

Techlink

D&T from afar



Techlink is a unique resource which supports and promotes Technology Education in New Zealand. Techlink provides curriculum support, case studies, examples of good teacher practice and showcases outstanding student work. There is also a section for parents, which helps them to fully appreciate the importance of Technological Literacy to their children's educational development.

The Technology Education curriculum

Although aspects of Technology were part of the school curriculum since the introduction of compulsory education in 1877, and technical education in 1890, it wasn't until 1995 that Technology was established as an essential learning area (a few years after the introduction of Technology within the National Curriculum in England and Wales). Since the latest review of the New Zealand curriculum (2007) the Technology learning area has three strands:

- **Technological Practice**
 - Brief development
 - Planning for practice
 - Outcome development and evaluation

Nature of Technology and Technological Knowledge strands were introduced later and will be assessed for the first time next year for the National Certificate of Educational Achievement (NCEA). Under this qualification system students are assessed at Years 11, 12 and 13 for NCEA Levels 1, 2 and 3.

- **Nature of Technology**
 - Characteristics of technology
 - Characteristics of technological outcomes

- **Technological Knowledge**
 - Technological modelling
 - Technological systems
 - Technological products

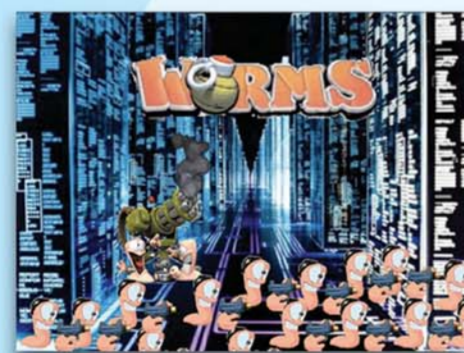
The New Zealand school system is based on primary (Years 0 to 8) and secondary schools (Years 9 to 13). Technology Education is compulsory at Years 1 to 10. Some Year 7 and 8 pupils attend all-through primary schools, but many are at intermediate schools. Funding is allocated for specialist Technology teachers for all Year 7 and 8 pupils and classroom teachers take responsibility for teaching Years 1 to 6. The Technology curriculum provides opportunities for pupils to work across six material focus areas: Materials (hard), Materials (soft), Food and Bio-related, Digital Tech. and Electronics. Throughout Years 1 to 13 there are eight levels with Indications of learning to show student progression.

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Techlink is an initiative of the Institution of Professional Engineers New Zealand (IPENZ) and is funded by the Ministry of Education through its Growth and Innovation Framework (GIF) – Technology Education. Its original aim was to support teachers in implementing the new Technology Curriculum by featuring outcomes and strategies from teachers/students working in all the subject areas. The site was initially aimed at secondary school teachers, but primary and pre-primary school content has now been included. When the Techlink site was first established it presented case studies of classroom and technological practice. It has since expanded to include sections on the Technology Curriculum, Links with Industry, Intellectual Property and Teaching Snapshots (sharing ideas, strategies and resources), Student Showcases, Information for Parents and Technology in the News. It now aims to build teacher capability through a focus on quality teaching, innovative environments and supportive relationships, improving the alignment between secondary and tertiary technology education and encouraging more interaction with the 'enterprise' community. ■

www.techlink.org.nz

Digital Technologies



Year 10 Katikati College pupil, Paul Organ, produced a kiosk PowerPoint presentation on a topical ICT issue: Worms – self-replicating computer programmes that infect computer operating systems.



Year 9 pupils from St Margaret's College, planned, produced, and edited a movie, which celebrated their school activities during the year.



Year 13 student, Krishneel Kumar from Paraparaumu College, helped her local district council to advertise its services to the community on the web in a visually appealing way. She designed professional and informative graphic-based downloadable 3D models of local amenities.



Electronics

Year 8 Remuera Intermediate pupils, Cayleigh and Sara, decided to tackle a common problem – cold slippers – creating heated slippers with battery powered circuits that can heat them to 39 degrees C.



Year 13 Mount Roskill Grammar School student, Kevin Huang, designed and constructed a remote controlled lawn mower for his grandparents who needed help with mowing their lawns. Kevin received a New Zealand Scholarship in Technology for this project in 2009.



Year 5 student, Morgan Grace from Dilworth School, designed and created an electronic matchbox bug with glowing LED eyes.

Hard Materials

Year 11 pupil, Eloise Kannemeyer from Diocesan School for Girls, designed and developed a range of jewellery for her mother, to replace the jewellery stolen during a home burglary.



Year 12 student, Karl Ralph from St John's College, designed and constructed a folding skateboard for his brother who needed a cheap and easy way to get around while at university. The skateboard is compact and can be stored in a backpack.

Kindergarten students from Otaki Kindergarten created their own outdoor chairs using recycled and donated materials.



Year 7 pupils from Havelock North Intermediate, were asked to design and make a pen for a chosen client. Amy chose her father as her client and based her design on mathematical symbols.



Food and Bio-related

Garin College was approached by Simply New Zealand, a national chain of tourist shops, to design a range of products suitable for sale to both local and overseas visitors. Year 11 pupil Nic Barkley, produced a multilayered jam.



St John's College student, Kyle Van de Pas, developed a spray, which reduced the spread of didymo in New Zealand waterways for his Year 12 project.

Year 12 students Estelle Johnson and Kate Morris, from St Kentigern College, created a range of biscuits for Griffins Foods Ltd. to target the teenager market. Their products had to meet Griffin's production requirements as well as having 'teen' appeal.



Soft Materials

Year 13 student Robyn Daly, from Wellington High School, designed a ballet tutu for her client who was auditioning for the Royal New Zealand Ballet School. Her design had to reflect her client's personality and style ('hard-edged, gothic look'), whilst retaining traditional costume aspects.



Year 9 Wellington High School pupils created soft toys from donated and recycled material with the theme of 'ugly creatures' as a result of a unit that focused on sustainability and the recycling of resources.