

IAC SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Lift Off - Secondary Space Education (2)

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AN APPROACH TO INTRODUCE STEM BASED EDUCATION SYSTEM TO INSPIRE NEXT  
SPACE GENERATION

**Abstract**

One of the initiatives of the National Space Science and Technology Centre (NSSTC) is the Space Camp which is a program that aims to introduce hand-on education material and STEM based education system to high school students in the United Arab Emirates (UAE). The program started in summer 2018 sponsored and supported by UAE Space Agency to help inspire the next space generation. This program is organized during the summer for students aged 15-18 years old. The program is designed to give the students small theoretical lecture by university professors and space engineers in the first day to help give simplified concepts about satellite, science and space technologies. Followed by hands-on workshop to program micro-bits which is a small device with two sensors students can learn simple codes to control its functions. This device later will be attached to the water rocket made with Pepsi bottles that the students create in a third workshop among other components in like the stand parachute , android app to get the data and the thermometer to measure the hight of the rocket . When designing this program, I focused on making suitable sessions to this age group that could help target their inspirations and interest in the space sector specially that this sector is new in United Arab Emirate. There is a huge gap to fill and demand from student and parents, in the first year we had 60 seats available and we received over 300 application. This demand was due to the great need in such programs specially after the great support from the leaders and the government as well as the UAE joining the space race. With the Emirates Mars Mission announced in 2014 and the establishment of UAE space agency and UAE astronaut Hazza Al Mansoori being the first Arab astronaut to go to the International Space Station in 25TH September 2019.all these aspects stimulated the need to present such programs. This paper will examine the use of hands-on program during the summer camp and its sustainability to introduce advance and adjusted sessions using the feedback and experiences over the three years if this program.