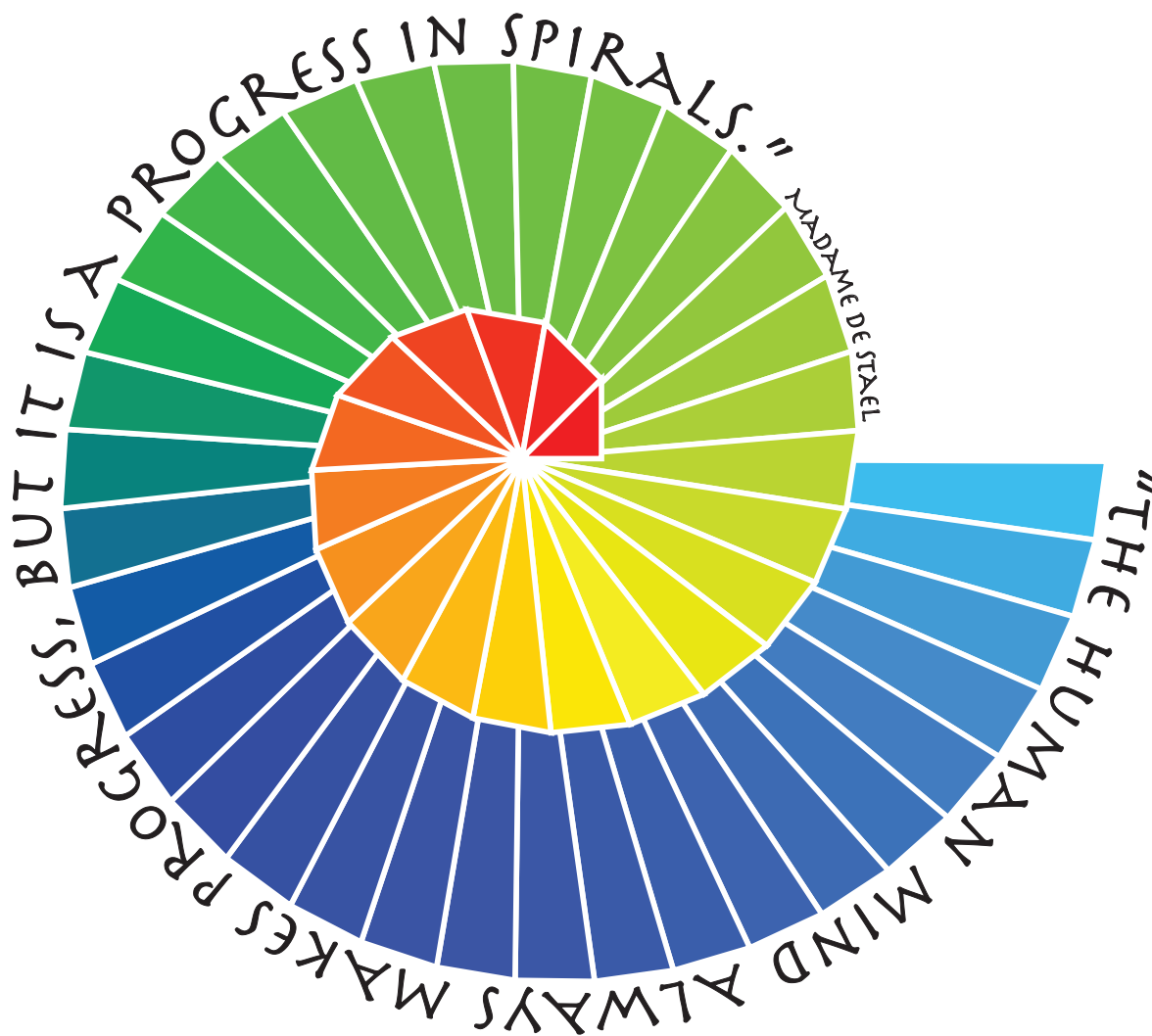


ASILOMAR

Mathematics Conference 2015

www.cmc-math.org



THE SPIRAL OF THEODORUS

"Getting at the Core of the Mathematical Practices"

Friday, December 11 - Sunday, December 13, 2015

Asilomar Conference Grounds • Pacific Grove Middle School, Pacific Grove

For activities
related to the
Wheel of Theodorus
see page 45.

Welcome to Asilomar

Take time to explore mathematical ideas and teaching for understanding. Whether you're a first-timer or a veteran of many Asilomar conferences, we hope this brochure will help you find the exciting opportunities that await you at this year's conference!

A PLACE TO GET NEW IDEAS...

Asilomar is a place to get lots of new lessons and ideas to use in your classroom. Attend sessions led by teachers and educators from all levels, and all over California, the United States, and beyond. Experience hands-on workshops and fun-filled activities you will want to share with your colleagues and students. The Asilomar conference provides nearly 200 sessions in a three-day program that offers a rich variety of experiences to suit every grade level and to cover all strands of mathematics.

A PLACE TO LEARN WHAT IS NEW IN MATHEMATICS EDUCATION...

Come to Asilomar to learn about and discuss the latest mathematics education news, information and issues. We are proud to have an outstanding group of presenters—people at the forefront of change in mathematics instruction. Discover how changes in state and national policy, teaching techniques, materials, texts and assessment will affect your classroom, your students and your teaching.

A PLACE TO NETWORK...

Several hundred teachers from all levels attend Asilomar each year. Take this opportunity to enlarge your network of colleagues who can assist you in building your math program. Become part of the CMC network that supports math teachers throughout California. Meet new friends who share your interests and love of teaching.

A WONDERFUL PLACE TO BE...

Asilomar is a beautiful State Park. You will encounter many species of wildlife as you meander through the grounds or take the boardwalks to the dunes. Join us!

TABLE OF CONTENTS

Conference Evaluation	2
Program	3
CMC-North " <i>Note of Gratitude</i> "	4
First Time at Asilomar?	4
Lunch Options.....	4
T-shirt and Sweatshirt Sale.....	4
CMC-North Officers and Conference Volunteers	5
Conference Information.....	5
Bus Service, Electronic Devices, College Credit, Exhibits, Conference Day Assistance, Disabled Services, First Time at Asilomar?, Help, Protect the Vegetation, Lunch Options, Meal Tickets, Parking, Program Changes, Seating/Capacity, Session Types, T-shirt and Sweatshirt Sales, Walking	
Kick-off Mini-Conference.....	6
Keynote Sessions.....	7
Tax Deductible Contribution.....	8
Highlighted Sessions.....	8
Call for 2015 Speaker Proposals.....	8
Conference Day and Time Planner	9
Matrix - Asilomar Grounds	10
How to Read the Matrix.....	10
Special Strands.....	11
Matrix - Pacific Grove Middle School.....	12
How to Read the Speaker List.....	14
Speaker List (alpha order).....	14
Speaker Evaluation	21
Sessions at a Glance.....	33
Exhibits.....	38
Exhibits Table Maps	39
Award Winners	40
Stay Connected: CMC Facebook & Twitter Information	41
Ignite! and President's Party	41
Calendar of Events for 2014	42
CMC State and North Board Members	42
Affiliated Groups	42
Mini-Grant Guidelines, Application, Information.....	43
NCTM Annual Meeting & Exposition	44
The Spiral of Theodorus.....	45
Certificate of Attendance	46
ETA hand2mind	46
Pacific Grove and Pacific Grove Middle School Maps.....	47
Asilomar Conference Grounds Map	48

Conference Evaluation Form Online

Visit <https://www.surveymonkey.com/r/CMC-NorthConferenceEvaluation> by December 31, 2015 and you will be entered in a drawing for FREE conference registration and on grounds housing for next year. The winners for this year's free registration and housing are Jordan Johnson and Debra Hughes.



A SPECIAL THANKS TO!

Conference Coordinator
April Goodman-Orcutt

Registration
Julie Crozier

Program Chair
Ana England

**Pacific Grove Middle School
Coordinators**
Ivy Kong, Susan Stegge

**Pacific Grove Middle School
Tech Coordinator**
Grayson Fong

**Program
Design/Layout**
Connie Anderson

Speaker	Topic	Grade Level	Room
Asturias, Harold	Linking Language to Learning, Agency, Authority & Identity	Equity	Oak Shelter
Bambao, Kim	Developing Number Sense in Pre-K to 3rd Grade Through Counting	PK-3	Acacia
Cagle, Peg	Taking Action to Build a Better Profession, No Matter Your Title or Job Description	Ldrshp	Evergreen
Leinwand, Steve	Breathing Classroom Life into the NCTM Teaching Practices	GI	Toyon
Luberoff, Eli	Design Principles for Digital Content	Tech	Nautilus West
Parker, Ruth	Changing the Classroom Culture Through Number Talks	4-14	Nautilus East
Shreve, Barbara Carlos Cabana	When the Task Is Not Enough: Pedagogy That Builds SMPs	GI	Heather

PROGRAM

	Time	Event	Location
Friday	3:00-7:00 PM	Registration (Mini Conference participants can pick up their bags at noon.)	Surf & Sand, Asilomar
	4:00-6:00 PM	Newcomers' Session (20 minute repeating presentations)	Triton
	5:30-7:30 PM	Exhibits (materials for purchase)	Gym, Pacific Grove MS
	6:00-7:00 PM	Dinner	Dining Hall, Asilomar
	7:30-9:00 PM	KEYNOTE SESSION: (information on page 7) Matt Larson, NCTM - Overcoming Obstacles to Make Mathematics Work for All!	Auditorium, Pacific Grove MS
Saturday	7:00-8:15 AM	Breakfast	Dining Hall, Asilomar
	7:30 AM-12:00 PM	Registration and Bag Pick-up (Bag pick-up only at Pacific Grove Middle School)	Surf & Sand, Asilomar
	7:45-9:00 AM	Newcomers' Session (20 minute repeating presentations)	Triton & PGMS Auditorium
	7:30 AM-5:30 PM	Exhibits (materials for purchase)	Gym, Pacific Grove MS
	8:00 AM-12:00 PM	Sessions (matrix begins on page 10, speaker section begins on page 14)	
	12:00-1:30 PM	Lunch (refer to page 4)	Dining Hall, Asilomar
	1:30-5:00 PM	Sessions (matrix begins on page 10, speaker section begins on page 14)	
	6:00-7:00 PM	Dinner	Dining Hall, Asilomar
	7:30-10:00 PM	Ignite! and President's Party Everyone Welcome!	Merrill Hall, Asilomar
Sunday	7:30-9:00 AM	Breakfast (pickup box lunch)	Dining Hall, Asilomar
	8:00-8:45 AM	CMC-N Membership Meeting	Surf & Sand, Asilomar
	9:00-10:15 AM	MORNING KEYNOTE SESSION: Grace Kelemanik — The Eight Standards for Mathematical Practice: Overwhelming and Under Realized	Merrill Hall, Asilomar
	10:15-10:45 AM	Coffee Break	
	10:45 AM - Noon	MID-MORNING KEYNOTE SESSION: Steven Leinwand — Teaching Math: Insights an Reflections on > 1000 Observations	Merrill Hall, Asilomar

CMC-North would like to express its sincere gratitude to:

The Asilomar Program Committee—for preparing an enriching program with speakers who are experts in their field, a variety of presentations to energize and expand the skills and talents of each mathematics educator, and a feeling of renewed enthusiasm for teaching.

The Speakers—for providing stimulating presentations and sharing new ideas, teaching methods, and tools. We acknowledge the many hours of preparation they have spent to provide you with valuable handouts and with this opportunity for growth and networking.

The Asilomar Committee Chairs and Volunteers—for providing you with the best support to help make your experience at this year's conference go smoothly through their help with equipment, signs, logistics, and more.

The Presiders and Pre-Service Teacher Volunteers—for providing speakers with warm hospitality, a welcoming introduction, and a hearty thank you at the end of each session. Presiders are one of the ones to keeping speakers coming back to Asilomar.

The Exhibitors—for contributing to your conference experience by bringing new curriculum materials, teaching ideas, technology, products, and free demonstrations to you and your fellow conference goers.

The Staffs of Pacific Grove Middle School and the Asilomar Conference Grounds—for welcoming conference participants to your sites and for your support in making our conference a great success.

*Thank
You*

Ignite! (Steve Weimer, emcee), and President's Party

We're very excited to offer an Ignite session sponsored by Math Forum @ Drexel. What is Ignite? This fast-paced, fun, thought-provoking, high-energy series of 5-minute talks with 20 self-advancing slides by people with the guts to get on-stage and talk about something they are passionate about! Stay for the President's Party afterwards.

Co-presenters: Harold Asturias, Annie Fetter, Susie Hakansson, Rebecca Lewis, John Mahlstedt, Max Ray-Riek, Mary Reynolds, David Rosenthal, Chris Shore, Elizabeth Statmore

Saturday, 7:30 - 10:00 | Asilomar, Merrill Hall

Lunch Options

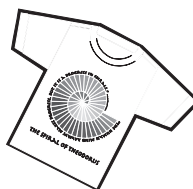
There will be food available for purchase at the Middle School! From 8:00am till about 2:00pm, student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries. Please support these local school groups. A limited number of meal tickets are available for purchase at the Asilomar front desk and light snacks can be purchased in the Asilomar Social Hall.

First Time at Asilomar

Come to Triton, Friday between 4:00 and 6:00pm, or Triton and PGMS Auditorium, Saturday between 7:45 and 9:00am for a 20-minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know.

T-shirts and Sweatshirts

Displaying this year's Asilomar Mathematics Conference logo will be available for purchase in Surf and Sand on Friday and Pacific Grove Middle School Gym on Saturday. Don't miss your opportunity to bring home a memento of your conference participation.



Hand Games, Logic Games, and Games for Practice!

Pacific Grove Middle School Library

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

Social Gathering

CMC-Central is hosting a social gathering from 5:00-7:00pm on Saturday in Evergreen. (Heavy hors d'oeuvres will be served.)

Hand2Mind Manipulative Playground

Pacific Grove Middle School Library

Come drop in and see how you can use manipulatives in your classroom lessons!

8:00 | Fraction Sense

9:30 | Geometric Concepts

11:00 | Number Sense, Place Value

1:30 | Open Playground



CMC-NORTH OFFICERS

PresidentApril Goodman-Orcutt
President Elect.....Rebecca Lewis
Vice PresidentAna England
Treasurer.....Brian Lim
Secretary.....Rita Nutsch

CONFERENCE VOLUNTEERS

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Ana England

Program Committee
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Krista McAfee, J. Orellana
Monica Rock-Johnson, Johnnie Wilson

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Linda Flood

Conference Evaluations
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Housing
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Mark Mosheim, Chris Tsuji

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NCTM Sales
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Julia Stephens

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Tina Robles

Equipment
Alison Nash

Newcomers' Orientation
Sherry Rodgers, Linda Shumate

Program Logo and T-shirt Design
John Martin

Social Media Chair
Brandon Dorman

Technical Support
Kate Reed, Jean Simutis

CONFERENCE INFORMATION

Sessions

You will find three session types: Presentations, Interactive and Make-It, Take-It sessions.

Presentations (PRS)

Will be speaker-focused, but you may expect discussion, explorations and/or some activity.

Interactive Sessions (INT)

Provide for discussion and exploration. Participants will be involved in activities and interaction with others.

Make-It, Take-It (MITI)

Make your own models for classroom projects and activities. Please join one of our scheduled sessions. Participation is limited to twenty-five. Advanced registration is not required. **Materials fee may be charged.**

Session Capacity/Seating

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix (pages 10-13) for the seating capacity of each room. All seats are available on a first-come, first-served basis.

First Time at Asilomar?

Come to Triton, Friday between 5:30 and 7:00pm or Saturday between 7:30am and 5:30pm for a 20-minute orientation session on how to navigate your first conference at Asilomar. We will show you all you need to know.

Exhibits

Some speakers have products as an integral part of their presentation. Also see the latest materials and textbooks from other companies.

Friday PGrove MS 5:30 - 7:30pm
Saturday PGrove MS 7:30am - 5:30pm

Parking

Since parking space is very limited, on-grounds parking is reserved for registrants housed on grounds. Others must park outside the main entrance to Asilomar or at the Middle School.

Disabled Services

Jitney service and white courtesy phones are available on Asilomar Grounds. Disabled access is available on the Asilomar grounds and at the Middle School.

Bus Service

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:00-9:30pm and on Saturday from 7:15am - 6:00pm

Electronic devices

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

Program Changes

Although this book contains the latest information available as of the printing deadline, some last-minute changes are inevitable. We apologize for any inconvenience that may result, and we appreciate your understanding.

Refreshments

Coffee and tea are available during the conference at Surf and Sand, Merrill Hall, Evergreen and Acacia on Friday and Saturday. Water will be in all the rooms on the grounds

Lunch Options

There will be food available for purchase at the Middle School. From 8:00am till about 2:00pm, student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries. Please support these local school groups.

Meal Tickets

Participants staying on-grounds receive a meal ticket with their housing, covering Friday dinner through Sunday lunch. For participants staying off-grounds a limited number of meal tickets will be available for purchase at the Asilomar front desk.

T-shirt and Sweatshirt Sales

T-shirts and sweatshirts displaying this year's Asilomar Mathematics Conference logo will be available for purchase in Surf and Sand on Friday and Pacific Grove Middle School Gym on Saturday. Don't miss your opportunity to bring home a memento of your conference participation.

Walking

It is one mile from Asilomar to Pacific Grove Middle School. A map of this area of Pacific Grove is provided on page 46.

Help Protect the Vegetation

Please stay on the paved paths that meander through the grounds or the boardwalks that take you on a delightful journey through the dunes. By keeping people off the vegetation, Asilomar is able to preserve the natural landscape for all to enjoy for many years to come. You might see some paths that look walking trails, but if they are not paved, they are simple animal trails created by many hooves walking the same route through the grounds. Thank you very much for your cooperation.



#CMCN15

KICK-OFF MINI-CONFERENCE

Pre-registration required.

ASILOMAR, 1:30-4:30PM

FRIDAY

Asturias, Harold — Honorable Past President of CMC, UC Berkeley

Linking Language to Learning, Agency, Authority & Identity

Finding ways to provide ALL students access and opportunity to wrestle with, make sense of, and communicate about important mathematics is the focus of this mini session. We will discuss how to ensure equitable instructional practices that provide students access to the knowledge and skills they need to be successful in school and beyond. Equity | PRS | Oak Shelter

Bambao, Kim — San Mateo COE and

Kathy Liu Sun — Santa Clara Univ

Developing Number Sense in Pre-K to 3rd Grade Through Counting

Deepen your understanding of how to support student development of number sense in Pre-K to 3rd grade by engaging in a hands-on and meaningful counting activity. We will watch videos of students engaged in counting and discuss students' mathematical thinking in relation to counting and their development of quantity and number sense. We will also discuss strategies for how to elicit and respond to student thinking and share ideas for adapting the counting activity for your classrooms. PK-3 | INT | Acacia

Cagle, Peg

Taking Action to Build a Better Profession, No Matter Your Title or Job Description

Come with an aspiration, leave with an action plan. Take stock of your current place within the mathematics education landscape and identify any untapped potential, under-developed opportunities and possible impediments to moving from aspiration to reality. Then join with others committed to improving the teaching and learning of school math to identify, capitalize on, expand, and create pathways for elevating your contributions and those of your colleagues, without being constrained or defined by your official day job. Ldrshp | PRS | Evergreen

Leinwand, Steve — Research Analyst at AIR

Breathing Classroom Life into the NCTM Teaching Practices

We can summarize the 8 Principles to Actions' Mathematical Teaching Practices as goals, tasks, representations, discourse, questioning, fluency, struggle and evidence. This fast-paced, example-laden workshop will provide examples by which we will model and then discuss each of these critical research-affirmed practices for impactful instruction. Just like a great class, we'll play and learn. GI | INT | Toyon

Luberoff, Eli — Founder, DESMOS

Design Principles for Digital Content

Technology opens up a vast, largely unexplored world for curriculum design. It also introduces a litany of new constraints. What is lost when moving a lesson from paper to computers? What can be gained? Explore these questions with Eli Luberoff, founder of Desmos. We'll begin cover the principles that have governed Desmos' content development so far and work together through a few activities from teacher.desmos.com. We'll finish by collaboratively developing our own set of design principles for digital content. Tech | PRS | Tech | NautilusWest

Parker, Ruth — Math Collaborative

Changing the Classroom Culture Through Number Talks

Engage in Number Talks and examine the deep shifts in classroom culture that this daily practice promotes. Experience Number Talks with whole numbers and other rational numbers. 4-14 | INT | Nautilus East | BT

Shreve, Barbara — Mathematics Coordinator, Oakland and

Carlos Cabana — Math Teacher, Life Academy of Health and Bioscience

When the Task Is Not Enough: Pedagogy That Builds SMPs

Students' development of the Mathematical Practices is influenced by not only the tasks we give them, but by how we set up students to authentically contribute to mathematical sense-making. In this workshop we will share our learning about Complex Instruction, a pedagogy that supports teachers to build from students' diverse strengths, and to address status issues that can hinder students' development of the SMPs. Come ready to experience a CI classroom, and leave with a new take on the SMPs! GI | INT | Heather | BT

KEYNOTE SESSIONS

FRIDAY EVENING — PACIFIC GROVE MIDDLE SCHOOL, AUDITORIUM

7:30 - 9:00



Dr. Matt Larson, President-Elect NCTM

Overcoming Obstacles to Make Mathematics Work for All!

Matt Larson has served as the K-12 mathematics curriculum specialist for the Lincoln Public Schools in Nebraska, was a member of the writing team for the NCTM publication *Principles to Actions: Ensuring Mathematical Success for All*, and is currently President-Elect of NCTM. He is the co-author of numerous journal articles, professional books, textbooks, and has taught mathematics at the secondary and college levels.

In order to raise the achievement of all students and simultaneously close learning differentials, improvement efforts must simultaneously address six necessary program shifts as well as persistent obstacles that have stood in the way of making mathematics work for all students. This session will address specific actions you can take to overcome these obstacles, implement highly effective mathematics programs, and ensure that mathematics works for all students!

SUNDAY MORNING — ASILOMAR, MERRILL HALL

9:00 - 10:15



Grace Kelemanik, Teacher Educator, Boston Teacher Residency Program

The Eight Standards for Mathematical Practice: Overwhelming and Under Realized

Grace works with districts and schools grappling with issues related to quality implementation of the Common Core State Standards. She is particularly concerned with engaging special populations, including English Language Learners and students with learning disabilities, in the mathematical thinking and reasoning embodied in the Mathematical Practices.

This session will make the case for and offer a viable approach to placing the math practices at the center of math learning and doing. Starting from the assumption that not all math practices are equal, I will describe how the eight math practices work together as a constellation of practices, serving different roles in students' mathematical reasoning.

10:45 - NOON



Steve Leinwand, Principal Research Analyst at AIR

Teaching Math: Insights and Reflections on >1000 Observations

Steve Leinwand currently serves as mathematics expert on a wide range of AIR projects that turn around schools, improve adult education, evaluate programs, develop assessments and provide technical assistance. Steve has also served on the NCTM Board of Directors and has been President of the National Council of Supervisors of Mathematics. He has authored of several mathematics textbooks and numerous articles.

I have been blessed with an ever-growing database of more than 1000 K-12 mathematics class observations since 2010. This session is my initial attempt to capture some of what I've learned and what can be transported to every classroom. We'll use specific examples to look at on-going cumulative review, homework, saying vs. showing, formative assessment, questions and tasks that either numb or energize our neurons, planning, and the power of constructing viable arguments.

SATURDAY HIGHLIGHTED SESSIONS

Time	Speaker	Session	Grade Level Type	Room
8:00 - 9:00	Gail Burrill	Instruction That Makes a Difference	6-8 INT	Nautilus West
	Annie Fetter	Using Technology to Foster Conceptual Understanding	6-8 PRS	Merrill Hall
	Arjan Khalsa	Unraveling Whole Numbers and Fractions on the Number Line	3-5 INT	Toyon
9:30 - 10:30	Scott Farrand	Choose Examples to Promote Conjectures	8-12 PRS	Heather
	Phil Daro	Using Progressions to Make Progress	GI PRS	Merrill Hall
	Steve Leinwand	Mathematics Coaching: An Essential Component of Quality	GI PRS	PGMS Auditorium
11:00 - 12:00	Paul Giganti	Optical Art for Kids	3-8 PRS	Scripps
	Patrick Callahan	Let's Talk About Tests	GI PRS	Merrill Hall
	David Foster	Supporting Students in Agency, Identity and Authority	GI INT	PGMS Auditorium
1:30 - 3:00	Megan Taylor	More Effective Assessments, More Effective Assessment Use	8-12 INT	Heather
	Andrew Stadel	Math Mistakes and Error Analysis: Diamonds in the Rough	6-8 INT	Merrill Hall
	Ruth Parker	Bringing the SMP to Life in Classrooms	GI INT	PGMS Auditorium
3:30 - 5:00	Michael Serra	One's Good, But More Is Better	8-12 INT	Heather
	Robert Kaplinsky	How Old Is the Shepherd?	6-8 INT	Merrill Hall
	Max Ray	Practicing the Five Practices Using Archived Student Work	3-8 INT	PGMS Auditorium

CALL FOR SPEAKERS

CMC-North 58th Annual Conference

Asilomar and Pacific Grove Middle School, Pacific Grove

The Mathematical Practices: A Reality in Every Classroom

December 2-4, 2016

Proposals will be accepted online at www.cmc-math.org/activities/north_speakers.html from January 30 to April 30, 2016. We welcome new and returning speakers to submit proposals. Speaking at a conference is a great way to share your ideas and expertise with your colleagues.

For further information, please contact: Ana England at northprogram@cmc-math.org.

CMC STUDENT ACTIVITIES TRUST

Tax Deductible Contribution

Remember your year-end tax deductible contribution to the CMC Student Activities Trust Fund. So far we've spent \$200,000 to support student activities throughout California since 1983. All contributions should be mailed to:

Chris Tsuji
CMC Student Activities Trust Fund
670 Choctaw Drive, San Jose, CA 95123

Applications

Many of the past activities supported have been math fairs and various math contests, however funds are not limited to these two type of events. For information on how to apply for these funds to support student activities in mathematics, visit www.cmc-math.org/awards, or contact your local affiliate president or Natalie Mejia at the SATF Chair, at nmejia62@yahoo.com.

How To Use The CONFERENCE TIME PLANNER

The Conference Time Planner is designed to help you “map out” your sessions so you can enjoy the conference without the frustration of running from place to place, arriving late for a session, or missing one completely. It cannot, of course, help you decide which of the many sessions for your grade level to select in each time slot, nor can it make the very popular sessions less crowded. We hope it will help you enjoy the conference just a little bit more.

Below are some ideas to be aware of as you check your plan for the day:





- If this is your first Asilomar math conference, be sure to drop in at the newcomers’ session Friday between 4:00 and 6:00pm or Saturday between 7:45 and 9:00am for a 20-minute orientation session.
- The lunch hour is 90-minutes and does not overlap any session.
- Don’t forget to visit exhibits at Pacific Grove Middle School.

**Please plan accordingly and choose a couple sessions at the same site you’d like to attend.
This will save you time by not having to make a last minute choice.
It’s possible a session has reached room capacity, or was cancelled after this program went to print.**

CONFERENCE DAY AND TIME PLANNER

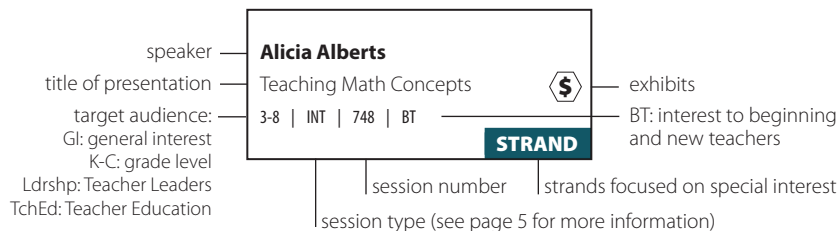
	Time	Speaker / Topic	Location
Friday	6:00-7:00 PM	Dinner	Dining Hall, Asilomar
	7:30-9:00 PM	KEYNOTE SESSION: (information on page 7) Dr. Matt Larson — Overcoming Obstacles to Make Mathematics Work for All!	Auditorium, Pacific Grove MS
Saturday	7:00-8:15 AM	Breakfast	Dining Hall, Asilomar
	8:00-9:00 AM	1ST CHOICE:	
		2ND CHOICE:	
	9:30-10:30 AM	1ST CHOICE:	
		2ND CHOICE:	
	11:00 AM-12:00 PM	1ST CHOICE:	
		2ND CHOICE:	
	12:00-1:30 PM	Lunch / Exhibits	
	1:30-3:00 PM	1ST CHOICE:	
		2ND CHOICE:	
3:30-5:00 PM	1ST CHOICE:		
	2ND CHOICE:		
6:00-7:00 PM	Dinner	Dining Hall, Asilomar	
7:30-10:00 PM	Ignite! and President’s Party - Everyone Welcome! (information on page 4)	Merrill Hall, Asilomar	
Sunday	7:30-9:00 AM	Breakfast	Dining Hall, Asilomar
	9:00-10:15 AM	MORNING KEYNOTE SESSION: (information on page 7) Grace Kelemanik — The Eight Standards for Mathematical Practice: Overwhelming and Under Realized	Merrill Hall, Asilomar
	10:45 AM-Noon	MID-MORNING KEYNOTE SESSION: (information on page 7) Steve Leinwand — Teaching Math: Insights and Reflections on >1000 Observations	Merrill Hall, Asilomar

ASILOMAR CONFERENCE GROUNDS—SATURDAY SESSIONS

Facility		8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
FIRESIDE	Oak Shelter Seats 25	Elizabeth Gamino Mathematics for Students Via Professional Noticing PK-2 INT 104 BT	Caryl Pierson 4 Essential Elements of RTI for Multiplication and Division 6-8 INT 204 BT	Stephanie Biagetti Facilitating Constructive Math Conversations PK-2 INT 304 BT	Jeanne Ramos Developing Students Algebraic Thinking and Academic Language 6-8 INT 404	Joan Easterday Statistics: Gummy Worms, Rubber Band Cars, and Cubits 3-5 INT 504 BT
	Evergreen Seats 25	Gloria Brown Brooks Problem Solving with English Language Learners GI INT 105 BT	Jennifer Oloff-Lewis Engaging Students in Open-Ended Tasks 3-5 INT 205 BT	Julie Yu The Math of Mirrors 8-12 INT 305 BT	Suzanne Damm Math: A Topic Worth Discussing. Teachers and Students Talk 6-8 INT 405 BT	Tammy Schultz Creating a Motivating Math Environment PK-5 INT 505 BT
NORTH WOODS	Heather Seats 110	Lizzy Hull Barnes Bay Area Secondary Partners: San Francisco and Oakland Ldrshp PRS 103 LDRSHP	Scott Farrand Choose Examples to Pro- mote Conjectures 8-12 PRS 203 BT	Kenji Hakuta Finally! Giving Students a Voice in Mathematics Classrooms Ldrshp PRS 303 LDRSHP	Megan Taylor More Effective Assessments, More Effective Assessment Use 8-12 INT 403 BT	Michael Serra One's Good, But More is Better 8-12 INT 503 BT
	Scripps Seats 50	Danielle Buckman Building Perseverance in a Culture of Exploration 8-12 PRS 106 BT	Greg Pitzer Student Discourse Around Rigorous Tasks Using Technology 3-8 INT 206 BT	Paul Giganti Optical Art for Kids 3-8 PRS 306 BT	Eli Luberoff Technology and Intellectual Need 8-12 INT 406 BT 	Angela Torres Video Club: Creating Vision and Pushing Teacher Beliefs GI INT 506 BT
	Acacia Seats 25	Michael Fenton Designing Rich Digital Tasks for the JH/HS Math Classroom 6-12 INT 107	Jon Southam Introduction to Trig in Geometry with the Unit Circle 8-12 INT 207 BT	Rhonda McEntee The Art of Effective Questioning 3-5 INT 307 BT	Rob Nickerson Be Intentional: Elevating the Mathematical Practices 3-5 INT 407 BT 	Ann Carlyle Ten Frames, Number Lines, Rekenreks: Tools for Thinking K-2 PK-2 INT 507 BT
	Toyon Seats 25	Arjan Khalsa Unraveling Whole Numbers and Fractions on the Number Line 3-5 INT 108 BT 	Patricia Amend-Ehn Making Connections Through Engineering PK-5 INT 208 BT	Shalek Chappill-Nichols Magical Math PK-2 INT 308 BT	Shalek Chappill-Nichols Measurement and Data, Oh My! PK-2 INT 408 BT	Susie Hakansson Understand Ratios and Proportional Reasoning 6-8 INT 508 BT
VIEW CRESCENT	Marlin Seats 50	Jonathan Dueck Building a Math Program Strong in Concept and Understanding Ldrshp PRS 109 CAMTE	Cathy Carroll Learning from Research: Using Worked Examples in Math Class 6-8 INT 209 BT CAMTE	Megan Taylor Enacting the Gold-Standard in Teacher Education GI PRS 309 BT CAMTE	Carol Fry Bohlin Preparing Middle School Mathematics Teachers- Issues & Models Tchr Ed PRS 409 CAMTE	Diane Kinch CAMTE Business Meeting Tchr Ed PRS 509 CAMTE
	Curlew Seats 25	Celine Liu Improving Outcomes Through Family and Community Engagement GI INT 110 BT	Joanne Rossi Becker Orchestrating Math Practices 7 & 8 in Your Math Classroom 6-8 INT 210 BT	Mardi Gale Algebra Intervention, Rigor, Problem Solving and the CCSS 8-12 PRS 310 BT	Henri Picciotto A Lab Gear Approach to Operations and Equivalent Expressions 6-8 INT 410 BT 	Patricia Rogers Persevere as Students Develop Mathematical Strength 3-8 INT 510 BT

HOW TO READ THE MATRIX

The matrix also reflects site, room, day and time of session. Refer to the alpha section for more information about each session. Site map on back of program.



REFRESHMENTS

Coffee and tea are available during the conference at Surf and Sand, Merrill Hall, Evergreen and Acacia on Friday and Saturday. Water will be in all the rooms on the grounds.

ASILOMAR CONFERENCE GROUNDS—SATURDAY SESSIONS

Facility		8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
SEA GALAXY	Triton Seats 20	Sherry Rodgers Newcomers' Session GI PRS 115	Debra Wickman Everyday, Every Class: Formative Assessment for SMPs Ldrshp PRS 215 LDRSHP	Roberta Newton Math Running Records: A Framework for Fact Fluency PK-5 PRS 315 BT	Noam Szoke Math in the Moment: Exploring Number in Early Childhood PK-2 INT 415 BT	Gail Standiford Data Collection: Using a CBR to Make the Math Real 8-12 INT 515 BT
	Nautilus E Seats 36	Beth Powell Identifying Breakdowns: Concept, Computation and Application PK-5 PRS 116	Denise Trakas Moving Beyond Narration to Mathematical Argumentation PK-5 INT 216 BT	Brad Fulton Teaching 2-Digit Multiplication the Common Core Way 3-8 PRS 316 BT	Brad Fulton The Number Line Activity: Empowering Mathematical Thinking 3-8 PRS 416 BT	John Mahlstedt Surviving the Apocalypse...with Math 6-8 INT 516 BT
	Nautilus W Seats 35	Gail Burrill Instruction That Makes a Difference GI INT 117 BT	Gail Burrill The CCSSM Expressions, Equations and Structure 6-8 INT 217 BT	Suzanne Alejandre Managing My Teacher Voice 6-8 PRS 317 BT	Jessica Balli Redefining Mathematical Proficiency: Walking the Walk 8-12 PRS 417 BT	Michael Fenton My Journey From Worksheets To Rich Tasks GI INT 517 BT
MERRILL H.	Merrill Hall Seats 138	Annie Fetter Using Technology to Focus on Conceptual Understanding 6-8 PRS 118 BT	Phil Daro Using Progressions to Make Progress GI PRS 218 BT	Patrick Callahan Let's Talk About Tests GI PRS 318 BT	Andrew Stadel Math Mistakes and Error Analysis: Diamonds in the Rough 6-8 INT 418 BT	Robert Kaplinsky How Old Is the Shepherd? 6-8 INT 518 BT

SPECIAL INTEREST STRANDS

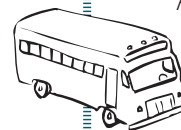
LDRSHP The leadership strand focuses on areas of interest to mathematics teacher leaders and coaches as well as district and site administrators.

CAMTE The California Association of Mathematics Teacher Educators bring together a set of speakers whose presentations focus on areas of interest to those involved in pre-service and in-service mathematics education. CAMTE Business meeting will be held 12:00-1:30 in Curlew.

MITI In the Make-It, Take-It strand you can make your own models for classroom projects and activities. Each session is limited to 25 participants. **There may be a small materials fee for some sessions.**

BUS SERVICE

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:00-9:30pm and on Saturday from 7:15am - 6:00pm



#CMCN15

SESSION CAPACITY/SEATING

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix for the seating capacity of each room. All seats are available on a first-come, first-served basis.

ASILOMAR PATHWAYS

Please stay on the paved paths that meander through the grounds or the boardwalks that take you on a delightful journey through the dunes. By keeping people off of the vegetation, Asilomar is able to preserve the natural landscape for all to enjoy for many years to come. You might see some paths that look like walking trails, but if they are not paved, they are simply animal trails created by many hooves walking the same route through the grounds. Thank you very much for your cooperation.



PACIFIC GROVE MIDDLE SCHOOL—SATURDAY SESSIONS

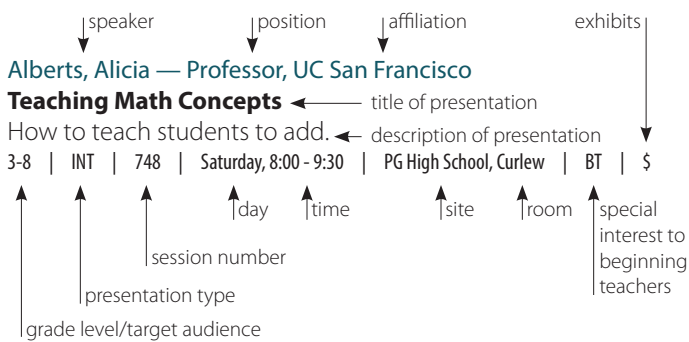
Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Library	Monica Rock Origami: Open Faced Dodecahedron Make and Take 3-8 160 MITI	Nancy Blachman Delightful Mathematical Puzzles for Differentiated Learning 6-8 260 MITI	Karen Arth Making Middle School Math Come Alive with Activities & Games MITI	Jeanne Lazzarini Connect Real Life with STEM Activities 8-12 460 BT MITI	Jeanne Lazzarini Make and Take Mathematical Cultural Figures 3-8 560 BT MITI
		Cynthia Shay Reckenreks PK-2 261 BT MITI	Elizabeth Brooking Simple Engineering to Apply Math Practices 3-5 361 BT MITI	Donna Goldenstein Enriching the Geometry/ Measurement CCMS Content Through Art 3-8 461 BT MITI	Siva Heiman Make a Special Abacus to See Core Addition Strategies PK-2 561 BT MITI
	Carol Wegner Hand Games, Logic Games and Games for Practice PK-5 W 162 MITI	Jodi Jusiak Hand Games, Logic Games and Games for Practice PK-5 W 262 MITI	Crystal Tsutsui Hand Games, Logic Games and Games for Practice PK-5 W 362 MITI	Miriam Sommer Hand Games, Logic Game and Games for Practice PK-5 W 462 MITI	Christine Wedel Hand Games, Logic Games and Games for Practice PK-5 W 562 MITI
Room 1 Seats 30	Jody Anderson Create CC Lessons Using Mathematically-Based Children's Lit PK-2 INT 131 BT	Estelle Woodbury Whose Job Is That?: Team Roles for Heterogeneous Groupings GI PRS 231 BT	Dean Becker Statistics Projects for the Aligned Classroom 8-12 INT 331 BT	Kevin Phillippi Pathway to Problem Solving via the Mathematical Practices 3-5 INT 431 BT	Chris Paulus Standard Deviation and Poe 8-12 INT 531 BT
Room 4 Seats 30	James Schierer Are Your Seniors Financially Literate? 8-12 PRS 133 BT \$	Craig Willmore Math Games for Greater Gains 3-5 INT 233 BT \$	Ma Bernadette Salgarino WestEd/SCALE's Mathematics Assessment Literacy Toolkit (ALT) 8-12 INT 333 BT	Richard Sgroi Advanced Algebra With Financial Applications 8-12 PRS 433 BT	Stephen Weimar How Do We Focus on Thinking, Rather Than Thoughts? 8-12 INT 533 BT
Room 5 Seats 30	Jane Liang From Standards to Assessments, Now What: A CDE Update GI W 134	Laura Pesavento Number of the Day PK-2 INT 234 BT	Karen Wootton Assessment: Why Bother? 8-12 INT 334 BT	Chase Orton Two-Way Frequency Tables: Teaching a New Statistics Standard 8-12 INT 434 BT	Kathleen McCarthy The Nimble Number Line PK-2 PRS 534 BT
Room 6 Seats 30	Deb Stetson Get Students to Do the Sense-Making: Teach Without Telling 3-8 INT 135 BT	Andres Marti Statistics and Probability in Grades 6-11 with Technology 8-12 PRS 235 BT	Suzanne Damm Extending Children's Mathematics: Fractions 3-5 INT 335	Carmen Whitman Let's Connect Proportional Reasoning With the Standards 6-8 INT 435 BT	Emma Trevino We Need to Reason Why: Division of Fractions 6-8 INT 535 BT
Room 7 Seats 30	Bree Pickford-Murray Classroom Routines to Support Mathematical Discourse 6-8 PRS 136 BT	Judith Kysh Challenging the Eager Achievers in Untracked Classes 8-12 PRS 236 BT	Josh Deis Looking for Vital Student Actions in the Math Classroom Ldrshp INT 336 LDRSHP	Mia Buljan Math Practices in Action: Problem Solving in Primary Classes PK-2 PRS 436 BT	Robert Preston The Pedagogy of the Practices PK-5 INT 536 BT
Room 13 Seats 30	Denise Henry SBAC and Claims and Targets, Oh My! 3-8 INT 140 BT	Anna Blinsein Journaling and Writing in Mathematics 8-12 INT 240 BT	Christine Newell Fractions: Reasoning Through Meaningful Discourse 3-5 INT 340 BT	Travis Lemon Dilation, Similarity, Trigonometry: Coherent, High Level DOK 8-12 INT 440 BT	Glenn Kenyon Rich Math Tasks as Language Catalysts PK-5 INT 540 BT
Lab 21 Seats 30	Joel Dylong Can a Computer Really Teach Problem Solving? 3-5 PRS 141 BT	Seth Dow Write to Learn 8-12 W 241 BT	Lisa Miller Using the Growth Mindset to Help All Learners Be Successful 8-12 PRS 341 BT	 Erica Burnison Making Student Thinking Visible GI PRS 441 BT 	Elizabeth Johnson TI Graphing Calculators in CC Algebra/CC Integ 1 Statistics 8-12 INT 541 BT
Lab 22 Seats 30	Rachel Lasek Using Google Forms for Quick Formative Assessments 8-12 PRS 142 BT	Rachel Lasek Math Tech-Toolbox 8-12 PRS 242 BT	Diane Resek Making Multiplication Tables Meaningful and Interesting 3-8 INT 342 BT	Shelley Carranza Google Docs and Desmos in the Secondary Math Class 8-12 PRS 442 BT	Sara Moore Linking Representation & Algorithm in Operations 3-5 INT 542 BT
Room 23 Seats 30	Beverly Heigre Technology Used in the Flipped and Traditional Classroom 8-12 PRS 158 BT	Christine Roberts Mathematics and Integrated ELA: Supporting All Learners GI INT 258 BT	Christine Roberts Assessment Practices + DOK = Deeper Understanding of Math 3-8 INT 358 BT	Bob Barboza Kids Talk Radio Math & The Occupy Mars Learning Adventures: Tchr Ed INT 458 BT	Lew Douglas Increasing Coherence in High School Math 8-12 INT 558
Room 24 Seats 30	Federico Chialvo Young Mathematicians & the Thrill of Mathematical Discovery PK-5 INT 143	Chris Shore The Core of The Core GI PRS 243 BT	Charlene Pugh You Can Do Mathematics with Fractions 3-8 INT 343 BT	Emiliano Gomez Let's Have Fun: Games for Mathematical Thinking GI INT 443 BT	James Town Making Math: Problem Solving in Action 8-12 INT 543 BT

PACIFIC GROVE MIDDLE SCHOOL—SATURDAY SESSIONS

Room	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Room 25 Seats 30	Michael Hattar Solving Common Core and Fun Problems with Confidence 8-12 PRS 144 BT	Philip Magner Beyond Euler's Line 8-12 INT 244 BT	Barbara Novelli Getting to the Core of Place Value in Primary Grades PK-2 INT 344 BT	Barbara Novelli Teach Science—Teach Math PK-5 INT 444 BT	Tracy Talamantes Pathway to Problem Solving via the Mathematical Practices PK-2 INT 544 BT
Room 26 Seats 30	Matt Lane The Unreasonable Effectiveness of Video Games 8-12 INT 145 BT	Marin Rodriguez Building Number Sense Through the Use of Primes 6-8 INT 245 BT	Jackie Wicks Playing with Numbers PK-2 INT 345 BT	Masha Albrecht Student-Centered Projects to Enrich Algebra 1 8-12 INT 445 BT	Juana De Anda Looking at a Math Task Through the Lens of the 5 Practices PK-5 INT 545 BT
Room 27 Seats 30	Eric Muller Having a Gas with Math: Geometry, Algebra and Air Pressure GI INT 146 BT	Tom Murray Math Games: Hands-on, Minds-on Fun! 3-8 INT 246 BT	Melissa Magyar Counting Collections: Build Skills Through Counting PK-2 INT 346 BT	James Short Using SMPs While Building Understanding of Expected Value 8-12 INT 446 BT	Marina Xavier-Klotz Actively Engaging in the Mathematical Practices PK-2 INT 546 BT
Room 28 Seats 30	Peggy McLean Geoboard/Dot Paper Investigations = CCSS Math Practices 3-5 INT 147 BT	Jody Silver Infusing Math Into Project-Based Learning 3-5 INT 247	Teresa Ryan Multiplication and Division of Fractions, The How and Why 3-5 INT 347 BT	John Gaines Engaging Students in Mathematics with Project Based Learning GI INT 446	John Gaines Helping Parents Transition to the Common Core Ldrshp PRS 547
Room 29 Seats 30	Robert Sornson Developing Competency for Grade 1 Essential Math Skills PK-2 INT 148 BT	Lora Saarnio Inspirational Math K-3 PK-2 INT 248 BT	Katie Reneau Rich Discussions and Rich Tasks in the MS Math Classroom 6-8 INT 348 BT	Ted Courant Conic Sections: From Geometry to Kepler's Laws 8-12 INT 448 BT	Elmano Costa Instruction for English Learners: Comprehension is at the Core PK-5 INT 548 BT
Room 32 Seats 30	Katy Early Discovering Divisibility with Pattern, Structure & Purpose! 3-5 INT 150 BT	Sean Nank Engagement Through Student Created Math Videos GI PRS 250 BT	Sean Nank Finally, a Free Online CCSS-M Textbook with Coherence! GI INT 350 BT	Kathy Bradley Building a CCSS-M Classroom with the Math Teaching Toolkit GI INT 450 BT	Hallie Foster Conics Rock! 8-12 INT 550 BT
Room 33 Seats 30	Jeanie Mehran Whimsy + Imagination = Math PK-5 PRS 151 BT	Leigh Childs Engaging Activities + Strategies = Numerically Nimble Students 3-5 PRS 251 BT	Deepti Khare Communicating Math Through Vocabulary and Writing 8-12 INT 351 BT	Martin Flashman Equations, Functions, and Mapping Diagrams in Common Core 8-12 PRS 451	Joy Otake A Journey Through Our Number System PK-5 INT 551 BT
Auditorium Seats 700	Linda Shumate Newcomers' Session GI W 153	Steve Leinwand Mathematics Coaching: An Essential Component of Quality GI PRS 253 BT	David Foster Supporting Students in Agency, Identity and Authority GI INT 353 BT	Ruth Parker Bringing the SMP to Life in Classrooms GI INT 453 BT	Max Ray Practicing the Five Practices Using Archived Student Work 3-8 INT 553 BT
Room 36 Seats 30	Lori Hamada Providing a Mathematically Rich Classroom 3-8 INT 154 BT	Rick Barlow Building a Community of Learners—One Mistake At a Time 8-12 INT 254 BT	Daren Starnes Taming the AP Statistics Investigative Task 8-12 INT 354 BT	Kathleen M Hamon Using Multi-Modal Curriculum Based on Digital Resources GI INT 454 BT	Bruce Grip Parabolas with Life Applications 8-12 PRS 554 BT
Room 37 Seats 30	Beth Baker Student Teams—Max Learning, Min Chat! Seven Simple Steps 6-8 INT 155 BT	Johnnie Wilson Teaching Word Problems Using Common Core Approaches 3-8 INT 255 BT	Elizabeth Statmore Fulfilling the Promise of MP 3 Through Talking Points 8-12 INT 355 BT	Pamela Hutchison A Night Out with Math: Supporting Parents and Students PK-5 INT 455 BT	Chris Shore The Practices Are for Kids 8-12 INT 555 BT
Room 38 Seats 30	Hardy Reyerson Discovering Newton 8-12 PRS 156	Andy Kotko Adding Depth and Complexity in Primary Math PK-2 PRS 256 BT	Karl Schaffer Where Patterns Collide: Mathematics and Dance GI INT 356 BT	Peg Cagle A Paper Cup + a Gust of Wind = Yearlong Rich Task 8-12 INT 456 BT	Kyndall Brown Using Statistics to Make Connections in Grades 6-8 6-8 INT 556 BT
Room 39 Seats 30	Kim Kirley Math and Literacy CCSS in a Joyful Kindergarten PK-2 PRS 157 BT	Lori Lambertson Change/Time: Using Data to Explore Our Changing Environment 8-12 INT 257 BT	Lucia Chavez-Goodman Math Stories and Mathematics Discourse PK-2 INT 357 BT	Rebecca Lewis "Clap Like Me" for Early Math Learning – Birth to Five PK-2 INT 457 BT	Barbara Schallau Teaching Operations for Fractions with Understanding 3-8 INT 557 BT

LDRSHP

HOW TO READ SPEAKER LIST & SPEAKER EVALUATION



Albrecht, Masha — Math Teacher, Berkeley HS
Student-Centered Projects to Enrich Algebra 1

The presenter shares projects she has used with a diverse group of algebra students in an urban high school. These projects deepen student skills and encourage mathematical thinking without rote memorization. Projects include: art posters using linear inequalities, data modeling based on topics of student interest, and student designed problems. Each project will be available as paper and electronic handouts, with rubrics included. We will look at a variety of student work.

8-12 | INT | 445 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 26 | BT
 Co-presenter: Jesus Herrera — Math Teacher, Berkeley HS

Alejandre, Suzanne — The Math Forum @ Drexel
Managing My Teacher Voice

A teacher recently said to me that she wants to encourage her students to be more engaged in their own mathematical thinking. She wants a classroom environment that encourages each student to voice their mathematical thinking and besides communicating orally, she wants to encourage each of them to write, reflect, and revise their problem-solving responses. She confessed that she's discouraged because it's hard! In this session we'll discuss some ideas for her to use to help make this happen.

6-8 | PRS | 317 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus West | BT

Amend-Ehn, Patricia — First Grade Teacher, Kenwood Elem
Making Connections Through Engineering

This is a hands-on session where participants will engage in solving real-world engineering challenges. We learn and have a deeper understanding of mathematical concepts when actively engaged. Participants will learn about the basics of the engineering process and how to bring the Maker Movement, STEM, or STEAM into their classroom. We will focus on strategies for implementing spontaneous or project based challenges into the classroom.

PK-5 | INT | 208 | Saturday, 9:30 - 10:30 | Asilomar, Toyon | BT
 Co-presenter: Carinne Paddock

ELECTRONIC DEVICES

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

Anderson, Jody — Kindergarten Teacher, Sargeant Elem / CRA
Create CC Lessons Using Mathematically-Based Children's Lit
 What child doesn't love to be read to and what teacher doesn't love to read to children? If this describes you – see how reading The 3 Little Pigs, The Very Hungry Caterpillar, Pete the Cat and His Four Groovy Buttons, The Tortoise and the Hare (plus many more titles) can lead into your next math concept lesson and ignite the love of literature and reading in your students. See how to use interactive writing to write math equations and story problems using the Language of Mathematics.

PK-2 | INT | 131 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 1 | BT
 Co-presenter: Jenn Tverberg — 1st Grade Teacher, Loomis Grammar School

Arth, Karen — CPM Educational Program
Making Middle School Math Come Alive with Activities & Games

Participants will be actively engaged in working through games and activities around middle school math topics. Operations on integers will be explored with manipulatives. Activities will be used to introduce or practice some of the basic skills. Participants will also do some activities around graphing, measures of central tendency, multiplication, play some games around integers and probability and also a Silent Board game. Mathematical Practices 1, 2 and 3 will be emphasized.

6-8 | MITI | 360 | Saturday, 11:00 - 12:00 | PG Middle School, Library A | BT

Baker, Beth — Teacher/Trainer/Affiliate President, CPM
Student Teams-Max Learning, Min Chat! Seven Simple Steps

Student study teams are the gold standard for many CCSS lessons. How do we keep our students on the lesson? Come learn and practice seven simple steps that will structure teams, give accountability to students and increase motivation and engagement. Suitable for homogeneous groups, with equity for all learners. Leave with a plan and the tools to tune up your student groups.

6-8 | INT | 155 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 37 | BT

Balli, Jessica
Redefining Mathematical Proficiency: Walking the Walk

We tell our students that we value their thinking, but then don't ask them to defend their answer. We tell our students that they'll use math in the real world, but then we decontextualize problems. We talk the talk, but don't walk the walk. In this session I will share strategies and describe how investing time in the SMPs had big payoffs throughout the year. Come see how engaging in the SMPs can help students redefine what it means to be 'good at math' and how you can walk your talk.

8-12 | PRS | 417 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus West | BT

Barboza, Bob — STEM Team Leader, Super School K-12
Kids Talk Radio Math & The Occupy Mars Learning Adventures

See demonstrations of Kids Talk Radio Math, STEAM++ Graphic Organizers, math and the visual and performing arts. The Occupy Mars Learning Adventures, project based IEP's, backpack robotics, backpack science and backpack STEM journalism podcasting. Projects include high motivational CCSS projects designed for special needs, ELL, Gifted and general ed. students.

Tchr Ed | INT | 458 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 23 | BT

Barlow, Rick — Math Teacher

Building a Community of Learners: One Mistake At a Time

As a teacher, I struggle when my students' motivation for learning seems to be assessment scores or points. I will share my efforts to use error analysis activities along with the Standards for Mathematical Practice to build a classroom community that values mathematical processes and perseverance over solutions and grades. Teachers will create an error analysis activity and modify a participation structure they currently use. We will use technology so bring your tablet, laptop or phone.

8-12 | INT | 254 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 36 | BT

Becker, Dean — Teacher, Albany HS

Statistics Projects for the Aligned Classroom

Efficiently carry out experiments that generate rich discussions about data collection and statistical analysis suitable for middle and high school classrooms. Participate in activities such as the Necco wafer challenge, manipulating numerical answers to survey questions, and using means to battle skewed distributions. You will leave with classroom ready activities and discussion points for students in 8th grade and beyond.

8-12 | INT | 331 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 1 | BT

Co-presenter: Stephen Chee — Teacher, Albany HS

Biagetti, Stephanie — CSU, Sacramento

Facilitating Constructive Math Conversations in K-2

This interactive presentation will draw on recent research related to different aspects of math conversations. As we discuss "talk moves" to support mathematical thinking, types of intentional math conversations, questions as well as sentence starters to support constructive conversation skills, you will participate in constructive math conversations to experience the tools in action and leave with resources so that you can facilitate math conversations with your own students the next week.

PK-2 | INT | 304 | Saturday, 11:00 - 12:00 | Asilomar, Oak Shelter | BT

Blachman, Nancy — Julia Robinson Math Festival

Delightful Mathematical Puzzles for Differentiated Learning

In playing with puzzles, hopefully your students will discover that mathematics is more captivating than they expected. In this workshop, Nancy Blachman will present puzzles that encourage collaborative and creative problem solving, which are accessible to students of different levels and learning styles. Each workshop attendee will receive a booklet of mathematical puzzles and links to websites with deep engaging problems and puzzles.

6-8 | MITI | 260 | Saturday, 9:30 - 10:30 | PG Middle School, Library A

Blinstein, Anna — Math Teacher, The Nueva School

Journaling and Writing in Mathematics

Writing about their math learning helps students develop deeper content understanding, improves their ability to communicate and critique the reasoning of others, and builds metacognition and positive disposition towards the subject. Come and explore different classroom structures and assessment models that support and teach students how to write more effectively in mathematics and how to include more writing in your curriculum.

8-12 | INT | 240 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 13 | BT

Bradley, Kathy — Curriculum & Instruction SFUSD

Building a CCSS-M Classroom with the Math Teaching Toolkit

The successful implementation of CCSS-M is as dependent on Practice as it is on Content. Changing the content is easy, but changing the practice is hard. The Math Teaching Toolkit was created to bring this change to our heterogeneous classrooms. In this session participants will experience signature strategies and tools from SFUSD's Math Teaching Toolkit, the guiding document for our core curriculum and for all math PD. Participants will leave with resources and ideas for their classrooms.

GI | INT | 450 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 32 | BT

Co-presenter: Glenn Kenyon — Math Content Specialist, San Francisco USD

Brooking, Elizabeth — Teacher, Pinole MS

Simple Engineering to Apply Math Practices

We will work through several simple (and inexpensive) engineering projects to support your math and science curriculum. These projects will help your students apply mathematical practices including problem solving, perseverance, and precision while reinforcing the NGSS engineering practices. Plus, they'll love it!

3-5 | MITI | 361 | Saturday, 11:00 - 12:00 | PG Middle School, Library B | BT

Brown Brooks, Gloria — Teacher, Santa Ana Opportunity School

Problem Solving with English Language Learners

I will share the work of my English Language Learners along with the student comments, and feeling regarding taking the Common Core Assessments. We will explore ways to prepare our English Language Learners to become successful with vocabulary filled assessments. Using the 8 Mathematical Practices we will explore connections and how to make them to our present curriculum. There will be a teacher discussion as well regarding; how have you increased mathematical discourse?

GI | INT | 105 | Saturday, 8:00 - 9:00 | Asilomar, Evergreen | BT

Brown, Kyndall — Exec. Director, California Mathematics Project

Using Statistics to Make Connections in Grades 6-8

The Common Core Standards contains a large number of statistics standards in grades 6-8. This session will expose teachers to the 6-8 statistics standards in the Common Core, Guidelines for Assessment and Instruction in Statistics Education (GAISE) Framework, and hands-on statistics activities. Connections will be made between the GAISE Framework and the Standards for Mathematical Practice. Strategies for English Language Development will be included.

6-8 | INT | 556 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 38 | BT

Buckman, Danielle

Building Perseverance in a Culture of Exploration

Students rarely have the opportunity to authentically make mathematical discoveries and engage in their own learning. The SMPs demand the space for multiple solutions and methods, but teachers and students alike are unsure of what this looks like in a classroom. In this session, teachers will learn about a structure called Explore, Conjecture, Validate, that allows students to be curious, take risks, and persevere when learning mathematics.

8-12 | PRS | 106 | Saturday, 8:00 - 9:00 | Asilomar, Scripps Conference | BT

Co-presenter: Jessica Balli Murk — Teacher & Education Consultant, Callahan Consulting

Buljan, Mia — Teacher, Glassbrook Elem

Math Practices in Action: Problem Solving in Primary Classes

Bring the Standards for Math Practice to life by beginning Problem Solving Workshop (PSW) as part of your math block. We will look at how to use Cognitively Guided Instruction (Carpenter, Franke) problem types to align instruction to the Common Core content standards. During this workshop we will use classroom video to highlight the roles of students and teachers during PSW; look at managing tools and materials; and give some scheduling ideas for how PSW might fit into a balanced math program.

PK-2 | PRS | 436 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 7 | BT

Burnison, Erica — Math Specialist, North Davis Elem School

Making Student Thinking Visible

If the intent of the Common Core Math Practices is to engage students in mathematical reasoning we need to first make student thinking visible and then be able to interpret and navigate students' mathematical ideas. This session will share questioning practices that help teachers elicit student thinking and get students to share and articulate their thinking. It will also give teachers tools for uncovering the math embedded in student explanations in order to deepen mathematical understanding.

GI | PRS | 441 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 21Lab | BT

Burrill, Gail — Academic Specialist, Michigan State Univ

Instruction That Makes a Difference

The NCTM Principles to Action describe eight practices for effective mathematics teaching that align directly to the CCSS Mathematical Practices for students. Research suggests that implementation of these practices shows promising evidence that they can make a difference in what students learn. What are these practices, how do they relate to the CCSSM, what does it take to make them happen, and how can interactive dynamic technology help?

GI | INT | 117 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus West | BT

The CCSSM Expressions, Equations and Structure

The CCSSM emphasize conceptual understanding and identify expressions and equations as a major content strand. Together these can provide students with the building blocks that will enable them to apply transfer their knowledge across a variety of algebraic domains. Examples of how to implement a coherent, consistent learning trajectory, supported by interactive dynamic technology, that develops this strand within and over grades can help us understand what this means for our classrooms.

6-8 | INT | 217 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus West | BT

Cagle, Peg

A Paper Cup + a Gust of Wind = Yearlong Rich Task

Explore how what began as a cup rolling on a table, became a low-threshold high-ceiling problem used to build significant math over the course of a year in geometry. Starting with physical models on day one and culminating with application of trig functions late in the year, revisiting the same task emphasizes math as reasoning not simply answer-getting, as increasingly sophisticated techniques are employed to reason about the same scenario and grow capacity for making strategic choices.

8-12 | INT | 456 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 38 | BT

Callahan, Patrick

Let's Talk About Tests

You are busy transitioning to the CCSS. New curricula, new pathways, etc., but what about your tests? Are yours very different than what you used before? Would they be considered rigorous? What does an Integrated 1 or a Common Core Grade 6 Final Exam actually look like? Does your grading system even make sense? Come find out. Let's talk about tests (and grades), it's BYOT (Bring Your Own Tests)! Warning: this talk may challenge some beliefs.

GI | PRS | 318 | Saturday, 11:00 - 12:00 | Asilomar | Merrill Hall | BT

Carlyle, Ann — Instructor/Supervisor

Ten Frames, Number Lines, Rekenreks: Tools for Thinking K-2

With these basic tools, students learn that numbers can be broken down into other numbers using decomposition. They also begin to recognize the relationship of parts to the whole. The relationships of more, less, the same, how many more, how many less, and the sequencing of numbers are all ideas that can be developed within the student's brain using visual tools to help construct these basic ideas. Participants will see how readily available materials can be used to explore these tools.

PK-2 | INT | 507 | Saturday, 3:30 - 5:00 | Asilomar, Acacia | BT

Carranza, Shelley — Math Teacher, Mountain View Los Altos SD

Google Docs and Desmos in the Secondary Math Class

This session will highlight a set of activities and templates implemented using Google Docs in middle and high school math classes. We will incorporate Desmos to support student understanding, and demonstrate how to embed hyperlinks, screenshots, and other images in a Google Doc math activity. Methods for distributing and collecting student work will be modeled throughout the session, and we will also go over how to efficiently distribute work to students using Google Classroom.

8-12 | PRS | 442 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 22Lab | BT

Co-presenter: *Noirin Foy* — Math Teacher, Los Altos SD

Carroll, Cathy — West Ed

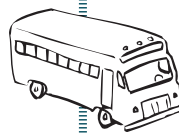
Learning from Research: Using Worked Examples in Math Class

How can we integrate the research-based cognitive design principle of *using worked examples* to enhance math instructional materials? Research suggests that engaging students in explaining solved problems *worked examples* is more effective than having them complete traditional problem sets. In this session, you will experience some samples of and strategies for using *worked examples* while engaging students with the Standards for Mathematical Practice.

6-8 | INT | 209 | Saturday, 9:30 - 10:30 | Asilomar, Marlin | BT

BUS SERVICE

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:00-9:30pm and on Saturday from 7:15am - 6:00pm



**Chappill-Nichols, Shalek — Master Teacher, Educational R & D
Magical Math**

Come join the fun in Magical Math. We will learn how to create games and activities to unlock the magic in basic math. Special emphasis is placed on identifying opportunities and methods of applying the mathematics practices in the Common Core Mathematics standards and the new Desired Result Development Profile (DRDP). Participants will learn how to conduct and assess fun and exciting activities that will enhance young student's experiences while weaving in other areas of learning domains.

PK-2 | INT | 308 | Saturday, 11:00 - 12:00 | Asilomar, Toyon | BT

Measurement and Data, Oh My!

In Measurement and Data, Oh My! educators will learn how to use hands-on activities to enhance student learning in measurement and data. Workshop participants will explore tools and strategies for teaching open-ended projects in a fun and exciting way, strengthening students' creative thinking, classification, and motor skills.

PK-2 | INT | 408 | Saturday, 1:30 - 3:00 | Asilomar, Toyon | BT

**Chavez-Goodman, Lucia — Teacher, Flowery Elem
Math Stories and Mathematics Discourse**

This session will provide an opportunity to become familiar with and explore the *5 Practices for Orchestrating Productive Mathematics Discussions* and *3-Read Strategy for CCSS Math*. The session will include an overview of how these practices can be implemented in grades K-2 and how students move to writing their math stories and providing solutions while being engaged in student discourse.

PK-2 | INT | 357 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 39 | BT

Co-presenter: *Juan Carlos Balandran — Classroom Teacher, Flowery Elem*

**Chialvo, Federico — Director of Mathematics, Synapse School
Young Mathematicians & the Thrill of Mathematical Discovery**

What kinds of mathematical contexts can provide elementary school students the thrill of mathematical discovery, and how can this fit into our curriculum? We will explore a few 'low floor, high ceiling' mathematical investigations that will get your students noticing patterns and wondering why. We will discuss ways to facilitate these kinds of math tasks and discussions with young students, and how these tasks can give students experience with mathematical practices as well as with core skills.

PK-5 | INT | 143 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 24

Childs, Leigh

Engaging Activities+Strategies = Numerically Nimble Students

Discover ways to efficiently implement CCSSM, particularly the Standards for Mathematical Practice. These engaging activities and strategies promote greater sense making, as all students increase their numeric fluency and proficiency. Selected activities differentiate instruction, infuse algebraic thinking, and enhance students' reasoning abilities.

3-5 | PRS | 251 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 33 | BT

**Costa, Elmano — Professor of Elem Education, CSU Stanislaus
Instruction for English Learners: Comprehension is at the Core**

English Learners can meet the Common Core standards and Practices when the instruction is orchestrated to meet their needs. This workshop will show you how to plan and deliver lessons that make instruction comprehensible for EL students at any level. The session begins by presenting the key features of effective EL lesson design and then models how to implement them in a math lesson taught exclusively in Portuguese.

PK-5 | INT | 548 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 29 | BT

**Courant, Ted — Mathematics Teacher, Bentley School
Conic Sections: From Geometry to Kepler's Laws**

Conic sections are introduced through geometric definitions, and their properties and applications are explored. We explore various constructions, including by paper-folding, mechanical apparatus, and use of a carpenter's square. We finish with an elementary proof of Kepler's law, namely that planets orbit the sun in an ellipse with the sun at one focus. The mathematics used ranges from geometry through algebra only, with some use of vectors, and the takeaways can be applied in grades 9-12.

8-12 | INT | 448 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 29 | BT

**Damm, Suzanne — Math Coordinator, Santa Cruz COE
Extending Children's Mathematics: Fractions**

We will explore: building meaning for fractions through word problems; the progression of children's strategies for solving fraction word problems; and, helping students capitalize on relational thinking strategies to integrate algebra into teaching and learning fractions.

3-5 | INT | 335 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 6

Math: A Topic Worth Discussing—Teachers and Students Talk

How do we get students to talk about math? We establish a safe classroom first. We set expectations and procedures. We demonstrate and practice. We give rich topics for discussion. We plan for the discussion. We allow time for the discussion to unfold. We draw conclusions and find ways to use what we have learned to help with future topics. Come experience classroom activities and ensuing discussion and start planning your next discourse topic.

6-8 | INT | 405 | Saturday, 1:30 - 3:00 | Asilomar, Evergreen | BT

Co-presenter: *Gloria Brown-Brooks — Mathematics and Science Teacher, Santa Ana Opportunity School*

Daro, Phil

Using Progressions to Make Progress

Mathematical concepts build on each other. In writing the CCSS-M, we put effort into sequencing concepts that depend on each other in coherent ways and align to cognitive development of children. The toughest job, however, belongs to teachers who must deal with progressions within each lesson. Differences among students reveal progressions along which students can travel to learn. The variety of ways students think can and should be used as stepping stones to bring students up to grade level.

GI | PRS | 218 | Saturday, 9:30 - 10:30 | Asilomar, Merrill Hall | BT

CONFERENCE PLANNER (PAGE 9)

Please plan accordingly and choose a couple sessions at the same site you'd like to attend. This will save you time by not having to make a last minute choice. It's possible a session may have reached room capacity, or was cancelled after this program went to print.

De Anda, Juana — Teacher, Flowery Elem

Looking at a Math Task Through the Lens of the 5 Practices

This session will provide teachers with an opportunity to complete a task and then go thru the 5 practices that point out how to make math discussions meaningful for students as well as teachers. Teachers will practice anticipating, monitoring, selecting, sequencing and connecting in a math task. We will discuss the importance of the anticipating stage and how you can use the information students show on the task to assess their ability in a specific math standard.

PK-5 | INT | 545 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 26 | BT

Co-presenter: Juan Carlos Balandran — Classroom Teacher, Flowery Elem

Deis, Josh — Math Coordinator, Sonoma COE

Looking for Vital Student Actions in the Math Classroom

What if we focused on students instead of teachers when we walked into a mathematics classroom? What should we look for? We should be looking for students demonstrating the Standards for Mathematical Practices (SMPs). The 5x8 card, developed by Strategic Education Research Partnership (SERP), is a powerful tool to help leaders and teachers look for vital student actions that are linked to the SMPs. Learn how to use the 5x8 card as a framework to inform teaching practices.

Ldrshp | INT | 336 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 7

Douglas, Lew — The Lawrence Hall of Science

Increasing Coherence in High School Math

The traditional 9-12 math curriculum is badly fragmented: Algebra, then Geometry, then more Algebra, and finally a hodgepodge of topics known as Pre-Calculus or Math Analysis. An integrated approach can help, but not if it merely slices up the courses and mixes up the pieces. What's needed is unifying concepts that the various pieces can fit into. I'll focus on transformations and system extension as examples of these, and include glimpses of others.

8-12 | INT | 558 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 23

Co-presenter: Henri Picciotto — Math Education Consultant
<http://www.mathedpage.org>

Dow, Seth — Sugar Bowl Academy

Write to Learn

Reflection and Extension: The power of writing in mathematics. We will begin with what the research says about writing in mathematics, and then continue onto practices in the classroom. The practices focus on writing within a unit and writing in projects. The projects are based on Sherlock Holmes and Dexter; each provides a context to analyze a fundamentally mathematical relationship. Teachers will go home with two projects and a few protocols.

8-12 | W | 241 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 21Lab | BT

Dueck, Jonathan — Fresno COE

Building a Math Program Strong in Concept and Understanding

Many elementary teachers struggle to create a math program that is larger than the adopted textbook that is handed to them each time there is a textbook adoption. Workshop participants will learn how the Fresno County Office of Education is working with educators to craft meaningful and skillful lessons with rigorous content and student interactions.

Ldrshp | PRS | 109 | Saturday, 8:00 - 9:00 | Asilomar, Marlin

Dylong, Joel — Senior Partnership Manager,
Reasoning Mind - Mathematics Nonprofit

Can a Computer Really Teach Problem Solving?

Explore how problem solving is described by researchers. Then use that information to analyze what failures and successes technology has had in utilizing said research. Attendees will be invited to critique methodologies used by technology products with a goal of help attendees better evaluate technology resources for their classroom.

3-5 | PRS | 141 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 21Lab | BT

Early, Katy — Mathematics Instructor, CSU Chico

Discovering Divisibility with Pattern, Structure & Purpose!

Divisibility begins with multiplication and division in third grade. Fourth graders explore factors, multiples, and patterns. Fifth graders express numbers as products of their prime factors and use divisibility comfortably in operations with fractions. The Math Practices empower students to use structure and precise language. We will use precise mathematical vocabulary as we play with patterns on the hundreds chart and the multiplication table, discovering useful tests of divisibility.

3-5 | INT | 150 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 32 | BT

Easterday, Joan

Statistics - Gummy Worms, Rubber Band Cars, and Cubits

These classroom lessons come from the CMC and California Mathematics Project Statistics Institute. Classroom lessons make connections for students between: the statistical process, measurement data, number, and the Standards for Mathematical Practice. You will measure gummy worms, distance traveled by wind up Lego cars, and handspans as well as see the results of the work of elementary students many of whom are second language learners.

3-5 | INT | 504 | Saturday, 3:30 - 5:00 | Asilomar, Oak Shelter | BT

Farrand, Scott — Professor, CSU, Sacramento

Choose Examples to Promote Conjectures

Getting students to anticipate and conjecture key mathematical ideas can do wonders for their motivation and inclination to make sense of mathematics. By using examples up front, carefully chosen to lead to the conjectures, you can change the roles students see for themselves as math learners. We'll go through such a process with some elementary mathematics, see some truly surprising results, and generate some wonderment and conjectures.

8-12 | PRS | 203 | Saturday, 9:30 - 10:30 | Asilomar, Heather | BT

Co-presenter: Kim Elce — Professor, CSU, Sacramento

~ Name badges ~
Name badges must be worn at
all times while attending the conference.
Badges are required for entry into the
sessions and the exhibit hall.

Fenton, Michael

Designing Rich Digital Tasks for the JH/HS Math Classroom

In this engaging, hands-on session we'll explore how Desmos—the free online graphing calculator—boosts student engagement and increases course rigor. We'll level-up our Desmos graphing skills, build rich digital tasks with Desmos Activity Builder, and gain access to hundreds of free online graphing activities. Bring a laptop or tablet for the best experience.

6-12 | INT | 107 | Saturday, 8:00 - 9:00 | Asilomar, Acacia

My Journey From Worksheets To Rich Tasks

Lecture. Practice. Homework. Wash, rinse, repeat. For years I was stuck in this uninspiring cycle. I knew there was more, but had trouble letting go of my example-centric approach. In this session I'll share what I've learned in my ongoing escape from monotony, from the big picture of 'Why' to the nuts-and-bolts details of 'What' and 'How.'

GI | INT | 517 | Saturday, 3:30 - 5:00 | Asilomar, Nautilus West | BT

Fetter, Annie — The Math Forum

Using Technology to Focus on Conceptual Understanding

Many topics in algebra and geometry are difficult to address conceptually and tend to be taught procedurally. We'll explore interactive applets that let students 'notice and wonder,' talk about mathematical situations, and develop conceptual understandings of triangle properties, linear equations, systems of equations, and factoring trinomials.

6-8 | PRS | 118 | Saturday, 8:00 - 9:00 | Asilomar, Merrill Hall | BT

Flashman, Martin

Equations, Functions, and Mapping Diagrams in Common Core

The Common Core emphasizes making sense of solving equations and using functions. Mapping diagrams provide a valuable tool for visualizing functions and connects function concepts to solving equations in many contexts. In this presentation both linear and quadratic equations will be solved using mapping diagrams to make sense visually of the functions and steps used in common algebraic approaches to these problems. GeoGebra will be used as a dynamic tool to connect the concepts with technology.

8-12 | PRS | 451 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 33

Foster, David — Executive Director,
Silicon Valley Mathematics Initiative

Supporting Students in Agency, Identity and Authority

Recent research stresses the importance of students being owners of their learning, developing positive disposition towards mathematics, shifting their beliefs to a growth mind-set and engaging in high cognitive math discourse. This session will examine how real teachers foster classroom culture to enable students to develop their agency, identity and authority in math class. Videos of elementary and secondary classrooms will be analyzed and resources shared.

GI | INT | 353 | Saturday, 11:00 - 12:00 | PG Middle School, Auditorium | BT

Foster, Hallie — Math Teacher, Terra Linda HS

Conics Rock!

Teacher: *What do you remember about conic sections?* Student: *They have to do with cones, right?* This presentation will focus (ha) on a series of activities designed to engage students in actively interacting with conic sections. Through paper folding, constructions with string and rocks, and connections to dynamic software, students learn to make geometric and algebraic connections. Leave with a packet of projects that make the vocabulary and general formulas make sense.

8-12 | INT | 550 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 32 | BT

Fry Bohlin, Carol

Preparing Middle School Mathematics Teachers-Issues & Models

CAMTE's Advocacy Committee has been focusing on middle school math teacher preparation (MSMTP) and will be sharing information on existing certification pathways, effective MSMTP models, and concerns about the Foundational-Level Mathematics credential, and conversations with the California Commission on Teacher Credentialing, and ideas for a possible middle school mathematics credential. If you have an interest in preparing excellent middle school mathematics teachers, come join the conversation!

Tchr Ed | PRS | 409 | Saturday, 1:30 - 3:00 | Asilomar, Marlin

Co-presenter: *Joanne Rossi Becker — Math Professor, San Jose State Univ*

Fulton, Brad — Mistletoe Elem

Teaching 2-Digit Multiplication the Common Core Way

With the Common Core Standards, it is no longer enough to learn multiplication facts by rote; students must also understand multiplication. Learn how to teach 2-digit multiplication so that it is conceptually rich and accessible to students. Understanding of multiplication and fluency with problem solving will flow naturally from this approach. Handout available.

3-8 | PRS | 316 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus East | BT

The Number Line Activity: Empowering Mathematical Thinking

Students can develop incredible fluency with mental mathematics using this easy-to-implement strategy. Adaptations make the lesson a perfect fit for arithmetic, fractions, decimals, percent, and algebra. A ready-for-Monday handout is available.

3-8 | PRS | 416 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus East | BT

SESSION CAPACITY/SEATING

We have made every attempt to provide adequate seating for participants at the conference. However, to ensure your safety and adhere to fire regulations, the number of participants allowed in each meeting room will be limited to the number of seats approved by the Fire Marshall. Anyone sitting on the floor or standing will be asked to leave the room. Please check the Program Matrix for the seating capacity of each room. All seats are available on a first-come, first-served basis.

#CMCN15

Gaines, John — STEM Department Chair, GLAMC

Engaging Students in Mathematics with Project Based Learning

In this presentation, participants will explore a variety of strategies and resources to help them fully incorporate the project based learning model in their mathematics curriculum. They will have the opportunity to apply these strategies and resources and address a number of the Common Core State Standards as they experience a project based learning activity firsthand. Afterward, they will discuss ways of taking this activity to the next level by increasing the rigor and depth of inquiry.

GI | INT | 447 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 28

Helping Parents Transition to the Common Core

In this presentation, we will explore a number of resources for educational leaders to use as their district begins addressing the needs of the parents. The parents present a unique opportunity for districts to reach out to the greater community and create a more cohesive learning environment that embraces the paradigm shift on a much broader scale. By educating and supporting parents through this transition, educational leaders will be able to instill solidarity through collaboration.

Ldrshp | PRS | 547 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 28

Gale, Mardi

Algebra Intervention, Rigor, Problem Solving and the CCSS

What's rigor? What's it look like for intervention? Examine essential elements for conceptually based instruction and algebra intervention that support the CCSS, embeds SMPs, emphasizes discourse, problem solving & writing. EL & PLC friendly. Engage in math, receive material that models the CCSS assessments.

8-12 | PRS | 310 | Saturday, 11:00 - 12:00 | Asilomar, Curlew | BT

Gamino, Elizabeth — Research Associate

Mathematics for Students Via Professional Noticing

CCSS is structured to ensure mathematical success for all. What does **all** mean? How is this evidenced in students' mathematical interactions? Through video, we invite you to notice and make decisions about how students approach mathematics. You will leave with tools that support counting, cardinality and whole number development to be used within your classroom.

PK-2 | INT | 104 | Saturday, 8:00 - 9:00 | Asilomar, Oak Shelter | BT

Co-presenter: *Melinda Riccardi — Research Associate, AIMS Center for Math & Science Education*

Giganti, Paul — Special Projects Chair, California Mathematics Council

Optical Art for Kids

The world of art intersects wonderfully with geometry and measurement, and no type of art crosses over into mathematics more than optical art. Come see how the artful use of geometry and careful measurement can create works of art that play tricks on your eyes and make you think you're seeing things that aren't there! Best of all, detailed instructions will be provided for half a dozen optical art projects that elementary and middle school students can do!

3-8 | PRS | 306 | Saturday, 11:00 - 12:00 | Asilomar, Scripps Conference | BT

Goldenstein, Donna

Enriching the Geometry/Measurement CCMS Content Through Art

This Make-It and Take-It session will focus on making line designs. These designs are geometric patterns formed entirely by the use of straight line segments that produce the illusion of a curve. After the paper and pencil activities, participants will make a string art project based on these designs. Geometry and measurement common core standards will be referenced as well as the mathematical practices of perseverance, precision, and using tools strategically.

3-8 | MITI | 461 | Saturday, 1:30 - 3:00 | PG Middle School, Library B | BT

Gomez, Emiliano — MDTP Site Director, UC Berkeley

Let's Have Fun: Games for Mathematical Thinking

If we want to get to the 'core' of the mathematical practices, we must present students with engaging, appealing activities or projects that provide them with meaningful opportunities to develop these practices. Games of strategy are a perfect terrain for mathematical thinking, problem solving and argumentation while having fun. We will have stations with games. First we will play. Then we will bring out the mathematics and find the optimal strategy for each of several games.

GI | INT | 443 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 24 | BT

Co-presenter: *Risa Wolfson*

Grip, Bruce

Parabolas with Life Applications

How can a spy listening device, a parabolic solar cooker, powerful lenses, and mirrors that focus light be used to bring meaning to parabolas? Our investigation will incorporate geometric transformations, the physics of reflection, proof involving congruent triangles and the distance formula. We will use Geogebra to generalize our results from hands-on activities.

8-12 | PRS | 554 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 36 | BT

Hakansson, Susie

Understand Ratios and Proportional Reasoning

We want ALL students to use problem solving to develop mathematical proficiency in proportional reasoning. In order for this to occur, we as teachers need to address the language needs of students, particularly English learners, and address our own understanding of proportional reasoning in order to design effective teaching practices. Be prepared to do some mathematics!

6-8 | INT | 508 | Saturday, 3:30 - 5:00 | Asilomar, Toyon | BT

Hakuta, Kenji — Education Professor at Stanford

Finally! Giving Students a Voice in Mathematics Classrooms.

How can we use a student observation form, with calibrated observers, to identify increase in quality of student-to-student discourse? How do we make sense of the evidence and act on our findings? Ten California school districts have collaborated to identify emerging structures to answer this question. With the support of experts like Dr. Kenji Hakuta, three different districts will share their story in building the capacity of school sites to consistently collect evidence of academic discourse.

Ldrshp | PRS | 303 | Saturday, 11:00 - 12:00 | Asilomar, Heather

Co-presenter: *Emma Druitt — Secondary Math Administrator*

Hamada, Lori — Director, CMC Central President
Providing a Mathematically Rich Classroom

CCSS calls for us to teach mathematics – much more than arithmetic and symbolic manipulation. What does this mean for teaching ‘math’? Are you and your colleagues ready for those implications? Join us for this critical conversation.

3-8 | INT | 154 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 36 | BT

*Co-presenter: Beverly Ford — Research Associate,
AIMS Center for Math & Science Education*

Hamon, Kathleen M. — Math Specialist, CK-12 Foundation
Using Multi-Modal Curriculum Based on Digital Resources

Not all students learn the same way so students need to be offered much more than the one-size-fits-all solution offered by a traditional textbook. Finding and using different modalities from free, online resources like CK-12 will help students master concepts and improve their learning. Interactive, videos, games, activities, lessons, study guides and much more will be discussed.

GI | INT | 454 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 36 | BT

Hattar, Michael

Solving Common Core and Fun Problems with Confidence

Students learn when math is fun. The presentation will be an interactive. Participants will experience unique ideas that make common core problems fun! These methods are adaptable to the classroom and ready for you to use. All participants will receive a complimentary CD for all the work shown.

8-12 | PRS | 144 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 25 | BT

*Co-presenter: Vic Hovsepian — Dean of Weekend Instruction,
Rio Hondo College, Whittier CA*

Heigre, Beverly — Math Teacher, Notre Dame HS

Technology Used in the Flipped and Traditional Classroom

Learn how I use Google products, other freeware, and existing classroom technologies in my flipped and traditional classes. I'll show you how I've successfully implemented these strategies in my classes from Algebra 1 through Trigonometry and Precalculus Honors. Join me to see how you can enhance your classroom instruction whether you have flipped none, some or all of your lessons.

8-12 | PRS | 158 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 23 | BT

Heiman, Siva

Make a Special Abacus to See Core Addition Strategies

Make and take home a Visual Math Addition Facts Abacus. You'll learn how your students can also sew one out of cardboard, a sheet protector, beads, and string. They'll be able to use it to see the addition facts and figure out core strategies to remember them (doubles, neighbors, nine is one away from 10, sum is 10, etc.). You'll also receive plans for Subtraction Facts, Multiplication Facts & Games Abacuses.

PK-2 | MITI | 561 | Saturday, 3:30 - 5:00 | PG Middle School, Library B | BT |

Henry, Denise — K-8 Mathematics Coach, Pajaro Valley USD
SBAC and Claims and Targets, Oh My!

Have you used assessment prompts to help guide instruction, focused on developing resilient learners? Are you looking for a way to correlate instructional activities to the skill sets needed to demonstrate the SBAC Achievement Levels? In this session we will share resources that can help you decode and connect SBAC Achievement Level Descriptors, clusters, and standards. You will leave with ideas for activities, and a template to recreate the process back at your school.

3-8 | INT | 140 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 13 | BT

Co-presenter: Frances Basich Whitney — Research, Accountability & Assessment Coordinator, Pajaro Valley USD

Hull Barnes, Lizzy

Bay Area Secondary Partners: San Francisco and Oakland

Math leaders from San Francisco and Oakland, with SERP partners and co-presenters Harold Asturias and Phil Daro, collaborated for 18 months on a secondary course sequence that aligns with the CCSS. Each district wrote a research based paper approved unanimously by their respective school boards, now guiding policy, teacher learning, and public outreach. Hear about the last two years of learning since the policies were passed, and how we continue to revise and refine our implementation.

Ldrshp | PRS | 103 | Saturday, 8:00 - 9:00 | Asilomar, Heather

Co-presenter: Phil Tucher — Manager, Mathematics, Oakland USD

Hutchison, Pamela — Director, UC Davis Math Project

A Night Out with Math: Supporting Parents and Students

Engaging and empowering parents is critical to student success in math. Participants will examine the use of Math Nights as a tool for engaging parents in deepening their knowledge and understanding of math while developing a toolkit of strategies, questions, activities and other resources they can use to support their child. Participants will explore activities designed to deepen students' conceptual understanding of key math concepts and support the development of procedural fluency.

PK-5 | INT | 455 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 37 | BT

*Co-presenter: Diana Zaragoza — Associate Director,
California Math Project at UC Davis*

Johnson, Elizabeth — Mathematics Teacher, Chico HS

TI Graphing Calculators in CC Algebra/CC Integ 1 Statistics

Unfamiliar with and teaching the stats in CC Alg 1 or CC Integrated 1? We will do a lesson that covers the two variable stats standards in these courses. Bring your own TI graphing calculator. You don't need to know how to use it. Stats topics include scatter plots, lines of best fit, Least Squares Regression Lines, residuals and residual plots, the coefficient of correlation, R-squared, and association vs. causation. Very fast paced but handouts will aide in filling gaps.

8-12 | INT | 541 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 21Lab | BT



Speaker Evaluation Form

<http://bit.ly/CMCNEval>

#CMCN15

Jusiak, Jodi — Julia Morgan Sch for Girls

Hand Games, Logic Games and Games for Practice

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

PK-5 | W | 262 | Saturday, 9:30 - 10:30 | PG Middle School, Library C

Co-presenter: Elizabeth Schieth and Amber Williams

Kaplinsky, Robert

How Old Is the Shepherd?

Learn how implementing real-world problem-based lessons and higher depth of knowledge questions help students develop deeper understandings and make sense of mathematics while avoiding becoming mindless math robots. Leave with free online resources.

6-8 | INT | 518 | Saturday, 3:30 - 5:00 | Asilomar, Merrill Hall | BT

Kenyon, Glenn

Rich Math Tasks as Language Catalysts

Our English Language Learners deserve meaningful access to grade-level math content. Complex texts and intellectually challenging activities are integral to both CCSS-M and California ELD Standards. This presentation demonstrates how to maintain high cognitive demand while differentiating instruction and promoting meaningful interactions between all students. Participants will experience the 3 Read Protocol while working on a rich math task from SFUSD's Math Core Curriculum.

PK-5 | INT | 540 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 13 | BT

Co-presenter: Alison Ellworth — Math Content Specialist, SFUSD

Khalsa, Arjan — CEO, Conceptua Math

Unraveling Whole Numbers and Fractions on the Number Line

Learn how to help students effectively use the number line to round whole numbers, reinforce the understanding of fractions as numbers, deepen understanding of magnitude, and make comparisons. Hands-on strategies for addressing the Common Core content and practice standards along with free online tools will be presented. This workshop will focus on the importance of the number line as a representational tool in developing an understanding of magnitude of whole numbers and fractions.

3-5 | INT | 108 | Saturday, 8:00 - 9:00 | Asilomar, Toyon | BT

Co-presenter: Julie McNamara — Assistant Professor, Cal State East Bay

Khare, Deepti

Communicating Math Through Vocabulary and Writing

Inspire students to unleash their use of precise, vocabulary and rigorous writing. Come to this interactive session to explore different strategies that can enhance students' use of academic vocabulary and develop their writing skills. Participants will be able to leave the session with concrete tools (vocab foldables, writing graphic organizers & rubrics) to address Math Practice #3 and explore how explicitly addressing math vocabulary and writing in math deepens conceptual understanding.

8-12 | INT | 351 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 33 | BT

Co-presenter: Craig Rawe — Math Teacher, Aspire Public Schools

Kinch, Diane

CAMTE Business Meeting

Tchr Ed | PRS | 509 | Saturday, 3:30 - 5:00 | Asilomar, Marlin

Kirley, Kim — IPark School

Math and Literacy CCSS in a Joyful Kindergarten

Explore ways to integrate math and literacy. We'll incorporate complex thinking and math tools as we work on CCSS. I will show you ways to tweak your wonderful Kindergarten practices in order to deepen the mathematical teaching and learning. We will explore and interpret the Mathematical Practices at a primary level. We will focus on hands-on materials and projects appropriate for our youngest students. I'll share great resources to help you on your way!

PK-2 | PRS | 157 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 39

Kotko, Andy — First Grade Teacher, Mather Heights Elem

Adding Depth and Complexity in Primary Math

Common Core challenges teachers to move beyond the traditional surface-level math problems to help students construct a deep conceptual understanding of the patterns and order within mathematics. Primary students often give the illusion of mastering content by memorizing a particular problem format, but still lack a deep understanding of operations and number sense. See how you can add depth and complexity to familiar activities to challenge and deepen your students' level of understanding.

PK-2 | PRS | 256 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 38 | BT

Kysh, Judith

Challenging the Eager Achievers in Untracked Classes

The elephant in the untracked classroom is the students who catch on quickly, anticipate your next move, and are anxious to move on. This session will focus on strategies for extending the engagement for these students. We will start with sample extensions based on standard lessons and consider alternative approaches to assignments. Groups will have the opportunity to discuss and propose additional ideas they have used or are considering, as well as practice extending a sample lesson.

8-12 | PRS | 236 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 7 | BT

Lambertson, Lori — Staff Teacher, The Exploratorium

Change/Time: Using Data to Explore Our Changing Environment

Mathematics is the language of science! Re-create our most important long-term environmental data set to understand our changing atmosphere. We will integrate Common Core Standards (modeling, proportional relationships, rates of change) and NGSS Practices (analyzing and interpreting data, using mathematics and computational thinking) in this hands-on workshop. Using data from NOAA and other resources, we will make graphical representations to model changes over time in our atmosphere.

8-12 | INT | 257 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 39 | BT

ELECTRONIC DEVICES

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

Lane, Matt

The Unreasonable Effectiveness of Video Games

Smartphones provides us with powerful machines in our pockets and on-hand 24 hours a day. With such easy access, there's a renewed push for so-called "educational games." But there's rich mathematical thinking in all sorts of games, not just ones that are billed as educational. In this session, we'll play some games, talk about some others, and explore examples of mathematics in games that don't typically come to mind when thinking about education.

8-12 | INT | 145 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 26

Lasek, Rachel — El Molino HS

Using Google Forms for Quick Formative Assessments

Overwhelmed by grading? Wish there was a faster and easier way to check for student understanding? Look no farther! Learn how to create Google Forms to use for quizzes, surveys, and assignments, which students can access on any device and receive immediate feedback. Get students writing about mathematics and making viable arguments! Come learn how use 21st Century Skills to check for daily understanding, without endless papers. Bring your laptop to learn first hand.

8-12 | PRS | 142 | Saturday, 8:00 - 9:00 | PG Middle School | Rm 22Lab | BT

Math Tech-Toolbox

Expected to be a 21st Century Skills teacher in a math classroom? Daunted by all the technology tools available? The CA SMPs expect our students to be able to use tools appropriately, to communicate readily, and to collaborate. Learn to model these practices with this tech toolbox and increase your ability to engage all students. Meet a variety of efficient technology tools for the math classroom, ranging from communication tools, classroom collaboration programs, assessment tools, and more!

8-12 | PRS | 242 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 22Lab

Lazzarini, Jeanne — Math Master Teacher, RAFT

Connect Real Life with STEM Activities

Investigate the environment while make engaging STEM connections come alive! Using the Practices of CCSS and NGSS, this workshop illuminates connections to real life and integrates Science, Technology, Engineering, and Math by investigating intriguing hands-on, make and take activities that explore properties of earthquakes, windmills, simple machines, engineering designs, artistic expression, scientific and mathematical reasoning, and much more!

8-12 | MITI | 460 | Saturday, 1:30 - 3:00 | PG Middle School, Library A

Make and Take Mathematical Cultural Figures

Proportions, symmetry, area, volume, scale models, and more brought to life! Fun make and take Mathematical cultural figures (Hopi Kachina, African Akuaba, Japanese Kokeshi, and Russian Matryoshka) connect math with cultural history and art while supporting Math Practices of the Common Core: Modeling with Mathematics; Looking for and Making use of Structure; Reasoning Abstractly, Attending to Precision; and Looking for and Expressing Regularity in Repeated Reasoning! Explore relevant creativity!

3-8 | MITI | 560 | Saturday, 3:30 - 5:00 | PG Middle School, Library A

Leinwand, Steve — Researcher

Mathematics Coaching: An Essential Component of Quality

There is so much that I've learned about the non-negotiables and the nuances of coaching teachers of mathematics and mentoring math coaches. I am increasingly convinced the only hope of widespread, effective implementation of the Common Core requires strong coaching. This session will examine some of the insights I've developed with a particular focus on videos of the all-important coaching debriefing session after an observation.

GI | PRS | 253 | Saturday, 9:30 - 10:30 | PG Middle School, Auditorium | BT

Lemon, Travis — Teacher/Consultant, Mathematics Vision Project Dilation, Similarity, Trigonometry: Coherent, High Level DOK

This session will focus on the mathematics of dilation, similarity and trigonometry. We will work tasks that highlight the progression of learning for the content identified. Participants will see the power of progression and making connections with students. Standards for Mathematical Practice will be highlighted as well as the Effective Mathematics Teaching Practices that are modeled and discussed. All tasks are free and available as open educational resources.

8-12 | INT | 440 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 13 | BT

Co-presenter: *Joleigh Honey*

Lewis, Rebecca — Director, Educational Programs

"Clap Like Me" for Early Math Learning – Birth to Five

The Core of early math learning begins at home by making numeracy a natural part of everyday. Experience CMC's "PD in Your Pocket" and take away Early Learning Math at Home (English & Spanish). Share activities with families, your children or grandchildren.

PK-2 | INT | 457 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 39 | BT

Co-presenter: *Vicki Vierra — K-12 Math Specialist, Ventura COE*

Liang, Jane — Calif Dept of Education

From Standards to Assessments, Now What: A CDE Update

With the adoptions of Common Core State Standards and the Next Generation of Science Standards as part of California standards, the development of curriculum frameworks, the implementation of California Assessment of Student Performance and Progress (CAASPP) system, the California Department of Education (CDE), under the direction of State Board of Education, in collaboration with stakeholders, is developing the new accountability system. This session will provide an update on the recent activities in CDE to support local educational agencies to improve California schools and districts.

GI | W | 134 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 5

Liu, Celine — Math Specialist

Improving Outcomes Through Family and Community Engagement

Family and community engagement is a powerful tool for improving student outcomes. Join the team from the Alameda County Office of Education as we share some research on family engagement and discuss how the Common Core State Math Standards are a lens to make parents and family's authentic partners in the various learning communities we support.

GI | INT | 110 | Saturday, 8:00 - 9:00 | Asilomar, Curlew | BT

Co-presenter: *Juwen Lam — Professional Expert, Alameda COE*

Luberoff, Eli — Founder, DEMOS

Technology and Intellectual Need

Every math notation, every word, every technique, solved a problem for someone somewhere. In this session, we'll explore how to use technology to place students in that same situation of intellectual need. In doing so, we'll see how to transform some of the most frustrating and tedious tasks — e.g. memorizing mathematical vocabulary lists — into some of the most interesting.

8-12 | INT | 406 | Saturday, 1:30 - 3:00 | Asilomar | Scripps Conference | BT

Magner, Philip

Beyond Euler's Line

Euler's Line for a Triangle includes at least the circumcenter, orthocenter, and centroid. What is Simson's Line and DeGrande's Line for any triangle? We will use a MIRA and TI NSpire/Navigator system to find these lines. Participants will learn the following:

*How to find Simson's Line and DeGrande's Line for any triangle.

*Introduced to various features of the TI NSpire CAS handheld in the geometry application including transformations, math draw, locus, live presenter, and quick polls.

8-12 | INT | 244 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 25 | BT

Magyar, Melissa — Teacher, Longwood

Counting Collections: Build Skills Through Counting

The Counting Collections activity gives students a chance to experience counting real world items while building number sense and computation skills. It can easily be differentiated and modified to meet students' needs throughout the year. In this session, you will: 1) learn the format and schedule of a Counting Collections lesson, 2) view first grade students using Counting Collections and Math Practices, 3) receive enough materials and training to start your own Counting Collections right away.

PK-2 | INT | 346 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 27 | BT

Mahlstedt, John — Teacher, Livermore Valley Charter

Surviving the Apocalypse...with Math

Do your students have the math skills to survive an apocalypse? Do YOU? Come find out in this interactive session where you'll learn how to create an immersive experience for students that will force them to use their math skills and problem solving to survive an apocalypse. The mathematical practices will be front and center as participants must band together and figure out how to survive when the world falls apart. You'll enjoy this experience as much as your students will!

6-8 | INT | 516 | Saturday, 3:30 - 5:00 | Asilomar, Nautilus East | BT

Marti, Andres — Math Content Specialist, SFUSD Curr. and Inst.

Statistics and Probability in Grades 6-11 with Technology

The focus on statistics and probability in middle and high school is a significant new shift. Experience activities that you can do with students, both with and without technology, while discussing statistical representations, measures of spread and variability, scatterplots, regression, two-way tables, and how probability and statistics are related. A variety of free apps, software, and websites will be featured that secondary teachers can use to bring dynamic representations to their students.

8-12 | PRS | 235 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 6 | BT

McCarthy, Kathleen — K-2 Math Coach

The Nimble Number Line

The number line is often an underutilized tool that can foster number sense and operational proficiency. This session explores the importance of the number line as a mathematical model for helping children develop greater flexibility in mental arithmetic.

PK-2 | PRS | 534 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 5 | BT

McEntee, Rhonda — Brook Knoll Elem

The Art of Effective Questioning

In this fast-paced session you will learn the five principles of Effective Questioning. We'll examine the levels of Depth of Knowledge, (DOK), and understand the correlation between them and closed and open questions. I'll show you how easy it is to turn a closed question into an open question. You'll leave energized and ready to promote effective questioning strategies first thing Monday morning! And in no time your students will be demonstrating higher levels of conceptual understanding.

3-5 | INT | 307 | Saturday, 11:00 - 12:00 | Asilomar, Acacia | BT

McLean, Peggy — Math Specialist, Peggy McLean Consulting
Geoboard/Dot Paper Investigations = CCSS Math Practices

Making sense of problems, modeling with tools, reasoning quantitatively, constructing arguments and critiquing reasoning of others happen simultaneously when pursuing interesting investigations. With geoboards and dot paper, design polygons to fit specific rules, discover relationships of area and perimeter, and build fractions. Investigations will strengthen math skills and provide opportunities to discover formulas. Games that support concepts will be shared. Handout provided.

3-5 | INT | 147 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 28 | BT

Mehran, Jeanie — Founder, Melon Rind

Whimsy + Imagination = Math

Do you know a student who's a creator, inventor or storyteller? Appeal to the creative right-brainers in the classroom by understanding the way they see the world. Take a look at a math class through the lens of the super imaginative kids to understand what is meaningful to them. We experimented with art, stories and activities. Hear how pre-K through 5th graders reacted when we introduced them to games that reinforced math skills. Learn which activities had the kids asking for more math.

PK-5 | PRS | 151 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 33 | BT

Miller, Lisa — District Academic Specialist, Napa Valley USD

Using the Growth Mindset to Help All Learners Be Successful

How do we help all learners, including English language learners, special education students, and other at-risk students be successful with Common Core math? Learn strategies for using the growth mindset to help all students engage in a math classroom. Participants will explore ways to set up a growth mindset culture in their classes and look at methods to have students track their own progress. Also, learn how teacher teams can work together to intentionally teach the growth mindset.

8-12 | PRS | 341 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 21Lab | BT

Moore, Sara — Director of Mathematics & Science

Linking Representation & Algorithm in Operations

Support comprehensive understanding of multiplication and division by using a variety of representations to work with whole numbers, and fractions. Experience practical strategies for helping students connect conceptual understanding of multiplication and division with the algorithms used for those operations. This session emphasizes that multiplication and division are the same operation for whole numbers & fractions and integrates conceptual understanding with procedural fluency.

3-5 | INT | 542 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 22Lab | BT

Muller, Eric — Senior Science Educator, Exploratorium

Having a Gas with Math: Geometry, Algebra and Air Pressure

Come expose yourself to the math in air pressure. This workshop will combine hands-on activities, principles of algebra and geometry, and the basic science of molecular motion to solve a few interesting math problems. We will figure out how much air force is on your body right now. We will discover and investigate some important mathematical relationships associated with gases. These activities were created at the Exploratorium Teacher Institute in San Francisco.

GI | INT | 146 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 27 | BT

Murray, Tom — Educational Consultant

Math Games: Hands-on, Minds-on Fun!

Join the fun of playing a wide variety of mathematically based skill and strategy games, many I've discovered from over 25 years at Asilomar. Students will need to use: logical reasoning, follow patterns and develop game playing strategies to be successful. Number skills, place value, geometric patterns and probability are just a few of the math components that students will experience by playing these challenging and thought provoking games. Connections will be made to the 8 Math Practices.

3-8 | INT | 246 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 27 | BT

Nank, Sean — American College of Education

Engagement Through Student Created Math Videos

I've never seen my students so engaged! Find out how students can create videos on their phone and how you can use the videos in the classroom. You will learn how to guide your students in choosing a CCSS-M standard and mathematical practice to make a two-minute video. Sample student videos from k-12 classrooms, a rubric for grading the videos, step by step directions guiding students in the creation of the videos, whole class follow-up questions, and tips for implementation will be provided.

GI | PRS | 250 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 32 | BT

Finally, a Free Online CCSS-M Textbook with Coherence!

Teachers, coaches, and domain specialists from across the country have created a coherent K-8 CCSS-M aligned math textbook complete with resources, classwork, homework, assessments, videos, and questioning strategies. Each unit has a balance of procedural, conceptual, and application lessons. Every Domain is thoughtfully woven throughout each grade level. Come learn how you can use this Learn Zillion textbook to supplement and even replace your current textbook!

GI | INT | 350 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 32 | BT

Newell, Christine — Math Project Coordinator, Stanislaus COE

Fractions: Reasoning Through Meaningful Discourse

In this interactive session, participants will reason about fractions through meaningful mathematical discourse, as expected of students in the CCSSM. We will engage in rich tasks that provide opportunities for students to engage in Mathematical Practice 3 and examine our role as teachers in facilitating these meaningful conversations. Participants will have an opportunity to watch and reflect on an episode of instruction and leave with new tools and strategies to apply to their own practice.

3-5 | INT | 340 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 13 | BT

Co-presenter: Jamie Garner — Mathematics Project Coordinator, Stanislaus COE

Newton, Roberta — Newton Education Solutions

Math Running Records: A Framework for Fact Fluency

Math Running Records provides a foundational piece in the elementary school arithmetic gap. For like the pin drop on a gps, Math Running Records help us to locate exactly where a student is on the journey through basic facts and then they tell us step by step how to get to the next destination. In this session participants will learn what math running records are, how to administer and analyze them, and how to use them for ongoing classroom assessment.

PK-5 | PRS | 315 | Saturday, 11:00 - 12:00 | Asilomar, Triton | BT

Nickerson, Rob — ORIGO Education

Be Intentional: Elevating the Mathematical Practices

Mathematically proficient students make sense of problems and reason logically as described by the 8 Standards of Mathematical Practices. Intentionally using rich, meaningful problems elevate the Practices so that students apply their conceptual understanding and procedures. Let's be intentional about the importance of 8 Standards of Mathematical Practice in our classrooms.

3-5 | INT | 407 | Saturday, 1:30 - 3:00 | Asilomar, Acacia | BT

Novelli, Barbara — Adjunct Faculty

Getting to the Core of Place Value in Primary Grades

Barbara will share many powerful ways to support primary students in understanding place value and how it relates to the operations of addition and subtraction. Engaging games, music and literature will be shared throughout the session as well as great class lessons. Let's get our primary students on the path to place value understanding, which will support their future math success!

PK-2 | INT | 344 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 25 | BT

Teach Science—Teach Math

Science is the perfect context for teaching the core math standards as well as engaging students in Standards for Mathematical Practice. Science makes math relevant to students. Barbara will fill this session with ideas about how to teach number sense, measurement and problem solving through science. For STEM schools this session is a must!

PK-5 | INT | 444 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 25 | BT

Oloff-Lewis, Jennifer — Assistant Professor, CSU Chico
Engaging Students in Open-Ended Tasks

Well-developed open-ended tasks can lead to deep mathematical thinking and act as powerful assessment tools, immediately revealing student understanding, gaps, and misunderstandings. In this session, we will present, explore, and discuss open-ended tasks designed to formatively assess student understanding and analyze student work on these tasks. Attendees will investigate the nature of these tasks, develop their own examples, and take some examples home.

3-5 | INT | 205 | Saturday, 9:30 - 10:30 | Asilomar, Evergreen | BT

Orton, Chase — Center for Math and Teaching
Two-Way Frequency Tables: Teaching a New Statistics Standard

The CCSS asks students to investigate patterns of association in bivariate categorical data by creating and interpreting two-way frequency tables and constructing viable arguments (8.SP.4, S.ID.5). Through a collaborative and engaging exploration and discussion of real-world data, attendees will deepen their knowledge of two-way tables and experience a lesson pathway that will engage all learners. Attendees leave with conceptually scaffolded lesson resources they can use with their students.

8-12 | INT | 434 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 5 | BT

Co-presenter: Shelley Kriegler — President, Center for Math and Teaching

Otake, Joy — Math Content Specialist
A Journey Through Our Number System

What does it mean to teach operations from a Place Value perspective? To understand operations in our number system, Place Value must be apparent. Understanding how the concepts progress is fundamental to elementary/middle school math. Participants will learn that standard algorithms culminate a long progression of reasoning about quantities, base-ten, and the properties of operations. Activities will highlight Place Value across the grade levels and how the standards build conceptually K-5.

PK-5 | INT | 551 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 33 | BT

Co-presenter: Kathy Bradley — Math Content Specialist, San Francisco USD

Parker, Ruth — Math Collaborative
Bringing the SMP to Life in Classrooms

The Standards for Mathematical Practice call for deep changes in mathematics classrooms. This session is designed to help you experience and understand several specific classroom practices that help bring the Standards for Mathematical Practice to life in classrooms across the grades 4-16 continuum.

GI | INT | 453 | Saturday, 1:30 - 3:00 | PG Middle School, Auditorium | BT

Paulus, Chris — Math Teacher, Santa Maria HS
Standard Deviation and Poe

Come experience how one curriculum introduces Normal Distribution and Standard Deviation using the works of Edgar Allen Poe. Participants will learn how the S.D. is introduced and then mastered so that students are able to answer a unit question based on the story *The Pit and the Pendulum* by E. A. Poe.

8-12 | INT | 531 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 1 | BT

Pesavento, Laura — Bilingual Teacher, Schafer Park Elem
Number of the Day

We will present effective ideas of how to use number of the day differentiated for Pre K-K, and 1st-2nd grades using a variety of tools and techniques that are aligned with Common Core and the Standards of Mathematical Practices. We will address place value, expanded notation, even/odd, less than/greater than, and more. We will demonstrate how tools will be used in multiple ways to represent a number or value and how dot and number talks can be incorporated into this routine.

PK-2 | INT | 234 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 5 | BT

Co-presenter: Dionne Iguar — Teacher, Fairview, Hayward USD

Phillippi, Kevin — Coordinator, San Bernardino City USD
Pathway to Problem Solving via the Mathematical Practices

The two most common barriers of problem solving are conceptual understanding and procedural fluency. Discover pathways to problem solving by integrating the SMPs into instructional routines. Participants will: Build knowledge of the relationship between conceptual understanding, procedural fluency and problem solving Understand effective teaching strategies that align with the SMPs to support math discourse, and develop questioning techniques to assist students in seeing real world applications.

3-5 | INT | 431 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 1 | BT

Co-presenter: Kari Freeman — Math Program Specialist

Piccio, Henri — Author and Consultant
A Lab Gear Approach to Operations and Equivalent Expressions

The Common Core and common sense both require an introduction to basic algebraic concepts in middle school. The Lab Gear manipulatives help students transition from numbers to variables, and from the concrete to the abstract. We will work through activities that promote an understanding of operations and their properties, especially the distributive law, combining like terms, and factoring. This is a necessary prerequisite to understanding equivalent expressions, a key concept for grades 6-9.

6-8 | INT | 410 | Saturday, 1:30 - 3:00 | Asilomar, Curlew | BT

Pickford-Murray, Bree — The Bay School
Classroom Routines to Support Mathematical Discourse

Talking about math requires students to articulate ideas that may be works in progress. By doing so, students develop a deeper understanding of their own and their peers' thinking and learn to more effectively communicate ideas. Planning for a mathematical conversation doesn't have to take all day. Each of the activities introduced in this talk contains a "bite-sized" task that allows for rich mathematical discussion that can either be used on their own or as an add-on to an existing curriculum.

6-8 | PRS | 136 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 7 | BT

Pierson, Caryl — President
4 Essential Elements of RTI for Multiplication and Division

Administer pre-tests, make decisions, engage in explicit instruction using manipulatives with the CRA process and conclude with progress monitoring. All activities emphasize CCSS-CA Math Practice Standards for fractions.

6-8 | INT | 204 | Saturday, 9:30 - 10:30 | Asilomar, Oak Shelter | BT

Co-presenter: Gloria Jonas

Pitzer, Greg — Coord, Instructional Technology, Cupertino USD
Student Discourse Around Rigorous Tasks Using Technology

Going beyond just the numbers, students need to be able to explain the reasoning, thought process, and strategies for solving a problem AND be able to evaluate another student's approach. With CCSS, there are numerous rigorous problems, Problems of Month, performance tasks to engage student. Bring a device and experience the workflow and integration of technology that challenges our students to capture their thinking, share with classmates and provide meaningful feedback to peers.

3-8 | INT | 206 | Saturday, 9:30 - 10:30 | Asilomar, Scripps Conference | BT
 Co-presenter: *Mary Alarid-Enright — Coordinator, Math & Science, Cupertino USD*

Powell, Beth — Director, Remediation A to Z
Identifying Breakdowns: Concept, Computation and Application

Teachers will learn how to identify and support underlying weaknesses in conceptual understanding, basic computations, and applying math knowledge to word problems. We will explore the connection between verbal and written language skills, memory and comprehension, and handwriting and spatial planning to better understand why students are struggling with explaining and retaining mathematics. Teachers will learn tips and tricks as well as a better sense of how to support each of their students.

PK-5 | PRS | 116 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus East

Preston, Robert — Math Project Director, MathTIME
The Pedagogy of the Practices

The Math Practices are standards we want our students to embrace, identify and utilize as they engage in tasks set before them; they are not the posters on our walls. This session will address the necessary pedagogical moves teachers can make to put the SMPs in their proper place, in the hands of the students. As a math/instructional coach, I know these moves work, even outside of "math" time.

PK-5 | INT | 536 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 7 | BT

Pugh, Charlene — Teacher, Longwood Elem
You Can Do Mathematics with Fractions

Teach students division of fractions without 'math magic.' Show students the mathematics behind dividing fractions. Don't dread fractions, enjoy them. Hands-on activities (tools), multiple strategies will be discussed. Take this strategy back to your site and make your fraction unit one to look forward to instead of dread.

3-8 | INT | 343 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 24 | BT

Ramos, Jeanne
Developing Students Algebraic Thinking and Academic Language

Participants will engage in activities that build students' access to and confidence in doing rigorous mathematics, in particular for English learners, through problem-solving tasks that develop algebraic thinking and academic language proficiency. Tasks will embed multiple standards for mathematical practice. This session is appropriate for grades 6-9.

6-9 | INT | 404 | Saturday, 1:30 - 3:00 | Asilomar, Oak Shelter

Ray, Max — Professional Collaboration Facilitator, The Math Forum

Practicing the Five Practices Using Archived Student Work

The Five Practices for Orchestrating Productive Mathematical Discussion, described by Peg Smith and Mary Kay Stein, are vitally important for math teachers who want to use whole-group and small-group discussion of big ideas to help students learn. The practices are not simple fixes, though. They require teachers to practice to get better. In this session, we will use archived student work on rich tasks to practice the practices, and discuss how to build practice time into teacher planning time.

3-8 | INT | 553 | Saturday, 3:30 - 5:00 | PG Middle School, Auditorium | BT

Reneau, Katie — Teacher

Rich Discussions and Rich Tasks in the MS Math Classroom

"What time does this class end?" "How much longer until we get out?" Be honest: How often do you hear that in your own classroom? Join us as we explore how to minimize these morale-crushing questions by incorporating rich tasks and facilitating all-hands-on-deck discussions. Boost engagement by inviting students to take ownership of their thinking and to develop the habit of asking "Why?"

6-8 | INT | 348 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 29 | BT

Co-presenter: *Michael Fenton*

Resek, Diane — Professor Emerita, San Francisco State Univ
Making Multiplication Tables Meaningful and Interesting

Participants will work in groups finding and then describing patterns in the multiplication table. The patterns will be explained in terms of the operation of multiplication. Other activities will require challenging thinking, but give practice with facts. These activities are appropriate for a diverse student population.

3-8 | INT | 342 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 22Lab | BT

Reyerson, Hardy — Math Teacher, Bellarmine College Prep
Discovering Newton

Take a walk with this fascinating man as he discovers his Calculus. Join him in his early years at Cambridge as he works out the General Binomial Theorem, does wondrous things with infinite series, and proves Heron's Formula. Find out how he handles limits 200years before Cauchy writes his first limit. By placing Calculus in a historical context you will enrich yourselves and add color to your presentations. Time permitting we will even mention his Calculus war with Leibnitz.

8-12 | PRS | 156 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 38

BUS SERVICE

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:00-9:30pm and on Saturday from 7:15am - 6:00pm



Roberts, Christine — Tulare COE

Mathematics and Integrated ELD: Supporting All Learners

Weave in supports for your English Learners in your math lessons to provide opportunities for access and to deepen student understanding. Explore CA Integrated ELD using the CA ELA/ELD Framework snapshots and additional examples created by TCOE.

GI | INT | 258 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 23 | BT

Co-presenter: Laura Gonzalez — ELA/ELD Staff Dev. and Curriculum Spec., Tulare COE

Assessment Practices + DOK = Deeper Understanding of Math

Use the formative assessment process to build a deeper understanding of mathematics; supporting students in achieving the depth and complexity of the CCSS-M standards, both in content and practice utilizing sample items of various Depth of Knowledge levels (DOK).

3-8 | INT | 358 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 23 | BT

Rock, Monica — Coordinator of Curr. and Inst., Hayward USD

Origami: Open Faced Dodecahedron Make and Take

In this Make and Take workshop participants will construct a dodecahedron and identify many of its geometric properties. Participants will learn the properties of polyhedras using the three-dimensional figure they build. In constructing this figure participants will experience the Standards of Mathematical Practice of perseverance, attending to precision, modeling and repeated reasoning, look for and make use of structure and use tools appropriately.

3-8 | MITI | 160 | Saturday, 8:00 - 9:00 | PG Middle School, Library A

Rodgers, Sherry — Shasta COE

Newcomers' Session

GI | PRS | 115 | Saturday, 8:00 - 9:00 | Asilomar, Triton

Rodriguez, Marin — Math Teacher, St. Raymond School

Building Number Sense Through the Use of Primes

Prime numbers are a fundamental building block of math. In this hand-on workshop, we will get to know primes using card games that will build your students number sense in many of the key middle school concept areas. You will take away a games template that will help with mental multiplication skills, exponential notation, prime factorization, factor pairs, greatest common factor, least common multiple/denominator, understanding the concept of relatively prime, and simplifying fractions.

6-8 | INT | 245 | Saturday, 9:30 - 10:30 | PG Middle School | Rm 26 | BT

Rogers, Patricia — MS Math Teacher, Brownell MS

Persevere as Students Develop Mathematical Strength

SMPs speak of students developing perseverance in solving problems. Teachers' questions can move student thinking forward, but we need to be purposeful in our questioning techniques. How do we plan questions that encourage student thinking and reasoning? How can we provide questions to elicit thought, collaboration and reflection among our students? Using model problems, let's discuss these ideas and provide some solid questioning strategies you can use as you plan your next unit of study.

3-8 | INT | 510 | Saturday, 3:30 - 5:00 | Asilomar, Curlew | BT

Rossi Becker, Joanne — San Jose State Univ

Orchestrating Math Practices 7 & 8 in Your Math Classroom

This session will focus on one big problem and extensions that show how Seeing Structure and Generalizing are inextricably linked. Participants will deepen their understanding of those two practices while experiencing how the two practices can be facilitated in the classroom. After working on the problem and extensions and sharing solutions with the whole group, participants will examine and discuss student work on the problem.

6-8 | INT | 210 | Saturday, 9:30 - 10:30 | Asilomar, Curlew | BT

Ryan, Teresa — Math Academic Specialist, Napa Valley USD

Multiplication and Division of Fractions, The How and Why

Teachers will work with multiplication and division of fractions utilizing arrays, drawings and properties of operations to understand and teach these difficult topics. Ideas for modeling these practices, as well as using the SMP to deepen student understanding will be explored. Discussions may include coherence of CCSSM Grades 3-5 and how fraction sense is developed vertically.

3-5 | INT | 347 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 28 | BT

Saarnio, Lora — Math and Tech Integration Spec., Nueva School

Inspirational Math K-3

At NCTM this past year, Jo Boaler launched a Week of Inspirational Math with tasks and activities for K-12. With this session, participants will see how to launch and what to expect from a range of inspirational and classroom-tested lessons in K-3 Math. Participants will also try out some inspirational mathematical puzzles and games to see how they support mathematical practices as well as promote joy, interest, and excitement about math.

PK-2 | INT | 248 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 29 | BT

Salgarino, Ma Bernadette — Coordinator, Santa Clara COE

WestEd/SCALE's Mathematics Assessment Literacy Toolkit

Experience the expansion of Building Educator Assessment Literacy through the Assessment Literacy Toolkit. This online resource offers tools to develop your knowledge of SBAC performance tasks, your understanding of how these tasks measure the CCSS and your capacity to score and analyze student work to inform instructional practice. The Toolkit offers scored and annotated student work samples that capture meaningful teacher annotations, reflections and insights into instructional strategies.

8-12 | INT | 333 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 4 | BT |

Co-presenter: Donna Lione — Secondary Math Specialist / Coach, Temecula Valley USD

Schaffer, Karl — De Anza College

Where Patterns Collide: Mathematics and Dance

Pattern is a fundamental building block in many fields: dance uses patterns of movement in time and space and mathematics investigates patterns of number, shape and connection. We will see how to link the arts and sciences using accessible classroom activities for all levels that simultaneously explore concepts of pattern, sequence, permutation, and combination in both math and dance. These activities help students experience the "A" in STEAM!

GI | INT | 356 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 38 | BT

Schallau, Barbara — East Side UHSD

Teaching Operations for Fractions with Understanding

I will share activities that engage students while developing understanding of fractions and operations performed on fractions—especially division! Fraction bars, multiples strips and number lines will support this learning for ALL students. Activities shared provide strategies for students to recreate their learning, instead of memorizing rules. I provide questioning techniques that promote sense making of the numbers used to help teachers and students move away from gimmicks.

3-8 | INT | 557 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 39 | BT

Schierer, James — Math Teacher, King City HS

Are Your Seniors Financially Literate?

In today's financial climate our students need to be financial literate more than ever. Come see a personal financial class that satisfies the third year college-prep math class, is A-G approved and is aligned to the Common Core. I will discuss my approach to the class, speakers that I bring in for their expertise on chapter topics and view sample projects that my students have done over the years.

8-12 | PRS | 133 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 4 | BT

Schultz, Tammy — Math Consultant, Monterey Bay Area Math Proj

Creating a Motivating Math Environment

Participants will learn how to motivate students to think deeply and share their ideas in a safe and supportive learning environment. This session will include ideas and strategies for fostering intellectually autonomous and growth-minded students who embrace the challenges of the Common Core State Standards.

PK-5 | INT | 505 | Saturday, 3:30 - 5:00 | Asilomar, Evergreen | BT

Serra, Michael

One's Good, But More is Better

Good Mathematics instruction and good problem solving includes problems with multiple answers as well as problems with multiple approaches. Join us as we explore a number of interesting problems and explorations that can have multiple answers or are accessible by a variety of approaches.

8-12 | INT | 503 | Saturday, 3:30 - 5:00 | Asilomar, Heather | BT

Sgroi, Richard — Retired Math Teacher

Advanced Algebra With Financial Applications

This presentation offers teachers a rationale and framework for creating and teaching a quantitative financial literacy advanced algebra math course. Building on Algebra 1 skills, this applications-oriented and technology-dependent course uses selected Algebra 2, Statistics, Probability and Precalculus topics in the contexts of investing, creating a business, banking, credit, automobiles, employment, taxes, home ownership, retirement, and budgeting. Sample materials will be distributed.

8-12 | PRS | 433 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 4 | BT

Shay, Cynthia — Bilingual Kinder Teacher, Strobridge School

Reckenreks

What is a Reckenrek? Come and learn about the possibilities to create a tool adequate for Pre-K to second grade. Reckenreks teach students a way to manipulate the concept of composing, and decomposing numbers. Did you know that students learn to subitize with the reckenreks? Join us and walk away with a tool in your hands to implement in your own classroom by Monday!

PK-2 | MITI | 261 | Saturday, 9:30 - 10:30 | PG Middle School, Library B | BT

Shore, Chris — The Math Projects Journal

The Core of The Core

The Common Core is more than a list of standards; it is a Noble Cause. Hear what that ultimate purpose is, why it changes our job description, and how you can successfully live up to it.

GI | PRS | 243 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 24 | BT

The Practices Are for Kids

Yes, we know that the practices are for the students. But how do you teach them? Three activities will give a better understanding of what the practices are, how to teach them explicitly, and how to apply them in tasks.

8-12 | INT | 555 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 37 | BT

Short, James — Ventura COE

Using SMPs While Building Understanding of Expected Value

Participants will experience a sequence of activities from the California Math Project materials supporting CCSS-M Probability and Statistics, that develop a deep conceptual understanding of expected value. They will then compute the EV in different contexts, and use that to inform and justify decisions. Leave with classroom ready, student tested activities that engage students in using and developing the math practices as they develop an understanding of an important statistical tool.

8-12 | INT | 446 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 27 | BT

Shumate, Linda — Shasta COE

Newcomers' Session

8-12 | W | 153 | Saturday, 8:00 - 9:00 | PG Middle School, Auditorium

Silver, Jody — Math Coach, Alvarado Elem

Infusing Math Into Project-Based Learning

Do you struggle with infusing math into the project-based learning experiences for your students? We did, too! Come learn how we intentionally created a project-based learning experience for 2nd graders that focused on real-life math. Then, learn how other elementary classes are thinking strategically about how the projects they're creating can make math come alive for their students. We'll share our thoughts, ideas, and some examples of end products created by students in grades 2-5.

3-5 | INT | 247 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 28

Co-presenter: Maureen Tecson — Classroom Teacher, New Haven USD

ELECTRONIC DEVICES

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

PROGRAM CHANGES

Although this book contains the latest information available as of the printing deadline, some last-minute changes are inevitable. We apologize for any inconvenience that may result, and we appreciate your understanding.

Sommer, Miriam — A Harrison MS

Hand Games, Logic Game and Games for Practice

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

PK-5 | W | 462 | Saturday, 1:30 - 3:00 | PG Middle School, Library C

Co-presenter: *Nora Alexander Short and Kristina Garrison*

Sornson, Robert

Developing Competency for Grade 1 Essential Math Skills

In this workshop we will consider which Grade 1 number skills and concepts must be deeply learned rather than just covered. Participants will understand the exact sequence of essential early math skills and concepts. You will explore simple and efficient ways to assess exactly which skills a child has, and which skills she is ready to learn.

PK-2 | INT | 148 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 29 | BT

Southam, Jon — Math Teacher, Sonoma Valley HS

Introduction to Trig in Geometry with the Unit Circle

Students are traditionally introduced to trigonometry through ratios of similar right triangles. But when students use calculators to find sine, cosine, and tangent values, they see a long string of digits that can seem difficult to understand. In this session, we will explore an alternative way to introduce trigonometry. Attendees will walk away with a sample trigonometry introduction lesson, a brief history of trigonometry, and current research about this approach.

8-12 | INT | 207 | Saturday, 9:30 - 10:30 | Asilomar, Acacia | BT

Stadel, Andrew

Math Mistakes and Error Analysis: Diamonds in the Rough

Explore why error analysis can help drive our instruction, curb student misconceptions, and strengthen formative assessment. Math mistakes are a valuable window into student thinking. We will turn student mistakes into free lesson ideas and opportunities for ongoing learning.

6-8 | INT | 418 | Saturday, 1:30 - 3:00 | Asilomar, Merrill Hall | BT

Standiford, Gail — CPM Regional Coordinator

Data Collection: Using a CBR to Make the Math Real

This hands-on workshop will use a \$100 device to help students see what motion looks like in a graph, a table and an equation. Engaging activities appropriate for implementing secondary common core standards will be explored to help students build conceptual understanding of linear and non-linear functions.

8-12 | INT | 515 | Saturday, 3:30 - 5:00 | Asilomar, Triton | BT

Starnes, Daren

Taming the AP Statistics Investigative Task

The investigative task is a unique feature of the AP Statistics exam that promotes transference of knowledge, analysis, and synthesis of statistical content that is not part of most introductory statistics courses. In this session, we'll examine strategies based on the mathematical practice standards – including team challenges, peer critiquing, and student presentations – to help students tackle these outside-the-box questions.

8-12 | INT | 354 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 36 | BT

Statmore, Elizabeth — Mathematics Teacher, Lowell HS

Fulfilling the Promise of MP 3 Through Talking Points

The number one predictor of success in group work is whether or not student talk rises to the level of what researchers call true "exploratory talk"; yet North American teachers have had few opportunities to learn and integrate these subtle but vital collaboration skills. To help realize the promise of Mathematical Practice 3, teachers in this session will learn efficient, evidence-based techniques and strategies from the University of Cambridge for improving the quality of student-student talk.

8-12 | INT | 355 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 37 | BT

Stetson, Deb — Project Director, CSU, Sacramento

Get Students to Do the Sense-Making: Teach Without Telling

Figuring something out for yourself makes you want to learn more, and makes you remember longer. How can we teach so students have a chance to figure things out in timely manner? Come see how to change a lesson using a cycle of teaching designed for students do the sense-making, figure out the rule, and reason why it works. This could be applied to get students to add two digit numbers without telling them how to line up addends, or to add fractions, or to square binomials.

3-8 | INT | 135 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 6 | BT

Co-presenter: *Rick West — Mathematics Specialist, UC, Davis*

Szoke, Noam

Math in the Moment: Exploring Number in Early Childhood

In this session participants will consider how our youngest learners (PK/TK) explore math concepts. How can we extend the common core down to PK/TK? What does math learning look like in the early years? How is learning in other subjects connected to math? How does learning in younger grades set the foundation for math in the elementary years and beyond? This session will include video of PK/TK classrooms and hands-on math activities.

PK-2 | INT | 415 | Saturday, 1:30 - 3:00 | Asilomar, Triton | BT

Co-presenter: *Sonny Wong Barbara Chisholm — Early Education Program Specialist, San Francisco USD*

Talamantes, Tracy — Program Specialist, Board of Education

Pathway to Problem Solving via the Mathematical Practices

The two most common barriers of problem solving are conceptual understanding and procedural fluency. Discover pathways to problem solving by integrating the SMPs into instructional routines. Participants will: Build knowledge of the relationship between conceptual understanding, procedural fluency, and problem solving; Understand effective teaching strategies that align with the SMPs to support math discourse; Develop questioning techniques to assist students in seeing real world applications.

PK-2 | INT | 544 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 25 | BT

Co-presenter: *Kate Durst — Math and Science Program Specialist,*

Speaker Evaluation Form

<https://www.surveymonkey.com/r/CMC-NorthSpeakerEvaluations>



Taylor, Megan — CEO & Founder, Trellis Education
Enacting the Gold-Standard in Teacher Education

We are at a rare point in history when there is widespread agreement among experts about how to create exceptional math teachers. Yet the number of people choosing to enter the profession each year continues to decline, and teacher turnover is alarming. Furthermore, debates about teacher effectiveness fill the media and polarize stakeholders. So here's the \$24,000 question: If we know effective ways to develop great teachers, why aren't we doing it? Come chat with the founders of Trellis Ed.

GI | PRS | 309 | Saturday, 11:00 - 12:00 | Asilomar, Marlin | BT

Taylor, Megan — CEO & Founder, Trellis Education
More Effective Assessments, More Effective Assessment Use

In a time when "Common Core" is used so often as a verb, changes to curricula and practice that address CCSS and SBAC in the right ways are often hard to define, let alone enact. In this session, come learn one process for assessing the effectiveness of an assessment (e.g., chapter test), adapting it in meaningful ways, and creating evaluative criteria that make the feedback you give students more valuable and grading more valid. Bring a test of your own you'd like to discuss.

8-12 | INT | 403 | Saturday, 1:30 - 3:00 | Asilomar, Heather | BT

Torres, Angela — Math Content Specialist
Video Club: Creating Vision and Pushing Teacher Beliefs

Ever wonder how to discuss classroom video with colleagues? Join us in experiencing the power of a community doing math, watching a video, and participating in a facilitated discussion centered around identifying student strengths. Hear how our teacher facilitated Video Club supports building a common vision of an equitable math classroom for teaching communities through pushing on teacher beliefs.

GI | INT | 506 | Saturday, 3:30 - 5:00 | Asilomar, Scripps Conference | BT
 Co-presenter: Noam Szoke — Math Content Specialist, SFUSD

Town, James — Mathematics Specialist, Alameda COE
Making Math: Problem Solving in Action

Come learn how to integrate Making into your math classroom to promote reasoning and problem solving. Engage your students with making activities to create a culture of productive struggle. Four student-tested (and approved) challenges will be ready for your Making pleasure. These activities span the range from high technology to low technology, from Algebra to Geometry You'll also have a chance to grapple with how you might facilitate such activities and adapt them to your own class.

8-12 | INT | 543 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 24 | BT
 Co-presenter: Celine Liu — Mathematics Specialist, Alameda COE

Trakas, Denise — Program Coordinator, Curriculum & Instruction
Moving Beyond Narration to Mathematical Argumentation

In this session we will connect how mathematical argumentation is necessary to get to the true essence of several of the math practices. We will identify the difference between narration and mathematical argumentation and posit instructional strategies for supporting students' reasoning as they develop into mathematicians. Participants will analyze student work samples and leave with tools to support work in their own classrooms.

PK-5 | INT | 216 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus East | BT
 Co-presenter: Sarah Roggensack — Implementation Specialist, Washoe County SD

Trevino, Emma — Univ of Texas at Austin
We Need to Reason Why: Division of Fractions

Lets investigate how we model division of fractions through the Common Core State Standards. We will trace how to teach the development throughout the grades. The Standards for Mathematical Practice will also be addressed.

6-8 | INT | 535 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 6 | BT
 Co-presenter: Carmen Whitman — Director, Mathematics For All Consulting

Tsutsui, Crystal — James Monroe Elem
Hand Games, Logic Games and Games for Practice

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

PK-5 | W | 362 | Saturday, 11:00 - 12:00 | PG Middle School, Library C
 Co-presenter: Chris Anspach Gina Godfrey

Wedel, Christine — Albert F. Biella Elem
Hand Games, Logic Games and Games for Practice

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

PK-5 | W | 562 | Saturday, 3:30 - 5:00 | PG Middle School, Library C
 Co-presenter: Ed Locker Lynn Duri

Wegner, Carol — Abraham Lincoln
Hand Games, Logic Games and Games for Practice

Game on! Each hour during the day different elementary, middle, and high school teachers will share games they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games. Different games will be played and highlighted each hour.

PK-5 | W | 162 | Saturday, 8:00 - 9:00 | PG Middle School, Library C
 Co-presenter: Alma Conde

Weimar, Stephen — The Math Forum
How Do We Focus on Thinking, Rather Than Thoughts?

Developing mathematical practices may be as important as learning content, but classrooms are largely organized to focus on thoughts, rather than thinking. How can we organize learning environments where students and teachers can focus on how we are thinking and what it means to get better at these practices? We will draw on the work of the Math Forum in the Virtual Math Teams project and online problem solving and explore ways to apply lessons learned to f2f as well as online contexts.

8-12 | INT | 533 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 4 | BT

Whitman, Carmen — Director, Mathematics For All Consulting
Let's Connect Proportional Reasoning With the Standards

How do the Common Core State Standards address proportionality? Let's examine lessons that incorporate proportional reasoning as we teach the different domains. These lessons provide questions for students that are struggling, students that are on task, and questions to extend student thinking. Additionally the lessons will also exemplify the Standards for Mathematical Practice.

6-8 | INT | 435 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 6 | BT
 Co-presenter: Emma Trevino — Bechtel Math Project Mgr., San Francisco USD

Wickman, Debra — Program Specialist, Oceanside USD
Everyday, Every Class: Formative Assessment for SMPs

What does it mean to use formative assessment strategies to gauge students' conceptual understanding and use of the SMPs? With the support of Dr. Tim Kanold and Dr. Dylan William, ten California school districts have been collaborating to answer this particular question on their journey toward full CCSS-M implementation. This session will highlight emerging best practices, lessons learned and next steps that have been co-developed & piloted in three of those districts, Elk Grove, Sacramento City and Oceanside.

Ldrshp | PRS | 215 | Saturday, 9:30 - 10:30 | Asilomar, Triton

Co-presenter: Mikila Fetzer — Math Project Lead, Sacramento City USD

Wicks, Jackie — Teacher
Playing with Numbers

Got antsy kids? This session will help them expend some of that energy. We will introduce some math games that will get your students out of their seats! And as a bonus, help your students have a better understanding of numbers. The introduced activities will include ideas for the use of the number line, 100's chart, and 10-frame. The tools we use are easy to make. When you return to your classroom on Monday, you can start using these ideas.

PK-2 | INT | 345 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 26 | BT

Willmore, Craig — ORIGO Education
Math Games for Greater Gains

Participants will use helpful strategies in understanding and retaining addition/subtraction and multiplication/division facts, and then practice these strategies through games. Each participant will walk away with understanding of sensible strategies and games to help students with "Automaticity" of basic facts including connections to mathematical practices.

3-5 | INT | 233 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 4 | BT

Wilson, Johnnie — Teacher/Supervisor/Lecturer, UC Santa Cruz
Teaching Word Problems Using Common Core Approaches

Three potent approaches to deconstructing and making sense of word problems will be presented. We will look at how to contextualize word problems to make them relevant to students. We will build word problems from given solutions, and consider ways to include worthwhile word problems across subjects. We will also make word problems an object of study, looking at the language that confuses and enables our students. Particular consideration for English Learners will be given.

3-8 | INT | 255 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 37 | BT

Woodbury, Estelle — MS Math Coordinator, Oakland USD
Whose Job Is That? Team Roles for Heterogeneous Groupings

Putting students in groups requires more than just pushing desks together. Team roles support productive engagement of all students to contribute to and learn from small-group mathematical conversations. Team roles also increase student autonomy and ownership in their team and in the classroom as a whole. Learn how to select and assign team roles in your classroom, how team roles can develop the Standards for Mathematical Practice, and how to use roles to intervene with an unproductive team.

GI | PRS | 231 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 1 | BT

Co-presenter: Geetha Lakshminarayanan — HS Math Spec., Oakland USD

Wootton, Karen — Dir. of Assessment, CPM Educational Program
Assessment: Why Bother?

With students taking so many high-stakes tests, why should we use valuable class time assessing what is being done in class? But then students can actually learn from the right type of assessment. Participants will broaden their view of what formative assessment means, and explore the power of effective feedback. Participants will learn techniques to make the process of giving feedback less daunting for the teacher, but just as valuable for the students.

8-12 | INT | 334 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 5 | BT

Xavier-Klotz, Marina — Teacher, Hayward USD
Actively Engaging in the Mathematical Practices

Explore various activities in your K-2 classroom that engage students in the mathematical practices. Using math talks and number talks as a basis, we will engage in activities aligned to the mathematical practices, that encourage mathematical reasoning, argument, stamina, and precision. Participants will also have time to create the materials needed for the activities shown.

PK-2 | INT | 546 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 27 | BT

Yu, Julie — Director, Teacher Institute, Exploratorium
The Math of Mirrors

Does a full-length mirror really need to be full-length? How do you draw a picture that is recognizable in a curved mirror? We'll use a variety of mirrors and math to answer these questions and explore basic ideas in geometry and trigonometry. Mirrors provide an engaging, hands-on way with real life applications to investigate concepts such as angles, symmetry, and, of course, reflections.

8-12 | INT | 305 | Saturday, 11:00 - 12:00 | Asilomar, Evergreen | BT

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SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	9-12	Ldshp/TchEd	GI		
Albrecht, Masha	Student-Centered Projects to Enrich Algebra 1			√	√			√	
Alejandre, Suzanne	Managing My Teacher Voice			√				√	
Amend-Ehn, Patricia	Making Connections Through Engineering	√	√					√	
Anderson, Jody	Create CC Lessons Using Mathematically-Based Children's Lit	√						√	
Arth, Karen	Making Middle School Math Come Alive with Activities & Games			√				√	√
Baker, Beth	Student Teams-Max Learning, Min Chat! Seven Simple Steps			√				√	
Balli, Jessica	Redefining Mathematical Proficiency: Walking the Walk			√	√			√	
Barboza, Bob	Kids Talk Radio Math & The Occupy Mars Learning Adventures:					√		√	
Barlow, Rick	Building a Community of Learners—One Mistake At a Time			√	√			√	
Becker, Dean	Statistics Projects for the Aligned Classroom			√	√			√	
Biagetti, Stephanie	Facilitating Constructive Math Conversations in K-2	√						√	
Blachman, Nancy	Delightful Mathematical Puzzles for Differentiated Learning			√					
Blinstein, Anna	Journaling and Writing in Mathematics			√	√			√	
Bradley, Kathy	Building a CCSS-M Classroom with the Math Teaching Toolkit						√	√	
Brooking, Elizabeth	Simple Engineering to Apply Math Practices		√					√	
Brown Brooks, Gloria	Problem Solving with English Language Learners						√	√	
Brown, Kyndall	Using Statistics to Make Connections in Grades 6-8			√				√	
Buckman, Danielle	Building Perseverance in a Culture of Exploration			√	√			√	
Buljan, Mia	Math Practices in Action: Problem Solving in Primary Classes	√						√	
Burnison, Erica	Making Student Thinking Visible						√	√	
Burrill, Gail	The CCSSM Expressions, Equations and Structure			√				√	
	Instruction That Makes a Difference						√	√	
Cagle, Peg	A Paper Cup + a Gust of Wind = Yearlong Rich Task			√	√			√	
	Taking Action to Build a Better Profession, No Matter Your Title or Job Description					√			
Callahan, Patrick	Let's Talk About Tests						√	√	
Carlyle, Ann	Ten Frames, Number Lines, Rekenreks: Tools for Thinking K-2	√						√	
Carranza, Shelley	Google Docs and Desmos in the Secondary Math Class			√	√			√	
Carroll, Cathy	Learning from Research: Using Worked Examples in Math Class			√				√	
Chappill-Nichols, Shalek	Magical Math	√						√	
	Measurement and Data, Oh My!	√						√	
Chavez-Goodman, Lucia	Math Stories and Mathematics Discourse	√						√	
Chialvo, Federico	Young Mathematicians & the Thrill of Mathematical Discovery	√	√						
Childs, Leigh	Engaging Activities+Strategies = Numerically Nimble Students		√					√	
Commons, Joan	Planning and Orchestrating Productive Mathematics Discussion		√	√					
Costa, Elmano	Instruction for English Learners: Comprehension is at the Core	√	√					√	
Courant, Ted	Conic Sections: From Geometry to Kepler's Laws			√	√			√	

SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tch.	Comm. Product
		K-2	3-5	6-8	9-12	Ldshp/TchEd	GI		
Damm, Suzanne	Math: A Topic Worth Discussing. Teachers and Students Talk			√				√	
	Extending Children's Mathematics: Fractions		√						
Daro, Phil	Using Progressions to Make Progress						√	√	
De Anda, Juana	Looking at a Math Task Through the Lens of the 5 Practices	√	√					√	
Deis, Josh	Looking for Vital Student Actions in the Math Classroom					√			
Douglas, Lew	Increasing Coherence in High School Math			√	√				
Dow, Seth	Write to Learn			√	√			√	
Dueck, Jonathan	Building a Math Program Strong in Concept and Understanding					√			
Dylong, Joel	Can a Computer Really Teach Problem Solving?		√					√	
Early, Katy	Discovering Divisibility with Pattern, Structure & Purpose!		√					√	
Easterday, Joan	Statistics - Gummy Worms, Rubber Band Cars and Cubits		√					√	
Farrand, Scott	Choose Examples to Promote Conjectures			√	√			√	
Fenton, Michael	Designing Rich Digital Tasks for the JH/HS Tech Classroom			√	√				
	My Journey From Worksheets To Rich Tasks						√	√	
Fetter, Annie	Using Technology to Focus on Conceptual Understanding			√				√	
Flashman, Martin	Equations, Functions, and Mapping Diagrams in Common Core			√	√				
Foster, David	Supporting Students in Agency, Identity and Authority						√	√	
Foster, Hallie	Conics Rock!			√	√			√	
Fry Bohlin, Carol	Preparing Middle School Mathematics Teachers-Issues & Models					√			
Fulton, Brad	Teaching 2-Digit Multiplication the Common Core Way		√	√				√	
	The Number Line Activity: Empowering Mathematical Thinking		√	√				√	
Gaines, John	Engaging Students in Mathematics with Project Based Learning						√		
	Helping Parents Transition to the Common Core					√			
Gale, Mardi	Algebra Intervention, Rigor, Problem Solving and the CCSS			√	√			√	
Gamino, Elizabeth	Mathematics for Students Via Professional Noticing	√						√	
Giganti, Paul	Optical Art for Kids		√	√				√	
Goldenstein, Donna	Enriching the Geometry/Masurement CCMS Content Through Art		√	√				√	
Gomez, Emiliano	Let's Have Fun: Games for Mathematical Thinking						√	√	
Grip, Bruce	Parabolas with Life Applications			√	√			√	
Hakansson, Susie	Understand Ratios and Proportional Reasoning			√				√	
Hakuta, Kenji	Finally! Giving Students a Voice in Mathematics Classrooms.					√			
Hamada, Lori	Providing a Mathematically Rich Classroom		√	√				√	
Hamon, Kathleen M.	Using Multi-Modal Curriculum Based on Digital Resources						√	√	
Hattar, Michael	Solving Common Core and Fun Problems with Confidence			√	√			√	√
Heigre, Beverly	Technology Used in the Flipped and Traditional Classroom			√	√			√	
Heiman, Siva	Make a Special Abacus to See Core Addition Strategies	√						√	
Henry, Denise	SBAC and Claims and Targets, Oh My!		√	√				√	
Hull Barnes, Lizzy	Bay Area Secondary Partners: San Francisco and Oakland					√			
Hutchison, Pamela	A Night Out with Math - Supporting Parents and Students	√	√					√	

SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tch.	Comm. Product
		K-2	3-5	6-8	9-12	Ldshp/TchEd	GI		
Johnson, Elizabeth	TI Graphing Calculators in CC Algebra/CC Integ 1 Statistics			√	√			√	
Jusiak, Jodi	Hand Games, Logic Games and Games for Practice		√						
Kaplinsky, Robert	How Old Is the Shepherd?			√				√	
Kelemanik, Grace	The Eight Standards for Mathematical Practice: Overwhelming and Under,,,						√		
Kenyon, Glenn	Rich Math Tasks as Language Catalysts	√	√					√	
Khalsa, Arjan	Unraveling Whole Numbers and Fractions on the Number Line		√					√	√
Khare, Deepti	Communicating Math Through Vocabulary and Writing			√	√			√	
Kinch, Diane	CAMTE Business Meeting					√			
Kirley, Kim	Math and Literacy CCSS in a Joyful Kindergarten	√						√	
Kotko, Andy	Adding Depth and Complexity in Primary Math	√						√	
Kysh, Judith	Challenging the Eager Achievers in Untracked Classes			√	√			√	
Lambertson, Lori	Change/Time: Using Data to Explore Our Changing Environment			√	√			√	
Lane, Matt	The Unreasonable Effectiveness of Video Games			√	√			√	
Lasek, Rachel	Math Tech-Toolbox			√	√			√	
	Using Google Forms for Quick Formative Assessments			√	√			√	
Lazzarini, Jeanne	Make and Take Mathematical Cultural Figures		√	√				√	
	Connect Real Life with STEM Activities			√	√			√	
Leinwand, Steve	Mathematics Coaching: An Essential Component of Quality						√	√	
	Breathing Classroom Life into the NCTM Teaching Practices						√		
	Teaching Math: Insights and Reflections on >1000 Observations						√		
Lemon, Travis	Dilation, Similarity, Trigonometry: Coherent, High Level DOK			√	√			√	
Lewis, Rebecca	ÒClap Like MeÓ for Early Math Learning—Birth to Five	√						√	
Liang, Jane	From Standards to Assessments, Now What: A CDE Update						√		
Liu, Celine	Improving Outcomes Through Family and Community Engagement						√	√	
Luberoff, Eli	Technology and Intellectual Need			√	√			√	√
Magner, Philip	Beyond EulerŐs Line			√	√			√	
Magyar, Melissa	Counting Collections: Build Skills Through Counting	√						√	
Mahlstedt, John	Surviving the Apocalypse...with Math			√				√	
Marti, Andres	Statistics and Probability in Grades 6-11 with Technology			√	√			√	
McCarthy, Kathleen	The Nimble Number Line	√						√	
McEntee, Rhonda	The Art of Effective Questioning		√					√	
McLean, Peggy	Geoboard/Dot Paper Investigations = CCSS Math Practices		√					√	
Mehran, Jeanie	Whimsy + Imagination = Math	√	√					√	√
Miller, Lisa	Using the Growth Mindset to Help All Learners Be Successful			√	√			√	
Moore, Sara	Linking Representation & Algorithm in Operations		√					√	
Muller, Eric	Having a Gas with Math: Geometry, Algebra and Air Pressure						√	√	
Murray, Tom	Math Games: Hands-on, Minds-on Fun!		√	√				√	
Nank, Sean	Engagement Through Student Created Math Videos						√	√	
	Finally, a Free Online CCSS-M Textbook with Coherence!						√	√	

SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchrs	Comm. Product
		K-2	3-5	6-8	9-12	Ldshp/TchEd	GI		
Newell, Christine	Fractions: Reasoning Through Meaningful Discourse		√					√	
Newton, Roberta	Math Running Records: A Framework for Fact Fluency	√	√					√	
Nickerson, Rob	Be Intentional: Elevating the Mathematical Practices		√					√	√
Novelli, Barbara	Teach Science—Teach Math	√	√					√	
	Getting to the Core of Place Value in Primary Grades	√						√	
Oloff-Lewis, Jennifer	Engaging Students in Open-Ended Tasks		√					√	
Orton, Chase	Two-Way Frequency Tables: Teaching a New Statistics Standard			√	√			√	
Otake, Joy	A Journey Through Our Number System	√	√					√	
Parker, Ruth	Bringing the SMP to Life in Classrooms						√	√	
	Changing the Classroom Culture Through Number Talks							√	
Paulus, Chris	Standard Deviation and Poe			√	√			√	
Pesavento, Laura	Number of the Day	√						√	
Phillippi, Kevin	Pathway to Problem Solving via the Mathematical Practices		√					√	
Picciotto, Henri	A Lab Gear Approach to Operations and Equivalent Expressions			√				√	√
Pickford-Murray, Bree	Classroom Routines to Support Mathematical Discourse			√				√	
Pierson, Caryl	4 Essential Elements of RTI for Multiplication and Division			√				√	
Pitzer, Greg	Student Discourse Around Rigorous Tasks Using Technology		√	√				√	
Powell, Beth	Identifying Breakdowns: Concept, Computation and Application		√						
Preston, Robert	The Pedagogy of the Practices	√	√					√	
Pugh, Charlene	You Can Do Mathematics with Fractions		√	√				√	
Ramos, Jeanne	Developing Students Algebraic Thinking and Academic Language			√					
Ray, Max	Practicing the Five Practices Using Archived Student Work		√	√				√	
Reneau, Katie	Rich Discussions and Rich Tasks in the MS Math Classroom			√				√	
Resek, Diane	Making Multiplication Tables Meaningful and Interesting		√	√				√	
Reyerson, Hardy	Discovering Newton			√	√				
Roberts, Christine	Assessment Practices + DOK = Deeper Understanding of Math		√	√				√	
	Mathematics and Integrated ELD: Supporting All Learners						√	√	
Rock, Monica	Origami: Open Faced Dodecahedron Make and Take		√	√					
Rodgers, Sherry	Newcomers' Session						√		
Rodriguez, Marin	Building Number Sense Through the Use of Primes			√				√	
Rogers, Patricia	Persevere as Students Develop Mathematical Strength		√	√				√	
Rossi Becker, Joanne	Orchestrating Math Practices 7 & 8 in Your Math Classroom			√				√	
Ryan, Teresa	Multiplication and Division of Fractions, The How and Why		√					√	
Saarnio, Lora	Inspirational Math K-3	√						√	
Salgarino, Ma Bernadette	WestEd/SCALE's Mathematics Assessment Literacy Toolkit (ALT)			√	√			√	
Schaffer, Karl	Where Patterns Collide: Mathematics and Dance						√	√	
Schallau, Barbara	Teaching Operations for Fractions with Understanding		√	√				√	
Schierer, James	Are Your Seniors Financially Literate?			√	√			√	√
Schultz, Tammy	Creating a Motivating Math Environment	√	√					√	

SESSIONS AT A GLANCE

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchrs	Comm. Product
		K-2	3-5	6-8	9-12	Ldshp/TchEd	GI		
Serra, Michael	One's Good, But More is Better			√	√			√	
Sgroi, Richard	Advanced Algebra With Financial Applications			√	√			√	
Shay, Cynthia	Reckenreks	√						√	
Shore, Chris	The Practices Are for Kids			√	√			√	
	The Core of The Core						√	√	
Short, James	Using SMPs While Building Understanding of Expected Value			√	√			√	
Shreve, Barbara	When the Task Is Not Enough: Pedagogy That Builds SMPs						√	√	
Silver, Jody	Infusing Math Into Project-Based Learning		√						
Sommer, Miriam	Hand Games, Logic Game and Games for Practice		√						
Sornson, Robert	Developing Competency for Grade 1 Essential Math Skills	√						√	
Southam, Jon	Introduction to Trig in Geometry with the Unit Circle			√	√			√	
Stadel, Andrew	Math Mistakes and Error Analysis: Diamonds in the Rough			√				√	
Standiford, Gail	Data Collection: Using a CBR to Make the Math Real			√	√			√	
Starnes, Daren	Taming the AP Statistics Investigative Task			√	√			√	
Statmore, Elizabeth	Fulfilling the Promise of MP 3 Through Talking Points			√	√			√	
Stetson, Deb	Get Students to Do the Sense-Making: Teach Without Telling		√	√				√	
Szoke, Noam	Math in the Moment: Exploring Number in Early Childhood	√						√	
Talamantes, Tracy	Pathway to Problem Solving via the Mathematical Practices	√						√	
Taylor, Megan	More Effective Assessments, More Effective Assessment Use			√	√			√	
	Enacting the Gold-Standard in Teacher Education						√	√	
Torres, Angela	Video Club: Creating Vision and Pushing Teacher Beliefs						√	√	
Town, James	Making Math: Problem Solving in Action			√	√			√	
Trakas, Denise	Moving Beyond Narration to Mathematical Argumentation	√	√					√	
Trevino, Emma	We Need to Reason Why: Division of Fractions			√				√	
Tsutsui, Crystal	Hand Games, Logic Games and Games for Practice		√						
Wedel, Christine	Hand Games, Logic Games and Games for Practice		√						
Wegner, Carol	Hand Games, Logic Games and Games for Practice		√						
Weimar, Stephen	How Do We Focus on Thinking, Rather Than Thoughts?			√	√			√	
Whitman, Carmen	Let's Connect Proportional Reasoning With the Standards			√				√	
Wickman, Debra	Everyday, Every Class: Formative Assessment for SMPs					√			
Wicks, Jackie	Playing with Numbers	√						√	
Willmore, Craig	Math Games for Greater Gains		√					√	√
Wilson, Johnnie	Teaching Word Problems Using Common Core Approaches		√	√				√	
Woodbury, Estelle	Whose Job Is That?: Team Roles for Heterogeneous Groupings						√	√	
Wootton, Karen	Assessment: Why Bother?			√	√			√	
Xavier-Klotz, Marina	Actively Engaging in the Mathematical Practices	√						√	
Yu, Julie	The Math of Mirrors			√	√			√	

EXHIBITS

Company	PG Middle Gym	Company	PG Middle Gym
3C Media Solutions	263	It's About Time	229
Amplify	217	Math Magic Blocks	251
Bedford, Freeman & Worth (BFW) Publishers	246	Math Teachers Press, Inc.	231-232
California Casualty Auto & Home Insurance	245	McGraw-Hill Education	261-262
California Jump\$tart Coalition	243	Mentoring Minds	203
Carnegie Learning Inc	235	MIND Research Institute	248
Center For Math and Teaching	256	Moore Educational Resources/Mimio	241-242
CMC - Bag pickup	205	Motion Math	227
CMC - Exhibit / T-Shirts	204	Music Notes	249
CMC Member Kit	275	Nasco	211-213
CMC - Communicator	276-277	National Council of Teachers of Mathematics	218-219
College Board	209	National Geographic Learning/Cengage Learning	225-226
ConsumerMath.org	252	ORIGO Education	237-239
Core Matters	244	Pearson	206-208
CPM Educational Program	253-254	Reasoning Mind	223
CSU/UC Mathematics Diagnostic Testing	236	Remediation A-Z	221
Curriculum Associates	202	Renaissance Learning	247
EAI Education	259	Stokes Publishing Company	267-268
Ed-Tex/Perfection Learning	214	TEAM UP For Common Core Learning	257
EdCaliber	234	TenMarks Education, an Amazon Company	264
Eureka Math	255	Texas Instruments	215-216
Heinemann Publishing	233	TPS Publishing Inc.	228
HMH Intervention Solutions Group	271	Walch Integrated Math	258
Houghton Mifflin Harcourt	272-274	Walden University	265
Industry Initiatives for Science and Math	222	Whizz Education	224

Pacific Grove Middle School Friday / 5:30 - 7:30pm Saturday / 7:30am - 5:30pm
 Exhibits close promptly at times listed above so visit early!

~ Name badges ~
Name badges must be worn at all times while attending the conference. Badges are required for entry into the sessions and the exhibit hall.

	271	272	273	274	275	276	277	
209	219	229			239	249		260
208	218	228			238	248		259
207	217	227			237	247		258
206	216	226			236	246		256
	215	225			235	245		255
205	214	224			234	244		254
204	213	223			233	243		253
203	212	222			232	242		252
202	211	221			231	241		251
	261	262	263	264	265	266	267	

- **Presidential Awards, www.cmc-math.org/PAEMST**

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the nation's highest honors for teachers of mathematics and science (including computer science). Awardees serve as models for their colleagues, inspiration to their communities, and leaders in the improvement of mathematics and science education. Since 1983, more than 4,400 teachers have been recognized for their contributions in the classroom and to their profession.

2016 Elementary Teacher Nominations

If you know great teachers, nominate them to join this prestigious network of professionals. The 2016 Awards will honor mathematics and science (including computer science) teachers working in grades **K-6**. Nominations close on **April 1, 2016**. The applications must be completed by **May 1, 2016**. Nominate a colleague at www.paemst.org

- **Announcing the 2015 PAEMST Math Finalists**

Mrs. Katharine Clemmer

Katharine is a high school teacher at El Segundo High School in the El Segundo Unified School District. She has been teaching 22 years. She currently teaches AP Calculus and Pre-Calculus Honors.

Mr. Clayton Dagler

Clayton is a high school teacher at Luther Burbank High School in the Sacramento City Unified School District. He has been teaching 15 years. He currently teaches Geometry as well as a computer programming and robotics class.

Ms. Genevieve Esmende

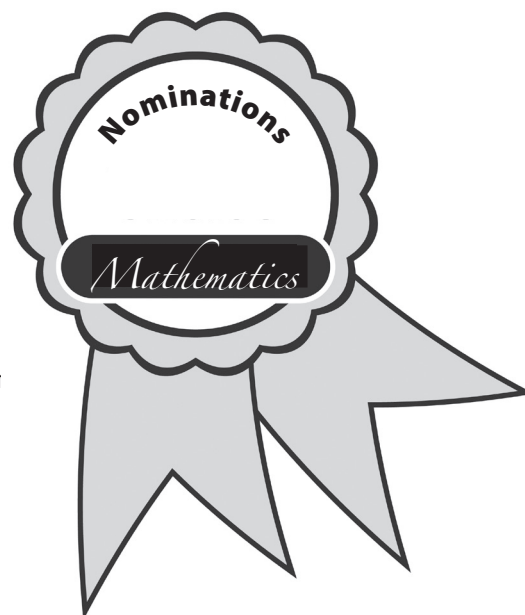
Genevieve is a middle school teacher and Math Department Chair at Wangenheim Middle School in San Diego Unified School District. She has been teaching a total of 15 years, 12 at the middle school level and three at the elementary level. She currently teaches Common Core Math 7, Accelerated Math 7 and Integrated 1 Advanced.

Ms. Maria McClain

Maria is a high school teacher at Deer Valley High School in the Antioch Unified School District. She has been teaching 26 years. She currently teaches AP Calculus AB, AP Statistics, and Pre-Calculus to students in grades 10-12.

Mrs. Kathleen McHeffey

Kathleen is a middle school teacher at Meadowbrook Middle School in the Poway Unified School District. She has been teaching 25 years. She currently teaches Common Core Math 7 classes.



For more information about awards, or to nominate, visit Presidential Awards at www.cmc-math.org/PAEMST or California Math Council at www.cmc-math.org/awards

REFRESHMENTS

Coffee and tea are available during the conference at Surf and Sand, Merrill Hall, Evergreen and Acacia on Friday and Saturday. Water will be in all the rooms on the grounds.

ELECTRONIC DEVICES

Out of respect for presenters and other participants, please turn off electronic devices during sessions.

IGNITE!

Saturday 7:30 pm
Merrill Hall
@sweimar, emcee

@hatwitt • @MFAnnie • @SusieHakansson • @mathchic
@jdmahlstedt • @maxmathforum • @maryjr40_mary
@DavidRosenthal_ • @MathProjects • @cheesemonkeysf
5 minutes. 20 slides. Lots of ideas.

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www.cmc-math.org

BOARD MEMBERS

2016-18	State	President..... Vicki Vierra	North	President..... Rebecca Lewis
		Past President..... Kathlan Latimer		Past President..... April Goodman-Orcutt
		President-Elect..... Cathy Carroll		President-Elect..... Rita Nutsch
		Secretary..... Ruby Durias		Vice President..... Ana England
		Treasurer..... Bruce Grip		Secretary..... Alison Nash
				Treasurer..... Brian Lim

CALENDAR OF MATH EVENTS

April 11-13, 2016

NCSM Annual Conference, Oakland, CA

April 13-16, 2016

NCTM Annual Meeting and Exposition, San Francisco, CA

June 23-25, 2016

TODOS 2016 Conference, Scottsdale, AZ

October 2016

Mt. Lassen Math Conference

November 4-5, 2016

CMC-S Palm Springs Conference, Palm Springs, CA

December 2-4, 2016

CMC-N Asilomar Conference, Pacific Grove, CA

For information and links to these math events go to:

www.cmc-math.org/activities/calendar.html

AFFILIATED GROUPS

Contact your local affiliate to find out more about their organization and become involved at a local level!

CA Math Council to the Far North (CMCN ∞)
Mary Ann Sheridan, masheri@suddenlink.net

Mt. Lassen Math Council (MLMC)
Dawn Burhans, iluvabcz@sbcglobal.net

Sonoma County Math Council (SCMC)
Ben Ford, ben.ford@sonoma.edu

Sacramento Area Math Educators (SAME)
Brian Lim, blim128@yahoo.com

Math Educators of Solano County (MESOC)
Julie Crozier, crozier4mesoc@aol.com

Alameda Contra Costa County
Math Educators (AC³ME)
David Lincoln, lincoln.hotmath@att.net

Council of Math & Science Educators
San Mateo County (CMSESMC)
Brennan Brockbank,
brennan.brockman@gmail.com

Santa Clara Valley Math Association (SCVMA)
Rita Korsunsky, rikorsunsky@gmail.com

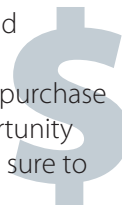
Monterey Bay Counties Math Education (MBCME)
Linda Dilger, ldilger@monterey.k12.ca.us

Northern Nevada Mathematics Council (N²MC)
Teruni Lamberg, terunil@unr.edu

San Francisco Math Teachers Association (SFMTA)
Mark Mosheim, Mosheim@gmail.com

EXHIBITS

Be sure to make time in your schedule to visit the exhibits at the Pacific Grove Middle School Gym. You'll find a remarkable collection of mathematics education books, curriculum materials, teaching resources, games, manipulatives, and technology and services. Exhibit hours allow ample opportunity to explore, try out, and purchase product/services for use in your classroom or to help you meet your career goals. You'll also have the opportunity to get fresh ideas, valuable information and resources and to see demonstrations of how products work. Be sure to check the list of exhibits and map of the exhibit hall on page 39.



California Mathematics Council - Northern Section

Purpose:

CMC-N wishes to encourage creativity and innovation among Northern California educators for the purpose of developing mathematically powerful students.

Who May Apply:

CMC-N members from any public or private school or district whose membership has been paid for the current school year.

Requirements:

- √ Can only apply once per school year
- √ Should have additional sources of funding
- √ Application completed in full

Deadlines:

March 1 – \$500 and November 1 – \$500

Application:

1. Title Page

- a. Title of Grant
- b. Name of Grant Leader, CMC Member #, home phone and home email
- c. School name, address, fax and email
- d. Grant impact – number of students, teachers and percent members of minorities
- e. Maximum amount requested to implement the grant

2. Description of Materials Use

- a. How will materials be used and with what goals in mind?
- b. Statement of need as related to your students
- c. Project ed activities and timeline, if applicable
- d. Impact – Who and how many will be affected?
- e. Evaluation/Dissemination Plan – How will you assess and then document the outcomes of the project? What plans do you have for sharing?

3. Project Budget

- a. Items to be purchased
- b. Expected vendor and prices
- c. Additional funding sources available to you.
(Grant requests maybe only partially funded.)
- d. Total amount requested

4. Approval Signatures

- a. Grant leader
- b. Building Site Administrator and Title

End Report:

Submit short report to the Mini-Grant committee by the end of the year on how the purchased materials were used and the effectiveness of the project.

Applications must be limited to five pages including the cover form.

MAIL TO

US Mail:

CMC-N Grants, c/o FaraLee S Wright
PO Box 2738, Suisun City, CA 94585-5738

Via email:

faralee.wright@sbcglobal.net
(application cover page with signatures should be scanned)

NOTE:

Grant covers materials only, not teacher work time or compensation.

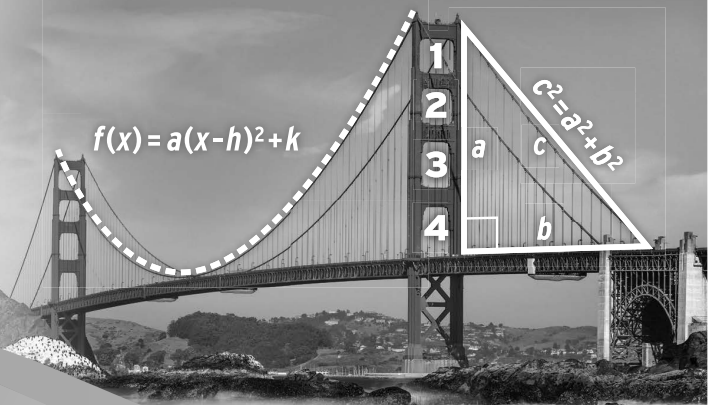
Only one Mini-Grant can be awarded per applicant per school year. Grant is limited to current CMC-N members and to school sites in the CMC-N area.



THE NATION'S PREMIER MATH EDUCATION EVENT

2016 NCTM ANNUAL MEETING & EXPOSITION

April 13-16 • San Francisco



Building a Bridge to Student Success

Join your peers in San Francisco at the country's leading math education event, where NCTM brings together thousands of education professionals to spur the exchange of ideas, present innovations in mathematics teaching, and drive quality learning practices that benefit you and your students.

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- Discover more about the latest teaching trends and topics in mathematics from PreK-12.
- Gain exposure to fresh ideas to bring back to your classroom.
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- PREK-12 TEACHERS
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- MATH RESEARCHERS

Learn more at www.nctm.org/annual and follow us on



#NCTManual

THE SPIRAL OF THEODORUS

The spiral on the front cover of this program is known as the Spiral of Theodorus. In the 5th century B.C., Theodorus of Cyrene, constructed this figure to prove that the square roots of the non-square whole numbers from 3 to 17 are all irrational. His spiral begins with an isosceles right triangle having leg length one. A new right triangle is formed with one leg being the hypotenuse of the previous triangle and the other leg having length one. The process is then repeated. Note that by the Pythagorean theorem, the length of the hypotenuse of the n^{th} triangle is $\sqrt{n+1}$. (See Figure 1.)

The following activities are examples of how the spiral can be incorporated into lessons at various grade levels.

Activity 1:

At the elementary level, copies of the spiral can be given to the students. (Enlarge Figure 2.) Have them color their spirals. Encourage them to add other features to their drawings. For example, they could turn their spiral into a lollipop or a seashell. There is an excellent article with additional ideas at:

<http://britton.disted.camosun.bc.ca/geometry/spiral.pdf>

Activity 2:

Middle school students can create their own spirals with a 3 x 5 index card. Start with a sheet of paper, 8.5 x 11 inches, in landscape orientation. Locate the point that is 4.5 inches down from and 4.5 inches to the right of the upper left hand corner of the sheet. This point will be used for the common vertex of the right triangles. Place two marks on the index card, each an inch away from one corner. Then use that corner and the marks to construct the original isosceles right triangle. That same corner of the card will also be used to make the right angles in each of the following triangles. These triangles are then constructed by placing the card so that one edge lies along the hypotenuse of the previous triangle with the corner at the vertex of the other acute angle in the triangle. The mark determines the location of the vertex of the new triangle. (See Figure 3.)

Activity 3:

High school students can use trigonometry to determine the sum of the angles at the common vertex. Note that the 17th triangle overlaps the original right triangle. How many more triangles are required before the original triangle is overlapped again? And then a third time? Is there a pattern?

I would enjoy seeing examples of student work. Please feel free to email me, John Martin, at: jmartin@santarosa.edu

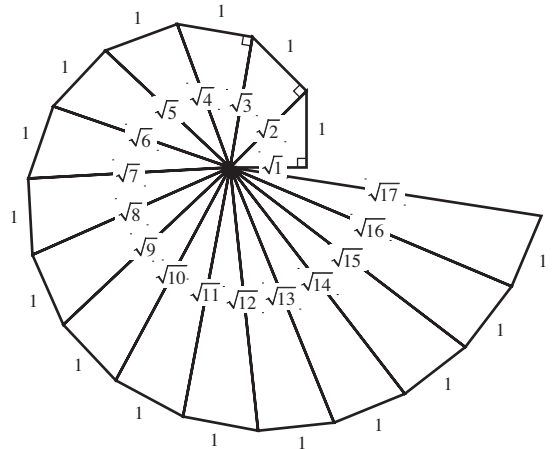


Figure 1

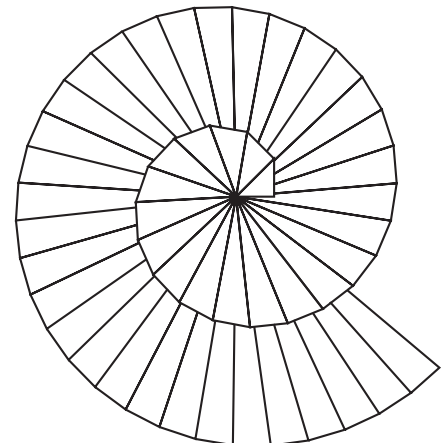


Figure 2

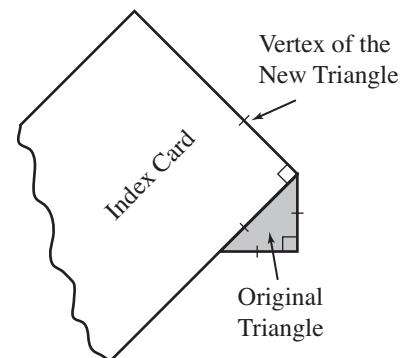


Figure 3

California Mathematics Council – North

Certificate of Attendance

is hereby granted to:

in recognition of attendance and participation at the
CMC-N Mathematics Conference at Asilomar
Pacific Grove, CA
December 11-13, 2015



April Goodman-Orcutt
April Goodman-Orcutt, CMC-N President

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Visit the playground to learn
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The following sessions will be held at the
Pacific Grove Middle School Library:

Fraction Sense (8:00–9:00am)

- Hands-on solutions for working with fraction concepts

Geometric Concepts (9:30–10:30am)

- A variety of ways to teach geometry

Number Sense (11:00–12:00pm)

- How manipulatives help students understand place value, multiplication and coordinates

Open Playground (1:30–3:00pm)

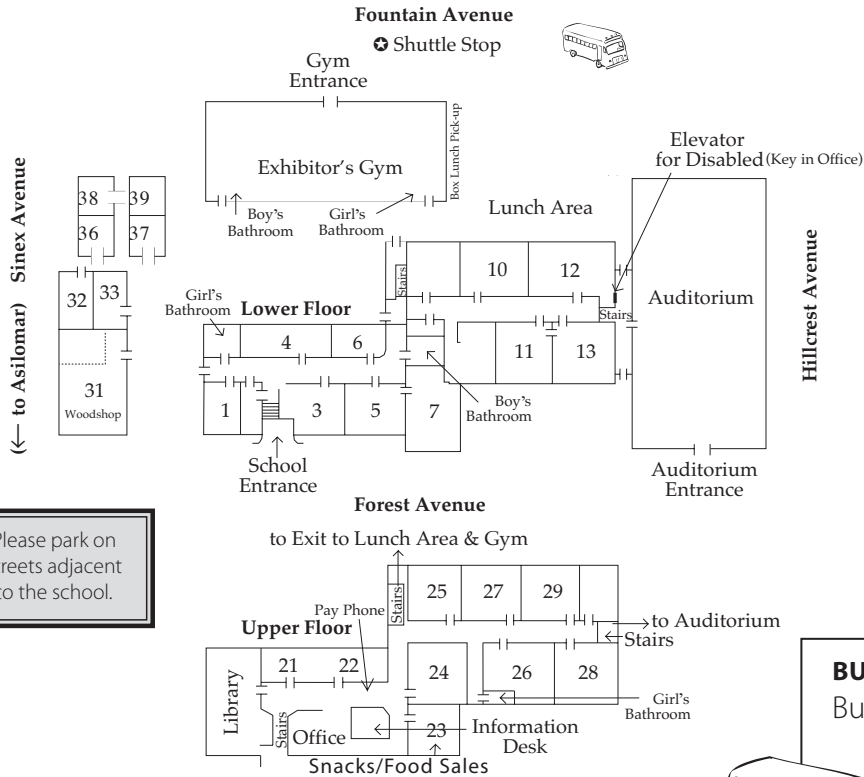
- How you can use manipulatives in your classroom lessons

For more information visit hand2mind.com



P-B0103

PACIFIC GROVE MIDDLE SCHOOL



Please park on streets adjacent to the school.

BUS SERVICE
 Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 4:00-9:30pm and on Saturday from 7:15am - 6:00pm



Speaker Evaluation Form

<https://www.surveymonkey.com/r/CMC-NorthSpeakerEvaluations>

PACIFIC GROVE

