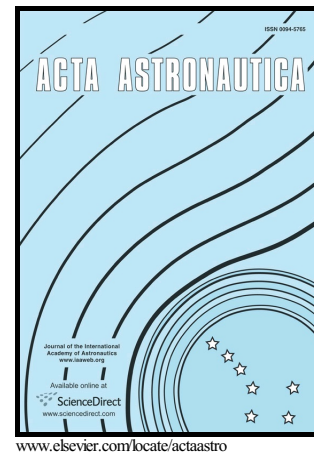


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TO IGNITE THE PASSION IN CHILDREN'S
HEARTS -ROLE AND EFFECT OF SPACE
EDUCATION, ISSUES AND CONSIDERATION

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TO IGNITE THE PASSION IN CHILDREN'S HEARTS -ROLE AND EFFECT OF SPACE EDUCATION,
ISSUES AND CONSIDERATION

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Abstract

It is obvious that Space Education is very important for sustainable space development as children are going to lead the new era of space development. The Japan Aerospace Exploration Agency (thereafter called "JAXA") believes that all children hold 3 spirits which are "Curiosity", "Adventure" and "Craftsmanship". We have been trying to ignite children's spirits toward nature, life and the universe with the effective use of space subjects and materials since the establishment of the JAXA Space Education Center in 2005. Studying about space is not limited to STEM, but can be applied to all subjects including social studies, music, and home economics. JAXA successfully coordinates more than 100 school classes in various subjects all over Japan each year. In geography, students learned geographical features of mountain ranges from images taken by JAXA's land observing satellite, while wearing 3D glasses so that they felt as if they were watching it from space. In home economics, students discussed and came up with ideas for new space food menu items considering nutrition and preservability. One of the ideas has been selected as Japanese Space Food.

Nowadays, the numbers of school collaborations are stable and cover various subjects. Therefore JAXA cooperated with SHINSEI elementary school as a model school of space education. This elementary school introduced space studies in all grade's education guidelines in this school year. JAXA and SHINSEI elementary school are going to revise and analyze how students have been changed through this effort in March.

We also focus on "Teacher Training" by holding JAXA-Teachers seminars all over Japan and more than 1,000 teachers take this seminar every year. By studying a questionnaire survey taken from teacher seminars, it has been clarified that most of teachers realized space can be applied not only for astronomy but also in various subjects. They evaluate JAXA's effort for broadening their horizons. However most of teachers do not have enough time for investigating or preparing teaching materials as they have to put lots of effort to club activities held after school and weekends in Japan. It is necessary for JAXA to study and analyze more about present issues in education and to build effective infrastructure to spread space education based on demands.

I believe that mysteries of space can stir up children's 3 spirits. It is our most important mission to motivate them via space education at their early stage of school life.

INTRODUCTION

Japan Aerospace Exploration Agency (JAXA) established a Space Education Center in 2005 with the belief of three spirits which are "curiosity", "adventure" and "craftsmanship"^{*1}.

We believe that space can be used to stimulate the young generation's curiosity and make all phenomena interesting. It is quite useful to broaden people's mind as well as to raise multilateral viewpoints. Since the establishment of JAXA Space Education Center, JAXA has taken a leading role to merge space educational materials into school classes, social events and home education all over Japan.

*1: JAXA defines the meaning of "craftsmanship" as the mind which motivates people to create something, in the other words, the mind of creativity.

GOALS AND PRINCIPLES OF JAXA SPACE EDUCATION CENTER

Space subjects, resources and materials inherently have a unique power to attract young people's attention, to encourage them to take on challenges and aim for higher goals. While JAXA Space Education Center considers it important to attract young people to increase appreciation of science and technology and to enhance their capacity for logical thinking, the key mission of the Center is to effectively use space materials to have a positive impact on the minds of young people in their development process, helping them to expand their potential and to become socially responsible individuals.

However there are apprehensive voices that young people tend to lose their motivation, to become pessimistic on their future and lives which increases their risk of becoming involved in serious crimes. According to a survey taken by the Japanese cabinet office from March 2013 to April 2014 with age groups from 13 to 29, only 45.8% of Japanese young people answered that they are satisfied with themselves today while 70% to 80% of young people

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