

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

Author: Dr. Parshati Patel
Centre for Planetary Science and Exploration(CPSX), Canada

Prof. Isha DeCoito
Western University, Canada
Prof. Gordon Osinski
Centre for Planetary Science and Exploration(CPSX), Canada

TRAINING AND ENGAGING THE NEXT GENERATION OF SPACE SCIENTISTS AND
ENGINEERS THROUGH THE SPACE EXPLORERS PROGRAM

Abstract

Western University's Centre for Planetary Science and Exploration (CPSX) educational outreach strives to engage youth to explore the universe and aims to empower children with the basic knowledge and workings of the many branches of planetary science and space exploration. These objectives are achieved through numerous outreach initiatives, including i) a summer academy, launched in 2018 for participants ages 12 to 14, with sessions led by faculty, postdoctoral fellows, and graduate students in CPSX; ii) week-long Space Explorers Programs, launched in 2016 for participants ages 9-14, and offered during March Break and the summer months; and iii) one-day space science and technology themed programs, offered throughout the school year. The Space Explorers program promotes experiential learning and since its launch, has engaged more than 600 students through hands-on activities. For the summer program, two distinct themes are offered weekly. In 2017 and 2018, the themes included Journey to Mars and Journey through the Universe. In Journey to Mars, participants designed a mission to Mars, possible landing sites, rovers, and created a Mars habitat. In Journey through the Universe, participants built a solar system and spectroscope, created a cosmic calendar, designed an alien, and visited the on-campus observatory.

To assess the potential of the Space Explorers Program to engage youth, camp participants are invited to complete a survey at the conclusion of the program. Survey statements gauge campers' experiences, as well as their interest in the field of space science and technology, thus providing insights into the impact of the program. The survey also allows for the evaluation of programming, camp activities, and facilitators. Camp survey responses from two years (2017 and 2018) have been analyzed, and preliminary results indicate that the program encouraged campers to be more interested in astronomy, planetary science and space exploration topics. Campers provided details on specific topics that they would like to learn more about, as well as topics they learnt about during the program, and what they enjoyed and did not enjoy about the camp. Based on preliminary findings, the program is certainly on its way to achieving the goal of engaging and training the next generation of scientists and engineers, while exposing them to various aspects of planetary science, space and space exploration. We intend to leverage campers' experiences and recommendations to continue developing robust programs as we move into the next phase of science and technology themed educational outreach initiatives.