IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Show Us Space: Demonstration of Hands On Education and Outreach (8)

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THE RAMON SPACE RACE PROGRAM: EMPOWERING TEACHERS FOR EARLY CHILDHOOD SPACE EDUCATION

Abstract

The Ramon Space Race program redefines space education by targeting preschool and kindergarten children, an often-underrepresented age group in science and space education initiatives, fostering their natural curiosity, and laying the foundation for scientific exploration from a young age. Our program operated in nearly 500 kindergartens across Israel, engaging 14,700 children from diverse backgrounds. The program offers a hands-on approach to space education, utilizing structured lessons delivered through a unique space kit. Each lesson integrates scientific experiments, hands-on challenges, space-themed games, and art and craft activities tailored to children's developmental stages. By immersing children in interactive experiences, we aim to instill a lifelong interest in space and STEAM concepts. While the program does not require special technical setups, it relies on the engagement of kindergarten teachers as central figures. The kit's uniqueness lies in its ability to empower teachers by providing extensive resources and support, enabling them to customize space education experiences according to the diverse needs and interests of young learners and individual classrooms. This empowerment not only enriches the educational journey but also enhances educators' capacity to cultivate curiosity and exploration among their students. The program's development was structured by research on early childhood education and best practices in space education. We conducted thorough analysis to ensure alignment with curriculum standards and educational objectives. Through ongoing evaluation and feedback mechanisms, we continuously refine our approach to maximize impact and relevance. Measurable objectives include assessing cognitive development, understanding of basic scientific concepts, and fostering creativity and critical thinking skills. Quantitative and qualitative data gathered through evaluations, surveys, and observations inform program enhancements and demonstrate its effectiveness in achieving learning outcomes. The Ramon Space Race program offers valuable insights for educators and organizations worldwide seeking to introduce hands-on space education at an early age. By sharing our experiences and lessons learned, we contribute to the advancement of space education on a global scale. In this presentation, the Ramon Space Race kit will be showcased, offering a hands-on demonstration of its components and activities. Through interactive experiments and engaging lessons, attendees will gain insights into the effectiveness of the kit in fostering space education among young learners. We will highlight key experiments and lessons learned from

implementing the kit in kindergarten classrooms, emphasizing its impact on children's understanding of space concepts and scientific inquiry.