

Kids' STEM Convention: Inspiration / Investigation / Celebration

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Abstract: *The Kids' S.T.E.M Convention is in its seventh year and has the reputation of providing students in the Middle Years with authentic inquiry based learning experiences. The project is highly regarded by Education Queensland as evidenced by the 2009, 2011 Kids' S.T.E.M Convention being a state finalist in the Showcase for Excellence Awards and being shortlisted for the 2012 State Finals. The Convention is a partnership project between Metropolitan schools, the University of Queensland (UQ), local communities, and industries. It provides students in the Middle Years (ages 11-14) with an exciting opportunity to broaden their knowledge in Science, Technology, Engineering, and Mathematics by participating in a three- part learning experience, which includes:*

- *Student Conference at UQ with eminent Keynote speakers and 'hands on' workshops*
- *School –based extended inquiry based investigations (8 weeks)*
- *Forum where students showcase their investigative inquiries.*

Teachers are provided with professional learning in inquiry based learning to assist their students with the extended investigations. Scientists and industry professionals mentor students throughout the extended investigation phase. Their investigations are judged on merit by academics and industry professionals. The aim of this workshop is to present the research, the history, process, and outcomes of how this unique learning innovation has inspired over 2000 students and influenced their academic choices in the S.T.E.M fields. It will demonstrate how it can be replicated across all educational school settings, be sustainable, and develop mentoring and real learning partnerships between educational institutions and local communities. The Kids' S.T.E.M. Convention has been adopted by the Australian Academy of Science, Technology, and Engineering as a model to develop partnerships between industries, tertiary education and independent and State schools in the promotion of Science and Technology in their 'Wonders of Science' program.

Research identifies that students in the Middle Years become disengaged in the Science fields but it is also the time when students are making decisions about career choices. The Kids' S.T.E.M. Convention has inspired both teachers and students with its inquiry based methodology and real life challenges. Over 85% of the student participants choose Sciences in the Senior Years of schooling. The benefits for students include ownership of the learning process, rigour and depth of knowledge in their chosen area, the development investigative inquiry skills and possible career pathways in STEM.

Keywords: Engaged, Students, Authentic, Inquiry-based, Partnership, Challenging