

PUBLIC ENGAGEMENT IN THE SCIENCE OF NLSI'S CENTER FOR LUNAR ORIGIN AND EVOLUTION (CLOE). K. LaConte¹, C. Shupla¹, A. Barr², S. Shipp¹, W. Bottke², ¹Lunar and Planetary Institute (3600 Bay Area Blvd, Houston, TX 77058, laconte@lpi.usra.edu). ²Southwest Research Institute (1050 Walnut Street, Suite 300, Boulder, CO 80302).

Introduction: Engaging the public in the excitement of lunar science and exploration is imperative as national and international interest in our nearest neighbor resurges – and igniting the imaginations of future scientists and explorers is critical to achieving our national goals. One of seven NASA Lunar Science Institute teams, the Center for Lunar Origin and Evolution (CLOE) team will help us understand more about how our Moon formed and changed in its early history. The CLOE team is dedicated to sharing CLOE research, NLSI science, and excitement about space science. The CLOE Education and Public Outreach projects include three primary foci:

1) Develop and support authentic lunar science research projects for high-school students through a partnership with Summer Science Program, Inc.;

2) Engage children, with emphasis on underserved populations, in lunar science and exploration by training librarians to implement hands-on science activities in their children's programs; and

3) Engage the public through a Web portal, created and maintained by high-school students, that shares the science, scientists, and events and activities of CLOE, NLSI, and NASA.

Authentic Lunar Research Projects for High-school Students: The CLOE team and Summer Science Program, Inc. (SSPI), a non-profit corporation, are partnering to inspire and educate Summer Science Program (SSP) students about the Moon's origin and early evolution, future robotic and human lunar exploration, and science career paths. Each year, 72 high-school students attending this six-week summer enrichment program for academically gifted undertake a two-day authentic computational project related to formational processes in the evolution of the solar system.

Engaging Children in Lunar Science at Libraries: This effort expands an existing program, *Explore!*, that has provided training and Earth and space science materials to children's librarians for over a decade. A module of hands-on activities, customized for the library setting, was developed to share CLOE and NLSI science with children ages 8-13. The module, *Marvel Moon*, is available at <http://www.lpi.usra.edu/explore/marvelMoon/>. Two-day workshops were offered in a central location for the paired states CO and WY and ND and SD; a final workshop will be offered for ID and MT. Partnering

state library systems recruited children's and youth librarians who primarily work with underserved rural, Hispanic, and American Indian populations. The approximately 75 program providers trained through the CLOE library program will reach a minimum of 5400 children annually.

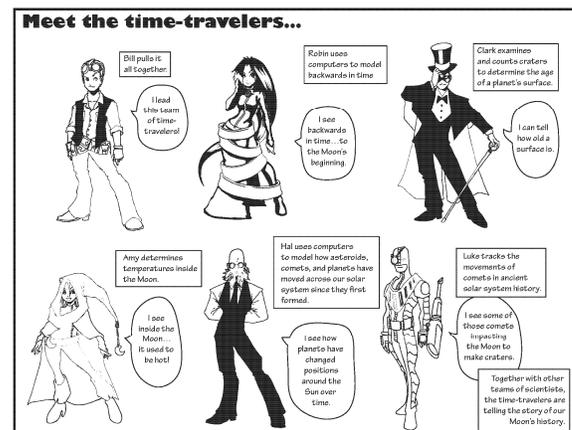


Figure 1. As part of the *Marvel Moon* module, children are introduced to members of the CLOE team through a comic book that serves as a journal. Each hands-on activity is supported by a comic book page, which includes prompts and quotes from the CLOE researchers.

During the workshops, CLOE scientists interact with participants to share CLOE and NLSI science. Attendees undertake hands-on activities, network, become familiar with state resources (e.g., Solar System Ambassadors, astronomy clubs) and plan how to bring the content into their programs. Attendees join the *Explore!* network and receive updates about NLSI science and opportunities for further NASA and NLSI involvement.

Web-based trainings are also being offered to the existing *Explore!* network of over 600 librarians and afterschool providers in 26 states, disseminating the materials more broadly.

Engaging the Public through a Student-designed Website: CLOE collaborated with astronomy classes at the Denver School of Science and Technology and North High School (both in Denver, CO) to create and maintain a public web portal to share CLOE and NLSI science, scientists, and activities.

Students at these diverse schools interacted with the CLOE team – including through site visits to the home institute -- to understand CLOE research and present it, in their own words, to the public. A third high school is joining the project. The evolving website (<http://cloe.boulder.swri.edu/>) includes student animations, articles, and art, and opportunities for public involvement.

Conclusion: These three efforts provide students and the public with authentic experiences with CLOE researchers and career possibilities, as well as with lunar science. Under the guidance of CLOE team members, SSP students build upon math and science concepts while participating in scientific processes such as data interpretation, analysis, and communication and debate of results. High school students shoulder the responsibility and challenge of communicating lunar science effectively and accurately to the public through the student-designed website. In the process, they gain skills in science communication and web design and work directly with CLOE researchers to learn about their science. Through the library program, librarians gain the skills and access to the materials to bring exciting, current science to their communities. Through these librarians, CLOE research and NLSI science are brought to rural regions of the country, where the library is often the nearest public center of learning. Children participating in *Marvel Moon* activities explore lunar science concepts and encounter the researchers themselves in an innovative format through the supporting comic book.

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If you have any questions or need additional information, please contact:

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