

## 2016 NCTM Affiliate Leaders Conference



## My Goals Tonight

- Welcome
- Brief Update on NCTM
- Discuss the Importance of **WHY**

## NCTM Mission Statement

The National Council of Teachers of Mathematics is the public voice of mathematics education, supporting teachers to ensure equitable mathematics learning of the highest quality for all students through vision, leadership, professional development, and research.

## NCTM Strategic Priorities

- **Access, Equity, and Empowerment:** Advance knowledge about, and infuse in every aspect of mathematics education, a culture of equity where everyone has access to and is empowered by opportunities mathematics affords.
- **Advocacy:** Engage in public and political advocacy to focus policymakers and education decision makers on improving learning and teaching mathematics.

## NCTM Strategic Priorities

- **Curriculum, Instruction, and Assessment:** Provide guidance and resources for developing and implementing mathematics curriculum, instruction, and assessment that are coherent, focused, well-articulated, and consistent with research in the field, and focused on increasing student learning.
- **Professional Development:** Provide professional development to all stakeholders to help ensure all students receive the highest quality mathematics education.

## NCTM Strategic Priorities

- **Research:** Ensure that sound research is integrated into all activities of the Council.
- **Technology:** Promote strategic use of technology to advance mathematical reasoning, sense making, problem solving, and communication.

## Brief NCTM Update



The Math Forum  
PEOPLE LEARNING MATH TOGETHER



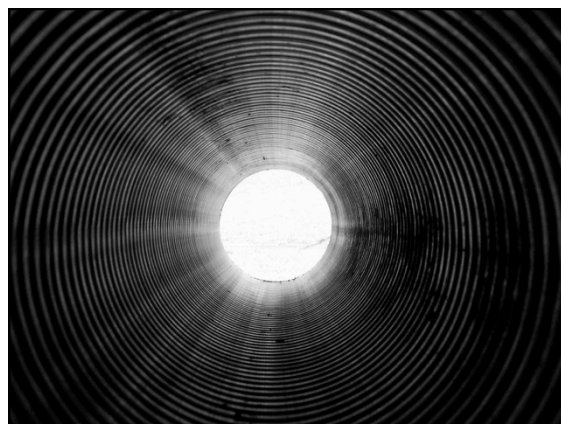
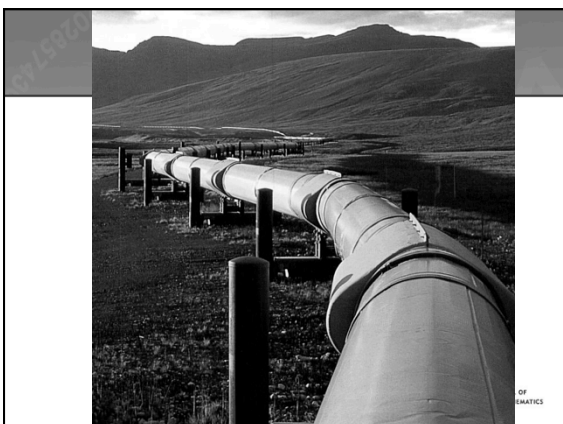
## NCTM Major Initiatives & New Resources

- NCTM's Renewed Focus on Access, Equity and Empowerment
- New Position Statements
- Presidential "Blog"
- State Advocacy Conference
- *Principles to Actions* Toolkits
- ARCs
- New Publications
- Innov8 – A new conference experience



## NCTM Has A Renewed Focus on Access, Equity, and Empowerment

NCTM has traditionally focused on standards, curriculum, instructional practices, and assessment in a de-contextualized way – **emphasizing "technical solutions" that too often have ignored the experiences of children.**



## Moving Forward

NCTM is re-framing its work to focus on Access, Equity, and Empowerment, to capture the critical constructs of identity, agency, and social justice.



## NCTM-hosted Equity Initiative

March 24, 2016

- TODOS
- NCSM
- AMTE
- ASSM
- BBA
- WME
- NASGEm
- Journal of Urban Mathematics Education (JUME)



## Priority NCTM Actions: Access, Equity and Empowerment

- Stop using deficit language
- Expand beyond Access & Equity, to include concepts of Identity, Agency, & Social Justice



## Priority NCTM Actions: Access, Equity and Empowerment

- Incorporate discussion/examples of equity issues in the enactment of the eight effective teaching practices in NCTM's *Principles to Actions: Ensuring Mathematical Success for All* (P2A) in our forthcoming grade-band teaching practices elaboration books and other P2A related materials.



## 2017 NCTM Annual Conference

PREMIER MATH EDUCATION EVENT

NCTM ANNUAL MEETING  
& EXPOSITION 2017  
April 5-8 | San Antonio

*Creating Communities  
and Cultivating Change*

Three Multilingual Sessions

- Panel Discussion
- Elementary Workshop
- Secondary Workshop



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2017



## ACCESS, EQUITY & EMPOWERMENT

November 15 – 17, 2017

Las Vegas, NV



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**2018**

**The Language of Mathematics: Students Finding Their Voice in Mathematics**

**October 4-6, 2018**

**Hartford, CT**

**Kyndall Brown, TODOS Board Member, is Program Chair**

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**NCTM Position Statements**  
<http://www.nctm.org/Standards-and-Positions/NCTM-Position-Statements/>

**Computer Science and Mathematics Education**  
A Position of the National Council of Teachers of Mathematics

**Question**  
Should mathematics course requirements for high school graduation be satisfied by computer science courses?


**NCTM Position**  
Ensuring that students complete college- and career-readiness requirements in mathematics is essential. Although knowledge of computer science is also fundamental, a computer science course should be considered as a substitute for a mathematics course graduation requirement only if the substitution does not interfere with a student's ability to complete core readiness requirements in mathematics. For example, in states requiring four years of mathematics courses for high school graduation, such a substitution would be unlikely to adversely affect readiness. Further, courses designated as mathematics courses should include only those designed explicitly to teach mathematics, with clear mathematical learning goals guiding the content, and taught by professionals certified to teach mathematics, while courses addressing computer science content should be labeled and counted as computer science courses and should be taught by professionals certified to teach such content.

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**Evaluation of Teachers of Mathematics**  
A Position of the National Council of Teachers of Mathematics

**Question:** What factors should be considered in evaluating the effectiveness of teachers of mathematics?

**NCTM Position**  
Teacher effectiveness is one of the most important factors in student learning and success. Both teachers and students stand to benefit from a comprehensive system of teacher evaluation that considers data from multiple domains of professional practice over time, such as the effective teaching practices found in *Principles to Actions*. Current evaluation mandates that include students' test scores and value-added measures of teacher effectiveness should not obscure the fact that many factors must play a role in the consideration of the evaluation of teachers of mathematics. Professional growth and support should be at the forefront of this evaluation process that is led by experts in effective mathematics instruction.

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**Large-Scale Mathematics Assessments and High-Stakes Decisions**  
A Position of the National Council of Teachers of Mathematics

**Question:** How should large-scale mathematics assessments be used in making significant, high-stakes decisions about schools, teachers, and students?

**NCTM Position**  
The results of large-scale mathematics assessments should not be used as the sole source of information to make high-stakes decisions about schools, teachers, and students. High-stakes decisions should also take into account relevant and valid data on classroom-based performance, such as formative and summative assessments of high quality that offer students a range of opportunities to demonstrate their mathematical knowledge. Moreover, educational systems—states, districts, and schools—should be held accountable for providing essential support for high-quality mathematics teaching and learning before teachers and students are held accountable for assessment results.


**State Advocacy Conference for Mathematics Education**

- State department and NCTM state Affiliate leaders from 12 states
- Goals
  - Increase knowledge about effective advocacy re: high-quality mathematics teaching and learning
  - Develop relationships within and across states to support effective advocacy
  - Commit to take action
- Partners: Hunt Institute, Collaborative for Student Success

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**www.nctm.org/ARCs/**

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Classroom Resources Publications Standards & Positions Research & Advocacy Conferences & Professional Development Grants & Awards

Activities with Rigor and Coherence - ARCs

**What are ARCs?**  
ARCs are Activities with Rigor and Coherence. Each ARC is a series of lessons that addresses a mathematical topic and demonstrates the vision of *Principles to Actions: Ensuring Mathematical Success for All*. ARCs scaffold effective teaching and support enactment of the eight Mathematics Teaching Practices articulated in *Principles to Actions* as well as the instructional guidance set forth in *5 Practices for Orchestrating Productive Mathematics Discussions*. ARCs integrate a wide array of NCTM resources to optimize opportunities for learning, including Illuminations and Student Explorations in Mathematics. ARCs also include community features that offer opportunities for social interaction. Engage in online discussions with other math educators, post a comment, and give feedback with ratings and reviews.

Contribute now! The ARCs are still works in progress. We need your voice.

## Activities with Rigor and Coherence (ARCs)

### Sequence of 2–4 lessons that

- Support *Principles to Actions*
- Address a specific math topic
- Scaffold effective teaching
- Support the 8 SMPs
- Demonstrate the 5 Practices for Orchestrating Productive Mathematics Discussions
- Integrate the wide array of NCTM resources



## NCTM Regional Conferences



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PREMIER MATH EDUCATION EVENTS

### 2016 NCTM Regional Conferences & Expositions

Phoenix • October 26–28  
Philadelphia • October 31–November 2

Innovate. Collaborate. Learn.



## NCTM Annual Conference

PREMIER MATH EDUCATION EVENT

### NCTM ANNUAL MEETING & EXPOSITION 2017

April 5–8 | San Antonio

*Creating Communities  
and Cultivating Change*



## New Conference Partnership

### MATHEMATICS IN A PLC AT WORK SUMMIT

In partnership with



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This much-anticipated event is brought to you by Solution Tree and NCTM. You won't want to miss this special opportunity to learn with renowned mathematics thought leaders, including Matthew R. Larson, Diane J. Briars, Timothy D. Kanold, and other top mathematics authors.

Orlando, Florida | December 5–7  
Rosen Centre Hotel



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Engaging the  
Struggling Learner  
November 16–18, 2016  
St. Louis



### A new hands-on, interactive learning experience

#### 3 Pathways

- Response to Intervention (RTI)
- Supporting Productive Struggle
- Motivating the Learner Who Struggles



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CONFERENCE

Engaging the  
Struggling Learner  
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### Collaborating with a team

- Keynote and expert presentations
- Learning Lounge
  - One-on-one with speakers
  - Book discussions
- Team time to plan and share ideas
- New technologies and solutions

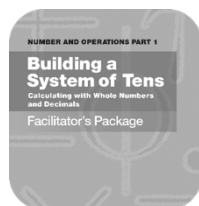


## New NCTM Publications

### Developing Mathematical Ideas Professional Development Series

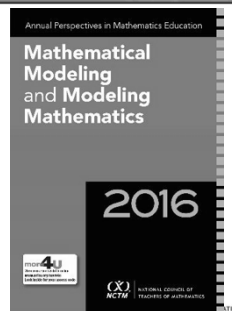
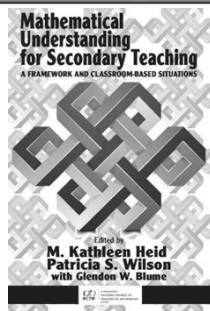
Module 1 now available

Number and Operations, Part 1:  
Building a System of Tens

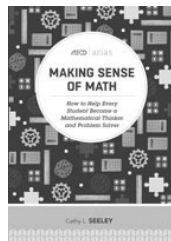
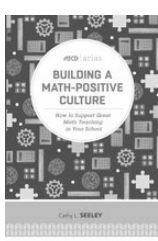
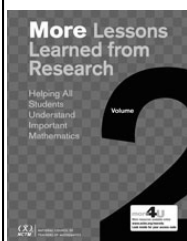


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## New NCTM Publications

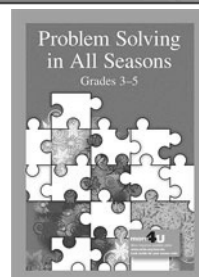
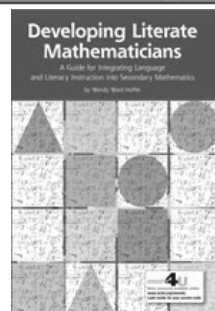


## New NCTM Publications



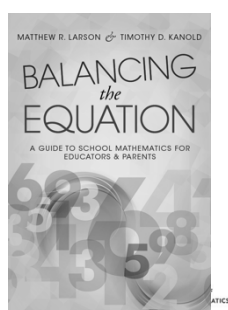
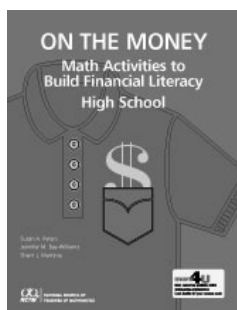
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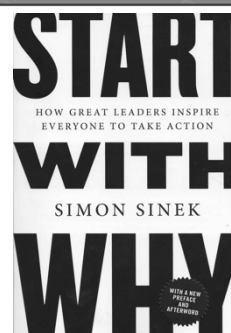


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## New NCTM Publications



## Why, What, and How



**Why: What is our cause, purpose, belief?**

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### The NCTM Vision Statement

We envision a world where everyone is enthused about mathematics, sees the value and beauty of mathematics, and is empowered by the opportunities mathematics affords.



### What Does it Mean to be Empowered by Mathematics?

- It is more than college and career preparedness
- It is more than enhancing our country's economic competitiveness & national defense
- Mathematics is an essential analytical tool to understand and potentially change the world -- **social justice**

### We Need to Also Focus on Mathematics For Democratic Citizenship

Traditionally, mathematics education has been connected to issues of national economic survival, rather than to the development of democratic citizenship through critical thinking in mathematics.

Tate, W. F. (2013). Race, retrenchment, and the reform of school mathematics. In E. Gutstein & B. Peterson (Eds.), *Rethinking mathematics: Teaching social justice by the numbers, second edition* (pp. 42-51). Milwaukee, WI: Rethinking Schools.

### Traditional Goals Remain Important

It is equally important to recognize that improving opportunities for employment is a real expectation that students and parents have of school. But preparation for the job market is indeed preparation for the capability of dealing with new challenges.

D'Ambrosio, U. (2012). A broad concept of social justice. In A. A. Wager & D. W. Stinson (Eds.), *Teaching mathematics for social justice: Conversations with educators* (pp. 201-213). Reston, VA: NCTM.

### Never Has this Been More Important

Mathematics literacy is essential to informed and active citizenship. We live in a world where mathematics is increasingly used to characterize societal problems and formulate solutions.

### Never Has this Been More Important

Without mathematics literacy and a positive mathematics identity and agency, ordinary citizens are unlikely to comprehend, let alone challenge, many of the decisions and actions of those in power in political, social, scientific, and economic institutions.

### Why I Believe We Teach Mathematics

We want to live in a society where citizens not only have the agency to improve their own lives, but the lives of others and society at large.

Each and everyone of us is engaged in an enterprise much bigger than the specific tasks of our daily job.

### We Contribute to a Better Society!

**What** we do is standards, conferences, publications, journals, professional development, and advocacy.

But **why** we do it is so we live in a society where citizens not only have agency to improve their own lives, but the lives of others and society at large.



### Thank You!

**Thank you for being here!**

**Thank you for your leadership!**

**Thank you for what your affiliate does!**

**Thank you for being an affiliate!**

