



FALL 2023 NEWSLETTER

MESSAGE FROM THE PRESIDENT

Greetings, CTCTM Members!

I hope your school year is going well and you are looking forward to the upcoming holiday break. This past year has been full of challenges and successes in mathematics education. Technology, state policies, and research continue to evolve and shape the profession, but the work of teachers remains a vital cog in supporting students. I have had the opportunity to visit classrooms from New York to California, and what continues to strike me is the fantastic work being done by educators here in Central Texas.

We find ourselves in an exciting time with technological advances such as Artificial Intelligence (AI) and communication. Students and teachers have more resources than ever, yet whiteboards and student-to-student communication are the most popular movements in our work. It refers to the importance of getting students to engage in mathematical thinking and curiosity regardless of the tools available. The key driver of this learning experience is and will remain the teacher. All this to say, your work as a teacher is essential, and I appreciate the opportunity to interact with each one of you through this organization and in our local classrooms.

As we look forward to the spring, we will have our annual conference on February 3rd, 2024. More information will be sent out before the holiday break, but please pencil in this date for us to gather once more. We hope to improve upon last year's experience, and I can not wait to learn from all of you again!

I hope every one of you had a great holiday season. I look forward to seeing you at the annual spring conference on February 3rd, 2024.

Kurt Salisbury, Ph. D.
CTCTM President



MESSAGES FROM SOME OF OUR VICE PRESIDENTS

HIGH SCHOOL

Differentiated Instruction and Practice

I have read and reread the book, *Building Thinking Classrooms*, by Peter Liljedahl, and I am such a fan. I have started implementing tools from that book and still have more to go. If you haven't read that or heard of it, you should totally check it out. Quick summary, Peter does extensive research to create a classroom where students do more thinking and less "studenting" (as he calls it). He found that daily random groups of 3 students and vertical non-permanent surfaces (white boards) were key features of the thinking classroom, and then gave several other ideas to help foster this thinking classroom.

I got this idea from one of the tools in the book. Peter talks about giving students mild, medium, and spicy questions (or something along those lines), where the questions increase in difficulty. So I decided to use this system for problems that groups solve while standing at the white boards. I call them "Taco Bell Problems" and they are leveled, mild, medium, spicy, and fire. So when I give my "mini lesson" at the beginning of class, I just give them enough information or skills to be able to complete mild problems. Then they progress themselves through the "spiciness" of the problems. There are skills in the other problems that I will have to help guide them through but some students already know how to get to medium, spicy, or fire and those students help teach their group. The students get to pick where they get their problem from, so they are gauging how comfortable they feel about the material and how much of a risk they are willing to take.

Solve for the value of x	
$6x - 3 = 15$	$4x + 6 = 22$
$5x + 8 = 43$	$2x - 5 = 11$
$3x + 7 = 16$	
MILD 🌶️	
Solve for the value of x.	
$3(x+2) - 2x = 4$	$4x - 6 + 3x = -41$
$3(2x - 4) + 2(3x + 6) = 18$	$12x - 6 - 2x = 34$
$2(x+3) + 4 = 12$	
MEDIUM 🌶️🌶️	
Solve for the value of x.	
$4x + 7 = 2x - 2$	$7x + 8 = 3x + 12$
$7x + 8 = -3x + 22$	$2x - 5 = x + 3$
$6x + 2 = 2x - 22$	$5x - 3 = 2x + 12$
SPICY 🌶️🌶️🌶️	
Solve for the value of x.	
$3(2x + 5) = 4x - 2x - 1$	$6x - 7 = 2x + 5(x - 3)$
$5x + 3x - 4 = 2(x - 7) - 2$	
FIRE 🌶️🌶️🌶️🌶️	

I set a timer because sometimes too much time at the white boards can create behavior problems. When the timer goes off, students sit in their seats and we talk about things they want to make sure they remember or point out to their fellow classmates. Then we work 1-2 problems and maybe an error analysis problem. If there is time to work on independent work then usually I pick a problem from that practice to check as an "exit ticket."

An example of taco bell problems for solving equations in Algebra 1: mild - solving two step equations, medium- solving multi-step problems (but the variable stays on the same side), spicy- solving equations where the variable is on both sides of the equation (but just the variable and a constant), then fire- multi-step equations with the variable on both sides of the equation.

Meaghan Lewis
Vice President, High School

PRE-SERVICE TEACHERS

I hope you all have had a great start to the school year!

This year I am pursuing my master's in curriculum and instruction from Baylor University. My class about the issues of mathematics curriculum discusses ways to create equitable learning experiences for students. One of the topics that we have learned about is ethnomodeling: the intersection of ethnomathematics and mathematical modeling. In simple terms, ethnomodeling is incorporating traditional mathematical knowledge from different cultures. This could look like using architecture from around the world to demonstrate geometric concepts or teaching about measurement units from other cultures. Last year as an intern/student teacher, I was concerned with building lessons for my students that would reflect the community they see outside of school. By practicing ethnomodeling, students can make mathematical connections to the real world while feeling represented in the classroom.

Ethnomodeling is a great way to engage in equitable teaching practices, so I hope you dabble in bringing in new cultures and real-world examples into your classroom!

Mallory Siemer
Vice President, Pre-Service Teachers

COLLEGE AND UNIVERSITY

I can't believe how fast the fall semester has flown by! I hope that you all have had a wonderful semester up until this point, and that it continues to be so through the end of the year. As we are always seeking improvement as math educators, I want to share with you a few opportunities you may want to consider.

Local: CTCTM is the local affiliate of NCTM. On November 7th, we had our Fall Conference. One resource that you can use year-round is our newsletters, which we post on our website at <https://www.ctctm.net/>. Circle back to look at the previously published newsletters at any time. I also hope you will consider encouraging your preservice teachers to apply for the CTCTM Preservice Teacher Scholarship.

State: TCTM is the state affiliate for NCTM. You can find grants, resources, and more on the TCTM website at <https://www.tctmonline.org/>. Note that TCTM offers grants for TCTM members and the Cynthia L. Schneider Mathematics Preservice Teacher Scholarship for preservice teachers attending a Texas college, Texas university, or approved Texas alternative certification entity.

National: NCTM offers professional development, resources, grants, and more. Check out <https://www.nctm.org/>. Note the professional development resources page and the grant opportunities for preservice teachers on the grants and awards page.

These are just three of the many organizations dedicated to mathematics teaching and learning. I believe that we can all be students of the art of education. I hope that we can all take some time to become one percent better in this art today. I can't wait to see you at the CTCTM Fall Conference!

Ian Grigsby
Vice President, College and University

NCTM TV Debuts at the 2023 Annual Meeting

Not able to make the NCTM Annual Meeting?

NCTM partnered with international film & broadcasting company, WebsEdge, to debut NCTM TV to the 2023 Annual Meeting & Exposition.

You can watch some of the main sessions on NCTM TV and check out some other informational videos from the conference.

[NCTM TV Conference Videos](#)

Subscribe to the [NCTM Youtube Channel](#).



Member-Only Webinars

Your NCTM membership includes exclusive access to 100+ hours of on-demand professional development! NCTM webinars are delivered by experts in mathematics education, including NCTM authors.

Check the library out:

<https://www.nctm.org/online-learning/Webinars/list>

Available Grants

Apply for NCTM's Mathematics Education Trust grants, scholarships, and awards. Funding ranges from \$1,500 to \$24,000 and is available to help math teachers, prospective teachers, and other math educators improve the teaching and learning of mathematics.

More information available at <https://www.nctm.org/Grants/>



Keep your Membership Up to Date

If you are not an NCTM member, be sure to join today! If you are a member, be sure to keep your membership up to date, so that you do not miss a single resource!

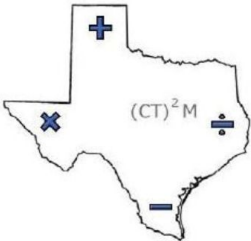
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To learn more about what each option offers, go to

<https://www.nctm.org/Membership/>

MET Mathematics Education Trust

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<p>NCTM Representative Sandi Cooper Baylor University Sandra_Cooper@baylor.edu</p>	<p>Newsletter/Website Editor Margeaux Smith Baylor University Margeaux_Smith1@baylor.edu</p>	<p>Secretary Julie Rush Midway ISD Julie.Rush@midwayisd.org</p>
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CONTACT US

Ctctm.officers@gmail.com



@CenTexCTM



@Ctctm12



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CTCTM
 One Bear Place #97314
 Baylor University
 Waco, TX 76798