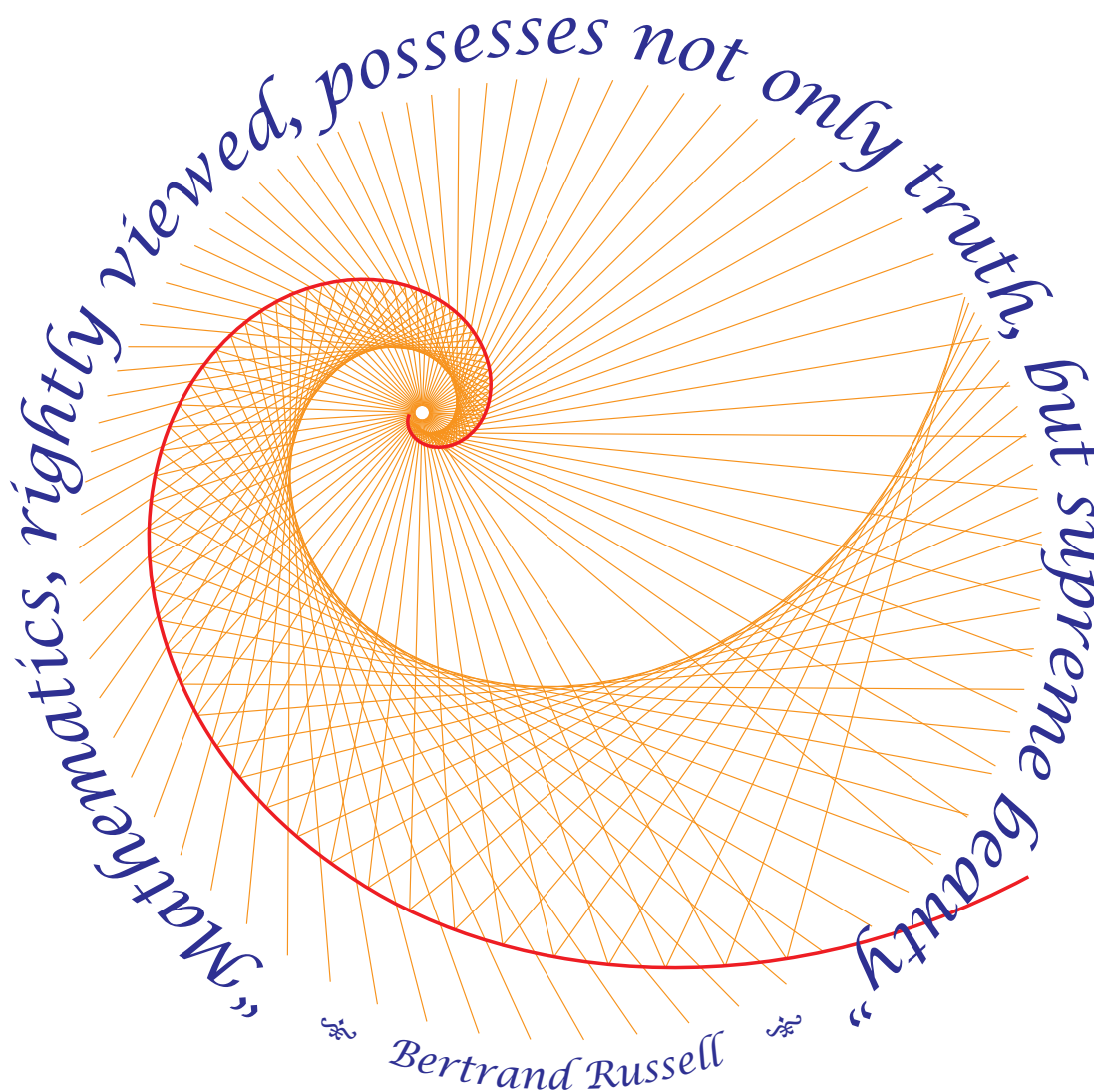


ASILOMAR

Mathematics Conference 2014

www.cmc-math.org



*California Mathematics Council - Northern Section
Asilomar 2014*

"Discovering the Beauty in Mathematics"

Friday, December 5 - Sunday, December 7, 2014
Asilomar Conference Grounds • Pacific Grove Middle School, Pacific Grove

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!

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Conference Evaluation Form Now Online!

Go to <https://www.surveymonkey.com/s/CMCNorth2014> by December 31, 2014 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 Denise Abbas and Robin Hayes.



A SPECIAL THANKS TO!

Conference Coordinator
April Goodman-Orcutt

Registration
Julie Crozier

Program Chair
Ana England

Speaker	Topic	Grade Level	Room
Foster, David	College and Career Ready Meets Math Intervention	Ldrshp	Acacia
Giganti, Paul	Using Children's Literature as Entry Points into Common Core Mathematics	PK-2	Nautilus West
Goldenstein, Donna	Mathematics and the Arts	3-5	Toyon
Haley, Carl	Lights! Camera! Math! Students Develop 21st Century Skills by Making Math Videos on Their Tablets	GI	Nautilus East
Humphreys, Cathy	The MP's in Action: Engaging Students in Math Investigations	GI	Evergreen
Ray, Max	Does That Make Sense in the Story? Launching and Exploring Rich Problems	6-8	Heather
Serra, Michael	A Pirate's Take on the Mathematical Practices	8-12	Oak Shelter

PROGRAM

	Time	Event	Location
Friday	3:00-7:00 PM	Registration	Surf & Sand, Asilomar
	4:00-6:00 PM	Newcomers' Session	Acacia
	5:15-7:30 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) Tony DeRose — Math in the Movies	Auditorium, Pacific Grove MS
Saturday	7:00-8:15 AM	Breakfast	Dining Hall, Asilomar
	7:30 AM-12:00 PM	Registration	Surf & Sand, Asilomar
	7:45-9:00 AM	Newcomers' Session	Acacia
	8:00 AM-6:00 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! (Dan Meyer, emcee), 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: Jo Boaler — Erasing Mathematics Failure Through a Growth Mindset and Multi-dimensional Mathematics	Merrill Hall, Asilomar
	10:15-10:45 AM	Coffee Break	
	10:45 AM - Noon	MID-MORNING KEYNOTE SESSION: Phil Daro — Stepping Stones	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! (Dan Meyer, 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 onstage and talk about something they are passionate about! Stay for the President's Party afterwards.

Co-presenters: Michael Fenton, Annie Fetter, Javier Garcia, Arjan Khalsa, Laila Nur, Bree Pickford-Murray, Max Ray, Teri Ryan, Brian Shay, Elizabeth Statmore

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

Lunch Options

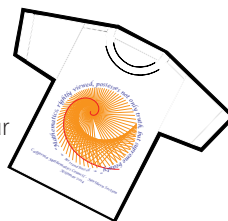
There will be food available for purchase at the Middle School! From 8:00am till about 2:00pm, student organizations will be selling various snacks and refreshments. Coffee, sodas and water will be available, as well as sandwiches and pastries. Please support these local school groups. A limited number 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 Acacia, Friday between 4:00 and 6:00pm or 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.



CAMTE Luncheon

CAMTE will hold a luncheon meeting in the Marlin room on Saturday, December 6th at 12:15pm. Members and interested others are welcome to attend. Contact Diane Kinch for more information.

Important Note

Please be sure to check on the very last minute information that is posted in the Asilomar registration area.

Although you have likely planned your schedule ahead of time, it is important that you verify the session information with what appears in this program. The information here reflects some unavoidable changes. Some sessions have changed speakers and/or topics, some have changed times and some have changed location, or a session has reached room capacity.

Plan to use the **Conference Planner** on page 9. This will save you time by not having to make a last minute choice.

CMC-NORTH OFFICERS

President April Goodman-Orcutt
President Elect Rebecca Lewis
Vice President Ana England
Treasurer Brian Lim
Secretary Rita Nutsch

CONFERENCE VOLUNTEERS

Program Chair
Ana England

Program Committee
Monica Rock-Johnson,
Stephanie Biagetti, Hope Bjerke,
Sheri Rodgers, Johnnie Wilson,
Krista McAfee

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Christin Hair and Rebecca Hubbell

Pre-Registration
Julie Crozier

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John Martin

Exhibits
Chris Tsuji and Mark Mosheim

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**Pre-Service Registration
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Asilomar Presiders
Robert Preston and Nyla DeLong

Conference Signs
Julia Stephens

Registration Tech Support
Jean Simutis and Beth Baker

Information Booth
Krista McAtee

Equipment
Alison Nash

Newcomers' Orientation
Sherry Rodgers and Linda Shumate

Program Logo and T-shirt Design
John Martin

Social Media Chair
Elizabeth Schleth

CONFERENCE INFORMATION

Sessions

You will find four 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 Acacia, Friday between 4:00 and 6:00pm or 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.

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 5:15 - 7:30pm
Saturday PGrove MS 8:00am - 6:00pm

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.

College Credit

Course details and registration information are found on page 45.

Bus Service

Buses run between Asilomar and the Middle School on Friday 4:00 to 9:30pm and 7:15am to 6:00pm on Saturday.

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 8:00 a.m. till about 2:00 p.m., 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.



KICK-OFF MINI-CONFERENCE

Pre-registration required.

ASILOMAR, 1:30-4:30PM

FRIDAY

David Foster — Executive Director of the Silicon Valley Mathematics Initiative (SVMI)

College and Career Ready Meets Math Intervention

The CCSSM's mandate that "All Students are College and Career Ready by 11th grade" is aspiration, yet holds a solemn promise for America's student. Tracking, course recovery, double periods, and remediation have been the traditional remedies for students who fail and fall behind. Successful models of those approaches are difficult to find. How can we change the model in the era of the CCSSM? Listen to ideas, plans, and tools that are being developed to address the college and career ready goal. The session will engage participants in using curricular materials to address formative assessment practices, differentiation and intervention.
Ldrshp | PRS | Acacia

Paul Giganti — Honorable Past President, Math Festival Program

Using Children's Literature as Entry Points into Common Core Mathematics

The Common Core gives students new opportunities to learn mathematics, but it also presents teachers with new opportunities to teach creatively! Let's use children's literature to introduce and reinforce the new math standards. Children love children's books—let's use it to make them love mathematics too! This workshop will use multiple pieces of my favorite children's books with math themes to lead us into related hands-on, standards-based lessons and projects—and a surprise ending.
PK-2 | PRS | Nautilus West

Donna Goldenstein — Retired Teacher, Awards Chair

Mathematics and the Arts

This mini-session will focus on math/art activities that encourage students to concentrate on the CCSS mathematical practices of perseverance, precision, and using tools strategically, as well as access the core curriculum. Participants will experience a variety of art projects that deepen the mathematical concepts in an intermediate grade classroom. Participants will walk away with art projects as well as a variety of journal prompts that integrate literature, mathematics and the arts. 3-5 | INT | Toyon | BT

Carl Haley — CK-12 Senior Content Manager

Lights! Camera! Math! Students Develop 21st Century Skills by Making Math Videos on their Tablets

Showing mathematical process can be fun when students make videos showing their thinking. Your students are the stars when they use Educreations or iMovie to narrate their solution as they show their process. Then they watch other students' videos making comments and offering other ways to solve the task. It's a powerful way for students to increase their skills in explanation and learn math concepts. If possible, bring an iPad or Android tablet to experience what this activity is like. A smartphone is also a lower tech alternate. GI | PRS | Nautilus East

Cathy Humphreys — Stanford University

The MP's in Action: Engaging Students in Math Investigations

Mathematical investigations give students a chance to experience mathematics as an exploratory activity. In mathematical investigations, students pose their own questions about a mathematical situation and then figure out how to approach answering them. They must gather relevant information, look for patterns, make and test conjectures, and justify their conclusions. In this session, participants will engage in a mathematical investigation; then talk about the teaching issues that arise.
GI | PRS | Evergreen

Max Ray — The Math Forum @ Drexel

Does That Make Sense in the Story?: Launching and Exploring Rich Problems

What does it take to get a room full of middle-school students persisting on a rich task? Lots of careful set-up and planning! We'll explore some rich tasks using a range of representations, analyze stories and videos of teachers implementing rich tasks, and learn about effective ways to help students understand problems well enough to solve them and persevere during independent work time. 6-8 | PRS | Heather

Michael Serra — Author and Math Educator

Title: A Pirate's Take on the mathematical Practices

Just as we ask our students to use appropriate tools strategically so must teachers learn to use a variety of teaching tools. In addition to the basic tools of discovery, teachers should also have available in their teaching repertoire a grab bag of motivational tools: magic tricks, games, puzzles, jokes, anything that makes students wonder, be perplexed, and thus willing to persevere to find out why. Participants will investigate interesting mathematical situations, solve puzzles, and strategize in game play.

8-12 | PRS | Oak Shelter

KEYNOTE SESSIONS

FRIDAY EVENING — PACIFIC GROVE MIDDLE SCHOOL, AUDITORIUM

7:30 - 9:00



Tony DeRose is a Senior Scientist and leader of the Research Group at Pixar Animation Studios. He received a BS in Physics from the University of California, Davis, and a PhD in Computer Science from the University of California, Berkeley. From 1986 to 1995 Dr. DeRose was a Professor of Computer Science and Engineering at the University of Washington. In 1998, he was a major contributor to the Oscar-winning short film *Geri's game*, in 1999 he received the ACM SIGGRAPH Computer Graphics Achievement Award, and in 2006 he received a Scientific and Technical Academy Award for his work on surface representations.

Math in the Movies

Film making has undergone a revolution brought on by advances in areas such as computer technology, geometry, and applied mathematics. Using numerous examples drawn from Pixar's feature films, this talk will provide a behind the scenes look at the role that math has played in the revolution.



SUNDAY MORNING — ASILOMAR, MERRILL HALL

9:00 - 10:15

Jo Boaler — Stanford University

Erasing Mathematics Failure Through a Growth Mindset and Multi-dimensional Mathematics

Students with a growth mindset achieve at higher levels because they are more likely to persist with challenging problems and have self-belief that they can achieve. But how do we encourage students to have a growth mindset, and how does mindset interact with issues of equity? In this presentation I will show how mindset is related to the mathematics we teach, and we will consider together what it means to teach multidimensional mathematics, at the same time as encouraging growth mindsets in our students. The changing of mathematics and mindset teaching has the potential to change the mathematics teaching and learning landscape, preparing students for the high-tech world as well as the Common Core. In this presentation we will look at what this means for classrooms, through videos and data, and consider how these important changes highlight a different role for teachers that allows their creativity and professionalism to take center stage.

10:45 - Noon

Phil Daro — Co-author Common Core State Standards in Mathematics

Stepping Stones

Standards define a common end point for learning across students: what students should learn by the end of the grade level. But students bring a great variety of prior knowledge, understanding and skills to each lesson. How can we teach students with such varied starting points so they reach the common end point from the standards? Where are the stepping stones? Research and an understanding of classroom practices from high performing Asian countries show where to find the stepping stones in the variety of thinking students bring. This talk will explain and illustrate how to find and use the stepping stones.



SATURDAY HIGHLIGHTED SESSIONS

Time	Speaker	Session	Grade Level Type	Room
8:00 - 9:00	Andrew Stadel	Get Students to Argue Through Number Sense Activities	3-8 INT	Heather
	John Martin	The Pythagorean Proposition and the Enduring Beauty of Math	GI PRS	Scripps
	Steve Leinwand	Shift Our Mindsets from Remembering How to Understanding Why	GI PRS	Merrill Hall
	Scott Farrand	Think First	GI PRS	PGMS Auditorium
9:30 - 10:30	David Foster	The Decisions and Shifts Required by the CCSS	GI PRS	Heather
	Jeff Clark	Math in the Movies II	8-12 PRS	Scripps
	Harold Asturias	Giving ELLs Access and Opportunity to Make Viable Arguments	6-8 PRS	Merrill Hall
	Patrick Callahan	Mathematical Reasoning: Why We Are Bad at It	GI PRS	PGMS Auditorium
11:00 - 12:00	Brad Fulton	Designing and Implementing Performance Tasks	6-8 PRS	Heather
	Dean Gooch	Cryptography and Codes: A Brief History of Encryption and Its Uses	GI PRS	Scripps
	Dan Meyer	Video Games and Making Math More Like Things Students Like	GI PRS	Merrill Hall
	Marcy Cook	Problems Per Primary Pupils	PK-2 INT	PGMS Auditorium
1:30 - 3:00	Cathy Humphreys	Number Talks Instead of Warm-Ups: Develop Algebraic Reasoning	GI INT	Heather
	Richard G. Werner	Beauty in Mathematical Sculptures	GI PRS	Scripps
	Megan W. Taylor	5th Tsuruda to (T)Sichermer: Great Problems for Common Core	8-12 INT	Merrill Hall
	Marcy Cook	Starters and Stumpers to Keep Minds in Motion	3-8 INT	PGMS Auditorium
3:30 - 5:00	Andrew Stadel	Modeling Mathematics Using Problem-Solving Tasks	6-8 INT	Heather
	Dan Munton	Beyond the 13th Bak'tun: Beauty of the Calendars of the Maya	GI PRS	Scripps
	Annie Fetter	"Noticing and Wondering", a Vehicle to Understanding the Problem	3-8 PRS	Merrill Hall
	Karl Schaffer	Polyhedra on a Shoestring	GI INT	PGMS Auditorium

CALL FOR SPEAKERS

CMC-North 57th Annual Conference

Asilomar and Pacific Grove Middle School, Pacific Grove

Getting at the Core of the Mathematical Practices

December 11-13, 2014

Proposals will be accepted online at www.cmc-math.org/activities/north_speakers.html from January 30 to April 30, 2015. 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:

Gayle Spencer
CMC Student Activities Trust Fund
3617 Dayton Avenue, Fresno, CA 93726

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) Tony DeRose — Math in the Movies	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) Jo Boaler — Erasing Mathematics Failure Through a Growth Mindset and Multi-dimensional Mathematics	Merrill Hall, Asilomar
	10:45 AM-Noon	MID-MORNING KEYNOTE SESSION: (information on page 7) Phil Daro — Stepping Stones	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 Sean Nank Lots of Squares: An Example from the Digital Library 8-12 INT 104 BT	Sean Nank Mathematical Modeling with Strawberries and Videos 8-12 INT 204 BT	Brian Lim Examples and Resources for Mathematical Modeling 6-8 INT 304 BT	Kevin Phillippi A Visit with Fractions: Making Sense of It All 3-5 PRS 404 BT	Kathy Morris ReEngagement, Chunky Problems and Textbook Transformations 3-8 INT 504 BT
	Evergreen Seats 25 Tricia Bagnas Simple Accommodations for IEP Students PK-5 PRS 105 BT	Katy Arrillaga Counting Pockets, Pumpkin Seeds and Other Things PK-2 INT 205 BT	Katie Salguero Combining Practice and Content Standards: MP 7 as a Case Study 8-12 INT 305 BT	Stephen Weimar Sense Making and Development of Other Mathematical Practices 8-12 INT 405	Sara Moore Hands-on Fractions: Manipulatives for a Strong Foundation 3-5 INT 505 BT
NORTH WOODS	Heather Seats 110 Andrew Stadel Get Students to Argue Through Number Sense Activities 3-8 INT 103 BT	David Foster The Decisions and Shifts Required by the CCSS GI PRS 203	Brad Fulton Designing and Implementing Performance Tasks 6-8 PRS 303	Cathy Humphreys Shifting the Class Culture: Number Talks in High School GI INT 403 BT	Andrew Stadel Modeling Mathematics Using Problem-Solving Tasks 6-8 INT 503 BT
	Scripps Seats 50 John Martin The Pythagorean Proposition and the Enduring Beauty of Math GI PRS 106 BT	Jeff Clark Math in the Movies II 8-12 PRS 206 BT	Dean Gooch Cryptography and Codes: Brief History of Encryption and its Uses GI PRS 306 BT	Richard Werner Beauty in Mathematical Sculptures GI PRS 406 BT	Dan Munton Beyond the 13th Bak'tun: Beauty of the Calendars of the Maya GI PRS 506 BT
	Acacia Seats 25 Newcomers' Session	Stephanie Biagetti Let's Talk Math: Designing Productive Discussions PK-2 INT 207 BT	Jeffrey Linder Claim, Support, Question: Thinking Routine 3-8 INT 307 BT	Shalek Chappill-Nichols Crazy 4 Math PK-2 MITI 407 BT	James Short Creating a Classroom Culture of Enjoyable Problem Solving 8-12 INT 507 BT
	Toyon Seats 25 Renee DuVander CCSS Geometry: Let Them Eat Cake, or at Least Design It 8-12 PRS 108 BT	Johnnie Wilson Words That Count: Language in Math Teaching and Learning 3-8 PRS 208 BT	Julie Yu The Many Pieces of Pi 8-12 INT 308 BT	Monica Johnson Rock Accessing Geometry Through Origami 3-8 INT 408 BT	Modesto Tamez The Art and Mathematics of Mirrors 3-8 INT 508 BT
	Marlin Seats 50 Rebecca Johnson Implementing the CCSS Integrated Pathway: Math I, II, III 8-12 PRS 109	Johnnie Wilson Words That Count: Language in Math Teaching and Learning 3-8 PRS 209 BT	Gail Burrill The CCSS, Ratios, Proportions: Implications for Classrooms 6-8 PRS 309 BT	Mona Toncheff Intended Versus Enacted: How Do We Close the Gap? Ldrshp INT 409	Robert Kaplinsky Implementing Real World Problem-Based Math Lessons 6-8 PRS 509 BT
Curlew Seats 25 Rick Barlow Math Fights and Middle Bits 8-12 PRS 110 BT	Linda West Mental Math in a Nutshell PK-5 PRS 210 BT	Linda West Modeling with the X Factor 3-8 INT 310 BT	Shelah Feldstein Supporting English Language Development in Math PK-5 INT 410 BT	Ted Courant Mathematical Throughlines: Topics that Span the Curriculum 8-12 PRS 510 BT	

Speaker and Conference Evaluation Forms Now Online!

We value your input and your feedback is important to us. All comments are reviewed by committee members to ensure next year's conference is even better! We can make it better—you just have to tell us!



Go to our website and click on the link to the **Speaker Evaluation Form** input or go directly to <https://www.surveymonkey.com/s/2014SpeakerEvaluations>. Your input will be easier and faster to tally!



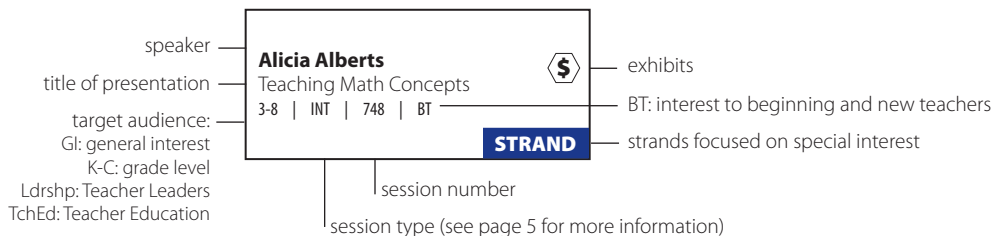
Complete **Conference Evaluation Form** online by December 31, 2014 and you will be entered in a drawing for FREE conference registration and on grounds housing for next year. The winners for this year's free registration and housing are Denise Abbas and Robin Hayes. <https://www.surveymonkey.com/s/CMCNorth2014>

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	Teresa Ryan Creating Critical Thinkers 8-12 PRS 115 BT	Patricia Rogers Beauty in Mathematical Discourse GI INT 215 BT	Mike Chamberlain Third Grade Integration: Multiplication, Fractions, and Oreos 3-5 INT 315 BT	Tere Hirsch Scaffolding Rigorous Tasks for All Learners 3-8 INT 415 BT	Jeff Tobes Discovering the Beauty of Mathematics While Walking 3-8 INT 515 BT
	Nautilus E Seats 36	Ivan Cheng How I Met Your Mother Function 8-12 PRS 116 BT	David Pugalee Reading and Writing to Support Math Learning: CCSSM Literacy 3-8 PRS 216 BT	Andres Marti San Francisco: Building a Core Curriculum for All Students Ldrshp PRS 316	Bill Doherty Flipping the Math Classroom 8-12 PRS 416 BT	Robert Preston Bridging Realia, Pictures and Symbols for Performance Tasks 3-5 INT 516 BT
	Nautilus W Seats 35	Justine Wong Math for Developing Minds and Training Brains PK-2 INT 117 BT	Staci Block Exploring Engaging Opportunities to Meet Our ELLs' Needs 3-5 INT 217 BT	Shawn Harris Sparking Math Conversations with Virtual Tools 6-8 INT 317 BT	Kyle Moyer Project-Based Learning for Mathematical Practices 8-12 PRS 417 BT	Dan Goldfield Outside Math Activities 8-12 INT 517 BT
MERRILL H.	Merrill Hall Seats 138	Steven Leinwand Shift Our Mindsets from Remembering How to Understanding Why GI PRS 118 BT	Harold Asturias Giving ELLs Access and Opportunity to Make Viable Arguments 6-8 PRS 218	Dan Meyer Video Games and Making Math More Like Things Students Like GI PRS 318	Megan Taylor 5th Tsuruda to (T)Sicher-man: Great Problems for Common Core 8-12 INT 418 BT	Annie Fetter Noticing and Wondering, a Vehicle to Understanding a Problem 3-8 PRS 518 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.



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.

TODOS In collaboration with TODOS: Mathematics for All!, an affiliate of NCTM, the sessions in this strand focus on issues related to equity and providing all students with high quality mathematics learning opportunities.

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.**

BMATH The Beauty in Mathematics Strand is a special collection of sessions that highlights the artistry and elegance of mathematics in the spirit of this year's theme.

BUS SERVICE

On Friday, bus service will run between the Asilomar grounds and Pacific Grove Middle School from 4:00-9:30 p.m.



Busses will run between Asilomar and Pacific Grove Middle School and 7:15 a.m. - 6:00 p.m. on Saturday.

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.

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 Seats 25	Suzanne Alejandre A Tour of the Math Forum's Classroom Video Collection 3-8 INT 130 BT	Michael Serra Martin Gardner and the Mathematical Practices 8-12 INT 230 BT	Kim Webb Exploring Fractions Through Number Talks 3-8 INT 330 BT	Max Ray Ursula is Undecided: Supporting the Simpler Problem Strategy GI INT 430 BT	Kari Wurch-Goldenson Engaging All Students: An Equitable Approach to Honors Math 6-8 INT 530 BT
Room 1 Seats 30	Mardi Gale Algebra Intervention and CCSS: Problem-Solving the Intersection 8-12 PRS 131 BT	Suzanne Damm Fractions: See the Beauty by Building, Drawing and Plotting 3-8 INT 231 BT	Joan Cotter Using Drawing Board and Tools to Create Art Through Geometry 3-8 PRS 331	Lew Douglas Rhythm of Math 3-5 INT 431 BT	Nanette Johnson Fostering Perseverance with Interesting Math Problems 8-12 INT 531
Room 4 Seats 30	Laura Pesavento Number of the Day PK-2 INT 133 BT	Rachel Lasek Try Google Forms for Quick Formative Assessments! 8-12 PRS 233 BT	Eric Muller The Math and Science of Surface Area and Volume 8-12 INT 333 BT	Emiliano Gomez The Hidden Mathematics 8-12 INT 433	Vicki Vierra Beauty of Juicy Problems: Do Math Like You Mean It! 6-8 INT 533 BT
Room 5 Seats 30	Shelley Krieger Hands-on Transformations: Dilations and Similarity 8-12 INT 134 BT	Jordan Johnson Functional Programming: Applied Math Fun 8-12 PRS 234	Lori Hamada Research-Based Classrooms: What Do They Really Look Like? GI PRS 334 BT	Jeanne Lazzarini Discover Fascinating Fractals and Math Connections! 6-8 MITI 434 BT	Andre Mathurin Cryptography: Keeping Secrets Using Algebra and Geometry 8-12 INT 534
Room 6 Seats 30	Jennifer North Morris Do the Math: Like Your Life Depends On It 8-12 INT 135 BT	Bree Pickford-Murray Calculus Adjacent: Designing Math Electives Accessible To All 8-12 PRS 235	James Fleisher Math Tunes: Rock On With Math 8-12 PRS 335 BT	Brian Shay Building Connections Through Authentic Tasks 8-12 INT 435 BT	Tom Reich Integrating Math and Fine Art 6-8 INT 535
Room 7 Seats 30	Gloria Brown Brooks Making Sense of Problem Solving with ELLs 6-8 INT 136 BT	Jill Riehl When Students Run the Show: Develop Magical Class Discourse 8-12 PRS 236 BT	Lori Reardon How Is Math Beautiful? 8-12 INT 336 BT	Christine Roberts One District's Journey for Making the CCSSM a Reality Ldrshp PRS 436 BT	Jeanne Ramos Building Students Confidence as Persevering Problem Solvers 6-8 INT 536 BT
Room 12 Seats 30	Allan Bellman Put Yourself in Your Algebra Problems with Digital Video 8-12 INT 139 BT	Perrin Phillips Standards of Math Practice Tips and Discussion Routines 3-5 PRS 239 BT	Sheldon Erickson Use Your Students' Smart Technology to Help Them Learn Math 6-8 PRS 339	Victor Selby Mathematics: So Beautiful It Can't Be Expressed by Words 8-12 PRS 439 BT	James Sheldon From Individual Deficits to Complex Instruction GI INT 539 BT
Room 13 Seats 30	William Zahner Understanding the CCSS-MP "Attend to Precision" for ELs 8-12 W 140 BT	Calisa Holm Study Statistics Holding Your Breath and Writing with Both Hands 6-8 INT 240 BT	Stuart Moskowitz Circular Reasoning: $2\pi r$ and πr^2 : Which is Which? 6-8 INT 340 BT	Chris Paulus Do Bees Build It Best? 8-12 INT 440 BT	David Chamberlain A Large District's CCSS Transition: Successes and Challenges 8-12 PRS 540 BT
Lab 21 Seats 30	Seth Dow Making Use of Your iPad: Apps That Enhance Understanding 8-12 PRS 141 BT	Carl Haley Customizing Free Digital Content to Increase Student Learning 8-12 W 241 BT	Greisy Winicki Landman Preparing a Good Math Game: From My Desk to Yours 3-8 INT 341 BT	Michael Fenton Desmos: Infinite Graphing Power on Every Device, for Free 8-12 INT 441 BT	Ryan Mangan Integrated Computing and STEM Education in the 21st Century 8-12 INT 541
Lab 22 Seats 30	Janet Bales Revolutionary Math Intervention 6-8 PRS 142 BT	Kim Kirley Common Core Math and Your Kindergarten Program PK-2 PRS 242 BT	Beth Baker Order of Operations in Context: Real Problems, Not Isolated 6-8 PRS 342 BT	Dennis Mulhearn Area: Where Can I Find Great Problems? 3-8 INT 442 BT	Shelley Carranza Functions, Functions, and More Functions 8-12 PRS 542 BT
Room 24 Seats 30	Alison Mazzola Modeling Division to Develop Understanding 3-5 INT 143 BT	Sandy Silverman Real World Sorting, Classifying and Patterning, K-1 PK-2 INT 243 BT	Jessica Murk Using Feedback and Revision to Improve Problem Solving 8-12 PRS 343 BT	Barbara Novelli Teach Science: Teach Math! PK-2 INT 443 BT	Melissa Canham Number Sense Routines that Support the SMPs PK-5 PRS 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	Rob Nickerson Be Precise: Link Addition and Subtraction PK-2 INT 144 BT	Charlene Pugh Tools for Student Toolboxes: Multiple Methods 3-5 INT 244 BT	Lynda Holman Hands-on Algebra for Primary Students PK-2 INT 344 BT	Amy Callahan Bridging Problems, Projects and the Common Core 8-12 INT 444 BT	Elizabeth Statmore Talk Moves & Task Structures for Productive Mistake Analysis 8-12 INT 544 BT
Room 26 Seats 30	Elizabeth Street Constructing Viable Arguments Through Problem of the Month 3-8 PRS 145 BT	Cristina Charney Cultivating Perseverance in Students Who Struggle PK-2 PRS 245 BT	Elizabeth Lomeli Hook Your Geometry Students 8-12 PRS 345 BT	Christopher Yakes CCSS Topic Sequencing for Pre-Service Middle School Teachers Tchr Ed PRS 445 BT	Fara Wolfson The Common Core and Beyond: Beauty in the Math of Labyrinths 6-8 INT 545 BT
Room 27 Seats 30	Peggy McLean What Is This Place? A Collection of Place Value Activities 3-5 INT 146 BT	Joanne Rossi Becker Activities to Exploit Seeing Structure and Generalization 6-8 PRS 246 BT	Halcyon Foster One Problem, Three Ways: Variations on a Theme 6-8 PRS 346 BT	David Lau Use of TVM Program on TI 84 and Calculus in Finance Math 8-12 INT 446 BT	Karen Arth Transformational Geometry Using Manipulatives and Activities 8-12 INT 546 BT
Room 28 Seats 30	Ryan Doetch Best iPad® Apps and Strategies to Enhance Math Instruction PK-5 PRS 147 BT	Sherrina Clark More Techy Tools and Apps 8-12 PRS 247 BT	Kathleen Strange Getting Students to Talk Confidently (About Math!) 8-12 PRS 347 BT	Bob Barboza STEAM ++ Occupy Mars the Learning Adventure 8-12 PRS 447 BT	Nicholas Restivo Unraveling the Mysteries of Geometry by Building a Box 3-8 INT 547 BT
Room 29 Seats 30	Tom Murray Math Games: Hands-on, Minds-on Fun! 3-8 INT 148 BT	Diane Resek Teach Algebra Differently To Enhance Pre-Calculus Learning 8-12 INT 248 BT	Ira Holston English Instruction for Algebra 1 (SDAIE) Students 8-12 INT 348 BT	Lisa Grant Come On In the Math is Fine! Dive into the CA Math Framework GI INT 448 BT	Gail Standiford Help! My Incoming Freshman Are Not Ready for Common Core! 8-12 INT 548 BT
Room 32 Seats 30	Elizabeth Brooking Geo-Math 3-8 MITI 150 BT	Elizabeth Brooking Cartooning to Teach Math (for the Artistically- Challenged) 3-8 INT 250 BT	Gena Richman Thinking Like a (Mathematically Inclined) Artist 3-5 MITI 350 BT	John Gaines Engineering in the Elementary PK-5 MITI 450	John Gaines Integrating Filmmaking and Mathematics 3-8 PRS 550
Room 33 Seats 30	Kristopher Boursier Help! Resources for Adapting to Common Core 8-12 INT 151 BT	Michael de Villiers Nine Point and Spieker Circles and Euler and Nagel Lines C PRS 251 BT	Ann Carlyle Make Sense of Number Relationships with Number Lines K-2 PK-2 PRS 351 BT	Carmen Whitman Let's Connect Proportional Reasoning with the Standards 3-8 INT 451 BT	Emma Trevino We Need to Reason Why: Division of Fractions 3-8 INT 551 BT
Auditorium Seats 700	Scott Farrand Think First GI PRS 153 BT	Patrick Callahan Mathematical Reasoning: Why We Are Bad at It GI PRS 253 BT	Marcy Cook Problems Per Primary Pupils PK-2 INT 353 BT	Marcy Cook Starters & Stumpers To Keep Minds in Motion 3-8 INT 453 BT	Karl Schaffer Polyhedra on a Shoestring GI INT 553 BT
Room 36 Seats 30	Patty Morrison Using Literature to Teach Math Concepts in K-2 PK-2 PRS 154 BT	Nicholas Restivo Getting to the Core of Problem Solving 3-8 INT 254 BT	Clay Dagler Discover How to Reduce Square Roots: A Look at the "SMP" 8-12 INT 354	John Binnert Flipped Classroom 102: The 2015 Hybrid Learning Environment 8-12 INT 454	Janeal Maxfield Learning to Love the Number Line! PK-5 INT 554 BT
Room 37 Seats 30	Kathleen Mittag A Hands-on Math Function Activity Using Science Gas Laws 8-12 MITI 155 BT	Serge Killingsworth Origami Triangles: Beauty is in the Hands of the Folder 8-12 MITI 255 BT	Christine Losq Think Ñ Pair Ñ Share to Develop Common Core Math Practices PK-5 PRS 355 BT	Agnes Tuska The Quadrature of a Polygon with GeoGebra 8-12 INT 455 BT	Judith Kysh What Do My Algebra Students Really Know? 8-12 INT 555 BT
Room 38 Seats 30	Elisabeth Smeltzer Let's Talk: Creating a Culture of Discourse in the Classroom 6-8 PRS 156 BT	Krishna Feeny The Beauty of Proportions: Maps, Art and Scaling 6-8 PRS 256 BT	Javier Garcia Building Structures That Guide Student Sense-Making 6-8 PRS 356 BT	Toni Allen What Does "Go Deeper" Really Mean? 3-5 W 456 BT	Carol Dorf Writing Mathematical Poetry: Developing Academic Language 8-12 INT 556 BT
Room 39 Seats 30	Karen Kennedy Mathematical Modeling and the Common Core: What's to Argue? 6-8 INT 157 BT	Chuck Biehl Critical Path Analysis: The Best-Kept Modeling Secret in CCSS 8-12 INT 257 BT	Elmano Costa CCSS Problem Solving for English Learners: It Is Possible! PK-5 INT 357 BT	Teruni Lamberg Implementing Effective Whole Class Discussions GI PRS 457 BT	Alysia Krafel Teaching Division the Common Core Way 3-5 INT 557 BT

HOW TO READ SPEAKER LIST



Alejandro, Suzanne — Director of Prof Dev.,
The Math Forum at Drexel

A Tour of the Math Forum's Classroom Video Collection

What's possible when students become active doers rather than passive consumers of mathematics? In the spring of 2013, the Math Forum partnered with Christopher Columbus Charter School in Philadelphia to produce videos of some of our favorite problem-solving activities. Our videos are freely available on our website <http://mathforum.org/pps/video.html>. We'll tour the collection and discuss ways the community can add to it! Problem prompts and problem-solving activity handouts will be provided.

3-8 | INT | 130 | Saturday, 8:00 - 9:00 | PG Middle School, Library | BT

Allen, Toni — Palo Alto USD

What Does "Go Deeper" Really Mean?

We all hear that Common Core requires that we go deeper into the concepts. What does that really mean? How do I integrate it with my current instructional materials? In this session, we will explore and experience what it means to go deeper into the CCSS-M standards using Formative Assessment Lessons and Re-engagement lessons. We will show methods to integrate without adding more.

3-5 | W | 456 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 38 | BT

Co-presenter: Laura Reeves

Arrillaga, Katy — Bilingual Teacher, Russ ES

Counting Pockets, Pumpkin Seeds and Other Things

Counting a 1,000 things can be a daunting task, but when students count they develop number sense. Students learn how numbers work. The Common Core Standards ask that students by second grade count objects, read and write numbers, use base ten numerals, number names and expanded form with numbers up to 1,000. Leave with some instructional ideas to use in your classroom.

PK-2 | INT | 205 | Saturday, 9:30 - 10:30 | Asilomar, Evergreen | BT

~ 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.

Arth, Karen

 — CPM Educational Program
Transformational Geometry Using Manipulatives and Activities

Participants will use hinged mirrors to look at polygons and similar triangles, rubber bands to explore dilations, patty paper to look at angle relationships through transformations and characteristics of shapes—mostly quadrilaterals, paper plates to fold and find shapes and angles and linear relationships, and other manipulatives, as well as interesting problems to develop and apply geometry concepts and review vocabulary. Topics include similarity, transformations, central angles and polygons.

8-12 | INT | 546 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 27 | BT | \$

Asturias, Harold — Honorable Past President,
Lawrence Hall of Science

Giving ELLs Access and Opportunity to Make Viable Arguments

Providing ALL students access and opportunity to wrestle with, make sense of, and communicate about important mathematics is the focus of this session. We will discuss how using key pedagogical strategies in diagnostic teaching provide students access to the knowledge and skills they need to be successful in school and beyond.

6-8 | PRS | 218 | Saturday, 9:30 - 10:30 | Asilomar, Merrill Hall

Bagnas, Tricia — Resource Specialist Provider,
Discovery Charter School

Simple Accommodations for IEP Students

Every classroom has a few students who currently have an IEP and should be tested for a disability. But they are in your general education classroom. How can you help them with 30+ students? How are they supposed to access math with the common core integration? This session will focus on simple accommodations you can try to help your most needy students be involved in math class. Participants will leave the session with a plan of action and strategies to try for Monday morning.

PK-5 | PRS | 105 | Saturday, 8:00 - 9:00 | Asilomar, Evergreen | BT

Baker, Beth — Zane MS

Order of Operations in Context: Real Problems, Not Isolated

It's time to integrate order of operations into the whole year. We will use problem sets to explore the progression of order of operation in the CCSSM. Given the right situation, students can write math sentences that create a use for this mathematical convention. Finding area of combinations of shapes, summarizing story problems in one long expression, or expressing the total number of tiles in a growing pattern can all generate situations where students will naturally apply correct order of operation.

6-8 | PRS | 342 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 22Lab | BT

Bales, Janet — Director of Math Partnerships, Scholastic
Revolutionary Math Intervention

What if your struggling math students really wanted to attend math class? Successful math intervention at middle schools has been difficult to achieve. Learn how many educators are revolutionizing their instructional practices and student engagement through the implementation of MATH 180.

6-8 | PRS | 142 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 22Lab | BT | \$

Barboza, Bob — Project Director, Super School (K-12) Univ. STEAM ++ Occupy Mars the Learning Adventure

We will demonstrate how we meet Common Core Standards through our STEAM++ projects: Occupy Mars, Backpack Journalism, Backpack Science and Backpack Robotics. Our use of STEAM++ graphic organizers help to individualize math and language arts for special needs, ELL, and gifted students.

8-12 | PRS | 447 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 28 | BT

Barlow, Rick — Fremont HS Math Fights and Middle Bits

Pushing students to think, write and talk clearly about their mathematical ideas is challenging. In our experience, structures are key to supporting all students to communicate and justify their thinking well. In this session we will share two participation structures we have used to scaffold students' mathematical communication and the thinking behind it. Teachers will also brainstorm how to integrate and implement participation structures like these in their classroom.

8-12 | PRS | 110 | Saturday, 8:00 - 9:00 | Asilomar, Curlew | BT

Co-presenter: Shira Helft

Bellman, Allan — Univ. of Mississippi Put Yourself in Your Algebra Problems with Digital Video

Videos each showing the beginning of a slightly different situations involving their teacher will encourage a class to develop mathematical models to determine which of the videos to view in its entirety, they can only view one. Using their models, can they pick the video with the fun ending? In the session, participants will work, as an algebra class would, on this task. Assessment determined differentiated groups, multiple solution paths and tools, and math practices 1-6 are featured.

8-12 | INT | 139 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 12 | BT

Biagetti, Stephanie — CSU Sacramento Let's Talk Math: Designing Productive Discussions in K-2

This interactive session will provide concrete ideas about how to structure purposeful math conversations to deepen student learning and develop students' academic language skills. Intentional math discussions support the development of ELLs' (and ALL students') language skills while at the same time target "critical" math concepts. You will leave the session with strategies and planning templates that will help get your students talking productively about math during the next class.

PK-2 | INT | 207 | Saturday, 9:30 - 10:30 | Asilomar, Acacia | BT

Biehl, Chuck — Special Academic Programs, Charter School of Wilmington

Critical Path Analysis: The Best-Kept Modeling Secret in CCSS

Mathematical modeling is a tough topic, even in Common Core. This session features an easily accessible activity used for planning large projects, like preparing a holiday meal, opening a restaurant, or building the space shuttle. Emphasis is on reasoning, algorithms, and vertex-edge graphs as mathematical models. This is a great introduction to modeling with a non-traditional approach.

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

Binnert, John — Georgiana Bruce Kirby School Flipped Classroom 102: The 2015 Hybrid Learning Environment

In this session, participants will be introduced to Schoology and Google Classroom, free learning management systems which can be used to create and host course materials, class forums, student blogs, and more. Every assignment can be synced to the Common Core State Standards, and most, if not all assignments, can be graded and feedback delivered right in the system. Participants will be given user log ins to a math course designed specifically for the conference.

8-12 | INT | 454 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 36 | §

Block, Staci — Principal, Stevenson Ranch ES Exploring Engaging Opportunities to Meet Our ELLs' Needs

Come and explore best strategies for teach English Language Learners. Learn how to create robust and engaging lessons with research-based strategies that will help foster academic vocabulary and improve higher order thinking skills. Participants will observe modeled Project GLAD (Guided Language Acquisition Design) and Kagan Cooperative Learning strategies that promote language acquisition and development. Project GLAD instruction utilizes dynamic, adaptable, and practical strategies for teaching second language learners and all learners in any classroom setting. These strategies focus on making instruction comprehensible, developing oral fluency and vocabulary, and allowing every child to feel comfortable, included, and excited about class participation. During the session, participants will receive instructional resources, hand-on experiences and be coached on how to implement strategies that will increase rigor in mathematics' lessons.

3-5 | INT | 217 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus West | BT

Boursier, Kristopher — Teacher, Live Oak HS Help! Resources for Adapting to Common Core

This session will begin with a brief description and demonstration of how lesson plans need to change for adoption of the Common Core Standards. We will then share and demonstrate our list of resources. Then attendees will be asked to share their resources. Follow-up will include an organized list of resources and a possible website with the list and a forum for sharing future information.

8-12 | INT | 151 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 33 | BT

Co-presenter: Mickey Valella — Teacher, Ann Sobrato HS

Conference Evaluation Form

Go to <https://www.surveymonkey.com/s/CMCNorth2014> by December 31, 2014 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 Denise Abbas and Robin Hayes.



Brooking, Elizabeth — ACCCME

Geo-Math

Explore our Earth using simple models and student-friendly math. How can students measure how big the Earth is? How far we are to the Sun? Why granite continents float? And more! We'll combine Common Core math and language content with Next Generation Science concepts to discover the Math of Geology!

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

Cartooning to Teach Math (for the artistically-challenged)

If you can't draw much more than stick figures, this is the workshop for you! We will explore many ways to use cartooning to teach math (and develop productive discourse) while engaging students and helping them discover underlying mathematical concepts and structures. Most students are drawing anyway, so let's help them learn math while they're doodling!!

3-8 | INT | 250 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 32 | BT

Brown Brooks, Gloria — Santa Ana Opportunity

Making Sense of Problem Solving with ELLs

Sharing comments and work from my ELL students, we will explore ways to prepare our ELL students to become successful on vocabulary filled assessments. We will discuss which strategies have proven useful and explore student mathematical discourse.

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

Co-presenter: *Justine Wong*

Burrill, Gail — Academic Specialist, Michigan State Univ.

The CCSS, Ratios, Proportions: Implications for Classrooms

The CCSS approach to ratios and proportions, supported by interactive dynamic technology, can bring coherence and consistency to content that has been "tough to teach/tough to learn." What shifts do we need to make in our practice and how can we make them happen?

6-8 | PRS | 309 | Saturday, 11:00 - 12:00 | Asilomar, Marlin | BT

Callahan, Amy — High Tech HS

Bridging Problems, Projects and the Common Core

Teachers new to projects often wonder where a project comes from. In this session, we will start with some traditional math tasks and model how they can be turned into richer experiences for students. Participants will then have their own turn developing such a task into a project.

8-12 | INT | 444 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 25 | BT

Co-presenter: *Sarah Strong — Math Teacher, High Tech HS*

Callahan, Patrick — UCLA

Mathematical Reasoning: Why We Are Bad at It

Reasoning is getting some major play: SMP2: Reason abstractly and quantitatively. SBAC Claim#3: Communicating reasoning. We will explore some research on reasoning and make a case that mathematical reasoning is hard because it is unnatural!

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

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.

Canham, Melissa — Teacher Specialist, Mathematics, Downey Unified SD

Number Sense Routines that Support the SMPs

How do you help your students develop a rich number sense while integrating the Standards for Mathematical Practice... Routines! This session will focus on developing number sense routines, such as number talks, that are based on Cognitively Guided Instruction research.

PK-5 | PRS | 543 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 24 | BT

Carlyle, Ann — UC Santa Barbara

Make Sense of Number Relationships with Number Lines K-2

The Open Number line is a model that students can use flexibly, depending on their familiarity with finding tens, counting forward by jumps of ones or tens, and their understanding of the relationship between addition and subtraction.

PK-2 | PRS | 351 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 33 | BT

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

Functions, Functions, and More Functions

Follow the progression of functions through Algebra, Geometry, and Algebra II. GeoGebra will be used to explore the role of transformations in each course. The presentation will include instructions on how to make a demonstration, pre-made demonstrations and how to use them, as well as activities for students.

8-12 | PRS | 542 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 22Lab | BT

Chamberlain, David — Capistrano USD

A Large District's CCSS Transition: Successes and Challenges

Learn how a large CA district has provided support/resources to its 200+ secondary math teachers through quality PD and an online community. We will also share the challenges that still lie ahead. Access to hundreds of CCSS resources will be provided.

8-12 | PRS | 540 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 13 | BT

Co-presenter: *Courtney Schreiman — Secondary Math TOSA, Capistrano USD*

Chamberlain, Mike — Math Consultant - Director, Fresno COE

Third Grade Integration: Multiplication, Fractions, and Oreos

The Common Core calls for connections to be made between content standards whenever possible. This session will examine a specific classroom lesson involving the introduction of multiplication and fractions through the use of Oreo cookies within a student-centered setting. Participants will walk through the lesson, receive the lesson plan itself, exam student work, and view video of this lesson being taught. Integration can be rather natural when carefully planned out and executed.

3-5 | INT | 315 | Saturday, 11:00 - 12:00 | Asilomar, Triton | BT

Co-presenter: *Ramona Barcena — 3rd Grade Instructor, Cesar E. Chavez ES*

Chappill-Nichols, Shalek — Master Teacher/Activity Developer, Resource Area for Teaching (RAFT)

Crazy 4 Math

Start the new year with activities and ideas that address Pre-K through 2nd grade math concepts. Games and materials to extend lessons beyond the workbook page and support the transition kindergarten student will be presented. Appropriate for use in the classroom or as a take-home activity. A resource list, activity models, literature links, and websites will be shared.

PK-2 | MITI | 407 | Saturday, 1:30 - 3:00 | Asilomar, Acacia | BT

Charney, Cristina — Instructional Specialist-Elem Math, North Thurston Public Schools

Cultivating Perseverance in Students Who Struggle

To expect perseverance, teachers must teach students to name and normalize productive struggle. When that is not enough to maintain perseverance, teachers ask questions that encourage agency while providing an appropriate amount of support. Participants will learn about creating a classroom culture that embraces “tinkering”; shifts “helping” to “conferring,” and provides mathematical models to scaffold grade-level learning. All which encourage independence in students who typically struggle.

PK-2 | PRS | 245 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 26 | BT

Co-presenter: Janeal Maxfield — Instructional Specialist-Elem Math, North Thurston Public Schools

Cheng, Ivan — Associate Professor, CSU Northridge
How I Met Your Mother Function

Competent and confident problem solvers need to use appropriate tools strategically in order to...wait for it... understand transformations as functions in geometry. This session will use PowerPoint as a simple tool to create lessons in transformational geometry. Ready to use lesson activities will be provided!

8-12 | PRS | 116 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus East | BT

Co-presenter: Jaspreet Sandha — Common Core Expert, LAUSD

Clark, Jeff — Mathematics Instructor, Santa Rosa JC
Math in the Movies II

Have you ever been watching one of your favorite movies and heard something that sounded mathematical? Have you ever wondered if it was correct? Jeff Clark, SRJC mathematics instructor, found dozens of Hollywood movies that included math concepts. Some are done correctly, others that got it wrong. Let us take you on a movie journey that will entertain and possibly peak your curiosity about Math in the Movies. (This is an update/continuation of one done at a previous CMC Asilomar Conference.)

8-12 | PRS | 206 | Saturday, 9:30 - 10:30 | Asilomar, Scripps Conference | BT

Clark, Sherrina — Independence HS
More Techy Tools and Apps

Come and explore what is new with technology tools that engage students in a variety of ways. From brain training to response systems, developers are creating new and innovative apps and sites that foster student learning. This session will allow you to choose which tools are useful for you and your classroom. Bring your own device! (Apple iOS and Androids are welcome).

8-12 | PRS | 247 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 28 | 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.

Cook, Marcy — Author

Problems Per Primary Pupils

Start young children on the road to mathematical thinking with meaningful activities. Engage all students in seeing and doing addition and subtraction in a variety of ways. Involve them with word problems and challenge problems on a daily basis. Practical ideas to use immediately to involve all in our wonderful world of mathematics.

PK-2 | INT | 353 | Saturday, 11:00 - 12:00 | PG Middle School, Auditorium | BT

Starters & Stumpers To Keep Minds in Motion

Create a math environment where all students are expected to engage in mathematical thinking. “Math Spoken Here” needs to be the motto of a mathematics classroom where skills and vocabulary are kept alive with daily problem solving and reasoning encounters.

3-8 | INT | 453 | Saturday, 1:30 - 3:00 | PG Middle School, Auditorium | BT

Costa, Elmano — CSU Stanislaus

CCSS Problem Solving for English Learners: It Is Possible!

English learners can be competent and confident problem solvers! This workshop will show how to plan and deliver comprehensible lessons. It begins by presenting the key features of effective lessons and then models with a lesson taught exclusively in Portuguese.

PK-5 | INT | 357 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 39 | BT

Cotter, Joan — Activities for Learning, Inc.

Using Drawing Board and Tools to Create Art Through Geometry

Children, grades 3 and up, can easily learn the skills for using small drawing boards, T-squares, and triangles. With these materials, they can construct equilateral triangles and divide them into halves, thirds, fourths, sixths, eighths, twelfths, and more. They can also construct hexagons, stars, squares, tangrams designs and their reflections, while discovering geometric relationships.

3-8 | PRS | 331 | Saturday, 11:00 - 12:00 | PGrove Middle School, Rm 1

Courant, Ted — Mathematics Instructor, Bentley School
Mathematical Throughlines: Topics that Span the Curriculum

This presentation explores the idea of Narrative Throughlines in mathematics. We present topics that span the standard curriculum, from pre-algebra to college-level mathematics, and include applications of technology. The topics reinforce practical skills while providing students opportunities to explore beautiful mathematics.

8-12 | PRS | 510 | Saturday, 3:30 - 5:00 | Asilomar, Curlew | BT

Dagler, Clay — Luther Burbank HS

Discover How to Reduce Square Roots: A Look at the “SMP”

This session will show teachers how to lead students to discover how to reduce square roots. In the first part of the presentation, teachers will take on the role of students and classroom observers while the lesson is demonstrated. The second part of this session will be a share out on how the lesson addressed some of the new common core standards.

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

Damm, Suzanne — UCSC

Fractions: See the Beauty by Building, Drawing and Plotting

Come explore fractions following the CCSS progressions. We will explore fractional relationships by building and plotting on a number line. We will add, subtract, multiply and divide fractions using manipulatives. We will transfer fractions from concrete to representational including number lines.

3-8 | INT | 231 | Saturday, 9:30 - 10:30 | PG Middle School, Room 1 | BT

de Villiers, Michael — Professor,
Univ. KwaZulu-Natal, South Africa

Nine Point and Spieker Circles and Euler and Nagel Lines

This paper will discuss some beautiful and remarkable results from 17th and 19th century geometry such as the 9-point and Spieker circles as well as the Euler and Nagel lines, and the interesting analogy that exists between them. Little known generalizations of these results will also be shown. Due to their visual nature, these results are accessible to undergraduate students, prospective and practicing high school teachers, as well as for the more mathematically talented high school learner.

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

Doetch, Ryan — Taylor ES

Best iPad Apps and Strategies to Enhance Math Instruction

iPads + Math = Engagement. In this energized and dynamic session, award winning math and innovation teacher, trainer, author and international presenter, Ryan Doetch will share the most effective math apps and the most engaging activities to enhance your math instruction. You will leave this high energy session with dozens of innovative ideas on how to best use iPads to help your math instruction, outstanding iPad apps to motivate students and strategies that strengthen academic achievement.

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

Doherty, Bill — Campolindo HS

Flipping the Math Classroom

Today's technology allows us to rethink how we deliver instruction to our students. Come hear how one teacher has "flipped" the high school mathematics classroom for the past three years, and the implications for student engagement and performance.

8-12 | PRS | 416 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus East | BT

Dorf, Carol — Berkeley HS

Writing Mathematical Poetry: Developing Academic Language

Poetry and mathematics share the ability to compress large ideas into small forms. In her poem "Pi," Nobel winner Szyborska considers Pi's expansion: "How feeble the star's ray, bent by bumping up against space!" Thus, the symbol holds infinite meanings. In the mathematics classroom poetry deepens understanding of language while connecting emotions to mathematics. In this workshop, teachers will learn writing exercises to increase student understanding and enjoyment of mathematics.

8-12 | INT | 556 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 38 | BT

CCSS MP1 Make Sense of Problems
and Persevere in Solving Them

Douglas, Lew — The Lawrence Hall of Science

Rhythm of Math

Rhythm of Math is a Unit for grades 3-5 developed by Body Musician Keith Terry and retired elementary school teacher Linda Akiyama. Rhythm of Math engages students in important math content by analyzing, composing, and performing rhythms. The unit is based on Rhythm Blocks, a technique that is easy to learn, even for teachers and students with little or no musical experience. Now available for purchase, you will learn about it by standing up and hitting yourself (but not too hard!).

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

Dow, Seth — Sugar Bowl Academy

Making Use of Your iPad: Apps That Enhance Understanding

How can you use your iPad, to demonstrate mathematics, assess students, and organize your documents to enhance your tools as a teacher? I have used Educreations, TI-Nspire, Airfile and Algebra Tiles and will share student work. We will focus on, a) What kinds of understanding are apparent in an Educreations video that are not apparent in a pencil/paper assessment?, b) At what point would a task like this be the most useful?, c) What are the limitations of this type of assessment in your classroom?

8-12 | PRS | 141 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 21Lab | BT

DuVander, Renee — Math Teacher, Wine Country Math Council

CCSS Geometry: Let Them Eat Cake, or at Least Design It

Allow your students to explore geometric measurement and dimension through hands-on experiences with cake! In this session, I will share my 3-D Cake Design Project which integrates the CCSS in Geometry with CTE standards in Culinary. I will share the project description, student instructions, related lessons, and student-work examples. What better way to engage your high school students than through their stomach? You can take this project, adapt it, and use it this year.

8-12 | PRS | 108 | Saturday, 8:00 - 9:00 | Asilomar, Toyon | BT

Erickson, Sheldon — Fresno USD

Use Your Students' Smart Technology to Help Them Learn Math

Students have smart phones and tablets. Use that technology to engage and grow their understanding of math. Use it to develop conceptual understanding through interaction. Utilize it to provide individual instruction and tutoring. Find out how to gather data and do collaborative problem solving. Student often have more technology in their hands than in a school computer lab. Take advantage of it to allow students to gain a deeper understanding of math through engagement and interactivity.

6-8 | PRS | 339 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 12

Farrand, Scott — CSU Sacramento

Think First

Changing the way class starts each day can change the habits of mind of our students, and it can change the way that we relate to our lessons. We'll look at warm-up problems, from various grades and topics, that are designed to emphasize thinking instead of remembering, inviting students to find insights into the lesson before the teacher speaks. We'll also report on how this small change has fostered collaboration among instructors and improved calculus instruction at Sacramento State.

GI | PRS | 153 | Saturday, 8:00 - 9:00 | PG Middle School, Auditorium | BT

Co-presenter: Deb Stetson — Director, Calif Math Project at Sac State

Feeney, Krishna — Math Coach, Montera MS

The Beauty of Proportions: Maps, Art and Scaling

Proportional reasoning is one of the fundamental steppingstones that prepares students for success in algebra and the real world. In the Common Core standards for middle grades, proportional reasoning is one of the largest and most exciting strands. Leave with several key learning experiences appropriate for grades 6-8 that engage and encourage students to think proportionally, to use proportions in real (and fantasy) world settings, and to see the beauty of proportionality all around us.

6-8 | PRS | 256 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 38 | BT
Co-presenter: Elisabeth Smeltzer — Teacher, Montera MS

Feldstein, Shelah — Math Consultant, Tulare COE

Supporting English Language Development in Math

This workshop will help you meet the needs of your English Learners by exploring ways to develop math content through the use of discourse and dialog. This session will reference both the Mathematics and ELA/ELD Framework in order to highlight pedagogical practices, which simultaneously support math content and language development.

PK-5 | INT | 410 | Saturday, 1:30 - 3:00 | Asilomar, Curlew | BT
Co-presenter: Kim Webb — Math Consultant,

Fenton, Michael — Teacher, Fresno Christian Schools

Desmos: Infinite Graphing Power on Every Device, for Free

This online graphing calculator will change your life. Join us for an interactive session on Desmos, the free and fantastically beautiful online graphing calculator. Design engaging tasks, facilitate multi-representational discussions, and encourage graphing inquiry in your classroom. Help students develop mathematical habits of mind through graphing. The learning curve is low and the sky's the limit. Bring a laptop or tablet to the session for maximum graphing joy.

8-12 | INT | 441 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 21Lab | BT

Fetter, Annie — The Math Forum @ Drexel

Noticing and Wondering, a Vehicle to Understanding a Problem

The practices of Noticing and Wondering can help all students generate mathematical ideas and make connections between them. Noticing and Wondering pave the way for the development of other problem solving strategies and support a classroom culture that gives every student a way to contribute and treats math as a creative process.

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

Fleisher, James — River Valley HS

Math Tunes: Rock On With Math

Hear songs about various math topics. Most modern songwriters have the disadvantage of writing about things no one cares about, such as love, relationships, or partying. Algebra Man has the unfair advantage of having songs about something far more exciting and relevant to today's youth: mathematics. Hear such hits as *Slope*, *Proving Triangles are Congruent*, and *Absolute Extrema*.

8-12 | PRS | 335 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 6 | BT

Foster, David — Silicon Valley Math Initiative

The Decisions and Shifts Required by the CCSS

Teachers, administrators and parents are confronted with a significant change in K-12 education, as America shifts to the Common Core State Standards. These shifts require changes in math content, instructional practices and the demands on students. The next generation assessments challenge students to think and do mathematics differently. Schools and districts are making and implementing important decisions about course offerings and student pathways. Negotiating these shifts and decisions will be discussed in this session and curricular and assessment tools will be introduced and shared.

GI | PRS | 203 | Saturday, 9:30 - 10:30 | Asilomar, Heather

Foster, Halcyon — Assistant Professor, San Francisco State Univ.

One Problem, Three Ways: Variations on a Theme

How do the instructions we give students impact whether a problem is procedural or conceptual? Three teachers co-planned a lesson and each used the same problem for their opener. Each gave slightly different instructions. This session will explore the variations of the problem and how the subtleties change what the students were asked to do. After reflecting on the problem, we will address techniques for asking procedural questions in a manner that will get students thinking conceptually.

6-8 | PRS | 346 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 27 | BT

Brad Fulton — Mistletoe ES

Designing and Implementing Performance Tasks

An integral part of our construction, performance tasks are critical in fostering the eight mathematical practices and in assessing content knowledge. Learn how to find and create performance tasks and the techniques for implementing them with success. Complete handout available.

6-8 | PRS | 303 | Saturday, 11:00 - 12:00 | Asilomar, Heather

Gaines, John — Site Coordinator, South Whittier SD

Engineering in the Elementary

Participants will explore problem-solving through the engineering design process in the elementary classroom. They will work through a problem-based learning activity and will discuss strategies for integrating mathematics and engineering.

PK-5 | MITI | 450 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 32

Co-presenter: Rogelio Villasano Jr. — Program Leader, South Whittier SD

Integrating Filmmaking and Mathematics

Participants will explore a new approach to developing mathematical fluency through the art of filmmaking. They will investigate ways of analyzing mathematical concepts by integrating filmmaking and mathematics, while learning the steps to successfully produce a student film.

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

Co-presenter: Rogelio Villasano Jr. — Program Leader, South Whittier SD

ELECTRONIC DEVICES

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

Gale, Mardi — WestEd

Algebra Intervention and CCSS: Problem-Solving the Intersection

Examine essential elements for algebraic intervention that support the CCSS, the SMP, problem solving and writing. Examine conceptually based content that targets common barriers to algebraic success and promotes problem solving in alignment with CCSS. Participants will engage in math and receive material that models the CCSS assessments. Supports ELL's and PLC structures.

8-12 | PRS | 131 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 1 | BT

Garcia, Javier — Mathematics Staff Development and Curriculum Specialist, Tulare COE

Building Structures That Guide Student Sense-Making

Feedback is critical to learning. Participants will explore ways to increase the point of contact between students and mathematics, consider structures to provide feedback that deepen student understanding of mathematics and sense-making strategies.

6-8 | PRS | 356 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 38 | BT

Goldfield, Dan — Island HS

Outside Math Activities

Students today spend a lot of time inside the classroom. In this session we will explore some simple outside activities such as How Big is that Star? or How Big was that Quake? We will also explore some more involved outdoor explorations such as How Much Carbon is in that Tree?, How Far Can I see?, How Many Grains of Sand is that? Many of these activities start with basic questions and can quickly extend into many different branches of math depending on your focus.

8-12 | INT | 517 | Saturday, 3:30 - 5:00 | Asilomar, Nautilus West | BT

Gomez, Emiliano — Univ. of California, Berkeley

The Hidden Mathematics

In mathematics there are problems (like Fermat's Last Theorem) which may seem easy at first, but turn out to be hard to solve. Come and experience the opposite! We will present problems that may seem hard at first, but turn out to be easy to solve thanks to the beauty of the hidden mathematics behind them. In order to find it, we may need to add colors or numbers, change our perspective, or make a model. Come ready to roll up your sleeves!

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

Gooch, Dean — Santa Rosa JC Mathematics

Cryptography and Codes: Brief History of Encryption and its Uses

What is cryptography? What influences has cryptography had on world history? Has and is cryptography used for the purposes of espionage? Has cryptography ever been the determining factor in the winning of battles or wars? What is recreational cryptography and who does this? How does cryptography effect one's life in today's society? These are the questions that will be addressed in this brief talk on cryptography.

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

CCSS MP2 Reason Abstractly
and Quantitatively

Grant, Lisa — Education Programs Consultant,
California Department of Education

Come On In the Math is Fine! Dive into the CA Math Framework

In this workshop session, we will dive deeply into the content of the framework and how to use it in your daily classroom instruction.

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

Co-presenter: Deborah Franklin — California Department of Education

Haley, Carl — CK-12

Customizing Free Digital Content to Increase Student Learning

Learn how to use CK-12 totally free, digital, concept-based resources that include lessons, texts, images, videos, simulations, interactives, practice problems, assessments, project and so much more. Your students can access all this digital content on any device: laptop, tablet and smartphone. This session will introduce many of CK-12's features and take you through the steps of getting your classes set up and on their way to quality content.

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

Hamada, Lori — AIMS Center for Math & Science Education

Research-Based Classrooms: What Do They Really Look Like?

How does research really impact the student experience? What does that look like? How do teachers make it happen? We'll look at how knowledge that we have learned from research can be translated into a real working solution in the math classroom, and how that translation can impact the student experience and student achievement.

GI | PRS | 334 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 5 | BT

Harris, Shawn — Director, The College Board, SpringBoard

Sparking Math Conversations with Virtual Tools

Spark your creativity by participating in this interactive session that explores digital math tools to enhance student-centered learning environments! Virtual tools and manipulatives that promote and solidify conceptual understanding of middle and high school topics and support implementation of the CCSS Practice Standards will be explored. Participants will also gain an understanding of how these tools prepare students for the expectations of tomorrow's careers.

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

Hirsch, Tere — Retired

Scaffolding Rigorous Tasks for All Learners

We need to insure that **all** students can access rigorous math tasks. We will look at new, as well as tried and true strategies that are necessary to scaffold accessibility. The SMPs will have a profound impact on classroom practices. We need to help students persevere, organize, observe, conclude, use tools, justify their thinking and critique the thinking of others. In this presentation you will experience mathematical tasks and strategies that help facilitate a path to success for all learners.

3-8 | INT | 415 | Saturday, 1:30 - 3:00 | Asilomar, Triton | BT

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.

Holm, Calisa — Teacher, Pacific Union ES
Study Statistics Holding Your Breath and Writing with Both Hands

CCSS Content Standards emphasize statistics in the middle school math curriculum. Motivate students with interesting data sets that teach us about ourselves and with easy to use graphing technology. We'll model CCSS Practice Standards as we see how long we can hold our breath and time how fast we can write with each hand. Then, after displaying the data using TI-84Cs, we'll describe, analyze, and interpret the results.

6-8 | INT | 240 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 13 | BT | \$
 Co-presenter: Stuart Moskowitz — Teacher, Humboldt State Univ.

Holman, Lynda — Math Consultant, Marietta City Schools
Hands-On Algebra for Primary Students

Common Core State Standards introduce Algebra topics in kindergarten, first, and second grades. Join in a hands-on session of equations, word problems, and real-world connections. You will use lessons and interactive tasks than can be implemented in your classrooms when you return to school on Monday!

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

Holston, Ira — Math Teacher
English Instruction for Algebra 1 (SDAIE) Students

This discussion concerns the lessons learned through a collaboration of a SDAIE math and a SDAIE English Teacher at Berkeley High. The focus of English Instruction for Algebra I students is to use strategies that help students develop and practice academic language for learning mathematics. At the same time students need to learn the mechanics, vocabulary and logic of Algebra; as well as mathematical reasoning!

8-12 | INT | 348 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 29 | BT
 Co-presenter: Heidi Ramirez-Weber — English Teacher & ELL Chair

Humphreys, Cathy — Stanford Univ.
Shifting the Class Culture: Number Talks in High School

Most middle and high school students have had few opportunities to "attend to the meaning of quantities - not just how to compute them." Short daily lessons called Number Talks can help our students gradually move away from "what to do" toward "what to do and why." This session will consider why this is so important and how to get started with Number Talks in our classrooms.

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

Johnson, Jordan — Teacher, Math & Technology, Georgiana Bruce Kirby Prep School
Functional Programming: Applied Math Fun

For years programming has been promoted as a medium for learning about math, but pseudo-algebra like $x = x + 1$, common in programming, invites confusion. In functional programming (FP), programs are true mathematical functions. In this talk you'll meet DrRacket, a free, open-source FP kit designed for learners, and see Bootstrap, a project using FP to teach algebra. See how we can use FP to make pictures, games, and simulations that enrich learning, from Algebra to AP Statistics!

8-12 | PRS | 234 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 5

Johnson, Nanette — Downey Unified SD
Fostering Perseverance with Interesting Math Problems

We will do math problems that will make students persevere. Because these problems are nontraditional, students will have to rely on conceptual understanding to find the solution, instead of mimicking a stated, paved path (by the teacher or textbook).

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

Johnson, Rebecca — District Solutions Manager, Walch Integrated Math
Implementing the CCSS Integrated Pathway: Math I, II, III

Overview of Walch Integrated Math's purpose-built materials for Common Core Integrated Math I, II, and III. Teacher materials focus on Problem Based Tasks, Station Activities, and formative and summative assessments. WalchWeb access includes online unit assessments which mirror the look and navigation of SBAC.

8-12 | PRS | 109 | Saturday, 8:00 - 9:00 | Asilomar, Marlin | \$

Johnson Rock, Monica — Hayward DO
Accessing Geometry Through Origami

Why origami? Children learn concepts best when they have time to explore and create their own thinking to build understanding. Origami allows students to create models that represent complex concepts. This workshop will show a systemic approach in how to create models to teach students geometrical concepts and vocabulary. This approach emphasizes the following standards for Mathematical Practice: precision and the ability to reason abstractly.

3-8 | INT | 408 | Saturday, 1:30 - 3:00 | Asilomar, Toyon | BT

Kaplinsky, Robert — District Office
Implementing Real World Problem-Based Math Lessons

Students are excited to learn math when they see it as trying to find the answer to a problem they care about. We will work through a problem, discuss how it supports the Common Core State Standards, and address potential implementation issues. Attendees will leave with access to hundreds of problems that are available on the Internet and ready to be used the next day.

6-8 | PRS | 509 | Saturday, 3:30 - 5:00 | Asilomar, Marlin | BT

Kennedy, Karen — UCLA Center X
Mathematical Modeling and the Common Core: What's to Argue?

Mathematical modeling is a powerful process in which students can connect classroom mathematics to real life situations. By adding context and relevance to modeling tasks, teachers insure higher student interest and motivation. In this session, participants will learn how to implement engaging modeling tasks to build a classroom culture of inquiry and problem-solving as they foster the 4Cs of 21st Century learning – collaboration, communication, critical thinking, and creativity.

6-8 | INT | 157 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 39 | BT

CCSS MP3 Construct Viable Arguments
 and Critique the Reasoning of Others

Killingsworth, Serge — Teacher, Mount Shasta HS
Origami Triangles: Beauty is in the Hands of the Folder

Special triangles such as the equilateral, hemieq (30° - 60° - 90°), half-square (45° - 45° - 90°), ambiguous-case (ASS) and the pythagorean-triples (3-4-5, 5-12-13, etc.) can all be easily folded using a square sheet of paper. This presents a colorful, hands-on opportunity to investigate the special properties of these triangles, which are an important part of the geometry, algebra and trigonometry curricula. Discovering connections between algebra and geometry: a beautiful thing, indeed!

8-12 | MITI | 255 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 37 | BT

Kirley, Kim — Teacher, Park School

Common Core Math and Your Kindergarten Program

Wondering how to fit CCSS into your kindergarten program? I'll share engaging and meaningful ways to deepen the mathematical thinking and learning you do with your students! Walk away with many no/low cost activities and resources. Let's have fun with math!

PK-2 | PRS | 242 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 22Lab | BT

Krafel, Alysia — Mentor Teacher, Chrysalis Charter School
Teaching Division the Common Core Way

CCSS asks 3rd and 4th grade teachers to teach division thinking, not the standard procedure we all learned in school. So what is division thinking? Using multiple methods to find an answer, making sense of other people's methods and looking for patterns. Teaching division is important and often difficult. Come learn some ways of making it easier and more comprehensible to students using teacher-made drop in units. You will not find this material in your new text books. Resources provided.

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

Kriegler, Shelley — Center for Math and Teaching, Inc.
Hands-On Transformations: Dilations and Similarity

Come experience activities and discussions that build understanding of transformations as functions. This session will focus on dilations and similarity, with applications to slope and the Pythagorean Theorem.

8-12 | INT | 134 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 5 | BT

Krupa, Adam — Associate Director, SpringBoard
Sparking Math Conversations with Virtual Tools

Spark your creativity by participating in this interactive session that explores digital math tools to enhance student-centered learning environments! Virtual tools and manipulatives that promote and solidify conceptual understanding of middle and high school topics and support implementation of the CCSS Practice Standards will be explored. Participants will also gain an understanding of how these tools prepare students for the expectations of tomorrow's careers.

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

Kysh, Judith — San Francisco State Univ.
What Do My Algebra Students Really Know?

We will look at creating assessment questions that probe understanding beyond procedures. Samples and ideas for turning procedural tasks into questions that require understanding and reasoning will be provided. We will consider construction of chapter tests that balance fluency with procedures, conceptual reasoning, and problem solving in order to assess students' development of core practices.

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

Lamberg, Teruni — Univ. of Nevada Reno
Implementing Effective Whole Class Discussions

Explore how you can effectively use whole class discussions to support all your students to learn math so that you get results in student achievement! Learn about the Three Levels of Sense Making Framework for facilitating productive discussions. This framework is embedded in the process of planning and teaching which naturally integrates the Standards for Mathematical Practice.

GI | PRS | 457 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 39 | BT

Lasek, Rachel — Mathematics Department Chair, El Molino HS
Try 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 | 233 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 4 | BT

Lau, David — Professor of Mathematics, Mission HS
Use of TVM Program on TI 84 and Calculus in Finance Math

Using TI 84 (TVM) Time, Value, Money along with basic calculus to solve problems in finance mathematics such as mortgage payments, refinancing a loan, accelerated payment, equity, loan balance, and interest payment. The use of calculus in solving present and future values will be discussed as well.

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

Lazzarini, Jeanne — Resource Area for Teaching (RAFT)
Discover Fascinating Fractals and Math Connections!

Make and take fascinating Common Core Math connections with fractals that appear everywhere – in bodies, plants, shells, mountain ranges, along coastlines, streams, galaxies, in the design of software and music, in predicting earthquakes and flu epidemics, in awesome computer generated projects, and so much more! Explore the math behind our self-similar world with its fractal dimension. Includes several samples to make and great supplies to use right away with your class!

6-8 | MITI | 434 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 5 | 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.

Leinwand, Steven — Principle Research Analyst,
American Institutes for Research

Shift Our Mindsets from Remembering How to Understanding Why

Some of the least effective lessons I've recently observed boil down to telling students what they need to remember. Some of the very best and most effective lessons I've recently observed boil down to providing students with a range of alternative approaches and representations that support an understanding of why the answers make sense. We'll look at a range of examples to model the chasm that separates these two approaches.

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

Lim, Brian — CSU Sacramento

Examples and Resources for Mathematical Modeling

The 4th Standard of Mathematical Practice in CCSS-M is to model with mathematics and the 5th Standard of Mathematical Practice is the using appropriate tools strategically. In this presentation, we will go through some of my favorite mathematical modeling problems as well as discuss some of the key things to consider when we model with mathematics. I will share some of the resources where you can get more examples and ideas of mathematical modeling.

6-8 | INT | 304 | Saturday, 11:00 - 12:00 | Asilomar, Oak Shelter | BT

Linder, Jeffrey — Math Specialist, Montecito Union SD

Claim, Support, Question: Thinking Routine

Teach students how to make claims, support them with evidence, and critique the reasoning of others through games and open-ended problems. Participants will experience this thinking routine that can be used to teach or assess key concepts.

3-8 | INT | 307 | Saturday, 11:00 - 12:00 | Asilomar, Acacia | BT

Co-presenter: Abbey Shaw Linder — Teacher, Rio SD

Lomeli, Elizabeth — Teacher, Wilma Cavitt JHS

Hook Your Geometry Students

Grab your students' attention at the beginning of each unit and pique their curiosity about geometry. We will be examining outstanding resources such as video clips, stories, riddles, and websites that will help link each common core geometry standard to student prior knowledge and make them want to know more. Walk away confident that you can incorporate resources that will excite your geometry students and connect math to everyday life.

8-12 | PRS | 345 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 26 | BT

Losq, Christine — President, MathCoach Interactive
Think-Pair-Share to Develop Common Core Math Practices

Learn how Think-Pair-Share strategies develop the eight mathematical practices of the Common Core. We'll share examples and classroom ready materials that develop number sense and academic language using the open number line, matching games, and ten frame tiles. Take away classroom ready materials.

PK-5 | PRS | 355 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 37 | BT

CCSS MP4 Model with Mathematics

Mangan, Ryan — Education Specialist / Teacher,
UC Davis C-STEM Center

Integrated Computing and STEM Education in the 21st Century

This workshop presents the UC Davis C-STEM program with innovative CTE and Common Core standards compliant curriculum for integrating computing in C/C++ and robot programming into formal K-12 STEM education, particularly focused on technology and engineering topics that reinforce mathematics concepts. The program culminates with the annual C-STEM Day with RoboPlay Competition and Math Programming Competition.

8-12 | INT | 543 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 21Lab

Marti, Andres — Math Content Specialist, San Francisco USD
San Francisco: Building a Core Curriculum for All Students

Hear how teachers in San Francisco used an iterative development process to create and implement a core curriculum for all students. The core curriculum is based on rich math tasks that have multiple entry points, support productive struggle, promote student discourse, build conceptual understanding, and form the basis for ongoing formative assessment. The implementation includes ongoing professional development structures that focus on building site-based professional learning communities.

Ldrshp | PRS | 316 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus East

Co-presenter: Lizzy Hull Barnes — Program Administrator for Math, San Francisco USD

Martin, John — Santa Rosa JC

The Pythagorean Proposition and the Enduring Beauty of Math

In the 1800s Charles Dodgson observed, The Pythagorean theorem is as dazzlingly beautiful now as it was the day when Pythagoras first discovered it. In this talk, we will explore the history of the theorem and the beauty that it still reveals today.

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

Mathurin, Andre — Bellarmine College Prep.

Cryptography: Keeping Secrets Using Algebra and Geometry

Get ideas for engaging students in exploring how to use mathematics to make communication private within the context of algebra and geometry topics. Attendees will learn about the basic ideas of cryptography by participating in activities that incorporate fundamental algebraic and geometric concepts into the design of an algorithmic process for concealing a message. Particular attention will be given to using ciphers as a way of exploring the concept of function.

8-12 | INT | 534 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 5

Maxfield, Janeal — Instructional Specialist,
North Thurston Public Schools

Learning to Love the Number Line!

Instructional Specialists from North Thurston Public Schools share their insights and practical ideas for helping teachers and students harness the power of the number line as an enduring model for operations with whole numbers, fractions, and decimals. Many teachers and students struggle to connect their mathematical thinking to the number line. This participatory session will help you make the connection. Session is appropriate for 2nd-5th grade educators.

PK-5 | INT | 554 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 36 | BT

Co-presenter: Cristina Charney — Inst. Specialist, North Thurston Public Schools

Mazzola, Alison

Modeling Division to Develop Understanding

Let's move beyond cute, memorized sayings and help students develop an understanding of division. Participants will build models of division that preserve place value understanding and one's intuitive sense of number. We will explore division of whole numbers and of fractions.

3-5 | INT | 143 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 24 | BT

McLean, Peggy — Peggy McLean Consulting

What Is This Place? A Collection of Place Value Activities

Place value is identifying basic units of number and measurement systems and understanding the relationship of the order of these units. Participants will build trees and other unique counting tools to develop meaning for different number systems. Games and activities will be used to strengthen place value understanding.

3-5 | INT | 146 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 27 | BT

Meyer, Dan — Stanford Univ.

Video Games and Making Math More Like Things Students Like

Students around the world are playing millions of hours of video games every day and, in many cases, they're enjoying those games more than they enjoy our math classes. Let's look at several of the most popular video games of all time and pull out some lessons. As task designers, test givers, and classroom managers, what can we learn from those games?

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

Mittag, Kathleen — Retired Mathematics Ed. Professor, Univ. of Texas at San Antonio

A Hands-on Math Function Activity Using Science Gas Laws

New ideas to integrate math, science and technology support student learning. The hands-on activity uses inexpensive manipulatives (soda cans, plastic syringes) to model functions for scientific gas laws. Topics covered: measurement; mean; graphing; tables; independent/dependent variables; direct/indirect/inverse functions; dimensional analysis; domain; range; problem solving; interpretation of function graphs; percent error; units used to express air pressure; and math CCSS used.

8-12 | MITI | 155 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 37 | BT

Moore, Sara — ETA hand2mind

Hands-on Fractions: Manipulatives for a Strong Foundation

CCSS emphasizes the idea of fractions as numbers. Students are asked to work with fractions as numbers - counting, using a number line, and thinking through operations. Manipulatives provide an essential tool for supporting student learning in this work. Learn to use a variety of tools to help students master fractions as numbers and integrate the standards of mathematical practice into instruction.

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

Morris, Kathy — Sonoma State Univ.

Re-engagement, Chunky Problems and Textbook Transformations

Stuck in an I-We-You rut? Come explore three innovative, student-thinking, oriented lesson protocols to break the "warm up, correct HW, direct instruction, guided practice, independent practice, repeat" cycle. Re-engagement, Chunky Problems & Textbook Transformation lessons work for any math content and provide rich formative assessment! We'll focus on helping students develop math practices, especially make sense, persevere, construct arguments and utilize structure.

3-8 | INT | 504 | Saturday, 3:30 - 5:00 | Asilomar, Oak Shelter | BT

Morrison, Patty — Fresno USD

Using Literature to Teach Math Concepts in K-2

Children love to hear stories! Literature is a great way to introduce math in a fun way to get children engaged in the lesson. Each story shared will include an activity to promote student understanding of the math in the story. Students create their own product so they can work at their level - beginning to advanced. Come get ideas and activities that you can use in your classroom on Monday. Many of the lessons were written by the speaker and student work samples will be shared.

PK-2 | PRS | 154 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 36 | BT

Moskowitz, Stuart — Humboldt State Univ.

Circular Reasoning: $2\pi r$ and πr^2 : Which is Which?

CCSS state 6th graders will know and understand the derivation of formulas for circumference and area of circles. But both formulas have the same three symbols: π , r , and 2 , and we know how hard it can be to memorize formulas. We will cover and surround circles with M&M candies, then after displaying the data on TI84C's, we'll use trial and error to find formulas to fit the data. We'll also investigate some very creative methods (new and old) to help us better understand which is which.

6-8 | INT | 340 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 13 | BT

Co-presenter: Calisa Holm — Teacher, Pacific Union ES

Moyer, Kyle — Academic Programs Manager, Summit Public Schools

Project-Based Learning for Mathematical Practices

This session shares Summit Public Schools' 21st century model of mathematics curriculum and instruction, designed to prepare all students for college readiness by teaching beyond content to the important life-long cognitive skills and mathematical practices.

The session will share innovative strategies and resources for project-based learning, formative assessment, self-paced content, and blended learning, among others, all aligned to Common Core.

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

Mulhearn, Dennis — Math Olympiads

Area: Where Can I Find Great Problems?

Non-routine problems are an effective tool to teach area. The real problem is finding problem-solving gems. Math contests are a fertile source. Work through a dozen contest classics. Leave with these and over 50 additional problems for class use.

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

CCSS MP5 Use Appropriate Tools Strategically

Muller, Eric — Exploratorium

The Math and Science of Surface Area and Volume

Explore the math and science of surface area and volume with cool chemistry activities from the Exploratorium. We will measure and calculate things all the way down to the size of an atom. Starting with simple geometric and algebraic concepts, we will work our way through exponential notation and beyond the nano-scale. All lessons use easily obtainable materials.

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

Munton, Dan — Santa Rosa JC

Beyond the 13th Bak'tun: Beauty of the Calendars of the Maya

The Maya Calendar generated much interest prior to the end of the 13th Bak'tun in 2012. Now that we have finished "partying like it's 12.19.19.17.19", we can examine more closely the mathematics of the intricate and beautiful calendars of the Maya, including the Tzolk'in, Haab, Long Count and Lunar calendars, and how they interconnect. We will explore the cultural context in which these calendars were and are used as well as the history of their decipherment.

GI | PRS | 506 | Saturday, 3:30 - 5:00 | Asilomar, Scripps Conference | BT

Murk, Jessica — Windsor HS

Using Feedback and Revision to Improve Problem Solving

In math class students are taught, first draft equals final draft. By using peer feedback and revision, students can learn how to persevere in their own problem solving and how to construct viable arguments and critique the reasoning of others. We will also explore strategies to improve student argument writing in mathematics.

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

Co-presenter: Patrick Callahan — UCLA

Murray, Tom — Math 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 | 148 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 29 | BT

Nank, Sean — Professor, American College of Education

Lots of Squares: An Example from the Digital Library

Where can I find resources aligned with SBAC test items? In this session, you will navigate the Digital Library to access formative assessments. The Lots of Squares activity will be completed, highlighting Standard G-CO and MP 1, 2, 3 and 8. Participants will discover how many squares they can make inside of one square. Participants will notice, wonder, discover, and problem solve to determine patterns and strategies for making squares. A complete and adaptable lesson plan will be provided.

8-12 | INT | 104 | Saturday, 8:00 - 9:00 | Asilomar, Oak Shelter | BT

Mathematical Modeling with Strawberries and Videos

Explore Mathematical Practice 4: Modeling with Mathematics using real life observations. In this session, you will use the Digital Library and student created videos to engage in the six CCSS-M steps for mathematical modeling. We will use "I notice" and "I wonder" questioning strategies while defining variables, creating a mathematical model, predicting the outcome, testing the model, and adapting the model according to the actual outcome. A complete lesson plan is provided.

8-12 | INT | 204 | Saturday, 9:30 - 10:30 | Asilomar, Oak Shelter | BT

Nickerson, Rob — Resource and Professional Learning Educator, ORIGO Education

Be Precise: Link Addition and Subtraction

Addition and subtraction are closely linked. What strategies are used to strengthen this connection between these operations and develop flexible thinking and competent students? Attend to Precision using strategies and rich mathematical language in this interactive session.

PK-2 | INT | 144 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 25 | BT

North Morris, Jennifer

Do the Math: Like Your Life Depends On It

The pressure is higher than ever to use investigative tasks in mathematics. Come experience "life or death" investigations that help us understand what rigorous problem solving and modeling look like. Will you take the plunge with Sherlock Holmes or will you survive the Deadly Dice? Come consider your choices...and construct viable arguments.

8-12 | INT | 135 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 6 | BT

Co-presenter: John Berray — Math Teacher, West Hills HS

Novelli, Barbara — Consultant, George Fox Univ.

Teach Science: Teach Math!

Science is the perfect context for teaching the core math standards and making them relevant to your young learners. 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-2 | INT | 443 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 24 | BT

Paulus, Chris — Santa Maria HS

Do Bees Build It Best?

Experience the progression of the mathematical ideas of area, perimeter, regular polygons, volume and tessellations as we study the honeycomb of the bees. See how the authors of this curricula incorporate integrated course work to answer the question, Do Bees Build It Best?

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

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.



Pesavento, Laura — Bilingual Teacher

Number of the Day

We will present effective ideas of how to use Number of the Day, differentiated for Pre-K, K, 1st and 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, written number form, etc. We will demonstrate how tools can 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 | 133 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 4 | BT

Co-presenter: Sandra Gonzalez — Bilingual Teacher

**Phillippi, Kevin — Elementary Math Coordinator,
San Bernardino City USD**

A Visit with Fractions: Making Sense of It All

Many of the common core standards in grades 3-6 cover concepts that are different than what we have experienced. This session is designed for new teachers or teachers new to their grade level and will provide a hands-on experience with fraction concepts from grades 3-6. Throughout the workshop, teaching methods will be explored in an atmosphere that supports those who feel insecure with their content knowledge. Participants will leave with an understanding of what to teach and how to teach it.

3-5 | PRS | 404 | Saturday, 1:30 - 3:00 | Asilomar, Oak Shelter | BT

Phillips, Perrin — Teacher, Southgate ES

Standards of Math Practice Tips and Discussion Routines

In our world of common core standards, student math practices, and assessment we need to teach in a targeted manner. How can we focus on the whole class and the individuals? This session will include several ideas you can use tomorrow. How to:

- Manage and organize your room for small group math instruction
- Keep track of your students math skills
- Isolate essential math skills and create quick assessments
- Set up routines for students to use the Math Practices for discussion

3-5 | PRS | 239 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 12 | BT

Pickford-Murray, Bree — The Bay School

Calculus Adjacent: Designing Math Electives Accessible To All

Although many fascinating topics in math can be explored with minimal prerequisite knowledge, math elective courses are often designed for students who have already taken calculus. Learn about one school that takes a different approach - designing courses that are open to as many students as possible - Topology, Cryptography, Probability and Game Theory.

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

Preston, Robert — Math Coach, Chico Unified SD

Bridging Realia, Pictures and Symbols for Performance Tasks

Performance Tasks require students to apply the mathematics they learn in the context of a "real" situation. For many of our children, this can be a daunting endeavor. This session is designed to prepare you to assist your students for these tasks by bridging the concrete realia and their pictorial representation towards the symbols of mathematics.

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

Pugalee, David — Univ. of North Carolina Charlotte

Reading and Writing to Support Math Learning:

CCSSM Literacy

The CCSSM requires students to demonstrate solid literacy skills to fully participate in problem solving and mathematical reasoning as envisioned in the standards. This session will provide classroom-tested and research-based strategies to support reading and writing in mathematics. Participants will receive a 65 page handout of strategies, information, and tools to assist in developing literacy connections that support the Common Core.

3-8 | PRS | 216 | Saturday, 9:30 - 10:30 | Asilomar, Nautilus East | BT

Pugh, Charlene — Teacher, Longwood ES

Tools for Student Toolboxes: Multiple Methods

We will explore the different methods we can teach our students for success with mathematical operations, while making sense of what is happening. Only teaching the algorithms does not allow all of our students to gain access to the skills they need. We will look at and practice the different methods we can use for the four operations. Multiple methods allows all of our students to model with mathematics, critique the reasoning of others, and adds tools to their mathematical toolboxes.

3-5 | INT | 244 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 25 | BT

Ramos, Jeanne — Administrator, Los Angeles USD

Building Students Confidence as Persevering Problem Solvers

Participants will engage in activities that will 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.

6-8 | INT | 536 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 7 | BT

Ray, Max — The Math Forum @ Drexel

Ursula is Undecided: Supporting the Simpler Problem Strategy

"Ursula is Undecided," a problem from the world of discrete mathematics, provides a challenge for students of all ages. We'll attempt to solve this low floor, high ceiling task, and learn strategies for facilitating students as they make sense of the story and answer their own questions about it. We'll generate facilitation questions that help students create simpler versions of the problem and reflection questions that help students add "Solve a Simpler Problem" to their strategy toolkit.

GI | INT | 430 | Saturday, 1:30 - 3:00 | PG Middle School, Library | BT

Reardon, Lori — Teacher, Crossroads School

How Is Math Beautiful?

Students often fail to see that math is all around us. This session will explore how math is beautiful through the avenues of art, nature and architecture. Participants will review algebra and geometry projects including creating pictures by graphing functions and spiral designs by using Pythagorean theorem, designing tessellations and mandalas and finding real-world geometric shapes and parabolas and modeling them mathematically. Project sheets and rubric assessments will be included.

8-12 | INT | 336 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 7 | BT

Co-presenter: Erin Hansen — Teacher, Wildwood School

Reich, Tom — Faith Ringgold School for Arts and Science
Integrating Math and Fine Art

Motivate your students with lessons that integrate middle school math and an appreciation of works of art on display at the San Francisco de Young Museum. Students will manipulate ratios as they explore still life paintings. Le Collage des Tulipes provides an understanding of area ratios. Wayne Thiebaud’s chocolate cakes and Fredrick Remington’s sculptures have something in common – they’re the ‘hook’ for lessons on unit rates. Challenge your math students and then take a field trip to the de Young!
 6-8 | INT | 535 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 6
 Co-presenter: Caryl Hodges and Benjamin Wells

Resek, Diane — San Francisco State Univ.
Teach Algebra Differently To Enhance Pre-Calculus Learning

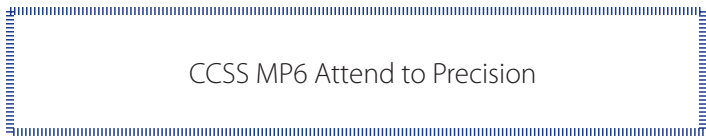
A new elementary algebra class for college students includes problems where students reveal and build on their prior knowledge. They engage in small group discourse that is necessary to understand mathematical concepts. Graduates had significantly higher passing rates than control students in pre-calculus. The ideas can be used with high school students who are repeating beginning algebra.
 8-12 | INT | 248 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 29 | BT

Restivo, Nicholas — Executive Director, Mineola UFSD (Retired)
Getting to the Core of Problem Solving

Generate excitement among your students by modeling how to take risks in mathematical problem solving. Energize and enrich your curriculum by encouraging your students to dialogue with each other and reminding them that a real problem is not the same as a practice exercise. Through the use of problems with multiple solution paths, teachers will learn techniques that will help their students reduce the need to “cram” for any states’ assessments.
 3-8 | INT | 254 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 36 | BT

Restivo, Nicholas — Executive Director, Mineola UFSD (Retired)
Unraveling the Mysteries of Geometry by Building a Box

Participants will transform used greeting cards into boxes useful for small item storage, and more importantly for delivering a better understanding of the relationships among perimeter, area and volume. A major goal is to give students a better understanding of geometry terms and the nuances of definitions involved with polygons with a special emphasis on families of quadrilaterals. Ratio and proportion are discussed as they relate to sizing the boxes.
 3-8 | INT MITI | 547 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 28 | BT



Richman, Gena — Teacher, Mary Collins School at Cherry Valley
Thinking Like a (Mathematically Inclined) Artist

Join us as we guide you through a seamless integration of mathematics and the visual arts inspired by the artist, Mondrian. Our hands-on session will enliven and enrich your math class! Watch as your “canvas” becomes an aesthetic representation illustrating models of multiplication, perimeter, area and developing understanding of the commutative, associative, and distributive properties! Come and experience math through the arts. Non-artists are especially welcome for this cross-subject session.
 3-5 | MITI | 350 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 32 | BT
 Co-presenter: Liza Eichert — Teacher, Mary Collins School at Cherry Valley

Riehl, Jill — Teacher, Flintridge Preparatory School
When Students Run the Show: Develop Magical Class Discourse

Imagine a classroom where students confidently and enthusiastically solve math problems and discuss their ideas with each other, share their work in front of the class and shout with delight when they figure out how to solve a problem, think creatively, critically, and logically. This could be your classroom! We will outline strategies for improving classroom discourse and building a student-centered learning community that specifically highlights the Standards for Mathematical Practice.
 8-12 | PRS | 236 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 7 | BT

Roberts, Christine — Mathematics Staff Development and Curriculum Specialist, Tulare COE
One District’s Journey for Making the CCSSM a Reality

Cycles of professional development, unit planning, and districtwide math routines have made the CCSSM a reality. View sample unit plans, report cards, assessments, and a strategies booklet used to support teachers on their implementation journey.
 Ldrshp | PRS | 436 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 7 | BT
 Co-presenter: Sophia Burr — District Math Coach, Dinuba Unified SD

Rogers, Patricia — Brownell MS
Beauty in Mathematical Discourse

Create mathematical discourse in your classroom through Formative Assessment Lessons (FALs). Focusing on the CCSS and the Standards for Mathematical Practice, these formative lessons are created to facilitate student-centered classrooms and support deeper learning. Come to learn how these lessons are structured and how you can begin using them as a part of every math unit you teach. Your students will learn to engage in meaningful mathematical conversations – listen to the sheer beauty!
 GI | INT | 215 | Saturday, 9:30 - 10:30 | Asilomar, Triton | BT

Speaker Evaluation Form

<https://www.surveymonkey.com/s/2014SpeakerEvaluations>

Rossi Becker, Joanne — San Jose State Univ.

Activities to Exploit Seeing Structure and Generalization

Mathematical Practices 7 and 8: Look for and Make Use of Structure; and Look for and Express Regularity in Repeated Reasoning are inextricably linked practices. In this session you will view videos of middle school students engaging in problems that actuate these two practices. The importance of visualization will be evident in students' ability to see structure and use it to generalize even if they do not yet have use of symbolic representations of patterns.

6-8 | PRS | 246 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 27 | BT

Ryan, Teresa — Mathematics Teacher, Vintage HS

Creating Critical Thinkers

Teachers will engage in activities and discussions which encourage respectful and thoughtful discourse among students in group setting and full class settings. Teachers will discuss ideas for encouraging thoughtful questioning and active engagement in conjecturing and justifying with strong arguments.

8-12 | PRS | 115 | Saturday, 8:00 - 9:00 | Asilomar, Triton | BT

Salguero, Katie — WestEd

Combining Practice and Content Standards: MP 7 as a Case Study

How are the Common Core Practices and Content Standards related? How can we integrate the two? How can teachers modify and implement existing materials in a way that supports the Practices? In this session, we will consider these and related questions in the context of MP 7: Looking for and making use of structure. We will discuss what mathematical structure looks like in the context of different courses, what it means to make use of it, and the importance of this MP for all students.

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

Co-presenter: Angela Knotts — WestEd

Schaffer, Karl — Math Faculty, De Anza College

Polyhedra on a Shoestring

String figures, the imaginative designs created with simple loops of string, are found among the world's most ancient cultures. The performance of string figures, with attention to their geometry, takes them naturally into the realms of dance and mathematics. We will see how to use large loops of rope to explore polygons and polyhedra, and also for creating surprising movement phrases. We will also use fingers and arms to create dance phrases that play with 2- and 3-dimensional geometry.

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

Selby, Victor — Author/Curriculum Consultant, Carmel HS retired

Mathematics: So Beautiful It Can't Be Expressed by Words

Discuss the four great symbol systems as with language, art, and music, we can "put on a show" with mathematics that enhances motivation for all students. From Pythagoras to the equations of the conic sections, connect the great ideas that have built civilizations. Use the nature of space to understand the poetry of Bucky Fuller and the applications of Design Science in our developing world. Attendees will receive a copy of my book *Mathematics and The Human Condition*.

8-12 | PRS | 439 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 12 | BT

Serra, Michael

Martin Gardner and the Mathematical Practices

Come join in celebrating the 100th anniversary of Martin Gardner's Birth. Gardner introduced us to polyominoes, Escher tessellations, geometric dissections, reptiles, and much more. See how these topics can be used to support the mathematical practices and teach transformations in novel ways.

8-12 | INT | 230 | Saturday, 9:30 - 10:30 | PG Middle School, Library | BT

Shay, Brian — Math Teacher, San Dieguito Union HSD

Building Connections Through Authentic Tasks

Participants will delve deeply into rich, holistic tasks that promote student discourse and build connections within a course and across subjects. The tasks are from the new CA Framework and provide rich guidance about how to teach and assess the student understanding of the Math Practices and Content. Examples from middle and high school will be investigated.

8-12 | INT | 435 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 6 | BT

Sheldon, James — San Francisco State Univ.

From Individual Deficits to Complex Instruction

Everyone has had a student that didn't succeed in mathematics no matter what they tried. Ordinarily, we would focus on the student's deficits and refer them for specialized intervention. This interactive workshop offers an alternative by inviting teachers to reorient curriculum around multiple-ability, group worthy tasks. Teachers will experience complex instruction and reflect on how to use this approach so that all students can meaningfully participate in their classroom.

GI | INT | 539 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 12 | BT

Short, James — Secondary Math Specialist, Ventura COE

Creating a Classroom Culture of Enjoyable Problem Solving

How do we change a culture from math as knowing rules, to math as a way of reasoning, sense-making and problem solving? From valuing "giftedness" to valuing effort and growth? Ideas and activities to transform the culture of your classroom will be shared.

8-12 | INT | 507 | Saturday, 3:30 - 5:00 | Asilomar, Acacia | BT

Silverman, Sandy

Real World Sorting, Classifying and Patterning, K-1

Young children are naturally curious about the world around them. Use the real world as the basis to develop the sorting-classifying-patterning progression. Through this interactive session, understand the developmental sequence and apply it to your teaching tomorrow.

PK-2 | INT | 243 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 24 | BT

Smeltzer, Elisabeth — Teacher, Montera MS

Let's Talk: Creating a Culture of Discourse in the Classroom

In the Common Core, we ask students to "construct viable arguments and critique the reasoning of others." We can agree that hearing any student communicate in this way is amazing, but we need to get all students to engage in math discourse equitably. In this session, we will explore an instructional strategy called the Participation Quiz, which allows teachers to create a culture of mathematical discourse in their classrooms through public recognition of positive mathematical interactions.

6-8 | PRS | 156 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 38 | BT

Co-presenter: Krishna Feeney — Math Coach, Montera MS

Stadel, Andrew — Currie MS

Get Students to Argue Through Number Sense Activities

Get students to productively argue in class about math situations. Participate in number sense activities that require students to construct viable arguments, critique the reasoning of others, and use sense-making. Get ready to throw down. Free online resources.

3-8 | INT | 103 | Saturday, 8:00 - 9:00 | Asilomar, Heather | BT

Modeling Mathematics Using Problem-Solving Tasks

Participate in problem-solving tasks that require mathematical modeling, sense-making, and the construction of viable arguments. Learn teacher moves, strategies, and what mathematical modeling is and is not. Free online resources.

6-8 | INT | 503 | Saturday, 3:30 - 5:00 | Asilomar, Heather | BT

Standiford, Gail — Fairfield High (retired)

Help! My Incoming Freshman Are Not Ready for Common Core!

This hands-on workshop will explore how to use graphing calculators to help students understand some of the big ideas of CCSS Algebra I or Integrated 1 including topics such as function (linear, quadratic, square root, exponential and absolute value), domain, range, equation solving, linear equations, sequences and modeling data. You will walk away with lots of ideas of how to use technology to support students with gaps in their prerequisite skills.

8-12 | INT | 548 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 29 | BT

Statmore, Elizabeth — Lowell HS

Talk Moves & Task Structures for Productive Mistake Analysis

In theory, Mistake Analysis ought to be a fertile field for group work, but in practice, it often breaks down into a social and emotional minefield. This session will present new talk moves and task structures that turn Mistake Analysis into a rich, equitable, and sustainable set of classroom practices. Participants will practice setting up the key elements and using these talk moves. We will also practice assigning competence to reinforce individual skills and a growth mindset culture.

8-12 | INT | 544 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 25 | BT

Strange, Kathleen — College Park HS

Getting Students to Talk Confidently (About Math!)

Techniques to engage students in viable mathematics discourse so students can speak with confidence about what they know and don't know. Focuses primarily on Algebra I and Geometry but appropriate for all levels. Sample lessons included. Presented by a CCSS curriculum writer who has returned to teaching in the high school classroom.

8-12 | PRS | 347 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 28 | BT

Street, Elizabeth — Teacher, Kenilworth JHS

Constructing Viable Arguments Through Problem of the Month

Participants will see the sequence and development of students constructing viable arguments and critiquing the reasoning of others through the completion of problems of the month. They will see the process developed by three middle grade teachers as students develop their arguments and critiquing arguments of other students on paper and through the use of technology.

3-8 | PRS | 145 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 26 | BT

Co-presenter: Amanda Dowdy Shannon Rudder — Teacher

Tamez, Modesto — Museum Teacher, Exploratorium

The Art and Mathematics of Mirrors

This hands-on class will use inexpensive plastic mirrors, paper and coloring pencils to make beautiful geometric art with the following educational goals:

- introduction to symmetry
- find cultural connections
- make angles fun and relevant to young students

This class is advertised as a 3-8 level, but the activities can be used with much younger and older students.

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

Taylor, Megan — Sonoma State Univ.

5th Tsuruda to (T)Sicherman: Great Problems for Common Core

Great problems are plentiful in mathematics. But it can be difficult to know how and when to use them in courses and with existing curricula, especially as teachers adapt to the new demands of the California Common Core content standards and standards for mathematical practice. The reality is that the Common Core provides more space than ever for using rich, open-ended problems. Come to an "old" session with a new twist! And, as always, be prepared to do some math.

8-12 | INT | 418 | Saturday, 1:30 - 3:00 | Asilomar, Merrill Hall | BT

Tobes, Jeff

Discovering the Beauty of Mathematics While Walking

Students learn to solve real-life math problems; map reading, measurement, perimeter, mph, ratio, decimals, fractions, time, and graphing while taking walks of 1-30 miles, as well as learning history, art, language, science and character building. By being organized with a clear purpose math objectives can be taught outside in the environment. The beautiful world becomes their classroom...step-by-step.

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

Toncheff, Mona — Math Specialist, Phoenix Union HSD

Intended Versus Enacted: How Do We Close the Gap?

Are all students receiving high-quality mathematics instruction? Determine the leadership and instructional processes needed to implement the Common Core State Standards (CCSS) to ensure high-quality mathematics instruction for all students. See how one high school district engages Professional Learning Communities to close the implemented-enacted curriculum gap and transform classroom practices aligned to the CCSS.

Ldrshp | INT | 409 | Saturday, 1:30 - 3:00 | Asilomar, Marlin

Trevino, Emma — Mathematics Program Coordinator, Charles A. Dana Ctr

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.

3-8 | INT | 551 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 33 | BT

Co-presenter: Carmen Whitman — Consultant, Mathematics For All Consulting

Tuska, Agnes — CSU Fresno

The Quadrature of a Polygon with GeoGebra

The quadrature of a planar object means the construction of a square that has exactly the same area as the given object. Enjoy the beauty and the power of transformational geometry as some famous theorems come alive in the dynamic GeoGebra environment of the construction process.

8-12 | INT | 455 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 37 | BT

Vierra, Vicki — Ventura COE

Beauty of Juicy Problems: Do Math Like You Mean It!

Focus on Math Practice #4 "Model with Mathematics", so that students see the beautiful connections between expressions, equations, and representations as they solve contextual problems.

6-8 | INT | 533 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 4 | BT

Webb, Kim — Mathematics Curriculum Development and Staff Support, Tulare COE

Exploring Fractions Through Number Talks

Participants will explore fraction understanding through interesting, open-ended questions that invoke reasoning to develop a deep understanding of fraction and their relationships. Number Talks are a 10-15 min. daily routine designed to build number sense through flexible computation strategies using structured, student-led conversations. This session is perfect for those who are new to Number Talks or are interested in expanding their current routines to include problems with fractions.

3-8 | INT | 246 | Saturday, 11:00 - 12:00 | PG Middle School, Library | BT

Co-presenter: *Shelah Feldstien — Mathematics Curriculum Development and Staff Support, Tulare COE*

Weimar, Stephen — The Math Forum @ Drexel
Sense Making and Development of Other Mathematical Practices

What does it mean to get good at looking for structure or reasoning abstractly and quantitatively? We will explore problem solving activities designed to help students get good at mathematical practices and the central role of sense making in that process. This session will draw on insight's from the Math Forum's experience mentoring thousands of students in the Problems of the Week program.

8-12 | INT | 405 | Saturday, 1:30 - 3:00 | Asilomar, Evergreen

Werner, Richard — Santa Rosa JC

Beauty in Mathematical Sculptures

In 2011 I took a sabbatical leave to study the works of some renowned artists and to create sculptures of my own. This has all been organized into a publicly available web site with photos, explanations and problem sets that are appropriate at many levels. In 2013 I retired and have continued to work on more mathematically inspired sculptures. The session will be a photographic journey intended to inspire teachers and their students to explore some new and exciting facets of mathematical beauty.

GI | PRS | 406 | Saturday, 1:30 - 3:00 | Asilomar, Scripps Conference | BT

West, Linda — Math Coach, SMART Training, LLC
Mental Math in a Nutshell

Learn new strategies to give your students the gift of mental math computations. Mental Math develops number sense; solidifies understanding of Place Value; builds confidence; develops memory and fact fluency; great for auditory learners and can be used anywhere and anytime.

PK-5 | PRS | 210 | Saturday, 9:30 - 10:30 | Asilomar, Curlew | BT

Modeling with the X Factor

Learn new instructional strategies to help your students develop strong pre-algebraic reasoning skills. This session will demonstrate the process of simplifying algebraic word problems to provide access to students in lower grades meeting the Common Core Practice Standards of persevering, modeling with mathematics, reasoning abstractly and quantitatively. Participants will be utilizing concrete materials, drawing models themselves and learning how to differentiate instruction.

3-8 | INT | 310 | Saturday, 11:00 - 12:00 | Asilomar, Curlew | BT

Whitman, Carmen — Consultant,
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.

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

Co-presenter: *Emma Trevino — Program Coordinator, Univ. of Texas at Austin*

Wilson, Johnnie — Teacher Educator, UC Santa Cruz

Words That Count: Language in Math Teaching and Learning

Language matters more to math teaching and learning than we sometimes realize. In this session we will look at three facets of language that make math comprehensible and engaging. We will look at the relationship between students' everyday language and the expectations we have for academic language. We will look at questioning strategies that promote discussion and critical thinking. We will look at how gesture and sign language add to our ability to share our mathematical ideas.

3-8 | PRS | 209 | Saturday, 9:30 - 10:30 | Asilomar, Marlin | BT

Winicki Landman, Greisy — Cal Poly Pomona

Preparing a Good Math Game: From My Desk to Yours

In this session participants will play several original math games that promote competent and confident problem solvers. We will reflect about the process of creating these games and successful strategies to implement them.

3-8 | INT | 341 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 21Lab | BT

CCSS MP7 Look For and Make Sense of Structure

Wilson, Johnnie — Teacher Educator, UC Santa Cruz

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3-8 | PRS | 208 | Saturday, 9:30 - 10:30 | Asilomar, Toyon | BT

Wolfson, Fara — Math/Special Education Teacher, Homewood Center

The Common Core and Beyond: Beauty in the Math of Labyrinths

A labyrinth is a different type of math circle with layers of beauty and a ripple effect on students' engagement as they direct their own learning. Exploring labyrinths gives educators the opportunity to address multiple common core standards including measurement, proportionality, and geometry. Students are engaged in a meaningful mathematical experience while simultaneously developing their communication skills, tapping into their creativity, and enhancing their problem-solving abilities.

6-8 | INT | 545 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 26 | BT

Wong, Justine — KM2A

Math for Developing Minds and Training Brains

We'll look at ways to reuse, recycle, and repurpose ideas and materials in a pre-kindergarten and kindergarten classroom to create the foundation for the following mathematical practices in a developmentally appropriate way:

- How to use common items to make sense of problems
- How to develop perseverance in solving problem
- How to look for and make use of structure

PK-2 | INT | 117 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus West | BT

Wurch-Goldenson, Kari — Math Teacher, Happy Valley ES

Engaging All Students: An Equitable Approach to Honors Math

Session Outcomes:

- Understand the reasons and rationale for Honors Math for ALL students
- Understand how to incorporate cooperative/collaborative learning in math classes
- Understand how to involve ALL students in rigorous math curriculum and instruction
- See, hear, and experience instruction, student involvement and interaction in an Honors Math classroom
- Trust that learning happens in different ways at different paces for both students and teacher

6-8 | INT | 530 | Saturday, 3:30 - 5:00 | PG Middle School, Library | BT

Co-presenter: Brian Gaddy — Math Teacher, Happy Valley ES

Yakes, Christopher — Associate Professor, CSU Chico

CCSS Topic Sequencing for Pre-Service Middle School Teachers

The development of ideas in CCSS-M takes a logical path starting with the development of ratio and proportion in grades 6-8 as a means to understanding linear functions. The speakers describe the content changes needed in the education of pre-service teachers to prepare them to understand this logical development when teaching and make appropriate choices of curricular materials. This talk is relevant to college faculty, mathematics leaders and professional development providers, and teachers.

Tchr Ed | PRS | 445 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 26 | BT

Co-presenter: Mary Elizabeth Matthews — Assistant Professor, CSU Chico

Yu, Julie — Staff Scientist, Exploratorium

The Many Pieces of Pi

Despite being so irrational, pi is loved by all. More than just a tool for figuring out how much pizza you're getting, pi is useful in many areas of math and science. Come do transcendental hands-on activities that show some of the ways pi appears in our natural world. We'll discover pi not only with circles, but also hidden in a line and by throwing toothpicks. Gain ideas for celebrating Pi Day and see how pi shows up whether you're teaching graphing, geometry, probability, or calculus.

8-12 | INT | 308 | Saturday, 11:00 - 12:00 | Asilomar, Toyon | BT

Zahner, William — SDSU; TODOS

Understanding the CCSS-MP "Attend to Precision" for ELs

How can teachers of linguistically diverse groups of students meet the CCSSM practice standard "Attend to Precision?" This interactive session combines research, insights into the design of CCSSM, and video case studies from algebra classrooms to consider strategies for meeting this standard with English Learners. Participants will collaboratively do a reasoning task that they can use with their students and discuss how other reasoning tasks can be designed using similar principles.

8-12 | W | 140 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 13 | BT

CCSS MP8 Look For and Express
Regularity in Repeated Reasoning

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.



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	College	Ldshp/TchEd	GI		
Alejandre, Suzanne	A Tour of the Math Forum's Classroom Video Collection		√	√					√	
Allen, Toni	What Does "Go Deeper" Really Mean?		√						√	
Arrillaga, Katy	Counting Pockets: Pumpkin Seeds and Other Things	√							√	
Arth, Karen	Transformational Geometry Using Manipulatives and Activities			√	√				√	√
Asturias, Harold	Giving ELLs Access and Opportunity to Make Viable Arguments			√						
Bagnas, Tricia	Simple Accommodations for IEP Students	√	√						√	
Baker, Beth	Order of Operations in Context: Real Problems, Not Isolated			√					√	
Bales, Janet	Revolutionary Math Intervention			√					√	√
Barboza, Bob	STEAM ++ Occupy Mars the Learning Adventure			√	√				√	
Barlow, Rick	Math Fights and Middle Bits			√	√				√	
Bellman, Allan	Put Yourself in Your Algebra Problems with Digital Video			√	√				√	
Biagetti, Stephanie	Let's Talk Math: Designing Productive Discussions in K-2	√							√	
Biehl, Chuck	Critical Path Analysis: The Best-Kept Modeling Secret in CCSS			√	√				√	
Binnert, John	Flipped Classroom 102: The 2015 Hybrid Learning Environment			√	√					√
Block, Staci	Exploring Engaging Opportunities to Meet Our ELLs' Needs		√						√	
Boaler, Jo	Erasing Mathematics Failure Through a Growth Mindset and Multi...									
Boursier, Kristopher	Help! Resources for Adapting to Common Core			√	√				√	
Brooking, Elizabeth	Geo-Math		√	√					√	
	Cartooning to Teach Math (for the Artistically-Challenged)		√	√					√	
Brown Brooks, Gloria	Making Sense of Problem Solving with ELLs			√	√					
Burrill, Gail	The CCSS, Ratios, Proportions: Implications for Classrooms			√	√				√	
Callahan, Amy	Bridging Problems: Projects and the Common Core			√	√				√	
Callahan, Patrick	Mathematical Reasoning: Why We Are Bad at It							√	√	
Canham, Melissa	Number Sense Routines that Support the SMPs	√	√						√	
Carlyle, Ann	Make Sense of Number Relationships with Number Lines K-2	√							√	
Carranza, Shelley	Functions, Functions, and More Functions			√	√				√	
Chamberlain, David	A Large District's CCSS Transition: Successes and Challenges			√	√				√	
Chamberlain, Mike	Third Grade Integration: Multiplication, Fractions and Oreos		√						√	
Chappill-Nichols, Shalek	Crazy 4 Math	√							√	
Charney, Cristina	Cultivating Perseverance in Students Who Struggle	√							√	
Cheng, Ivan	How I Met Your Mother Function			√	√				√	
Clark, Jeff	Math in the Movies II			√	√				√	
Clark, Sherrina	More Techy Tools and Apps			√	√				√	
Cook, Marcy	Starters & Stumpers To Keep Minds in Motion		√	√					√	
	Problems Per Primary Pupils	√							√	
Costa, Elmano	CCSS Problem Solving for English Learners: It Is Possible!	√	√						√	

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Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience							Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	9-12	College	Ldship/TchEd	GI		
Cotter, Joan	Using Drawing Board and Tools to Create Art Through Geometry		√	√						
Courant, Ted	Mathematical Throughlines: Topics that Span the Curriculum			√	√				√	
Dagler, Clay	Discover How to Reduce Square Roots: A Look at the "SMP"			√	√					
Damm, Suzanne	Fractions: See the Beauty by Building, Drawing and Plotting		√	√					√	
Daro, Phil	Stepping Stones									
de Villiers, Michael	Nine Point and Spieker Circles and Euler and Nagel Lines					√			√	
DeRose, Tony	Math in the Movies									
Doetch, Ryan	Best iPad® Apps and Strategies to Enhance Math Instruction	√	√						√	
Doherty, Bill	Flipping the Math Classroom			√	√				√	
Dorf, Carol	Writing Mathematical Poetry: Developing Academic Language			√	√				√	
Douglas, Lew	Rhythm of Math		√	√					√	√
Dow, Seth	Making Use of Your iPad: Apps That Enhance Understanding			√	√				√	
DuVander, Renee	CCSS Geometry: Let Them Eat Cake, or at Least Design It			√	√				√	
Erickson, Sheldon	Use Your Students' Smart Technology to Help Them Learn Math			√						
Farrand, Scott	Think First							√	√	
Feeney, Krishna	The Beauty of Proportions: Maps, Art and Scaling			√					√	
Feldstein, Shelah	Supporting English Language Development in Math	√	√						√	
Fenton, Michael	Desmos: Infinite Graphing Power on Every Device, for Free			√	√				√	
Fetter, Annie	Noticing and Wondering, a Vehicle to Understanding a Problem		√	√					√	
Fleisher, James	Math Tunes: Rock On With Math			√	√				√	
Foster, David	The Decisions and Shifts Required by the CCSS							√		
	College and Career Ready Meets Math Intervention						√			
Foster, Halcyon	One Problem, Three Ways: Variations on a Theme			√					√	
Fulton, Brad	Designing and Implementing Performance Tasks			√						
Gaines, John	Integrating Filmmaking and Mathematics		√	√						
	Engineering in the Elementary	√	√							
Gale, Mardi	Algebra Intervention and CCSS: Problem-Solving the Intersection			√	√				√	
Garcia, Javier	Building Structures That Guide Student Sense-Making			√					√	
Giganti, Paul	Using Children's Literature as Entry Points into Common Core Mathematics	√								
Goldenstein, Donna	Mathematics and the Arts		√						√	
Goldfield, Dan	Outside Math Activities			√	√				√	
Gomez, Emiliano	The Hidden Mathematics			√	√					
Gooch, Dean	Cryptography and Codes: Brief History of Encryption and its Uses							√	√	
Grant, Lisa	Come On In the Math is Fine! Dive into the CA Math Framework							√	√	
Haley, Carl	Customizing Free Digital Content to Increase Student Learning			√	√				√	
	Lights! Camera! Math! Students Develop 21st Century Skills by Making...							√	√	
Hamada, Lori	Research-Based Classrooms: What Do They Really Look Like?							√	√	

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	College	Ldship/TchEd	GI		
Harris, Shawn	Sparking Math Conversations with Virtual Tools			√					√	
Hirsch, Tere	Scaffolding Rigorous Tasks for All Learners		√	√					√	
Holm, Calisa	Study Statistics Holding Your Breath and Writing with Both Hands			√					√	√
Holman, Lynda	Hands-on Algebra for Primary Students	√							√	
Holston, Ira	English Instruction for Algebra 1 (SDAIE) Students			√	√				√	
Humphreys, Cathy	The MP's in Action: Engaging Students in Math Investigations							√		
	Shifting the Class Culture: Number Talks in High School							√	√	
Johnson Rock, Monica	Accessing Geometry Through Origami		√	√					√	
Johnson, Jordan	Functional Programming: Applied Math Fun			√	√					
Johnson, Nanette	Fostering Perseverance with Interesting Math Problems			√	√					
Johnson, Rebecca	Implementing the CCSS Integrated Pathway: Math I, II, III			√	√					√
Kaplinsky, Robert	Implementing Real World Problem-Based Math Lessons			√					√	
Kennedy, Karen	Mathematical Modeling and the Common Core: What's to Argue?			√					√	
Killingsworth, Serge	Origami Triangles: Beauty is in the Hands of the Folder			√	√				√	
Kirley, Kim	Common Core Math and Your Kindergarten Program	√							√	
Krafel, Alysia	Teaching Division the Common Core Way		√						√	√
Kriegler, Shelley	Hands-on Transformations: Dilations and Similarity			√	√				√	
Kysh, Judith	What Do My Algebra Students Really Know?			√	√				√	
Lamberg, Teruni	Implementing Effective Whole Class Discussions							√	√	
Lasek, Rachel	Try Google Forms for Quick Formative Assessments!			√	√				√	
Lau, David	Use of TVM Program on TI 84 and Calculus in Finance Math			√	√				√	
Lazzarini, Jeanne	Discover Fascinating Fractals and Math Connections!			√					√	√
Leinwand, Steven	Shift Our Mindsets from Remembering How to Understanding Why							√	√	
Lim, Brian	Examples and Resources for Mathematical Modeling			√					√	
Linder, Jeffrey	Claim, Support, Question: Thinking Routine		√	√					√	
Lomeli, Elizabeth	Hook Your Geometry Students			√	√				√	
Losq, Christine	Think - Pair - Share to Develop Common Core Math Practices	√	√						√	
Mangan, Ryan	Integrated Computing and STEM Education in the 21st Century			√	√					
Marti, Andres	San Francisco: Building a Core Curriculum for All Students						√			
Martin, John	The Pythagorean Proposition and the Enduring Beauty of Math							√	√	
Mathurin, Andre	Cryptography: Keeping Secrets Using Algebra and Geometry			√	√					
Maxfield, Janeal	Learning to Love the Number Line!	√	√						√	
Mazzola, Alison	Modeling Division to Develop Understanding		√						√	
McLean, Peggy	What Is This Place? A Collection of Place Value Activities		√						√	
Meyer, Dan	Video Games and Making Math More Like Things Students Like							√		
Mittag, Kathleen	A Hands-on Math Function Activity Using Science Gas Laws			√	√				√	

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	College	Ldship/ TchEd	GI		
Moore, Sara	Hands-on Fractions: Manipulatives for a Strong Foundation		√						√	
Morris, Kathy	ReEngagement, Chunky Problems and Textbook Transformations		√	√					√	
Morrison, Patty	Using Literature to Teach Math Concepts in K-2	√							√	
Moskowitz, Stuart	Circular Reasoning: $2\pi r$ and πr^2 : Which is Which?			√					√	
Moyer, Kyle	Project-Based Learning for Mathematical Practices			√	√				√	
Mulhearn, Dennis	Area: Where Can I Find Great Problems?		√	√					√	
Muller, Eric	The Math and Science of Surface Area and Volume			√	√				√	
Munton, Dan	Beyond the 13th Bak'tun: Beauty of the Calendars of the Maya							√	√	
Murk, Jessica	Using Feedback and Revision to Improve Problem Solving			√	√				√	
Murray, Tom	Math Games: Hands-on, Minds-on Fun!		√	√					√	
Nank, Sean	Lots of Squares: An Example from the Digital Library			√	√				√	
	Mathematical Modeling with Strawberries and Videos			√	√				√	
Nickerson, Rob	Be Precise: Link Addition and Subtraction	√							√	
North Morris, Jennifer	Do the Math: Like Your Life Depends On It			√	√				√	
Novelli, Barbara	Teach Science: Teach Math!	√							√	
Paulus, Chris	Do Bees Build It Best?			√	√				√	
Pesavento, Laura	Number of the Day	√							√	
Phillippi, Kevin	A Visit with Fractions: Making Sense of It All		√						√	
Phillips, Perrin	Standards of Math Practice Tips and Discussion Routines		√						√	
Pickford-Murray, Bree	Calculus Adjacent: Designing Math Electives Accessible To All			√	√					
Preston, Robert	Bridging Realia, Pictures and Symbols for Performance Tasks		√						√	
Pugalee, David	Reading and Writing to Support Math Learning: CCSSM Literacy		√	√					√	
Pugh, Charlene	Tools for Student Toolboxes: Multiple Methods		√						√	
Ramos, Jeanne	Building Students Confidence as Persevering Problem Solvers			√					√	
Ray, Max	Does That Make Sense in the Story?: Launching and Exploring Rich Problems			√						
	Ursula is Undecided: Supporting the Simpler Problem Strategy							√	√	
Reardon, Lori	How Is Math Beautiful?			√	√				√	
Reich, Tom	Integrating Math and Fine Art			√						
Resek, Diane	Teach Algebra Differently To Enhance Pre-Calculus Learning			√	√				√	
Restivo, Nicholas	Getting to the Core of Problem Solving		√	√					√	
	Unraveling the Mysteries of Geometry by Building a Box		√	√					√	
Richman, Gena	Thinking Like a (Mathematically Inclined) Artist		√						√	
Riehl, Jill	When Students Run the Show: Develop Magical Class Discourse			√	√				√	
Roberts, Christine	One District's Journey for Making the CCSSM a Reality						√		√	
Rogers, Patricia	Beauty in Mathematical Discourse							√	√	
Rossi Becker, Joanne	Activities to Exploit Seeing Structure and Generalization			√					√	

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	College	Ldshp/TchEd	GI		
Ryan, Teresa	Creating Critical Thinkers			√	√				√	
Salguero, Katie	Combining Practice and Content Standards: MP 7 as a Case Study			√	√				√	
Schaffer, Karl	Polyhedra on a Shoestring							√	√	
Selby, Victor	Mathematics: So Beautiful It Can't Be Expressed by Words			√	√				√	
Serra, Michael	A Pirate's Take on the Mathematical Practices			√	√					
	Martin Gardner and the Mathematical Practices			√	√				√	
Shay, Brian	Building Connections Through Authentic Tasks			√	√				√	
Sheldon, James	From Individual Deficits to Complex Instruction							√	√	
Short, James	Creating a Classroom Culture of Enjoyable Problem Solving			√	√				√	
Silverman, Sandy	Real World Sorting, Classifying and Patterning	√							√	
Smeltzer, Elisabeth	Let's Talk: Creating a Culture of Discourse in the Classroom			√					√	
Stadel, Andrew	Get Students to Argue Through Number Sense Activities		√	√					√	
	Modeling Mathematics Using Problem-Solving Tasks			√					√	
Standiford, Gail	Help! My Incoming Freshman Are Not Ready for Common Core!			√	√				√	
Statmore, Elizabeth	Talk Moves & Task Structures for Productive Mistake Analysis			√	√				√	
Strange, Kathleen	Getting Students to Talk Confidently (About Math!)			√	√				√	
Street, Elizabeth	Constructing Viable Arguments Through Problem of the Month		√	√					√	
Tamez, Modesto	The Art and Mathematics of Mirrors		√	√					√	
Taylor, Megan	5th Tsuruda to (T)Sicherman: Great Problems for Common Core			√	√				√	
Tobes, Jeff	Discovering the Beauty of Mathematics While Walking		√	√					√	
Toncheff, Mona	Intended Versus Enacted: How Do We Close the Gap?							√		
Trevino, Emma	We Need to Reason Why: Division of Fractions		√	√					√	
Tuska, Agnes	The Quadrature of a Polygon with GeoGebra			√	√				√	
Vierra, Vicki	Beauty of Juicy Problems: Do Math Like You Mean It!			√					√	
Webb, Kim	Exploring Fractions Through Number Talks		√	√					√	
Weimar, Stephen	Sense Making and Development of Other Mathematical Practices			√	√					
Werner, Richard	Beauty in Mathematical Sculptures							√	√	
West, Linda	Modeling with the X Factor		√	√					√	
	Mental Math in a Nutshell	√	√						√	
Whitman, Carmen	Let's Connect Proportional Reasoning with the Standards		√	√					√	
Wilson, Johnnie	Words That Count: Language in Math Teaching and Learning		√	√					√	
Winicki Landman, Greisy	Preparing a Good Math Game: From My Desk to Yours		√	√					√	
Wolfson, Fara	The Common Core and Beyond: Beauty in the Math of Labyrinths			√					√	
Wong, Justine	Math for Developing Minds and Training Brains	√							√	
Wurch-Goldenson, Kari	Engaging All Students: An Equitable Approach to Honors Math			√					√	
Yakes, Christopher	CCSS Topic Sequencing for Pre-Service Middle School Teachers							√	√	
Yu, Julie	The Many Pieces of Pi			√	√				√	
Zahner, William	Understanding the CCSS-MP "Attend to Precision" for ELs			√	√				√	

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 5 – December 7, 2014



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

Speaker and Conference Evaluation Forms Now Online!

We value your input and your feedback is important to us. All comments are reviewed by committee members to ensure next year's conference is even better! We can make it better—you just have to tell us!



Go to our website and click on the link to the [Speaker Evaluation Form](#) input or go directly to

<https://www.surveymonkey.com/s/2014SpeakerEvaluations>. Your input will be easier and faster to tally!

Complete [Conference Evaluation Form](#) online by December 31, 2014 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 Denise Abbas and Robin Hayes.

<https://www.surveymonkey.com/s/CMCNorth2014>



EXHIBITS

Company	PG Middle Gym	Company	PG Middle Gym
Activities for Learning, Inc.	224	McGraw-Hill Education	262 - 264
Bedford, Freeman & Worth & W.H. Freeman & Company	244	Mentoring Minds	203
California Casualty	259	MIND Research Institute	248
California Jump\$tart	243	Moore Educational Resources	241
California Teachers Association	265	Music Notes	249
Carnegie Learning	258	Nasco	211 -212
Cengage Learning/National Geographic Learning	225 -226	National Council of Supervisors of Math	215
Center for Mathematics and Teaching, Inc	256	National Council of Teachers of Mathematics	218 - 219
CMC - North bags	205	Origo Education	238 - 239
CMC Exhibit Check-in	204	Pearson	206 - 208
CMC - Communicator	275 - 276	Reasoning Mind Inc.	270
ConsumerMath.org	221	Renaissance Learning	214
CPM Educational Program	253 - 254	Rosen Classroom	234
CSU/UC MDTP	237	Scholastic/Math Solutions	251 - 252
Curriculum Associates	202	SpringBoard, The College Board	209
Ed-Tex/Perfection Learning	213	Stokes Publishing Company	267 - 268
eInstruction	217	TakeMath	235
Heinemann	232 - 233	TEAM UP! For Common Core Learning	260
Houghton Mifflin Harcourt	272 - 274	TenMarks Education, an Amazon Company	246 - 247
Industry Initiatives for Science and Math Education	222	ThinkThrough Math	245
It's About Time	228 - 229	TPS Publishing Inc	242
ITSPHUN, LLC	216	Triumph Learning	236
ixl Learning	223	Varisty Learning	255
Math Teachers Press, Inc.	231	Walch Integrated Math	271
MathFun book	266	Western Governors University	227

Pacific Grove Middle School Friday / 5:15 - 7:30 p.m. Saturday / 8:00 a.m. - 6:00 p.m.
 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.

	270	271	272	273	274	275	276	
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
	262	263	264	265	266	267	268	

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

One elementary or one secondary awardee, chosen from several mathematics teacher finalists, get a trip for two to the White House and over \$10,000 in awards. The award alternates between the two levels: secondary in odd years, elementary in even.

2015 Secondary Teacher Nominations

Elementary and secondary awards are alternating. The nominations for the 2014 Presidential Award for Excellence in Mathematics and Science Teaching are now being accepted. Please encourage your colleagues to apply. A good candidate:

- Gets students excited about math
- Skillfully uses a variety of teaching techniques
- Engages students in meaningful mathematics
- Regularly reflects on lessons and seeks professional development
- Is actively involved in mathematics education at the local, state, and/or national levels

- **Announcing the 2014 PAEMST Finalists**

Andrew Kotko

Andrew is a first grade teacher at Mather Heights Elementary in the Folsom Cordova Unified School District. He has been teaching eleven years. He achieved National Board Certification in 2007. In March, 2014 he spoke to members of the US Congress on behalf of the National Board “advocating for increased concentration of certified teachers and mirroring the medical residency model in teacher prep.” He also serves as vice-chair of the California Teacher Advisory Council. He is a previous California PAEMST finalist (2012). The topic he chose to teach in his lesson was that of base-ten place value.

Sara Norris

Sara is a first grade teacher at the Mills College Children’s School in Oakland, California. She has been teaching ten years. She has been highly involved in the Lesson Study Collaboration at Mills College and was a Co-presenter of Listening for Learning: Reflections on Two Years of Lesson Study Collaboration in Mathematics at the Conference of the International Association of Laboratory and University Affiliated Schools in Pittsburg, PA in 2011. She is a previous California PAEMST finalist (2012). The topic she chose to teach in her lesson was that of regrouping.

- **California Math Council, www.cmc-math.org/awards**

We are also grateful to the following winners of CMC’s awards for educators who have given sustained service to the students of California and to the mathematics education community.

- **2014 Polya Award**

The George Polya Memorial Award may be conferred upon the teacher or teachers, K-12, who have been deemed as outstanding teachers of mathematics over a sustained period of time, have supported CMC activities, have been active participants in CMC, and have high visibility throughout the state of California. This year’s awardee is **April Goodman-Orcutt**.

For over a dozen years, not only has April been an outstanding math teacher, she has been an active participant in CMC leadership and has had high visibility throughout California. Her contributions include:

Current CMC-N President; Current mathematics teacher, Joaquin Miller Middle School, San Jose, CA; Current treasurer for Santa Clara Valley Mathematics Association; Former CMC-State Treasurer; Former CMC-N Conference Chair; Former CMC-N Asilomar Conference speaker.

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

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#cmcmath

www.cmc-math.org



@themathforum & @CAMathCouncil

IGNITE!
Saturday 7:30 pm
Merrill Hall
@ddmeyer, emcee

@ArjanKhalsa • @btwnthenumbers • @MFAnnie
@cheesemonkeysf • @geometrywiz • @javgarci • @mjfenton
@maxmathforum • @MrBrianShay • @msnurdoesmath

5 minutes. 20 slides. Lots of ideas.

CALENDAR OF MATH EVENTS

December 13, 2014

SCVMA Senior Olympiad at Miller Middle School
Rita Korsunsky, rikorsunsky@gmail.com

February 7, 2015

CMSESMC STEM Conference
San Mateo County Office of Education
Brennan Brockbank, brennan.brockbank@gmail.com
<http://cmsesmc.org/events/stem-conference.html>

February 12-14, 2015

AMTE Annual Conference, Orlando FL

March 2015

San Mateo County STEM Fair, Hiller Aviation Museum
Brennan Brockbank, brennan.brockbank@gmail.com
<http://stemfair.net/>

March 14, 2015

SCVMA Math Field Day at West Valley Community College
Rita Korsunsky, rikorsunsky@gmail.com

March 23, 2015

Monterey Bay Counties Math Education (MBCME)
David Foster, "The Decisions and Shifts Required by the
Common Core State Standards", at the Monterey County Office
of Education, Susan Castillo (scahill@monterey.k12.ca.us)
<http://monterey.k12oms.org/1519-89248>

April 13-15, 2015

NCSM Annual Meeting, Boston, MA

April 15-18, 2015

NCTM Annual Meeting and Exposition, Boston, MA

November 6-7, 2015

CMC-S Palm Springs Conference, Palm Springs, CA

December 11-13, 2015

CMC-N Asilomar Conference, Pacific Grove, CA

For information and links to these math events go to:
www.cmc-math.org/activities/calendar.html

BOARD MEMBERS

2014-15	State	PresidentKathlan Latimer	North	PresidentApril Goodman-Orcutt
		President-ElectVicki Vierra		Past PresidentChristine Robles
		SecretaryJeannie Toshima		President-ElectRebecca Lewis
		TreasurerJulie Crozier		Vice-PresidentAna England
				SecretaryRita Nutsch
		TreasurerBrian Lim		

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** CMC-N members from any public or private school or district
- Qualifications**
- √ Must be current members
 - √ Can only apply once per school year
 - √ Should have additional sources of funding
 - √ Application completed in full
- Proposal**
1. Title Page, complete the form on page 44.
- Format**
2. Project Description
 - a. Project Goals—What will the project seek to accomplish?
 - b. Statement of need as related to your students.
 - c. Project activities and timeline.
 - d. Impact—Who and how many will be effected?
 - 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—provide an itemized budget listing support from other sources.
 4. Amount requested. Partial funding likely.

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

Send to:

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

MINI-GRANTS

Mini-Grants for CMC-N members are available for up to \$500 to encourage creativity and innovation among Northern California educators for the purpose of developing mathematically powerful students.

Deadline: January 31 and November 1 of next year.

For information and applications visit www.cmc-math.org/awards or contact FaraLee Wright at faralee.wright@sbcglobal.net

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.

California Mathematics Council - Northern Section

**Mini-Grant Deadlines: January 31 - \$500
November 1 - \$500**

Title of Grant _____

Name of Grant Leader: _____ CMC Member # _____

Home phone: () _____ Home e-mail: _____

School name: _____

School address: _____ Fax: _____

School e-mail: _____

The Grant will impact the following: Number of students: _____

Number of teachers: _____

Percent members of minorities: _____

Maximum amount requested to implement the grant: _____

Include the following information in your request:

Item(s) to be purchased:

Expected vendor and prices:

Short narrative about how these items will be used:

Grant requests may be only partially funded. Additional funding sources available to you.

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.

Approval Signature:

Grant Leader _____

Building Site Administrator Name and Title _____

Send to:

CMC-N Grants, c/o FaraLee S Wright, PO Box 2738, Suisun, CA 94585-5738, or faralee.wright@sbcglobal.net

SPECIFICS:

- ✓ Earn 1.5 quarter hours (= 1 sem hr) of college credit for your Asilomar participation.
- ✓ Credit is from CSU East Bay Extension Division. Generally it can not be applied toward a degree program, but can be used as:
 - professional growth units for your credential, and,
 - district credit for step advancement. Check with your district regarding its policy on accepting these units.
- ✓ Credit will be given in the Winter Quarter. Grades will not be available until April. Please do NOT call before that time. After February 1, you may send an e-mail to be sure your materials were received.
- ✓ Grades are CR/NC only.
- ✓ You must complete each of the requirements below.

REQUIREMENTS:

1. Register for the conference.
2. Register for credit/no credit by downloading the form at www.cmc-math.org/activities/north_conference.html. Complete the form on your computer. Then print, sign, and mail with your payment in the amount of \$145.00 (payable to CSU East Bay).
3. Attend the opening session Friday evening 7:30-9:00 p.m. at Pacific Grove Middle School Auditorium.
4. Attend at least three sessions on Saturday, visit the exhibit area, and attend a Sunday closing session.
5. Type a paper as described below. Save a tree: single spacing is fine. Include your name, address and phone number on it in case of problems.

PAPER:

1. Submit a two-part paper. In the first part devote a paragraph or more to each session you attended. Include details on the title, speaker, ideas, activities, and theme(s). Then, in the second part, reflect on how the conference affected your thinking about math education. How has it affected your classroom? How do you believe it will affect it in the future? What common themes did you see throughout the conference? This part should be at least 1 or 2 pages.
2. If you prefer, the two parts above can be combined into one using a more narrative style.

REMEMBER:

The paper must exhibit a great deal of reflection, and must not be just a chronicle of how you spent your weekend.

Mail the registration form, payment, and paper in a single packet by January 30 to:

Dr. Jean Simutis
 Dept. of Mathematics and Computer Science
 CSU East Bay
 Hayward, CA 94542

Download form at
http://www.cmc-math.org/activities/north_conference.html

CALIFORNIA STATE UNIVERSITY **Division of Continuing and International Education**
 25800 Carlos Bee Blvd., SA 1700 | Hayward, CA 94542 | Phone: (510) 885-3605 | www.cc.csueastbay.edu

Contract Credit Registration Form

Student Information (Please print clearly.) **To enroll for credit, please complete and return to instructor. Fees must be paid in full for enrollment to be valid.**

Last Name _____ First Name _____ Middle Initial _____ NetID/SSN _____

Street Address _____ Date of Birth **(required)** _____

City _____ State _____ Zip _____

Home Phone _____ Work Phone _____ E-mail _____

Employer _____ Employer Address _____

City _____ State _____ Zip _____

Gender: Male Female

Please sign and date below to verify for official University records that the above information is correct. By signing this application, you consent to have your NetID & activation code e-mailed to the address provided above.

SIGNATURE: _____ DATE: _____

NO REFUNDS ISSUED ON CONTRACT REGISTRATIONS

Course Information Year: 2015 Quarter: Fall Winter Spring Summer

Credit/No Credit Option: To receive credit/no credit instead of a letter grade (for courses offering this option) you must check the appropriate CR/NC column below. If you do not choose an option, you will automatically receive a standard letter grade.

Department	Course No	Course Title	Instructor	Units	Fee	CR/NC
MA	Math 7373	Asilomar Conference 2014	Simutis	1.5	\$ 145	<input checked="" type="checkbox"/>
					\$	
					\$	
					Total: \$145	

Payment Options (Check one box)

Personal Check/Money Order (Made Payable to CSUEB) Paid by Employer: **Attach** either Company/Agency Check or Employer Purchase Order. Employer address information must be provided above.

Office Use Only _____

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, masheris@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

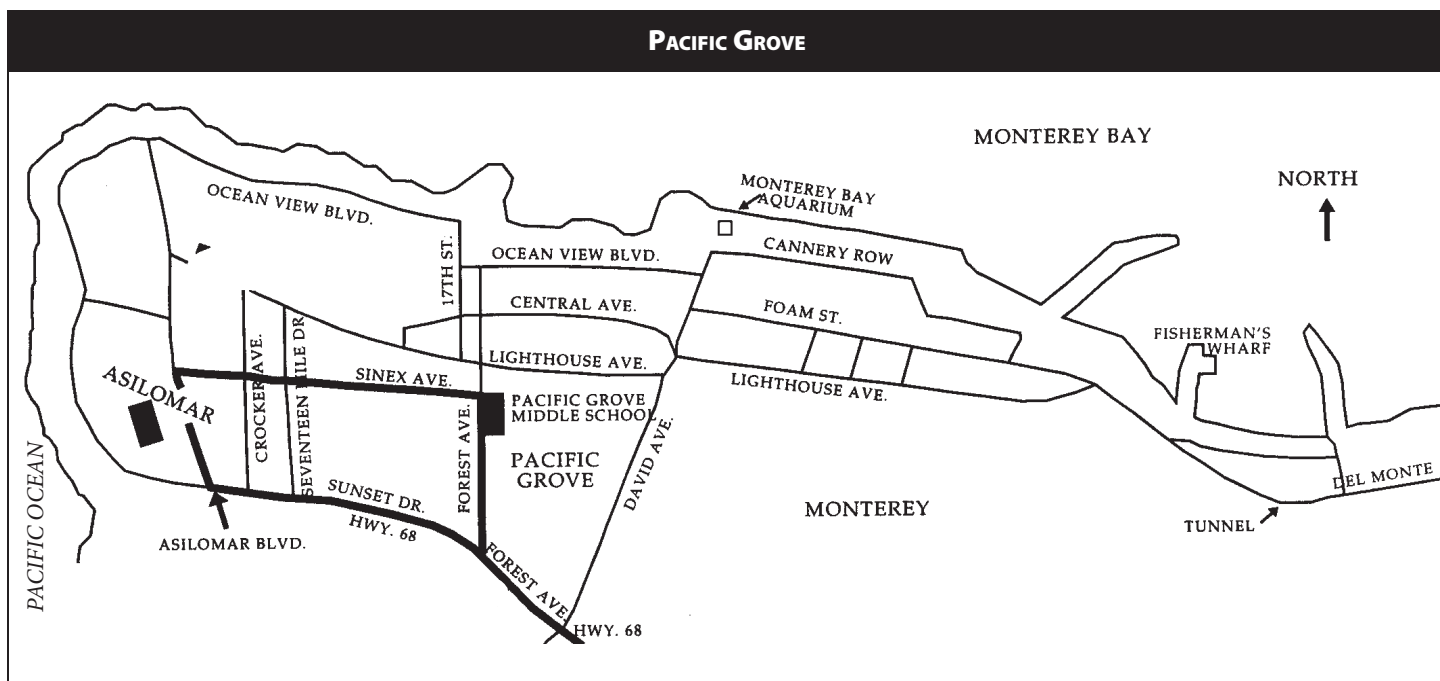
Council of Math & Science Educators
San Mateo County (CMSESMC)
Brennan Brockbank, brennan.brockman@gmail.com

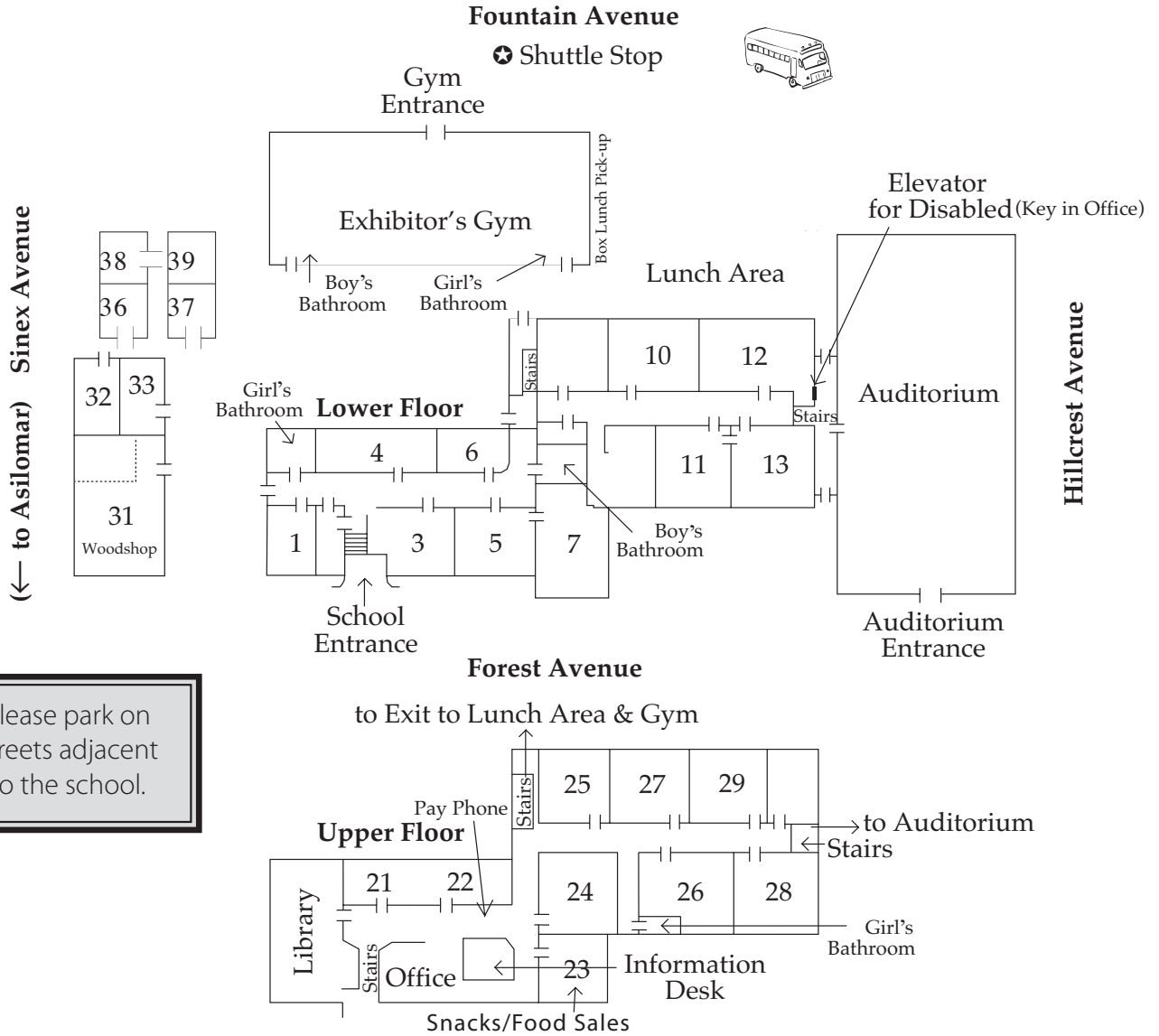
Santa Clara Valley Math Association (SCVMA)
Rita Korsunsky, rikorsunsky@gmail.com

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





Please park on streets adjacent to the school.

BUS SERVICE



On Friday, bus service will run between the Asilomar grounds and Pacific Grove Middle School from 4:00-9:30 p.m. Busses will run between Asilomar and Pacific Grove Middle School and 7:15 a.m. - 6:00 p.m. on Saturday.

MEETING ROOMS	MEETING ROOMS	MEETING ROOMS
B4 Acacia	F2 Afterglow Rooms 1301-1312	F2 Acacia
D5 Chapel Auditorium	C5 Breakers East Rooms 821-832	C5 Chapel Auditorium
C4 Curlew	C5 Breakers West Rooms 833-840	C4 Curlew
C5 Dolphin	H5 Cypress Rooms 717-724	C5 Dolphin
F1 Evergreen	H3 Deer Lodge Rooms 1121-1130	F1 Evergreen
E2 Fred Farr Forum	C3 Director's Cottage Rooms 133-1324	E2 Fred Farr Forum
C4 Heather	G3 Engineer's Cottage	C4 Heather
E2 Klin	F1 Forest Lodge Rooms 1202-1211	E2 Klin
G3 Madrone	F2 Guest Inn Rooms 901-903	G3 Madrone
B4 Manzanita I & II	F1 Hearth Rooms 1325-1336	B4 Manzanita I & II
D4 Marlin	G3 Live Oak Rooms 1101-1110	D4 Marlin
G4 Merrill Hall	D4 Lodge Rooms 201-218	G4 Merrill Hall
H4 Nautilus	A3 Long View North Rooms 101-110	H4 Nautilus
C4 Oak Knoll I & II	A3 Long View Middle Rooms 111-120	C4 Oak Knoll I & II
F1 Oak Shelter	A3 Long View South Rooms 121-130	F1 Oak Shelter
C6 Sanderling	B4 Manzanita Rooms 1001-1012	C6 Sanderling
D4 Scripps	C4 Oak Knoll Rooms 1018-1024	D4 Scripps
G5 Surf & Sand	G5 Pirates' Den Rooms 501-510	G5 Surf & Sand
B4 Toyon	G6 Sand Rooms 605-610	B4 Toyon
H4 Triton	D4 Scripps Rooms 301-323	H4 Triton
B4 Willow I & II	H5 Shores Rooms 709-716	B4 Willow I & II
G3 Whitehead	C5 Spindrift North Rooms 849-856	G3 Whitehead
OTHER	C6 Spindrift South Rooms 841-848	OTHER
BBQ Area	F4 Stuck-up Inn Rooms 401-414	BBQ Area
Crocker Dining Hall	H6 Surf Rooms 601-604	Crocker Dining Hall
Fire Pits	H3 Tree Tops Rooms 111-120	Fire Pits
Guest Check-In	C5 Whitecaps North Rooms 809-820	Guest Check-In
Hearst Social Hall	D3 Whitecaps South Rooms 801-808	Hearst Social Hall
Human Resources	B4 Willow Inn Rooms 1025-1036	Human Resources
Meditation Space	H5 Windward Rooms 701-708	Meditation Space
Mott Training Center	G1 Woodside Rooms 122-1223	Mott Training Center
Park Ranger Office		Park Ranger Office
Park Store		Park Store
Phoebe's Café		Phoebe's Café
Seascape		Seascape
Swimming Pool		Swimming Pool
Conference and Event Sales		Conference and Event Sales
Viewpoint		Viewpoint
Volleyball Court		Volleyball Court
Woodlands		Woodlands
Yoga Room		Yoga Room
PARKING LOTS		PARKING LOTS
Parking Lot A		Parking Lot A
Parking Lot B		Parking Lot B
Parking Lot C		Parking Lot C
Parking Lot D		Parking Lot D
Parking Lot E		Parking Lot E
Parking Lot F		Parking Lot F
Parking Lot G		Parking Lot G
Parking Lot H		Parking Lot H
Parking Lot J		Parking Lot J
Parking Lot K		Parking Lot K
Parking Lot L		Parking Lot L
Parking Lot M		Parking Lot M
Parking Lot N		Parking Lot N
Parking Lot P		Parking Lot P



SECTION	ROOMS
1	Yoga Room, Meditation Space, Long View North, Long View Middle, Manzanita, Hearst, Willow Inn, Underground, Breakers East, Breakers West, Dolphin, Housekeeping, Swimming Pool, Greenhouse
2	Director's Cottage, Forest Lodge, Forest Resources, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
3	Director's Cottage, Scripps, Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
4	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
5	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
6	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
7	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
8	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen
9	Whitehead, Merril Hall, Stuck-up Inn, Hearth, Embers, Deer Lodge, Cypress, Fred Farr Forum, Red Farr Forum, Adkin, Merril Hall, Park Ranger Office, Woodside, Oak Shelter, Evergreen

Asilomar Math Conference Room Guide

- A** – North Woods (Toyon)
- B** – View Crescent (Curlew, Sanderling)
- C** – Merril Hall
- D** – Sea Galaxy (Nautilus East & West, Triton)
- E** – Fireside (Evergreen, Fred Farr, Klin)



- LEGEND**
- Information / Guest Check-In
 - Disabled Parking
 - EV Charging Station
 - Beverage Vending Machine
 - Ice Machine
 - Julia Morgan Historic Building
 - Roadway
 - Pedestrian Pathway
 - Outdoor Group Activity Area