Engaging Rural and Alaska Native Undergraduates and Youth in Arctic STEM

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Arctic Research Consortium of the United States has been connecting Arctic research and education since 1988.

Guided by our Values, we bridge Arctic research across organizations, disciplines, geographies, sectors, knowledge systems, and cultures.

Based in the United States, ARCUS serves a globally connected, diverse Arctic research community, with an emphasis on connecting U.S. researchers.

We are supported by government agencies, foundations, and others who share our enthusiasm for Arctic research and education.
Challenges

- Changing Arctic requires local solutions
- Not enough rural Alaskans and Alaska Native undergraduates and youth in STEM education and career pathways
- Institutions working in the Arctic need to represent and be inclusive of the communities most affected by changes happening in the region
Timeline of the Activities

- Start of project
- Workshop Planning
- Workshop
- Listen & Learn Sessions
- Participant Review
- Report Published
Activities

- Contracted a Facilitator
- Worked with a Steering Committee
- Held Regular Team Meetings
- Conducted Open Listen and Learn Sessions
- Planned an Engaging Workshop
- Participant Involvement in Review Process
- Wrote a Final Report
- Dissemination to Participants, Funders, Community
Guiding Themes

• Cost-Benefit of Participating in Programs
• Accessibility
• Relevance
• Community Engagement
• Long Term & Post-Program Engagement
• Funding
• Outreach and Recruitment
• Mentorship
• Partnerships

Inupiaq Elder Dr. Elizabeth Fleagle, who opened each day of the workshop with a blessing. Elizabeth Fleagle is originally from Alatna in Interior Alaska and now lives in Fairbanks.
The Questions...

What can be done to increase undergraduate & youth participation in existing Arctic STEM programs?

What can programs do differently or how can programs adapt to support student engagement?

Session 1 on outreach & recruitment
Day 1 AM

Session 2 on relevancy, accessibility, and community engagement
Day 1 PM

Session 3 on partnerships & mentoring
Day 2 AM

Session 4 on funding & long-term support
Day 2 PM

Session 5 to pull it all together
Day 3
Purposeful Structure

• Multiple ways to access workshop materials
• Schedule allowed for participants to join in the discussion that mattered to them
• Schedule included long bio-breaks, music, & being off Zoom
• Held a blessing each day
• Started with a Land Acknowledgement
• Everyone had to agree to the Code of Conduct
• Small groups led by trained volunteers and included tools to capture ideas

https://docs.google.com/presentation/d/1WZfnwiObfvsJ72OIMjYebqd6F0AnOAT9vdpaBrGMk3w/edit?usp=sharing
Increase early outreach and exposure to STEM
Define STEM broadly and inclusively to capture a wider group of students.
Redefine how program objectives and success are measured to ensure they are relevant to students and communities.
Draw on partnerships with multiple sectors and organizations
Shift power to students and communities
Remove hurdles to participation, including structural and systemic hurdles
Respect and include Indigenous knowledge and ways of being
Key Take Aways

- Need more time to organize, discuss, implement, share

- Need to be clear about expectations as the process takes time

- Need facilitators and leads to work with the participates, ideally Indigenous and youth centered

- Define terms from the beginning to avoid confusion

- Need more input and involvement from youth (always)!
Final Report


https://www.arcus.org/meetings/2021/arctic-youth-stem
Thank You!

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