

Cecil Andrews College

Special Edition 2018



Achieving excellence together



P-TECH Career Expo

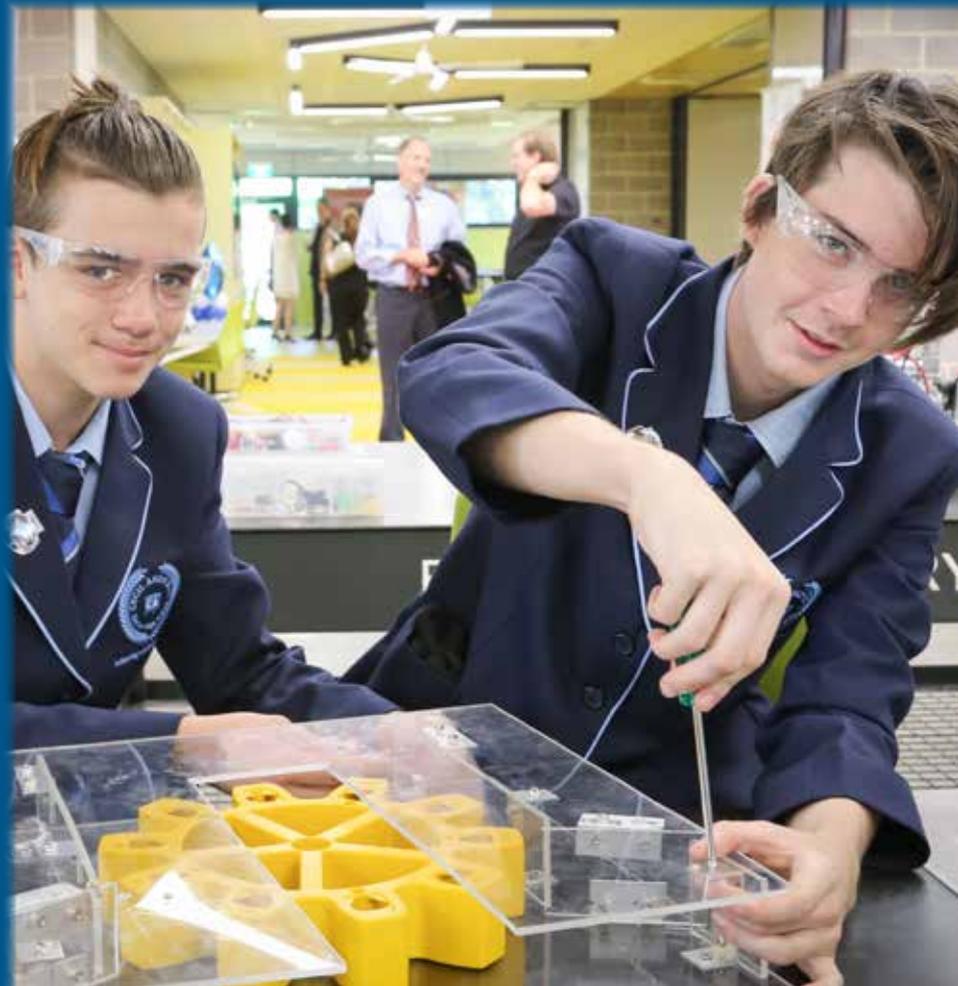
EduTech Conference

Principal's Awards

STEAM Maker
Conference

Deloitte MOU

FIRST Lego League
Tournament



Principal's Address



2018 has been a very successful year with many significant achievements for our students at Cecil Andrews College. In accordance with our motto, 'Achieving Excellence Together', our collaboration with partnerships and the community have enabled students who chose to get

the most out of their education, to achieve to their full potential. Deloitte have now signed the MOU and students continue to engage in workplace learning at school and in the fantastic industries we work with and with skillful mentors alongside them. South Metro TAFE have lectured in Engineering in our STEM Centre seeing growing numbers of students enrolling.

For the last two years, Asta Morton from Skilling Australia has assisted us with brokering and strengthening our partnerships with Austal, Cvmec, Datacom, Deloitte, HP, Thales, Curtin University and South Metro TAFE and we genuinely appreciate her support and positive attitude. She has been a dynamic and effective partner in meaningful learning resulting in successful student outcomes. She will be moving on to take what she has learned to establishing the Northern P-TECH Pilot.

We have delivered on our endeavour to provide an inspiring, positive and inclusive environment for students to learn best in. The Southern Perth P-TECH (Pathways in Technology) Pilot students have many and varied opportunities to better prepare themselves for the future in a changing world. We have seen students mature and show the values we uphold with our graduating class confidently prepared for pathways in school and beyond, setting a high benchmark. The Year 12 students clearly displayed inclusivity and took on the 'family' culture that we strive towards displaying great leadership and role modelling.

I was joined by staff and students on a full day excursion visiting the workplaces of the Southern Perth P-TECH Program Partners Austal, Cvmec, Datacom and Thales. The tour was a great way to highlight the possibilities and future career pathways for Cecil Andrews College through the Southern Perth P-TECH Program.

The annual P-TECH Career Expo was held on Tuesday, 10 April, providing students with insights into what the world of work can look like. Now in the second year of the Pilot, students are engaging with the world of work to better understand the relevance of their school learning to jobs and post-school pathways. P-TECH Program Partners received great feedback from students, parents and teachers about their exhibits and the opportunities for the future.

I was invited to present in Sydney at the EduTech Conference on our Pathways in Technology (P-TECH) Pilot and as the first one in WA, we have a story worth celebrating and sharing. Two of our P-TECH Peer Mentors, Mutinta Nangongwe and Ali Alyassin were flown over to Sydney where they represented us to a very high standard. We were joined by STEM Specialist Teacher Mrs Lean, VET Coordinator Mrs O' Donoghue, STEM Deputy Mr Morton and AIEO, Mrs Little. It was a great opportunity to share our successes of our partnerships with South Metro TAFE and our global business and industry partners Cvmec, Austal, Datacom, Deloitte, HP and Thales.

Year 10 students Eliza Banks and Ella Quinlan, along with teacher Kasie Franklin, were rewarded for their winning efforts in the 2017 P-TECH Battleship Challenge with a private tour of Austal shipyard by Naval Architect Sarah Cathcart. Ella and Eliza were provided an up close view of the Catamaran Passenger Car Ferry currently being constructed in Henderson and the refurbishing of HMAS Armadale.

Our student team from 'Just Start It' were also finalists in the Young Innovators of the Year 2018. The PLASTIGO Team of Jet, Nicole, Nathaniel, Exequiel, Tyler and Daniel with their Teacher Mr Townley and I attended the 'WA Innovator of the Year Awards Ceremony' at the State Reception Centre in Kings Park. They were in the top three finalists with Como Secondary College and Sacred Heart College and were acknowledged by the Minister for Innovation and ICT and other dignitaries including Lyn Beazley and Professor Barry Marshall.

The Cecil Andrews Robotics and ARC hosted the Seville Grove FLL 2018 Into Orbit Regional, one of 3 FIRST Lego League (FLL) WA regional tournaments. The network

of our collaborative schools also creates pathways for students to continue with their robotics learning from Primary into Secondary schooling, moving up into increasingly more challenging programs to full-blown industry linked engineering with high-level STEM learning and workplace ready team and collaboration skills. FIRST Tournaments are designed to be like big sporting events and combine highly challenging, time-pressured technical and personal performance with bucket loads of fun and an inspiring sense of being part of the technology revolution. We have hosted Tjuntjuntjara Remote Community School and continued visits through our STEM partnership. We also had a combined team in the Little Lego League State Final.

Our E-sports club, Vertx Gaming, team members Alex Smith and Alex Petis participated in the last Minecraft community league and received an honourable mention from judges for their tribute to Star Wars on May the 4th (May the force be with you).

The STEAM Maker Conference provided quality professional learning and we had presenters who were internationally and nationally acclaimed to bring K-12 teachers the most current and best in curriculum learning. We are committed to our guarantee to the community to provide quality teaching and therefore ensure that training is reflective of best practice.

The ABCN Program has given students valuable mentoring from high achieving professionals and Interview skills from the Dress to Impress Program.

Year 12 student, Kayla Roemer-Hanisch has been awarded a Defence Teaming Centre Shipbuilding Scholarship. She has also been selected as one of three to participate in an internship program with Cvmec Construction and Engineering. Kayla and Madeleine Smith were both shortlisted for the outstanding VET Awards.

The Year 12 students finished their year with a very moving Anniversary Assembly followed by their Year 12 Farewell Breakfast, cooked by their teachers. The Year 12 Presentation Night was a truly memorable occasion with many students being recognized for their hard work. We had a highly successful Senior School Ball this year on the last Friday of Term 2, at the Pan Pacific.

On 11th October, the Year 8 Academic Extension students showcased their ideas and models on "How can we be more sustainable with our food and

energy at school?" at Scitech where Scitech and Shell Representatives as well as students' families were able to look at the students' work being exhibited. Our students presented themselves in a positive manner to the attendees and were commended on their efforts by Scitech and Shell Representatives.

The Marine Industry School's Pathways Program with Subs in Schools and the 4x4 Engineering, Scitech Shell NXplorers Program were all very successful and excellent STEM learning projects that engaged the students.

We fondly farewell Ms Anne Lindorff after her strong commitment and contribution of 36 years to teaching and leading at Cecil Andrews College. She will be missed.

Our cultural highlights have included the students performing in the South of The Swan Dance Festival at UWA, the production Game of Tiaras and Music Under The Stars. We had an excellent turn out for the Art Festival with an outstanding exhibition showcasing students' art works. Our Specialist Performing Arts students from Years 7 to 12 put on the production of Game of Tiaras to the delight of various audiences. The show was performed in two acts that showcased the students drama and music abilities. Directed by Ms Humphreys and produced by Ms Underhill and Mr Fares, this show entertained both local primary schools and the community members.

Our Specialist Dance students from Years 7 to 12 performed at the annual South of the Swan Dance Festival at the Octagon Theatre UWA. We presented 8 dance pieces from a wide range of genres such as Hip Hop, Jazz and Contemporary with choreography by Anjali Bhogal, Hanna Maciejewski, Sheldon Elliot and Mr Fares.

Sporting achievements included our Athletics Carnival and we took a group of students to the WA Athletics Stadium for an Interschool Athletics Carnival. The students were phenomenal. Every student gave it their all and never gave up. We finished 4th overall and took home the Meritorious Award (highest score when dividing the score by the number of students that school has) which goes to show we have some exceptional athletes. Special mentions need to go to Patricia Hansen who came 3rd in the Year 8 Champion Girl Award (and only by 3 points) and Jordan Douglas who won the

Year 8 Champion Boy Award. They are to be congratulated on their excellent effort and achievement.

The Performing Arts Specialist group and the Football Specialist students came together for the Melbourne trip which was a wonderful and exciting learning opportunity where the students all bonded together.

Our Cecil Andrews College Girls Academy showcased a wonderful NAIDOC Assembly in August. The theme "Because of Her, We Can" resonated with students, staff and community members alike.

In August, Anthony Dean exhibited his artwork in 'META 2018', a prestigious exhibition that showcased selected artworks by senior school art and design students across WA. The exhibition was held at Gallery Central, Perth.

Mr Young and his Year 9 class's sculpture was shown and won First Prize at the Highland Gathering.

Mr Craig Power, our Engineer, who has been working with students on projects, won **'The Professional Engineer of the Year' Award for WA.**

I am honoured to have won a **'20 in 20' WitWA Award** which is acknowledgement of the work I do in leading a 21st century vision in which technology is at the forefront. I also received an Excellence Award from Skilling Australia for outstanding leadership and commitment to STEM Education in Australia.

Stella Jinman
Principal

Principal's Awards

Skilling Foundation Australia recognised Cecil Andrews College Principal, Stella Jinman, for her outstanding leadership and commitment to STEM education in Australia. Jinman said: "The STEM disciplines connected to all subjects give students a sense of purpose and relevance that influences their lives on many levels so that even people with marginalised backgrounds flourish."



P-TECH schools do not work in isolation to develop and implement the program. By forging partnerships with industry and educational institutions, P-TECH sees cross-disciplinary experiential learning, incorporating industry mentors, workplace learning and paid internships.

WITWA is a Perth-based, not for profit organisation providing a framework for women in technology. Their mission is to encourage business change to accommodate diversity and provide a network of support for women in technology, science and innovation. Congratulations to our principal, Stella Jinman, for winning a WitWA '20 in 20' Award.

Leisa Aitken from Ashdale College, a former Cecil Andrews College student, also won an award. The awards recognise women who have championed and inspired other women in science, technology, engineering and mathematics in WA at some point over the last 20 years. Stella has brought the cause of women in STEM and Innovation further forward by showing young women that careers in STEM and Innovation are within their reach.





Hands on *Learning*

During 2017 and 2018, Craig Power mentored two groups of high school students in the Cecil Andrews College Project Based Learning Programs under the guidance of experienced STEM teacher John Townley and Principal, Stella Jinman.

The first group consisted of 4 boys and 3 girls from Year 11. They were offered the use of the school 3D printer and laser cutter for their project and decided to design and produce a montage of a penguin playground over a period of several weeks.

During the project, they were taken to the premises of the Inventor Hub in Yangebup, owned and managed by Megan Gobey and shown real life applications of laser cutting and 3D printing, including a visit to the plastics injection moulding facility next door.

The second group consisted of 5 boys and 2 girls from Year 10. Twin indigenous boys with a very high level spatial awareness skills, (Year 8) also attended part-time. They were offered projects and decided to do a project using Drones (Quadcopters), where, as teams of two students, they assembled and flew their own kit drone. This was competitive in nature with the first team to assemble fly their drone winning a prize.

The girls team won, which caused great consternation in the 3 other boys teams.

During the project, an environmental consultant, Hugh Osborn from Pendoley Environmental, came to the school and demonstrated the commercial use of their drone, which was used to track the nesting sites of turtles in the north of Western Australia.

Fully assembled drones were purchased and the students learnt to fly the drones, performing competitive tricks, including flying around obstacles and popping balloons.

The next challenge is to fly five drones in a co-ordinated public display – watch this space!!!!

The transformation of their soft skills has been extraordinary. Students have developed increased self-confidence, developed problem solving and team work skills. Some have demonstrated intuitive leadership during their projects. They are beginning to respect each other and listen to different points of view to help solve the challenges posed in both projects.

Craig Power
Engineer



Students get up close with Henderson Shipbuilder; *Austral*

Year 10 students Eliza Banks and Ella Quinlan, along with teacher Kasie Franklin, were recently rewarded for their winning efforts in the 2017 P-TECH Battleship Challenge with a private tour of Austral shipyard by Naval Architect Sarah Cathcart. Ella and Eliza were provided an up close view of the Catamaran Passenger Car Ferry currently being constructed in Henderson and the refurbishing of HMAS Armadale.

The students were taken through the large construction sheds following the stages of the build. Destined for Denmark, the Ferry will hold 1000 passengers and 425 cars, is 109m long, over 30m wide and will cruise along the water at 37 knots (68km/hr).

"I had fun being able to see ships being built. I'm glad I was able to experience this, I hadn't thought I'd be able to until today. It was really interesting to see all the parts of the ship separate and understanding where they would all go later" – Eliza, Year 10

"I thought the experience was pretty good and really interesting. If I had a choice to do it again, I would..." – Ella, Year 10

The Battleship Challenge was part of a hands-on learning activity in the Southern Perth P-TECH Program currently being piloted at Cecil Andrews College. Austral is one of the industry partners engaged in the pilot providing students the opportunity to learn more about careers in the shipbuilding industry. Students in Year 9 will get their opportunity to undertake the 2018 challenge in Term 2.

Dara O'Donoghue
VET Coordinator

P-Tech Career Expo

The Cecil Andrews College annual P-TECH Career Expo was held on Tuesday, 10 April, providing students with insights into what the world of work can look like. P-TECH program partners Austal, Civmec, Datacom, Deloitte, South Metropolitan TAFE and Thales were joined in 2018 by Defence Force Recruitment providing the opportunity for Cecil students to not only find out who provides services to our defence force, but also the opportunities in Defence to use them.

The Expo was again supported by WA based Universities Curtin, Edith Cowan, Murdoch and Notre Dame as well as Apprenticeship Support Australia. Now in the second year of the Pilot, students are engaging with the world of work to better understand the relevance of their school learning to jobs and post-school pathways. P-TECH Program Partners received great feedback from students, parents and teachers about their exhibits and the opportunities for the future.

"Datacom was once again proud to be a part of the Southern Perth P-Tech Careers Expo. Our staff had a great time talking to students about the pathways to working in Information Technology, and the range of roles in our industry. We look forward to seeing some of these students working in our teams in the years to come. We would also like to thank the students for their questions, enthusiasm and the professional way they conducted themselves on the day." – **Andrew Garside and Hall Jackson, Datacom**

"Civmec were very pleased to be a part of the P-Tech Careers Expo at Cecil Andrews College. We were impressed by the enthusiasm and interest shown by the students and it was an added bonus to have a number of parents present to hear about career pathways and skills required to work in our industry. We congratulate P-Tech for bringing together TAFEs, Universities and Industry to demonstrate to students the broad range of options they have and the exciting careers open to them if they follow a STEM pathway." – **Mike Deeks CSC, Civmec**

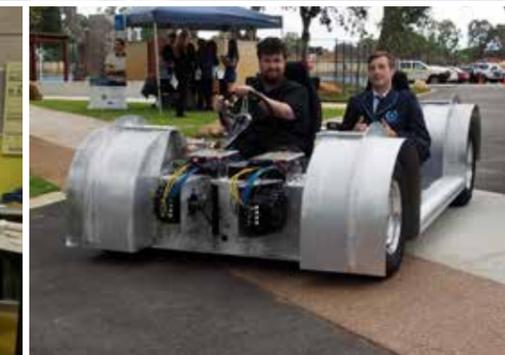
"...The expo was extremely interactive and our P-TECH Partners had put a lot of thought and effort into making their demonstrations interactive and engaging. The students really benefited from the hands on activities providing links between learning and future careers." – **Dara O'Donoghue, VET Coordinator**

Teachers and students recently visited P-TECH program partners to have a greater understanding of the work environment the careers offered by these industries are surrounded by. From walking underneath the hull of a 109m catamaran ferry at Austal, viewing the intricate construction work of the Matagarup Bridge for Perth Stadium at Civmec, watching live-stream cyber security threat maps at Datacom and having a tour of the high-tech visitor room at Thales.

Over the years workplace environments have changed dramatically while the classroom view has had subtle changes. Collaboration between the education and industry sectors strengthens the connection between student learning and the skills that employers need. In addition to the technical skills that students gain, opportunities to engage with employers and experience the contemporary workplace enable P-TECH students to develop the work-readiness skills so highly valued by employers. The combination of these skills improves young people's prospects of employment, including opportunities for employment with industry partners.

"...The companies provided us teachers with an understanding of the roles that each company plays and what the different individual roles within their company contributes to their success. It was great to see the different engineering pathways being highlighted ranging from digital software engineering to mechanical engineering." – **Amanda Lean, STEM Teacher**

With support from industry partners and mentors, Cecil Andrews College students have the opportunity to commence and pursue formal STEM training as part of a nationally recognised VET qualification, while also undertaking their Western Australian Certificate of Education (WACE) or ATAR pathway.



Edutech Networking & Information Conference

As a leading STEM school across Australia, we are continually being asked to share our best practice and showcase our incredible, purpose built STEM Centre. Stella Jinman, our principal, was invited to present on our Pathways in Technology (P-TECH Pilot) and as the first one in WA, we have a story worth celebrating and sharing.

Two of our P-TECH Peer Mentors, Mutinta Nangongwe and Ali Alyassin were flown over to Sydney where they represented us to a very high standard. We were joined by STEM Specialist Teacher Ms Lean, VET Coordinator Ms O' Donoghue, STEM Deputy Mr Morton and AIEO, Mrs Little.

It was a great opportunity to share our successes of our partnerships with South Metro TAFE and our global business and industry partners Civmec, Austal, Datacom, Deloitte, HP and Thales.

"In June I was given the opportunity to speak at Edutech 2018 in Sydney. Edutech is a networking and information conference. Its goal is to inspire and inform educators from all over Australia about what's new in technology. The event is targeted at bettering the next generation of students by using technology. This year I and one other student were given the honour of talking about how STEM and P-TECH has changed our schooling experience in the last year of its pilot. I'll admit when I heard that I was going to talk to a bunch of adults about how STEM has changed my perspectives I was scared. Until I thought about how much STEM and P-Tech has changed our school community. When I finally got to

the conference and I actually saw how many educators cared and wanted to see how we as students want to learn I started to see the importance of our school transitioning to be a P-tech pilot. This in itself was a highlight of this trip for me. This new found information about how the education world is changing led me to realise that every child all over the world should and can have the very same opportunities that our school has with STEM. The truth is that we as a community do have some issues. Issues that sometimes feed back into students. Although with the help of having industry partners at the school to guild our students on their futures outside of school maybe things could. Besides having the opportunity to talk and network with educators from around the country my favourite part of going to Sydney for Edutech was going around the city and going to see the vivid light shows at night," – Mutunta Nangonwe, Year 12 student

"In early June I had the privilege of going on an amazing and once in a lifetime educational trip to the EduTECH conference in Sydney. I was one of two P-TECH peer mentors that went with our Principal Mrs Jinman to talk to an audience about the changes and developments in our school. We had been preparing our speeches for weeks, making sure we could answer any sort of question the audience gave us. We stood on the stage on Friday morning, after Mrs Jinman had given her speech, and spoke to an audience of teachers and industry professionals. Our message that we tried to get across to them was how crucial P-TECH was to our education and how it will help in the future.



While we were up on the expo stage the audience had a chance to ask us some questions. The main ones asked were on how our parents felt about P-TECH opportunities and how they viewed it. When answering these questions I started to realise how serious of an event it was and how we were so lucky to represent our school, peers and teachers. It also made me realise how lucky we are to have the P-TECH program at Cecil Andrews and how we are advancing as a school," – Ali Alyassin, Year 12 student

Matt Keogh Visit

Matt Keogh, Federal Member for Burt, visited Cecil Andrews College on 13 March 2018 and presented the National flags to the Armadale Youth Intervention Partnership staff in support of this special project, which commenced at the start of this year.

Congratulations to Isabella Bulich of 'The Wilder Wolves' First Robotics Club on receiving her Matt Keogh Good Sport Award for always displaying good sportsmanship, fairplay and for always being inclusive and promoting STEM to her peers. Mr Keogh wished Isabella and the team good luck at the FIRST Robotics Competition South Pacific Regionals in Sydney.





Game of *Tiaras*

In the third week of Term 3, 25 of our Specialist Performing Arts students from Years 7 to 12 put on the production of Game of Tiaras to the delight of various audiences. The show was performed in two acts that showcased the students vast drama and music abilities.

Directed by Sarah Humphreys and Produced by Celeste Underhill and Peter Fares, this show entertained both local primary schools, and the community members.

The students worked tirelessly on this production from the end of term four last year, learning their lines and building their dynamic characters. From Term 1 this year they devoted four hours of after school time per week to work together on bringing this comedic production to its high quality.

The students came in during their holidays for three days of intensive workshops and rehearsals to engage in professional theatre processes of working with lighting, sound and stage crew. Eight of their fellow

Specialist Performing Arts peers worked professionally and efficiently as the production crew expanding their skills and understanding of sound, light and stage management.

The cast and crew worked as a team with passion to create the best performance they could for two local primary schools, friends and family, and the community of Armadale.

All the audience members were enthralled with the comedic and dramatic performances of some of Cecil Andrews' most talented students. All in attendance agreed it was a show not to be missed!

I am so very proud of all the students who were involved and feel very privileged to have been able to work with such a talented group.

Peter Fares
Specialist Performing Arts Program Coordinator



Deloitte training sessions

Siang Yeap from Deloitte hosted an Online Career and Social Media Tools session with Year 10 Work Studies students during Term 2. This session supported the students undertaking their World of Work series booklets which are completed during Work Studies classes. Mr Yeap discussed how students online presence may have a positive but also negative impact in the workforce and seeking employment. The students were also shown the various online career tools being used by graduates to find employment.



Deloitte MOU

It was wonderful to officially welcome Deloitte as our Workforce Development Partner to our Southern Perth P-TECH Program. While Deloitte have been with us in our journey from the start, they are now certainly committed to the program and engaging with our students to put their best foot forward. Michelle Legena from Deloitte was with Principal Stella Jinman on the signing of the MOU.

Dara O'Donoghue
VET Coordinator

Tjuntjuntjara Remote Community School Visit

June 2018

Cecil Andrews College and Tjuntjuntjara Remote Community School have developed a strong partnership, which continued to flourish this year. Cecil Andrews College Follow the Dream students Madeleine Smith (Year 12), Jemiah Laylan (Year 11) and Shevon McCormack (Year 8) visited Tjuntjuntjara in June and then another group of students visited in September. Tjuntjuntjara RCS students also visited Cecil Andrews College twice this year.

Tjuntjuntjara is located about 1,100km west of Perth, in what is known as the Spinifex Country. Getting there is an adventure and involves 6-hour train journey to Kalgoorlie, followed by a 10-hour drive on rough tracks. The Follow the Dream students wrote about their visit in June:

Madeleine's account

"To have this experience for the second time [Madeleine was on the STEM camp to Tjuntjuntjara in September 2017] was just amazing. To be able to see the friends that I made on the last trip and to be able to go into the classrooms this time and help the kids with their work was just the best experience. This time we were able to go out into the town a bit more and have a look around - we got to see the new houses being built, the general store and some of the other places in the town. One of the students, Rianna, also took us on a bike ride throughout the town on the Monday afternoon. Jemiah, Shevon and I also spent a lot of time after school with the kids in the rage cage (which is a big cage that has soccer goals, netball and basketball) playing basketball and spending time with them as they loved our company as much as we loved theirs. With being back this second time I knew what the lifestyle was like for the locals and how things worked but for Shevon and Jemiah it was an eye-opener to see the difference in how we live our Westernised lifestyle compared to the community which has English as their second language. They still have a strong connection with their traditional culture, still doing their traditional practices and it was a privilege to learn about it. It was also a big shock for Jemiah and Shevon to see how they lived and what their

houses were like and being able to see what their new ones were going to be like was a big difference. They were going to be getting showers and flushing toilets for the first time and their new houses were much bigger than their old ones. It was such an amazing experience to be there when the first house's new owners had their keys handed over. The family were so stoked as this construction process has been going on since the end of 2017 and is still going. Overall, I really enjoyed the trip and I would love to be able to go back and have that experience again, as I am sure the others do too".

Shevon's account

"I felt very privileged to be able to go to a place as remote as Tjuntjuntjara. I have had experiences that I would not be able to have anywhere else. For example, at the time of us staying in Tjuntjuntjara the town was undergoing construction for new and refurbished houses for the locals. These houses were at no cost for the locals as it was funded by the Department of Communities who contracted the Aboriginal Community Housing to do the building. It was very interesting to see the transition the town and the people were going through. I could see that the people were excited but at the same time nervous because these houses would have something that many of them have gone their whole life without, such as flushing toilets and showers. The change that was happening in the town inspired us to make an iMovie with the older kids in the school about how to look after the new houses they would be getting. During the first few days it was quite hard to get the content for the iMovie as the kids were very shy. However, because the school finished early, as the teachers had a PD, me and the other two students decided to go play basketball with the kids in the rage cage. The kids started to lighten up and we got to see all their different personalities come through. The next day at school the kids started talking, sharing their ideas and allowing us to take photos of them. It was so interesting to teach at a school where English is the second language. Everyone there was so connected to the culture with many of them still doing traditional practise that many other Aboriginal communities have lost. It was so interesting to compare



the Spinifex People's culture to the Noongar culture. For example, they do not have a traditional welcome but in Perth the Noongar welcome is very important and a way to show respect. Though I have only been there for a week I really got to know all the different people in the community. I am so honoured that I was given the opportunity to experience this".

Jemiah's account

"I was very excited to go to Tjuntjuntjara because I love towns that have a lot of culture in them. The week at Tjuntjuntjara showed me how different the way they live there compared to us in the city and it showed me how happy people can be with just what they have. I am glad that I had that time to experience what it is like to live in the Spinifex country. My favourite part were the times that we spent with the children at the primary school, working with them, playing with them after school and just hanging with them at the school and I also liked how English was their second language they speak there, I wondered what they would be saying in their Pitjantjara language. I just loved it all".



STEAM *Maker Conference*

On 31st August and 1st September, Cecil Andrews College held the STEAM Maker Conference which provided a range of professional learning opportunities to Primary and Secondary teachers and school leaders from around Western Australia to attend. Participants engaged in interactive STEAM workshops and lectures that provided them with STEAM based ideas and networking opportunities.

The STEAM Maker conference had a range of innovative and world renowned presenters who had brought in a wealth of experience and knowledge to share with our teachers. With a focus to Mathematics and inquiry skills, Shaham from Scitech provided our Primary teachers with an insight on how to make maths more of an inquiry process.

The STEM Learning project, presented by Natalie Dowd from Scitech, provided our Department of Education teachers and school leaders with an insight on integration of the different learning areas as a learning program. Kim Flintoff, Learning Futures Advisor from Curtin University, presented valuable information on Global Goals, Games and Challenge-based STEM with the focus on how it would empower our students in their learning. Teachers had the opportunity to see Ric Johnson from Rostrata Primary School present a STEAM show and tell of ideas and activities that teachers can use within their classroom.

Lisa Breen from Austal provided teachers with an insight of how educators can build essential workplace skills within students so they are prepared for the workplace and jobs of the future. Leonie Clelland and Veronica Aske from Treendale Primary School presented teachers with a variety of Digitech integration ideas with a Primary School setting and how it is adopted by teachers. Rachael Bott from Creative Moves WA presented an interactive workshop for teachers on integrating Performing Arts into STEAM.

International presenter and author Richard Gerver spoke about Innovation in schools, Professor Leon Stirling from Swinburne University of Technology presented on coding and computational thinking, Mike Harris CEO

WA Music Association spoke about connecting schools with music creation and innovation, Charlie Bass the Founder and Chairman of the Entrepreneurial Research and Innovation gave an inspirational closing address.

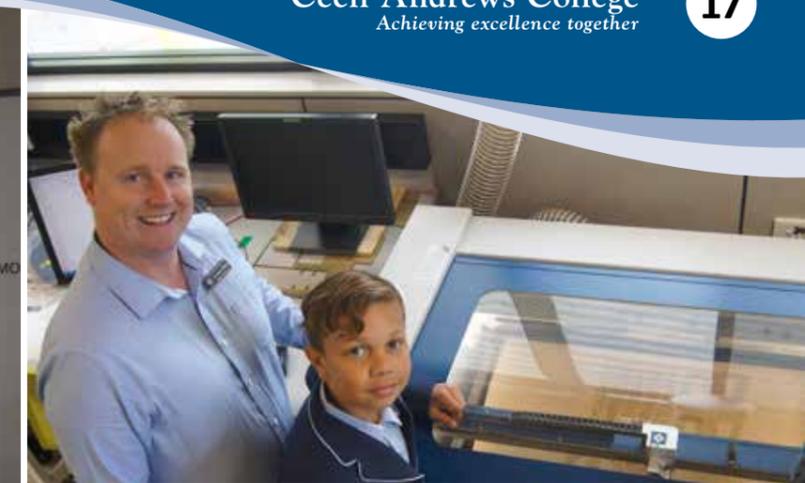
We were fortunate to have Virginia Ellis from Barker College as our STEAM Teacher in Residence at the college who not only presented at the conference on Effective STEAM integration across P-12, but worked alongside our teachers and students on demonstrating integration of STEAM based activities within the various subjects. This was a valuable professional learning opportunity for our teachers to capacity build within STEAM and how they could integrate those skills within their classes.

During the conference, our students exhibited their STEAM projects in a student-led display in the Engineering lab. Students conducted a show and tell to distinguished guests and teachers from other schools on their project and what they have achieved. Some of the projects included 4x4 in schools, SUBS in schools, FRC and FLL, and the drone choreographed dance as well as smaller scale STEM projects.

We also had the STEAM Primary Extension program which was conducted by Jodie Lewin for students from around our feeder Primary schools. Students immersed themselves in a series of STEM-based activities and were able to develop their skills in mechatronics. The conference celebrated with Helen Townsend and Bella Harvey with the Art and Technology of Song writing that also allowed our students to work shoulder to shoulder with the artists. Drew Mayhills performed for our guests with a combination of music and technology.

I would like to thank the presenters who provided our teachers and students with the amazing opportunity to be immersed in the world of STEAM. I would also like to thank our Cecil Andrews College P&C, and sponsors Office Max and teachers Mutual Bank for supporting our STEAM Conference. It was a highlight to our school community.

Amanda Lean
STEM Teacher





Kayla *Roemer-Hanisch*

The Southern Perth P-TECH Program is proving to be a great success for our school. During the past two years students have participated in various activities showcasing our partner industries and prospective careers of the future. As we move out of the Pilot phase of the program, all of our program partners have committed their continued involvement with our school. In 2019 we will also see new and exciting partners and stakeholders become involved progressing the program, and more importantly, exciting outcomes for Cecil Andrews College students.

Recently one of our graduating Year 12 students Kayla Roemer-Hanisch spoke of her experience with the P-TECH program at the Perth USA Asia Indo-Pacific Defence Conference. In front of 500+ attendees including the Chief of Navy, Federal Ministers, State Ministers, large business CEO's, Managing Directors, Professors and employees from various Defence Industry companies, Kayla spoke of her

P-TECH journey and how it has helped guide her into a career pathway to Design Engineer.

"In Year 10, I was given an opportunity, along with 14 other students, to complete a two-year Certificate III Engineering - Technical qualification through P-TECH. I was excited for this opportunity as there were only two other girls that wanted to do this course and it's not something I would normally choose. Over the duration of the qualification and through being introduced to companies such as Cvmec, Austal and Lürssen

Shipbuilding, I was surprised at how interesting and complex the industry is and I have really changed the direction I want to take in the future for a career," – said Kayla.

In further exciting news, Kayla has been successful in being awarded one of ten inaugural Defence Teaming Centre Shipbuilding Scholarships. She has also been selected as one of three to participate in an internship program with Cvmec Construction and Engineering. This is a great result for our school, but also a testament to the hard work and opportunities Kayla undertook during her time at Cecil Andrews College. She also received the Cecil Andrews College High Achievement Award in Vocational Studies and General Mathematics at the Year 12 Graduation Evening. She has also progressed to the next stage of the 2018 School Curriculum and Standards Authority (SCSA) Outstanding Achievement in VET Awards for Automotive, Engineering and Logistics. This is a state wide award across all public and private secondary students. We all congratulate Kayla on her success for the future.

The P-TECH Program continues to grow at Cecil Andrews College. In 2019 we are progressing the program as we move from the pilot phase. This year we have seen program stakeholder Deloitte firm their support and become an official P-TECH Partner, with Engineers Australia and Curtin University becoming stakeholders.

Madeleine *Smith*



As the College bids farewell to its 2018 Year 12 students, it is to reflect on the outstanding achievements of one of these students – Madeleine Smith.

Madeleine joined the College in Year 9 and over the past 4 years she has fully immersed herself in College life, embracing all opportunities

that have come her way. She has been on numerous camps – the Science and Engineering camp at Curtin University at the end of Year 9, the CSIRO Health and Nutrition Camp in Adelaide at the end of Year 10 and Girls Academy NAIDOC leadership summit in Canberra in July this year, when she was nominated for a leadership award. She was also the recipient of a grant to develop an on-line Noongar language learning resource. Recently she was shortlisted for the SCASA "Outstanding achievement in VET award" relating to her Community Services Certificate Course. The results will be announced in January 2019.

Madeleine served the College as Head girl this year, taking her leadership duties seriously. She performed official roles at assemblies and special events and worked with the Student Council to organise activities such as the Ball, fundraisers, NAIDOC celebrations and lunch-time netball matches. Her leadership and teamwork skills were recognised when she was awarded with the Long Tan Leadership award at the Year 12 presentation.

Madeleine has also consistently applied herself to her studies and has achieved outstanding results, achieving A Grades in virtually all her subjects throughout Year 12. In previous years, when her grades were not so high, she applied herself with great effort and determination to improve her results, attending Follow the Dream after school virtually every day for 4 years. Madeleine is a wonderful role model to younger students, always guiding and encouraging them with their learning.

Madeleine's service to the local and broader community has also been exceptional and she has particularly made an impact on sharing her Noongar culture and language. She developed her Noongar language skills through attending weekly lessons with local Elder, Miranda Hansen, and through doing her school-based traineeship at Brookman Primary School, also with Miranda. Madeleine has planned and delivered Noongar language lessons at local primary schools, including Kelmscott Primary School, Carey Baptist College and Challis Community Primary School. She attended the Noongar Homework Club at Challis on a weekly basis over 2 terms when she taught Noongar, helped the children with their homework and helped prepare for a week of NAIDOC celebrations. She has also delivered Noongar lessons to students attending Follow the Dream and has delivered the Acknowledgement of Country on numerous occasions at College events.

Of particular significance is the contribution Madeleine has made to Tjuntjuntjarra Remote Community School. Madeleine has visited the school three times, first of all attending the STEM Camp, along with 11 other College students in September 2017. She returned in May 2018, this visit being designed to serve the community, which Madeleine did in an exemplary way. She helped in the classroom and, also led the upper school students in a project to create an iMovie to demonstrate to the community how to look after the new houses that they were on the brink of being given. Her ability to connect with the students and to lead them as well as the quality of the product they produced were highly impressive. Madeleine also visited in September 2018, when she took on a mentorship role for the younger students.

In the few weeks since leaving graduating, Madeleine has not wasted any time in embracing life. She is working as an AIEO at Makybe Rise Primary School, she is enrolled in the Department of Education's Noongar language learning course and she is also undertaking a Cert IV in Special Needs Education. Next year Madeleine is planning to go to university to study Primary Education and she will be back at Cecil Andrews College as a Follow the Dream tutor. There's no stopping her!

P-Tech Partner Engagement

Principal Stella Jinman was joined by senior staff, teachers and students on a full day excursion visiting the workplaces of the Southern Perth P-TECH Program Partners Austal, Cvmec, Datacom and Thales. Beginning the day in Henderson at Cvmec, the group were provided a safety and company briefing then with their PPE on toured Cvmec's steel workshops.

While difficult to hear at times with earplugs in, the group were shown the stages of the Optus (Perth) Stadium footbridge currently under construction. The large sections of the bridge were at the different stages of the build from component assembly to the paint workshops.

Concluding at Cvmec, the tour moved on to Austal where the group were taken on a tour of the very large sheds where the construction of the 109m Ferry was being constructed. Our tour continued then into the city and into the offices of Thales in West Leederville. Thales demonstrated their software created here in Perth which is now used around the world by the US, UK and Australian defence forces. Concluding the tour with a site visit at Datacom, the group were intrigued by the live mapping of online computer threats where over 1 million computer attacks were happening around the world at just 3pm in the afternoon.

The tour was a great way to highlight to senior staff, teachers and students the possibilities and future career pathways for Cecil Andrews College through the Southern Perth P-TECH Program.

"I thought the tour was very interesting and I was intrigued by the amount of work they put into their products. My favourite site was Cvmec and Austal. You need good engineering skills to build those ships and the bridge." – Ali Alyassin, Year 11 Cert III Engineering student



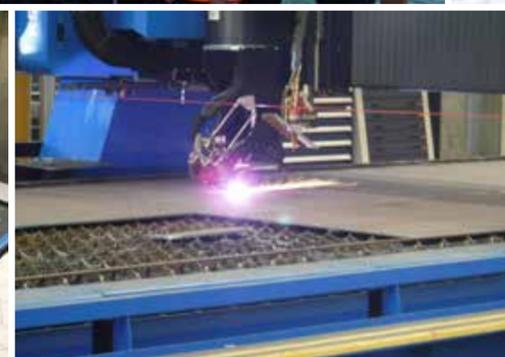
"I would like to thank the P-TECH Partners for the opportunity to experience and get a better understanding of the career pathways that students have the opportunity to pursue. The companies provided us teachers with an understanding of the roles that each company plays and what the different individual roles within their company contributes to their success. It was great to see the different engineering pathways being highlighted ranging from digital software engineering to mechanical engineering." – Amanda Lean, STEM Teacher

At the end of the year several Year 9 & 10 students were also provided the opportunity to tour P-TECH partners Austal and Cvmec plus the Australian Marine Complex in Henderson and the Construction Fund Centre in Belmont. While some students had the opportunity to climb the six story AMC floating dock, others discovered new technology being used in the construction industry.

P-TECH sessions were held for our graduating Year 12 class as they were taken through interview preparation with HR Advisors from Cvmec, Dress for Success and preparing for TAFE. Students participated in mock group interviews, provided resume and presentation advice, all providing some great guidance on how to navigate their pathway to success after College.

Year 9 students from Ms Lindorff's Work Studies class formed our first Re-Engineering Australia Subs in Schools team. P-TECH mentor, Dean from Thales, helped the students with some of the issues they faced when preparing the Mini ROV (remote operated vehicle) submarine. Congratulations to the students for our first year in the competition.

Dara O'Donoghue
VET Coordinator



Scitech Shell Nxplorers Program

The Year 8 Academic Extension class has been a part of the Scitech Shell NXplorers Program which is an international STEM program that incorporates all the skills and knowledge of all the different learning areas. Cecil Andrews College were 1 in 4 schools in Western Australia along with South Coast Baptist College, Lakelands Senior High School and Warwick Senior High School to participate in the program. The aim of the NXplorers program is to develop smart thinkers to solve tomorrow's global challenges and to be able to equip our next generation of individuals with 21st century skills that they need to access the jobs of the future.

The main question asked to students was "How can we be more sustainable with our food and energy at school?". Students worked in groups to discuss possible solutions that were practical and achievable in our school setting which evolved into different ideas being prototyped and made out of recycled materials on a smaller scale model. Some of the students came up with ideas to create a small scale recycling plant to break down food scraps to utilise on vegetable gardens and some students had the concept of increasing vegetable gardens around the school to produce fresh

produce for our students to be able to access. Students were also asked to think about the scaling the idea into a larger model and how they would go about it.

On 11th October, the students showcased their ideas and models at Scitech where Scitech and Shell Representatives as well as students' families were able to look at the students' work being exhibited. Our students presented themselves in a positive manner to the attendees and were commended on their efforts by Scitech and Shell Representatives. Due to the success of Cecil Andrew College's involvement, we have been invited to participate in next year's program with another group of students.

I would like to congratulate the Year 8 Academic Extension students for their involvement in the Scitech Shell NXplorer's program and also thank their Parents and Carers for being supportive of their involvement. I would like to also thank Scitech and Shell for having Cecil Andrews College as part of this amazing opportunity!

Amanda Lean
STEM Teacher



South of the Swan Festival

At the end of Term 2, 80 of our Specialist Dance students from Years 7 to 12 performed at the annual South of the Swan Dance Festival at the Octagon Theatre UWA. We presented 8 dance pieces from a wide range of genres such as Hip Hop, Jazz and Contemporary with choreography by Anjali Bhogal, Hanna Maciejewski, Sheldon Elliot and Peter Fares.

The students through Semester One worked very hard to develop and improve their technique and skills in the two genres. They worked on specific execution of movement, deep meaning of intension in relation to performance and presentation and clarity in musicality. All 8 dance pieces were costumed and given the necessary staging and lighting to bring the choreographers vision to the stage. The students

arrived at the theatre at 12pm to do a dress rehearsal of all the pieces. Students engage in real theatre processes outside of the college with professional theatre staff.

The dancers performed their pieces with integrity and passion and worked as a team to bring the best performance they could to all their parents, family and friends. A parent from Rockingham Senior High School contacted the school about how amazing our students performed. A quote from her email "It was a fantastic night and I felt I needed to let you know how amazing your students were". This is a great achievement to have another parent from another school give us such great feedback is amazing.

Peter Fares
Specialist Performing Arts Program Coordinator



Student Sporting Achievements

On the 4th of March, Year 11 student Katie Burrow, participated in the National Dragon Boat Racing Competition on the Sunshine Coast, Queensland. Her Western Australian team placed 2nd in the Junior U/18 Ladies Division.

Katie trains for the Lakers at the Champion Lakes Regatta Centre. Anyone interested or wanting further information can to the clubs website at www.dragonboatingwa.asn.au/the-lakers-from-champion-lakes-boating-club/

Year 10 student, Georgia Butler has also been selected for the under 16 Youth Women's Baseball Team.

Year 10 student, Elizabeth Pau'u has also been selected for the under 16 State Rugby Team.

On the 19th of October, a group of students competed in the Interschool Athletics Carnival at the WA Athletics Stadium. Cecil Andrews College finished 4th overall and took home the Meritorious Award. Patricia Hansen came 3rd in the Year 8 Champion Girl Award and Jordan Douglas won the Year 8 Champion Boy Award.

Nathan Squires
Head of Health & Physical Education





Young Innovator of the Year

The Innovator of the Year and Just Start It programs have formed a collaboration to identify a Young Innovator of the Year Award recipient. Teams participating in the Just Start It Program have the opportunity to apply for the Young Innovator of the Year.

The WA Innovator of the Year program is an initiative of the State Government's New Industries Fund, which aims to enable SMEs to develop greater opportunities to commercialise their ideas and innovations and expand to create new jobs. The IOTY program has showcased innovative and entrepreneurial individuals, businesses and creative minds since 2006.

The Cecil Andrews College PLASTIGO Team successfully pitched for this award in August and has been announced as 1 of the finalists.



It's an extraordinary achievement and speaks volumes about Plastigo's perseverance, team work and tenacity with such a ground breaking solution to a global problem!

Darren Lomman from Greenbatch is recycling PET drink bottles into 3D Printer filament here in Perth and has underwritten PLASTIGO to work with Greenbatch. Darren is an Australian of the Year Honour Role and multiple Engineering and Business Awards winner.

More info at www.cacollegestem.org/entrepreneurship

John Townley

Teacher in Charge, Technologies



FIRST Lego League Tournament

A total of 35 teams from 22 different schools showcased their Lego robots at a science event like no other for a day of fun, camaraderie, learning, and problem solving. On November 4 the Armadale Robotics Club and Cecil Andrews College Robotics Club 'The Wilder Wolves' hosted the Seville Grove FIRST Lego League 2018 Into Orbit Regional tournament. The competition required teams of students from Years 4 to 11, to build and code a Lego robot in three months that has the ability to complete very challenging missions during a robot game.

For Inspiration and Recognition of Science and Technology (FIRST) offers sports based robotics programs and competitions with regional, national and international levels for children from Year one to Year 12. Founded in 1998, the league now has close to 300,000 students competing in 80 countries.

Cecil Andrews College Technologies teacher, John Townley, said the event was one of three tournaments with Comet Bay in Secret Harbour and St Stephens in Carramar also hosting events. *"FIRST Lego League requires children aged nine to 16 in teams of two to 10 to design, build and code a Lego robot in three months,"* he said. *"The robot then has to complete very challenging missions in an annually changing game on field tables."*

Mr Townley said each team scored points and was judged on their robotic design, soft skills and values and a STEM presentation, which identified a real problem from the year's theme and their innovative solution to solve it.

Congratulations to Gwynne Park Primary School, Greenwood College and Clifton Hills Primary School, which have all advanced to the next round in the tournament!

John Townley

Teacher in Charge, Technologies



Work Experience Highlights

Cecil Andrews College runs a (ADWPL) Workplace Learning program, which is invaluable in helping students to develop the many skills they need for employment. The opportunities employers make available provides a far greater awareness of the transition from school to the working world, giving student's firsthand experience and insights into industries which they hope to develop career pathways and make informed decisions about their future.

Student in Years 10 through 12 have the opportunity to go out into the community and apply their knowledge and skills. Some are required to do this as part of a TAFE qualification requirement and others choose to opt in so they can test the waters of a career they think they may like. Eighty Year 10 students participated in the end of Year work experience program. Throughout the Year 15 Year 11 and 12 students went out into industry. Bianca Rainsford was outstanding at her child care placement and gained employment at the end of Year 12.

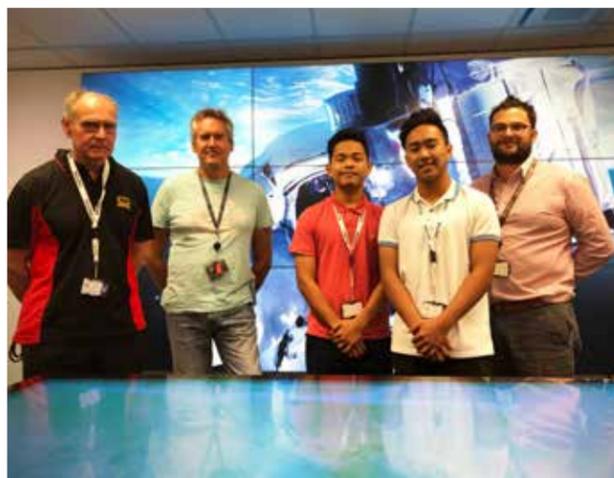
Stronger links with our P-TECH partners have been building and this year Thales hosted two Year 10 students at their West Leederville site for the two week block at the end of term 4. Nathaniel Enato and Exequiel Cancisio enjoyed their time in the office learning about new technologies and how to apply their IT skills. Kenneth Knowler (Year 11) was able to take up the chance to work at Thales' site in Rockingham where he worked in the workshops and witnessed the hull repair process for a submarine. CIVMEC also hosted Ella Quinlan (Year 10) in the office to give her a

taste of the engineering industry she wants to pursue a career in and they commented that she was very interested in the work assigned to her.

The local primary schools have always been extremely supportive of our students and this year was no different. Josh Heil (Year 11) worked at Challis Community Primary School one day a week for terms 3 and 4 as part of the requirements of his Certificate III in Education Support qualification. Challis also hosted two Year 10 students (Eliza and Georgia) at the end of term 4 and reported back that they both interacted well with students well and were working at a high standard. Other students at Nerrigen Brook, Gwynne Park and Kingsley also performed to a high standard and formed very positive relationships.

A major interest area for the Year 10s was the Automotive Industry. There were 16 students who secured placements at automotive workshops. They all represented the school extremely well and there were many reports of 'best student ever'. Another industry that is always very supportive is the retail Industry. These placements often lead to casual employment and are very supportive of students who are just learning workplace behaviours and expectations. Our STEM partner Scitech also engaged 2 students in their programs and Meleane and Comfort assisted with the STEM focused primary school excursions and exhibits.

Overall it was an extremely successful year for students going out on placements and all of them should be congratulated for their dedication and commitment to learning new skills and developing themselves.



Vocational Education and Training

This year the school nominated 2 students for Awards for Outstanding Achievement in VET. Students eligible for this School Curriculum and Standards Authority (SCSA) award had to have completed a nationally recognised VET qualification to a minimum of AQF level II, by the end of Year 12. They were also required to have completed at least two unit equivalents of workplace learning in Year 12. The workplace learning needs to be undertaken in an industry area that is related to the VET qualification. Both students were shortlisted for interview, an honour in itself. Both students prepared well for the interviews and reported feeling confident afterwards.

Madeleine Smith is a passionate, dedicated and exemplary VET student who has excelled in her on and off-the-job experiences in the area of Community Services. She completed an Aboriginal School Based Traineeship in Community Services throughout 2017 and 2018. Her long term goal is to become a Primary teacher, specialising in Noongar language. The majority of her workplace was at Brookman Primary School with the Noongar teacher, Merindah Hansen but towards the end moved to Maykbe Rise Primary School to develop her skills with the promise of AIEO work after she completed Year 12. Madeleine has been a dedicated VET student with the ability to demonstrate the workplace expectations and she sought every opportunity to contribute to her community in many

ways and she has shown herself to be an exemplary citizen and student.

Kayla Roemer-Hanisch is an outstanding and widely respected student in the Cecil Andrews College community. Her teachers, trainers and workplace supervisors all acknowledged her accomplishments in both the classroom and workplace. She demonstrated strong competence in her chosen vocational studies as well as core workplace skills. The diversity of her experiences means that she was able to transfer skills for various contexts to ensure she was always growing, learning and achieving. Kayla's knowledge, versatility, enthusiasm and skill level were an asset in both on and off-the-job experiences in the area of Engineering. Kayla started Year 11 with an ATAR focused program along with the Certificate III in Engineering – Technical. She very quickly identified that the VET qualification fitted her passions and ambitions and suited her learning style much better. She changed out of the ATAR pathway to focus on her vocational studies and hasn't looked back since. She has been a dedicated VET student with the ability to demonstrate the workplace expectations of having the right attitude and mindset, matched with the ability to learn and pursue further education and skills training for success.

Dara O'Donoghue
VET Coordinator





Achieving excellence together

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