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SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Hands-on Space Education and Outreach (8)

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GLOBE: A WORLDWIDE HANDS-ON SCIENCE AND EDUCATION PROGRAM

Abstract

For over 20 years, the Global Learning and Observations to Benefit the Environment (GLOBE) Program has been a leader as an international science and education program that connects a network of students, teachers and scientists to better understand, sustain and improve Earth's environment at local, regional and global scales. By engaging students in hands-on learning of Earth system science, GLOBE is an innovative way for teachers to get students of all ages excited about scientific discovery locally and globally. GLOBE scientific protocols are developed by scientists, tested by teachers and executed by students. The protocols and learning activities are designed to help students develop a wide range of skills including critical thinking, scientific research methodology, data analysis, independent learning and big picture thinking. GLOBE provides training and professional development to a worldwide network of teachers. Currently, there are tens of thousands of GLOBE-trained teachers who implement GLOBE in their classrooms using GLOBE's inquiry-based science projects. Teachers and students have the opportunity to work with scientists on Earth Science satellite missions, and the GLOBE International STEM Network (GISN) is a global community of scientists and STEM professionals who connect with, and inspire, students and teachers around the world through activities such as visiting a GLOBE school, judging student research, hosting webinars, proposing field campaigns and conducting scientific investigations with GLOBE data. Since the launch of GLOBE in 1995, 1.5 million students in more than 30,000 schools in over 110 countries have participated in GLOBE. They have contributed more than 140 million measurements to the GLOBE science database, creating standardized, research-quality data sets that can be used in support of student and professional scientific research. Last year, GLOBE expanded to include non-school based citizen scientists while upholding its commitment to formal science education.

During the presentation, we will demonstrate how GLOBE students investigate the environment through GLOBE. We will conduct hands-on science protocol(s) to demonstrate how data are collected and present a related learning activity that aids students in the understanding of important scientific concepts, data collection methodologies, and the interpretation of data. We will demonstrate how students use the GLOBE website to visualize and analyze data. In addition, we will highlight GLOBE partnerships with Earth Science satellite missions and national, regional and international GLOBE campaigns.