

Defining “Culturally Sustaining STEM” through Research, Evaluation, & Practice

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About the Study: This poster shares initial reflections and challenges in defining, implementing, and documenting impact around culturally sustaining, informal STEM learning programs designed to engage families in rural communities.

Project Goals: Refine promising practices and expand the capacity of informal science institutions and their partners to create culturally sustaining STEM (CSS) family programming that supports rural families' continued participation in STEM.

A Research to Practice Partnership (RPP): This project was designed as a RPP where research and evaluation results inform the iterative development of multi-day, informal STEM learning workshops for families in rural communities. Participants in the RPP include:

- A project leadership team of programming and professional development experts, researchers, and evaluators; and
- Informal educators, STEM professionals, and community partners from 4 informal science learning institutions located in rural American communities.

Our working principles for “culturally sustaining STEM” programs:

1. Understanding the values, needs, experiences, and interests of the families in the series.
2. Building a sense of belonging in the program, informal learning institution, and in STEM more broadly.
3. Families leave the workshop series with a deeper understanding of themselves, each other, and their community in relation to STEM.

These definitions draw on the work of Django Paris (2021) and the Learning in Places Collaborative (2020).

Where We Are

What We’re Continuing To Think About

Project-level		
In the professional development we moved from a theoretical framing of culturally sustaining STEM toward more grounded conversations about what it looks like in practice.	→	How do we <i>understand</i> the impacts of culturally sustaining STEM while we are still refining what it means?
Practitioner level		
Practitioners have realized that strengthening community partnerships in order to deeply connect with, understand, and invite in audiences is an important first step toward laying the groundwork for culturally sustaining STEM.	→	How do we support practitioners in <i>implementing</i> culturally sustaining STEM while not reinforcing the narrative that there’s one “right” way?
Family level		
We found that family engagement in both traditional (e.g., science, engineering activities) and non-traditional (e.g. gardening, cooking) STEM activities increased significantly after as compared to before the program.	→	How do we better <i>measure the impacts</i> on families? What counts as a STEM-related activity? And how do we relate STEM participation to culturally sustaining practices?

How are youdefining “culturally sustaining”?supporting these outcomes?defining these impacts?
gathering feedback from family participants?



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