

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

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"A GLANCE TO SPACE" – IAI MBT SPACE ACTIVITIES TO ENCOURAGE YOUNG STUDENTS
TO EXCEL IN MATH, SCIENCE, ENGINEERING AND TECHNOLOGY (STEM)

Abstract

This paper describes our activities during 2012-2019 with high school pupils (ages 14-18) in order to encourage them to learn and excel in the field of STEM.

The decreasing in the STEM learning was a challenge to IAI MBT SPACE. We initiated a unique program using our resources, especially our engineers, to develop various ways of interaction with the pupils in order to encourage them into STEM. Our program called "A glance to space" contains several main activities: 1. Hosting thousands of school students in our facilities at IAI MBT Space. The students visits our assembly and experiments center and the GEO satellites ground station . They also getting by our space engineers and experts a full review about space, satellites and other space vehicles. 2. Teaching in PLB space courses, which the pupils designs and creates wonderful models such as space debris removal. Many of these prototypes where displayed at exhibitions and gained many rewards 3. PLB projects: Mentoring in Nano satellite mission's projects that high-school pupils develop and build themselves! 4. Encouraging and helping the ministry of education to establish a space track in many high schools by writing learning program to the track. 5. Teaching hundreds of STEM teachers space studies. 6. "Female engineers of the future" mentoring in project that dedicated to high school girls who specialized in science and technological studies. After 7 years, we see our contribution in STEM studies: • The ministry of education established a space study track in many high schools. Pupils getting graduations exams in space as a subject. • In the schools that we gave our program: school managers and teachers reports growth in pupils's ambition to study and graduate in STEM. Special remarks about this growth were given by two high schools at the "Ofakim" town, at the Negev desert. Our programs take place in many schools all over Israel. The pupils who are exposed to the programs come from various levels of social/economical/educational backgrounds. Here we see the beauty of finding in each one the desire to learn, by giving them the resources and desire. For example, we found out that when the youth see a young space engineer with whom they can be identified (like young female pupil with space female engineer) they understand better the benefit in excelling in math physics, finding out that the sky are not the limit to anyone.