

Generations of Knowledge

Traditional Ecological Knowledge and Environmental Science

(DRL: #101055)

Primary Audiences

- Public audience: general—families, underserved—Native youth (ages 11-14) and their communities
- Professional audience: project team members from all partner organizations

Collaborators

Generations of Knowledge is a collaboration lead by:

- Oregon Museum of Science and Industry (OMSI)
PI: Victoria Coats, Co PI: Cecilia Nguyen
- Indigenous Education Institute (IEI)
Co PI: Nancy Maryboy Ph.D, Co PI: David Begay Ph.D
- National Museum of the American Indian (NMAI) and Smithsonian Institution Traveling Exhibition Service (SITES)

With four Native community partners:

- Confederated Tribes of the Umatilla Indian Reservation and Tamástslikt Cultural Institute
- Tulalip Tribes and Hibulb Cultural Center and Natural History Preserve
- Eastern Band of Cherokee Indians and Revitalization of Traditional Cherokee Artisan Resources
- Pacific American Foundation and Waikalua Loko Fishpond Preservation Society in Hawaii

With review and input from:

- National experts in traditional ecological knowledge and environmental science
- A local Native Youth Advisory Board (YAB) of middle school students from Portland Public Schools (PPS) Title VII Indian Education Program

Overview

This project engages underserved Native and non-native youth and adults in environmental science content and awareness through innovative exhibitions and hands-on activities. Traditional ecological knowledge (TEK) and western science are communicated and promoted within culturally relevant contexts as valuable, complementary ways of knowing, understanding, and caring for the world. OMSI, partner institutions, Native scientists, tribal museum partners, exhibit developers, advisors, and members of Native American and Hawaiian communities are co-developing the project deliverables.

Lifelong Learning Group, Center for World Indigenous Studies and advisors from RMC Research and Native Pathways are the external evaluators and are using a mixed method, community-based participatory research (CBPR) approach.



Umatilla



Tulalip



Hawaii



Cherokee

Project Goals

- Produce *Roots of Wisdom: Native Knowledge. Shared Science*. This traveling exhibition is designed to engage families at science and tribal museums in the “Big Idea” that “Native American traditional ecological knowledge (TEK) and western science are valuable and relevant to society and offer complementary ways for understanding the natural world.”
- Produce a traveling graphic panel *Roots of Wisdom* exhibition and interactive website in collaboration with NMAI and SITES for small tribal museums and other venues.
- Create and disseminate an activity kit for Native youth with programming ideas for use in schools, after-school programs, tribal museums, or science centers. The activities complement both traveling exhibitions, and invite youth to explore issues in their communities using both TEK and environmental science.
- Create opportunities and resources for reciprocal collaboration between informal science educators and indigenous partners on the development, evaluation, and interpretation of the public deliverables.

Challenges

Collaborating with many different cultures across long distances. Co-creating deliverables with diverse Native partners and advisors presents many new challenges. Our co-PIs at IEI serve as essential “bridge people” and our most valuable resource for navigating cross-cultural challenges. Face-to-face meetings at OMSI and in partner communities and scheduled communication by phone and email are essential.

Connecting with the local Native community and youth audience. The project was designed for a national audience initially and did not include local audiences in project development. In Year 1, the advisory group advocated for greater engagement with our local Native American community. To address this concern and to collaborate directly with our target Native youth audience, the project team formed the Native Youth Advisory Board in partnership with PPS Indian Education.

Evaluation

Exhibit Formative Evaluation
Six exhibit prototypes were produced & evaluated at OMSI with:

- OMSI visitors (112 interviews and 184 observations)
- Native Youth Advisory Group
- project advisors and partners

Evaluators from Native Pathways and the Lifelong Learning Group also gathered feedback at 2 events from 150 individuals, including:

- urban-based Native families in the Portland area
- youth ages 11-14 from the Confederated Tribes of the Umatilla Indian Reservation

Exhibit revisions based on formative findings included:

- creating a graphic panel that highlighted collaboration with project partners
- adding a map to highlight other restoration projects
- reducing text-heavy labels
- increasing hands-on activities
- building on the interactive and “game-like” experiences of the components.

Collaboration Formative Evaluation

With collaborative input from the project PIs and project evaluation teams, Center for World Indigenous Studies (CWIS) implemented a Talking Circle methodology with project partners to facilitate conversations about the collaborative development process.

This formative process helped highlight the limitations of language in cross-cultural collaborations. It also helped the team recognize that this project is comprised of multiple, cross-cultural, collaborative partnerships rather than just one collaboration. Each collaboration within the project operates uniquely given the context and nature of the joint effort.

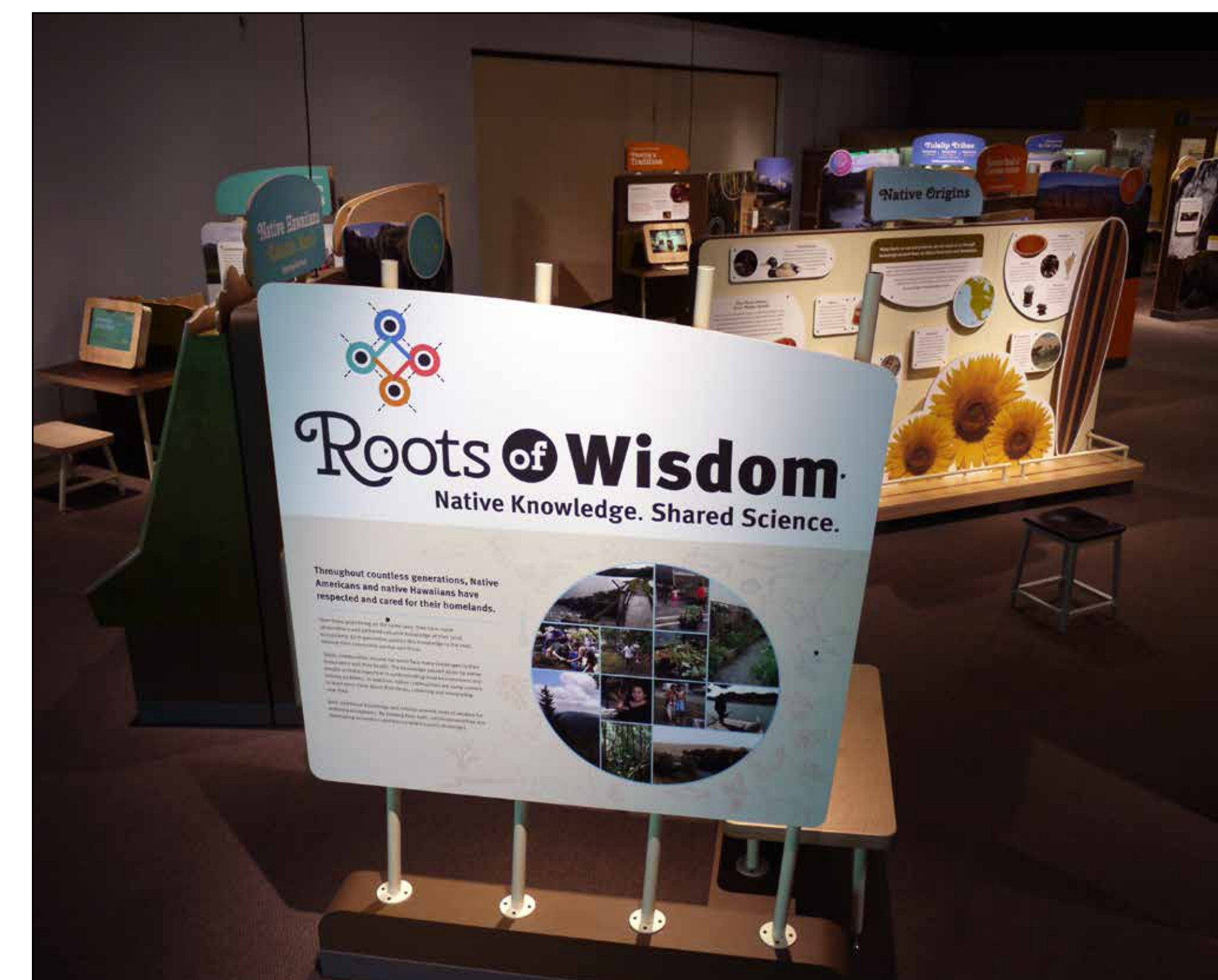
programs.omsimuseum.org/professionals/traveling-exhibits/roots-of-wisdom-native-knowledge-shared-science



Native Youth Advisory Board



Project Team



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