MEDIA RELEASE
25 February 2021

More information
Susan Hoerlein
Public Affairs & Communications Specialist

p (08) 9215 0733
m 0422 553 343
e susan.hoerlein@scitech.org.au

New Program Shines a Light on Maths Teaching

Maths lessons will never be the same when the new Lighthouse Maths program kicks off in Perth primary schools later this term. Empowering teachers with proven, international best-practice techniques to flip the script on classroom engagement is set to boost students' maths results.

Lighthouse Maths is an intensive, year-long professional development program that shifts teachers' confidence, attitudes and beliefs about maths teaching practise. With financial support from Chevron Australia, Scitech is pleased to introduce Lighthouse Maths to Perth teachers and facilitate a deeper understanding of maths for students.

Lighthouse Maths takes teachers beyond rote learning and explanations, to engaging their students in a daily practise of discussion, problem solving and reasoning. This unique approach to teaching is based on leading education research from universities in Australia, Canada, the USA and the UK. Teachers support students to make sense of the maths before them; to take risks, try different strategies, make connections across different topics, communicate with others, and find solutions.

Once teachers complete the program, they are able to upskill their colleagues and take a leadership role in changing the face of maths education in their school community.

Kalien Selby, Scitech Chief Executive Officer, expects the program to positively influence maths outcomes for over 800 students in the first year.

"The return on this investment is substantial, as teachers maintain their new techniques in subsequent years. From the first year alone, if all 32 participants remain in teaching roles for the following four years, we estimate to reach more than 4000 students," Ms Selby said.

Paul Clark, General Manager Asset Development, said Chevron Australia's greatest asset is the ingenuity and creativity of its people.

"We call this Human Energy, and it's how we solve some of the world's most complex energy problems," said Mr Clark.

"Chevron Australia is proud to support Scitech in powering the next generation of problem solvers through STEM education programs such as Lighthouse Maths."

Lighthouse Maths combines workshops, in-class coaching, lesson observations, reflection and assisted planning – practices that have been shown to have a high degree of impact in transforming teacher beliefs and behaviour[1,2,3].

Ms Selby said the proven methods of the program will empower teachers to develop the next generation of STEM professionals.

"By changing the behaviour and approach of our teachers, Lighthouse Maths will equip students with the STEM skills and knowledge they will need to meaningfully participate and thrive in the future of work and innovation," Ms Selby said.

MEDIA RELEASE
25 February 2021

More information
Susan Hoerlein
Public Affairs & Communications Specialist

p (08) 9215 0733
m 0422 553 343
e susan.hoerlein@scitech.org.au

The impact of Lighthouse Maths is projected to continually increase, as teachers showing aptitude for further learning and development have the opportunity to take on formal coaching roles. This multiplier effect will create a powerful change to the way maths is taught in Western Australian schools.

Editor's Notes

Mathematics is a key foundation of many future jobs however global reports show that 45% of Australia's 15-year-olds are not proficient in maths and that Australia is one of 30 countries experiencing a significant decline in maths proficiency between 2003 – 2015[4].

For the first time, in 2018 Australian students failed to exceed the OECD average for mathematics in the Program for International Student Assessment (PISA). This issue is further pronounced within Australian indigenous populations with 15-year-old aboriginal students up to 2.5 years further behind the general population in maths proficiency[5].

Research advocates for teaching methods which focus on experiential approaches to problem solving and reasoning, and that allow students to explore different strategies themselves to find solutions.

This student-centred approach to teaching provides an important means for improving student engagement, making maths more accessible to under-represented groups such as girls and students from low socio-economic backgrounds and encouraging equal access and diversity in maths participation[6].

The Lighthouse Maths program is a scaled version of the award-winning[7] Alcoa Champions of Maths program (ACoM), which has delivered a 50% increase in teacher confidence to teach problem solving[8] and a 34% increase in assessing reasoning, in participating South West schools[9].

Further, Champions of Maths has led to participating students substantially improving their performance in standard testing while participating in the program.

The Champions of Maths program has been recognised in the WA Government State STEM Skills Strategy as best practice10.

In 2021, Chevron celebrates 15 years of partnership and collaboration with Scitech. The community partnership empowers educators and inspires students to enjoy and engage with STEM and the exciting career paths it can lead to in the energy industry.

Footnotes

[1] *Effective Teacher Professional Development* Learning Policy Institute, 2017
[2] *Professional learning that works* Australian Institute for Teaching and School Leadership, 2011
[3] *Australian Institute for Teaching and School Leadership* (AITSL)
[4, 5] *Reporting Australia's Results* Australian Council for Educational Research, 2015 and *PISA 2018*
[6] *Overcoming Barriers to engagement and equity for all students* Foundation for Young Australians, 2009
[7] *Resources Sector Community Partnership Award* Department of Mines, Industry Regulation and Safety, 2020
[8, 9] Alcoa Maths Enrichment Program Evaluation. Scitech, 2019 & 2020
[10] *Future jobs, future skills* Department of Jobs, Tourism, Science and Innovation, 2019