From Math Teachers' Circles to the Classroom: Making Math Fun for Students

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What are Math Teachers' Circles?

MTCs are professional learning communities in which teachers and mathematicians engage in mathematical exploration as genuine learners while effective problem solving practices are modeled and implemented. Through social interaction, participants construct a shared identity with a desire to grow mathematically and professionally through collective learning experiences.

Goals of a MTC:

- To engage school math teachers in mathematical problem solving
- To involve teachers in an ongoing dialogue about mathematics with students, colleagues, and professional mathematicians
- To provide guidance, materials, and resources to teachers that will enable them to promote open-ended problem solving as a way of learning, thinking about, and practicing mathematics in their classrooms.

Math Teachers' Circle Network

Active Math Teachers' Circle
Formerly active Math Teachers' Circle
Math Teachers' Circle coming soon…

American Institute of Mathematics

https://www.mathteacherscircle.org/

Smoky Mountain Math Teachers' Circle Leadership Team 2014

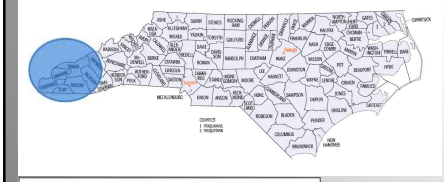
Michelle Massingale
Fairview School

Brook Stillman
Mountain Discovery Charter School

Renee Stillwell
Cullowhee Valley School

Sloan Despeaux
Western Carolina University

Nathan Borchelt
Western Carolina University



SM²TC

The Smoky Mountain MTC establishes an encouraging, collaborative, and non-competitive community of mathematics educators in Western North Carolina for the purposes of exploring rich mathematics tasks and encouraging personal, professional growth through fun and engaging experiences.

North Carolina Network of Math Teachers' Circles

https://sites.google.com/site/ncnmtc/

NORTH CAROLINA GlaxoSmithKline FOUNDATION

Benefits of MTCs

Math Teachers' Circles address the isolation of both teachers and practicing mathematicians by creating communities of mathematical practice in which teachers and mathematicians can learn about each others' profession, culture, and work. (CBMS, 2012)

Four principal categories were identified as areas of growth through MTC participation: Mathematical Content Knowledge, Attitudes about Mathematics, Instructional Practices, and Professional Activities. (White & Donaldson, 2011)

An AIM survey discovered that 97% of respondents indicated that had grown mathematically as a result of MTC participation while 84% reportedly had changed something about the way that they teach mathematics. (Silverstein, 2014)

Principles to Actions

Implement tasks that promote reasoning and problem solving.

Use and connect mathematical representations.

Facilitate meaningful mathematical discourse.

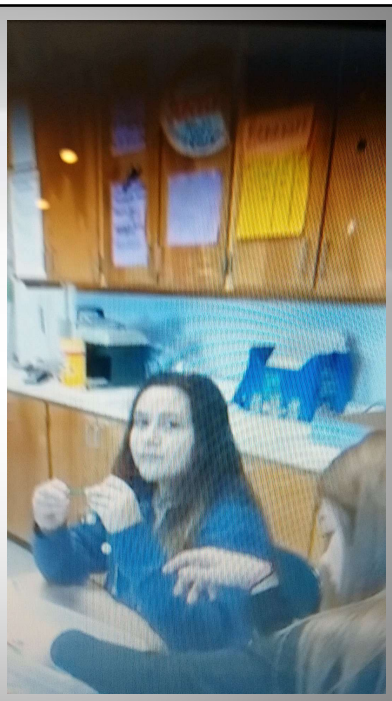
Pose purposeful questions.

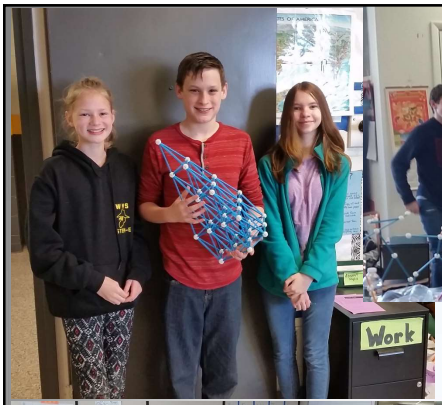
Support productive struggle in learning mathematics.

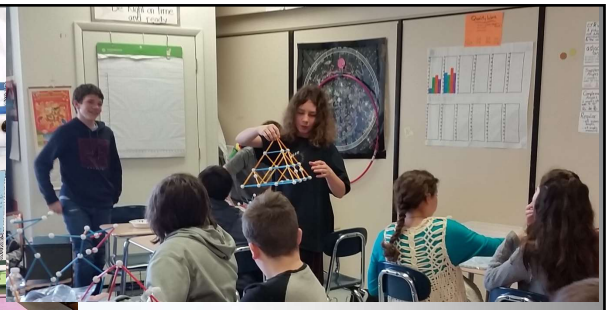
NCTM, 2014

What sort of impact does MTC participation have in the classroom?

Kristine Bates
7th Grade Teacher
Waynesville Middle School
Haywood County, NC



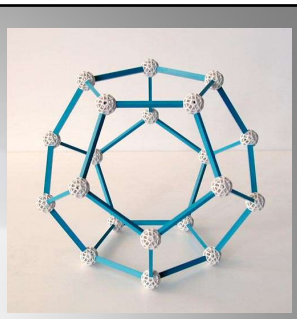


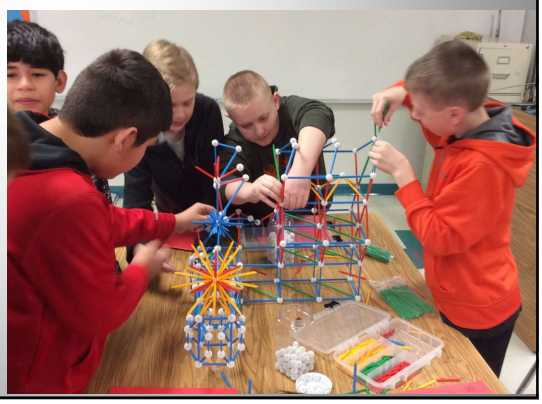


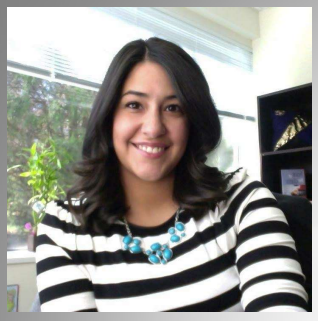
Waynesville Middle School
Student Math Circles

"My students love Zometools! They help my students to think creatively and problem solve. Students work together and share ideas collaboratively while building amazing structures!" – Kris Bates

Nishelle Henson
6th Grade Teacher
Macon Middle School
Macon County, NC

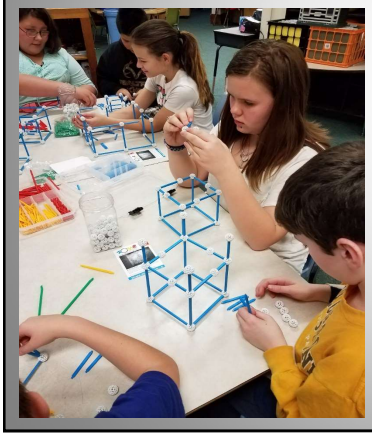


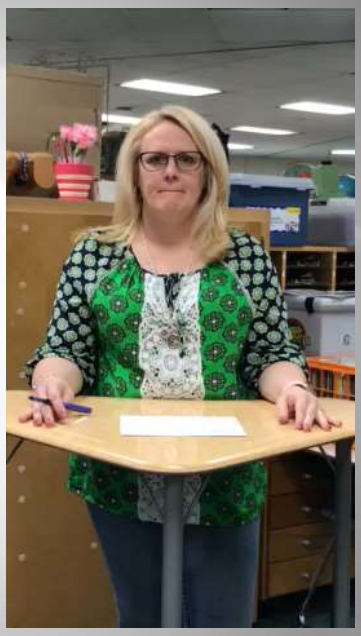




"My students have benefited from that materials I've received. It has allowed me to 'bring to life' mathematics that was not possible before. Groups of students are able to work together to complete hands-on tasks and not only remember mathematical terms, but now can apply them while demonstrating their knowledge. Engagement has been amazing!" – Nishelle Henson

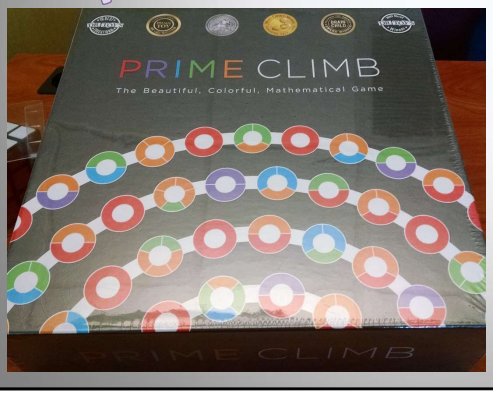
"SUTEP has given me the opportunity to provide math materials in my classroom that I would otherwise not been able to have. I am able to have a greater impact on student engagement and student learning through these quality materials. I am grateful for the support of my WCU partners, Dr. Borchelt and Dr. Faughn for all of the mathematical support they have provided me as well. As an alumni and a native of Jackson County, is important to me to have such a strong University and public school partnership." – April Mayes





April Mayes
5th Grade Teacher
Fairview Elementary School
Jackson County, NC

Other activities used In the classroom



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