STEM Horizons
for High Achievers

Years 10 & 11

What is STEM?

STEM is an acronym for **Science, Technology, Engineering** and **Mathematics** practice and education.

Why STEM?

In the move towards a knowledge-based economy, a workforce of scientifically and technologically literate people is key.

In 2011-12, approximately 10.5% of the Australian workforce were directly employed in STEM-related occupations while 75% of the fastest growing occupations require STEM skills and knowledge.

"A renewed national focus on STEM is critical to ensuring that young Australians are equipped with the necessary STEM skills and knowledge that they will need to succeed".

STEM Horizons

Our passion is to provide extraordinary STEM experiences for students through a range of unique opportunities.

The STEM Horizons program for high achieving Year 10 and 11 geography students is the perfect opportunity to further enhance their knowledge and extend learning beyond the classroom. The program is aimed at identified, high achieving students who have a strong interest in Geography.

Students will complete a day of specialist activities at the Queensland University of Technology. Activities are designed to be 'hands on' and provide opportunities to actively engage students in higher order thinking and problem solving. Links to authentic 'real world' geography further enhance engagement and highlight tertiary and career options.

Students will be working in small groups alongside peers from other schools with similar demonstrated interests and abilities in Geography.

The cost for the program will be *$25.00 per student*, invoiced to the school. Teachers are able to nominate identified students by returning the attached forms.

For further information, please contact **Mark Devaney** on **0472 870 898** or email **mdeva7@eq.edu.au**.

Further details about the program are provided on the following page.

QUT Queensland University of Technology

BRISBANE **URBAN** Environmental Education Centre

Years 10 & 11

Brisbane Urban Environmental Education Centre

Flood Proof Our Future

Urban planners are increasingly challenged by pressures such as population growth, sea level rise and climate change. Faced with an uncertain future, creating a sustainable water management plan is challenging when varied perspectives and priorities of stakeholders need to be considered. By engaging those stakeholders and exploring different pathways collaboratively we can prepare for the future.

This one day workshop will allow students to investigate the effects of flood on our cities and to hear from Kotchakorn Voorakhom, founder of the Porous City Network, an organisation working to increase urban resilience in South East Asia. An exploration of current flood mitigation in Brisbane will be undertaken before participating in a computer simulation called the 'Sustainable Delta Game'. Students will employ negotiation skills to pitch their flood mitigation ideas to lessen the social, economic and environmental effects of flood on the virtual town of Te Ara.

About Brisbane Urban Environmental Education Centre

Brisbane Urban Environmental Education Centre is a Department of Education and Training (DET) facility located on the Newmarket State School Campus.

The Centre focuses on urban environmental investigations, urban environments, urban planning and lifestyles, and sustainability – with the main curriculum links to the subject areas of Science, Geography and History.

Most centre programs involve field investigations in the inner and central city areas of Brisbane, or classroom activities at the Centre at Newmarket.