

# Engaging Rural and Alaska Native Undergraduates and Youth in Arctic STEM

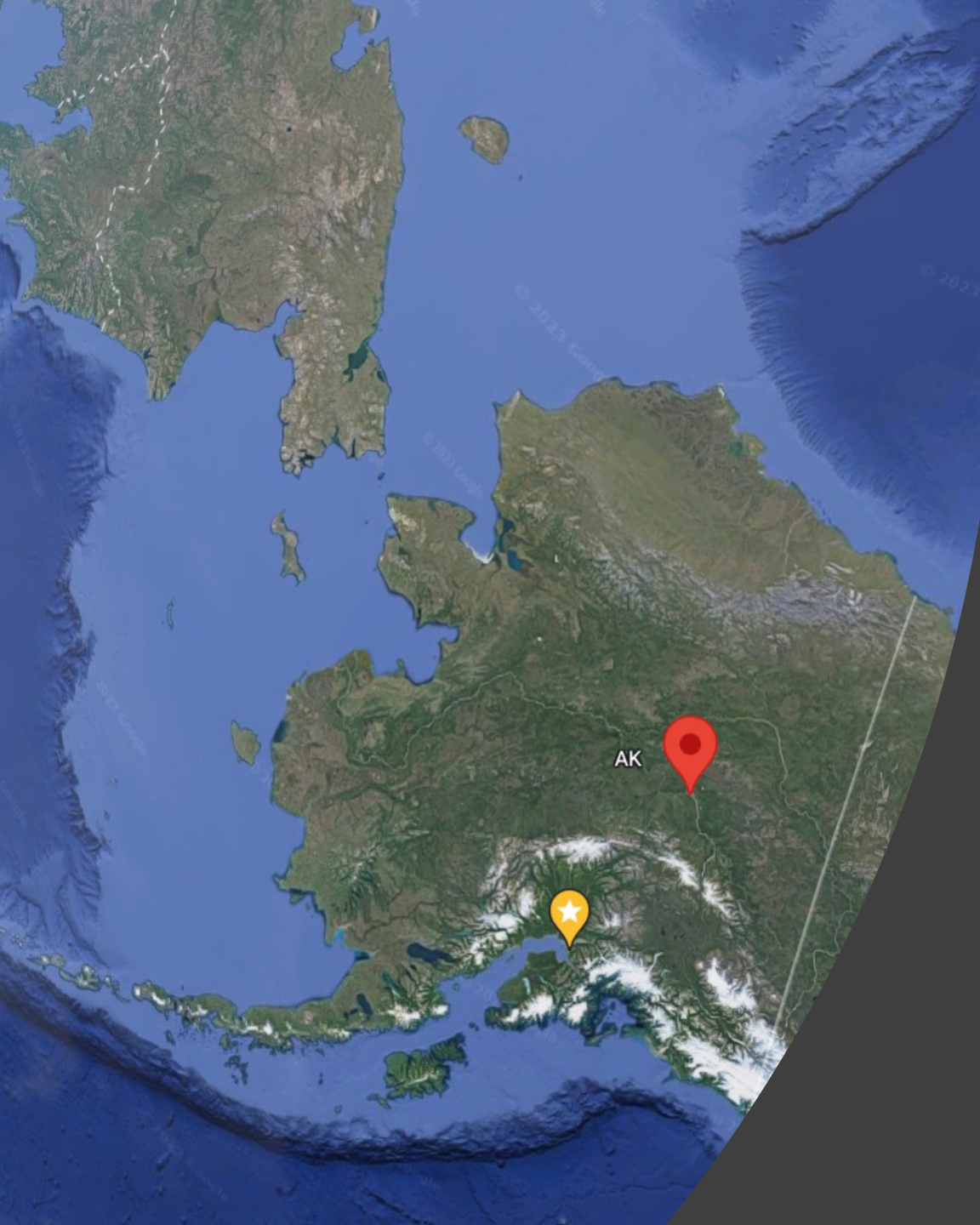
ASSW February 21, 2023

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

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

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

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

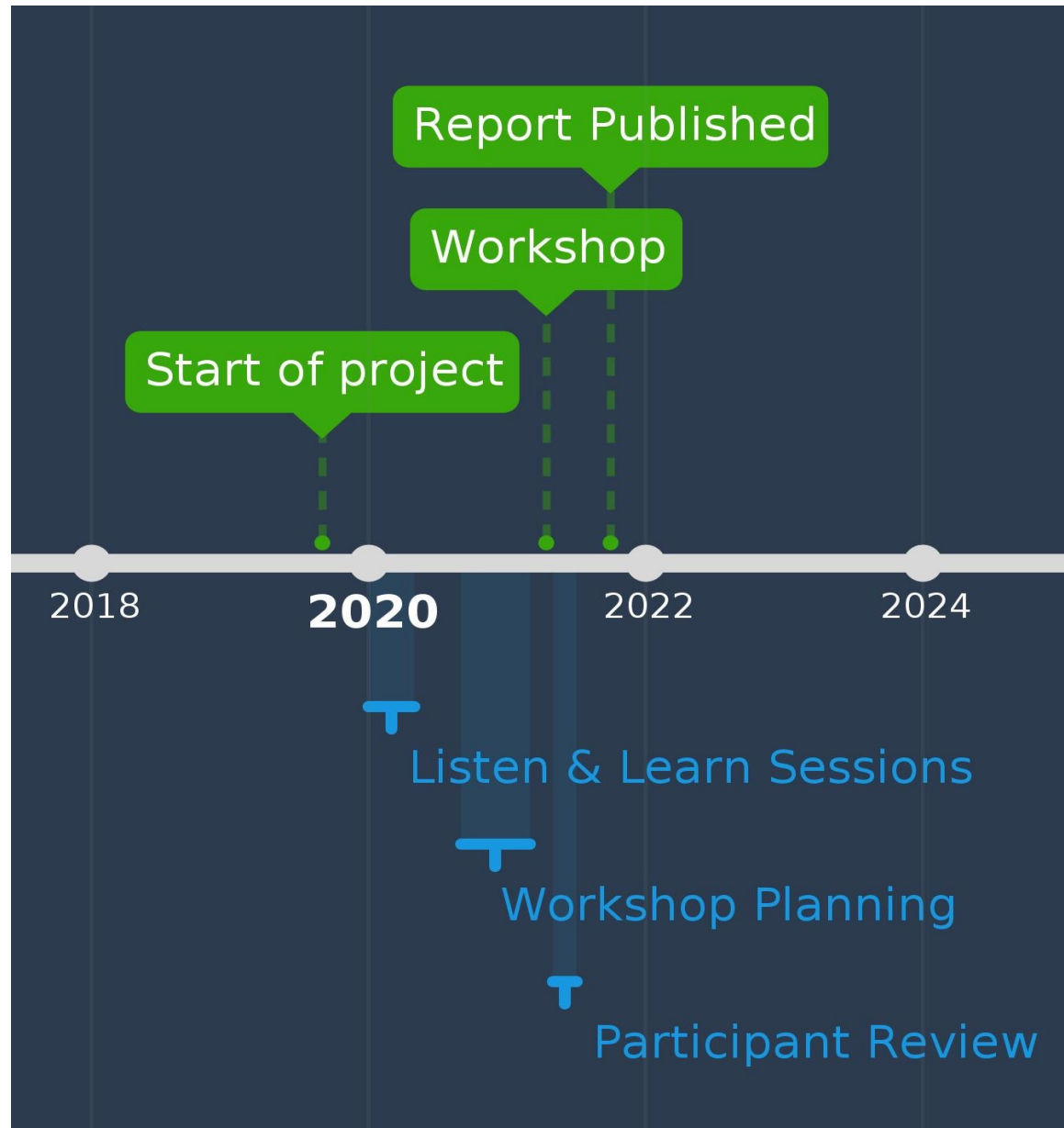


A person wearing a bright red jacket and dark pants stands in a vast, snowy landscape. They are surrounded by several sled dogs of various breeds, some pulling a sled. The background features a dense forest of evergreen trees and distant, snow-covered mountains under a clear sky. The scene is bright and open, typical of a high-altitude or Arctic environment.

# 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





# 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

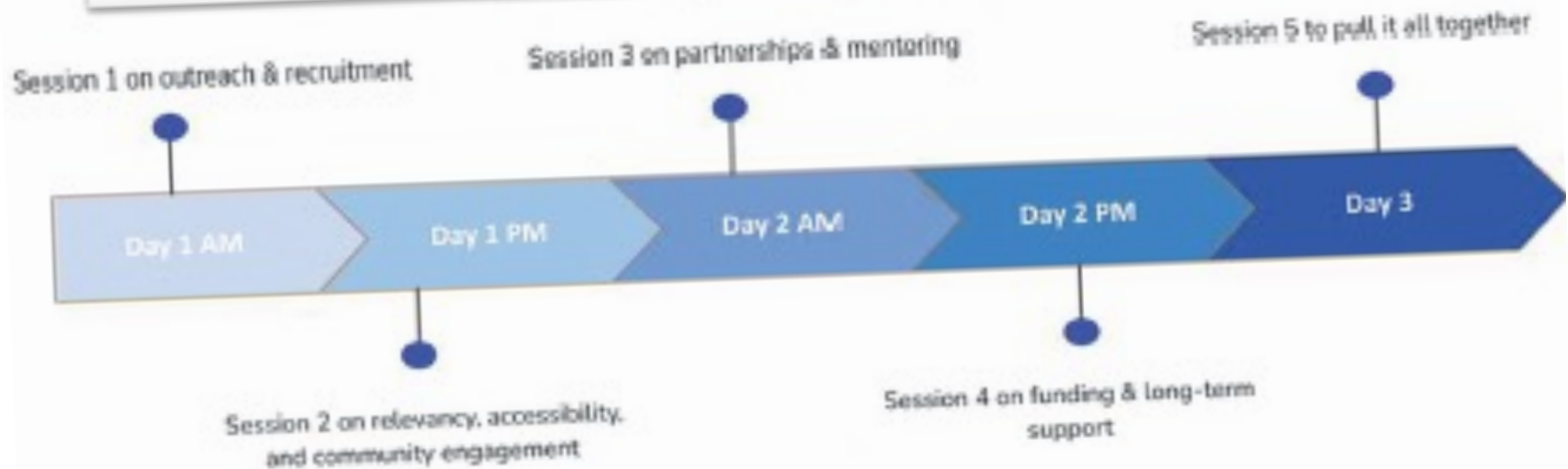
- Cost-Benefit of Participating in Programs
- Accessibility
- Relevance
- Community Engagement
- Long Term & Post-Program Engagement
- Funding
- Outreach and Recruitment
- Mentorship
- Partnerships

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?



# 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



**THE FUTURE IS WITH US**

Spring 2021 Virtual Workshop

Engaging Rural & Alaska Native Undergraduates & Youth in Arctic STEM

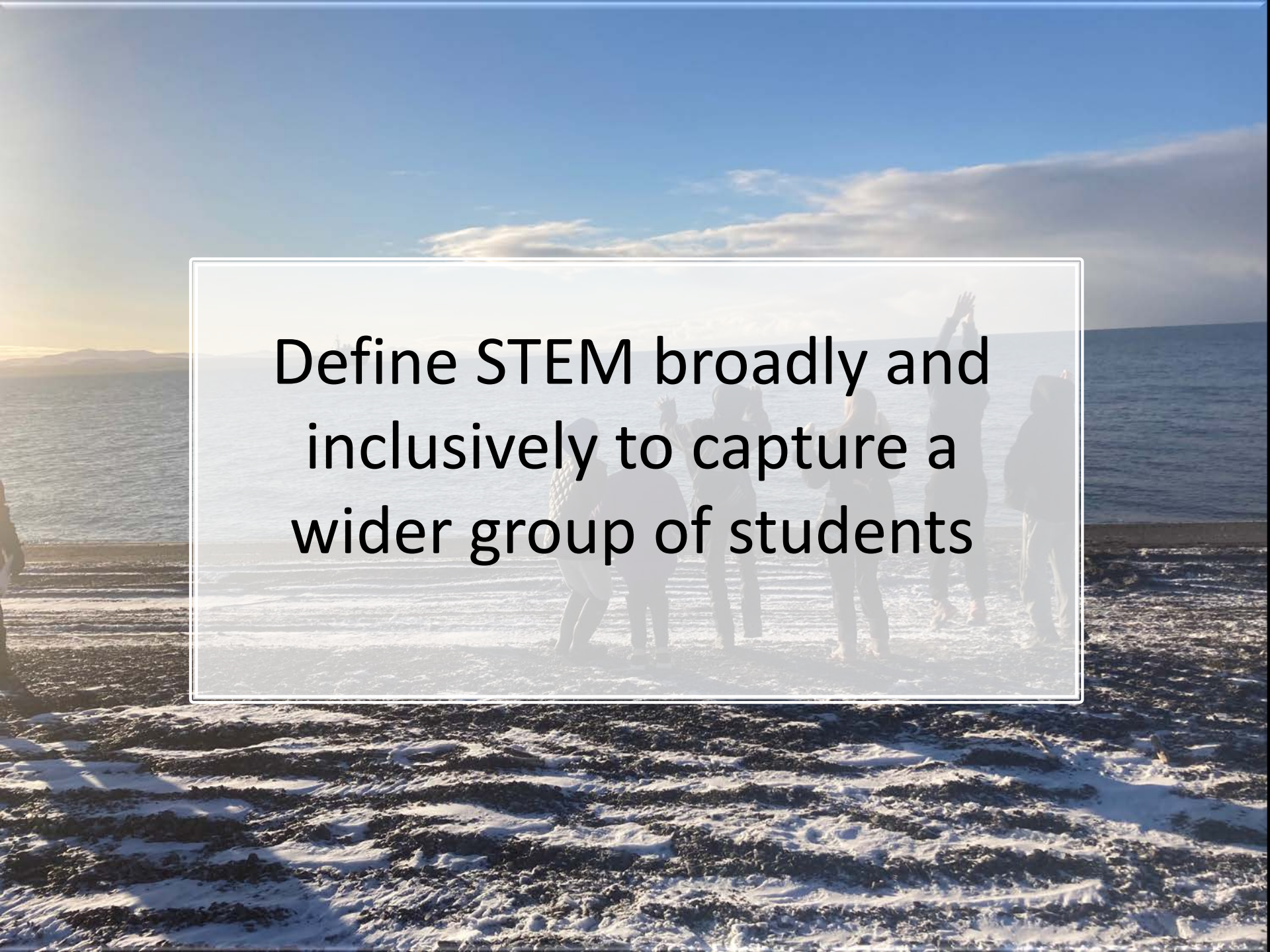
APRIL 13-15, 2021

<https://docs.google.com/presentation/d/1WZfnwiObfvsJ72OIMjY9vdpaBrGMk3w/edit?usp=sharing>



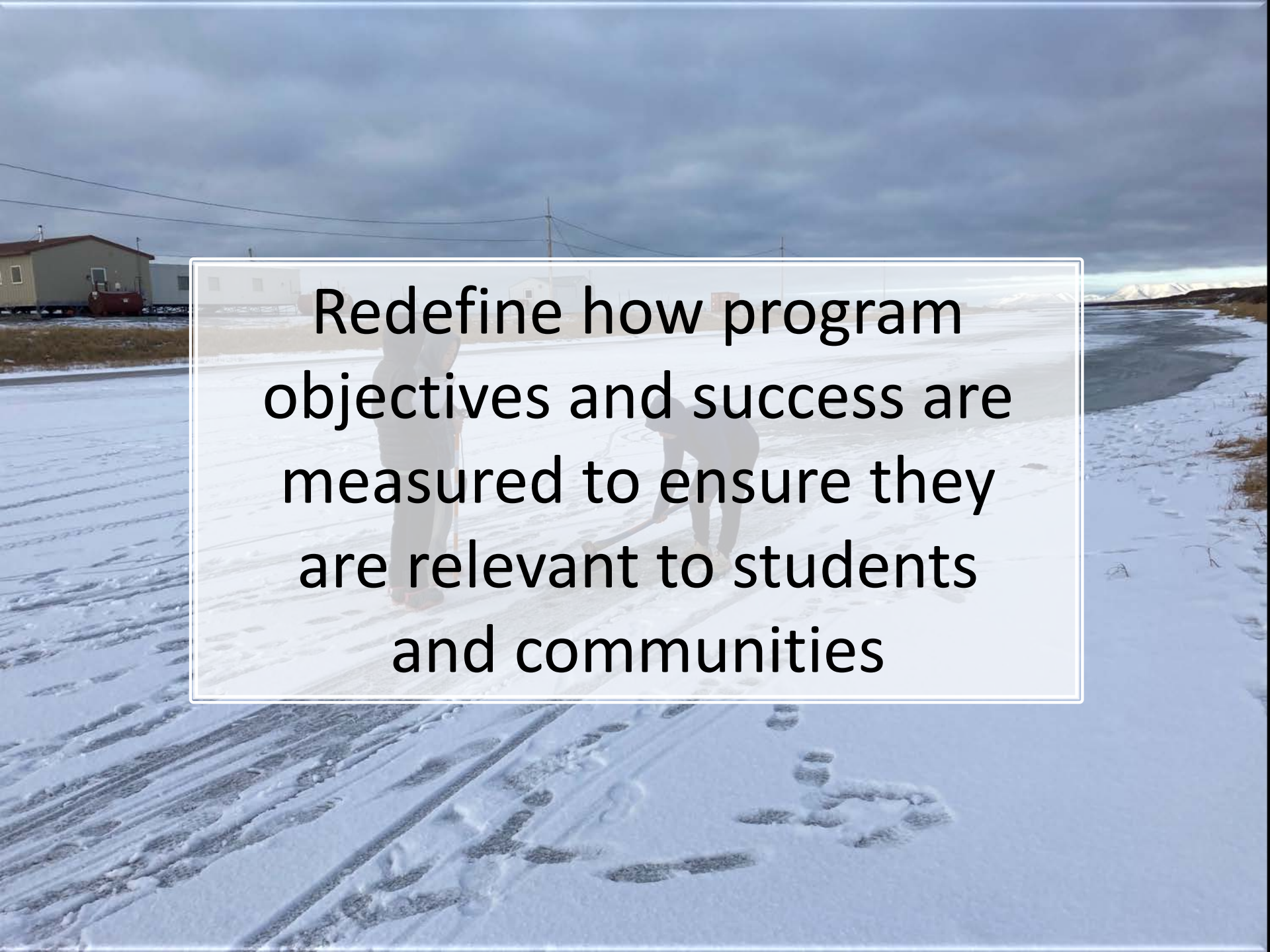
A photograph showing three people, two women and one man, working together at a table. They appear to be engaged in a hands-on activity, possibly a STEM project. The man, wearing glasses and a black t-shirt, is leaning over the table, looking at something the women are holding. One woman is wearing a black t-shirt with the text 'WOMEN'S FILM' visible. The table is cluttered with various items, including a white bottle, a yellow object, and some wires. The background shows a wooden cabinet and a whiteboard.

Increase early outreach  
and exposure to STEM

A group of people is silhouetted against a bright sunset over the ocean. The scene is captured from a low angle, showing the dark, rocky shore in the foreground and the calm sea extending to the horizon. The sky is a mix of blue and orange, with some light clouds. A white rectangular box with a thin black border is centered over the image, containing the text.

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



An aerial photograph of a vast, flat landscape, likely a coastal plain or a large wetland. The ground is covered with a dense network of small, interconnected water-filled depressions or ponds, creating a complex, grid-like pattern. The water reflects the light from the sky, which is filled with soft, white clouds. The overall scene is serene and expansive.

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 participants, ideally Indigenous and youth centered
- Define terms from the beginning to avoid confusion
- Need more input and involvement from youth (always)!

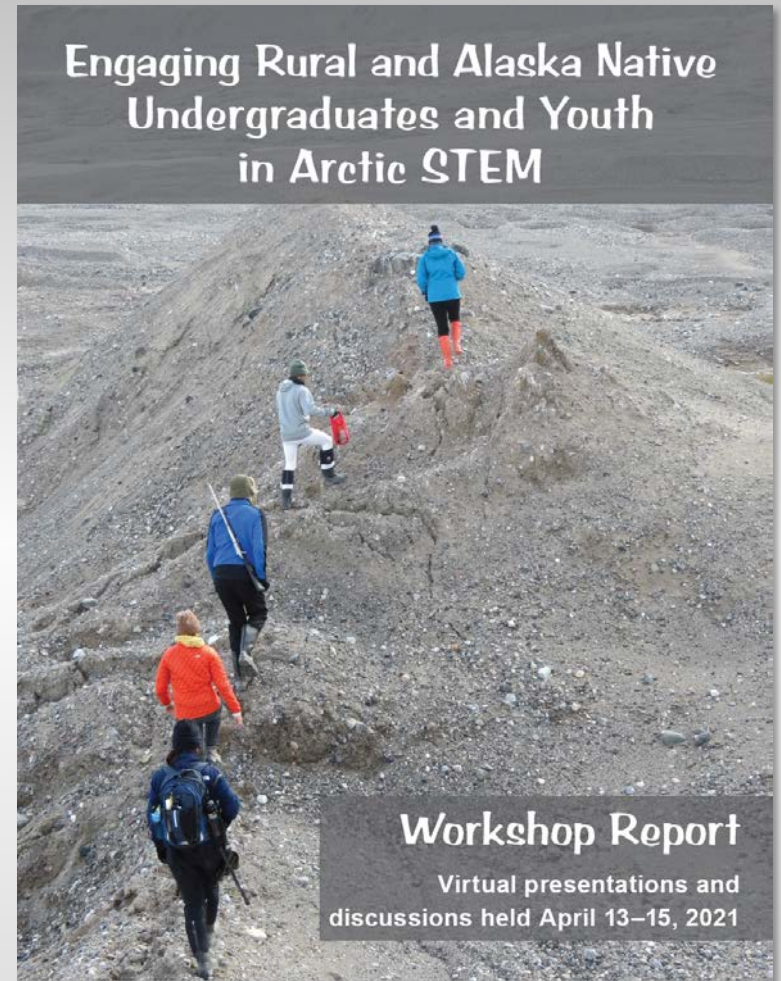




# Final Report

Arctic Research Consortium of the United States. 2021. *Engaging Rural and Alaska Native Undergraduates and Youth in Arctic STEM: Workshop Report*. ARCUS, Fairbanks, Alaska.

<https://www.arcus.org/meetings/2021/arctic-youth-stem>





# Thank You!

## Meet the Organizers



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And, so many  
others that  
helped along  
the way!

Thank you!

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