



THIRD- QUARTER REPORT 2021 (Q3)

CoRE Learning Foundation



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EXECUTIVE SUMMARY



- Nine schools were visited throughout the Pilbara, Wheatbelt, Goldfields and Perth Metro.
- Six field trips were explored from Yingawangka Country in the Pilbara to Ramelius' new Tampia Gold mine and as far east as Balladonia for some SkyLab information.
- Two CoRE Resource Challenges. The Ashburton School Alliance (ASA) held their second challenge, and Kent Street it's eighth. Overall, **450 primary students** were exposed to some creative, open pit and underground mining challenges, respectively.
- Norseman Primary 5/6 CoRE was officially launched.
- Three CoRE schools attended our Sky Sponsor - Chevron's LNG Exploration Day at Perth Arena.
- Our Eucalypt Sponsor - IGO, supported two Norseman CoRE- IGO Graduate days
- New Eucalypt Sponsor - Ramelius Resources' Mark Zeptner (Managing Director) and Claire Weeber (Communications and Admin Manager) visited Merredin College spending time with students discussing their work and their CoRE learning experience.
- Paraburdoo CoRE opened their new COMM Center for CoRE STEAM Learning for their K-6 students.
- Kent Street CoRE's senior ANSTO team was awarded second place in this national Science Week Hackathon.
- Kent Street CoRE maintained their Pedal Prix tradition and entered two teams in the WA Human Powered Vehicle Event in Bunbury.
- The CLF-MCA-BHP Gamification Initiative Pilot Program was officially launched during National Skills Week on August 23, 2021. 70 schools nationally registered their interest, and currently, 46% are engaged in the pilot.
- Sponsorship agreements are being finalised with Perenti (Eucalypt Sponsor) and AROSE (Ochre Sponsor)
- Three new CoRE Management Committee members joined the team.



CoRE Purpose - Learning Results

The two paragraphs below have come from one of our Year 8 CoRE students. The first is from their first end of project evaluation, and the second is from their most recent project evaluation. The student started their CoRE journey this year, and communication has been a struggle for them. The student wanted to leave at the end of their first project but stayed.

Here are the results:

Individual Evaluation PBL#1:

"For me, I felt like CoRE was a very good specialist program, but I also have a few reasons why I don't think I could be in CoRE. CoRE is considered a specialist program, which I do not think I am prepared for, as it was a little overwhelming, and I couldn't socialise a lot with other students, which was a problem for me in doing and understanding the tasks. I do not think I am smart enough to do this specialist program, and my career in life isn't related to what was taught in CoRE. I have not interacted with other students before and have no connection with anyone, as I am mostly left out. I don't think that working in groups with other children is really what helps me. I like to work individually on my tasks because I am the one responsible for it, and I can do it the way I want unless I get to be in a group of people whom I know and I have worked before."

Individual Evaluation PBL#2:

"CoRE has done me many favours outside school or inside school socially. CoRE has made us mingle and get to know people we never have, and later comfortable working with so we can achieve a high grade, and imply things that would help us get ourselves a successful career and not like other classes, teaching us things we might not want to or not need to learn. This teaches us about the economy and topics that will help us do well in the future. **CoRE** is all about socialising and achieving things to benefit our lives with scientific, biological and interesting subjects that prepare us. I see **CoRE** better than a normal curriculum's science class, as it teaches us things that will occur in the real world, and as well as other information that is made interesting."

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CoRE Schools- Resource Challenge



Building an Open Pit



Buidling an Underground Tunnel



Gold Panning with WASM Wallabies



CoRE Resource Challenges are a favourite! Originally developed at the Lighthouse School - Kent Street in 2013, the day event truly has a Carnivale atmosphere. This quarter, two Resource Challenges were held, exposing 450 primary students to mining. The buzz is electric as the primary students enter the hall and begin gearing up into their high vis, hard hats, safety glasses, and gloves!

In the Pilbara, the ASA CoRE Resource Challenge comprised six competing primary teams. A new design contextually reflecting the iron ore value chain utilised the open pit to port theme. Rio Tinto personnel judged the event.

It was Kent Streets eighth challenge and one eagerly supported by Perenti judges. Thirteen teams from six feeder schools engaged in the underground mine and ore processing Challenge. CoRE Alumni (Class of 2012) and hydrogeologist Amy Carlino provided an engaging keynote address at the opening ceremony. The WASM Wallabies spent the day entertaining the students with their rock and mineral display and gold panning activity.

The Challenge is competitive. Judging criteria is based on STEM technical and enterprising skills, including safety and ESG. For the ASA Challenge, the day ended in a draw for a Paraburdoo and Tom Price Primary teams, and at Kent Street, the Carlisle Primary Team were victorious. Individual awards were presented to the best miners from the primary school teams and to the Top Mine Managers for the secondary school mentors. These individual awards were, once again, based on STEM skill [#therealclassroom](#) display.

CoRE Schools- The Field Trips

On the Totadgin Wave!



#therealclassroom is a favourite with students, and during this quarter, Merredin CoRE's Year 5 students experienced their second field trip to Totadgin Rock. What a difference from their first! Stella even brought along her rock and mineral identification book to cross-reference the granitic minerals she was observing. Young scientists at work actively collected data from the gnamma ecosystems, atmospheric conditions and measurements of the pegmatitic dykes which intrude the granite. The students confidently carried their iPads, taking and labelling photos and recording notes.

The Classic Pinnacles



The Kent Street Year 10 Turquoise Coast field trip is designed to examine evidence of past natural climate change effects. Evidence is reflected in the biodiversity across two hills, the analysis of wave-cut platforms and the remnant beaches at Mt Leseur National Park. Additional sites examined the ancient karst landscape and Lake Thetis thrombolites at Nambung National Park. A session at Gin Gin's Gravity Discovery Center was a great end to the trip, and from all accounts, this trip was devoid of ticks, a hazard of past ones.

Archaean basaltic pillow lava



The Year 6 Paraburdoo students experienced their first field trip to Yingawangka Country. It was a warm day, the resilience of the students was admirable. From camel trekking, bush medicine to natural springs, Aboriginal petroglyphs and pillow lava basalt flows, this diversity of 'science in the world around us' perfectly sets the scene for their future CoRE learning.

CoRE Schools- The Field Trips

Wildflower Adaptations at Buldania Rocks



Norseman Primary CoRE was officially launched this quarter. It was fantastic to witness - new CoRE educator Rob Hayes organise and run his first field trip to Buldania Rocks. Students are studying Gondwana Link Wildflower Adaptations, and what a great season to have this experience. MOR (Measure, Observe, Record) was taken to a new level, with several expected observations and measurements required by each student as part of their subsequent field trip report.

Wave Rocks Wave!



After its COVID rescheduling, the Joseph Banks Year 8 Wheatbelt CoRE field trip got underway. The importance of water in the Wheatbelt and Goldfields, a visit to Ramelius Resources' new Gold Mine at Tampia and a study of the Wheatbelts iconic granitic 'waved' rocks were the trip's focus. Tampia is a mine with a difference. Only 5m deep, this very new mine is set in a green wheat field! During the three information sessions, the students asked great questions, which enthralled the mine manager and senior mine geologist. The day was windy, to say the least, with more than a few hard hats flying off heads at the lookout!

Fire on Top' Bushfire Regeneration, Eyre Highway



Four IGO graduates accompanied the Norseman 7/8/9 CoRE students on their 'Fire within, Fire on Top, Fire from the Sky' field trip to Balladonia. The main objective was to visit the Balladonia museum, where SkyLab famously crashed to Earth in 1975. The other two stops examined bushfire regeneration, and at Newman Rocks, high grade metamorphic, migmatites and gneissic granites were analysed as examples of the 'Fire within' component.

CoRE Schools - Special Events

Kent Street Senior High School - CoRE's Lighthouse School

"Just regular people doing extraordinary things

A massive on and off-track effort by the Kent Street CoRE junior and senior pedal Prix teams in Bunbury this year. During the 6-hour endurance event, our junior team (9/10 CoRE) worked hard to complete a respectable 223 laps in "Rigby" whilst our senior team pushed 'Malachite' to some outstanding lap times (56.498s).

Our senior and junior team captains, Jake and Nic, worked relentlessly to prepare the two trikes with 'Malachite' undergoing a complete re-build after being generously donated to us by our 2019 team's parent community. It was great to welcome back a couple of our CoRE alumni to enjoy the smooth 'Malachite' ride!"

Kathleen Booth, CoRE Metro Champion, Kent Street CoRE

The Kent Street CoRE Senior ANSTO Hackathon team wonderfully achieved runner-up in this national competition for the second year in succession. Read below two excerpts from the Careers in STEM Magazine interview:

"The best part of the hackathon for me would have to be the experience and learning to work collaboratively with new people to solve a problem. I learnt that not everyone is going to agree about everything, and there is also a way to work around it, as well as the planning stage is just as important as the solution, " - Hailey McArthur (Year 10 CoRE)

"I love participating in this event as it brings my team closer together as we work through each step of the design think process to conquer our challenge. I learnt that empathising with the end-user is the most important part of creating a solution because this is the person we want to present our ideas too; if it doesn't suit them, then our solution doesn't mean anything." Sylvia Blakeway (Year 10 CoRE).

Two Year 10 CoRE students were awarded the top prize from this year's Get into Resources Conference. Zeke and Oliver, accompanied by their teacher, Stephanie Ludekens, spent a whole day at Sandfire's Degruessa Copper Mine, learning about and experiencing different elements of the mining value chain. By all reports, it was a gratifying and 'eye-opening' experience for the boys.





CoRE Schools - Special Events

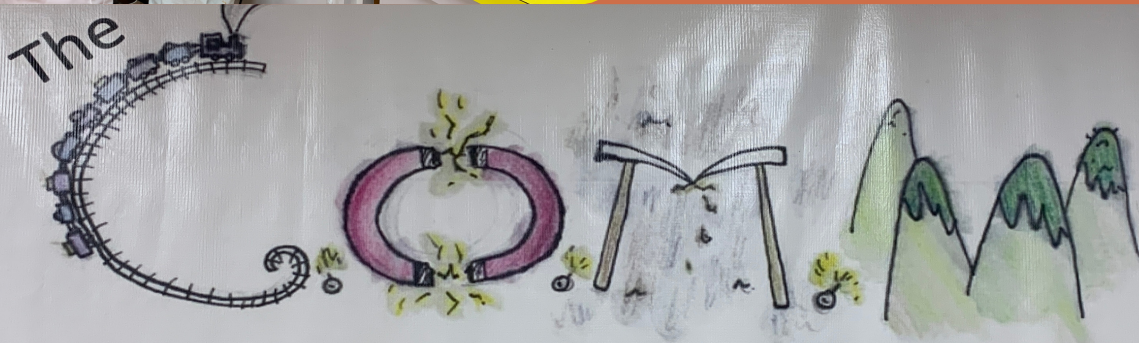


Paraburdoo CoRE

With a team of four CoRE Educators, the CoRE program at Paraburdoo has grown from strength to strength this year. Running CoRE in three classes from Years 4 - 6 inclusive, the team realised all their students required exposure to CoRE STEAM Learning. Their strategy resulted in the proposal and realisation of the COMM (Creative Open Minds and Muscles) Centre, a hands-on STEAM learning area for exploration, discovery, inquiry and construction for creative and open-minded students.

The opening night was a huge success. Just under 100 students, community and industry members and parents attended the two-hour display. From spray painting, drilling and sawing wood, microscopic analysis of rocks and insects and robotics, all members gave it a go.

Creating an atmosphere of success for its CoRE students, the brightly decorated room showcased students' CoRE Project work and inspirational scientific and STEM posters. The learning space utilises a previously redundant high school laboratory. Now it has **#therealclassroom**, **#thefutureclassroom** and **#STEMLearning** purpose!



Centre
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GAMIFICATION INITIATIVE

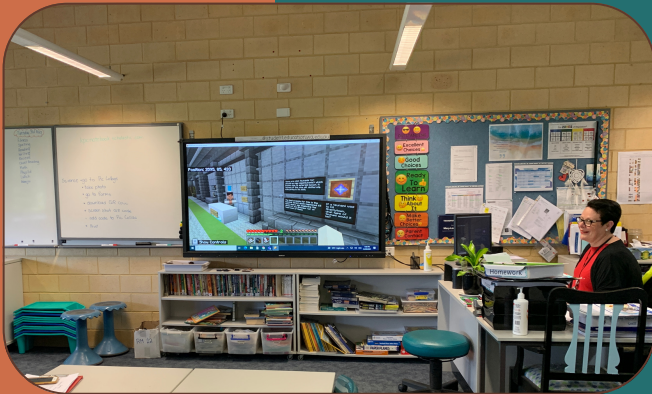
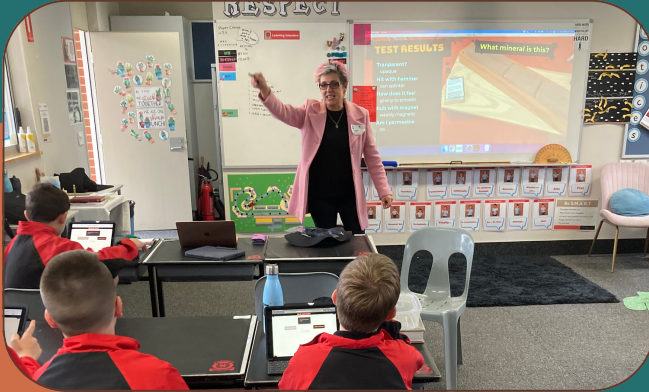
The Gamification Initiative Pilot Program launched nationally during National Skills Week, August 23, 2021. Seventy schools from across the nation registered, and to date, 46% have started the process.

The pilot is underpinned by an Educator Support Platform (ESP) which CoRE directs. For the schools in Western Australia, it is easy to have face to face tuition, as was the case for Aquinas College and Riverton Primary School. At CoRE's Merredin College, the CoRE Lead had the opportunity to integrate the games into the learning sequence. It proved to be a learning experience for all involved, highlighting how the CoRE curriculum integrated games differently from standard ones.

Firstly, the games have been designed for students to work in teams, and then each team collaborates to develop a class strategy and outcome. This alone challenged many! No pressing buttons straight away; first, it's time to discuss and plan. A significant mindset change, especially for the boys! Meaningful communication and negotiation are required before the technical skill is engaged. This was most apparent for the Old as Dirt Game. It was good to see how some students led the strategy discussion and then provided the class with the forward-moving plan.

Secondly, especially for the Minecraft RRR game, the first directive was having the students work in teams, each with a time limit. Then introducing the camera, folio and journal as a tool to gather information proved a time-consuming objective to achieve. However, after an hour, students worked in teams, collected their data, and solved the best mitigation strategies for the earthquake scenario. Converting the folio and journal into PDFs for assessment, which the students emailed to the CoRE Lead, supported the competitive edge and sense of accomplishment.

Three virtual ESP sessions have enabled educators to understand better how to use the games as part of their lesson plans. This aspect sets them on their way!





The CoRE Management Committee



In July, three new members joined the committee:

- Emily Farr - CoRE Alumni 2019 and Geology Student Curtin University. Emily holds the CoRE Alumni Lead and CoRE Events Officer positions.
- Sarah Brinkman- Contracts Supervisor at Golden Grove. Sarah holds the positions of CMC Secretary and Sponsorships Grants officer.
- Dianne Rogers - Education SCSA, WA. Dianne has the roles of CoRE Social Media and CoRE Grants Officers.



The Perth Gem and Mineral Show kindly donated CoRE a booth. Positioned in a prime location, Emily's coordination, planning and design drew large crowds particularly, the children. Kathleen Booth supported Emily's design, and Kent Street CoRE provided the display materials, including the much loved and engaging 'sieving for Coolgardie, WA Emeralds.' From all reports, the children were very involved and got to keep the emeralds they successfully separated from the biotite schist!



The rock and mineral identification competition were also very popular. An Eastwing Geology pick as the prize proved very attractive. Clues were located in the numerous CoRE student field trip books on display. CoRE Alumni volunteered to support CMC members operating the booth, and their ambassadorship for the program enthralled many students, particularly those who are homeschooled.



"It was great to see the number of families and who came along. A large community turned out, and it was great to give back. Many homeschooled kids got exposed to the CoRE model and learned a little more about Geology and STEM. Plenty of community support for the work CoRE is doing – brilliant". **Chalida Pascoe**



Collaborating with CoRE Sponsors



Chevron

Since 2013, Kent Street CoRE has been an integral participant in Chevron's Powering Careers in Energy - LNG Discovery Day. For the first time this year, the CoRE Expansion Program has enabled two other CoRE schools to attend and, more importantly, the regional schools of Tom Price SHS CoRE and Merredin CoRE.



The LNG Exploration Day compliments the PCiE program and engages all of its students from around the state in a series of LNG based activities. The most significant activities engage the students in a career networking session followed by a mock interview experience. Chevron employees from across the business interact with students, sharing their career roles and descriptions and then mentor them through an interview process. It's a big day but one where students are exposed to a real-world **#therealclassroom** experience.

IGO Graduate Days



Two IGO Graduate Days had seven graduates tutoring Norseman CoRE year 5 - 9 students. The first session was held at the school, and graduates supported the students through their Natural Acid Lake Formation investigation. Data Literacy involving tables, graphs and excel was the focus. Gillian, IGO's Exploration Geologist, displayed some fantastic Nova underground ore and country rock specimens. Students marvelled at the colour and density of the rock samples.



Four graduates were involved in the Balladonia Field Trip to gather data for the student's 'Fire within, Fire on Top and Fire from the Sky' PBL. Out in the field, the graduates assisted by students interpreting the information boards at the museum, dissecting the data and identifying the relevant and essential pieces of information and engaging in conversation to share their career descriptions. The graduates also learned about bushfire regeneration and ecosystems and the Albany Fraser high grade metamorphic and igneous rocks!



Collaborating with CoRE Sponsors

Ramelius Resources - Merredin CoRE Visit



Mark Zeptner MD and Claire Weeber, Communications and Admin Manager from Ramelius Resources, spent the morning at Merredin College talking to primary and secondary students as they worked through their CoRE Learning PBLs. A round table discussion with a Q&A session was also held with a selected group of students to understand better how the CoRE Learning Model benefits students' education, particularly for Merredin's agriculturally based students. A video showcasing the new Tampia Gold's prompted Kurtis (Year 8) to share the revelation of gold in Merredin!



The conversation was interactive, with students telling Mark and Claire about their parents/grandparents employment with Ramelius at Edna May. The discussion ended with jobs, community support, and the disused rail lines and Ramelius' vision for the region.

Ramelius Resources - Joseph Banks Wheatbelt Field Trip



A highlight of the Joseph Banks Year 8 CoRE field trip was their visit to Ramelius' very new Tampia Gold Mine. Seeing a gold mine in a green wheatfield was a first and unique experience for myself and Katrina. The mine manager and senior mine geologist provided two internal information sessions. The questions asked by the students were high level, referring to mining, where the ore goes and where the workers live. Most of the conversation revolved around the community and their sporting clubs and other groups who farm the surrounding land as a source of income supporting their cause(s).

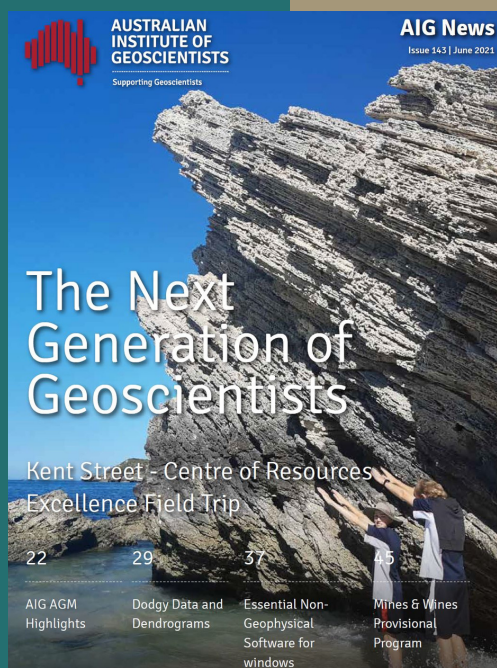


It was such a windy day! Standing at the lookout saw several hard hats roll across the mine road. Nevertheless, it was great to see the machinery in action. Once again, the students asked many questions about their observations, including the drill holes, the drill rigs, benches and the different types of digging machines used to move the dirt—an excellent **#therealclassroom** experience.



Collaborating with CoRE Sponsors

AIG - The Australian Institute of Geoscientists



The AIG had supported the development of the CoRE Learning Model and its **#therealclassroom** ethos since 2006 when the first field trip was experienced. Their consistent contributions have enabled some 60 plus field trips for Kent Street CoRE. Inspired by the field trip experience, several CoRE students proceeded to pursue careers in the resources sector. The field trips are a reinforcing attribute that enables students to see how their STEM learning applies to the real world. Furthermore, as students progress through their CoRE Learning into upper school, they experience several mine site visits. Underpinned by an evolving CoRE Learning Model Program over six years, this learning combination is a fundamental and impactful determinant that guides them into the industry.

The AIG WA Branch supports the six field trips annually (for years 7 - 12) for Kent Street CoRE.

The Earth and Environmental Science (EES) Scholarship



The EES Scholarship provided by former AIG WA Committee Member - Marcus Harris was established to support students in their upper school education. It is awarded to a Year 10 student who demonstrates the passion and desire for a resources career. It is the tenth year of the scholarship, and many of its past recipients are now successfully working in the industry.

This year it was too difficult to split, awarding it jointly to Sylvia Blakeway and Kate Bozich. Both students will complete their fourth year of CoRE and have been industrious and stand-out CoRE students. Sylvia and Kate have not hesitated to support the CoRE Learning Foundation. Excellent ambassadors for the program; they are often present at the Industry showcases. Congratulations.



CoRE Sponsors



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