



TOP DESIGNS

LARGE PRINT LABELS

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VCE PRODUCT DESIGN AND TECHNOLOGY

Jocelyn Chee

Trinity Grammar School, Kew / Ruyton Girls'
School, Kew, Wurundjeri Country

Aerify Air Purifier

Carbonised bamboo, PLA, power supply, fan,
HEPA Filter

The COVID-19 pandemic created a heightened awareness of wellbeing, and data on rising air pollution levels has led people to prioritise their respiratory health. This paradigm shift prompted me to create an air purifier, not just for respiratory issues, but also to improve one's quality of life. My product focuses on minimising environmental impact and is a seamless blend of aesthetics and functionality - purifying the air you breathe and adding a touch of elegance to your space.

Luca Cimino

Marcellin College, Bulleen, Wurundjeri Country

CLM1

Victorian ash, acrylic

CLM1 is designed and based around the Citylink M1, a road located southeast of the Melbourne CBD. CLM1 is a pendant light designed to illuminate and enliven an otherwise bland foyer. My design is based on a road system as my end user is a traffic engineering company, and the product aims to represent their values and expertise. The grain of the hardwood is accentuated through many coats of varnish. This natural aesthetic, paired with the form of the clear acrylic rods, creates an abstract light piece. The design can be alternately interpreted by each of its observers.

Sophia Du

Trinity Grammar School, Kew / Ruyton Girls'
School, Kew, Wurundjeri Country

Upcycled Pet Carrier

Corflute

To meet the demands of our ever-evolving world, we continually consume valuable resources that accumulate in landfill. As the number of pets per household is rapidly increasing, I have designed a sustainable, upcycled pet carrier made from discarded corflute sheets. The product reduces the need for new materials and creation of additional waste. The carrier is compact, lightweight and comfortable for both end users, as well as flat-packable and easy to assemble due to its laser cut, net design.

Georgie Evans

Northcote High School, Northcote

Wurundjeri Country

Meridian

Merbau, pine, Tasmanian oak, paint, screws

As more people find themselves living in smaller spaces, storage is increasingly important. While conventional shelving options focus on function over form, the Meridian shelf combines functionality with unique, retro inspired visuals. After outlining the needs of my end user, I conducted research into their preferred design styles as well as storage dimensions and functionality for a wall mounted shelf. Through visualisations and refinement, I created a stylish and multifunctional design piece.

Tilly Jones

Carey Baptist Grammar School, Kew

Wurundjeri Country

Games Table

Bamboo, paint, card, PLA plastic, dice

During lockdown, board games served as an important means of interaction. My goal in making the Games Table was to create something that the family could use and enjoy together. I researched most frequently played games, including ones that might inspire kids to learn about global issues, including sustainability. Dustpanally and Chess are the two games featured in this distinctive and multifunctional design, which also includes a place to store all game accessories.

Amelie Nguyen

Carey Baptist Grammar School, Kew

Wurundjeri Country

The Pods Light

Jelutong wood, concrete, epoxy resin

Post-lockdown, many teenagers are experiencing anxiety-related sleep disruption. The Pods Light is designed to illuminate spaces without hindering the production of melatonin in the hours before sleep. It provides warm lighting to provide a soothing and calming glow without causing eye strain. I took inspiration from nature and organic seed pod shapes to create a piece that is both grounding and timeless. The Pods Light aims to be both functional for everyday life and an aesthetic addition to any room.

Michael Streader

University High School, Parkville

Wurundjeri Country

Microbat and Pardalote Nest Boxes

Recycled hardwood fence palings, Hoop Pine plywood, metal hardware, beeswax, oil

Australia has one of the highest rates of biodiversity decline worldwide, with habitat loss a leading cause. In urban areas, where almost half of these threatened animals can be found, vital nesting hollows are in critically short supply. The artificial alternatives are often poorly insulated, lack important species-specific design features, and are unattractive in appearance. My range of nest boxes aims to encourage the installation of artificial habitat in urban areas by combining pleasing aesthetics with improved artificial habitat quality.

Jemma Billing

Northcote High School, Northcote

Wurundjeri Country

Mr Tony's Turtles

Cotton, fleece, silk, calico, wire, stuffing, velvet, leather

I produced two sensory-friendly comfort toys aimed to foster concentration, playfulness, a sense of safety and calmness. The first turtle focuses on enhancing concentration and cognitive abilities, employing various tactile materials, wire legs for interactive engagement, a weighted component for simulated human touch, and a seamlessly integrated tracking device for security. The second toy maintains continuity with the first but prioritizes materials that induce calmness, featuring a cuddly blanket and visual cues like sleepy eyes for a serene experience.

Alexandra Fleischmann

Sacred Heart College Geelong, Newtown

Wadawurrung Wathaurong Country

LED Mountain Biking Vest

Water-resistant polyester, water-resistant microfibre fabric, mesh, zippers, velcro

Mountain biking is a sport that requires the athlete to carry many items and tools with them. Current mountain biking apparel on the market lacks adequate storage for biking essentials. I have therefore designed this vest with storage in mind, incorporating several pockets of varying sizes to accommodate a range of mountain biking tools. The detachable battery-operated LED light panels enhance the wearer's visibility and safety on the tracks, avoiding the need to bring a separate light source. The mesh panels located under the arm aid breathability and airflow, and

the flexible laser-cut side pockets can carry almost any size drink bottle.

Jasmine Goon

Ballarat High School, Lake Gardens

Wadawurrung Wathaurong Country

Utility Jumpsuit for Fine Artists

100% reused cotton corduroy, denim jeans, elastic, satin, zips, press studs

After struggling to maintain desk space and organise materials during my own art making processes, I created this utility jumpsuit to address fine artists' needs for practical and convenient storage solutions. Designed to redefine a conventional art apron, my unique garment has biodegradable full body coverage that safeguards the user from mess. With strategic arm, torso and leg pocket placements, art materials are accessible and desk clutter is eliminated. Contrasting colours make material stains easily identifiable and aesthetically

complement the wearable art to promote artistic expression.

Alexa Hernyak

Emmaus College, Vermont South

Wurundjeri Country

Smarty Pants

100% cotton denim, 100% cotton lining, non-woven interfacing, zippers, clasps, button

Melbourne's extreme daily weather fluctuations present challenges when it comes to choosing comfortable, climate-appropriate clothes. To address this issue, I chose to explore transformable clothing. The Smarty Pants were designed to adapt to Melbourne's 'four seasons in one day'. These fun and fashionable full-length denim pants entirely transform into shorts and a functional tote bag. My design is made up of panels edged with chunky zippers that can be assembled in various directions, and also features a smart multipurpose strap.

Katelyn Hon

Ave Maria College, Aberfeldie

Wurundjeri Country

Less is More

Cuprammonium rayon, linen, buttons

As the global population continues to grow, humans are running out of space in their households. Inspired by my mother's old homes in Hong Kong, I chose to create a set of garments that would take up minimal storage space and could serve multiple purposes. I used materials that were lightweight, durable, and flexible so that the garments could be worn in different weather conditions and stored with ease.

Buttons allow the wearer to easily remove and attach each piece of the garment, ensuring convenient use.

Sofia Korfiatis

Star of the Sea College, Brighton

Bunurong Boonwurrung Country

Metamorphosis of a Butterfly

Cotton and polyester

My design was developed as an educational tool to teach prep students the process of a butterfly's metamorphosis. The butterflies on the garment were drawn by prep students and then printed onto fabric. The garment was designed to engage these students, by reflecting on their own creative work. The transformation of the garment represents the three stages of a butterfly's metamorphosis. The dress symbolises the caterpillar and the skirt represents the cocoon, which then transforms into a cape as the butterfly emerges.

Ashleigh McGuire

Bacchus Marsh Grammar, Maddingley

Wadawurrung Wathaurong Country

Anti-Anxiety Hoodie

Fleece, faux fur, satin, cord, sequin fabric, iron-on vinyl

My gender-neutral hoodie design features fidget and soothing accessories to assist users in moderating their anxiety and/or other sensory needs discreetly in public. The interchangeable pocket inserts and compression elements can be removed and attached depending on the wearer's preferences. The soft, hand dyed fleece is a calming, neutral colour, offering another soothing feature for the wearer.

Kate Pope

St Michael's Grammar School, St Kilda

Bunurong Boonwurrung Country

Contemporary Medical Uniform

Cotton, bamboo fibre, elastane, nylon zip

My garment is a unisex medical uniform for the Western Health Organisation. Inspired by the recent upgrade of the Footscray Hospital, I aimed to design an updated uniform that was stylish as well as ergonomic. I have used high quality breathable material and included various points of adjustability to address some of the common technical flaws in scrubs. I have incorporated Maisie Nungarrayi Ward's print fabric 'Desert Oak Dreaming' created with Warlukurlangu, Artists of Yuendumu to visually represent Western Health's commitment to achieving equality in health status between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.

My garment aims to align with Western Health Organisation's values and meet the needs of their diverse staff, while considering the unique tasks and duties undertaken by each individual.

Laura Power

Marist College Bendigo, Maiden Gully

Dja Dja Wurrung Country

Upcycled Onkaparinga Coat

Onkaparinga wool blanket, satin lining, non-woven fusible interfacing, cotton thread, epoxy resin, handmade Tasmanian oak buttons

To address the growing issue of textile waste, I designed my garment to focus on recycling an existing Onkaparinga blanket. A statement feature of the coat are the recycled Tasmanian oak buttons, which I made by hand. The coat is designed to be oversized, while the addition of an optional belt makes it versatile for many body types and individuals. The large deep pockets allow for maximum comfort and additional security for valuables.

VCE MEDIA

Jiayi Xu

Lauriston Girls' School, Armadale

Wurundjeri Country

Joyce Xu

Inkjet print

My self-portrait photography series explores my journey as a Chinese immigrant, delving into the emotional layers of assimilation and heritage rejection. Inspired by my dual upbringing, I peel back emotional veneers, offering a unique perspective on the intersections of Gen Z, contemporary society, and entrenched traditions. The series captures internal conflicts, leading to a poignant reconciliation with my true identity and a profound love for Chinese culture. This journey is ongoing.

Tayla Ahmed

Korowa Anglican Girls' School, Glen Iris

Wurundjeri Country

The Society

Comic

The Society is a dystopian comic which highlights our mindless consumption of media in the modern day. The comic follows a young woman, Dawn, as she recognises the media's manipulation of her thoughts and attempts to escape its control. My inspiration came from the COVID-19 pandemic, when the majority of young people's lives were spent online with pervasive manipulative media. The Society addresses a young adult audience, encouraging them to use critical thinking when consuming media and advertising.

Hayley Archer

Loreto Mandeville Hall, Toorak

Wurundjeri Country

Undercurrent

Magazine

Undercurrent explores the music scene in Melbourne, especially the alt-rock genre, through the perspectives of musicians, industry professionals, and local music fans. My main sources of inspiration for both the photography and content were magazines such as Rolling Stone and Frankie, as these publications explore the music scene from a diverse range of perspectives and exhibit unique approaches to the photographic portrayal of live music.

Ella Campbell

Our Lady of Mercy College, Heidelberg

Wurundjeri Country

The Zen Zone

Magazine

The Zen Zone is a magazine that provides entertainment, inspiration and motivation about healthy habits, aimed at an adolescent audience. Interactive elements have been implemented throughout the product, so that the act of engaging with the magazine will simultaneously allow consumers to take time for themselves and practice mindfulness. Using a playful and contemporary style, I created original graphics, photography and text to align with the wellbeing genre.

Alyssa Cunanan

Williamstown High School, Williamstown

Bunurong Boonwurrung Country

That Time I Got Transported Into The Real World

Graphic novel

This graphic novel presents a spin on the 'isekai' genre—the idea of travelling between a real world to a fantasy one. In 2140, people have now established their new lives in Shylven, an immersive video game. Two girls, who have lived there all their life, suddenly get disconnected from Shylven. Together, they explore the remains of humanity and the sensations of simple things in life.

Charlotte Cumming

Our Lady of Mercy College, Heidelberg

Wurundjeri Country

Atlas Magazine

Magazine

Atlas Magazine tours Melbourne, highlighting all the best places to visit, eat, drink and shop to experience the city like a local. With a particular focus on inner-Melbourne suburbs, Atlas Magazine delves into the melting pot of cultures, characters, and experiences that all contribute to the unique and dynamic atmosphere Melbourne is known and loved for.

Andre Nguyen

St Francis Catholic College, Melton West

Wurundjeri Country

God's Will Volume #1: Grave Danger

Comic

God's Will was conceived from a combined interest in dramatic Wild Western themed media and indie animation, such as the series Helluva Boss, which inspired the comic's campy and stylistic approach, hot colour palettes and occult themes. The style of God's Will takes cues from many artists, from the campy style of Paru Itagaki, to the dreamy and striking colour palettes of Wes Anderson. This project challenged me on all fronts, from the punchy storytelling down to the striking visuals that accompany the narrative.

Daniel Noonan

Northcote High School, Northcote

Wurundjeri Country

The Celestial's Key

Graphic novel

The Celestial's Key is a story about a young woman meeting her long-lost rockstar uncle, set within a mysterious hotel that bends reality to accommodate the desires of its residents. I love the ability comic books have to play with surreal concepts and abstract visuals. The book's premise was a conscious effort to use such surrealism as a method of reframing a small-scale narrative about two people dealing with loneliness, the passage of time, and the process of healing.

Abigale Quin

Wurun Senior Campus, Fitzroy North

Wurundjeri Country

Undergrowth

Graphic novel

When creating Undergrowth, I wanted to combine several mediums to reflect my love of creating visual art in many forms, and to appeal to a younger audience through pops of colour. The narrative follows two tween girls, because a lot of my artistic style and interest in illustration developed around that age. I wanted to root my year-long passion project of illustrating a graphic novel in something that was comforting and familiar.

Jasmine Sandaver

Point Cook Senior Secondary College, Point Cook
Bunurong Boonwurrung Country

The Ferryman

Digital graphic novel

The Ferryman was a passion project to explore my perspectives on complex subjects like memory and mortality through the lens of a world that is very dear to me. Inspired by fantasy media like Lord of the Rings and tabletop role-playing games like Dungeons & Dragons, the story is set in the fantasy world of Kaitera, a fictional realm which I created. The narrative follows the undead protagonist Thana Akuji, focusing on her struggles with moving on from the past and how she learns to confide in those around her. I chose to create a digital novel so it could be easily shared and reach a wider audience.

Jasmine's digital novel can be viewed on the touchscreens.

Isobel Spanos

Loreto Mandeville Hall, Toorak

Wurundjeri Country

From the Heart

Cookbook

In producing my cookbook *From the Heart*, I wanted to convey my personal relationship with Greek cuisine through my connection with my grandmas and our shared enjoyment for cooking. I produced an assortment of images that capture a variety of traditional dishes, as well as snippets from my grandmas' homes. I gained inspiration from a collection of pre-existing cookbooks in producing a sleek and polished product, with cohesive colours of deep blue and muted cream hues to enrich the visual qualities.

Lily Tran

The Mac.Robertson Girls' High School,
Melbourne, Bunurong Boonwurrung Country

Shooting for Rabbits

Gamebook

Shooting for Rabbits is a whodunit story with a twist. In this half book, half board game, choose-your-own-adventure narrative inspired by the work of Agatha Christie and Rian Johnson's *Knives Out* (2019), readers work to determine the sequence of events that have led up to the death of an unpopular patriarch—before the killer strikes again. The printed book is supplemented by additional materials, including tactile clues, maps, and handwritten notes directly from the story, all stored in a purpose-made box.

A video of Lily's work can be viewed on the touchscreens.

Tom Caulfield

Buckley Park College, Essendon

Wurundjeri Country

TAPE 108

Crime, 9 min

An obsessive audio surveillance expert accepts a deadly mission to infiltrate and record a meeting at the infamous Cobra Club. When he crosses paths with a mysterious assassin, he must question the nature of his mission and confront the impending danger that awaits.

Vicky Chen

Balwyn High School, Balwyn North

Wurundjeri Country

Agony

Action Fantasy, 3 min 21 sec

In this animated music video set in a fantasy world, a Duke and Duchess suddenly pass away from suspicious circumstances, leaving the protagonist Solomon to protect his parents' fortune from greedy relatives keen on taking it for themselves. However, Solomon meets someone who could save him from this fate.

Jesseca Daly

Mirboo North Secondary College, Mirboo North
Gunaikurnai Country

Reminisce: A Poem

Mixed Media, 2 min 49 sec

This short film, based on Dr. Earl Reum's poem Reminisce, defines the various phases of a young boy's life. Through three chronological sections, it captures the gradual loss of his innocence during the transition from childhood to adolescence. More abstractly, Reminisce is about the isolation commonly felt by young people.

Matilda Deeble

Wurun Senior Campus, Fitzroy North /
Collingwood College, Collingwood

Wurundjeri Country

L'ecole de Cirque

Documentary, 9 min 59 sec

This documentary is based in and around the National Institute for the Performing Arts (NICA), the only institute that offers tertiary level study for the circus arts in Australia. Through interviews with NICA students and staff, the film explores why maintaining the magic of circus is socially and culturally important, which is especially relevant with Swinburne's recent pausing of NICA's Bachelor program.

Ryan Harrison

Mullauna College, Mitcham

Wurundjeri Country

The Nitpicker

Comedy, 7 min

A pedantic neat freak throws himself into a psychotic, lice-ridden panic quest in an absurd effort to get rid of his nits. Using a range of genre-stereotypical visual and musical styles, The Nitpicker spins an irritating intrusion into a slapstick calamity.

Gabe Hartshorne

Northcote High School, Northcote

Wurundjeri Country

Cat

Psychological Horror, 10 min

A boy delves into a mystery surrounding his beloved Cat after he has an inexplicable paranormal experience while looking into the Cat's eyes. As the boy desperately attempts to figure out what happened, he begins to lose his grasp of reality, becoming crazed with trying to understand his household pet.

Jorja Kavellaris

Loreto Mandeville Hall, Toorak

Wurundjeri Country

Sticky Notes

Coming of Age Drama, 5 min

Sticky Notes follows the friendship of two young women, Florence and Anisa, as they pursue their dream of opening a hairdressing salon together. Their picture-perfect life suddenly comes to a halt when Anisa is in a tragic accident, leaving Florence to face a tough decision regarding a promise made in the past.

Jasmine Lui

Ringwood Secondary College, Ringwood

Wurundjeri Country

LORENZO?

Adventure/ Low Fantasy, 2 min 25 sec

A young lion tamer within a colourful circus troupe has lost their star lion before a nearing performance. With the aid of a clown companion, the duo search for the lion across the bizarre carnival grounds before the curtains are drawn. With its bright and engaging animated style, LORENZO? considers life's unpredictability, drawing on values of friendship and empathy.

Rebecca Murphy

Santa Maria College, Northcote

Wurundjeri Country

BAD CHICKEN

Comedy, 7 min

Following a typical school day, Darcy and Evie go to their local chicken shop for an after-school snack. However, upon receiving their food, they notice there might be something wrong with their chicken. Something very, very wrong. BAD CHICKEN aims to represent teenage friendships and show the often nonsensical situations they may find themselves in.

Henry Qiu

Brighton Secondary College, Brighton East

Bunurong Boonwurrung Country

Puddles

Drama, 2 min

Struggling with their sense of self and identity, a young child in a gloomy suburb escapes their own reflection by stomping on puddles.

Eventually, they build the courage to peer into the water and confront their image.

James Rushbrook-Stock

St Kevin's College, Toorak

Wurundjeri Country

Open Dining

Food Documentary, 7 min 37 sec

The backdrop of Portarlington's bustling mussel trade provides the setting for this documentary about the industry's inner workings. Open Dining's host follows the journey of Victorian mussels from sea to plate. This journey is captured through insightful conversations with Peter and Tracy Bold, two of the nation's most accomplished mussel farmers.

Lucas A. Taylor

Alice Miller School, Macedon

Wurundjeri Country

Don't Burn the Toast

Absurdist /Comedy/ Fantasy, 4 min 4 sec

In order to make breakfast, a teenager must confront the absurd fantasies of the kitchen. 'Boy' sees visions when preparing toast in a battle against his own imagination. Inspired by Edgar Wright's dramatically paced montages, Don't Burn the Toast uses hyper tense moments and an absurdist, comedic lens to investigate young people's relationships with their imaginary inner-worlds.

Dylan Wijesekera

Balwyn High School, Balwyn North

Wurundjeri Country

Magpie Mocha

Absurdist Comedy, 5 min 30 sec

In a dystopic vacuum of space, where humanoid robots are assigned to tedious labour, a barista's habitual work shift is interrupted by the hijinks of an erratic magpie. By incorporating both 2D and 3D palettes into its animation, Magpie Mocha aims to utilise the creative liberties of its medium to accentuate the film's surrealist humor.

Fynn Williams

Dromana Secondary College, Dromana

Bunurong Boonwurrung Country

I Know What They're Thinking

Music Video, 4 min 3 sec

This music video delves into the world of a teenager who is grappling with her own mental health struggles. Through a surrealist, non-linear approach, the film explores issues around depression, anxiety and dissociation, challenging the stigmas surrounding mental health and highlighting the hardships faced by teenagers.

**VCE VET
CREATIVE AND DIGITAL
MEDIA**

Hamish Baird

Mildura Senior College, Mildura

First Peoples of the Millewa-Mallee, being Latji Latji and Ngintait Traditional Owners

Anabranch Pre-School

Animation

Photoshop, Adobe Animate, Premiere Pro, Word

My animation is designed to promote a fictional pre-school that I created. The animation includes values that are appealing to parents, and uses exciting colours and sounds to engage potential students. Both demographics make up my target audience. The animation is also made to take the viewer on a journey of wonder, to entice creativity within the audience and encourage curiosity.

Chloe Clayton

Galen Catholic College, Wangaratta

Yorta Yorta Country

Makisig the Skater Boy

Portfolio

Ibis Paint X

Makisig is a character inspired by Filipino street fashion, the works of artist Jamie Hewlett, and famous skateboarders like Keegan Palmer, Margielyn Didal and Momiji Nishiya. With his self-bleached hair and colourful attire, Makisig is not afraid to stand out. This image was hand drawn using an Apple Pencil in Ibis Paint X on an iPad. It makes use of a single light source, reflective light and a simple background.

Chloe Clayton

Galen Catholic College, Wangaratta

Yorta Yorta Country

sk8

Animation

Ibis Paint X, Adobe Animate

I have created 'sk8', a short 2D animated trailer made in Adobe Animate. It follows a young woman who is training for a roller derby tournament. The changing of colour palettes indicate the passing of time. As she finally slows down, the audio follows her breath and it transitions into game day. She is lined up as a front blocker, but when the game is about to start, the camera cuts out dramatically.

Alyssa Cunanan

Bayside P-12 College, Newport

Williamstown High School, Williamstown

Bunurong Boonwurrung Country

FUSCO

Website

Adobe Animate, Dreamwaver, Photoshop,
Illustrator

My website is for FUSCO, a business that runs after school design classes for children. FUSCO aims to nurture a culture of creativity for these children and teach the basics of design from an early age. This includes design elements, principles and typography. Fun visuals and colours are utilised to stimulate younger children and get them involved with learning about design. The website also acknowledges FUSCO's sponsor, 'XYZ', a children's television program.

Alyssa Cunanan

Bayside P-12 College, Newport

Williamstown High School, Williamstown

Bunurong Boonwurrung Country

XYZ

Animation

Adobe Animate, Paint Tool SAI

XYZ is a TV program aimed at young children. My animation is the brand identity for XYZ, in the form of a clip used for intermission breaks and advertising. In order to best represent the brand, vivid colours, bouncy sound effects, and playful shapes are utilised to engage children as the target audience.

Kieran Ford

Academy of Mary Immaculate, Fitzroy

Wurundjeri Country

Fantasy Zoo

Animation

Adobe Animate, Fire Alpaca

My product is a promotional advertisement for a fantasy zoo. The animation depicts several mythical creatures that can be found at the zoo and provides information about where it is located. I created the animation using frame-by-frame and motion tween techniques. The voiceover is by my friend, Emily.

Sophie Hui

Mentone Girls' Grammar School, Mentone

Bunurong Boonwurrung Country

Mannequin

Animation

Adobe Animate, Adobe Audition

My animation portrays the discrimination faced by the young LGBTQ+ community today, and the effects this has on their mental wellbeing. I have used mannequins as a metaphor. Much like a mannequin, the protagonist of the story was pressured to act and dress in a certain way. She dressed to hide her identity, with the clothing representing self-doubt and self-hatred. The animation highlights the importance of inclusivity, respect and acceptance, urging the audience to be a helping hand in times of need.

Kayley Irvine

Salesian College, Sunbury

Wurundjeri Country

Wattle

Animation

Adobe

My animation is a trailer for the fictional video game Wattle. It illustrates a funny quoll, named Wattle, and her scramble to escape from a Tasmanian Devil after stealing its waratah flower. I utilised screen and animation principles as the backbone for my extensive research, storyboard and animatic process.

Kayley Irvine

Salesian College, Sunbury

Wurundjeri Country

Wattle

Portfolio

Procreate

Wattle is a cartoon character design based on an Eastern quoll. Her exaggerated appearance helps emphasise a silly, laid-back attitude. Utilising character design principles such as shape language, silhouette, and simplification, her design is made suitable for animation.

Amber Klepacovski

Taylors Lakes Secondary College, Taylors Lakes

Wurundjeri Country

The Dangers of Vaping

Animation

Adobe Animate, Adobe Illustrator, Final Cut Pro

The Dangers of Vaping is a short animation about the negative impacts of vaping, particularly for young people who may be easily influenced. I portrayed this through the character Sam, who experiences the different stages of addiction and finds it difficult to overcome this. Using Adobe Animate, I utilised the lip-sync feature, frame-by-frame animation, and tweening techniques.

Johnny McDermott

Mildura Senior College, Mildura

First Peoples of the Millewa-Mallee, being Latji Latji and Ngintait Traditional Owners

CAT + RABBIT

Portfolio

Ibis Paint X

CAT + RABBIT are characters I created to tell the story of a duo surviving their daily lives in a dying city. I wanted to create two characters that complemented, yet contrasted, each other. I targeted my audience, teenagers and young adults, by featuring both cartoon-like and mature design aspects in the characters. To achieve this, I explored various silhouette possibilities, colour palettes and themes before refining my ideas and deciding on my final designs.

Sophie Price

Mentone Girls' Grammar School, Mentone

Bunurong Boonwurrung Country

Dysphoria

Animation

Adobe Animate

This animation was created to show some aspects of gender dysphoria that transgender individuals, specifically those assigned female at birth, experience primarily before transitioning. I used research and some of my own personal experiences as inspiration for this work.

**VCE VET
MUSIC (SOUND
PRODUCTION)**

Jedd Bowden

Caulfield Grammar School, Caulfield
Bunurong Boonwurrung Country

Riverbed

Logic Pro X

Riverbed is an innovative production that blends the raw emotion of an original acoustic song with contemporary techno. The creation process involved an exploration of novel approaches to composition, seamlessly fusing different genres to craft a unique auditory experience. Produced meticulously on Logic Pro X, the track showcases a mix of traditional instruments with modern electronic nuances.

Scan the QR code on the object label to listen to Jedd's sound production.

Will Newton

Ballarat Grammar, Wendouree

Wadawurrung Wathaurong Country

Cloud

FL Studio

Cloud is a post-rock and psychedelic rock inspired piece, which I composed, wrote and produced. It is the culmination of years' worth of riffs, chord progressions, and melodies that hadn't yet found their place in a piece of music. I experimented with production techniques such as layered and double tracked guitars and combined those recordings with digital drums and bass. These techniques emulate the slow burn builds and crescendos of the post-rock genre which influenced this song.

Scan the QR code on the object label to listen to Will's sound production.

**VCE VET
INTEGRATED
TECHNOLOGIES**

Benjamin Wallace

Northern College of the Arts and Technology,
Preston / Thornbury High School, Thornbury
Wurundjeri Country

Neuro Variable Lighting System

Arduino microcontroller, brain-computer interface (BCI) headband, NUC computer, Arduino housing, pine product display, RGB strip lighting, electrical components

My project adjusts the strength and hue of lighting within a room, based off brain activity detected by the brain-computer interface (BCI) device. The project aims to inspire people to optimise the lighting within their home by adjusting the ambience of a room to specific moods and activity levels. The project also showcases emerging BCI technology and how it can be integrated with existing, established devices.

Erin Stewardson

Northern College of the Arts and Technology,
Preston / Ivanhoe Girls' Grammar School,
Ivanhoe
Wurundjeri Country

Driver Fatigue Detector

Arduino microcontroller, Vero Board, electronic components, 3D printed housing box, webcam, smart phone, power cables

My Driver Fatigue Detector aims to reduce the road death toll by detecting when drivers are getting sleepy and waking them up with a loud audio output. This product protects individuals with fatigue-related conditions, such as sleep apnea, who are at greater risk of falling asleep while driving. The device monitors the driver's face with a webcam, detects eye closure and then triggers a loud audio output via Bluetooth to the driver's smartphone.

VCE VET FURNISHING

Toni Halwi

Braybrook College, Braybrook

Wurundjeri Country

Hall Table

Victorian ash, Jarrah

The piece of furniture I have created is a rectangular hall table made from Victorian ash and Jarrah timbers. It utilises a range of joinery techniques such as dowel, mortise and tenon joints and lapped dovetail joints. Though designed to be a hall table, this attractive piece would look great in any room of the house.

Laura Smout

Victory Lutheran College, West Wodonga

Cocktail Cabinet

American white ash, American black walnut,
glass, steel

My furniture piece is a complex cocktail cabinet made from American timbers, black walnut and ash. The chosen timbers are visually contrasting and are finished with elegant matte black hardware and fixings. The cabinet is placed on wheels for mobility and accessibility, with a sliding barn door for increased design complexity and visual detail. All drawers push to open for a flush finish and a wine rack and glass holders allow for easy accessibility to all types of beverages.

**VCE VET
ENGINEERING STUDIES**

Isabella Burdan

Ringwood Training, Ringwood East / Fintona
Girls' School, Balwyn
Wurundjeri Country

Stainless Steel Jewellery Box

Stainless steel, felt

My jewellery box is made from stainless steel and was designed to be elevated, resting upon small feet welded to the base. The lid of the case hinges back to reveal a top and inset tray. Double doors with inbuilt handles open to the main storage area containing 3 shelves of drawers in different sizes. These drawers are designed to pull out completely and hang with a catch at the back.

William Milner

Swinburne University of Technology, Wantirna South, Wurundjeri Country

Automated Manual Transmission

Polyethylene terephthalate glycol (PETG),
stainless steel

My aim was to design a transmission that acted as an electronically controlled manual transmission. The advantage of this transmission is that the gear selector and gear box are separately housed, and as a result can be placed in more efficient, ergonomic or unique positions within a vehicle. PETG was selected as the plastic for 3D printing as it is more robust and easier to print than other plastics, while stainless steel rods and bolts were used to provide extra strength.

Luke Nicholson

Ringwood Secondary College, Ringwood / Box Hill High School, Box Hill, Wurundjeri Country

Exercise Machine

Mild steel SHS, solid round bar, sheet metal

I had extensive freedom when it came to the course requirements, so I endeavored to create a practical and intriguing project that would exemplify the skills I had learnt. Following research and concept sketching, the optimal design was chosen and finalised using the CAD software SolidWorks. From there, I used a wide range of fabrication hand tools and machines to complete my project, including a MIG welder, industrial press brake and CNC plasma cutter.

Zachary van de Ven

Swinburne University of Technology, Wantirna
South, Wurundjeri Country

Interactive Key Puzzle Box

Wood, PLA, aluminum

The Interactive Key Puzzle Box was a passion project of mine that manifested as an idea from a variety of places. It involves a series of puzzles, each leading to the creation of a three-dimensional key that is required to open the box. The box utilises a simple robotic system that detects whether the correct key has been used, and consequently decides whether to open the door in response.

VCE THEATRE STUDIES

Cleo Hunter

Loreto Mandeville Hall, Toorak
Wurundjeri Country

Chorus (Antigone, Jean Anouilh)

Costume and sound design: Knit balaclava, cotton, tulle, knitting needles, lace, red paint, red ribbons, boots, violin

My costume and sound realise the 'Chorus' character in Jean Anouilh's Antigone, a play both written and performed in France during the Nazi occupation of World War II. Informed by Anouilh's subtle political criticisms, my interpretation of this character has been recontextualised to reference the ongoing conflict between Russia and Ukraine, placing my audience in the midst of this contemporary humanitarian crisis. In Sophocles' original rendition of Antigone, the chorus acted as a mirror for the audience, guiding their perspectives on the plot. Driven by this notion, I have chosen to imbue the chorus with a clear

and passionate identity, primarily through the red balaclava, an iconic symbol of the infamous Russian punk protest band Pussy Riot, who have continued to revolt against Putin's totalitarian regime. The needles on the black skirt reference Eurydice, who meets death by her own hand. They are also informed by the infamous 'tricoteuses', women who protested by knitting liberty caps between decapitations during the French revolution. As such, the needles symbolise how tragedy can surpass time's limitations. Themes of passion and revolution are solidified by the sound design, which includes a live and emotive violin performance. The bed track includes sirens and chants from a recent anti-war in Russia. This is designed to challenge passivity from the audience as they are reminded of the horrors of war, both in the play and our 21st century world. These sounds were extracted from Thousands detained in Anti War protests against Russia footage, courtesy of Radio Free Europe/ Radio Liberty.

Scan the QR code on the object label to listen to Cleo's sound design.

Tamsen Howard

Sacré Cœur, Glen Iris

Wurundjeri Country

Philoctetes (Paradise, Kae Tempest)

Set and prop design: Wood, metal, sand, glue, leaves, rope, plastic elements

Kae Tempest's Paradise is centred around an injured man who has spent 10 years abandoned on a remote island, living in a cave that has become both his sanctuary and his prison. My design concept emphasises the juxtaposition between the play's ironic title and its content. Paradise is a bold socio-political statement. The character Philoctetes functions as Tempest's raisonneur, confronting the audience with a tirade about the superficiality of the lives we have created. They comment on our morally corrupt world, which has been ravaged by power and greed, exploitation of people, and environmental destruction caused by the Western world's overconsumption. The stage

directions state that the island, once a thriving shipping port, now serves only as a detention centre and rubbish dump. This inspired my use of cyclone fencing and oil drums. The playwright was inspired by their trip to a Sri Lankan fishing village, seeing how the effects of war, natural disasters, and climate change had impacted the villagers' lives. This also informed my mise-en-scene: Buddhist iconography, the colours of the Sri Lankan flag, palm leaves, sand, fishing net, a discarded tea chest and a motorbike tyre. The clash of visual cues is intended to communicate Philoctetes' internal conflict, his nihilistic views (through memento mori) and the hope he seeks in spirituality and nature.

Jazmin Golding

Sandringham College, Sandringham

Bunurong Boonwurrung Country

Alquist (Rossum's Universal Robots, Karel Čapek)

Set and prop design: Timber, metallic spray paint, LED lights

In Karel Čapek's play R.U.R., the character Alquist is left as the last human alive. My interpretation of the play aims to convey his desperation and distress. Through my set and prop design, I incorporated angular and geometric composition to construct an abstract version of reality. In the construction of Alquist's desk and chair, I created a disheveled and worn finish by distressing the timber and staining the desk with ink. The weathered state of the props found on Alquist's desk aim to further convey his loneliness and desperation to save humanity. The metallic paint used for the robotic set piece conveys a futuristic aesthetic, representing the robots in the play.

The cold and striking white LED lighting used in the set has an artificial aesthetic that contrasts the humanity represented in Alquist's furniture. The test tubes and silver holder align with the futuristic laboratory aesthetic to strike a balance through their similar colour palettes, linear composition and cool tones of steel and cobalt blue.

Alysha Dodd

Eltham College, Research

Wurundjeri Country

Tetsuro Shigematsu (Empire of the Son, Tetsuro Shigematsu)

Set and costume design: Solid pine wood, cellulose paper, vinyl records, CDs, tea-stained paper, film negatives, wheels, hinges, string, wooden pegs, timber, cotton cushions, mirrors, photo albums, projector

My set design incorporates metaphors for the play's complex father-son dynamic. The room divider is inspired by Shoji, used in Japanese architecture. I use this in my design to enhance the similarities between Tetsuro and his father Akira, and shed light on the complexities of their relationship. Photographs from Tetsuro's life are projected onto the divider, accompanied by a soundscape during vital moments of the playscript. This projection and sound highlight moments of shared intimacy and connect to

Akira's work in radio. Other set elements include vinyl records, which are juxtaposed by CDs to emphasise the intergenerational and cultural differences between the two men. Mirrors represent the way their personalities reflect each other, despite the distance between them. Finally, old letters that Tetsuro's father gave him apologise for forcing ideas upon him. My costume design enhances Tetsuro's identity as explored within the playscript. As Tetsuro matures, he reflects on his lifestyle and realises he mirrors many of his father's personality traits. This is depicted through a black suit, similar to an image found in the playscript, where Akira is nearing Tetsuro's age. I have incorporated Japanese cuff links, which symbolise origins and beginnings. Additionally, a blue tie to represent Buddha references Tetsuro's healing. Through these design choices, Tetsuro is depicted as a young man entering a journey of self-discovery and acceptance.

Ashley Syers

Ivanhoe Grammar School, Ivanhoe
Wurundjeri Country

Jean (Dead Man's Cellphone, Sarah Ruhl)

Set and sound design: Wood planks, canvas, metal table, fold out chair, black spray paint, duct tape, hot glue, wooden pole, metal ring, hook

My set and sound design respond to the character of Jean in Sarah Ruhl's play Dead Man's Cellphone. The interplay of my design elements reflects Jean's feeling of isolation in the monologue, where there is a sense of human disconnection amidst the ever-evolving age of new technology. My sound design evokes the ambience of a cafe, surrounded by the sounds of online activity. Rather than the expected bustle of conversation, having a solely technological noiscape encapsulates the destructive and numbing qualities of technology. My set took inspiration from Edward Hopper's painting Automat. Set in a cafe, Hopper's painting depicts

a woman trapped inside an artificial environment. She is decentered, communicating a sense of discomfort and displacement. I have reflected this through my decision to locate the cafe off-centre and not take up the entire stage space with my design. Jean is depicted in a cramped environment, with the table and chair set on an enclosed checkerboard canvas flooring, next to a large window. The set physically depicts an intense feeling of human loneliness, and also emphasises Gordon's literal disconnect from life itself by positioning him at a table outside of the realistic cafe environment.

Scan the QR code on the object label to listen to Ashley's sound design.

**VCE VISUAL
COMMUNICATION
DESIGN**

Sophie Balis

Caulfield Grammar School, Wheelers Hill

Wurundjeri Country

Fingy Beans Hangboard

Branding and presentation board: Inkjet print, foam core

Hangboard model and prototype: Plastic filament, pine wood

Fingy Beans is an online climbing brand that is passionate about efficient and effective training. They required a new logo and hangboard designs for intermediate to advanced climbers looking to increase their finger strength. Their goal was to provide climbers with a flexible and beneficial training tool. The hangboard includes a range of hold types and depths to allow for a variety of training styles to be performed on a single board.

Phoebe Biggin

Methodist Ladies' College, Kew
Wurundjeri Country

Station House

Architectural model, concept board: Poplar
wood, plastic

Advertisement brochure, concept board: Inkjet
print, paper, plastic

Station House is a medium density apartment
complex designed for Houndstooth Ltd.

Presented as part of a development concept, my
vision for Station House was to be an integration
of organic and modern forms of design. I wanted
the complex to reflect community ideals and the
needs of an interaction-oriented population. My
design uses wide open area spaces, green wall
inclusions, and other features to suit the lives of
growing families and achieve sustainable and
aesthetic outcomes for all residents.

Hannah Cook

Northcote High School, Northcote
Wurundjeri Country

Fruits For Fauna

3D architectural model and presentation board:
Laser cut wood, cardboard, foam core, inkjet
print

Logo and visual identity: Inkjet print, foam core,
paper

Fruits For Fauna is a small business that aims to protect endangered wildlife and conserve the environment. They required a sustainably designed café and education hub to be situated on Mount Buller, accompanied by a visual identity to promote the brand. The green roof of the café provides insulation and protection from alpine weather while also helping the building blend into the landscape. Inspired by snow gum trees, the logo features seasonal colours and a unique illustration that represents nature.

April Crumpler

Ballarat Clarendon College, Newington

Wadawurrung Wathaurong Country

Complement Brewing Company

Beer can label designs: Inkjet print, mount board, sticker paper, cans

3D model of a proposed brewery: 3D print filament, model trees, balsa wood

Complement Brewing Company required a set of graphic labels for the 6 different beer cans they produce, all following a complementary colour scheme of yellow/purple, blue/orange, and red/green. I used digital methods to produce the sticker labels and adhered them to aluminium cans. Complement Brewery also required a 3D model to present a proposed brewery design that would show the contemporary, vibrant nature of the business and their passion for brewing.

Alyssa Cunanan

Williamstown High School, Williamstown
Bunurong Boonwurrung Country

Pictura

Flagship Pictura store: Plastic filament, paper

Stationery set: Pencils, pens, inkjet print, paper

Pictura is a stationery store located in Fitzroy, Melbourne. The storefront is inspired by retro aesthetics, traditional shopfronts, contemporary arts, and prominent architecture throughout the suburb. A limited edition stationery set has been designed to celebrate the shop's opening, which pays homage to early-internet East Asian shows such as Cowboy Bebop and Perfect Blue, key inspirations of the owner Ann Che's work.

Joseph Dinh

Mazenod College, Mulgrave

Bunurong Boonwurrung Country

Yumi Restaurant

Brand design and packaging: Inkjet print, card, paper

3D model and promotional flyer: Inkjet print, bamboo panels and paper

Yumi is a restaurant chain owned by chef Aaron Tran and owner Shue Dang, who are in the process of opening a new family-run Vietnamese restaurant in Springvale. They are looking for a modern and distinct brand identity for their restaurants, including packaging. The architectural model of Yumi's modern interior and exterior views depicts the unique environmental design, which distinguishes it from existing restaurants.

Amelie Dyer

Huntingtower School, Mount Waverley

Wurundjeri Country

Arizona

Drink bottle and presentation board: Resin, plaster and inkjet print

Mascot and presentation board: Wood and inkjet print

Arizona is a large US based company providing climbing accessories to an international audience. The company's ethos is to blend practical and elegant design. I focused on a highly functional design for the drink bottle that is both compactable and effortlessly attachable to meet the climber's needs while ascending. The accompanying mascot, inspired by the rugged spirit of the mountain goat, entwines authenticity and resilience into Arizona's brand identity.

Phoebe Kupsch

Wurun Senior Campus, North Fitzroy

Wurundjeri Country

Happycapy

Happycapy experience centre: Inkjet print, foam core, virtual architectural model

Logo identity and phone application: Inkjet print, paper, foam core

Happy Sparks is a not-for-profit organisation that has been providing key services relating to mental health in Australian communities for over 20 years. Happy Sparks wanted to base their therapy around capybaras, given their placid temperament and social nature, and develop an experience centre called Happycapy.

Happycapy's logo and experience centre have been designed to appeal to Melbourne residents aged 4 to 65, while also carefully considering the surroundings of the location and natural habitat of the capybaras. The accompanying phone app ensures a continuous interactive experience,

extending mental health benefits beyond the centre itself.

Phoebe's virtual architectural model can be viewed on the touchscreens in the exhibition.

Ethan Leong

Mount Waverley Secondary College, Mount Waverley, Wurundjeri Country

Bendigo Contemporary

Style guide and motion graphic: Inkjet print, paper, digital methods

Presentation boards and model: Inkjet print, paper, mounting board, card, resin

Bendigo Council required a design for a new contemporary art gallery along with a distinct brand identity aimed at young adults and tourists. I used both traditional and digital methods to create detailed architectural presentation boards and a model that accurately depicts form and scale. I used simple shapes and typography to create a minimalistic and modern aesthetic for the brand.

Ethan's digital motion graphic can be viewed on the touchscreens in the exhibition.

Ruby McInnes

Lowther Hall Anglican Grammar School,
Essendon Wurundjeri Country

Artfull Community Art Centre

Concept board and model: Plywood, foam core
Promotional poster, style guide, business card,
apron: Card, fabric, foam core

Artfull Community Art Centre is located in the growing suburb of Williams Landing. The facility provides development opportunities for local artists as well as classes for community members that cater to a range of ages and abilities. The Centre incorporates a balance of space for both recreational and work activities, providing multifunctional community benefits. I created an accessible building design alongside artistic branding to promote the new facility.

Holly McNamara

Lauriston Girls' School, Armadale

Wurundjeri Country

COO-EE Native Botanical Museum

Promotional material and brand identity: Inkjet print, card, paper, foam core

Architectural model and presentation board: Perspex, wood, paper, glue, cardboard, card, foam core

The Horticulturalist Society of Victoria wanted to renew city spaces by bringing Australian native flora to Melbourne through their new project, the Native Botanical Museum. The Society required a clear brand identity and promotional material, as well as architectural and landscape designs for the museum. The COO-EE Native Botanical Museum and promotional material were created with a vision to reflect a minimal yet innovative aesthetic, complementing the city environment.

Joshua Roberts

Waverley Christian College, Narre Warren South
Bunurong Boonwurrung Country

The MOON Project

Logo, brand identity: Cotton t-shirt, calico fabric, acrylic paint, inkjet print, foam core, motion graphic

Architectural design: Wood veneer, plastic, spray paint, inkjet print

Elliot Lewis required a logo and architectural design for The MOON Project, a Melbourne-based organisation dedicated to creating spaces for emerging designers and artists. The unique shapes used for the logo, alongside the GIF animation, give the brand a contemporary appearance that targets a young audience aged 16 to 25. The openness of the gallery, met with the privacy of the studio hub, facilitates a space for creativity to thrive and be displayed to the public, meeting the organisational purpose.

Joshua's digital motion graphic can be viewed on the touchscreens.

Cooper Smith

Caroline Chisholm Catholic College, Braybrook
Bunurong Boonwurrung and Wurundjeri
Countries

Woodlands & Co

3D architectural model and digital drawings:
Foam core, balsa wood, inkjet print
Brand identity: Inkjet print

Woodlands & Co, a private holiday homes company, required a design for accommodation and an updated brand identity. They wanted the designs to suit a gender-neutral audience aged 20 to 55, living in Australia and looking to holiday in regional Victoria. I used a combination of model making materials to construct my model, along with digital applications such as Google SketchUp and Adobe Illustrator to create my drawings. The brand identity was designed with consideration of a modern aesthetic with links to the natural environment.

Chinan Yang

Genazzano FCJ College, Kew

Wurundjeri Country

Urban Garden

Garden design: Virtual architectural model, inkjet print, paper, cardboard, artificial foliage

Plant labelling sign: Inkjet print, paper, PVC pipe, PLA plastic, acrylic

ThinkGreen is an organisation that recognises the importance of natural environments in maintaining a spatial and spiritual balance in urban areas. In response to a growing number of high rises in Melbourne's eastern suburbs, ThinkGreen required a garden design and plant labelling signs for their urban garden. The garden aims to provide an immersive escape from the frenzy of a modern city, blending a style reminiscent of traditional Chinese architecture with a range of natural features, to create a

space that embodies the five senses: sight, taste, scent, touch and sound.

Chinan's virtual architectural model can be viewed by scanning the QR codes on display.

Tin Lok Zhang

Camberwell Grammar School, Canterbury

Wurundjeri Country

Zen+ Studio

Keyboard: PLA plastic

Brand identity and packaging: Inkjet print, card, paper

Zen+ Studio required a compact keyboard design, packaging and brand identity, aimed at users aged 18 to 25, that combined the art of traditional Japanese design with aspects of modern technology. The stackable keyboard and packaging design are inspired by a bento box, with a unique yet functional design that promotes cohesion between the product and its package. The consistent minimalist and clean aesthetic across all designs reflects both the values of the brand and the 'zen' in its name, with the Japanese inspired styling adding a unique twist.

A video of Tin Lok's keyboard can be viewed on the touchscreens.

VCE
SYSTEMS ENGINEERING

Christopher Batras

Penola Catholic College, Broadmeadows

Bunurong Boonwurrung Country

ALMMPA, Affordable Lightweight

Multiarticulate Myoelectric Prosthetic Arm

DFRobot electromyography sensor, SG90 servo motors, Arduino Uno microcontroller, RGB LED, 75 Ω and 150 Ω resistors, wires, 6V 3Ah AA battery, fishing line, elastic thread, M3 metal, 3D printed PLA components: nuts, bolts, prosthetic arm, servo adaptor and spur gears

Designed for accessibility, ALMMPA blends affordability with advanced functionality.

Controlled by a muscle electromyography sensor, the prosthetic arm features five micro servo motors connected to fishing line and elastic thread that act as artificial tendons for finger articulation. The Arduino microcontroller interprets elevated voltage signals from the sensor when the amputee contracts their muscle, enabling seven distinct grip modes with

synchronized RGB LED colour changes to reflect the active mode. This innovative integration of technology and biomechanics is dedicated to significantly improving the quality of life for amputees.

Louie Dodds

Kardinia International College, Bell Post Hill
Wadawurrung Wathaurong Country

Hydroelectric Dam

Acrylic, silicon, electronic relays, switches, capacitors, resistors, LDRs, solar panels, diodes, LEDs, terminal blocks, 6V batteries, plywood, pine wood, screws, nails, glue, steel mount, rubber furniture grippers, PLA plastic, plaster of Paris, artificial trees and rocks

I have produced a scale model of a hydroelectric dam that generates electricity using an input of water via an intake chute. The system uses an Arduino board and closed loop system to control an artificial reservoir's water level and penstock subsystems, then directs the generated electricity to LED outputs. A storage container catches the water as it runs through the dam, which is then actively pumped back up to continually produce a constant DC voltage output, satisfying the design brief.

Manuel Fay

Parade College, Bundoora

Wurundjeri Country

Train Colour Sorter System

Arduino Mega board, servo switches, stepper motors, stepper motor driver, 3D printed PLA components, 19V DC power supply, infrared sensors, GY-31 colour sensor, L298N motor module, 12V-5V DC converter, 00 model train gauge track

I have designed a system to sort trains by colour through a variety of functional techniques such as rotation, sliding, and pivoting. The device identifies trains placed on the system and individually guides each one towards the colour sensor. This sensor detects the train's colour and determines the appropriate track. The system then propels the train onto the correct track. Once all trains have reached their final positions, the system powers down.

Jeremy Gray

Scotch College, Hawthorn

Wurundjeri Country

Magnus Effect Wind Turbine

Arduino Uno, Adafruit Motor Shield V2, DC motors, servo motors, stepper motor, potentiometers, bearings, gears, LCD screen, batteries, PLA, aluminium tube, slip rings, steel frame

I have built a wind turbine that utilises the Magnus Effect instead of using traditional airfoils. The Magnus Effect is a feature of airflow around a spinning body that is also moving in relation to the airstream. Using an Arduino Uno microcontroller, this approach gives a lot more control to the operator over how much lift is generated and allows the turbine to operate in a wider variety of wind conditions. My design demonstrates how this type of turbine can be used in areas where wind speed and direction are widely variable, such as urban environments.

Jamie Phelps

Belmont High School, Belmont

Wadawurrung Wathaurong Country

Rubik's Cube Solver

Raspberry Pi 3B+, Arduino Uno, Arduino Uno LCD display shield, A4988 stepper motor drivers, NEMA 17 stepper motors, Pi camera module, lead screws, PLA 3D printed components, laser cut acrylic components, push button, Aluminium v-slot strut, Rubik's cube, Molex power connector

I have created a system that automatically solves Rubik's Cubes. It uses a camera and a specifically designed colour detection algorithm to accurately read the Rubik's Cube state. The system then uses the Kociemba solving algorithm to generate a sequence of actions to the solved state, then executes these actions efficiently, solving the Rubik's Cube. The time taken to read and solve the Rubik's Cube is shown on the display.

Justin Pollock

Padua College, Mornington

Bunurong Boonwurrung Country

Automatic Transmission

DC electric motor, Arduino Uno, photo interrupter, rotary encoder, LiPo battery, digital servo motor, DC battery, Bread board, PLA plastic 3D printed components, 15 gauge wire, bearings, washers and bolts, metal axle, jumper cables

I have created a system that can change the ratio of torque and speed from an input to an output. Running on an Arduino Uno, the transmission can change gears automatically using a servo motor depending on the measured Revolutions Per Minute (RPM) of the system. The motor speed can be manually controlled by the operator to simulate the different scenarios that the transmission can be used in.

Haisong Qi

North Geelong Secondary College, North
Geelong

Wadawurrung Wathaurong Country

Automatic Card Sorter

Raspberry Pi 4B, SparkFun RedBoard Plus,
touchscreen, MCP3008 ADC, magnet, TLV493D
magnetometer, L298N motor driver, S13V30F5
voltage regulator, relay, BC547 transistor, resistor,
LED, laser diode, LDR, DC motor, servo motor,
stepper motor, stepper driver, 18650 battery, GT2
timing belt, 2020 aluminium extrusion, T-nut,
bearing, smooth rod, PLA, ABS, plywood, acrylic

I have developed a device that sorts playing cards into order using three electromechanical subsystems. Cards are first dispensed one at a time using friction feed. A camera then captures an image of each card and the system recognises it using a deep learning algorithm powered by a convolutional neural network. Finally, a rotating drum is used to arrange the cards in the order

defined by the program. This device is operated via a graphical user interface on a touchscreen.

Clancy Wilson

Scotch College, Hawthorn

Wurundjeri Country

Automatic Truck Unloader

Arduino Uno, DC motors, servo motor, 9V batteries, wheels, motor driver shield, RFID reader, line sensors, PLA 3D printed components, screws, wires

I have designed a system that automates loading and unloading pallets from the back of a semi-truck. The system would be based in a warehouse to unload pallets from a truck and deliver them to a designated place. The scale model system is controlled by an Arduino and navigates through the use of a RFID reader and two line sensors. Through this automation, the Automatic Truck Unloader attempts to reduce forklift related accidents in the workplace.