

Leveraging NSF EPSCOR - T3 Alaska

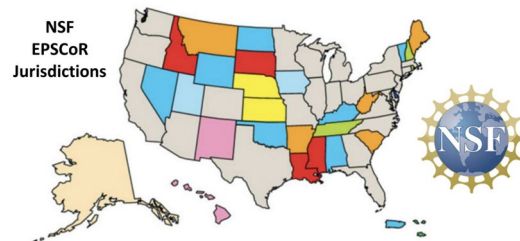
- **Introductions**
- T3 Alaska Model
 - TRIO context
 - NSF EPSCOR history
- Post Expansion
 - Diversified funding
 - UAF integration
 - Industry partnerships
- On the horizon
- Contact info



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Dr. Nicole Norfles Co-PI
Adam Low - Director T3 Alaska



UAF Upward Bound to T3 Alaska



TRIO Upward Bound

TRIO Upward Bound (UB) are federally funded college access programs administered through the Dept. of Education serving high-school students from low-income backgrounds, first-generation to college and students who may have a disability.

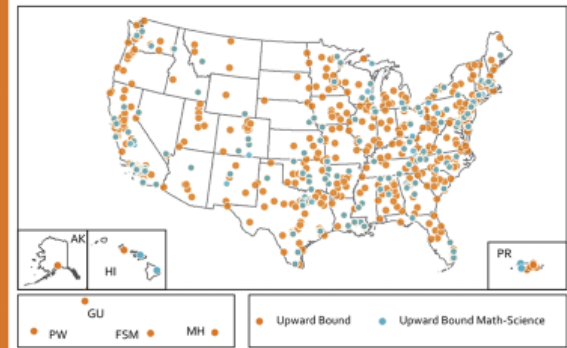
Program Overview: Upward Bound

The UAF Upward Bound Classic Program - 56 years at UAF

- 160 students
- 10 communities
- Academic year support through districts
- Six week residential summer program



Exhibit 2. Upward Bound and Upward Bound Math-Science grantee locations: 2017-18

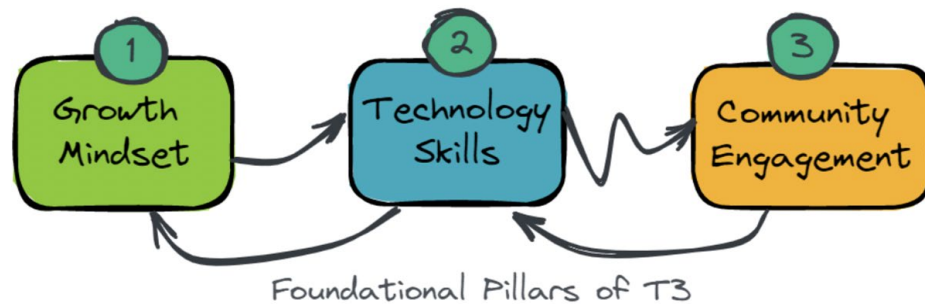
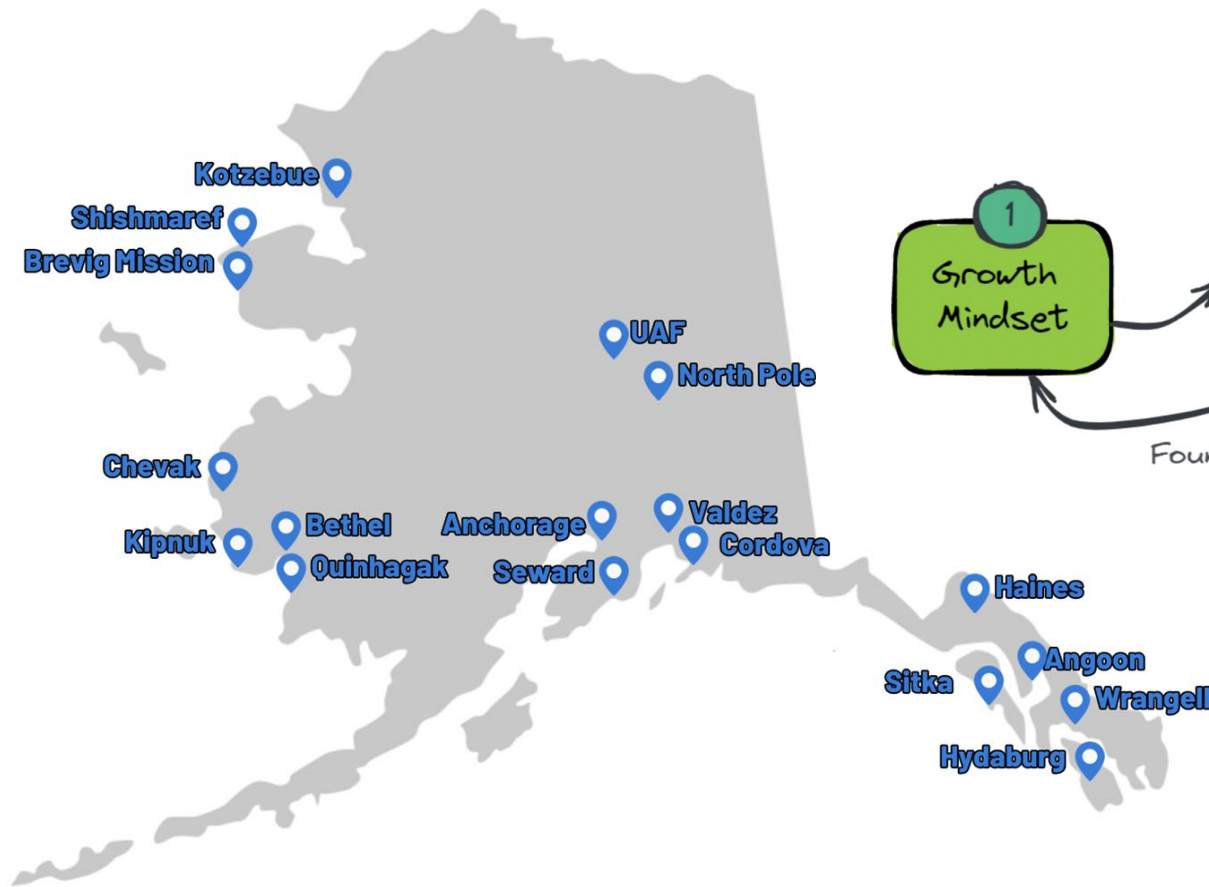


NOTE: AK = Alaska; FSM = Federated States of Micronesia; GU = Guam; HI = Hawaii; MH = Marshall Islands; PR = Puerto Rico; and PW = Palau.

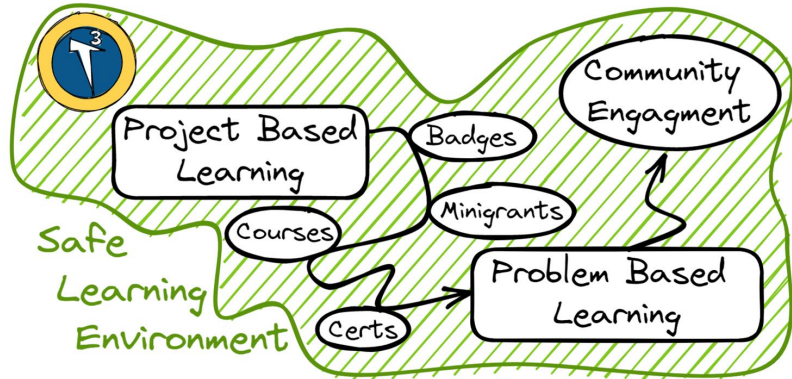
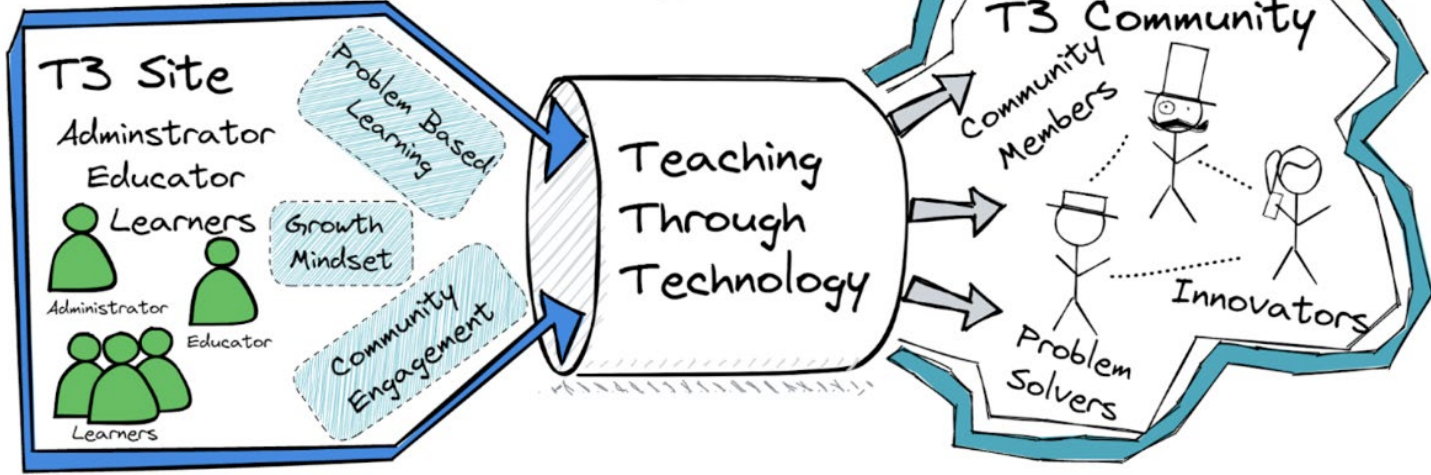
Traditional UB (1030) and UBMS (220)

Alaska Upward Bound provided the foundation infrastructure to test and build what became Teaching Through Technology: **T3 Alaska** & the **National T3 Alliance**

UAF Upward Bound to T3 Alaska



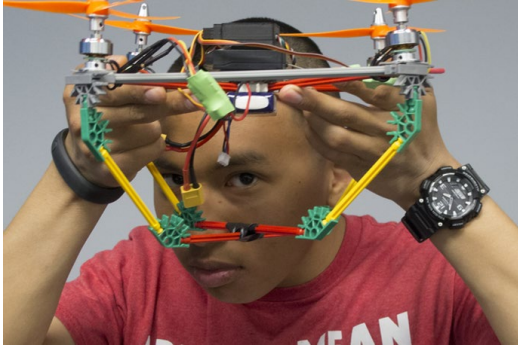
Teaching Through Technology Pipeline



Adaptable Model: PBL vs PBL

Project-based Learning

“Do this.”



“Here is the problem.”

Problem-based Learning



- Complex
- Meaningful/Authentic
- Team/Group
- Inquiry and Choice

Operations - How we do it

School year - at site

- Local Coach / Club
- Statewide Clubs
- STEAMFest / Events
- Makerspaces / Projects
- Credentialing / Badges

Summer Program - UAF

- Multi-week residential
- Tech skill intensive
- Based on partner themes

T3 Badges



T3 Alaska Clubs



Energy



Earth Ops



Makerspace



Drone



T3 in Action - Stories from Alaska





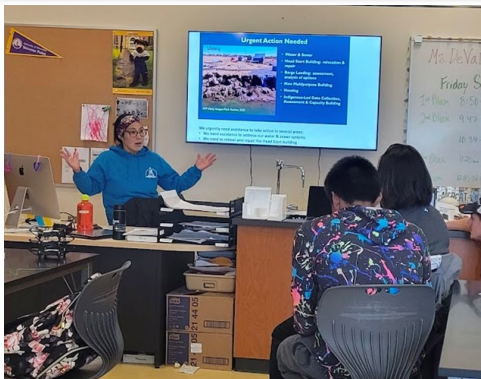
Quinhagak:



Quinhagak - Intro to T3 STEAMFest




Addressing climate change with T3



T3 Mini-grant Proposal

Summer 2023 MINI-GRANT PROPOSAL

OVERVIEW	
PROBLEM ADDRESSED	<p>Our communities main problems are erosion and permafrost. Over the past decade our old airport road has completely eroded and continues to. Along with our beach, which is very concerning because of the proximity to the sewer lagoon. Also permafrost has been melting under important buildings causing them to be unlevelled and damaged.</p> 
PROJECT Description	<p>The main problem with our village is permafrost and erosion. We can't really fix erosion but with permafrost, we have permafrost probe sensors. In order to put the sensors in the ground we need the spikes.</p>
VALUATION METHODS	<p>The data collected from the sensors will be put into a graph and compared to previous data from the community. Then continue to discuss future plans for the club and community. Lastly, a presentation will be given to the community.</p>



Bethel - T3 Afterschool Clubs and Projects



Ask An Elder: Digital Storytelling



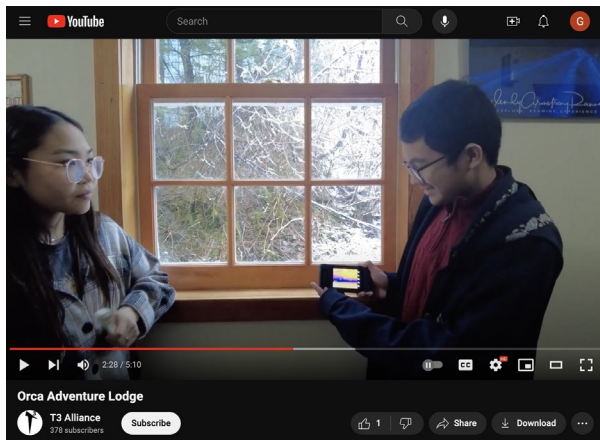
Cordova Energy Audit & Mariculture Trips

Cordova Adventure Lodge



Our Findings

- Heating pumps could save up to \$34,244/year
- Insulation improvements can be made
- Windows are consistently $\sim 20^\circ$ cooler than walls





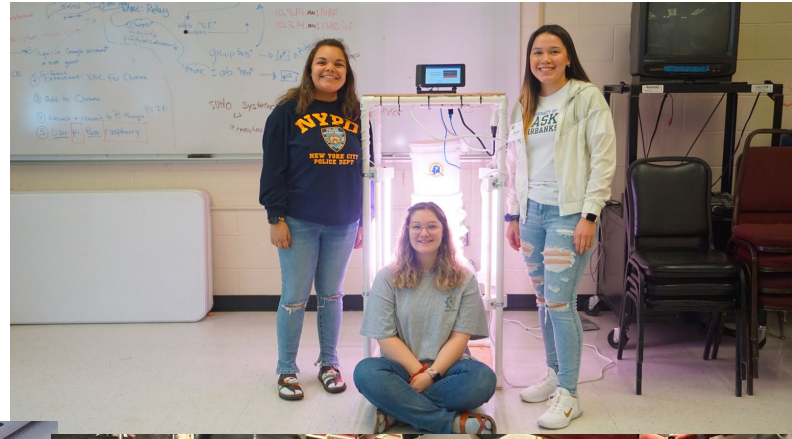
Shishmaref and Fairbanks



Shishmaref - Upward Bound / T3



Pathway to UAF Geosciences and T3 Staff



UAF Makerspace



On the horizon for T3 Alaska

Expanded summer program opportunities.

New Cyber and Mariculture Statewide clubs.

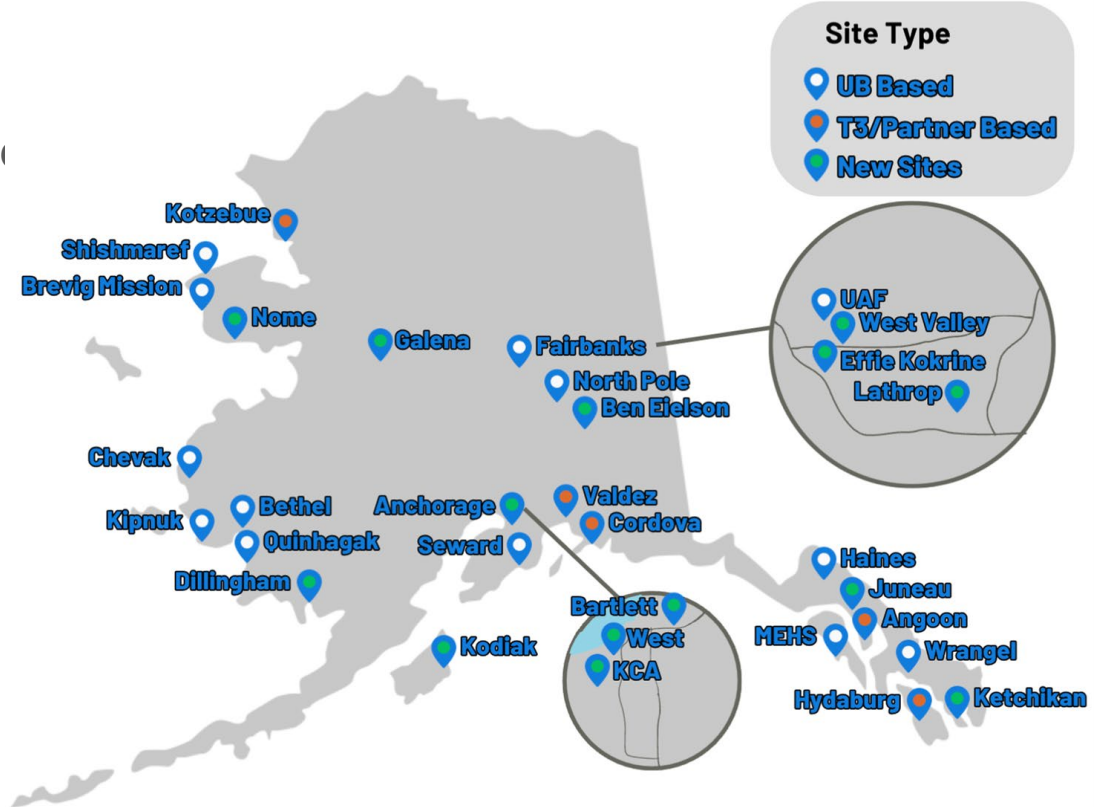
Partnership with Alaska DOT
Alignment with internships.

Interdisciplinary PhD Cohort

CTE alignment for STEM classes

Share through TRiO

T3 Alaska Sites



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