Supporting tribal nations in STEM

The U.S. National Science Foundation respects the sovereignty and self-governance of federally recognized American Indian and Alaska Native tribal nations; the agency is committed to sustained and meaningful consultation with tribal nations as it carries out its mission. NSF has invested in the STEM instructional and research capacity of tribal colleges and universities since their establishment over 50 years ago.

This handout highlights NSF programs that are especially suitable for tribal-led proposals and the ways that NSF is engaging with tribal nations.
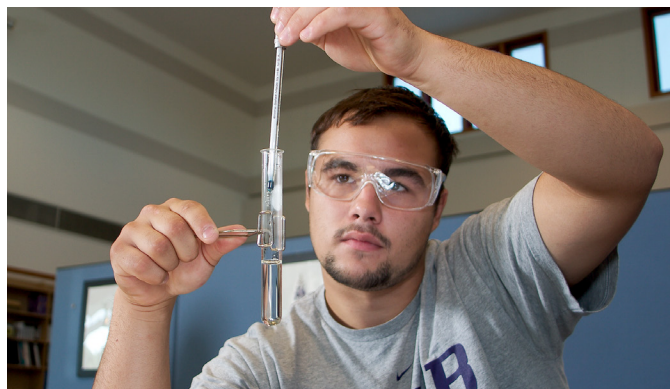
Tribal Colleges and University Program

The Tribal Colleges and Universities Program, or TCUP, provides awards to federally recognized tribal colleges and universities and eligible Alaska Native- and Native Hawaiian-serving institutions. It aims to increase Native individuals' participation in STEM careers by expanding the breadth and depth of STEM programs at eligible institutions and facilitating the development of a strong STEM enterprise in these institutions' service areas.

The program supports transformative capacity-building or community engagement projects through several strands:

- **Instructional Capacity Excellence in TCUP Institutions** projects support designing and implementing comprehensive institutional advances in STEM education and research capacity at eligible institutions.

- **Targeted STEM Infusion Projects** support the attainment of a short-term, well-defined goal to improve the quality of STEM education.

- **Small Grants for Research** support research studies that further the scholarly activity of individual faculty members.

- **TCUP Partnerships** support collaborations led by tribal colleges and universities that involve non-tribal institutions of higher education. With these projects, other NSF programs support the work of the non-tribal collaborating institutions.

- **Tribal Enterprise Advancement Centers** build upon the STEM capacity of TCUP institutions by positioning the faculty and students as intellectual partners to address STEM needs or aspirations of the community they serve.

- **TCUP Secondary and Elementary Teachers of STEM** supports K-12 STEM teachers in the identified community to increase their content knowledge of STEM disciplines and their expertise in sharing that knowledge with students, colleagues and community members.

- **Cyberinfrastructure Health, Assistance, and Improvements** support projects at eligible institutions to upgrade the cyberinfrastructure necessary to conduct, expand, manage and administer STEM research and education programs.

- **Preparing for TCUP Implementation** supports activities that prepare an institution for implementation-level projects. Examples of supported activities include completing an assessment of an institution's current STEM instructional capacity or engaging in conversations necessary to formulate a shared vision of what that capacity should be and how to achieve it.

Science lab at orientation for Hutlee Umyuarchdelee Math Focus Project.
Credit: Todd Paris; UAF

Arctic Community Engagement program

Given the deep knowledge held by local and Indigenous residents in the Arctic, NSF recognizes the importance of collaboration with Arctic residents and welcomes collaborations that improve NSF-funded research.

The Arctic Community Engagement program encourages the following types of collaborations:

- Research at sites near local and Indigenous communities of lands.
- Community engagement and outreach.
- Developing the next generation of researchers and Indigenous scholars.
- Co-producing Indigenous knowledge to address shared research questions, pursue shared methodologies, and agree upon appropriate outreach and data sharing activities.

Additional funding opportunities to support the co-production of knowledge and include Indigenous people and organizations in Arctic research can be found on NSF's Office of Polar Programs page.

Arctic Native ice testing stick. Credit: Anatoly Kochnev, National Park Beringia

OTHER RESOURCES

Learn more about NSF's programs for tribal-led research, education and training - including its Tribal Colleges and Universities Program and its Arctic Community Engagement program - at **https://beta.nsf.gov/tribal-support**

Other NSF programs that support tribal nations

The following programs focus on equity in leadership, development and impact and support many tribal-led awards or are especially suitable for tribal-led proposals:

- Advancing Informal STEM Learning
- Innovative Technology Experiences for Students and Teachers
- NSF INCLUDES
- Racial Equity in STEM Education

Additional programs that encourage submissions from tribes include:

- Faculty Early Career Development Program
- Discovery Research Pre-12
- Computer Science for All

NSF Tribal Engagement

NSF Director Sethuraman Panchanathan is committed to improving accessibility to NSF's tribal programs and expanding NSF's reach to tribal nations. NSF engages with tribes whenever tribal interests or resources are potentially impacted as a result of proposed NSF funding. This is part of NSF's responsibilities under Section 106 of the "National Historic Preservation Act."

In compliance with the **Presidential Memorandum on Tribal Consultation and Strengthening Nation-to-Nation Relationships**, NSF has conducted a series of listening sessions, hosted a virtual town hall, and a virtual room, which can be found at **www.NSFTribalEngagement.com**.

In 2021, NSF developed and began implementing the **Action Plan of the National Science Foundation to Enhance Tribal Consultation**, which reflected verbal and written comments from tribal nations and members of tribes.

Testing caloric values as part of Hutlee Umyuarchdelee Math Focus Project. Credit: Todd Paris; UAF