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IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Ignition - Primary Space Education (1)

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USING INQUIRY-BASED LEARNING AND ROLE MODELLING AS A MOTIVATOR FOR INCREASING THE PARTICIPATION OF GIRLS IN SPACE SCIENCE

Abstract

The 17 Sustainable Development Goals agreed upon by world leaders was launched in 2015, with the aim of creating a better world by the year 2030. The central purpose of goal number 5 is to achieve gender equality and empowering all women and girls. Yet as we approach the mid-point of the world's objective in addressing these 17 goals, in the domain of STEM education gender disparity remains a serious problem. While a number of programs have been developed to inspire and engage more girls in the STEM curriculum area, gender stereotypes still persist, particularly in primary schools. At Cornish College a four week long integrated unit of work targeted at students from Years 5 and 6, and focused on space science has been developed, which provides a progression of 'short' activities, using easily accessible materials and resources which have helped better engage students while building their knowledge and skills. The presence of female role models from the senior secondary school have helped shape the attitudes and beliefs of the primary school students. An emphasis was placed on the students working collaboratively on authentic learning opportunities. The unit of work integrated the learning areas of Science (specifically Earth and Space Science), Design and Technologies, and Mathematics. At the conclusion of the unit, students attitudes and beliefs were assessed which indicated a significant improvement in their enjoyment and learning of Science and Engineering, which was also evident in the strong connection that had been established between the Years 5/6 students and their older role models. The observations and feedback has also helped the participating teachers to adjust their own professional practice and unit planning to create a more inclusive classroom in the teaching of Space Science and Engineering.