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National Space Contest in memory of STS-107 Crew: Nation-Wide Space Learning Experience

Inbar Tal, VP, Israeli Space Society

P.O.Box 400, Kadima, 60920, Israel. Phone - +972-98913010 Fax: +972-3-6844422
talinbar@space.org.il

The educational enterprise hereby described was a first of its kind and focused on an active research and participation of thousands of high school students in Israel.

On February 1st, 2003, the space shuttle Columbia was lost during its Re entry to Earth's atmosphere. Among the crew of STS-107 was Israel's first astronaut – the late air force colonel Ilan Ramon. This nation-wide space learning experience was a successful tool to boost the learning of Physics, Biology, Astronomy and Mathematics in many schools.

Beginning October 2003, a call for participation was published in the web site of the Ministry of Education, aimed at science teachers of various disciplines, encourage them to take part in an online space quiz, which was aired for one school day, and was open to every students in grades 7-9. After the online quiz, 14 classes, representing 14 schools nation wide, including orthodox Jewish schools, Arab school, and other minorities were selected to participate in phase 2 of the enterprise – dealing with complex, interdisciplinary research project – designing a space colony.

Each school of this heterorganic representation of the Israeli society was involved in designing and building a model of a space colony, with capacity of 10000 people. The students dealt with verity of subjects and issues in interest groups, of an interdisciplinary nature. Such as calculating the exact location of the space colony, determine the g factor, designing the structural- both internal and external-aspect, the various problems of ecological issues, communication and transportation, etc. other issues determined by the students themselves were psychological, cultural, political and sociological effects on the colonies inhabitant- to name a few. A selection group was formed, with representatives from the academy, ministry of education, and NGO's such as Israeli Space Society, the leading player in the whole enterprise.

The final stage took place as a public event, in which a memorial service was held. All the models and posters were on display, and the students presented the winning works. Prizes were awarded, such as telescope, medals, and complimentary participation in a space camp.

As a prominent person in the steering committee of this project (I wrote most of the quiz and the design-mission) I have an insider view of all the aspects of the learning experience and process- from the day I envisioned it till the awards ceremony.

This unique and very successful learning experience model was first of its kind in Israel, and could easily be adapted by other countries, as an instrument to boost science education and learning in schools.