



# Engaging Communities in Innovative STEM Programs

Education Innovation and Research Webinar Series

Thursday, September 12, 2024



# Agenda

Objectives Overview

Introductions

Opening Comments

Panel Discussion and Conversation

Additional Resources



# Today, our panelists will discuss...

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strategies for engaging communities effectively when implementing STEM initiatives in rural and tribal places

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approaches to common challenges around effective community engagement



# Nancy Gannon



**Technical Advisor**  
FHI360



# Debora Southwell



**Management and Program Analyst**  
Education Innovation and Research Program  
U.S. Department of Education



# CS4NorCal Directors



**Kathy Hamilton**  
Director  
CS4NorCal



**Karen Mix**  
Co-Director  
CS4NorCal

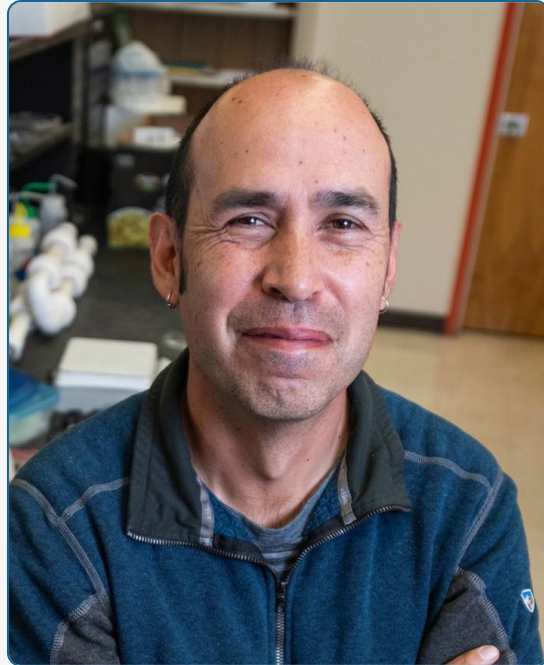


**Tanja Ramming**  
Director  
Advancing Modoc





# Montana American Indians in Math and Science (MT AIMS) Directors



**Dr. Aaron Thomas**  
Project Director, MT AIMS  
University of Montana



**Stephan Chase**  
Director of Native American Initiatives  
Associate Director of Upward Bound  
New Mexico Tech



# Education Innovation and Research (EIR)



## **Explore**

new ways of addressing persistent challenges, designed that other educators can build upon them.



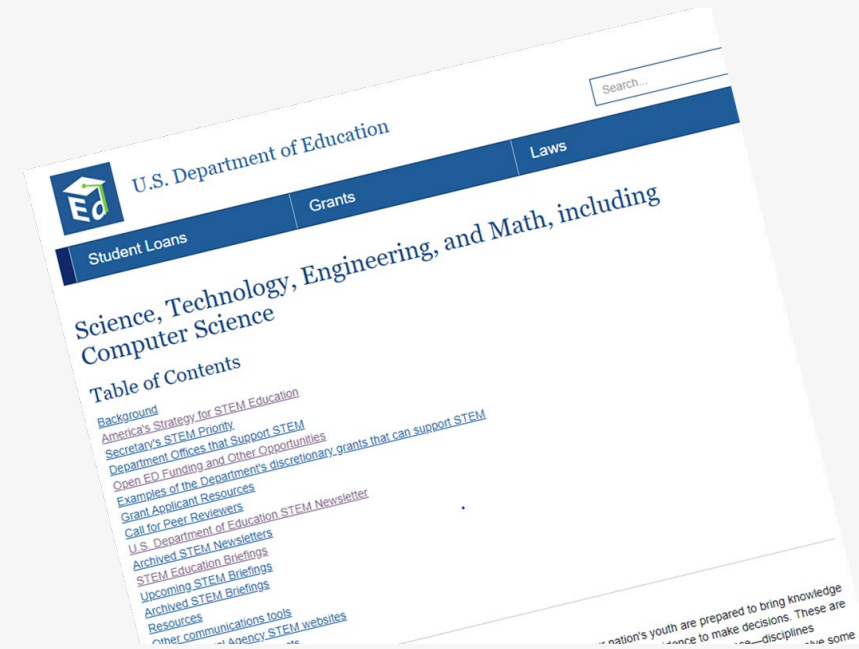
## **Sustain, replicate, and scale**

successful practices in new schools, districts, and states, or with new demographics of students, and address barriers to scale, such as cost structures and implementation fidelity



## **Build the evidence**

on effective educational practices to improve achievement for high-need students by expanding existing innovative education practices.







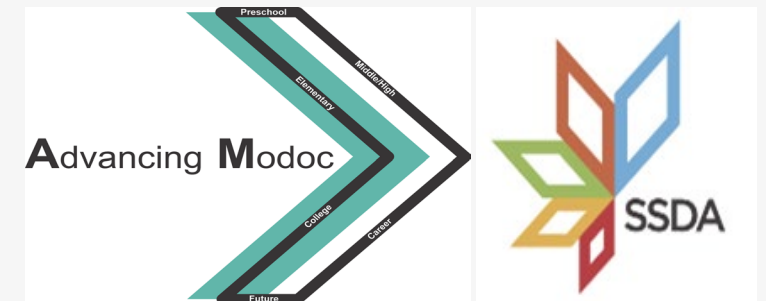
# CS4NorCal

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Karen Mix, CS4NorCal Co-Director, [karen@cs4norcal.org](mailto:karen@cs4norcal.org)  
Tanja Ramming, Advancing Modoc Executive Director, [amy@teachinginc.org](mailto:amy@teachinginc.org)  
Yuri Calderon, Small School Districts' Association Executive Director, [yuri@ssda.org](mailto:yuri@ssda.org)



## CS4NorCal

Computer Science and STEM Education  
Rural Implementation Model



# CS4NorCal and Community Engagement

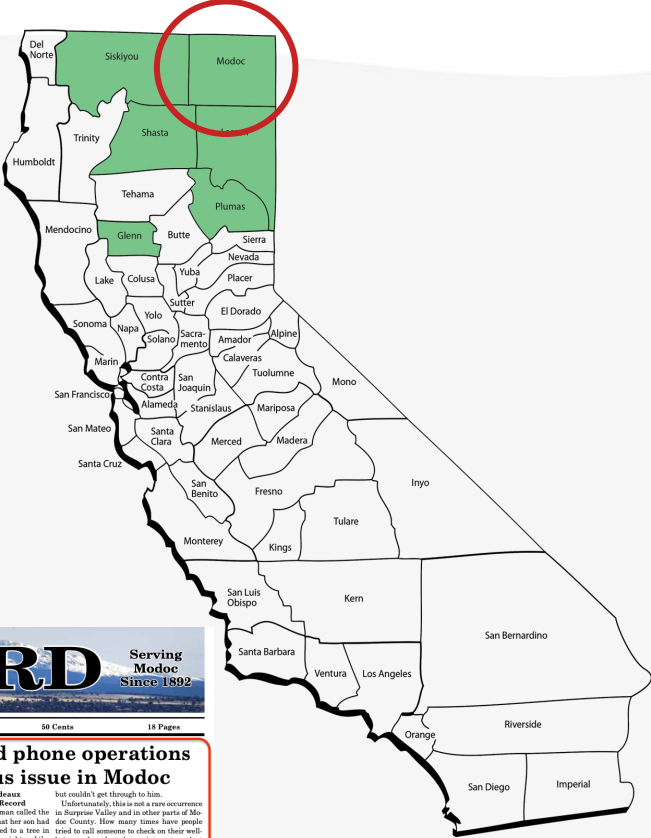
## Theory of Action:

Utilize the County Office of Education to engage the local community



# General Challenges

- Remoteness and isolation ≠ professional learning
- Modoc County: teaching & broadband “desert”
- Pandemic and shift to remote learning
- Lack of knowledge about and interest in computer science education
- COE was staff stretched too thin to fulfill the role of CS Champion



**The Modoc County RECORD** Serving Modoc Since 1892  
 Vol. 130, No. 51 Alturas, California May 4, 2023 50 Cents 18 Pages

**Cell and phone operations a serious issue in Modoc**

**By Jean Billedeau**  
**Special to the Record**

A very distraught woman called the Modoc Record saying that her son had been beaten and chained to a tree in an ice-filled creek. It was night and the winter temperature was below zero. She was frightened.

Another resident of Surprise Valley was experiencing a pulse rate of 161 per minute, nearly double the normal rate. She needed help.

A man living in Surprise Valley was driving 200 miles to see a specialist in Reno. He stopped in Cedarville to call and check if his appointment was still as planned.

These three incidents had one thing in common, their phones didn't work. The rain and snow soaked woman went door to door asking to use their phone to call for help. Eventually she got through to the sheriff. The person with the rapid heart-beat could not talk to the hospital until he was able to call at this time. The man who went to his specialist was told that the office had been trying to reach him for a week, to reschedule his appointment.

Unfortunately, this is not a rare occurrence in Surprise Valley and in other parts of Modoc County. How many times have people tried to call someone to check on their well-being, make a doctor's appointment, conduct a business transaction, or just call a friend to talk, and were unable to do so because of poor or nonexistent cellphone service.

A few may even complete their call and within seconds have their call dropped, or be told by a computerized recording that the number is no longer in service, or the page has to be full, or the number is not taking calls at this time when they'd just been talking to them a few seconds earlier. One person's personal record for being dropped in one call is nine times. That's nine times the person called the same number just to finally give up and say, "I guess I'll try again tomorrow."

Many times when a solid connection is made, the audio is so garbled that the caller can't understand what is being said. Leaving the hospital only to have a recording that the hospital wasn't taking calls at this time. It is also not unusual to not have any phone service for days at a time. Many see Phones, page 4

**US Cellular enhances network**

US Cellular has enhanced its network in Modoc County by adding additional bandwidth and capacity to its Willow Ranch cell site. These enhancements improve voice and messaging quality and to connect to what matters most.

For more news and information about US Cellular, go to [www.uscellular.com](http://www.uscellular.com).

About US Cellular:





# Modoc County Approach and Early Successes

Advancing Modoc, a local cradle-to-career initiative, is the solution that emerged.

Executive Director Tanja Ramming assumed the role of county CS Champion and has been responsible for community engagement.

**Advancing Modoc Mission:  
GROW → TRAIN → RETAIN**





# K-12 STEM Program Building Trust within Montana Tribal Communities

Aaron Thomas (Dine')  
Professor of Chemistry, University of Montana  
Director  
Montana American Indians in Math and Science (MT  
AIMS)

Stephan Chase (Dine')  
New Mexico Institute of Mining and Technology



MT AIMS





# What is MT AIMS?

## 3 components

1. Gatherings for new students.
  - 10-day camp
2. Journeys for returning middle school students.
  - 7-day camp
3. Pathways for returning high school students.
  - 12-day camp

Students going into grades 6-10





# MT AIMS Program

Experience life like a college student

- Stay in dorms
- Eat at the Food Zoo
- STEM Classes in multiple campus buildings
- Activities led by University Faculty, Staff and Students

Monthly grade checks

In-person visits

- Review grades
- Provide encouragement
- Locating resources
- Paying small cash stipend
  - 'C' or better in all classes
  - Prep for college



# Tribal Nations

## Montana – 12 tribes, 7 reservations

- The Blackfeet Tribe of the Blackfeet Reservation
  - Amskapi Pikuni
- Confederated Salish & Kootenai Tribes of the Flathead Reservation
  - Séliš
  - Qlispé
  - Ktunaxa-Ksanka
- Crow Tribe of the Crow Reservation
  - Apsáalooke
- Fort Peck Tribes of the Fort Peck Reservation
  - Nakoda
  - Dakota
  - Lakota
- Northern Cheyenne Tribe of the Northern Cheyenne Reservation
  - Tsetsêhesêstâhase
- Fort Belknap Tribes of the Fort Belknap Reservation
  - A'aninin
  - Nakoda
- Chippewa Cree Tribe of the Rocky Boy's Reservation
  - Ojibwe
  - Ne-i-yah-wahk
- Little Shell Chippewa Tribe
  - Ojibwe Métis



<https://tribalnations.mt.gov/tribalnations>





# Questions & Conversation

# Resources for Today's Session

- U.S. Department of Education EIR Program – [EIR@ed.gov](mailto:EIR@ed.gov)
- Raise the Bar: Lead the World – <https://www.ed.gov/raisethebar>
- U.S Department of Education STEM Initiatives – <https://www.ed.gov/stem>
- Tribal Nationals of Montana – <https://tribalnations.mt.gov/tribalnations>



# Upcoming EIR Webinar Series Events

## Leveraging Evaluators to Enhance Innovative Projects

- Thursday, September 26, 2024
- 2pm ET / 11am PT





**Thank You!**