Coupling Mathematical Modeling Professional Development with Community Connection Events

MAA MathFest
August 3, 2023

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Agenda

Creating strong, motivated learning communities centered on local contexts

Event Description

- STEAM Expo
- Mathematical Modeling PD
- Community Connection Events

Themes from Participant Reflections

Recommendations

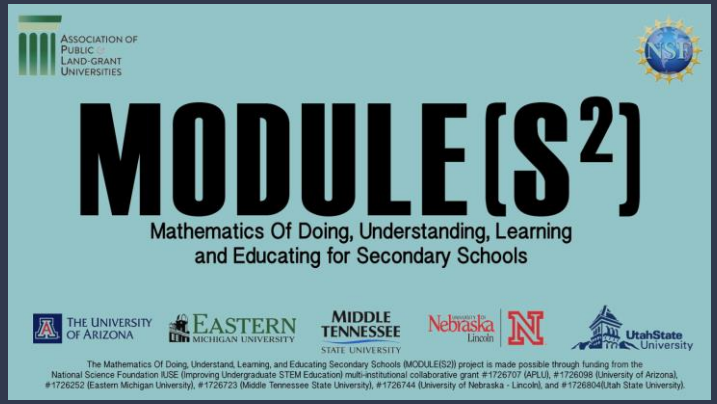
Utah State University STEAM Expo and Teacher Workshop

This year's emphasis: bringing different communities together for a collaborative experience

- Well-promoted and supported by department head
- College of Science JEDI committee support
- Local faculty encouraged and facilitated school districts' participation

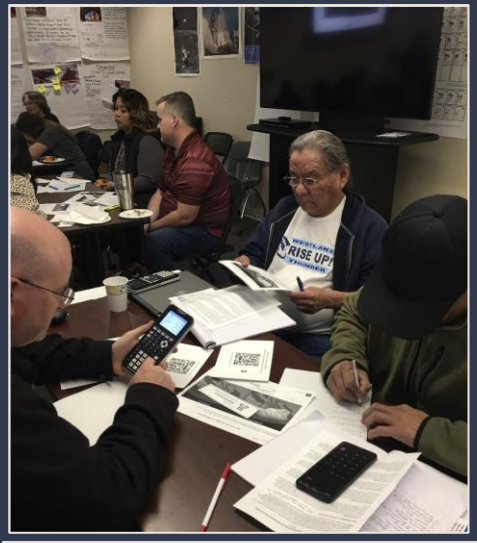
"We recognize Utah State University Blanding resides on the ancestral, traditional, and contemporary lands of the Navajo Nation, San Juan Southern Paiute Tribe, and the White Mesa Ute peoples. USU commits to creating and instilling a continuous relationship with tribal nations and fostering a partnership through community, family (clan/bands), research, education, and programming. In offering this land acknowledgment, we affirm Tribal Sovereignty, history, and experiences."

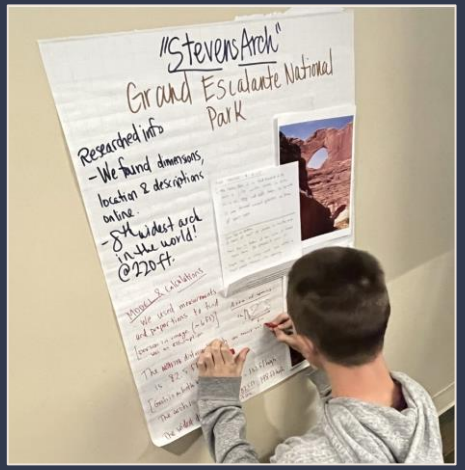
Mathematical Modeling Teacher Workshop

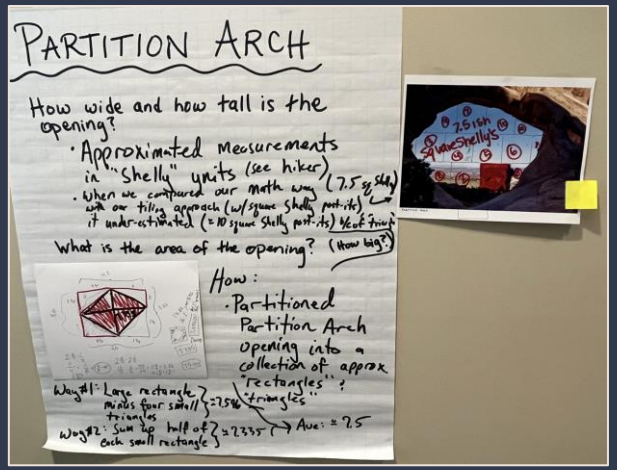


Cynthia Anhalt: Director of Mathematics Education, University of Arizona

What do you notice?
What do you wonder?
What do you already know about your monument?
How would you describe your monument geometrically?

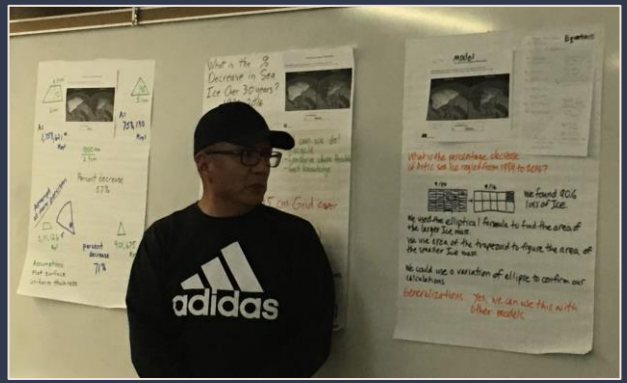






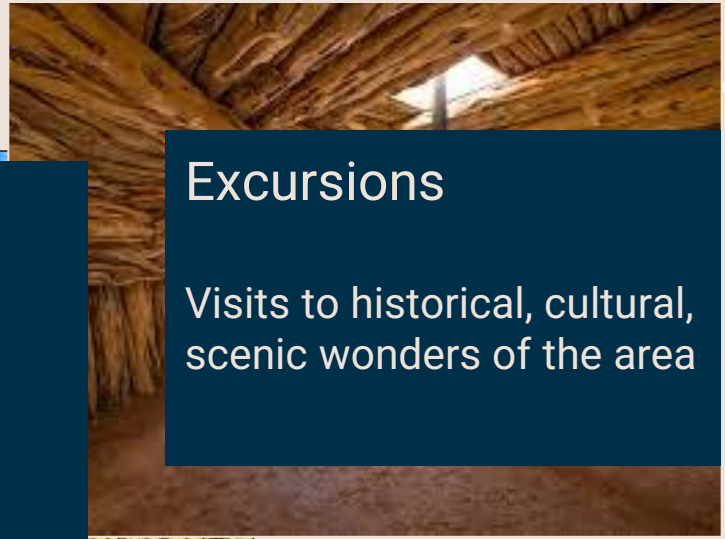
Community of Learners

- Local Teachers (grade 5-12 math, science, special education)
- Faculty (math/stat department across regional campuses)
- University Students (undergrad/grad/preservice teachers)



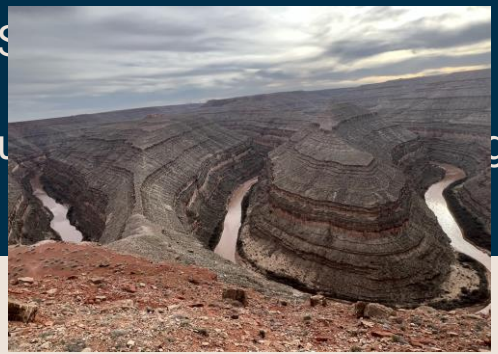
Community Connection Events

USU College of Science JEDI Committee



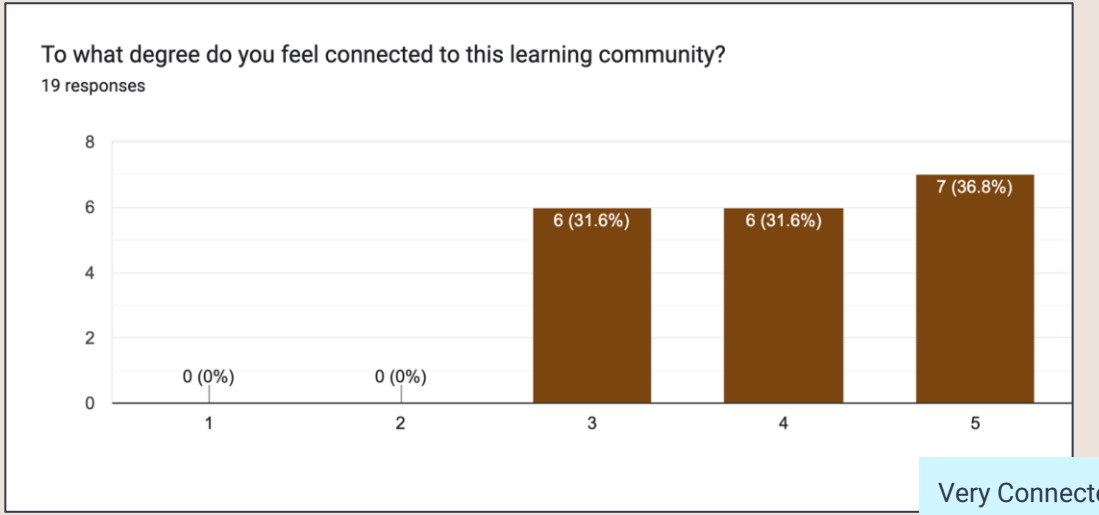
Excursions

Visits to historical, cultural, scenic wonders of the area



Participant Reflections

Strong sense of belonging and connection to the learning community



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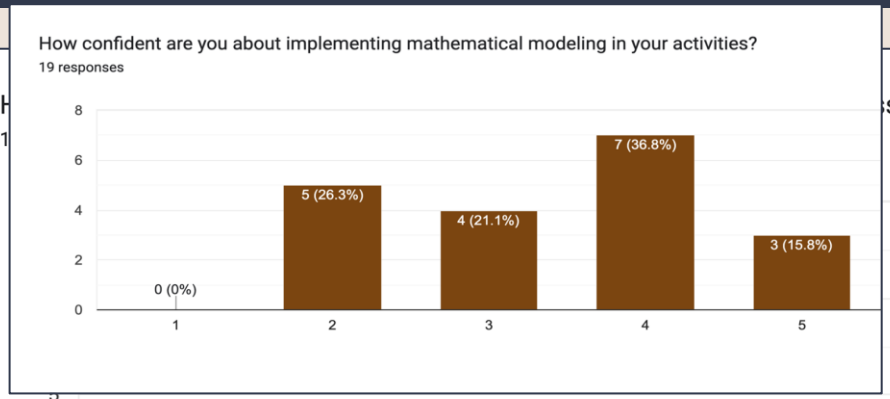
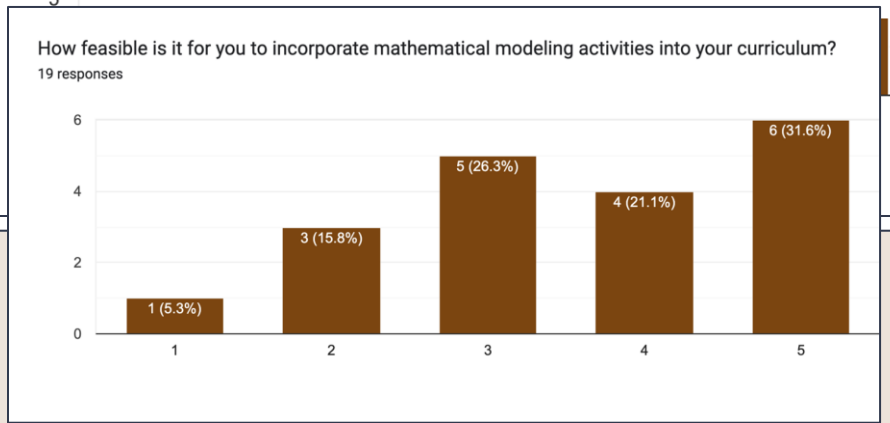
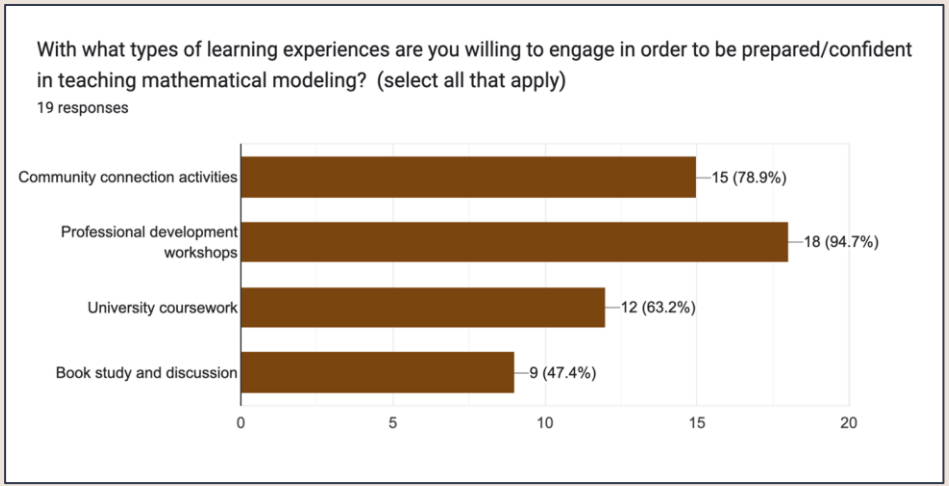




High interest in incorporating mathematical modeling into the classroom

- Relevance to learning community
- Mixed levels of confidence & feelings of feasibility
- Desire for more training

Participant Reflections



Willingness to participate

- future professional development (95%)
- community connection events (79%)

Recommendations

for building motivated, connected learning communities

- Provide more collaborative opportunities to engage with mathematical modeling.
  - Diversity & Creativity
- Focus mathematical modeling professional development on local contexts.
- Engage in collaborative cultural exchange as part of PD.

Questions or Comments?

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Thank you!