

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)

Lift Off - Secondary Space Education (2)

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ISS EDUCATION PROGRAM “JAXA SPACEFLIGHT SEEDS KIDS I”

Abstract

PURPOSE Organized by Space Education Center of JAXA which provides chances to use the International Space Station for a new field of education, this is the first campaign of JAXA SpaceFlight Seeds Kids, designed primarily to promote interest in science and give inspiration to school children.

METHODS Participating schools in this program will be provided with the opportunity to grow sunflower seeds which flew on the ISS for about nine months as a start to ‘touch the Universe’. Thru a series of education guides, a deeper understanding of the past and near-term future of manned space flight, as well as that of Earth and life, will be learned. Furthermore, all contestants will receive an hourglass gift filled with simulated lunar regolith(A). (Note: hourglass does not reflect time accurately.) The sunflower will be grown with the aid of culture guides and advice from an experts committee. Proposed curriculum and lessons from cross-topic education guides has been shown.

(A) 1.Lunar regolith: lunar soil on the Moon’s surface composed primarily of rock fragments from the Moon’s bedrock, dust and glass particles. 2.Simulated lunar regolith: terrestrial material created to approximate the chemical, mechanical, and engineering properties of, and the mineralogy and particle size distributions of, lunar regolith.

EDUCATION GUIDES No.1. Sunflower Cultivation Guide No.2 Moon Surface Circumstance (including lunar regolith) No.3 Role of Soil to Plants 1 (soil and soil organisms) No.4 Role of Soil to Plants 2 (mycorrhizal fungi) No.5 Soil Observation No.6 Space Farms in Microgravity 1 No.7 Space Farms in Microgravity 2 No.8 Extraterrestrial Agriculture (Lunar and Mars Agriculture)

CONTEST A contest about scientific reports on “ Lunar Outpost Agriculture ” from campaign participants will be held.

SUPPORTS Some Japanese scientists, playing an active role on the front lines of the disciplines for gardening plants such as sunflower, would give the impetus to create teaching materials, reply to questions, and handle student data.

CONCLUSIONS JAXA intended to have schoolchildren experience the pseudo”Overview Effect”, by learning properties of harsh space circumstance disclosed by recent space developments. As a result, it

would be much more easy for them to find that Earth is really not only an oasis of space but also a cradle itself for living things on the Earth.