

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Open Space: Participatory Space Education and Outreach (8)

Author: Prof. Jeanne Holm
National Aeronautics and Space Administration (NASA), Jet Propulsion Laboratory, United States,
Jeanne.Holm@jpl.nasa.gov

OPENING SPACE WITH OPEN EDUCATION, OPEN SOURCE, AND OPEN DATA

Abstract

In one country, a little girl dreams of becoming an astronaut. In another country, a young boy dreams of having enough to eat and of going to school. Is it possible for both of these children to dream that space exploration is within their grasp? By bringing the power of open community-based education to people in developed and developing nations, this can happen.

From hack-a-thons in Kampala, Uganda to the U.S. open data effort in Washington D.C., this paper shares the lessons from using space imagery and geospatial information systems in open and innovative educational events with children and adults.

More than 20 open events were conducted in 10 countries. During these events, the educational methodology varied depending on the audience, infrastructure, community, and outcomes. For example, working with the International Space Apps Challenge, groups were expected to use open data and to find creative ways to share their work via open source. During the Ebola Data Jam, space data and satellite imagery were used in countries ranging from very high to very low tech to dynamically map, forecast, and inform people in Eastern and Western Africa of the issues and patterns of infectious diseases. Throughout these events, lessons were pulled out to help inform how even in the poorest nations and low-tech circumstances, open data and education can lead to real change.

Connecting people throughout the world to the ability to participate in space exploration is an ideal application at the intersection of the open source and open data movements. Using space-based imagery and space technologies, these new educational techniques are opening up space to all people.