



## CAREER CAFES LINK CURRICULUM TO INDUSTRY

While most schools are winding down during the last few days of first term, four Gladstone high schools used this time to educate their students about careers in the resources sector.

Chanel College, Toolooa, Tannum Sands and Gladstone state high schools all hosted QMEA Career Cafes, which saw a number of industry experts come in to the classrooms and discuss how the national curriculum lessons apply in the working world.

QGC Lab Analyst Kieran Pierce spoke to close to 450 students over three days of visits to QMEA's LNG schools. Kieran, whose personal and professional story entertained both students and teachers, showed his audience how a career in science and the resource sector can take you across the world.

Toolooa State High School was twice as busy in its last week, with the school hosting two QMEA Career Cafes. As well as hearing from QGC's Kieran Pierce, AP LNG Environmental Supervisor Jamie Reilly generously gave up his morning to speak with year 7 students. Their young eager minds worked with Jamie on a series of water testing activities and learnt more about the environmental side of the LNG operations.

Fourth-year mechanical engineering student Palisa Huoth visited year 11 and 12 engineering technology students at Gladstone State High School and spoke about her experience since starting her degree, as well as her time being a student at the school herself.

The QMEA is pleased to have delivered another round of successful career cafes for enthusiastic students at its participating schools.

For details of upcoming career cafes, see our [calendar](#).

For more photos from the career cafes, head to our [Facebook page](#).

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## **A MINT OPPORTUNITY FOR STUDENTS**

Seventeen lucky high school students were offered a new and exciting opportunity during the Easter School Holidays as they participated in the new QMEA 'Make it Now in Trades' (MINT) Challenge with BMA in Dysart.

The students were invited to pursue their interest in a trade career through a week-long program of challenges and activities aimed at developing a range of trade skills, as well as a workplace health and safety induction, networking opportunities and site visits in the area.

The students worked collaboratively with trainers from BMA to identify problems and then propose, design and construct solutions to industry standards as they completed four days of intensive trade training. They then put their knowledge in to practice to design and construct a motorised bicycle to industry standards. Using a variety of basic trade skills including welding, mechanics, basic electrics and operational maintenance, the students ensured their bike designs were in good working order before being tested for performance.

Participating students were from Dysart State High School, Moranbah State High School, Emerald State High School, Pioneer State High School, Middlemount State High School, Kirwan State High School and Tannum Sands State High School.

These students will also complete a Certificate II in Resources and Infrastructure Work Preparation (RIWP) this year through a new flexible mode using online resources developed in partnership with the School of Distance Education.

## **ONLINE RESOURCES REFRESH QUALIFICATION DELIVERY**

QMEA schools across Queensland are engaging with industry to deliver entry level qualifications and ensure pathways into the minerals and energy sector are available for young people.

In a partnership with the Central Queensland Institute of TAFE (CQIT) Mining Faculty, approximately 200 students from Dysart, Moranbah, Rockhampton, Mackay, Townsville, and a number schools linked to MINT Camps and Challenges, will complete a Certificate II in Resources and Infrastructure Workplace Practices (RIWP) qualification this year. Partnerships such as this are essential in ensuring the next generation of trades people are work ready.

The training includes completion of a range of modules which cover skills such as risk assessments, use of hand and power tools and basic operational maintenance tasks, all of which are highly valued by resources sector companies.

A new set of resources for delivery of the Certificate II in Resources and Infrastructure Work Preparation (RII20109) are presently being trialled through the use of online course materials developed by the QMEA and School of Distance Education. These resources will be used to deliver the qualification through schools and trade training centres across the state and are now linked to the QMEA MINT Camps.







## NEW INNOVATION A DRAWCARD FOR FUTURE MINERS

Teachers and students from QMEA schools now have a better understanding of innovative practice in industry following their participation in a recent webinar series. It offered participants the opportunity to engage with young engineers and research scientists, to increase industry awareness and showcase innovative research.

Chanel College teacher Nadia Shahgholi said the webinars were a fabulous opportunity to enhance classroom delivery of chemistry concepts with examples of innovative applications from industry. As many of Nadia's students will eventually have careers in science and engineering in the resources sector, she felt the webinar was the perfect opportunity to make links with industry.

Two of the webinars featured presentations from CSIRO researchers who shared insights into their work. CSIRO researcher Aaron Stewart presented on insect prospectors, which is the use of termite mounds in mineral exploration. Participants also heard from Stephen Northey who spoke about process evaluation and environmental assessment of mining-related processes.

Spinifex State College student Beatrice Urbuda, who has a goal to become a geologist or geotechnical engineer in the mining industry, said that she never knew the diverse range of geology related research that gave rise to ore body identification. Beatrice added that the opportunity to participate in the webinar meant that she could find out what is happening around the state without leaving Mount Isa.

Participating students and teachers were from Blackwater, Brisbane, Gladstone, Mackay, Moranbah, Mount Isa, Rockhampton and Townsville. The webinar series is an initiative of the QMEA teacher professional development and ambassador programs.



## STAR STUDENTS MEET THE CHALLENGE OF SCIENCE IN MINING

High achieving year 10 students from North Rockhampton, Rockhampton, Yeppoon and Toolooa state high schools recently worked through a series of challenges designed to provide students with a greater understanding of science perspectives in the resources sector.

The 25 top performing science, technology, engineering and mathematics (STEM) students from QMEA schools worked alongside industry reps from Wesfarmers Curragh and Central Queensland University (CQU) at the QMEA Science Olympiad workshop in Rockhampton.

Dean Evans, a Curragh Graduate Program Process Engineer, worked side by side with students investigating the exploration, extraction and rehabilitation phases of the mining process.





Students learnt about ore body formations and the role of an exploration geologists. They analysed core samples and drill core data to determine where a particular ore body was located. A decision related to the economic viability of mining was justified when students presented their finding.

Students also modelled extraction, trialling two methods of chemical processing and determining efficiency of the procedures based on yield.

Ambassadors from CQU helped guide the students through each of their challenges and offered advice on transitioning from senior schooling to first year uni life and studying engineering in particular.

Finally, students completed a 'reshaping the land' activity to simulate the considerations required during mine rehabilitation. Wesfarmers Curragh Environmental Superintendent Nicola Mylne provided expert advice regarding how to reshape a spoil pile into a rehabilitation slope and calculate the cost of restoring this section of land.

QMEA would like to thank Wesfarmers Curragh and CQU for their support of the QMEA Science Olympiad.

For more photos, head to our [Facebook page](#).

## PATHWAY PAVED FOR RESOURCE SECTOR BOUND STUDENTS

Thirty Brisbane students are more aware of pathways into resources sector careers following a recent QMEA Science Olympiad workshop.

The year 10 students from Alexandra Hills, Corinda, Dakabin and Wavell state high schools, participated in a series of activities designed to engage their interest further in geology, environmental science, engineering and mechatronics career paths.

The students heard from industry professionals about their role and career progression, before working under the guidance of industry mentors to solve challenging problems related to geology, environment or engineering.

Hosted by Queensland University of Technology (QUT), the students had an opportunity to explore hands-on activities at The Cube at QUT, while also engaging with QMEA science, technology, engineering and mathematics (STEM) ambassadors.

Alexandra Hills State High School teacher Robyn Flexman said that the opportunity to engage with tertiary students and young industry professionals is important for the students involved, as it can indicate future career pathways.

The QMEA Science Olympiad is a program for QMEA professional pathway students. For upcoming workshops, see our [calendar](#).







## STUDENTS OPEN THE TOOLKIT TO CAREER OPTIONS

A career in trades will be one step closer for more than 150 Queensland students following their participation in the upcoming QMEA 'Toolkit for School Kids' program.

Students from QMEA and invited Education Queensland schools will take part in the program which will be presented in a number of regional centres throughout terms two and three this year.

These day-long events will see students engaging with industry mentors to complete a number of hands-on activities designed to make them more aware of the range of career options available in the electrical, fabrication, mechanical and operator trade areas.

Supported by mentors from a wide range of companies, the students will complete a range of tasks and engage with professionals and trades people who will share their knowledge and experience.

Students will also learn more about the minerals and energy industry and underground mine environment as they take a tour of the Lennon Training facilities in Emerald and Moranbah, and Mynestart training centres in Mackay and Brisbane.

Students from the following schools will participate in the QMEA 'Toolkit for School Kids' program:

Alexandra Hills State High School, Anglican Church Grammar School, Biloela State High School, Blackwater State High School, Bundamba State Secondary College, Capella State School, Clermont State School, Dysart State High School, Emerald State High School, Mackay State High School, Mackay North State High School, Middlemount Community College, Mirani State High School, Monto State High School, Moranbah State High School, Mount Morgan State High School, Moura State High School, Nanango State High School, Pioneer State High School, Sandgate SHS, Sarina State High School, Taroom State School, Wandoan State School, Wavell State High School.

The following companies will have representatives participate as mentors:

Anglo American, BHP Billiton Mitsubishi Alliance (BMA), Rio Tinto, Leighton Contractors, Thiess, Downer EDI, GAGAL, Glencore, Lennon's Training, Mynestart, SkillsTech, Mackay Engineering College, Dalrymple Trade Training Centre, Townville TECNQ, Miles and Central Queensland Institute of TAFE.

For more details, see our [calendar](#).

## ENTRIES NOW OPEN IN INAUGURAL EARTH AND ENVIRONMENTAL SCIENCE OLYMPIAD

Year 10 and 11 students are invited to test their knowledge of Earth and environmental science by sitting the inaugural Australian Earth and Environmental Science Olympiad Exam on 8 August.

To test students' knowledge of geology, geophysics, meteorology, oceanography, astronomy and environmental science, the two-hour exam will be held in schools on the same day across Australia.

Students who perform well in the exam will be invited to attend an intensive summer school where theory and practical skills will be further developed, before a final four-member team is chosen to compete at the International Earth Science Olympiad.

Teachers must register students in the Australian Science Olympiad exams by 16 July 2014.

Students may sit one or more of the exams in chemistry, Earth and environmental science, biology and physics. The inaugural competition is an Inspiring Australia initiative supported by the Australian Government through the Department of Industry, in partnership with Australian Science Innovation and the Australian Geoscience Council.

To find out more about this fantastic initiative, contact program director Greg McNamara via [greg.mcnamara@asi.edu.au](mailto:greg.mcnamara@asi.edu.au), or visit [www.asi.edu.au](http://www.asi.edu.au).



## WHAT OUR STUDENTS ARE SAYING

*.. 'we did a range of team building activities and tours through BMA head office, Santos, UQ and more. However my personal favourite was a guided tour through Brisbane's Stanwell Power Station'..*

To read the full story, [click here](#).

*.. 'I was asked to attend the QRC's annual IWD breakfast. This event brought many people together from all over the sector to promote gender equality in the workforce and inspire change throughout the industry'..*

To read the full story, [click here](#).

*.. 'Stephen Northey's presentation was thought-provoking and assisted me in forming ideas for my chemistry assignment about the effects that mining has in waterways ..*

To read the full story, [click here](#).

## UPCOMING EVENTS

**5 May, 2014**

Engaging Engineering Workshop, Gladstone

**8 May, 2014**

Career Cafe, Biloela

**13 May, 2014**

Science Olympiad, Townsville

**16 May, 2014**

Toolkit for School Kids, Brisbane

**22 May, 2014**

Toolkit for School Kids, Biloela

**2 June, 2014**

Applying for scholarships webinar, online

For more details, and to view all events, see our [calendar](#).