



ST MARY'S
COLLEGE

St Mary's College providing a gateway to science innovation

With the demand for STEM-related (Science, Technology, Engineering and Mathematics) expertise in the workforce continuing to trend upwards, it has never been more important to ensure that young people are equipped with the knowledge, skills and abilities they need for the careers of the future.

Tasked with encouraging more young women to develop a life-long love of learning in the sciences, St Mary's College is offering a STEM Inquiry Based Learning unit for Year 10 students studying science in 2017.

As part of this unit, six students have teamed up with STEM volunteers from the University of Tasmania (UTAS) and CSIRO to conduct open-ended science investigations into contemporary STEM concepts.

The projects, which involve more than 100 hours of research in areas ranging from astrophysics to microbial biodegradation, will be eligible for submission into the CSIRO CREST program, UTAS Science Investigation Awards and Tasmanian Science Talent Search.

St Mary's College Science Coordinator, Heather Omant says the program was designed to stimulate an interest in STEM learning by engaging students in "real world" activities beyond the classroom.

"This focus on translating research into practice complements the excellent science program we have at St Mary's College, which encourages our students to 'discover by doing' – to think, observe, question and solve problems," she said.

Among the unit's most valuable offerings are the connections that students forge with leading Tasmanian STEM researchers and practitioners, Mrs Omant said.

"The projects acknowledge the significant impact that relationships with role models and mentors, especially female, have on girls' perceptions of their abilities to excel in science-based careers."

St Mary's College Year 10 student, Eloise Deconinck, is working alongside Dr Karen Barry, from UTAS, on an ongoing project that is examining the biodegradability properties of microbes (bacteria and fungi) found on plastics recovered from compost.

The 15-year-old was recently recognised for her innovative scientific research at the BHP Billiton Science and Engineering Awards, where she was named as a national finalist.

"This project gives us a taste of what university life will be like. We get to work in the lab and network with students and teachers who have years of knowledge and experience," Eloise said.

"We have had opportunities to drive all aspects of the research, from being in contact with mentors to collecting and then applying the data."

Fellow Year 10 student, Saakshi Dhakal, said it was vital that young women and girls considering a career in STEM had positive female role models to look up to.

“St Mary’s College teaches us that science is a great pathway for women,” said the budding astrophysicist, whose project is investigating the techniques used to determine the age of lesser known stars.

“We are fortunate to have such wonderful teachers like Mrs Omant to encourage us to pursue a degree in science, along with fantastic facilities like our Women in Science Centre.”

Other St Mary’s College Year 10 students participating in the project are Chloe Cooper, who is looking at the relationship between insects and plant pollination; Alana Bellette, who is studying the effects of climate change in different Tasmanian regions through the emergence times of plants, and Spriha Paudel and Keeley Hine-Haycock, whose joint investigation is testing possible drug treatments for dementia-related disease.

- *Caption: St Mary’s College students, Keeley Hine-Haycock, left, Chloe Cooper, Saakshi Dhakal, Spriha Paudel and Eloise Deconinck, all in Year 10, have partnered with STEM practitioners at the CSIRO and UTAS to conduct open-ended science investigations.*

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