Paper ID: 11476
student

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
New Worlds - Innovative Space Education And Outreach (5)

Author: Dr. Melissa M. Battler
University of Western Ontario (UWO), Canada

Dr. Andrew A. Rader
COM DEV Ltd., Canada

LIVING ON MARS: EDUCATIONAL ACTIVITIES FOR AN INTERACTIVE MARTIAN SETTLEMENT ON EARTH

Abstract

One excellent way to raise public awareness and interest in planetary exploration is through immersive, hands-on learning. We present here preliminary plans for an interactive Martian settlement, called the "Mars Center". A primary goal of the Mars Center would be the coordination of educational activities, including classes, science projects and design competitions.

Expanding on insights gained from Mars analogue missions and K-12 educational outreach programs at the University of Western Ontario and the Massachusetts Institute of Technology, we describe the development of interactive activities for a Mars Educational Center. The center would be laid out as an interactive working Martian base, along the lines of a futuristic "pioneer village", inviting visitors to participate in activities related to surviving in a hostile environment (e.g., extracting water, growing food, building habitation, planning excursions). Part space museum, special emphasis would be placed on our current understanding of the Solar System based on past, current, and future missions.

We will present the results from previously successful outreach activities in space geology, spacecraft design, and mission planning. We then apply these lessons learned to the development of activities specifically designed for the Mars Center. Spanning the range from K-12, and with defined and verifiable learning objectives, these activities include analogue field geology excursions, computer based learning, games, inquiry-based learning activities, and traditional classes, all based around the established curriculum.

The Mars Center will provide abundant learning opportunities to promote space awareness and learning in Canada, and possibly at other affiliated centers around the world, while at the same time serving as an entertaining tourist destination. It is our hope that the Mars Centre will inspire students to pursue careers in space science, engineering, and related fields, and simultaneously encourage public support of global space and planetary exploration initiatives.