

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Calling Planet Earth - Space Outreach to the General Public (6)

Author: Mr. Marcin Giza  
SpaceShip, Poland

THE NEW PATH OF SPACE EDUCATION

**Abstract**

**Problem.** Space education in many countries (including Poland) is very often conducted in a standard way (school classes), which is unattractive/uninteresting for the students (despite the fact that space itself is fascinating). Therefore, students are not interested in this area and see no reason why they should follow the "cosmic path".

At the same time, this education is conducted: 1. In separated disciplines; 2. In not engaging/motivating way; 3. Based on memorization of knowledge.

At the same time, in a rapidly changing world in which knowledge quickly becomes outdated, it seems more advisable to develop competences such as: critical thinking, analysis, complex problems solving, creativity, innovation (World Economic Forum report).

**Project.** In response to the above-mentioned problems, we have created an interdisciplinary educational program focused on space/its exploration - "Cosmic Challenge", the goals of which are: 1. Promotion of STEAM education. 2. Integration of knowledge about the cosmos with other subjects. 3. Development of creativity and innovation among students. 4. Promotion of practical use of knowledge. 5. Developing complex problem solving skills.

The program is implemented in 3 age groups: A."Curiosity": for primary schools. B."Pathfinder": high schools. C."Voyager": universities.

So far, 5 editions of the program have been organized, with about 200 participants. Program has over 20 Partners/Patrons: space agencies, universities, space companies and the media. Each edition has its own interdisciplinary topic focused on the space and its exploration, framed in the form of a complex problem to be solved.

The rewards are voyages (usually for 3 winners of each edition) to the most interesting places on Earth related to space/its exploration, such as: Gran Telescopio CANARIAS, Pic du Midi de Bigorre observatory, ESA/ESEC center in Belgium.

The uniqueness of the program is the combination of: interdisciplinarity + solving complex space problems + a wide range of Partners / Patrons + mentoring program for finalists. Participation in the program is free. Part of finalists have already started study in top European space" universities.

**Conclusions.** If young people are faced with interesting challenges that require: space/interdisciplinary knowledge, the ability to solve complex problems, creativity, etc. this is a very strong motivator to follow the cosmic path. The key success factors seem to be: emphasis on the development of skills; support by wide range of Partners/Patrons; attractive rewards - voyages to the most interesting "cosmic" places on Earth. The most important thing, however, seems to be to arouse curiosity among the participants.