

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

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A COMPREHENSIVE CURRICULUM FOR PRIMARY STUDENTS IN THE FIELD OF SPACE
SCIENCE WITH A FOCUS ON EXPERIENTIAL LEARNING**Abstract**

The aim of this abstract is to present a well-structured educational curriculum for students up to 11 years of age in the field of space science. Since not many academic institutions have a dedicated curriculum for space education at the primary level, the proposed idea is an initiative to impart necessary skills as well as develop a long-term passion in students, therefore contributing in building the future astronaut workforce. The curriculum focuses on practical and experiential learning as it would ensure a holistic learning process. The proposed curriculum is flexible and designed to enhance creativity in students. It would include a range of activities spanning for about 10 hours per week. This academic curriculum can be adopted by institutions and schools across the world as a part of their daily schedule. Some activities as a part of the curriculum would include: solving puzzles on space- based themes, hands on CANSAT making with environment friendly materials, visualizing space events and life of astronauts through creative illustrations in the form of stories or games, paving a way for specially designed space apps to be developed for this purpose, live space talks with astronauts to get better insights into what it actually takes to become an astronaut. Apart from aforementioned activities, children would be taken on space treks where they would be provided with an opportunity to launch their own picosatellites or femto-satellites using a parachute. This idea of launching student satellites has been implemented in educational institutions as a part of academic workshops, student satellite teams and other technical societies. This paper focuses on implementing the same on a regular basis as a part of the curriculum. As a result, students will thoroughly enjoy the entire learning process, developing the necessary passion for space science. The paper would provide a complete analysis on the weekly schedule of the curriculum, its implementation in schools and the feasibility of each activity. The paper will also provide insights into the budget and careful analysis of learning outcomes.