

Have you been wondering what Blakehurst students are working on this year and how it connects to the real world? Take a closer look at the incredible skills and projects our students are showcasing!

INTRODUCING

2024

INDUSTRIAL ARTS



In the Industrial Arts faculty, students develop practical and creative skills that prepare them for real-world challenges. From timber craftsmanship and jewellery design using silversmithing tools to electronics, computing, and engineering, they gain hands-on experience that drives innovation.

Students also explore architecture, graphic design, and 3D modelling, learning to bring their ideas to life. By designing furniture, creating intricate jewellery, and developing engineered solutions, they build skills in problem-solving, critical thinking, and teamwork, laying a strong foundation for future success in various industries.



YEAR 7

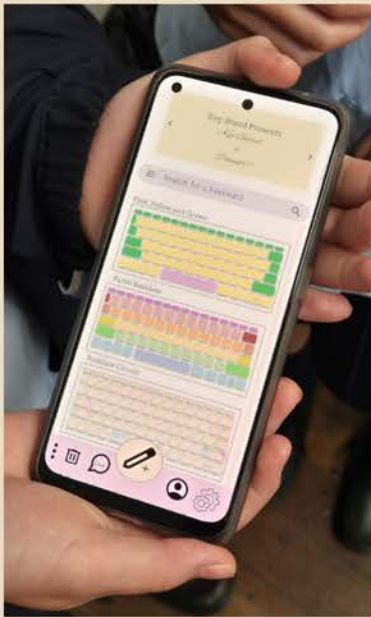
SMART STORAGE DEVICE

Our newest Blakehurst students kick off their workshop experience with a modern take on a classic design: the pencil box. This updated version features a pivoting lid that doubles as a mobile phone stand, blending practicality with creativity. Check out some of the outstanding projects they've created!



PHONE APP DESIGN

Students bring their personal interests to life by designing functional phone apps using tools like Adobe XD and Figma. Through a process of researching, storyboarding, and prototyping, they develop creative and user-friendly app concepts. The results are impressive, showcasing exceptional creativity and technical skills.



YEAR 8

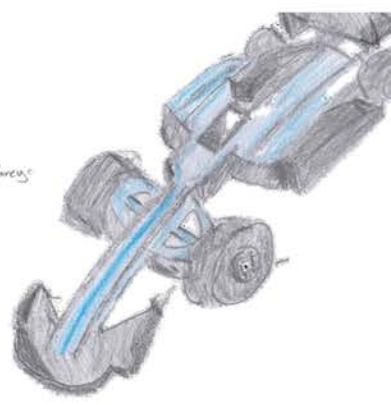
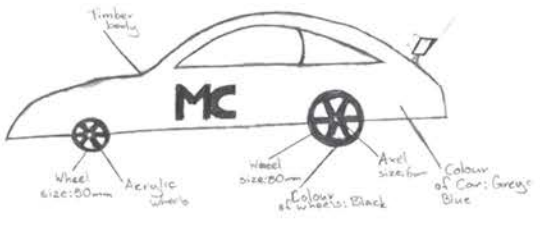
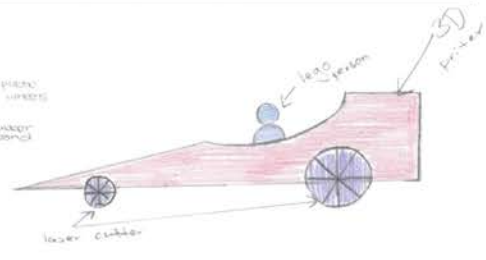
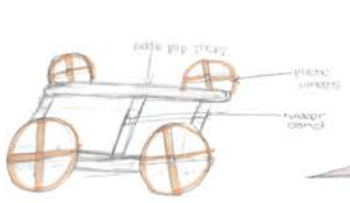
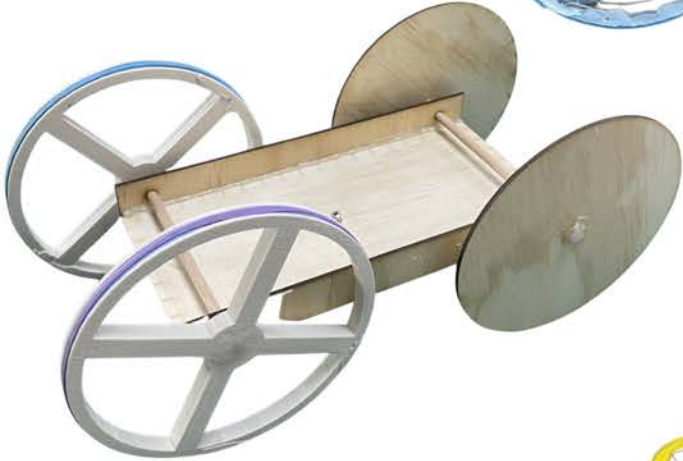
NIGHT LAMP

This semester, students learned to draft their designs using Adobe Illustrator, mastering skills that allowed them to create intricate acrylic inserts cut with our Trotec laser cutter. The final touch involves incorporating LED strips powered by a low-voltage (5V) USB switch, resulting in an impressive night lamp. The etched images refract light beautifully, making these projects both functional and visually striking.



RUBBER BAND RACER

Each semester, Year 8 students tackle the challenge of designing and building a racer powered entirely by the elastic potential energy of a single rubber band. The current record of 20.5 metres, held by Jason, Annie, Kayla, and Ruby, sets the benchmark for this exciting competition.





YEAR 9 YEAR 9

DESIGN INNOVATION STEM JEWELLERY DESIGN

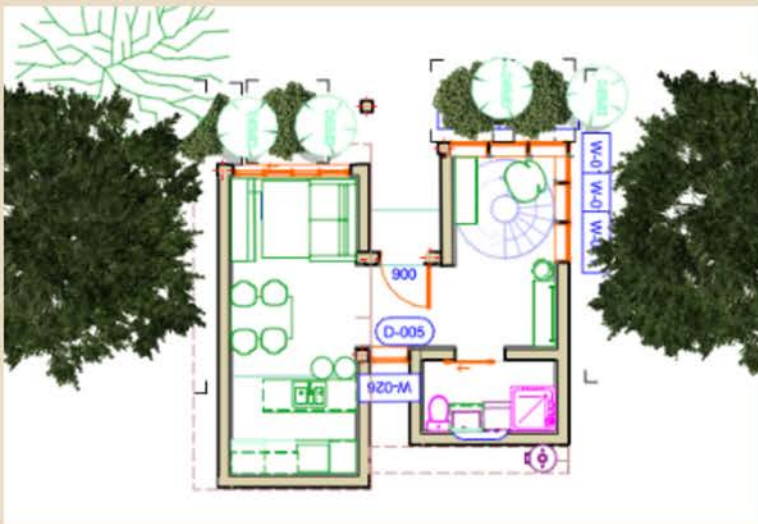
Year 9 Design Innovation STEM students showcased their creativity by designing and crafting silver jewellery using traditional silversmithing techniques.



DESIGN INNOVATION STEM

ARCHITECTURE

Year 9 students learned to create floor plans according to AS1100 standards and designed tiny homes based on a detailed design brief and set criteria using industry-standard software, Archicad.



INDUSTRIAL TECHNOLOGY TIMBER TIMBER STOOL

As a major project for the year, students have created a complex stool construction using mortise and tenon joinery, leg shaping and symmetrical seat design. The projects look great and will last the test of time. Blakehurst Hand Made Guarantee.



BUILDING AND CONSTRUCTION

Our year 9 Building and Construction students this year were tasked with the creation of some set boards for the school Adams Family production. The two classes followed the plans and built, using only trade tools, four large mobile set backing tall boards that were later painted by the CAPA faculty. The tall boards will be re-used year after year for any future productions. Well done team!



COMPUTING TECHNOLOGY ARDUINO CODING CHALLENGE

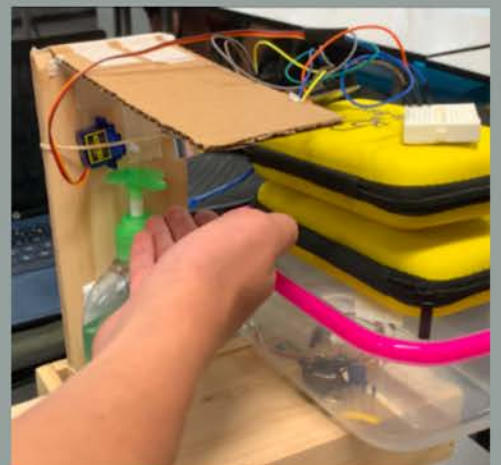
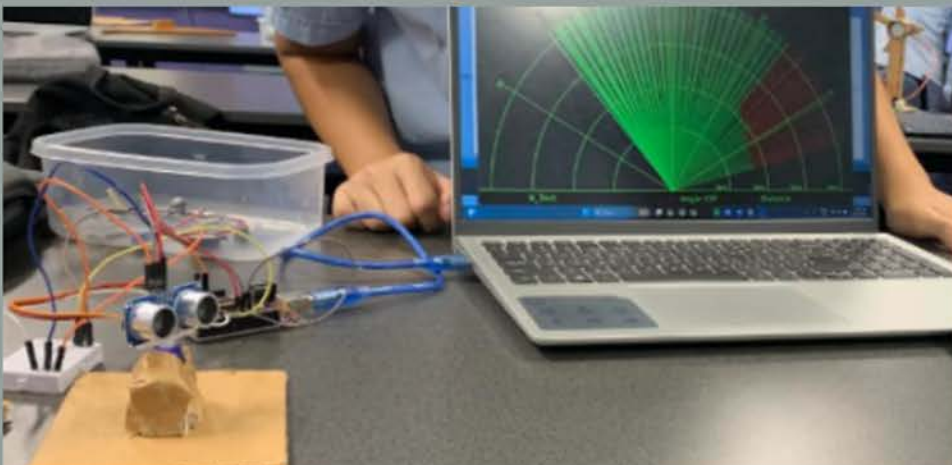
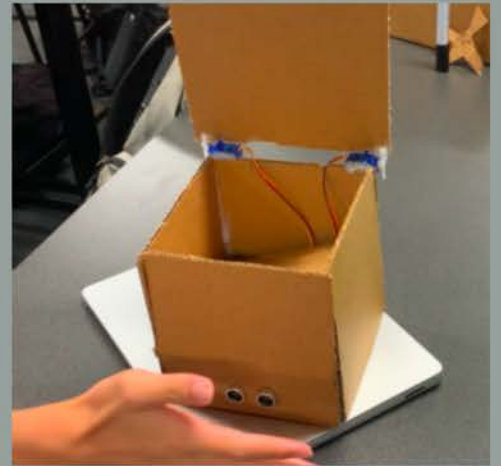
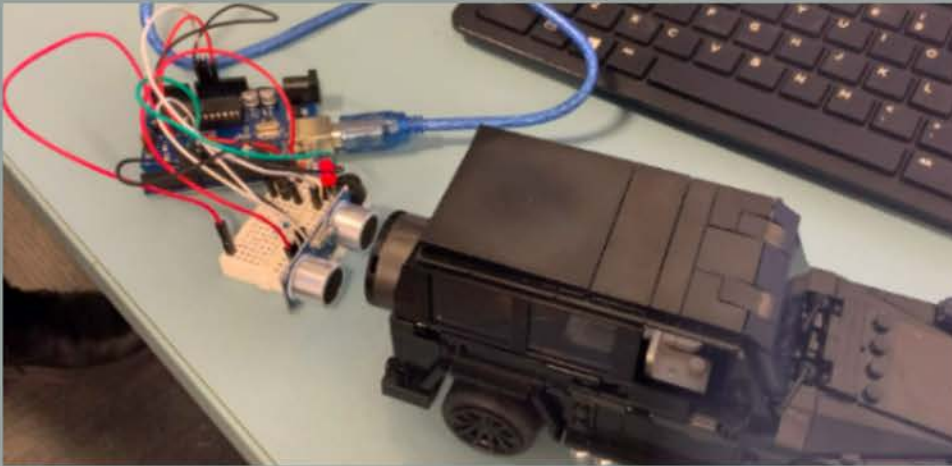
Building off last year's success in piloting the new Computing Technology Syllabus for the State, this year's 9CT class is filled to the brim with lots of skilled computer champions. The first Semester saw students investigate the wide world of user interface design by researching, designing and prototyping their own custom apps. From (APP) to (App) we had it all, and the quality was excellent across the board, allowing many students to stretch their creative legs.



**SCAN
ME!**
TO SEE
STUDENT
SAMPLE

MECHATRONICS AND AUTOMATION

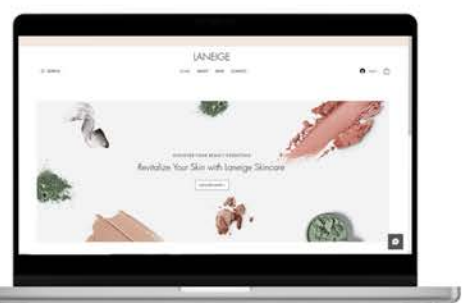
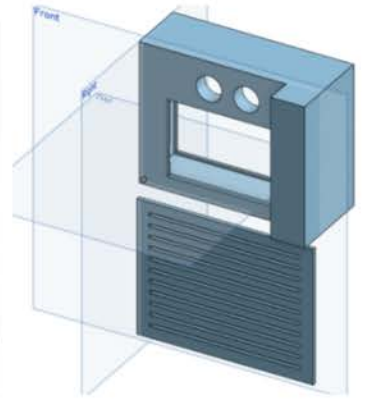
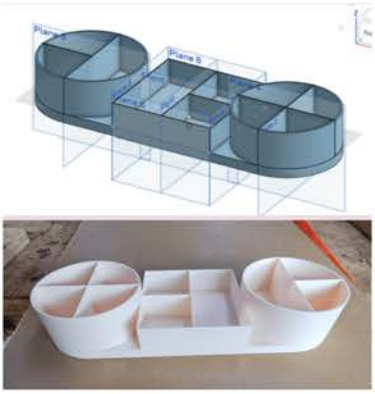
In Semester 2, students explored the growing fields of mechatronics and automation, eagerly learning new skills in electronics, coding, and wiring. Using Arduino Uno microcontrollers with various sensors and actuators, they created impressive projects like Ultrasonic Radar Systems, Motion-Activated Alarms, and Parking Distance Sensors. Working collaboratively, they showcased their talents and set a high standard for future Computing Technology students at Blakehurst.



YEAR 10

DESIGN INNOVATION STEM

Year 10 Design Innovation STEM students took on a **student negotiated project**, choosing a topic they were passionate about or skilled in. This independent learning experience challenged them to manage their time effectively and bring their creative ideas to life within the given timeframe.



GRAPHICS TECHNOLOGY

MAGAZINE PUBLICATION

Over the course of a semester, Graphics Technology students used Adobe InDesign to design and produce their own **magazine publications**. Along the way, they developed valuable skills in layout design, typography, and meeting publication requirements.



INDUSTRIAL TECHNOLOGY TIMBER

DART BOARD CABINET

In Industrial Technology Timber, students crafted personalised dartboard cabinets, learning cabinet assembly and joinery techniques. They also used laser engraving technology to add unique, customised designs to their projects.



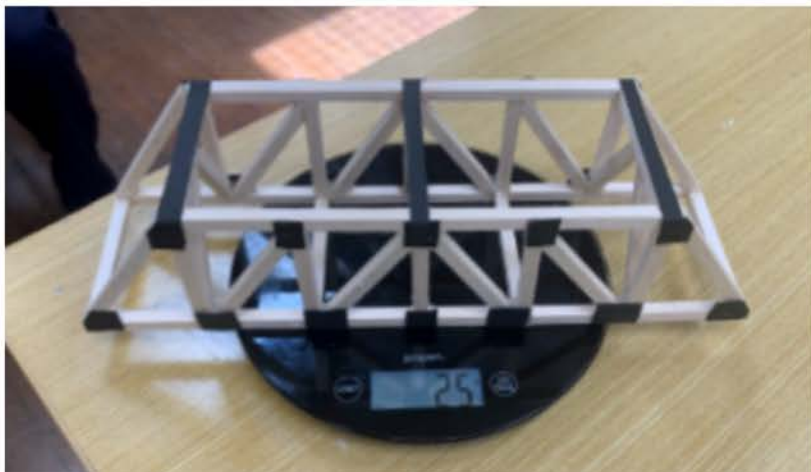


YEAR 11

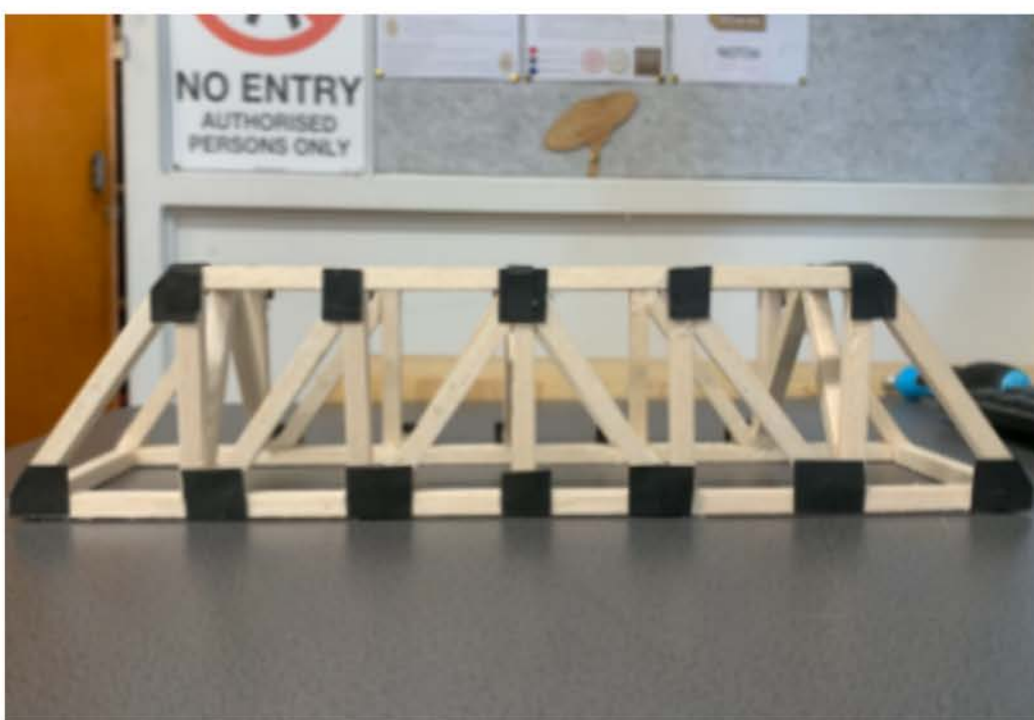
ENGINEERING STUDIES

After completing the Preliminary Engineering Studies course, students took on their first HSC task, focusing on Civil Engineering with an emphasis on bridges. Using just four 915mm sticks of 6.5x6.5mm balsa wood, they applied their knowledge to design and construct stable truss bridges.

Lucas Young achieved the highest weight held, with his 42g bridge supporting an impressive 34.8kg. Lucas Liu won the strength-to-weight ratio, with his 25g bridge holding 29.5kg, achieving a remarkable ratio of 1180:1. These students are off to a strong start as they continue their HSC journey next year.



Mass weights held (kg)	Mass bridge (g)	Strength to Weight Ratio
34.8	42	828.6
34.4	64	537.5
32.8	28	1171.4
30.6	27	1133.3
29.5	25	1180.0
28.7	40	717.5
16.7	27	618.5
15.7	32	490.6
14.7	30	490.0
10.7	19	563.2
10.7	44	243.2
6.7	19	352.6
6.7	20	335.0
6.7	29	231.0
2.7	20	135.0



YEAR 12

IT TIMBER

PRODUCTS AND FURNITURE

TECHNOLOGIES



After a full year of hard work and a few mishaps along the way (myself included), the class of 2024 truly delivered. Extra afternoons and holiday workshop sessions brought the students together, and every project was completed by the Department of Education's deadline. Great work, everyone - I wish you all the best in your future endeavours!



DESIGN AND TECHNOLOGY

What an exciting range of exceptional projects from our HSC Design and Technology students! This year, they showcased a diverse array of specialisations and skills, making the collection of projects a true journey through the work of talented and innovative designers.

