



DesignTECH Gallery Guide PHM





Message from the Minister

It gives me great pleasure to welcome you to the 2010 DesignTECH exhibition.

This annual event recognises excellence in design, innovation and creativity. It also acknowledges the dedication and commitment of our NSW Higher School Certificate students and their teachers.

A selection of 23 outstanding works from Design and Technology students have been included in this year's exhibition representing an extensive variety of designs. I congratulate and thank all of the 2010 Higher School Certificate students whose work has been chosen for display.

The importance of invention, design and innovation is unquestionable. Consumers are increasingly demanding better products and services. Now more than ever, innovation is helping meet these expectations.

As visitors to this exhibition you will be inspired by the breadth of innovation on display. You can expect to see works that have the potential to deliver significant economic, environmental and cultural benefits, and others that may make far-reaching improvements to the quality of people's lives.

Student folios are included in the exhibition as they support the development of the works and chronicle the evolution of an idea into a final product, system or environment.

DesignTECH is an opportunity for schools throughout NSW to explore new ideas that promote, provoke, delight and create change.

DesignTECH would not be possible without the support of our partners and sponsors.

Thank you in particular to the Powerhouse Museum for once again supporting DesignTECH and for the inspiration and encouragement it provides to young Australian designers and inventors.

I invite you to enjoy DesignTECH 2010 and encourage you to engage with this inspiring exhibition.

A handwritten signature in black ink, appearing to read "Verity Firth".

Verity Firth MP
Minister for Education and Training

The Powerhouse Museum Award for Innovation in Design



Sponsored by Design Resource, Australia's Global Design Brand

Each year the Powerhouse Museum presents an award to one of the students whose major work is selected for display in DesignTECH. The Museum's award recognises product innovation in such areas as new uses of materials, new design and fabrication processes, or a new or improved design for an existing product.

The award is given for the product that best demonstrates a thorough approach to product innovation. This may include consulting with potential users and with expert makers of similar products, generating alternative designs and production methods, exploring opportunities to reduce environmental and health risks over the product's life cycle, ensuring compliance with relevant standards, testing and evaluation.

The winner of the Powerhouse Museum award for innovation in design receives a certificate, a \$500 prize, and a one-week work placement in the studios of Design Resource.

The Alan Broady Memorial Award

This award is named in honour of Mr Alan Broady, who was a principal lecturer in Industrial Arts at the Sydney Teachers College from 1948 to 1984. The Teachers College is now part of the Faculty of Education and Social Work at the University of Sydney. The award of \$500 is made possible through a bequest from the Alan Broady Memorial Trust.

Alan Broady had a particular interest in design and initiated a Major Design Project as the culmination of the then Bachelor of Education (Industrial Arts) degree. He also had a flair for projects incorporating wood. In recognition of his work this award is given for projects successfully integrating design and materials.

The UNSW Built Environment Award for Sustainability in Design



UNSW Built Environment (UNSW BE) focuses on the design, construction and management of a valued and sustainable world.

Our students consider the environment from a global perspective whilst delivering practical applications and solutions. They are encouraged to think creatively and work professionally.

We recognise the role of built environments in reflecting, shaping, supporting and influencing human activity. UNSW BE equips students with the skills, education and experience to produce designs that impact the well-being of communities around the world.

This award is given to the student and project that best identifies the need for sustainability in design and incorporates key elements throughout the design process.

A message from the Director of the Powerhouse Museum

Welcome to the 2010 *DesignTECH* exhibition at the Powerhouse Museum.

Now in its twenty-second year, this exhibition of major design projects completed by students of Design and Technology for the Higher School Certificate once again provides reason for us to be optimistic about the creative capacities of future generations.

A key element of this exhibition is the way in which it documents each student's design process through the students' folios. I would like to think that this exploration of the creative process may inspire other students to pursue their own creative paths.

This year we've introduced a number of enhancements, which include an illustrated panel highlighting aspects of the design process, along with a series of short video case studies where students discuss the development of their projects.

The seminar program which accompanies the exhibition continues the exploration of the design process. I'm delighted that the design team at the Powerhouse is once again participating in the program, sharing their approach to the development of graphic, exhibition, interactive and multimedia design solutions.

It is particularly pleasing to see the inclusion of HSC Textiles and Design in this year's exhibition. This will better reflect the diversity of student design, and broaden the exhibition's appeal to Museum visitors.

This exhibition reflects a longstanding association with the NSW Board of Studies and Department of Education and Training. These are important relationships for the Powerhouse and reflect our commitment to promoting design and technology innovation to the broadest possible audience.

Please join me in congratulating the students whose work is featured in the exhibition and wishing them every success for the future.

Dr Dawn Casey PSM FAHA
Director
Powerhouse Museum

Australian International Design Awards



The Australian International Design Awards, a division of Good Design Australia, is proud to present this prize aimed at recognising and rewarding the work of one outstanding secondary student of design and technology in Australia through the annual DesignTECH program. The selection criteria include innovation, concept design, detail resolution, commercial viability and overall quality of presentation. The winner receives a framed certificate and \$500 prize money courtesy of Good Design Australia.

The Australian International Design Awards is Australia's only national product design awards program and operates in the national interest by raising the profile and significance of professional design in Australia. The awards set benchmarks of quality and excellence in manufactured goods through a sophisticated application and assessment process.

Shelston IP – Award



Shelston IP is one of Australia's leading specialist intellectual property (IP) firms, offering the full range of IP and related legal services from patent, trademark and design registration, through to strategic IP portfolio management, commercialisation and enforcement.

This \$500 award recognises the student whose project embodies the most potential for IP protection and commercialisation and who demonstrates the best understanding of that potential.

This may involve the student identifying the problems of previously known products in the same field, the key characteristics of his or her product that address those problems, the IP rights most relevant to the protection of such characteristics, and the relationship between those rights and the commercialisation potential of the product.

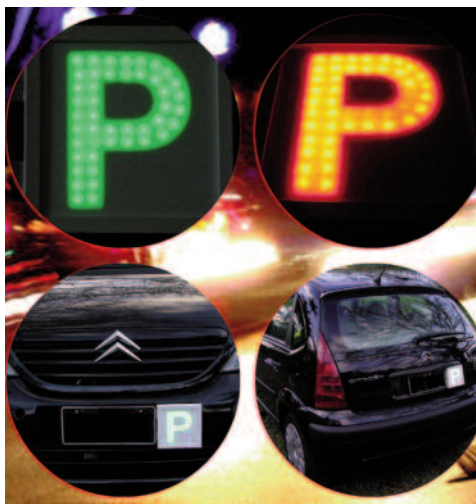


Global Greed, Africa's Sacrifice

Kara Adolfson

Wenona School

Kara's dresses of recycled rubber and plastic are symbols of power abuse, drawing our attention to forced child labour in Liberian rubber plantations. The smaller dresses signify the children.



PL8Safe

Illuminated Remote Controlled Provisional Plate Display System

Richard Combe

St Andrew's Cathedral School

L and P plates are often held insecurely and may be difficult to see at night. Richard's PL8Safe addresses this, using a remote-controlled illuminated sign powered by the car battery.



Hospital Hygiene Station

Timothy Cullen

St Joseph's College

The Swine Flu pandemic shut down Timothy's school and cancelled sporting events. His Hospital Hygiene Station provides gloves, facemasks, tissues and a hand sanitiser for limiting the spread of infection.



Di Nuovo (Again)

Stephanie Frig

Brigidine College Randwick

Stephanie's garment designs, blending fashion with nature, challenge the idea that eco-fashion is boring and plain. Her designs use sustainable materials and recycled fabrics from second-hand clothes.



Arkamedia

Hayley Foster

Australian International School Hong Kong

Hayley's design helps artists working in small, cramped areas. When retrofitted to easels to allow easy access to materials, it gives the freedom to work anywhere and everywhere.



The Innovative Finless Surfboard

Zachary Griffiths

Xavier Catholic College Ballina

Zachary's finless surfboard, based on snowboard design, gives the surfer extra spinning and sliding skills. A channel/groove system replaces the fins, gripping and stabilising the board on the wave.

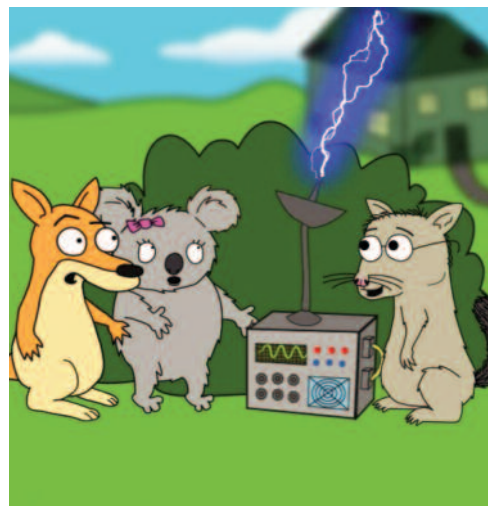


Paper and Prejudice

Amy Gilfeather

Batemans Bay High School

Amy's dress of recycled paper and cotton symbolises the values of the world's six largest religions – Christianity, Judaism, Islam, Hinduism, Buddhism and Taoism – and suggests an end to prejudice.



Wally's World

Aidan Howes

Barker College

Aidan has created this eco-oriented animation series for Australian audiences, using native animals as the main characters and combining environmental lessons with engaging storylines.



ProtectShoe

Will Jacobsen

Alstonville High School

Will's ProtectShoe incorporates a large certified steel toecap and flexible foot guard covered by heavy-duty leather. Everyday shoes with the ProtectShoe covering become protective footwear for practical work at school.



The ABC bike

Stuart Johnson

Gosford High School

Addressing the need for a more personal and creative approach to a child's first bicycle, Stuart's ABC bike can be easily modified by children to match their imagination and growth.



Pool alarm and safety unit

Aaron Kirton

Mater Dei Catholic College

Aaron's pool safety unit for preventing accidental drownings triggers a loud alarm when an unauthorised person opens the pool fence. The unit also contains a first-aid kit and resuscitation instructions.

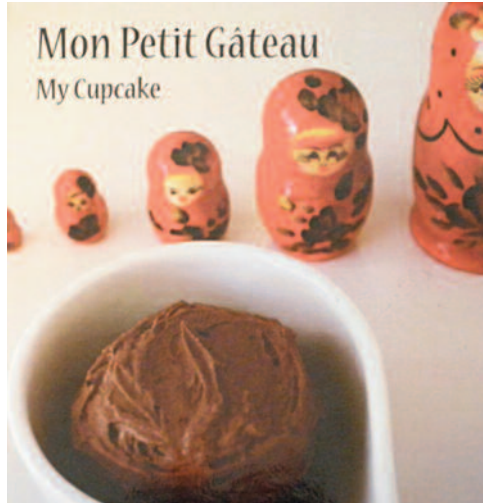


The Instantly Deployable Shelter

Daniel Lia

Holy Cross College

Motivated by the lack of adequate shelter for victims of the devastating Haiti earthquake of 2010, Daniel has designed immediate relief housing using durable and lightweight materials.



Mon Petit Gâteau

Emily McGee

St Vincent's College

'No-one who cooks, cooks alone' – Emily's cupcake recipe book has five sections, a notes page, and a space for each baker's photo once their cupcakes have been made.



Gran-aid

Laura McKinnon

Calrossy Anglican School

Elderly people who find it hard to reach their shopping at the bottom of their shopping trolley will appreciate Laura's nifty design. The lightweight removable shelf fits most shopping trolleys.



TopStop

Zachary Mitchell

Kirrawee High School

Zachary's child-lifesaving TopStop helps to stop runaway prams. The brakes come on when the pram stops, so that the user has to pull the hand lever to start moving again.



LDROG

Learner Driver Log iPhone application

James Perkins

Great Lakes College, Tuncurry Senior Campus

James's iPhone app is a smarter and more efficient way to help learner drivers log their driving hours.



Ebony & Rae Jewellery Design

Erica Seath

Narooma High School

Erica's good quality, affordable jewellery targets Generation Y. Her modern, funky collection is made from wood, alternating white and black timber veneer with a face of ebony or silky oak.

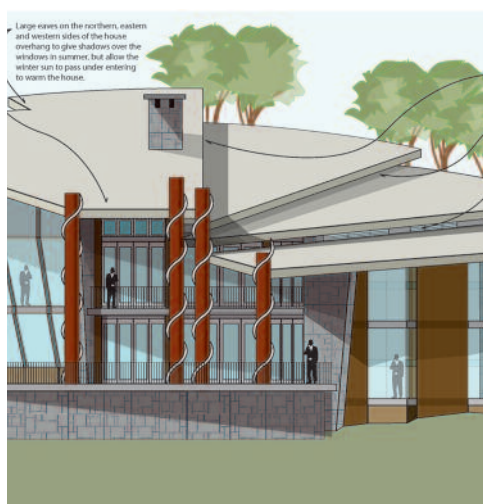


MIXA

Scott Wei-Jian Seeho

Knox Grammar School

Scott has designed a pharmacists' mixing product that compounds medicines and mixes creams. The MIXA is lightweight and durable, and is more economical than similar products.

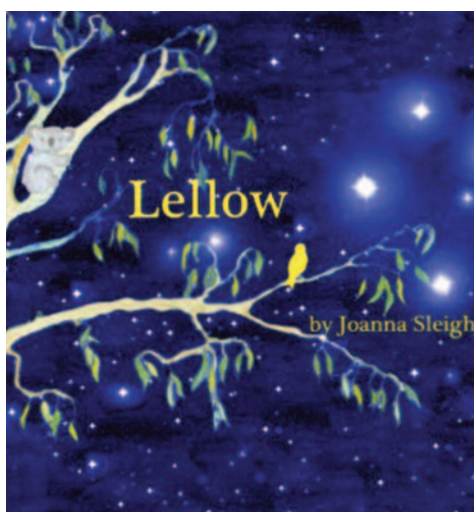


Modern Blue Mountains Luxury Holiday Retreat

Jessica Short

Lucas Heights Community School

Parts of Jessica's eco-friendly, self-sustaining house, inspired by nature, 'biomimic' natural icons such as Hanging Rock, the calla lily flower and the male Victorian rifle bird.

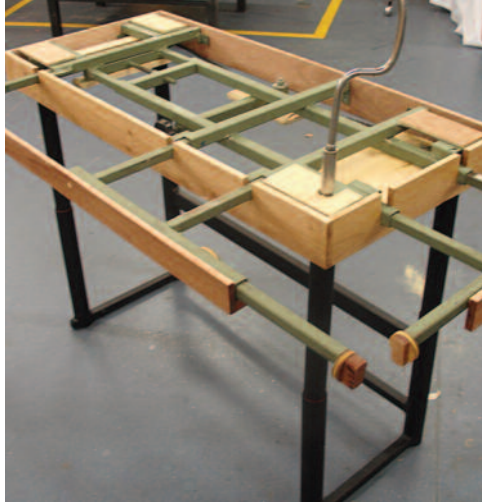


Children's Picture Book About Indigenous Australian Place Names

Joanna Sleigh

Moriah College

As Joanna discovered, not many Australians know that some iconic place names come from Indigenous history. Her educational and entertaining picture book explains their origin and meaning.

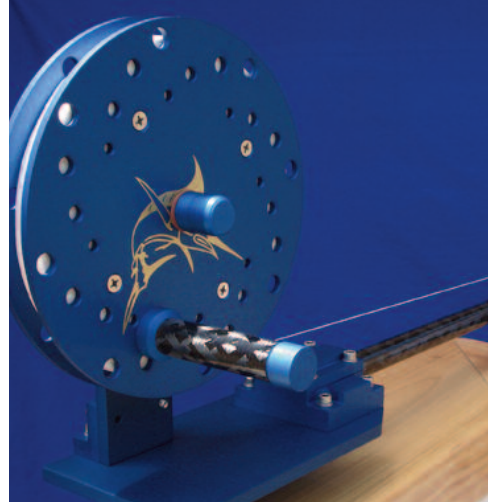


Multi-purpose Table

Ewan Vaughan

Marrickville High School

Ewan's multi-purpose table reduces the amount of furniture needed to fully furnish a house. It is constructed of wood, metal, and recycled bicycle chains for raising and lowering the table.



Downdeep Downrigger

David Waldock

Camden High School

David's design is specifically for Australian blue water fishing. The carbon-fibre downrigger can be used in any vessel from a five-metre dinghy to a 15 m game fishing boat.



Aus-E-Bass

Matthew White

Penrith High School

Unable to afford a double bass, Matthew decided to make an electronically amplified one himself. It uses locally sourced Australian timber, and has detachable parts for easier transporting.



Powerhouse Museum Design Highlights and Resources

+ Exhibitions and events – www.powerhousemuseum.com

- *Australian International Design Awards* – the Powerhouse selection from the Australian International Design Awards
- *Engineering Excellence* – winning projects from the Engineers Australia, Sydney Division, Engineering Excellence awards
- *DesignTECH* – outstanding projects by 2010 HSC Design & Technology students
- *The 80s are back* – the music, design, fashion, and events of the decade. Closes 27 March 2011
- *Thinking hyperbolically!* – a small display of works by Years 9 and 10 Design & Technology and Maths students, exploring ways of representing mathematical concepts through art and design. Closes May 2011
- *Ecologic: creating a sustainable future* – this recently refurbished exhibition looks at the risk of climate change and the role of design in providing sustainable solutions
- *Student fashion* – showcasing outfits by four top graduating students from Sydney fashion schools. Opens 12 March 2011
- *Pathways to space* – a display focusing on the development of an experimental robotic rover. Opens 31 March 2011
- *Sydney Design 2011* – an annual festival of exhibitions, talks, workshops and student study days at the Museum and across Sydney. 30 July – 14 August 2011.

Note: Dates may be subject to change. Please check the website.

The Articulated Head in *Engineering Excellence*. For details see www.thinkinghead.edu.au

+ Online resources – www.powerhousemuseum.com/online

The Museum has a wide range of design resources online. Highlights include:

- Australia innovates: an online guide to innovation in Australian industries
- Australian designers at work: meet six designers and learn about how they work
- D*Hub: online design magazine and gateway to the world's best design collections
- Electronic swatchbook: thousands of fabric samples from the 1830s to the 1920s
- HSC technology syllabus support: case studies in design, technology and cultural diversity
- Sydney designers unplugged: case studies from seven design studios
- Interactive database: search over 60,000 objects collected from 1880 to the present day. This interactive database contains thousands of images and information from the Museum's collection, much of it made public for the first time.
- Australian Dress Register: documenting significant and well provenanced men's, women's and children's clothing from the early days of the colony to 1945

+ Thinkspace: Creative Digital Media Workshops –

www.powerhousemuseum.com/thinkspace/index.php

Thinkspace is the Powerhouse Museum's digital learning precinct, offering workshops and short courses to develop your creative and media production skills, including digital video editing, digital music production, digital storytelling, web 2.0 and online research, songwriting and movie-making.

+ Powerhouse Publishing – www.powerhousemuseum.com/publications

An extensive range of books relating to permanent and temporary design exhibitions.

For more information visit www.powerhousemuseum.com/teachersguide or subscribe to our Education News at www.powerhousemuseum.com/teachersguide/teacheremailsSignup.php
To make a booking for a school visit, phone (02) 9217 0222, fax (02) 9217 0622 or email edserv@phm.gov.au .



Photo by Sally Tsoutas.