that they had produced as participants (students) and they identified what the teacher might have to do to work towards progression in



*Cheryl Pym speaking at her Hawke's Bay workshop*

technological practice. That gave them a platform for what we might look at in the student work in the afternoon – to ask 'What does this work show you?', 'What do you think is missing?' and 'What do you think the teacher needs to do?'"

The end-of-day evaluations showed that teachers had particularly appreciated the opportunity provided for structured discussion around progression.

"Also the opportunity to have an in-depth examination of not only activities, strategies and indicators, but also of student work. Having live student work was critical to the success of the day."

"It was a very valuable end-of-year activity session with a real mixture of intermediate and secondary teachers.



A body sculpture session at the Hawke's Bay workshop

People were very positive and said that the level of professional conversations they were able to engage in was a real highlight," said Cheryl.

Cheryl's other November workshop supported by TPP funding involved a group of mainly 'food' and 'fabric' teachers in Hawke's Bay. Last year Cheryl had been invited by the regional HETTANZ cluster to do some work on the 'front end' of the new curriculum.

"This time the focus of the group was clearly on the Technology curriculum," says Cheryl. "Some of the group were Home Economics teachers with very little background in Technology, looking at values and key competencies within technology, moving from attributes to specifications,

considering what is progression in Technology and examining the differences at different levels."

"Over the day we did some really cool group activities," she says. "In one they had to talk about what their vision was for technology, and work out what the essence of that vision was – then they had to communicate what they felt that technology in the 21st century meant through a body sculpture"

The groups then looked at the 'three-floor elevator speech' that Marc de Vries alluded to in his TENZ keynote – how to communicate to a stranger the essence of Technology education in the time that it takes an elevator to go up (or down) three floors.

Cheryl started this off with an introductory activity to get the teachers thinking about the task, then directed them to pages 17 and 33 of the curriculum statement – which they had to put into "their own language".

"So while they were doing this I was unpacking with them the strategies I was using to teach them to teach this – so they could take those strategies away and use them in their classroom as well as actually getting the concept knowledge"

"Over the day we did a lot of practical activity – a lot of video clips, a lot of analysis, a lot of discussion. Another valuable day for teachers I think – I really enjoyed it. They were a neat bunch of people to work with."

Niall is keen to see that access to the TPP funding continues into 2010. Groups who are looking to facilitate specific professional development in their region should make contact with Niall, email [niall@teched.net.nz](mailto:niall@teched.net.nz).

## GREEN ICT . . .

**W**HEN IT COMES TO GREENHOUSE GAS emissions, Information and Communication Technologies (ICT) are part of both the problem and the solution, says Loretta Johnson of the Australian Information Industry Association at a recent KANZ (Korea, Australia, New Zealand) broadband summit in Auckland.

Around the world, the stellar growth of the ICT industry has been pushing up greenhouse gas emissions. Right now, says Johnson, the global ICT business pumps out around two percent of total global CO<sub>2</sub>. This puts it on a par with the airline industry. In just over 10 years' time ICT could account for closer to six percent of the global total.

This year, both Australia and New Zealand have firmed up plans to roll out new improved broadband networks. In September our government announced plans to inject \$1.5 billion into making ultra-fast broadband available to 75% of New Zealanders.

A faster, more reliable broadband network could help decrease New Zealand's greenhouse gas emissions from ICT – to find out how, read the [full article](#).

This story is from *Export News*, the monthly e-newsletter from NZ Trade and Enterprise. Although primarily focused on the business market, many feature stories and news articles are of interest to teachers and students. Subscribe at [www.nzte.govt.nz/Register-for-Updates/Pages/Register-for-Updates.aspx](http://www.nzte.govt.nz/Register-for-Updates/Pages/Register-for-Updates.aspx)

# Techlink update

## TECHLINK'S NEW TEACHER SUPPORT PACK

This support pack focuses on providing helpful resources for Technology teachers in their first year of teaching.

The pack includes:

**Tips for Teachers** – Techlink's latest publication which provides useful advice from experienced Technology teachers for first-year teachers

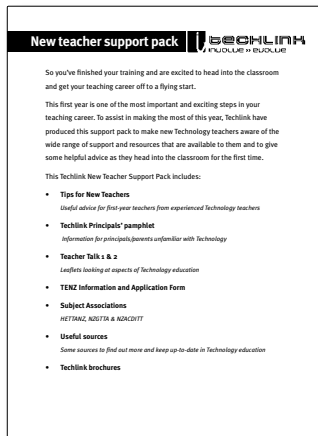
**Teacher Talk 1 and Teacher Talk 2** – four-page handouts.

**Technology Education in your School** – a four-page promotional handout for principals

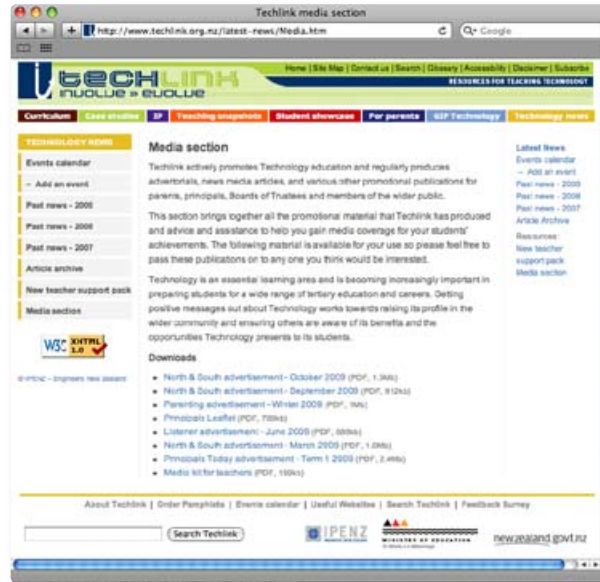
**Information on subject associations** – TENZ, HETTANZ, NZGTGA and NZACDITT

**Useful resources** – A list of other useful resources for teachers to find out more about and to keep up-to-date with Technology education

To view or download this pack, visit: [www.techlink.org.nz/latest-news/new-teacher-support-pack.htm](http://www.techlink.org.nz/latest-news/new-teacher-support-pack.htm)



## TECHLINK MEDIA SECTION



This section brings together all the promotional material that Techlink has produced and advice and assistance to help you gain media coverage for your students' achievements.

Techlink actively promotes Technology education and regularly produces advertorials, news media articles, and various other promotional publications for parents, principals, Boards of Trustees and members of the wider public. Getting positive messages out about Technology helps raise the awareness of Technology, its benefits, and the opportunities it presents to students.

We encourage teachers to use this material to inform their peers and to raise the profile of Technology education in the wider community.

An updated version of Techlink's Media Kit, which now includes a media release template, has also been added to this section.

All material is available for download at [www.techlink.org.nz/latest-news/Media.htm](http://www.techlink.org.nz/latest-news/Media.htm).

## ATTENTION SECONDARY TEACHERS

We are tracking down several ex-Technology students to gather information on how the skills learnt in Technology have been beneficial to them in employment and tertiary study. Profiles of students will be used to promote secondary Technology education in New Zealand. For those of you who have students in their final year, or who are still in contact with an ex-Technology student please pass on their details to Vanessa, email [comms@techlink.org.nz](mailto:comms@techlink.org.nz).

## REGULAR TEARAWAY TECHLINK FEATURE

Every month, *Tearaway's* online magazine features an article based on material from Techlink. This month the article is on the innovative and very cool folding skateboard by Year 12 student Karl Ralph from St John's College – see Student Showcase overleaf. To view this article go to: <http://viewer.zmags.com/publication/362eca69#/362eca69/26>.



## NEW CLASSROOM PRACTICE CASE STUDY

### Healthy, funky, saleable lunches

Jo Clarke, Year 4 classroom teacher at St Michael's Church School, expanded an existing 'sandwich' unit to form a new 'Food to Go' unit that involved three classes, industry mentors, sponsors and the marketing and selling of the outcomes in a highly successful, profit-making venture.

See: [www.techlink.org.nz/Case-studies/Classroom-practice/Food-and-Biological/CP909-saleable-lunches](http://www.techlink.org.nz/Case-studies/Classroom-practice/Food-and-Biological/CP909-saleable-lunches) »



## NEW STUDENT SHOWCASES

### Folding skateboard

Year 12 student Karl Ralph from St John's College designed a skateboard that could fold up and be carried unnoticed into university lecture theatres, for his brother.

See: [www.techlink.org.nz/student-showcase/materials/karl-folding-skateboard.htm](http://www.techlink.org.nz/student-showcase/materials/karl-folding-skateboard.htm)

### Jewellery collection

After her mother's jewellery was stolen in a burglary, Diocesan School for Girls Year 11 Technology student Eloise Kannemeyer designed and created a range of rings, necklaces and bracelets for her. See: [www.techlink.org.nz/student-showcase/materials/eloise-jewellery.htm](http://www.techlink.org.nz/student-showcase/materials/eloise-jewellery.htm)



## NEW RESOURCE REVIEW

### e.nz magazine

This 48-page magazine published bi-monthly by the Institution of Professional Engineers New Zealand (IPENZ) has feature articles that span a range of technological contexts and engineering disciplines. Subscription discounts are available for New Zealand schools and TENZ members.

See: [www.techlink.org.nz/teaching-snapshot/Resource-Reviews/enz.htm](http://www.techlink.org.nz/teaching-snapshot/Resource-Reviews/enz.htm)



## NEW TEACHING SNAPSHOT

### Canvas me

Materials Technology teacher Deborah Lean of St Margaret's College asked her Year 7 students to design and make a collage on canvas to reflect aspects of their personality, interests, or things that are important to them.

See: [www.techlink.org.nz/teaching-snapshot/Y07-10-Middle/StMargarets-Canvas-Me.htm](http://www.techlink.org.nz/teaching-snapshot/Y07-10-Middle/StMargarets-Canvas-Me.htm)



## QUICK TECHLINKS...

- Curriculum Support
- Case Studies:
- Classroom Practice
- Technological Practice
- Enterprise Links
- Technology News
- Events Calendar
- Information for Parents
- Intellectual Property
- Search Techlink

## Technology in the News

Techlink publishes Technology news items of interest to teachers and students as they happen – it's a page worth checking every week!

Here are just a few of the latest items:



### Second time lucky for NZ rocket launch video (30 November)

New Zealand has entered the space age, blasting a rocket into space just after 2pm on Monday from a launch pad on Great Mercury Island off the Coromandel Coast. The successful launch came after a day of delays. [More>>](#)



### Gluten-free: Healthy choice or expensive fad? video (24 November)

Organic, GE-free, low cholesterol – all buzzwords associated with healthy living and healthy food choices. But what about gluten-free? How many people think they are gluten intolerant even though they have never actually been tested? [More>>](#)



### Wireless electricity – A world without cables (22 November)

For a century the modern world has been caught in a growing web of copper cables. They have become arteries that power the globe, but, from the jumble of cords cluttering our desks to the miles of wires hidden in our walls, they are also an expensive nuisance binding our gadgets to the grid. [More>>](#)

To keep up with the latest in Technology news, visit [www.techlink.org.nz/latest-news/archive.htm](http://www.techlink.org.nz/latest-news/archive.htm)

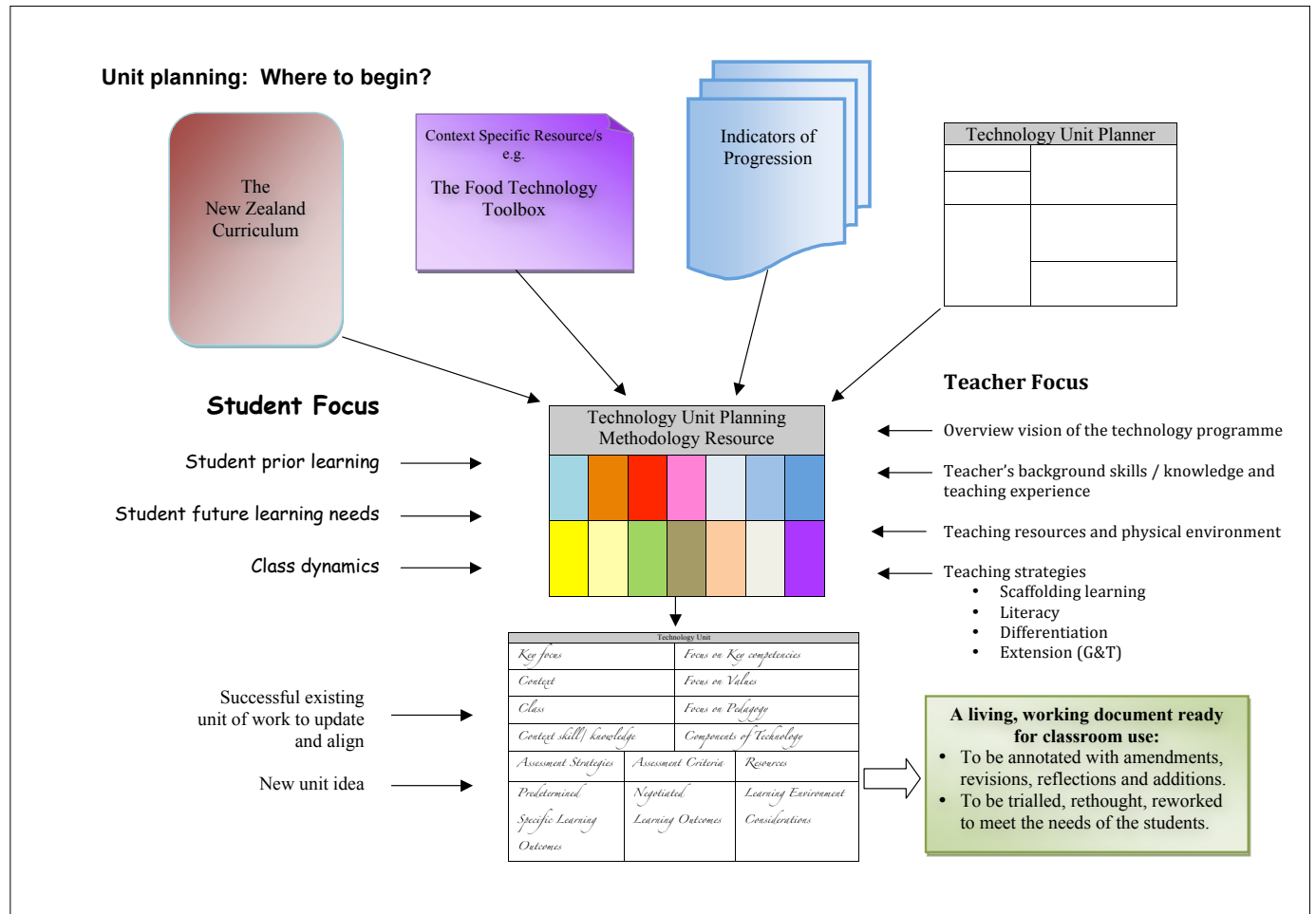
# Big Bikkies gets a new curriculum makeover

In her TENZ 2009 Conference workshop, Diana Eagle took delegates through the refocusing of her Year 10 Big Bikkies unit, and discusses feedback from teachers trialling her Food Technology Toolbox.

**B**IG BIKKIES WAS ONE OF THE FIRST classroom practice units published on the Techlink website. For teacher Diana Eagle, the idea of delivering a context specific Food Technology unit at that time (2003) was a scary proposition, but she was lucky enough to get help from Carol Pound – a real, live and best of all locally based practising food technologist.

“My Year 10 students were used to cooking a batch of biscuits,” says Diana, “but the aim of this unit was to give them shared experiences and understandings around what needs to be considered in the development of a biscuit outcome for multi-unit batch production.”

The unit has sat comfortably on the site for well over five years now and has proved to be a very popular one, with many teachers using it as a first stepping stone into the relative unknown world of Food Technology.



However, with the implementation of Technology in the New Zealand Curriculum (2007) looming large, Diana took up the challenge of adapting the unit to address the new curriculum requirements and 'Big Bikkies' began its

metamorphosis into the new unit, which Diana renamed 'Bikkie Time'.

"I had to work out what made that original unit successful," she says, "and then try to match it in with the 'front end' of



the new curriculum. Then it was a matter of trying to mesh in all of the Technology stuff with that, and do it smoothly.”

The unit planning case study now on the Techlink site gives a detailed insight into much of the thinking that Diana put into the process of developing her final unit. Her alignment focused on the Technology learning area – considering the three strands from the new curriculum, and taking full advantage of the opportunity to incorporate specific skills and knowledge in Food Technology.

Diana points out that the level of detail included in the unit planning process goes way beyond what she would typically be doing as a classroom teacher. “In that example I’ve tried to show all the possible thinking that could be taking place – nobody is expected to sit down for days on end in the planning of a unit.”

She advises teachers to start cautiously, with an existing unit that has proved successful. “It might be that you enjoy teaching the content, or the kids were particularly motivated, or because you got good results – quality

outcomes and/or student learning – or a combination of all of those.

“First of all, work out what made that unit successful and see how well what you’re doing in the unit matches in with the front end of the new curriculum. Then work out where you want your students to progress – maybe pick a specific key competency like *managing self* and work out strategies you could use to do that. So by the end of the unit you’ve had activities that have focused on that competency and you can see some improvement in that competency in individual students.”

“The first time you do it, start simple,” she advises. “Edge your way into the new curriculum and don’t try to do too many things at once – and don’t expect it to turn out 100% right first time.”

Diana presented a workshop on her planning considerations for the *Bikkie Time* unit at the TENZ Conference in Napier.

### Strategies for using the Food Technology Toolbox

In the TENZ 2009 workshop, Diana also shared some of the feedback from teachers who had been trialling the Food Technology Toolbox which she developed with fellow teacher Jacquey Neilson and food technologist Carol Pound.

“I’ve had very positive feedback from others who have used the toolbox in their schools,” said Diana. “It is being used in a number of different ways depending on the experience of the teacher and the individual school situation.”

Specific strategies mentioned included:

- *Individual unit planning*: “Where teachers highlight which bits in the Food Technology Toolbox they’re putting into their unit. They’ll do something in one unit and then pick something else as a focus in the next unit – so it’s a way

of making sure they are focusing on teaching specific knowledge and skills.”

- *Auditing*: “Using the toolbox to examine their existing programme – and it may be a Home Economics course – to see where they were covering things to do with Food Technology.”
- *Long term planning across levels*: “In the toolbox you can match learning experiences with clearly identified links, to ensure you’re covering a wide range of experiences in all of the five elements incorporated across all of the programme levels.”
- *Addressing NCEA requirements*: “Helping to cover relevant content for the knowledge and skills standards at the three levels.”
- *Gap analysis*: “An HOD can use the toolbox to look at their existing programme and identify the gaps – highlighting what was being covered and identifying what could be covered in addition – to ensure progressive programme planning.”
- *Self analysis*: “Teachers were using the toolbox to identify content and skills they were comfortable with and covering well, and highlighting areas that they were not covering as well and were less comfortable with, and which could challenge them to branch out into new areas.”

### Find out more...

*Bikkie Time* unit planning: [www.techlink.org.nz/curriculum-support/unit-planning/Big-bikkies](http://www.techlink.org.nz/curriculum-support/unit-planning/Big-bikkies)

The development and use of the *Food Technology Toolbox*: [www.techlink.org.nz/Case-studies/Classroom-practice/Teaching-Practice/cp807-food-technology-toolbox](http://www.techlink.org.nz/Case-studies/Classroom-practice/Teaching-Practice/cp807-food-technology-toolbox).

**A**S FUTUREINTECH REACHES THE END of another busy year, we're getting encouraging feedback from Technology teachers about how our services have supported their teaching and sparked students' curiosity.

Carolyn Norquay from St Kentigern College has used a number of Ambassadors in her Food Technology class over the years. In August, food technologist Shelley Banham, who currently works at Hubbard Foods, took Carolyn's class on a tour of the Griffin's factory in Auckland. She pointed out how the product – chocolate thins in this case – must be measured and tested throughout the process, from weighing the dry ingredients to checking the temperature inside the factory.

"Going on a factory tour made my knowledge about the commercialisation of biscuit-making so real," says Carolyn. "I could tell stories about what food technologists do, and it was so helpful in the understanding of why tests are done at each stage – even down to things like if the biscuits are too fat in this batch, then they're not going into a packet."

Vince Brannigan from Wellington High School had similar success with former Ambassador Scott Abernethy, a software engineer with Harris Stratex. He found that Scott's input contributed a great deal to the class and opened up career opportunities for his students.

"It helped align my teaching with the new curriculum in that students had the opportunity to relate to others," he says. "Some students were able to use Scott as a mentor for CREST projects, and one of our students, after attending university, ended up as an intern at Harris Stratex."

Overall, the students had a lot to gain from Scott's practical approach to the subject. "I like the idea that in a high-tech



*Food technologist Shelley Banham with Carolyn Norquay's Year 12 class at St Kentigern College.*

industry, people have to not only be able to learn, but also unlearn and relearn," says Vince.

These are just a couple of examples of the successful partnerships we've developed with Technology teachers around the country. The Futureintech team would like to thank you for your ongoing support, and we look forward to more rewarding experiences in 2010.

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