

TASM Business Meeting 02.21.14



Texas Association of Supervisors of Mathematics Business Meeting February 21, 2014 Hilton Airport Hotel in Austin, TX

TASM's Purpose: Our objective shall be to assist in promoting effectiveness in supervision, coordination, and teaching of mathematics, especially in the elementary and secondary fields, by holding meetings for the presentation and discussion of papers; by conducting public discussion groups, forums, panels, lectures, or other similar programs; by conducting or promoting investigations for the purpose of improving the teaching of mathematics; and by the publication of papers, journals, books, and reports; thus vitalizing and coordinating the work of mathematics supervisors across Texas and bringing the interests of mathematics to the attention and consideration of the larger educational community in Texas.

Morning Conversations:

 Welcome, Goals, & Norms Minutes Treasurer's Report NCSM Update: NCSM Regional Director Collaborative Conversations: Formative Assessment NCTM Position Paper: Formative Assessment TEA Update: Curriculum TEA Update: Student Assessment 	Janet Dodd Paul Gray Cathy Banks Linda Griffith Janet Dodd Jo Ann Bilderback James Slack Julie Guthrie
Lunch Break 11:30-12:15	
 Afternoon Conversations: 2014 Elections Update TCEE Personal Financial Literacy CAMT: STEPS Update Collaborative Learning: Data Analysis Tools Collaborative Conversations: TSELA 2014 Tommy Eads Leadership Excellence Award Future Meetings Future Conversations 	Brenda Aleman Cindy Manzano Shelley Bolen-Abbott Janet Dodd Kenn Heydrick Janet Dodd Nicole Shanahan Janet Dodd

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2014	2015	
02.20.14 Spring Professional Development	02.19.15 Spring Professional Development	
02.21.14 Spring Business Meeting	02.20.15 Spring Business Meeting	
07.20.14 CAMT Business Meeting (Ft. Worth)	06.23.15 CAMT Business Meeting (Houston)	
10.20.14 Fall Professional Development	10.19.15 Fall Professional Development	
10.21.14 Fall Business Meeting	10.20.15 Fall Business Meeting	

Future Meeting Dates (Hilton Airport Hotel in Austin, TX)



- Welcome
- That's me!
 - This is my first TASM meeting!
 - I am presenting at CAMT this summer!
 - I brought one of my campus leaders with me!
 - I've nominated someone for the Tommy Eads Leadership Excellence Award!
 - I just retired!
- Meet your table colleagues



TASM's Purpose

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Goals: Today's Meeting

- Engage in collaborative conversations focused on curriculum and assessment
- Engage in collaborative conversations focused on improving the teaching of mathematics



@MathLeaders #TASM



Norms for Today's Meeting

- Contribute to collaborative conversations
- Contribute to collaborative professional learning
- Monitor and help minimize distractions
- Honor an attention signal

Parking Lot



Secretary: Paul Gray

- Approval or Correction of Minutes
 - Are there any corrections to the minutes as distributed?
 - I would like to entertain a motion to approve the minutes.
 - Second?
 - Any discussion?
 - All in favor?
 - Any opposed?



Secretary: Paul Gray

- TASM's Email Service: Constant Contact
 - Are you receiving our TASM emails?
 - If not, please provide a secondary email address to Paul Gray (TASM Secretary).

pgray73@sbcglobal.net



Treasurer: Cathy Banks

• Treasurer's Report



National Council of Supervisors of Mathematics

• Linda Griffith, NCSM Regional Director



NCSM UPDATE

Linda Griffith

Southern 2 Regional Director TASM Business Meeting Austin, TX February 21



NCSM Website http://mathedleadership.org



THE **PRIME** Leadership Framework

ALCENS SUCCESS SUCCESS

PRINCIPLES AND INDICATORS FOR MATHEMATICS EDUCATION LEADERS

NGSM MERCAN BURGAT NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS



Leadership for Mathematics Leaders NCSM has collaborated with NCTM, ASSM, and AMTE in the following activities based on the priority recommendations from the Joint Task Force on the CCSS of the four organizations.

Leadership Imperatives for Mathematics Education: An Agenda for Ensuring that All Students Benefit from the Common Core

To provide its members, and the broader education community, with critical guidance on the program components and conditions necessary to effectively implement the Common Core State Standards for Mathematics in every classroom and for every student, NCSM has drafted a call to action entitled "Leadership Imperatives for Mathematics Education." The purpose of this document is to describe an agenda that includes a set of imperatives for systemic change in curriculum, instruction, assessment and professional culture which are aligned with, and supports, the implementation of the Common Core State Standards. To ensure that what is released in April, 2014 is the strongest and most helpful document, NCSM seeks your critical feedback on the March, 2013 Public Review Draft of this work.

March 201 3 Public Review Draft 🔁

Public Review Draft Online Feedback Form

Give your feedback on the draft

It's TIME: Themes and Imperatives for Mathematics Education : An Agenda for Ensuring that All Students Benefit from the Common Core

Common Core Resources





HOME ABOUT NCSM OUR NETWORKS CONFERENCES & EVENTS LEADERSHIP RESOURCES JOIN NCSM PARTNERS CCSS COACHING CORNER

Calendar

Contact Us

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My NCSM

OVERVIEW LATEST NEWS RESOURCES PRESENTATIONS DOCUMENTS COLLABORATIONS

CCSS Sections

Latest News; Learn about CCSS implementation, research, and assessment by NCSM and others

Resources: Thumb through online resources

Presentations:

Comb through a collection of CCSS presentations and handouts including those made at NCSM events

Documents:

Browse through a growing set of useful reference documents related to the CCSS

Collaborations:

Catch up on the collaborative efforts of NCSM related to the CCSS



An NCSM priority is to help mathematics educators interpret and understand the Common Core State Standards (CCSS) for Mathematics and to support the development and implementation of comprehensive, coherent instruction, and assessment systems.

These pages include NCSM developed materials and resources, work undertaken in collaboration with other organizations, and participating in conferences and other initiatives that promote shared understanding of the CCSS.

Quicklinks MTE (Association of Mathematics **Teacher Educators**) ASSM (Association of State Supervisors of Mathematics) CCSS (Common Core State Standards) CCSSO (Council of Chief State School Officers) COMAP (Consortium for Mathematics and Its Applications) CPRE (Consortium for Policy Research on Education) CSMC (Center for the Study of Mathematics Curriculum) EMS&TL Project (Elementary Mathematics Specialists & Teacher Leaders) Horizon Research, Inc. Illustrative Mathematics Project Inside Mathematics MAA (Mathematics Association of America)

Search

MAP (Mathematics Assessment Project) NSF (National Science Foundation) NCSM Conferences & Events NGA (National Governors Association)

Noyce Foundation



NCSM Resources

- The Common Core State Standards
- Illustrating the Standards for Mathematical Practice Professional Development Series
- Webinars sponsored by Carnegie Learning Inc.
- CCSS Curriculum Materials Analysis Toolkit
- Conference Webinars and Session PowerPoints
- NCSM Great Tasks for Mathematics
- News about and Links to other CCSS Projects and Resources
- Situations Facilitators Guide



Great Tasks!



Engaging Activities for Effective Instruction and Assessment (bat Integrate (be Content and Practices of the Common Core State Standards for Mathematics

CONNE SCHROCK, KIT NORRIS, DIGID K. PEGALIE, RICENKO SEITZ, AND FRED BOLLINGSREAD



NCSM

NCSM Great Tasks for Mathematics

Engaging Activities for Effective Instruction and Assessment that Integrate the Content and Practices of the Common Core State Standards for Mathematics

CONNEL SCHEDCK, KIT NORRES, DAVID K. PCGALEE, RICEARD SETTZ, AND FRED HOLLINGSHEAD



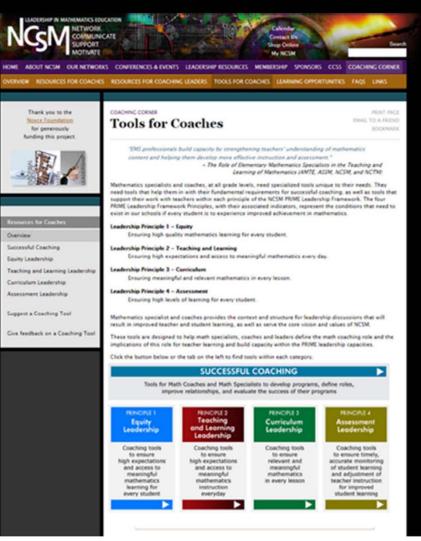


NGSM

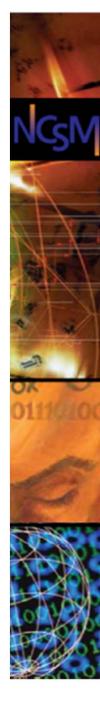


Illustrating the Common Core State Standards for **Mathematical Practices** COMMON CORE STATE STANDARDS PRINT PAGE Illustrating the Standards for EMAIL TO A FRIEND BOOKMARK **Mathematical Practice** Module Index Introduction to **Professional Learning Module Index** the CCSS Powerful PD resources at your fingertips! Standards for Mathematical Practice Click a button below to view resources for that module. K - 2 3 - 5 6 - 8 9 - 12Problem Solving & Problem of Properties of Quadrilaterals the Month Precision Similarity. Reasoning & Properties of Button Congruence Slope and Operations Pattern and Similarity Explaining Lines Representing Comparing Modeling & Using Properties of Penny Jar Number Linear uadrilateral Tools Functions entences Odd Seeing Structure & Patterns with Sidewalk Number Patterns Walls Generalizing Patterns Note: The placement of each module is intended as a quick reference to support focus but not limit use. Each of the modules is

Coaching Corner: Resources for Mathematics Specialists







Professional Learning Opportunities

Leadership Academies June 30-July 2, 2014 North Little Rock

NCSM Annual New Orleans, LA: April 15-17, 2013



2014 NCSM SUMMER LEADERSHIP ACADEMY *Mathematics Leadership at Work:* **DEEPENING FORMATIVE ASSESSMENT** KNOWLEDGE TO PREPARE FOR NEXT GENERATION SUMMATIVE ASSESSMENTS

North Little Rock, Arkansas · June 30–July 2, 2014

For K-16 mathematics education leaders — teams and individuals Daily plenary and breakout sessions—elementary, middle, high school, administrators

Featuring a keynote presentation from Dr. Phil Daro, Lead CCSS-M Co-Author

THE ACADEMY WILL FOCUS ON expanding and deepening participants' knowledge about the role of formative assessment in instruction, implementation of the CCSS, and as a means to powerfully impact results on next generation summative assessments. Participants will learn more about:

- the role of formative assessment in improving student learning;
- professional development modules to promote understanding and use of formative assessment strategies;
- improving classroom-based summative assessment tasks by studying and modeling next generation assessment items.

VISIT MATHEDLEADERSHIP.ORG FOR ALL ACADEMY DETAILS National Council of Supervisors of Mathematics

Communications

E-Newsletter

- Up to date fun and exciting news
- Fun puzzle, poem, quote or joke!
- Update on latest issues (Common Core, Coaching, ...)
- Short and sweet!

Marshall Memo

Newsletter

- Spotlight Feature
- Technology column
- Coaching column

Web Site

Journal

Blog







Collaborative Conversations: Formative Assessment

• What was one of your take-aways from yesterday's PD with Cheryl Rose Tobey?



NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

Formative Assessment

A position of the National Council of Teachers of Mathematics

Question

What is the role of formative assessment in mathematics education?

NCTM Position

Through formative assessment, students develop a clear understanding of learning targets and receive feedback that helps them to improve. In addition, by applying formative strategies such as asking strategic questions, providing students with immediate feedback, and engaging students in self-reflection, teachers receive evidence of students' reasoning and misconceptions to use in adjusting instruction. By receiving formative feedback, students learn how to assess themselves and how to improve their own learning. At the core of formative assessment is an understanding of the influence that assessment has on student motivation and the need for students to actively monitor and engage in their learning. The use of formative assessment has been shown to result in higher achievement. The National Council of Teachers of Mathematics strongly endorses the integration of formative assessment strategies into daily instruction.

Formative assessment is an essential process that supports students in developing the reasoning and sense-making skills that they need to reach specific learning targets and move toward mastery of mathematical practices, such as those set out in the Common Core State Standards. It serves to inform both the teacher and the learner, enabling the teacher to change what he or she is doing and the student to understand where he or she is in relation to the learning goal. In other words, formative assessment provides information that changes what *both* the teacher and the learner are doing. The United Kingdom Assessment Reform Group has laid out five requirements for assessment to improve learning (Hattie, 2012):

- 1. The provision of effective feedback to students
- 2. The active involvement of students in their own learning
- 3. The adjustment of teaching, taking into account the results of the assessment
- 4. The recognition of the profound influence that assessment has on the motivation and selfesteem of students, both of which are crucial influences on learning
- 5. The need for students to be able to assess themselves and understand how to improve

Linking assessment to everyday classroom instruction requires teachers to make a shift in both their thinking and their practice. When assessment focuses on evidence of student learning, teachers must plan and work in new and different ways. Their planning must be flexible enough to allow them to adjust their instruction to take into account the results of assessment. They must also plan for the provision of effective feedback to students that will move them forward in their learning, and then they must offer their students opportunities to use this feedback to improve their performance. The feedback should tell students what they are doing well, where they need to improve, and what to do next. It should also assist the teacher in making sound instructional decisions.

Formative Assessment-NCTM position

In 2008, the National Mathematics Advisory Panel cited research to support the position that the use of formative assessment in mathematics classrooms directly correlates with improvement in student achievement. "A review of practice by the OECD [Organisation for Economic Cooperation and Development] across eight countries defined formative assessment as frequent, interactive assessments of students' progress and understanding to identify learning needs and adjust teaching appropriately" (Wiliam, 2011, p. 37). Formative strategies embedded in arburction provide opportunities for students the mathematical thinking with their peers. Effective formative assessment as a positive impact on student achievement and how they perceive themselves as learners.

References

Black, P., Harrison, C., Lee, C., Marshall, B., Wiliam, D. (2006). Assessment for learning: Putting it into practice. New York, NY: McGraw Hill.

Black, P. J., and Wiliam, D. (1998). Assessment and Classroom Learning. Assessment in Education, 5(1), 7–74. Collins, A. (Ed.). (2011). Using classroom assessment to improve student learning. Reston, VA: NCTM.

Hattie, J. (2012). Visible learning for teachers: Maximizing impact on learning. New York, NY: Routledge. National Mathematics Advisory Panel. (2008). Foundations for success: The final report of the National Mathematics Advisory Panel. Washington, DC: U.S. Department of Education.

Wiliam, D. (2011). Embedded formative assessment. Bloomington, IN: Solution Tree Press.

NCTM Resources

Burrill, J. (Ed.). (2005). Mathematics assessment sampler: Items aligned with NCTM's "Principles and standards for school mathematics"—grades 6–8. Reston, VA: National Council of Teachers of Mathematics.

Collins, A. M. (2012). NCTM assessment resources for professional learning Communities: A practical guide. Reston, VA: National Council of Teachers of Mathematics.

Formative Assessment-NCTM position

Gawronski, J. D. (Ed.). (2005.) Mathematics assessment sampler: Items aligned with NCTM's "Principles and standards for school mathematics"—grades 3–5. Reston, VA: National Council of Teachers of Mathematics.

Huinker, D. (Ed.). (2006). Mathematics assessment sampler: Items aligned with NCTM's "Principles and standards for school mathematics"—prekindergarten-grade 2. Reston, VA: National Council of Teachers of Mathematics. Stenmark, J. K. (1991). Mathematics assessment: Myths, models, good questions, and practical suggestions. Reston, VA: National Council of Teachers of Mathematics.

Travis, B. (Ed.). (2005). Mathematics assessment sampler: Items aligned with NCTM's "Principles and standards for school mathematics"—grades 9–12. Reston, VA: National Council of Teachers of Mathematics.

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Collaborative Conversations:

NCTM Position Paper: Formative Assessment

Table Talk: What does this mean for you in your role as a supervisor of mathematics?

- Formative strategies embedded in instruction provide opportunities for students to make conjectures, incorporate multiple representations in their problem solving, and discuss their mathematical thinking with their peers.
- ... formative assessment provides information that changes what *both* the teacher and the learner are doing.
- Linking assessment to everyday classroom instruction requires teachers to make a shift in both their thinking and their practice.



Updates from TEA

• Division of Performance Reporting:

http://ritter.tea.state.tx.us/perfreport/account/20 14/index.html

> Shannon Housson, Director Division of Performance Reporting <u>Performance.Reporting@tea.state.tx.us</u>



Updates from TEA

- <u>Curriculum Division:</u> Jo Ann Bilderback Math/Science Content Specialist
- <u>Student Assessment Division:</u>
 - Julie Guthrie

Director of Math and Science Assessments



- 2014 Nominating Committee
 - Brenda Aleman, Crosby ISD
 - Committee Chair
 - Tammy Chandler, Frisco ISD
 - Karen Marshall, Region 17 ESC
 - Nicole Shanahan, Harris County Department of Education (ex-officio)



- The Secretary shall coordinate the preparation of a ballot including the names proposed by the nominating committee, with space for write-in candidates.
- Votes must be submitted on or before 1 June to the chairman of the nominating committee to be counted and verified in the presence of at least one other member of the Executive Board.
- On-line elections/ballot
- On/Before May 10 End On/By June 1



- Introduction of Nominees
 - Treasurer
 - Vice-President
 - President-Elect



Update: 2014 Elections

• Treasurer

Candidate 1: Bonnie Reyes San Antonio ISD



Candidate 2: Linda Sams Cy-Fair ISD





- Treasurer
 - Any nominations from the floor?
 - The nominations for Treasurer are closed.



Update: 2014 Elections

Vice-President

Candidate 1: Jerri LaMirand Eanes ISD



Candidate 2: Kathy Riley Ft. Bend ISD





- Vice-President
 - Any nominations from the floor?
 - The nominations for Vice-President are closed.



Update: 2014 Elections

President-Elect

Candidate 1: Janet Dodd Pasadena ISD



Candidate 2:



Update: 2014 Elections

- President-Elect
 - Any nominations from the floor?
 - The nominations for President-Elect are closed.



Update: 2014 Elections

- I would like to entertain a motion to accept the slate of candidates.
- Second?
- Any discussion?
- All in favor?
- Any opposed?
- The motion carries.



Texas Council on Economic Education (TCEE)

• Cindy Manzano, Smarter Texas Director

http://smartertexas.org/?page_id=1145



Helping young people learn to think, choose, and make better economic and financial choices in a global economy

Laura Ewing President/CEO 1801 Allen Parkway, Houston, TX 77019 P: 713.655.1650 F: 713.655.1655 laura@economicstexas.org Cindy Manzano Director of Smarter Texas 1801 Allen Parkway, Houston, TX 77019 C: 713.503.5338 F: 713.655.1655 cindy@economicstexas.org

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Texas Council on Economic Education

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- Free lessons for grades 2-8
 - -Coming June 2014: Lessons for grades 2-3

WOODFOREST[®]

Lessons for grades 4-6 funded by

-Lessons for grades 7-8 funded by



TEXAS CREDIT UNION FOUNDATION

-<u>www.smartertexas.org</u> under Resource tab



A Project of The Texas Council on Economic Education



Home About

Resources Standards

rds Schools/Districts

Trainings and Events Student Competitions

by admin on January 4, 2014

Parents

TCEE Hosts Statewide Smarter Texas Conference June 16-18, 2014

TCEE will again host its annual conference at the beautiful Hotel Contessa in San Antonio.

The workshop for elementary teachers and supervisors will be June 16-17 and the secondary educator workshop will be June 17-18, 2014.

The conference will offer lessons and strategies for K to 12 math, K to 12 social studies, secondary career and economics educators.

Conference Registration

Conference Registration by Credit/Debit Card



Free Math & Personal Financial Literacy Books Click Here

Donate Now

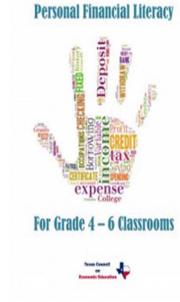
Please click here to enter our secure donations section.

- Click on Resource tab
- Choose Free Math and PFL Books



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Personal Financial Literacy for Grade 4-6 Classrooms Free Math & Personal Financial Literacy Books Click Here



Donate Now

Please click here to enter our secure donations section.

Personal Financial Literacy For Grades 7 & 8

<u>Classrooms</u>



Math & Personal Finance for K - 12



What Does TCEE Offer?

Teachers Talk about TCEE



For full screen, click in the bottom right corner of video.

More TCEE Videos

Recent Posts

- 53rd Annual Financial Literacy and Economic Education Conference
- Applications for Council For Economic Education Annual National Conference Available
- TCEE Hosts Statewide Smarter Texas
 Conference June 16-18, 2014
- TCEE Receives TFEE Grant for Smarter Texas Program
- Aaron Gladstone's Birthday Supports Texas
 Council on Economic Education Programs





Click a course to get started.





Seniors



Entrepreneurship



Adults

Teens



Young Adults





Correlation Grids under Resource tab

Grade 8

Resource Correlation with Mathematics TEKS for Personal Financial Literacy

	Student Expectation	Financial Fitness for Life	Hands on Banking	TCEE Lesson
	The student is expected to:	Grades 6-8	www.handsonbanking.org	www.smartertexas.org
8.12A	solve real-world problems comparing how interest rate and loan length affect the cost of credit:	Lesson 13: Who Pays and Who Receives?	Young Adults: All About Credit	Lesson 2: Borrowing Money Lesson 8: Borrower Beware
8.12B	calculate the total cost of repaying a loan, including credit cards and easy access loans, under various rates of interest and over different periods using an online calculator;	Lesson 15: Cash or Credit	Teens: Credit and You Young Adults: All About Credit	Lesson 2: Borrowing Money Lesson 8: Borrower Beware A Credit Card Story
8.12C	explain how small amounts of money invested regularly, including money saved for college and retirement, grow over time;	Lesson 13: Who Pays and Who Receives? Lesson 10: Why Save?	Teens: Savings and Checking Guide	Lesson 1: Saving for My Future Lesson 7: How Does Your Money Grow?
8.12D	calculate and compare simple interest and compound interest earnings;			Lesson 1: Saving for My Future Lesson 6: How Annual Interest Rate Works Lesson 7: How Does Your Money Grow?
8.12E	identify and explain the advantages and disadvantages of different payment methods;	Lesson 8: Choosing and Using a Checking Account	Young Adults: All About Credit	Lesson 3: Methods of Payment Lesson 9: Your Money or Thiers
8.12F	analyze financial situations to determine if they represent financially responsible decisions and identify the benefits of financial responsibility and the costs of financial irresponsibility;	Lesson 2: Making Decisions Lesson 15: Cash or Credit Lesson 10: Why Save?	Young Adults: All About Credit	Lesson 4: Financially Responsible Decisions Lesson 8: Borrower Beware Lesson 8: PPT Lesson 9: Your Money or Thiers
8.12G	estimate the cost of a two-year and four- year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the 1 st year of college.		Young Adults: Spending Smart	Lesson 5: Devise a College Savings Plan Lesson 10: Savings Plan for College

SAVING FOR COLLEGE: THE WHY, WHEN AND HOW



Conferences

- Texas Council on Economic Education State Conference in San Antonio – June 16-18, 2014 – <u>http://smartertexas.org/</u>
- Council of Economic Education National Conference in Dallas – October 8-11, 2014 – <u>http://www.councilforeconed.org/</u>



Nonprofit Partners

(Goal to build financial capability for lower income Texans through education and savings.)

 Raise Texas - SAVING FOR COLLEGE: THE WHY, WHEN, AND HOW A GUIDE OF COLLEGE SAVINGS

http://raisetexas.org/resources/Guide Final V ersion for Website.pdf Texas Council on Economic Education



Nonprofit Partners

- Opportunity Texas School Banking Program coming soon <u>http://www.opportunitytexas.org/blog/53-</u> <u>financial-education/83-smarter-texans-</u> <u>save-launched</u>
- Texas Financial Education Endowment helps to finance PFL workshops at regional ESCs







CAMT 2014: STEPS

Shelley Bolen-Abbott, Region 4 ESC



STEPS 2014 Secondary Teachers Enhancing Performance for Students





WANTED!

- Teams of 2 teachers willing to present at CAMT July 21-23, 2014 in Fort Worth
- We currently need:
 - -5 High School Teams (July 21st)





Important Details

- Required Training Session
 - Saturday, March 29, 2014, 9 A.M. 3 P.M.
 - Region 11 Education Service Center
- CAMT supports the effort to grow presenters by funding:
 - CAMT Registration for presenters
 - Lunch on March 29
 - One page 2-sided handouts for the conference
 - STEPS t-shirts





Applying is Easy

• Fill out the short application online at:

http://bit.ly/1f6fZnZ





Contact Shelley Bolen-Abbott or Jerri LaMirand for details or to sign up your teachers!

sbolenabbott@esc4.net

jlamirand@eanesisd.net

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





CAMT 2014: Math-a-Rama

- 6 Math-a-Rama teams are needed
- Contact: Dinah Chancellor <u>dinahchancellor@gmail.com</u>



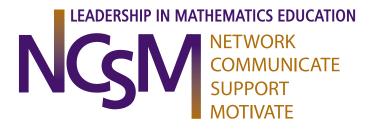
Collaborative Learning: (Fall 2013)

NCSM Position Paper: Improving Student Achievement by Leading *Effective* and *Collaborative Teams* of Mathematics Teachers

Key Elements of Collaborative Teams

 Develop common formative and summative assessments and discuss the results, at the test and item levels.

Research-Informed Answers for Mathematics Education Leaders



Improving Student Achievement by Leading Effective and Collaborative Teams of Mathematics Teachers

The question for the educator/leader is not whether all humans can learn, but what conditions we can devise so they will learn. For only when the school house becomes a context for adult development will it become hospitable to student development.

> Roland Barth Learning by Heart, 2001, p. 29

Our Position

It is the position of NCSM that the significant improvement of mathematics teaching and learning requires the creation of structures and practices in every school and district that support and encourage meaningful professional collaboration among teachers. We believe that teacher collaboration should be viewed as a professional obligation for developing the craft knowledge of those closest to the classroom. Key elements of these collaborative teams of teachers should be reflected by a group of teachers who meet regularly as a team to collaboratively:

- Identify essential and valued student curriculum for learning.
- Share teaching strategies and analysis of the effectiveness of those strategies.
- Identify essential and valued student curriculum for learning to include, when possible and appropriate, culturally

The NCSM Improving Student Achievement Series is a set of position papers designed to provide research-based practices for school and district mathematics education leaders. situated contexts and connections.

- Set student achievement goals and establish specific benchmarks for student and program improvement.
- Develop common formative and summative assessments and discuss the results, at the test and item levels.
- Use data to analyze current levels of student achievement and provide intervention programs for support.
- Create lessons based on reflective discussions and observations of teacher practice.
- Adjust lesson plans based on student results and collaborative discussions with others.

The Research that Supports our Position

In many schools, mathematics teaching is regarded as an individual practice. Yet, in the past decade, there has been a consistent and growing body of research confirming the critical importance played by structured teacher collaboration and the removal of teacher isolation (Schmoker, 2005). The right kind of ongoing teacher collaboration improves the quality of teaching, significantly increases student achievement, and pays immediate dividends in the professional development of mathematics teachers and leaders. In the words of researcher Milbrey McLaughlin,

It is not often in social science that one finds consistent patterns across time, across settings, in rural, midsize cities, urban ... All had one thing in common. Every single one of them, without exception, belong to some matter of learning community. Not one of them, not one of them, not one of these teachers across states, districts, settings, who was able to engage and sustain these kinds of classrooms, was an isolate ... Teachers were working together in collaborative and collegial teams.

> Navigating the Winds of Change NSDC 27th Annual Conference, Chicago, 1995

Deal and Peterson (1999) establish that a "better climate for the social and professional exchange of ideas and the spread of effective teaching practices" is a residue of collaborative cultures. Wood's (1991) research verifies that teachers do not learn best in isolation. "The learning that occurs in the classroom as teachers interact with their students must be combined with opportunities for sharing these experiences with other teachers involved in the same process."

This research provides a glimpse into the power of teacher collaboration and team building processes that can be used to "bring an entire mathematics faculty together around meaningful and shared issues about student achievement."

According to DuFour and Eaker (2005), a primary characteristic of a professional learning is collaborative teacher teams. They state:

A basic structure of a professional learning community is a group of collaborative teacher teams that share a common purpose. Building a school's capacity to learn is a collaborative rather than an individual task. People engaged in collaborative team learning are able to learn from one another, thus creating momentum for continuing improvement.

Fullan (1993) stresses the importance of collaborative teams in *Change Forces*. "The ability to collaborate — on both a large and small scale — is one of the core requisites of post modern society. ... In short, without collaborative skills and relationships, it is not possible to learn, or continue to learn as much as you need in order to be an agent for social

improvement." The paradigm of teacher *collaboration* expands the knowledge base of teachers and provides opportunities for active discussions and reflections regarding student learning.

Researcher Judith Warren Little (1990) found that when teachers engage regularly in authentic "joint work" focused on explicit, common learning goals, their collaboration pays off in the form of high quality solutions to instructional problems, increased teacher confidence, and remarkable gains in student achievement.

The image of a grade-level or course-based team of mathematics teachers who meet regularly to share, reflect, and assess the impact of lessons and assessment (testing) strategies has yet to become the norm in most schools. The removal of teacher isolation in daily decision making regarding lesson plans, homework assignments, exam construction, grading practices, and effective teaching strategies is a primary factor in eliminating the inequities created by inconsistent rigor and lowered expectations for student performance by some teachers (Kanold, 2006).

How NCSM Members can Implement our Position

NCSM members must act to remove the barriers of teacher isolation, create the conditions and structures for teacher grade or course-level collaboration during the *normal work* day, and establish training for the development of crucial conversation skills among all adults. The powerful collaboration that characterizes a true teacher learning community is a systematic process in which teachers work together to analyze and improve their classroom practice, while also preserving their need for autonomy. More specifically, NCSM members must:

1) Establish high-performing collaborative teacher teams and *monitor* the work of those teams. They should empower teacher teams to take actions that embody the shared values of the mathematics

program by replacing norms of isolation with norms of collaboration.

- 2) Make the purpose of the collaboration explicit; work deliberatively to build trust among the mathematics teachers and provide training for the team communication skills necessary to function together successfully.
- Help each teacher team to identify student achievement gaps in the grade or course level they teach and address the inequities caused by mathematics teacher isolation, privatization, and independent decisionmaking.
- Radically monitor and celebrate teacher team performance, paying attention to the results in improved student achievement. Encourage discussions of work and successful initiatives to be an ongoing public endeavor.
- 5) Collaborate with administration and other faculty to support the work and needs of the mathematics teacher teams during the contracted school day. They should provide opportunities for teacher leadership of these teams.
- 6) Take responsibility for elevating and highlighting mathematics student achievement goals.
- 7) Provide the current research and best practice evidence of the power of teacher teams to impact student performance.
- 8) Help teachers learn to acquire culturally responsive pedagogical strategies and infuse, when possible and appropriate, culturally situated contexts and connections specific to the culture and communities of the students they teach and implement them in their instruction.

- 9) Allow teachers to take responsibility to establish their own student achievement goals.
- 10) Expect *all* teachers of mathematics to collaborate in a professional manner with integrity and honesty, using caring and respect.
- 11) Not tolerate any form of teacher isolation and require all teachers to honor the decisions of the team as it applies to research-based best practices in mathematics curriculum, instruction, and assessment.
- 12) Mandate that collaborative teams of mathematics teachers design *required* intervention programs targeted for struggling students *early* in the progress of each semester of the school year.

Linda Lambert (2003) indicates that teachers will willingly participate in collaborative teams if they find the effort interesting, meaningful, and rewarding to do so. As mathematics education leaders, NCSM members must then create the conditions that help teachers understand the close connection between the daily tasks at hand, the effective use of collaborative team time and the personal values of the participant teachers.

For additional insight into leading effective teams, related to adult learners, and case studies of successful implementation, NCSM recommends the books: *Leadership Capacity for Lasting School Improvement* (2003) by Linda Lambert; *Strengthening the Heartbeat: Leading and Learning Together in Schools* (2005) by Thomas Sergiovanni; and *Results Now* by Mike Schmoker (2006). These are referenced in the bibliography for this paper.

One of a series of position papers of the National Council of Supervisors of Mathematics www.ncsmonline.org © 2007

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National Council of Supervisors of Mathematics

Mission Statement

The National Council of Supervisors of Mathematics (NCSM) is a mathematics leadership organization for educational leaders that provides professional learning opportunities necessary to support and sustain improved student achievement.

Vision Statement

NCSM envisions a professional and diverse learning community of educational leaders that ensures every student in every classroom has access to effective mathematics teachers, relevant curricula, culturally responsive pedagogy, and current technology.

To achieve our NCSM vision, we will:

- N: Network and collaborate with stakeholders in education, business, and government communities to ensure the growth and development of mathematics education leaders
- C: Communicate to mathematics leaders current and relevant research, and provide up-to-date information on issues, trends, programs, policies, best practices and technology in mathematics education
- S: Support and sustain improved student achievement through the development of leadership skills and relationships among current and future mathematics leaders
- M: Motivate mathematics leaders to maintain a life-long commitment to provide equity and access for all learners

Revised July, 2007

NCSM: Leadership in Mathematics Education

www.ncsmonline.org



Collaborative Learning: Data Analysis ToolsIt all started with some CBAs...

Which underlined digit has the greatest value?

F. <u>299**</u> (39%) **G.** 36<u>8</u> (34%)

- **H.** 5<u>7</u>7 (14%)
- **J.** 99<u>1</u> (13%)

Which number is 100 more than 367?

- **C.** 467** (42%)
- **D.** 1,367 (32%)



Collaborative Learning: Data Analysis Tools

- 2013 STAAR Grade 4 Mathematics
 - Item # 25
 - 4.6B use patterns to multiply by 10 and 100

A season pass at a water park costs \$100. A total of 125 people paid for a season pass. What was the total cost of these season passes?

- **A** \$225
- **B** \$12,500
- **C** \$12,005
- **D** \$1,250



Collaborative Learning: Data Analysis Tools

Tool: Here's What! So What? Now What?

Here's What!	So What? So what does that mean?	Now What? So what do we do now?

Adapted from Data Driven Dialogue (Lipton and Wellman, 2003)

Here's What! What happened?	So What? So what does that mean?	Now What? So what do we do now?

Adapted from *Data Driven Dialogue* (Lipton and Wellman, 2003)



Collaborative Learning: Data Analysis ToolsTool: Here's What! So What? Now What?

Here's What!	So What?	Now What?	
What happened?	So what does that mean?	So what do we do now?	
Item#: Student Expectation:	What does the student data on	What do we do for the students	
For this student expectation, what do students need to know and be able to do?	this assessment item mean?	that have demonstrated mastery of the concept(s)?	
Based on the student data for this assessment item, what happened?		What do we do for the students that have not demonstrated mastery of the concept(s)?	
		How will we know when students have mastered the concept(s)?	

Here's What!	So What?	Now What?
What happened?	So what does that mean?	So what do we do now?
Item#: Student Expectation:	What does the student data on	What do we do for the students
For this student expectation, what do students need to know and be able to do?	this assessment item mean?	that have demonstrated mastery of the concept(s)?
Based on the student data for this assessment item, what happened?		What do we do for the students that have not demonstrated mastery of the concept(s)?
		How will we know when students have mastered the concept(s)?



Collaborative Learning: Data Analysis Tools

 What tools are you using to support your data analysis conversations with your collaborating teachers?



Cross-Organization Conversations

- TSELA's Representatives at TASM
 - Kenn Heydrick, TSELA President
 - Susanna Ramirez, TSELA Treasurer
- TASM's Representatives at TSELA – Dinah Chancellor, TASM Past-President
 - Adam Hile, CAMT Board Representative



Cross-Organization Conversations TSELA's Representatives at TASM

- <u>www.TSELAonline.org</u>
- www.tinyurl.com/tsela-folder



2014 Tommy Eads Leadership Award



"to annually recognize a current TASM member who has made dedicated and unique contributions to mathematics education"

> Nominations can be made online! http://www.tasmonline.net/index.html



Future Meetings: Nicole Shanahan

2014	2015
02.20.14 Spring PD	02.19.15 Spring PD
02.21.14 Spring Business Meeting	02.20.15 Spring Business Meeting
07.20.14 CAMT Business Meeting	06.23.15 CAMT Business Meeting
(Ft. Worth)	(Houston)
10.20.14 Fall PD	10.19.15 Fall PD
10.21.14 Fall Business Meeting	10.20.15 Fall Business Meeting



Future Conversations: Janet Dodd

TASM's Objectives:

- by holding meetings for the presentation and discussion of papers;
- by conducting public discussion groups, forums, panels, lectures, or other similar programs;
- by conducting or promoting investigations for the purpose of improving the teaching of mathematics; and
- by the publication of papers, journals, books, and reports;



Goals: Today's Meeting

- Engage in collaborative conversations focused on curriculum and assessment
- Engage in collaborative conversations focused on improving the teaching of mathematics