

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Space Culture – Public Engagement in Space through Culture (9)

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INSPIRING DIVERSE AUDIENCES TO EARTH AND SPACE SCIENCES THROUGH NATIVE  
AMERICAN CULTURE

**Abstract**

To truly make room for all in space and Earth exploration, it is necessary (and urgent) to attract those that are traditionally underrepresented. A program to engage Native American students in Earth and space sciences, was created in 2021 with the help of a Native American intern at NASA. The effort is led through NASA's Ice, Cloud, and land Elevation Satellite-2 (ICESat-2) remote sensing mission outreach team. The program uses in person and virtual workshops and has developed a children's animated story book that incorporates indigenous culture, art, and explores indigenous ecological knowledge and western science.

Lessons learned include tying into the culture as well as the waters and land specific to the tribe. Some of the focus also includes explaining to tribal members exactly how missions such as ICESat-2 are impacting tribal lands to help understand the effects of global warming that are drastically changing tribal waters, land, and ecosystems from which they make a livelihood. One major goal was to bring awareness to not only the ICESat-2 mission but other NASA missions that can be beneficial to tribal communities, as well as how tribal communities can in turn help navigate, provide insight and diverse perspectives within NASA missions that can also benefit from that deep connection and understanding. The true merge of indigenous knowledge and western science.

The program can be used as a model for other indigenous cultures on the planet to inspire students to learn about Earth and Space in a new way.