

Capitalizing on Culture

NICOLETTE NALU & AMBER TRANTHAM
AMSTI MATH SPECIALISTS



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- ▶ **Mathematics is a cultural activity.** The way in which people engage in mathematics is often determined by who they are, where they are and how they and the people around them think about mathematics.
 - ▶ **Ethnomathematics** as a term used to “express the relationship between culture and mathematics” (p. 308). As he explains, “Mathematics is a compilation of progressive discoveries and inventions from cultures around the world during the course of history. Its history and ethnography form a wonderful mosaic of cultural contributions.” (p. 310) D’Ambrosio 2014

Mathematics Observed in Human Culture



You **cannot** separate the context from the Math and expect students to understand.

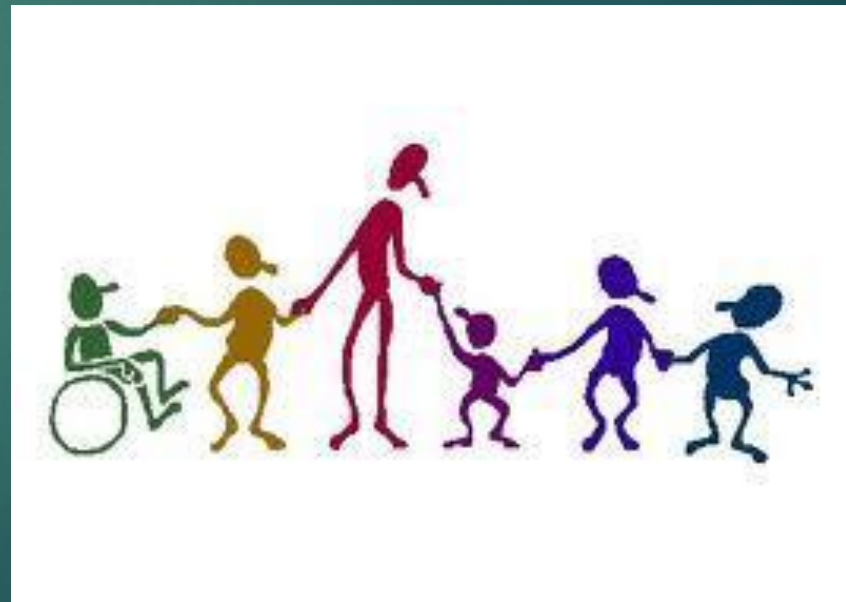


Why is Mathematics important to learn?



Reframe deficit discourse.

- ▶ Envision what you want.
- ▶ Create strength framed discourse
- ▶ Dismantle the structures that impede the progress of students



Where to begin....

- ▶ How do we provide mathematics opportunities for our students that build both their grit, math confidence. And funds of knowledge?



Mathematical Practice Standard 2

Reason Abstractly and Quantitatively

- ▶ Contextualize
- ▶ Decontextualize
- ▶ Meaning of quantities
- ▶ Representing symbolically

Children who are special to us can do special things.

► Dr. Lee Stiff



Adrienne Stiff-Roberts

Associate Professor of Electrical and Computer Engineering

Dr. Stiff-Roberts received both the B.S. degree in physics from Spelman College and the B.E.E. degree in electrical engineering from the Georgia Institute of Technology in 1999. She received an M.S.E. in electrical engineering and a Ph.D. in applied physics in 2001 and 2004, respectively, from the University of Michigan, Ann Arbor, where she investigated high-temperature quantum dot infrared photodetectors grown by molecular beam epitaxy. Dr. Stiff-Roberts joined Duke University in August 2004, and she is currently an Associate Professor.



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Leading for Social Justice in Mathematics



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Amber Trantham
atrantham@jsu.edu

Nicolette Nalu
nnalu@montevallo.edu