

Successful Students - STEM Program

Building STEM teaching capability in Geelong region schools (Science, Technology, Engineering and Mathematics)

The Successful Students – STEM Program partners with secondary schools to support greater STEM student engagement and attainment through strengthening teacher capability.

Principals of secondary schools in the Geelong region were asked:

- Are you keen to address the downward trend in STEM subject participation in schools?
- Do you wish to strengthen the capabilities of your maths, science and technology staff?

Aims of the ‘Successful Students – STEM Program’

- Build STEM teaching capability in secondary schools in the Geelong region
- Support higher levels of STEM subject participation and attainment
- Encourage student awareness and promote interest in STEM related future study and career pathways

Principals’ STEM Forum

Skilling the Bay with Deakin University hosted a STEM Forum for principals and curriculum leaders in the Geelong region in March 2015, at the Deakin Waterfront Campus.

STEM Forum purpose:

- Provide participants with a snap shot of the most recent industry, employment and educational developments in the STEM landscape
- Review regional secondary school STEM data (VCAA)
- Outline how schools will benefit from the STEM Program
- Describe how schools can become partners in the program via an Expression of Interest process.

Ten schools are now official partners in the program from 2015-17.

Arresting the downward trend in STEM participation in schools

Geelong’s economic prosperity will be underpinned by higher levels of participation in Science, Technology, Engineering and Mathematics (STEM) related subjects. International research has found that 75% of the fastest growing occupations will require STEM skills and knowledge (The Australian Industry Group 2013).

The downward trend in student participation in STEM related subjects in the Geelong region is pronounced.

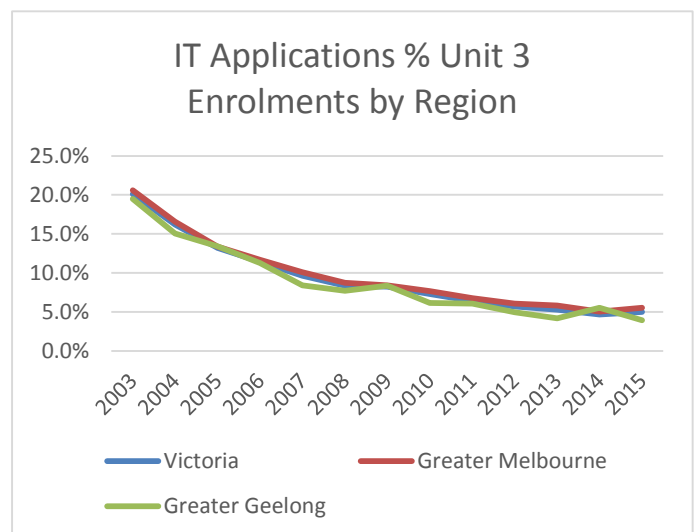
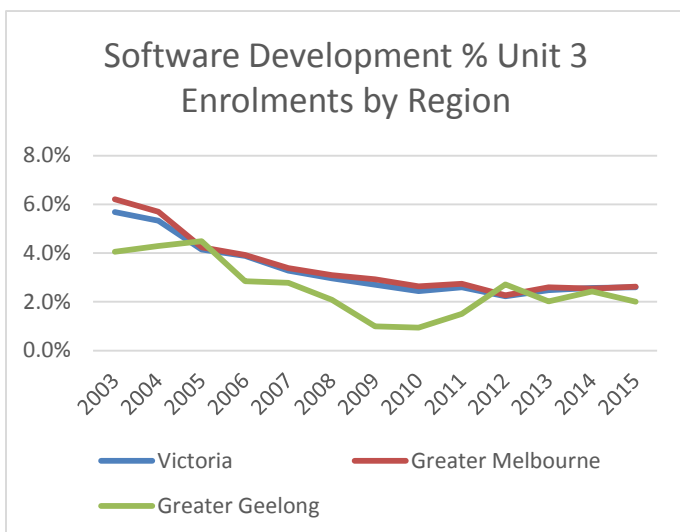
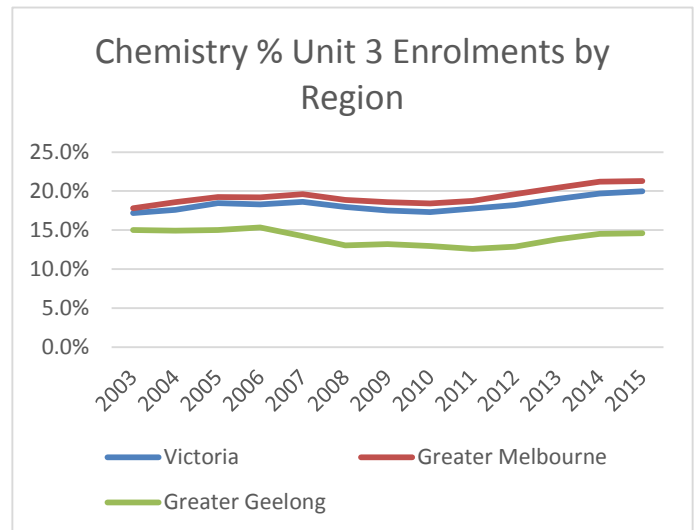
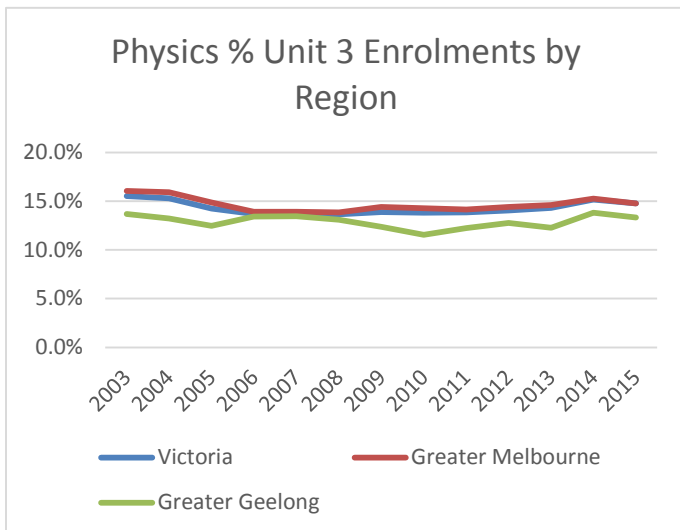
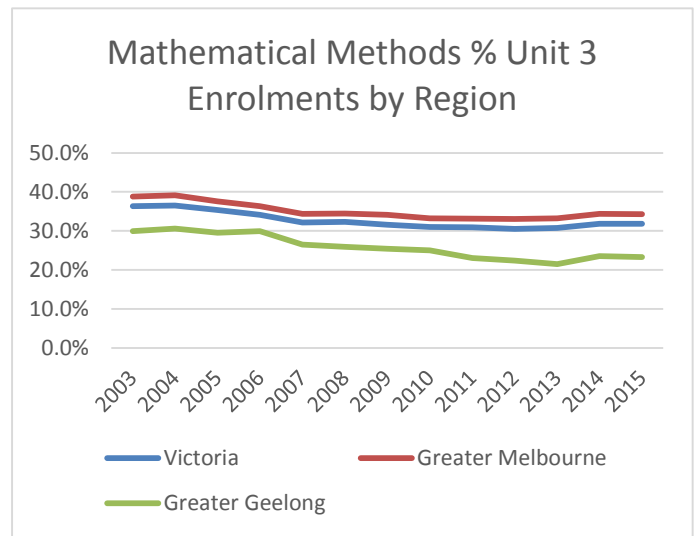
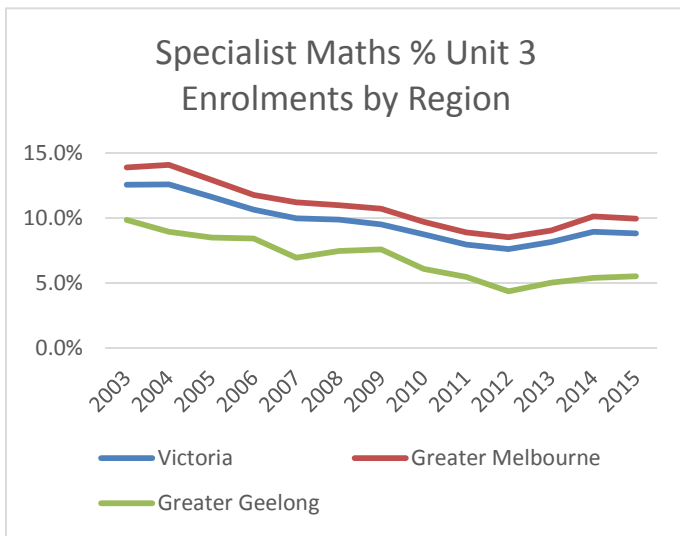
Fast Facts

- International research has found that 75% of the fastest growing occupations will require STEM skills and knowledge
- The downward trend in student participation in STEM related subjects in the Geelong region is pronounced.
- The need to reverse the trend of decreasing STEM participation in schools is a priority.
- The STEM Program will prioritise innovative teaching and learning methodologies, specifically tailored to engage students and excite their continuing interest in STEM subjects.
- Skilling the Bay is funding the Program over three years from 2015 – 2017.

STEM subject participation data - Geelong region context

(source: VCAA September 2016)

The need to reverse the trend of decreasing STEM participation in schools is a priority.



Benefits to partner schools

- Program delivery by STEM teaching experts from Deakin University School of Education
- Professional Development of STEM teachers focusing on Years 7 and 8, including on-line curriculum materials, face-to-face seminars, workshops, and on-site school initiatives
- Professional support of STEM teachers by the STEM Program leaders
- STEM Teachers Network in the Geelong region supported by a dedicated STEM website hosted by Deakin University and BioLAB
- Deakin University Faculty of Science, Engineering and the Built Environment undergraduate student ambassador program assisting with raising students' awareness of pathways into STEM related fields.
- Collaboration with leading industry partners in the Geelong region
- School sharing conferences where STEM teachers reflect on model curriculum units to inform future practice

Our school partners

- Belmont High School
- Grovedale College
- Geelong High School
- Matthew Flinders Girls Secondary College
- Western Heights Secondary College
- Lara Secondary College
- Newcomb Secondary College
- Oberon High School
- St Joseph's College
- Geelong Baptist College

STEM Program funding period and costs to schools

Skilling the Bay is funding the Program over three years from 2015 – 2017. Access to curriculum resources, professional learning program and student based initiatives require no funding from schools. There is, however, the need for partner schools to provide support for teachers attending programs off-site.

STEM Program Delivery Partner – Deakin University, School of Education

The Successful Students – STEM Program is being delivered by Deakin University School of Education, Faculty of Arts and Education. The expertise captured in past and current STEM related education projects conducted locally, regionally and internationally have been applied to the STEM Program design.

Innovative teaching and learning methodologies are prioritised, specifically tailored to engage students and excite their continuing interest in STEM subjects.



STEM Education Conference held 5–7 October 2016

Deakin University and Skilling the Bay hosted a STEM Education Conference based at the Waurm Ponds Centre for Advanced Design Engineering Training, Waurm Ponds.

This event generated local, regional and international interest. Funding support for Geelong region schools ensured there was strong local representation.

Further Information

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