

CMC-N Mathematics Conference *2017* **ASILOMAR**

www.cmc-math.org

California Mathematics Council

Northern Section • Asilomar 2017

Reflecting on 60 Years



**Diamond Jubilee: Celebrating 60 Years of Community,
Leadership and Innovation in Mathematics**

December 1-3, 2017

Asilomar Conference Grounds • Pacific Grove Middle School • Pacific Grove, CA

Download
this year's
app!

2017 CMC North Conference Going Mobile with EduPlus

E+eduplus
Connect Conferences in Education

Go to App Store or Google Play Market and search "eduplus" or simply scan the QR Code:

Available on the App Store

ANDROID APP ON Google play



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 over 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!



Rebecca Lewis, Conference Coordinator
Ana England, Program Chair
Julie Crozier, Registration
Heather Roman, Pacific Grove MS Coordinator
Grayson Fong, Pacific Grove MS Tech Coordinator

Thank You

TABLE OF CONTENTS

Conference and Speaker Evaluation (EduPlus mobile app)	2
Conference Planner (EduPlus mobile app).....	2
CMC-North "Thank you"	2
Program	3
Kick-off Mini-Conference.....	4
Keynote Sessions	5
Lunch Options.....	6
Ignite! and President's Party.....	7
Social Gatherings (CMC-C and CMC-N).....	7
T-shirt and Sweatshirt Sale.....	7
First Time at Asilomar?	8
Meal Tickets.....	8
CMC-North Officers and Conference Volunteers	8
Conference Information.....	8
Bus Service, Electronic Devices, College Credit, Conference Day Assistance, Exhibits, Disabled Services, First Time at Asilomar?, Lunch Options, Meal Tickets, Help Protect the Vegetation, Parking, Program Changes, Seating/Capacity, Session Types, T-shirt and Sweatshirt Sales, Walking Paths	
EduPlus mobile App.....	9
Matrix - Asilomar Grounds.....	10
CMC-North "Note of Gratitude"	11
How to Read the Matrix.....	11
Matrix - Pacific Grove Middle School.....	12
How to Read the Speaker List.....	14
Speaker List (alpha order).....	14
Sessions at a Glance.....	33
Exhibits.....	38
Exhibits Table Map.....	39
Award Nominations/Finalists.....	40
Call for 2018 Speaker Proposals.....	41
Certificate of Attendance	41
Tax Deductible Contribution.....	41
CMC State and North Board Members	42
Calendar of Events for 2018	42
Affiliated Groups.....	42
In Memoriam.....	43
The Lurie Center Scholarship.....	43
Continuing Education Units.....	45
Mini-Grant Guidelines, Application, Information.....	46
Pacific Grove and Pacific Grove Middle School Maps.....	47
Asilomar Conference Grounds Map.....	48

Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>.

Be sure to visit <http://event.confplusapp.com/cmcn17/> to get a preview of the EduPlus features. Search sessions, create your own schedule, get notifications and evaluate sessions. (More information on page 9.)

Evaluate the conference by December 31, 2017 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 Ginger Kelley and Michelle Hale.



Speaker	Topic	Grade Level	Room
Ani, Karim	Lesson Modeling, Mathalicious	8-12	Nautilus East
Asturias, Harold	Maker Projects: Activating Students' Agency, Authority, and Identity	6-8	Evergreen
Baker, Elizabeth	Student Teamwork Strategies	6-8	Oak Shelter
Chappill, Shalek	Superhero Math Style	PK-2	Toyon
Luberoff, Eli	Designing Effective Digital Activities	8-12	Heather
Phillips, Perrin	Launching Math Workshop in Your Classroom	3-5	Acacia
Shore, Chris	The Clothesline Grows Up: Functions on the Number Line	8-12	Nautilus West

(Session descriptions on page 4.)

PROGRAM

	Time	Event	Location
Friday	3:00-7:00pm	Registration and bag pick up (Mini Conference participants can pick-up their bags at 12:30pm)	Surf & Sand, Asilomar
	4:00-6:00pm	Newcomers' Session (20 minute repeating presentations)	Triton, Asilomar
	6:00-7:00pm	Dinner	Dining Hall, Asilomar
	6:00-7:30pm	Exhibits (materials for purchase and bag pick-up)	Gym, Pacific Grove MS
	6:00-7:30pm	Bag Pick-up	Pacific Grove MS
	7:30-9:00pm	KEYNOTE SESSION: (information on page 5) Dr. Jo Boaler — Teaching Mindset Mathematics Through Open, Creative Mathematics and Brain Science Messages	Auditorium, Pacific Grove MS
Saturday	7:00-8:15am	Breakfast	Dining Hall, Asilomar
	7:30am-12:00pm	Registration and bag pick-up (Bag pick-up only at PGMS until 11:30am)	Surf & Sand, Asilomar
	7:45-9:00am	Newcomers' Session (20 minute repeating presentations)	Triton, Asilomar Pacific Grove MS, Rm 6
	7:30am-4:30pm	Exhibits (materials for purchase)	Gym, Pacific Grove MS
	8:00am-12:00pm	Sessions (matrix begins on page 10, speaker section begins on page 14)	
	12:00-1:30pm	Lunch (refer to page 6)	Dining Hall, Asilomar
	8:00am-5:00pm	CMC Community Hub	Afterglow, Asilomar
	1:30-5:00pm	Sessions (matrix begins on page 10, speaker section begins on page 14)	
	3:00pm	Drawing	Gym, Pacific Grove MS
	5:15-6:00pm	CMC-N Affiliate Gathering	Fred Farr, Asilomar
6:00-7:00pm	Dinner	Dining Hall, Asilomar	
7:30-10:00pm	Ignite! and President's Party Everyone Welcome!	Merrill Hall, Asilomar	
Sunday	7:30-9:00am	Breakfast (pick-up box lunch)	Dining Hall, Asilomar
	8:00-8:45am	CMC-N Membership Meeting	Surf & Sand
	9:00-10:15am	MORNING KEYNOTE SESSION: Harold Asturias — CMC Leadership: Sixty Years of Taking Responsibility for What Matters!	Merrill Hall, Asilomar
	10:15-10:45am	Coffee Break	
	10:45am - Noon	MID-MORNING KEYNOTE SESSION: Dr. Alan Schoenfeld — What have we learned over the past 60 years, and where might we be going?	Merrill Hall, Asilomar

KICK-OFF MINI-CONFERENCE

Pre-registration required.

FRIDAY — ASILOMAR
1:30 - 4:30

Ani, Karim — Mathalicious

Lesson Modeling, Mathalicious

Let's roll up our sleeves and do some math. As a group, we'll explore two lessons in their entirety and debate interesting real-world questions. Attendees will choose the topics. Options will include: Does Facebook leave us more or less connected? Should baseball stadiums be standardized? Is it fair to tip as a percent? What are some pros and cons of increasing the minimum wage? Why haven't humans gone extinct?

8-12 | INT | 16 | Nautilus East

Asturias, Harold — Honorable Past President, Univ. of California, Berkeley

Maker Projects: Activating Students' Agency, Authority, and Identity

How can we activate students' interest and curious minds in ways that ignite persistent engagement in science, technology, engineering, and mathematics learning, inquiry, and innovation? How do Maker projects and lesson study promote a deeper understanding of the role that students' mathematical agency, authority, and identity (AAI) play in the classroom? Learn how we've been working with K-8 teachers to connect Maker projects with formal mathematics lessons. Also, we will discuss how to create powerful mathematics classrooms where students develop robust understanding of the concepts they are learning and the academic language to communicate their reasoning.

Co-presenter: Emma Trevino Carmen Whitman

6-8 | INT | 5 | Evergreen

Baker, Elizabeth — Teacher/Coach, Zane MS

Student Teamwork Strategies

Anyone can put students in groups, but how do we get them to focus on the math instead of each other? Motivation, organization, accountability, and specific strategies can all be used to increase mathematical discourse and reduce the distractions inherent in group work. We will model the components of an effective group work lesson and take some time to tailor them to participants' individual teaching environments. Gather resources and experiences at the conference to deploy on Monday!

6-8 | INT | 4 | Oak Shelter | BT

Chappill, Shalek — Educational Consultant

Superhero Math Style

In this workshop, teachers will learn how to use the superhero movement to engage in STEAM ideas and positive social emotional thinking. Teachers will gain techniques on how to create a project-based learning lesson using design challenge steps, 21st Century thinking and hands-on math activities. Empower students to become creative "lil' heroes."

PK-2 | INT | 8 | Toyon | BT

Luberoff, Eli — Desmos, Inc.

Designing Effective Digital Activities

The digital medium brings new power and affordances to lesson design. It also brings new constraints. In this session, we'll begin by taking a survey of the wealth of free technology for building digital activities—from Google Docs and Forms to Nearpod, Peardeck, Socrative, Kahoot, and Desmos Activity Builder. We'll look at the design principles for building effective digital activities, and will then apply them while designing and building activities in groups.

8-12 | INT | 3 | Heather | BT

Phillips, Perrin

Launching Math Workshop in Your Classroom

How can we give students the opportunity to practice explaining their thinking every day? Through Math Workshop, students work collaboratively, shift the classroom culture, while allowing students to go deeper with the Common Core Matrix of Word Problems. Come and learn how to launch Math Workshop, step by step. Using a practical, student centered approach, participants will apply what they already know from Writer's Workshop to Math Workshop!

3-5 | PRS | 7 | Acacia

Shore, Chris — Math Coach, The Math Projects Journal

The Clothesline Grows Up: Functions on the Number Line

The Clothesline is popularly being used to teach conceptual understanding of algebraic expressions and equations, geometric relationships and statistics. Now experience functions like you never have... on an open number line. Learn how this manipulable tool reveals to students the critical aspects of successfully evaluating and graphing functions. clotheslinemath.com

8-12 | INT | 17 | Nautilus West | BT

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.



Available during the conference at Merrill Hall, Fred Farr and Curlew on Friday and Saturday.

tea and coffee



BUS SERVICE will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 5:30 - 9:30pm and Saturday from 7:15am - 6:00pm.

California Mathematics Council

Northern Section Conference at Asilomar

Keynote Speakers



Dr. Jo Boaler

Friday Evening, December 1 • 7:30 – 9:00 pm in the PGMS Auditorium

“Teaching Mindset Mathematics Through Open, Creative Mathematics and Brain Science Messages”

We are in the midst of a revolution, in the science of the brain and learning. New knowledge from brain science is showing a clear path for mathematics learning, that is both exciting and inspiring for teachers. In recent years scientific studies have also demonstrated that student and teacher ‘mindsets’ have a profound impact on learning. So what does mathematics teaching look like when it takes account of brain science and mindset research? It is open, creative, visual and it encourages brain connections through multi-modal representations of knowledge. In this session we will think about ways to teach mindset mathematics, K-16, and look at videos of students who have learned in these ways. We will consider what mathematics can be and look like when it is open, creative and beautiful.



Harold Asturias

Sunday Morning, December 3 • 9:00 – 10:15 am at Asilomar, Merrill Hall

“CMC Leadership: Sixty Years of Taking Responsibility for What Matters!”

We believe that all students have the capacity to become mathematically competent and confident when provided a rigorous and challenging mathematical program supported by high expectations. It is with this belief that we create opportunities for teachers to learn from and with each other how to create a coherent learning experience for each and everyone of their students. In this session we will take a journey down memory lane to highlight the major events that have contributed to our building community, exercising leadership, and embracing innovation to make this possible.



Dr. Alan Schoenfeld

Sunday Morning, December 3 • 10:45 – noon at Asilomar, Merrill Hall

“What have we learned over the past 60 years, and where might we be going? A biased history and a view of what counts in mathematics teaching and learning”

I went to school in the prehistoric era, then witnessed the new math, back to basics, problem solving, the standards, math wars, common core... Is there progress? You bet! We now know what to do to create powerful learning environments, a.k.a. “Teaching for Robust Understanding,” and my goal is to get us all there.

Featured Speakers



Marilyn Burns
Lessons learned from classroom teaching.



Patrick Callahan
AP mathematical modeling? This changes everything.



Phil Daro
AP mathematical modeling? This changes everything.



Zachary Champagne
Learning to listen through rich mathematical tasks.



Mona Toncheff
Building a student-centered classroom.



Christopher Danielson
From counting to calculus: all students are mathematicians



Scott Farrand
Anticipate the coolness of math.



Michael Fenton
Applying the five practices to visual patterns.



Annie Fetter
Think, Talk, Write, & Type Math: The Problem Solving Process".



David Foster
Remembering 44 of the 60 years of CMC at Asilomar



Michael Flynn
Using robotics to engage students in mathematical practices.



Linda Gojak
Linking teaching practices and visible learning



Grace Kelemanik
Using routine rehearsals to transform teaching practices.



Steve Leinwand
Math homework: it's time for a major overhaul.



Eli Luberoff
Technology that thinks with students, not for students.



Dan Meyer
Full stack lessons.



Judit Moschkovich
Mathematics, the common core, and language.



Ruth Parker
Transforming math classrooms: a deep drive into number talks.



Chris Shore
Teaching the forgotten 4th C: creativity in the math class.

California Mathematics Council

Northern Section • Asilomar 2017

Reflecting on 60 Years



Megan Taylor
From Tsuruda to Sicherman (v.6.0): old school v. new school.

Social Gatherings

What's a better way to get to know more about local CMC Affiliates than to mingle and network with other people from the affiliate groups?

CMC-North affiliates will be having a social gathering Saturday in Fred Farr from 5:15-6:00pm with appetizers and beverages. Come find out more about each affiliate in our section and how to stay connected with other math educators in your local area!

Saturday, 5:15 - 6:00 | Asilomar, Fred Farr

CMC-North Local Affiliate Groups

- Math Council of California's Far North, CMCFN
- Mt Lassen Math Council, MLMC
- Northern Nevada Math Council, NNMC
- Sonoma County Math Council, SCMC
- Sacramento Area Math Educators, SAME
- Math Educators of Solano County, MESC
- San Francisco Math Teachers Association, SFMTA
- Alameda Contra Costa County Math Educators, AC3ME
- Santa Clara Valley Math Association, SCVMA
- Monterey Bay Counties Math Educators, MBMC
- Council of Math & Science Educators of San Mateo County, CMSESMC



Ignite! (Rebecca Lewis, emcee), and President's Party

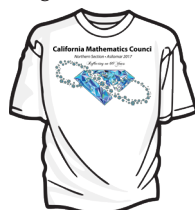
Come join us at our President's Party, sponsored by Texas Instruments (appetizers and no-host bar), and the final Ignite! session produced by the Math Forum at NCTM. What is Ignite? This fast-paced, fun, thought-provoking, high-energy series of 5-minute talks with 20 self-advancing slides by people with the guts to get onstage and talk about something they are passionate about! We are especially excited about having Larry Hawkinson get us started with a 'Quickie'. Larry has attended every single one of the 60 CMC-N Mathematics Conferences at Asilomar!

Co-presenters: Harold Asturias, Peg Cagle, Federico Chialvo, Annie Fetter, Jamie Garner, Arjan Khalsa, Steve Leinwand, Kimberly Morrow-Leong, LaMar Queen, Lora Saarnio

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

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

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.



Come by the **CMC Community Hub** to learn more about your local affiliate, talk with others about what your learning at the conference, and take your selfies or group photos in front of the CMC Media Wall.

And don't forget to drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of the three conferences!

Find your way around CMC **Scavenger Hunt** by completing the tasks below to be considered for the drawing for a \$250 voucher for any of the three CMC conferences.

Name: _____

Email: _____

1. Talk with a newcomer and get their signature.

2. Connect with any CMC officer and get their name and signature.

3. Introduce yourself to a person you do not know in one of your sessions and get their signature.

4. Look at the CMC map and write down your local affiliate.

5. Take a selfie or group photo with the CMC media wall and picture frame in the HUB located in Hearth.

6. Make a post to social media about something you are excited about learning at the conference. Tag us @camathcouncil and #cmcmath

7. Take a selfie with one of the speakers.

8. What have you learned about CMC that you did not know before?

Before turning in the **Scavenger Hunt**, show your selfies and social media posts to someone in the Hub to verify completion. We will email the winner!

Saturday, 8:00 - 5:00 | Asilomar, Afterglow

CMC-NORTH OFFICERS

President	Rebecca Lewis
President Elect	Rita Nutsch
Vice President	Ana England
Treasurer	Brian Lim
Secretary	Alison Nash

CONFERENCE VOLUNTEERS

Program Chair

Ana England

Program Committee

Stephanie Biagetti, Hope Bjerke
Krista McAtee, Monica Rock
J. Orellana, Johnnie Wilson

Evaluations

Linda Flood

Conference Evaluations

Rebecca Hubbell

Registration

Julie Crozier

Exhibits

Chris Tsuji, Mark Mosheim

NCTM Sales

Mary Ann Sheridan

NCTM Representatives and Sales

Mary Ann Sheridan

Mini Grant Awards

FaraLee Wright

Pre-Service Volunteers

Sarah Ives, Brennan Brockbank

Asilomar Presiders

Robert Preston

Conference Signs

Julia Stephens

Information Booth

Christine Robles

Equipment

Chris Dell

Equipment Committee

Paul Juarez, Geoff Kent, Christopher Hill

Newcomers' Orientation

Sherry Rodgers, Linda Shumate

Program Logo and T-shirt Design

Chasity Konu

Conference Program

Connie Anderson

Social Media Chair

Brandon Dorman

Middle School Coordinator

Heather Roman

Middle School Tech Coordinator

Grayson Fong

Onsite Registration

Jan Simutis, Kate Reed

Historian

April Goodman-Orcutt

CONFERENCE INFORMATION

Sessions

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

Presentations (PRS)

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

Interactive Sessions (INT)

Provide for discussion and exploration.

Participants will be involved in activities and interaction with others.

Make-It, Take-It (MITI)

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

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 11-13) for the seating capacity of each room. All seats are available on a first-come, first-served basis.

First Time at Asilomar?

Come to Triton, Friday between 4:00 and 6:00pm; or Saturday between 7:30 and 9:00am and PGMS, Room 6, 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, PGMS, 6:00 - 7:30pm

Saturday, PGMS, 7:30am - 4:30pm

Parking

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

Disabled Services

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

Bus Service

Bus service will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 5:30-9:30pm and on Saturday from 7:15am - 6:00pm.

Electronic devices

Out of respect for presenters and other participants, please silence or 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 Merrill Hall, Fred Farr and Curlew on Friday and Saturday. Water will be in all the rooms on the grounds.

Lunch Options

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

Meal Tickets

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

T-shirt and Sweatshirt Sales

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

Walking

It is one mile from Asilomar to Pacific Grove Middle School. A map of this area of Pacific Grove is provided on page 47.

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 like 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.



Be sure to rate the sessions you attend using the **EduPlus app**.

CMC North Conference 2017 Mobile App


2017 CMC North Conference Going Mobile with EduPlus




Connect Conferences in Education

Go to App Store or Google Play Market and search "eduplus" or simply scan the QR Code:

Available on the App Store



ANDROID APP ON Google play



We have created a **conference app** that will allow you to use your smartphone or table onsite to easily:

- access session details and create a personal schedule
- rate and take notes on sessions
- view speaker bios
- see other attendees at the event who are using the app (and connect with them via email)
- access sponsor and exhibitor details
- receive new alerts
- view map of the exhibit hall layout
- post tweets via Twitter – **@CAMathCouncil #cmcmath** and visit the CMC – California Mathematics Council's Facebook page directly!

Download the EduPlus app!

Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>

Be sure to visit <http://event.confplusapp.com/cmcn17/> to get a preview of the EduPlus features.

Evaluate the conference by December 31, 2017 and you will be entered in a drawing for FREE conference registration and on grounds housing for next year.



CALIFORNIA MATHEMATICS COUNCIL

how to use twitter

Social Media

Hashtag CMC MATH

@CAMathCouncil

Stay connected with CMC



www.facebook.com/CAMathCouncil



[@CAMathCouncil](https://twitter.com/CAMathCouncil)



Connect to the best faculty lounge around.

If you don't already have a Twitter account, consider signing up for one. There is a thriving community of mathematics educators engaging in conversations that you might enjoy and could benefit from your contributions.

Keep your eye on the hashtag #cmcmath before, during, and after the conference to see what people are talking about and keep up with any announcements or special events. Stay connected to our math world through Twitter!



Join the conversation. Share some of the great things you do in your classroom and learn what others do in theirs. Keep the discussions you start here going long after the conference is over and the tweets have been posted.



Not ready to jump in? It's okay to just watch and listen in. There is a lot to consider and learn from the conversations and chats happening all the time. Read as much or as little as you like. It's ok.



Connect to others attending the conference. Grow your personal network by following presenters and the people you meet during the conference. Teaching is complex and we can do so much better together.



To get started:

1. Create an account.
2. Follow some people (We suggest @camathcouncil).
3. Check twitter.
4. Make some awesome new friends.

Max will tell you more: <http://bit.ly/tweetmemaybe>



@camathcouncil

ASILOMAR CONFERENCE GROUNDS—SATURDAY SESSIONS

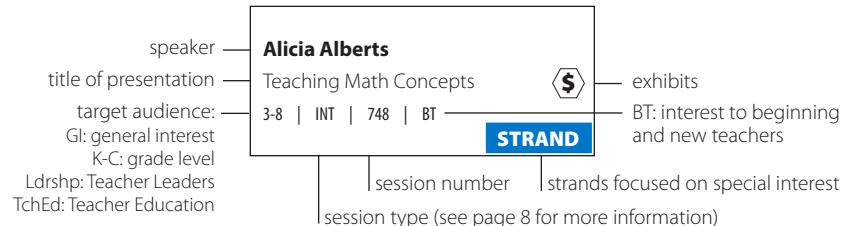
Facility	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
Chapel	Seats 198 Judit Moschkovich Mathematics, the Common Core, and Language GI PRS 100 TODOS	Marilyn Burns Lessons Learned from Classroom Teaching GI PRS 200 BT	David Foster Remembering 44 of the 60 Years of CMC at Asilomar GI PRS 300 BT	Ruth Parker Transforming Math Classrooms: A Deep Dive Into Number Talks 6-8 INT 400	Steven Leinwand Math Homework: It's Time for a Major Overhaul GI PRS 500 BT
	Fred Farr Seats 80 Scott Farrand Anticipate the Coolness of Math 8-12 PRS 101 BT	Christopher Danielson From Counting to Calculus: All Students Are Mathematicians GI INT 201 BT	Michael Fenton Applying the Five Practices to Visual Patterns 6-8 INT 301 BT	Chris Shore Teaching the Forgotten 4th C: Creativity in the Math Class 8-12 INT 401 BT	Mona Toncheff Building a Student-Centered Classroom 8-12 INT 501 BT
FIRESIDE	Kiln Seats 54 Megan Taylor Math Teaching As an Act of Social Justice 8-12 INT 102 BT	Christen Schwartz "New" Math in CCSS-M: This Isn't the Way I Learned It! 3-8 INT 202 BT	Sean Nank How Do I Adapt a Growth Mindset in My Assessments? 8-12 PRS 302 BT	Cathy Humphreys Kindling Students' Mathematical Agency Through Number Talks GI PRS 402 BT	Jeanne Ramos Developing Students Algebraic Thinking & Academic Language 6-8 INT 502 BT TODOS
	Oak Shelter Seats 32 Allison Krasnow Fostering Discourse & Reasoning with Desmos Activity Builder 6-8 INT 104 BT	Lori Lambertson Size and Scale of Earth and Moon with Exploratorium "Snacks" 8-12 INT 204 BT	Katie Waddle Getting the Most Out of a Test 8-12 INT 304 BT	Mia Buljan Practical Strategies for Powerful Explanations PK-5 INT 404 BT	Federico Chialvo Authentic Mathematics: For the Love of Mathematics 3-8 INT 504 BT
	Evergreen Seats 32 Crista Leamons Capture and Communicate: Granting Student Voice with Tech PK-2 INT 105 BT	Eric Frandsen Do You Know it When You See it? Rigorous Math Implementation Ldrshp PRS 205	Robert Preston Empowering Educators: Coaching 101 Ldrshp PRS 305	Sandie Gilliam Growth Mindset and the Value of Mistakes in Learning 6-8 INT 405 BT	Ann Carlyle K-2 Number Talks with Number Lines PK-2 INT 505 BT
NORTH WOODS	Heather Seats 60 Peg Cagle Purposely Leveraging Community (PLC): To Go From Good to Great GI PRS 103 BT	Karim Ani Math as the New Civics (aka: Teach Math, Save Country) 8-12 INT 203 BT	Elsa Medina Fun with Algebraic Thinking 8-12 INT 303 BT	Johnnie Wilson Working Word Problems: Focus on Problem Solving/Communication 3-5 PRS 403 BT	Jenny Wales Workshop: How to Design Great Digital Activities 8-12 PRS 503
	Scripps Seats 33 Jennifer Hein deMause Reaching SPED Students Through Concept Progressions PK-5 INT 106 BT	John Hayden Grading For Growth In Mathematics 8-12 PRS 206 BT	Toni Echaves ELD Strategies Are Not Just for ELD Time! PK-2 PRS 306 BT	Marcy Cook Seeing & Understanding Before Memorizing: Basics & Beyond 3-5 PRS 406 BT	Farshid Safi Mathematical Sense Making Through Purposeful Technology Use 8-12 INT 506 BT
	Acacia Seats 24 Julie Joseph Building Fraction Understanding Through Number Talks 3-8 INT 107 BT	Darlene Fish Doto Counting and Number Sense PK-5 INT 207 BT	Stuart Moskowitz TI84 Art Project: A Creative Test Alternative for Algebra 8-12 INT 307 BT	Ivan Cheng Transforming How To Teach Transformations 8-12 INT 407 BT	Ivan Cheng How to Desmo-fy Your Math Lessons to Guide Student Discovery 8-12 PRS 507 BT
	Toyon Seats 24 Ellen Edmonds Pose Planned, Intentional Questions to Get Students Talking GI INT 108 BT	Kathy Bradley Math and Language; not Math or Language 3-8 INT 208 BT	Ann Trescott You've Got the Data: Now What? 6-8 INT 308 BT	Virginia Bastable Support Math Argument by Linking Arithmetic to Algebra (K-8) 3-5 INT 408 BT	Brandolyn Patterson Developing Global Competency in Mathematics 6-8 INT 508 BT
VIEW CRESCENT	Marlin Seats 34 Rayshell Fambrough Tech Tools for Conceptual Understanding 3-8 INT 109 BT	Sally Carter Empowering Students in a TRU Math Classroom PK-5 PRS 209 BT	Mardi Gale Coaching/Being Coached for the SMPs: Essential Elements GI PRS 309 BT	Lizzy Hull Barnes Building Teacher Leadership with Video Based Discussion Ldrshp INT 409	Lew Douglas A Transformational Approach to Congruence Proofs in Geometry 8-12 PRS 509
	Curlew Seats 34 Solana Lee Capturing Mathematical Thinking in the Elementary Grades PK-5 PRS 110 BT	Elizabeth DeCarli Doing Math with Teachers: PD to Transform Instruction 8-12 INT 210	Elizabeth Svensson Connecting Math to Sustainability for All Kinds of Learners 6-8 INT 310 BT	Chuck Biehl The Facility Location Problem: Modeling in Algebra and Precalculus 8-12 INT 410 BT	Karl Schaffer Let's Get Loopy with Geometry GI INT 510 BT
	Sanderling Seats 24 Cory Henwood Experience Digitally Enhanced 3 Act Math Tasks GI INT 111 BT	Josh Curtiss Seductive Mathematics 6-8 INT 211 BT	Heather Clark Mindful of Math 3-5 PRS 311 BT	Jessica Balli Assessments That Capture Evidence of More Than Just Skills 6-8 PRS 411 BT	Margaret Sullivan Rigor 4 All: Examining How to Unite Access and Rigor 8-12 INT 511 BT

Be sure to rate the sessions you attend using the **EduPlus app**.

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
DOLPHIN	Dolphin Seats 24	Kimberly Seashore Beyond Tacos: Culturally Responsive Math for Teachers Tchr Ed INT 112 BT	Jordan Johnson It's Not About the Grades: Teaching Without Scores GI PRS 212 BT	Javier Garcia Mathematics and the Art of Storytelling GI PRS 312 BT	David Reeves Transforming with Tessellations: Math Meets Technology & Art 8-12 INT 412 BT	Joanne Rossi Becker New 12th Grade Course in Mathematical Modeling 8-12 INT 512 BT
	Triton Seats 24	Sherry Rodgers Newcomers' Session GI PRS 115	Megan Sulsberger The STEM Rubric: A Tool for Pre-Service Teacher Preparation Tchr Ed PRS 215 CAMTE	Patrice Waller Ensuring College Readiness for All 8-12 INT 315 BT CAMTE	Julie McNamara Blast from the Past: Return of the Tug of War 3-8 INT 415 BT	Joi Spencer CAMTE Business Meeting Tchr Ed PRS 515 CAMTE
SEA GALAXY	Nautilus E Seats 24	Elmano Costa Powerful Math for ELs: It Only Takes a Change in Mindset! PK-5 INT 116 BT	Virginia Bastable Using Contexts to Examine Division: Whole to Fractions K-8 INT 216	Arjan Khalsa 1 to 1 Million: Number Sense Progressions PK-5 INT 316 BT	Jorgen Berglund Making Sense of the Standard Long Division Algorithm 3-8 INT 416 BT	Barbara Novelli Making the M in STEM Powerful and Meaningful Mathematics PK-5 INT 516 BT
	Nautilus W Seats 24	Ho Nguyen Strengths-Based Coaching to Support Deep Learning for Equity Ldrshp PRS 117	Marin Rodriguez Using Games and Toys to Build Number Sense 6-8 MITI 217 BT	Michael Ruibal Engaging High Needs Learners with Communication Strategies 8-12 INT 317 BT	Dennis Mulhearn My Favorite Contest Problems Are for All Students 3-8 INT 417 BT	Sara Moore I Don't Get What They Want Me to Do! 6-8 PRS 517 BT
MERRILL H.	Merrill Hall Seats 500	Zachary Champagne Learning to Listen Through Rich Mathematical Tasks PK-2 INT 118 BT	Grace Kelemanik Using Routine Rehearsals to Transform Teaching Practices GI PRS 218	Annie Fetter Think, Talk, Write, & Type Math: The Problem Solving Process 3-8 PRS 318 BT	Eli Luberoff Technology That Thinks WITH Students, Not FOR Students 8-12 PRS 418 BT	Linda Gojak Linking Teaching Practices and Visible Learning GI 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.



~ 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.

Be sure to rate the sessions you attend using the **EduPlus app**.

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 a warm welcome, an introduction, and a hearty thank you at the end of each session. Presiders are the ones that keep 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!

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 1 Seats 30	Patty Morrison Using Literature to Engage PreK-1 Student Understanding PK-2 PRS 131 BT	Emma Trevino Student Discourse in Mathematics: What Are They Thinking? 3-8 INT 231	Shannon Hoos Calculated Risk: Building Community in Middle School 6-8 INT 331 BT	Carolyn Gray Renewable Energy House: An interdisciplinary Project 8-12 INT 431 BT	Theodore Sagun Ratios & Proportions from Elementary to Algebra 6-8 INT 531 BT
Room 4 Seats 30	Ralph Connelly Making Sense of Number Sense 3-8 PRS 133 BT	Hardy Reyerson Sir Isaac Newton: The Man, the Mathematician, the Legend C PRS 233	Carol Langbort Spatial Visualization Activities: Tangrams and Pentominoes 3-5 INT 333 BT	Tom Beatini Want to Develop Math Power? Use High Level Tasks! 6-8 INT 433 BT	Vicki Vierra Build a Maths-Positive Culture: Support Great Maths Teaching GI INT 533 BT
Room 5 Seats 30	Laura LaBelle Building Measurement Lessons While Moving Full STEAM Ahead PK-5 PRS 134 BT	Mindy Fullerton Mixing It Up With Math: Blended Learning 3-8 INT 234 BT	David Chamberlain A Hands-on Approach to Applying The Distributive Property 3-8 INT 334 BT	Brandon Dorman Universal Design for Learning Strategies for All Teachers GI MITI 434 BT	Denis Lantsman Computer Science in the Math Classroom 8-12 INT 534 BT
Room 6 Seats 30	Linda Shumate Newcomers' Session GI W 135 BT	Jody Anderson Using Children's Literature in Math to Ignite the Passion PK-2 INT 235 BT	James Schierer Seniors Financially Literate for Today and Tomorrow 8-12 PRS 335 BT	Rhonda McEntee Sparking Deeper Understanding Through Real-World Problems 3-5 INT 435 BT	Andres Marti Strategic Use of Technology Tools for Statistics in Algebra 8-12 INT 535 BT
Room 7 Seats 30	Dianne Willson Strategies for Student Discourse 3-8 INT 136 BT	Breedeen Pickford-Murray High Tech, Low Tech: Striking the Balance GI PRS 236	Gail Burrill Functions: What Makes Them So Difficult? 8-12 INT 336 BT	Yana Mohanty Spatial Reasoning: Hands-on Volume and Surface Area Lessons 6-8 INT 436 BT	Nancy Meier Number Talks for Struggling Students PK-5 INT 536 BT
Room 13 Seats 30	Gary Eisenberg Singing, Dancing, and Playing Through K-3 Mathematics PK-2 INT 140 BT	Howard Alcosser AP Calculus: My Favorite Class! 8-12 PRS 240 BT	Nick Vacca The Journey to Providing Equitable Access to Equations 6-8 INT 340 BT	Joan Commons Fraction Division: 4 Meanings and "Why the Reciprocal?" 3-8 INT 440 BT	David Lau Discrete Mathematics: Combinatorics 8-12 PRS 540 BT
Room 21 Seats 30	Seth Dow Teaching Statistics Using R 8-12 INT 141			Tim Erickson Data Science Games 8-12 INT 441 BT	
Room 22 Seats 30	Kristen Acosta The Initial Hook of a Math Journey PK-2 INT 142 BT	Allen von Pallandt Creating a Collaborative Math Classroom 8-12 INT 242 BT	Brittany Jones Spice Up Math Time! PK-2 PRS 342 BT	Wade Ellis Developing Flexibility in Solving Linear Equations 6-8 INT 442 BT	Avery Pickford First Days of School: Blending Classroom Culture and Content 8-12 INT 542
Room 23 Seats 30	Jillian Green Fostering Inquiry and Independence in the Math Classroom 8-12 PRS 158 BT	Jamie Garner Fluency: Facts or Fiction? PK-5 INT 258 BT	John Kanemoto Differentiation 101 GI INT 358 BT	Masha Albrecht Students as Decision Makers: Activities for Social Justice 8-12 INT 458 BT	Mary Elizabeth Matthews Probability and Statistics: The Middle Grades Connection 6-8 PRS 558 BT
Room 24 Seats 30	Lori Goebel Creating a Mathematician's Mindset 3-5 INT 143 BT	Scott Farrar The Wrong Answers of Khan Academy and How to Use Them 8-12 PRS 243 BT	Lora Saarnio Mathematical Mini-Universes PK-2 INT 343 BT	Ethan Weker How to Have Effective Math Debates Using Technology 8-12 INT 443 BT	Mike Blaschke Engage & Assess Understanding with Desmos Activities 6-8 INT 543 BT
Room 25 Seats 30	Jennifer Hagman Why Do Students Struggle? The Matter of Units 6-8 INT 144 BT	Tom Reardon Discover Transformational Geometry in 15 Seconds 8-12 INT 244 BT	Diane Resek Proof That Makes Sense to Students 8-12 INT 344 BT	Marisa Aoki Number Sense in the Secondary Classroom 6-8 PRS 444 BT	Emiliano Gomez Let's Do Some Beautiful Math Problems 8-12 INT 544 BT
Room 26 Seats 30	Craig Willmore Celebrating Conceptual Math and Engaging Games 3-5 INT 145 BT	Tracy Sola Growing a Mathematical Community in Primary Classrooms PK-2 INT 245 BT	Cecilio Dimas Reasoning About Proportional Reasoning 6-8 INT 345 BT	Elizabeth Statmore Creating a Culture of Exploratory Talk 8-12 INT 445 BT	Becky Bob-Waksberg Select and Sequence: Empower Students Through Discourse 6-8 INT 545

Be sure to rate the sessions you attend using the **EduPlus app**.

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 27 Seats 30	Mary Katayama Increase Mathematical Thinking Through Talking and Writing PK-2 INT 146 BT	Christine Newell Building Mathematical Language & Precision Through Routines 3-8 INT 246 BT	Martin Bonsangue Full STEAM Ahead: Blending Art, Geometry, and Number Theory 3-8 MITI 346 BT	Judith Kysch Balancing Core Practices and Core Content and Time 8-12 INT 446 BT	Denise McDowell Eye the Prize PK-2 MITI 546 BT
Room 28 Seats 30	Martin Joyce Cooperative Learning Strategies 6-8 INT 147 BT	Greisy Winicki Landman PWWx2: Proofs Without Words + Ponder, Wonder and Write 8-12 INT 247 BT	Tyler Auer Classifying and Writing Story Problems PK-5 INT 347 BT	Henri Picciotto Geometric Puzzles in the Classroom GI INT 447 BT	Karen Arth Empowering Students to Make Mathematical Connections 8-12 INT 547 BT
Room 29 Seats 30	Suzanne Damm Enhancing Mathematical Practices in the Classroom 3-5 INT 148 BT	Diana Zaragoza GAMES+TASKS=LEARNING +ASSESSMENT: A Balanced Approach to Math PK-2 INT 248 BT	Chase Orton Storming the Ivory Tower: Bringing Calculus to All GI INT 348 BT	Anna Blinsein Beyond Showing Work: Bring Students' Thinking to the Front 8-12 INT 448 BT	Jamie Holmes Amp Up Engagement Through Projects & Math-tivities 6-8 INT 548 BT
Room 32 Seats 30	Craig Schneider Structure and Repeated Reasoning: Growing Student Thinking GI INT 150 BT	Kelli Wasserman Is the Unit Always 1? Nope! PK-5 INT 250 BT	Angela Knotts Building Algebra: Laying Powerful Foundations 3-5 INT 350 BT	Gail Standiford Catapults, Captured Royalty and Desmos 8-12 INT 450 BT	Michael Stern Math Steeplechase! 3-8 INT 550 BT
Room 33 Seats 30	Laurie Boswell Hanging Out On a Number Line: You're on the Spot! 3-5 INT 151 BT	Hallie Foster I've Got Problems 8-12 INT 251 BT	Tierra Fender Collaborating to Disrupt Racialized Participation Patterns GI INT 351 BT	Yun Ji Chai How to Help EL Students Access Mathematical Text PK-5 W 451 BT	Barbie Buckner NASA's Scale of Discovery: Ratios, Conversions & Scale 6-8 MITI 551 BT
Room 36 Seats 30	LaMar Queen Music, Math, Rigor, Hip Hop, Excitement, and Empowerment 3-8 INT 154 BT	Andy Kotko Making Sense of Problem Solving in Grades 1-2 PK-2 INT 254 BT	Connie Horgan Curiosity and Collaboration: The Power of Divergent Problems 8-12 INT 354	Victor Selby Math as the Language of Science: Building the Great Models 8-12 PRS 454 BT	Derrall Garrison Engage Students in Math With Design Thinking: VR and Coding PK-5 INT 554 
Room 37 Seats 30	Zeke Kossover Surprising Strategies for Games that Use Probability 8-12 INT 155 BT	Elizabeth Curran Using Anchor Tasks to Ignite Learners 3-5 INT 255 BT	Maria McClain Maximizing Math Potential: Mastering Algebra X and Y 8-12 PRS 355 BT	Kathy Morris Fractions Are Numbers Too! 3-5 INT 455 BT	Carl Veater Making Decisions Mathematically: Real Mathematical Modeling 8-12 INT 555 BT
Room 38 Seats 30	Lauren McGrath Spiraled Assessment for Spiraled Learning 6-8 PRS 156 BT	Shelley Kriegler Linear Functions: Four Strategies to Spark Engagement GI INT 256 BT	Kathy Mitchell Beyond TENS & ONES: Developing Place Value Concepts PK-2 INT 356 BT	Agnes Tuska Teaching Heuristic Thinking 60 Years Ago and Now 8-12 INT 456 BT	Catherine White What Did You Say? Effective Classroom Discussion 3-8 INT 556 BT
Room 39 Seats 30	Talk Kim Success in Fractions 3-8 INT 157 BT	Kimberly Morrow-Leong Mining the Professional Power of the Student Work Clinic 3-8 INT 257	Laura Pesavento Routines! Routines! Routines! PK-2 PRS 357 BT	Kyndall Brown An African Mathematical Legacy: Culturally Relevant Pedagogy GI INT 457 BT	Jeanne Lazzarini Making Mathematical Sense Through Design Challenges 6-8 MITI 557 BT
Auditorium 700	Patrick Callahan AP Mathematical Modeling? This Changes Everything GI PRS 153 BT	Dan Meyer Full Stack Lessons GI PRS 253 BT	Mike Flynn Using Robotics to Engage Students in Mathematical Practices 8-12 PRS 353	Megan Taylor From Tsuruda to Sicherman (v 6.0): Old School v. New School 8-12 INT 453 BT	Nikki LaLonde Break the Cycle: Reframing Behaviors to Re-Engage Students in Learning Math 6-8 INT 553
Library Seats 49	Brigitte Lahme Maker Tasks for Mathematics: Make a Yardstick PK-5 MITI 160 BT	Donna Goldenstein Enriching the Geometry/ Measurement CCMS Content Through Art 3-5 MITI 260 BT	Chris Brownell HexaFlexagons: A Mathematical Curiosity & Joyous Depth GI MITI 360 BT	Tammy Schultz Exploring the Geometry of Islamic Tiles GI MITI 460 BT	Brian Miller The Pedagogy of Origami 8-12 MITI 560 BT

TODOS

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.

HOW TO READ SPEAKER LIST & SPEAKER EVALUATION


Acosta, Kristen — Math Teacher, Merlinda ES
The Initial Hook of a Math Journey

Two teachers set out to engage K–2 students, promote rich conversation, and instill a joy in learning math. Adapting routines from MTBoS, we prepare our students to be critical thinkers by making big connections and developing number sense. Placing the learning in their hands prepares our students to be problem solvers. Making sense of how numbers work and where they belong is our focus. We will explore our work with the clothesline and the inverted hundreds chart.

PK-2 | INT | 142 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 22 | BT
 Co-presenter: Stacy Zagurski — Kindergarten Teacher

Albrecht, Masha — Berkeley HS
Students as Decision Makers: Activities for Social Justice

One of the most powerful manifestations of social justice in an academic setting is student control over the intellectual content of a classroom. This is particularly important in a math classroom where mathematics is often described as a predetermined system of algorithms. Participants will engage in activities and assessments where students make and dispute their mathematical choices. All activities will match lessons the presenter has used successfully with students.

8-12 | INT | 458 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 23 | BT

Alcosser, Howard — Mr Calculus, Diamond Bar HS
AP Calculus: My Favorite Class!

Participants get innovative and motivational strategies for success in their AP Calculus class and in every classroom, review tips and tricks on building a successful AP Calculus program, explore ways to make their program and class exciting, and learn strategies to help ensure a deeper student engagement and success on the AP Calculus exam.

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

Anderson, Jody — Vice President, California Reading Assoc.
Using Children's Literature in Math to Ignite the Passion

If reading to your students is one of your passions join me to learn how to use Children's Literature in your Math lessons...see how reading *Deck the Walls*, *The Relatives Came*, *The Tortoise & the Hare* and many more titles, can enhance and expand your next concept lesson and ignite passion of reading in your students. We will explore how to use interactive writing to write math equations and story problems using the Language of Mathematics.

PK-2 | INT | 235 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 6 | BT

Be sure to rate the sessions you attend using the **EduPlus app**.

Ani, Karim — Mathalicious
Math as the New Civics (aka: Teach Math, Save Country)

Should the government increase the minimum wage? Are retailers taking advantage of consumers with fake deals? As a country, we seem increasingly unable to discuss the issues that affect our lives. Fortunately, math class is a place where students can learn to debate society's most pressing topics in a way that's rational, reasonable, and respectful. With civics no longer taught in many schools, math teachers can help students become the thoughtful citizens our democracy depends on.

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

Aoki, Marisa — Math Teacher, Fairmont ES
Number Sense in the Secondary Classroom

As math educators we often hear about the importance of building number sense with students, but how can we fit this into the secondary classroom where we often have less time with students and our content requirements have long since moved past simple operations? Come learn practical ways to embed number talks, estimation, and other sense-building number routines into what you are already doing—WITHOUT reinventing the wheel or adding an extra 15 minutes onto your lessons every day.

6-8 | PRS | 444 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 25 | BT

Arth, Karen — Reg. Coord./Math Coach, CPM Educational Prog.
Empowering Students to Make Mathematical Connections

Participate in activities that make connections between a pattern, table, graph and rule. Starting with a Silent Board Game, learn ways to help students move between each representation while developing a deep understanding of linear equations and a system of equations in the context of a word problem and to communicate that understanding both verbally and visually. Teachers will receive materials that they can use in their 8th grade, Algebra or Integrated 1 classrooms. SMP: 1, 2, 3, 4, 6 & 7

8-12 | INT | 547 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 28 | BT

Auer, Tyler — Saint Andrew's Episcopal School
Classifying and Writing Story Problems

In this interactive session we will dig into whole number story problems involving addition, subtraction, multiplication, and division. Participants will practice classifying and writing a variety of story problem types such as join, compare, separate, cartesian product, multiplicative compare and more. We will discuss the importance of using visual models to make sense of contexts and review the issues with teaching students to look for keywords.

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

Balli, Jessica — Math Teacher
Assessments That Capture Evidence of More Than Just Skills

Whether you're using a district mandated assessment or a test provided by a publisher, chances are these are painting a very narrow picture of what your students can do. With a critical lack of assessments on the market that really capture evidence of a student's ability to solve non-routine problems, write a mathematical argument, or model with mathematics, what choice do you have? Come learn how a teacher-lead assessment project is committed to solving this problem for schools and districts.

6-8 | PRS | 411 | Saturday, 1:30 - 3:00 | Asilomar, Sanderling | BT

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

Bastable, Virginia**Support Math Argument by Linking Arithmetic to Algebra (K-8)**

In this interactive session, we will discuss examples of students' reasoning as they articulate, represent, and justify generalizations about the operations in grades 2–7. We will also explore a teaching model describing a process teachers can use to support the development of such reasoning in their own classrooms. We will examine lesson sequences which were constructed to support such thinking. The lesson sequences are designed to be used 15–20 minutes two to three times a week.

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

Using Contexts to Examine Division: Whole to Fractions

We will explore various meanings of division and how they are exemplified through the use of story contexts, first with whole numbers and then consider modifications needed to work with fractions. We will examine the connections across the story situation, the number sentences and a variety of visual representations.

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

Beatini, Tom — Math Consultant, Union City Public Schools
Want to Develop Math Power? Use High Level Tasks!

Twenty-first century learning requires students to develop math power, make meaningful connections in mathematics, and thinking about the math instead of doing the math. Using real-world examples, let's explore some high-level tasks that pose purposeful questions and facilitate meaningful discourse while deepening an understanding of concepts and procedures. Take back to your classroom ready-to-use activities that promote reasoning and problem solving to empower your students.

6-8 | INT | 433 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 4 | BT

Berglund, Jorgen — Professor, CSU, Chico
Making Sense of the Standard Long Division Algorithm

There is a great deal of talk about having mathematics make sense to students. This requires students not only to use algorithms, but to explain why the algorithm works, giving meaning to the individual steps. In this session, we will work on doing just that for the standard long division algorithm. Starting with partitive and quotative views of division, base ten blocks, and alternative algorithms, we end up making sense of each of the steps in the standard long division algorithm.

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

Biehl, Chuck — Secondary Math Specialist
The Facility Location Problem: Modeling in Algebra and Precalculus

Where to build a new hospital, fast food restaurant, or nuclear waste dump? This activity combines systems of linear equations, coordinate geometry, construction, and a model called a Voronoi Diagram, to answer this question. Introduce as early as Algebra 1 and do in pieces over an extended time period; for Algebra 2 and precalculus, it can be a stand-alone modeling problem or project or a capstone activity for the embedded topics. The perfect activity for the question "What is this good for?"

8-12 | INT | 410 | Saturday, 1:30 - 3:00 | Asilomar, Curlew | BT



Available during the conference at Merrill Hall, Fred Farr and Curlew on Friday and Saturday.

Blaschke, Mike — MS Math/Science Teacher, Paradise Charter MS
Engage & Assess Understanding with Desmos Activities

How do you build greater student interest in grade-level math concepts? How do you provide students valuable feedback? In this session, teachers will be introduced to Desmos Classroom Activities. A lesson will demonstrate how to support grade-level standards, fully engage students, provide real-time formative assessment, and use devices to connect (not isolate) students. It is recommended that teachers bring their own device.

6-8 | INT | 543 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 24 | BT

Blinstein, Anna
Beyond Showing Work: Bring Students' Thinking to the Front

Student thinking should be at the forefront of ambitious math lessons, but bringing it out requires planning, classroom structures, teacher questioning, and assessments that are focused on this goal. Working in groups, we will go through a full lesson cycle and learn how to design a task, structure student conversations and class discussions, and give feedback in order to elicit and build on meaningful student thinking.

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

Bob-Waksberg, Becky — Park Day School
Select and Sequence: Empower Students Through Discourse

We will model how to facilitate low-floor high-ceiling tasks to optimize productive mathematical discussions in order for students to learn from each other through the practice of selecting and sequencing student work. Participants will experience a hands-on low-floor high-ceiling task where the presenters will model the process of selecting and sequencing. Then participants will practice the process of selecting and sequencing a set of student work in a small group.

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

Co-presenter: Genevieve Esmende — Math Teacher, Wangenheim MS

Bonsangue, Martin — Prof. of Mathematics, CSU, Fullerton
Full STEAM Ahead: Blending Art, Geometry, and Number Theory

This interactive session presents a mathematics lesson involving art, geometry, arithmetic, and even a little number theory. This lesson aims to strengthen student mathematical engagement using a blended lesson and to create links to mathematical topics in a way that promotes mathematical exploration. While appropriate for a variety of grade levels, this lesson may be particularly helpful for reaching the reluctant math learner. Classroom-ready handouts provided.

3-8 | MITI | 346 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 27 | BT

Co-presenter: Jennifer Clinkenbeard — Math Lecturer, CSU, Channel Islands

Boswell, Laurie — Big Ideas Math
Hanging Out On a Number Line: You're on the Spot!

Get up and move as you physically demonstrate your understanding of numbers, operations, and algebraic reasoning. This powerful workshop helps students see and feel position on a number line. Number sense and reasoning are needed to locate your spot. Answer the following: The endpoints are $\frac{3}{4}$ and $1\frac{3}{4}$. Where are you located if you are $1\frac{1}{3}$?

3-5 | INT | 151 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 33 | BT

Enter to win a free registration or free housing at next year's conference by downloading the **conference evaluation** at EduPlus app.



Bradley, Kathy — Math Content Specialist
Math and Language; not Math or Language

How can we support language learners to acquire and use academic language within a rigorous math classroom? We will do a math task with a lens on key math concepts and specific language requirements. We will model how to identify what language is necessary to understand the problem and what language is necessary to solve the problem. We will discuss approaches to support students linguistically to be successful mathematically. We will show how SMP #2 and SMP #6 inform instructional choices.

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

Co-presenter: Glenn Kenyon — Math Content Specialist

Brown, Kyndall — Exec. Director, California Mathematics Project
An African Mathematical Legacy: Culturally Relevant Pedagogy

This session will introduce participants to games and algorithms from Africa that help to build basic skills, conceptual understanding, and mathematical reasoning abilities.

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

Brownell, Chris — Assoc. Professor,
AIMS Center for Math & Science Education
HexaFlexagons: A Mathematical Curiosity & Joyous Depth

We will look into some of the geometric properties of how Flexagons are made, flex, and form "rotation" groups. Participants will create TriHexaFlexagons, HexaHexaFlexagons, but after some geometric exploration of the concepts of limits, Isosceles triangles, and equilateral triangles. This is a General Interest session, because it has something for all ages; including some seriously deep geometry.

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

Buckner, Barbie — NASA Armstrong Flight Research Center
NASA's Scale of Discovery: Ratios, Conversions & Scale

Come explore applications of ratios, fractions, and conversions with hands-on standards-aligned STEM activities. Engage with space and our universe as you apply scale to distance, time, and size. Learn how to apply fractions to our solar system while using unique NASA content to apply ratios and conversions while creating a scale model of the planets.

6-8 | MITI | 551 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 33 | BT

Co-presenter: Sue Nichols — Assistant Professor, Ohio Univ.

Buljan, Mia — SVMi
Practical Strategies for Powerful Explanations

Use student work and videos of a problem solving classroom for students of diverse language needs in a Title 1 school to deepen understanding of mathematical justification and learn high-leverage tools (student-centered rubrics and re-engagement lessons for both content and practice standards) to help move any student away from "I did it in my head", and toward powerful explanations. Students are the authors of sense-making and mathematical ideas in these high cognitive demand activities.

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

Co-presenter: Cecilio Dimas — Co-Executive Director,
 The Silicon Valley Mathematics Initiative

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

Burns, Marilyn — Founder of Math Solutions
Lessons Learned from Classroom Teaching

Number and Operations is the core of math instruction in the elementary grades, and learning to reason numerically is essential for students' success. Students often see the goal of math assignments to "do the page" instead of to "do the math." This session presents pedagogical suggestions that help students build understanding and skills while embracing the Mathematical Practices. Suggestions are illustrated by specific classroom examples.

GI | PRS | 200 | Saturday, 9:30 - 10:30 | Asilomar, Chapel | BT

Burrill, Gail
Functions: What Makes Them So Difficult?

Students struggle with functions in almost all contexts. How can we restructure our approach so students understand how to connect different representations of functions, think about functions in general terms and develop the functional thinking they will need in calculus?

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

Cagle, Peg — Reseda HS
Purposely Leveraging Community (PLC): To Go From Good to Great

One hallmark of professions is the role of community in defining and facilitating excellence in the work of the discipline. Explore ways to identify colleagues, extend networks, and join &/or craft productive participation/collaboration structures to accelerate your trajectory in all aspects of highly accomplished practice as a mathematics educator. Deepen knowledge of existing communities of practice, take stock of current networks, & plan steps to strengthen/expand professional collaborations.

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

Callahan, Patrick — CEO, Callahan Consulting
AP Mathematical Modeling? This Changes Everything

Rigor is not about how "advanced" a topic is but rather what the student is expected to do mathematically. Even though most students don't take AP Calculus, the course exerts significant influence on K-12 pathways and often distorts the idea of rigor. We will discuss these structural implications and describe a possible brand new AP course that would be rigorous and useful for both STEM and non-STEM students. We will also look at examples of rigor in elementary and middle school mathematics.

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

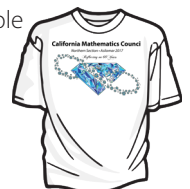
Co-presenter: Phil Daro — Author of Common Core

Carlyle, Ann — Univ. of California, Santa Barbara
K-2 Number Talks with Number Lines

We will build number sense with brief (15 minute) number talks dealing with mental math skills. We'll use number paths, open number lines, and student constructed paper numberless number lines to support benchmark number development. Students justify their thinking by using models that make sense.

PK-2 | INT | 505 | Saturday, 3:30 - 5:00 | Asilomar, Evergreen | BT

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.



Carter, Sally — Hayward Unified SD
Empowering Students in a TRU Math Classroom

Agency, authority, and identity are the "onramp" to learning. We explore how to foster these traits through relationships that build the confidence and growth mindset needed for a mathematically powerful classroom. Research links increased student engagement and achievement to positive relationships with teachers. We will explore those relationships and the art of facilitating the development of agency, authority, and identity as a bridge to accessing cognitively demanding content.

PK-5 | PRS | 209 | Saturday, 9:30 - 10:30 | Asilomar, Marlin | BT

Chai, Yun Ji
How to Help EL Students Access Mathematical Text

Come learn a strategy to deconstruct the language of mathematics that is challenging for our EL students. We will share a structure for incorporating Mathematics into the Designated ELD block, including making sense of the language in the context of math, strategies to help students attend to precision in language/the complexity of language, develop vocabulary and expressing language through representation and writing. We will present some guiding principles and work samples.

PK-5 | W | 451 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 33 | BT

Co-presenter: Angelica Trejo-Ortiz — Teacher

Chamberlain, David — Secondary Math Curr. Spec., Capistrano USD
A Hands-on Approach to Applying The Distributive Property

This session will emphasize a deep understanding of the distributive property, applicable for students in Grade 4 through Algebra 1. Attendees will be able to easily assess every student's understanding of the distributive property, as well as quickly see if their students can factor a trinomial. There will be a strong emphasis on these 3 math practices: "Reason abstractly and quantitatively", "Look for and make use of structure", and "Look for and express regularity in repeated reasoning."

3-8 | INT | 334 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 5 | BT

Champagne, Zachary — Director of Advocacy and Program
Learning to Listen Through Rich Mathematical Tasks

Listening is one of the most important tools in a teacher's toolbox. In this session, we'll explore a variety of rich mathematical tasks, focused on early number, operations, and equality concepts that provide authentic opportunities for us to learn to better listen to our students. We'll also view video clips of students solving problems as an exercise in learning to truly listen to our student's ideas and conceptions.

PK-2 | INT | 118 | Saturday, 8:00 - 9:00 | Asilomar, Merrill Hall | BT

Please stay on the paved pathways 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.



Cheng, Ivan — Professor, CSU, Northridge
Transforming How To Teach Transformations

We will share some exciting ready-to-use activities that help students make sense of transformational geometry. These activities provide access and promote equity for all learners by using guided discovery and Desmos to connect transformations to proportions and functions. Participants will engage with activities on paper AND on their own devices to examine innovative ways to make concepts accessible to all of their students.

8-12 | INT | 407 | Saturday, 1:30 - 3:00 | Asilomar, Acacia | BT

Co-presenter: Alex Vatchkova — Student, CSU, Northridge

How to Desmo-fy Your Math Lessons to Guide Student Discovery

We will share ready-to-use activities that help students make sense of math by using Desmos to guide discovery and promote student engagement. We will also "pull back the curtains" and provide some helpful tips on using this tool so that you can build your own activities to promote critical thinking and conceptual understanding.

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

Co-presenter: Jaspreet Sandha — Administrator, Los Angeles USD

Chialvo, Federico — Director of Mathematics
Authentic Mathematics: For the Love of Mathematics

Authentic mathematics involves imagination, creativity, collaboration, and the thrill of discovery! Mathematics courses should empower students to generate, test and share their own theories. What kinds of mathematical contexts provide such experiences, and how do they fit into our curriculum? We will explore how to facilitate low-floor high-ceiling mathematical investigations that get students noticing patterns and wondering why, while developing standards-based skills and the eight practices.

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

Clark, Heather — Teacher, Black Butte School
Mindful of Math

Bringing awareness to the content, connections, and mindsets provides students with purposeful opportunities to learn math. These trauma-informed practices are especially mindful of students with Adverse Childhood Experiences. Connecting learning targets to movement, keeping lessons within the attention span of students, providing choice and creative opportunities-in school and after school, engages students in positive math experiences. Filling our minds with math one moment at a time.

3-5 | PRS | 311 | Saturday, 11:00 - 12:00 | Asilomar, Sanderling | BT

Commons, Joan — Coordinator, San Diego Math Network
Fraction Division: 4 Meanings and "Why the Reciprocal?"

Experience problems and models to show division can solve many problems: fair share, quotative/measured, partitive, and in rectangular area-find the missing dimension. Leave ready to answer students' questions: "What does the answer mean?", "Why can I multiply by the reciprocal instead of dividing?" and "Can I divide across as I do when I multiply fractions?"

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

Connelly, Ralph — Professor Emeritus
Making Sense of Number Sense

This session will look at the importance of good number sense in daily living, providing ideas for encouraging/improving the various "parts" of good number sense — estimation, mental math, making sense of large numbers, making sense of survey data, etc.

3-8 | PRS | 133 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 4 | BT

Cook, Marcy

Seeing & Understanding Before Memorizing: Basics & Beyond

Provide opportunities for students to “see” meaningful mathematical connections & develop conceptual understanding before expecting them to memorize basic facts and formulas. Promote understanding with visualizations to teach and puzzle-like activities to probe, explore, experiment and persevere while working with basic operations of multiplication/division, squaring numbers, and area/perimeter.

3-5 | PRS | 406 | Saturday, 1:30 - 3:00 | Asilomar, Scripps Conference | BT

Costa, Elmano — Professor, CSU, Stanislaus

Powerful Math for ELs: It Only Takes a Change in Mindset!

Can we grow powerful EL math students? Can we empower them to tackle the standards of practice? Can teachers have the same rigor in math lessons for EL students? Yes they can! This workshop will show you how to plan and deliver lessons to make the standards of mathematical practice a reality in every classroom. The session begins by presenting features of effective lesson design for ELs and then model how to implement them in a math lesson taught in Portuguese.

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

Curran, Elizabeth — Consultant

Using Anchor Tasks to Ignite Learners

Participants will engage in active math lessons and learn how to use objectives to create rich tasks that spark student interest and allow students of all levels to access rigorous content, engage in discourse and deepen conceptual understanding. Teachers will experience how students move through the concrete-representational-abstract progression to solve problems using hands-on materials, explore strategies using drawings, and connect their discoveries to abstract numbers and operations.

3-5 | INT | 255 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 37 | BT

Co-presenter: *Cassy Turner — Founder, Math Champions*

Curtiss, Josh — Math Consultant, University Preparatory HS

Seductive Mathematics

Extremely hands on content and technology session focusing on the beauty of math. Oh yeah, the lessons also happen to overlap with a ton of math practices and content standards as well. Do not attend this session if you want to be bored. The entire session will be hands on and engaging. This session is appropriate for those teaching grades 6–12 and anyone else who wants to attend a cool session. Technology is required so lets hope the wi-fi is working!

6-8 | INT | 211 | Saturday, 9:30 - 10:30 | Asilomar, Sanderling | BT

Damm, Suzanne — Math Coordinator, Santa Cruz COE

Enhancing Mathematical Practices in the Classroom

Developing student habits of mind and a growth mindset take understanding, support and perseverance from teachers as well as students. In this session we will explore ways to assure students do the thinking, make connections, use multiple representations, and communicate about math. We will use sample student problems as the basis of our exploration. You will leave with some use tomorrow problems and ideas as well as some resources for additional support.

3-5 | INT | 148 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 29 | BT

Co-presenter: *Gloria Brown-Brooks — Teacher, San Benito County*

BUS SERVICE will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 5:30 - 9:30pm and Saturday from 7:15am - 6:00pm.



Danielson, Christopher — Teaching Faculty, Desmos, Inc.

From Counting to Calculus: All Students Are Mathematicians

We tend to think of the work of calculus students as being very different from that of kindergarteners, but it really shouldn't be so. Furthermore, it has consequences for who has access to and participates in the field. All learners can function as mathematicians. We'll examine this claim through tasks and student ideas across the K–12 curriculum.

GI | INT | 201 | Saturday, 9:30 - 10:30 | Asilomar, Fred Farr Forum | BT

DeCarli, Elizabeth — High School Math Specialist

Doing Math with Teachers: PD to Transform Instruction

In SFUSD, our vision is that “All students will make sense of rigorous mathematics in ways that are creative, interactive, and relevant in heterogeneous classrooms.” How do we provide math experiences for high school math teachers from a diverse set of schools to support that vision? You'll do math with other participants as “students” and debrief the experience as teachers. Then we'll reflect together about the strategies we use, such as norms and participation structures, and their purpose.

8-12 | INT | 210 | Saturday, 9:30 - 10:30 | Asilomar, Curlew

Co-presenter: *Andres Marti — HS Math Specialist, San Francisco Unified SD*

Dimas, Cecilio — Partner & Director of Innovation & Strategy, Silicon Valley Mathematics Initiative

Reasoning About Proportional Reasoning

In this session, low-floor, high-ceiling MARS performance tasks will be showcased to explore the development of proportional reasoning from 3rd through 8th grade. Concepts such as repeated addition, multiplication, ratio, rate, unit rate, and slope, and their interrelatedness, will be highlighted. Student work will be examined to explore the development of student thinking about proportional reasoning. Common misconceptions and successful strategies will be featured in an interactive format.

6-8 | INT | 345 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 26 | BT

Co-presenter: *Tracy Sola — Assist. Dir., Silicon Valley Mathematics Initiative*

Dorman, Brandon — Adjunct Professor, ACT Inc.

Universal Design for Learning Strategies for All Teachers

Universal Design for Learning strategies are often relegated to special day classrooms. The principles of open access for all students is easily applied to mainstream classes as well. We will break participants into grade level groups and go over specific examples of adapting so-called ‘regular’ lessons and how they can be more accessible.

Bring your pacing guides and be ready to make notes to make small changes to your lessons that can have huge results. Actual math problems will be used!

GI | MITI | 434 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 5 | BT

Co-presenter: *Meagan Dorman — Special Education Adjunct, CSU, Fresno*

Douglas, Lew — Teacher, Stanford Online HSA

Transformational Approach to Congruence Proofs in Geometry

CCSSM HS Geometry Clusters include Understand Congruence in Terms of Rigid Motions and Prove Geometric Theorems. But the standards don't tell us how to approach these proofs using transformational assumptions. This session will address this deficiency by providing the assumptions, updating some definitions accordingly, and providing examples of proofs and some for you to try. No student materials are currently available—this session is for you as a teacher-learner.

8-12 | PRS | 509 | Saturday, 3:30 - 5:00 | Asilomar, Marlin

Dow, Seth — Sugar Bowl Academy
Teaching Statistics Using R

This session displays the power of using a programming language to teach statistics. We will be exploring R, Rstudio(an IDE for R), KnitR, and a data set on educational achievement and its covariates. Attendees will walk away from this section with knowledge of where to learn R and a project with rubrics that focuses on regression analysis. It is recommended that you install R and Rstudio and are able to open them on your computer before attending. We will be programming during class.

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

Echaves, Toni — Hayward USD
ELD Strategies Are Not Just for ELD Time!

Come see real classroom footage showing young mathematicians speaking, reading, listening and writing in math classes integrating ELD strategies. We will highlight students working individually, with partners, in small groups and whole class settings. Participants will leave this session with strategies that can be immediately implemented in your classroom, making rigorous math concepts accessible and engaging for young children, especially ELLs .PK-2 | PRS | 306 | Saturday, 11:00 - 12:00 | Asilomar, Scripps Conference | BT
 Co-presenter: Katy McCarthy — Math Specialist/Coach, Hayward Unified SD

Edmonds, Ellen — Exec. Director of Prof. Dev., W.H. Sadlier
Pose Planned, Intentional Questions to Get Students Talking

Participants will examine the power of rich discourse in deepening students' understanding of math. Attendees will explore ways to use purposeful questions to jump-start rich student discourse and increase collaboration. They will learn how conversation starters, meaningful questions, and the four operations can be used to gain insight into teaching and learning. Participants will receive a "Why Use Discourse in the Math Classroom?" handout to support implementation of productive math discourse.

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

Eisenberg, Gary
Singing, Dancing, and Playing Through K-3 Mathematics
 Participants will leave this session with ready to use, practical ideas to enhance their K-3 math instruction through songs, dances, and games that their students will ask them to do again and again. Participants will gain an invaluable resource that is easily accessible through YouTube. Participants will leave this interactive, life changing session happy and with a new set of skills to raise the positive climate of their classroom and student mastery of math skills.

PK-2 | INT | 140 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 13 | BT

Ellis, Wade — Retired Math Instructor, TI
Developing Flexibility in Solving Linear Equations

Various approaches to solving linear equations that encourage students to understand and justify their solution steps will be discussed with the aid of technology. Ways of encouraging students to talk about their approaches will be presented. After several equation solving methods are presented, participants will be asked to chart in a specific way at least three ways to solve a given linear equation. They will then be asked to discuss the pros and cons of their solutions in groups.

6-8 | INT | 442 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 22 | BT

#hashtag **CMCMATH**

Erickson, Tim — Senior Scientist
Data Science Games

We'll explore free online games where you and your students can get a taste of data science. You will find patient zero in an epidemic, identify a new asteroid, or maybe discover where the secret orchestra is rehearsing. To do that, you'll learn "data moves" in a data-analysis system that will help you find the patterns hidden in unruly data. Data science is not quite statistics. Not quite computer science. But get ready—it's coming soon to a set of standards near you.

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

Fambrough, Rayshell — Educ. Tech. Spec., Bakersfield City SD
Tech Tools for Conceptual Understanding

With a shift to common core and the definition of fluency called out in the framework as flexibility, efficiency, and accuracy, leveraging tech tools to demonstrate conceptual understanding is a must! Learn the many ways students in the elementary classroom are creating with technology to approach mathematical concepts in novel, engaging, and effective ways. Leaving consumption and shifting to creation, we want our students constructing meaning using 21st century tools!

3-8 | INT | 109 | Saturday, 8:00 - 9:00 | Asilomar, Marlin | BT

Co-presenter: Benjamin Boesch — Educational Technology Specialist,

Farrand, Scott — Professor, CSU, Sacramento
Anticipate the Coolness of Math

We'll do some fun math together, and along the way we'll pause to imagine what might lie ahead. Learning and motivation can be greatly enhanced by simply asking what cool things we hope are going on, before we are sure. Look around, view math on a grander scale, and foster mind-blowing realizations. We'll discuss places in secondary mathematics where similar opportunities can be found and we'll explore the benefits of having this focus.

8-12 | PRS | 101 | Saturday, 8:00 - 9:00 | Asilomar, Fred Farr Forum | BT

Farrar, Scott — Researcher, Khan Academy
The Wrong Answers of Khan Academy and How to Use Them

Thousands of learners use Khan Academy every day for practice exercises. Thousands of learners produce thousands of answers—many of them wrong. Wrong answers can contain hidden partial understandings, waiting to be developed. In this session we discuss potential ways to leverage answer data for meaningful learning in and out of the classroom.

8-12 | PRS | 243 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 24 | BT

Co-presenter: Cam Christensen — Math Content Manager, Khan Academy

Fender, Tierra — Math Coach
Collaborating to Disrupt Racialized Participation Patterns

In our district, there is a large opportunity gap for African American and Latino students; something is not working. In this session, we will begin to train our eyes by analyzing racial patterns of participation and having deep conversations about teaching and learning.

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

Co-presenter: Alisa Brown — Math Coach, San Francisco Unified SD

Fenton, Michael — Desmos, Inc.
Applying the Five Practices to Visual Patterns

In this session we'll explore a rich context for making connections between multiple representations: visual patterns. Using Smith and Stein's Five Practices as a guide, we'll discuss best practices for facilitating classroom discussions around visual patterns, with special attention given to selecting, sequencing, and connecting student work.

6-8 | INT | 301 | Saturday, 11:00 - 12:00 | Asilomar, Fred Farr Forum | BT

Fetter, Annie — Math Forum at NCTM**Think, Talk, Write, & Type Math: The Problem Solving Process**

High-stakes tests are just one time we expect students to read a problem on the computer and then type an answer. It's easy to lose sight of the phases involved in the process of producing a finished product. We'll look at samples that highlight this issue and strategies to support moving from thinking to talking to writing to typing.

3-8 | PRS | 318 | Saturday, 11:00 - 12:00 | Asilomar, Merrill Hall | BT

Fish Doto, Darlene — Educator, San Carlos Charter Learning Ctr. Counting and Number Sense

Through counting collections, come see how children experience quantity, develop number sense, deepen place value understanding, and reinforce a positive mathematical identity. Our session is based on how we address the common core standards focusing on supporting student engagement, participation, developing a community of active learners and encouraging articulation of mathematical ideas.

PK-5 | INT | 207 | Saturday, 9:30 - 10:30 | Asilomar, Acacia | BT

Co-presenter: Erin Hohler — Educator

Flynn, Mike — Mount Holyoke College**Using Robotics to Engage Students in Mathematical Practices**

Engaging students in the Standards for Mathematical Practice through robotics is a powerful way to get PK–5 students actively collaborating and problem solving. In this session we will explore the rich mathematics that emerges as students navigate a variety of tasks and challenges with easily programmable robots. We will discuss how to use robotics in the classroom and examine videos of students engaged in this work.

8-12 | PRS | 353 | Saturday, 11:00 - 12:00 | PG Middle School, Auditorium

Foster, David — Exec. Dir., Silicon Valley Mathematics Initiative Remembering 44 of the 60 Years of CMC at Asilomar

I will present favorite moments and events from the 44 years that I have attended or presented at Asilomar. This is an update of a presentation I gave 10 years ago at the 50th anniversary of Asilomar. It includes topics from Asilomar's greatest speakers, the time 60–Minutes came to film at the conference, some of my favorite problems that originated at the conference and just to celebrate this wonderful conference. Come and join the celebration!

GI | PRS | 300 | Saturday, 11:00 - 12:00 | Asilomar, Chapel | BT

Foster, Hallie — Math Teacher, Terra Linda HS I've Got Problems

In 2016-17, Terra Linda High School started an all-school problem of the month. This session will identify lessons we learned along the way about how to create original engaging and challenging problems that are accessible to almost all students yet are still deeply challenging. Participants will leave with a packet of nine originally crafted problems and hopefully some insights on successfully implementing an all school enrichment.

8-12 | INT | 251 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 33 | BT

Frandsen, Eric — Math Coordinator, Oceanside Unified SD Do You Know it When You See it? Rigorous Math Implementation

With CCSS-M implementation fully underway, how are districts designing structures to support teachers and administrators in shifting instruction and measuring those shifts? Hear how three districts have worked together to address this challenge and walk away from this session with concrete resources, processes and ideas for setting up structures to support complex change in your district or at your site.

Ldrshp | PRS | 205 | Saturday, 9:30 - 10:30 | Asilomar, Evergreen

Co-presenter: Dean Guzman — Prog. Assoc., California Education Partners

Fullerton, Mindy — Math Facilitator**Mixing It Up With Math: Blended Learning**

Say goodbye to the spot light! Discover how self regulated learning can be achieved by incorporating blended learning. Maximize your instructional time by increasing engagement and individualizing instruction. This hands-on session will inspire educators to personalize the learning environment while learning how to strategically meet the needs of all learners.

3-8 | INT | 234 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 5 | BT

Co-presenter: Catherine White — Math Facilitator, Cajon Valley Union SD

Gale, Mardi — Senior Research Associate, WestEd**Coaching/Being Coached for the SMPs: Essential Elements**

How do we coach/teach for SMPs? What are classroom dimensions that matter? Examine successful models for coaching from SVMU & TRU Math that support teachers as they shift their practice for deeper learning. Documents also provide guidance for PLCs.

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

Garcia, Javier — Mathematics Specialist, Tulare COE**Mathematics and the Art of Storytelling**

What story does your math class tell? Does storytelling have a role to play in navigating our mathematics classrooms? How might we harness the power of narrative to help students make lasting mathematical connections?

GI | PRS | 312 | Saturday, 11:00 - 12:00 | Asilomar, Dolphin | BT

Garner, Jamie — Stanislaus COE**Fluency: Facts or Fiction?!**

Why don't these kids know their facts?!" is one of the most common frustrations in math teaching. In this session, participants will learn the definition of fluency (it's more than just memorizing facts!), engaging strategies to support students in their journey to mathematical fluency, and opportunities for ongoing assessment.

PK-5 | INT | 258 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 23 | BT

Garrison, Derrall — IST Tech Coach, Cupertino Union SD**Engage Students in Math With Design Thinking: VR and Coding**

Engage in technology focussed activities combining math and science with virtual reality and coding. Common Core Standards for Measurement and Data will provide the impetus for creating and solving math and science based outcomes that are to be modeled digitally. After a guided practice, participants will have opportunities to work with grade level teams or colleagues with apps using virtual reality model creation and coding tools.

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

Co-presenter: Bev Jacoby — Instruct. Support Teacher, Cupertino Union SD

Gilliam, Sandie — Regional Director, NCSM**Growth Mindset and the Value of Mistakes in Learning**

Experience classroom activities on interpreting distance-time graphs to understand how inquiry-based tasks—along with mindset messages—can impact the learning of middle school students.

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

Goebel, Lori — Math Coach, Visalia Unified SD**Creating a Mathematician's Mindset**

How do we support students' curiosity in math? How can we facilitate meaningful math discourse? We will explore ways to promote curiosity through open math tasks and engage in meaningful discourse as we share wonders and understandings of concepts within the tasks.

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

Co-presenter: Alexandria Hofer — Math Coach, Visalia Unified SD

Gojak, Linda — Past President of NCTM

Linking Teaching Practices and Visible Learning

Mathematics educators have been in search of “what works” for decades. The effective teaching practices from Principles to Actions provide a clear outline of instructional practice that helps to ensure student success. This session will look at how these practices align with the Visible Learning mega analyses work of John Hattie in giving our students opportunities to develop surface, deep and transfer learning. Practical classroom examples will be included.

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

Goldenstein, Donna

Enriching the Geometry/Measurement CCMS Content Through Art

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

3-5 | MITI | 260 | Saturday, 9:30 - 10:30 | PG Middle School, Library A | BT

Gomez, Emiliano — MDTP Site Director

Let's Do Some Beautiful Math Problems

In recent years at Asilomar, I gave talks focusing on mathematical games or problems. They were fun and inviting while also underlining meaningful mathematics. They were easily stated, yet they required interesting ideas or perspectives for their solution. This session will continue in that vein. I will share some more of my favorite problems or mathematical puzzles, and we will roll up our sleeves, try to solve them, and discuss the ideas and the mathematics that they generate.

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

Co-presenter: Risa Wolfson

Gray, Carolyn — Middle School Math Teacher

Renewable Energy House: An interdisciplinary Project

Come take part in the Renewable Energy House Project where students investigate social justice issues and use the design thinking process to act as an architect working for a family in a foreign country. We'll be looking at the project through a math lens, but the project spans writing, science, art and world language classes. In math, students design and make scaled models of a home within the family's budget and find solar and zenith angles for optimal roof overhangs or solar panel angles.

8-12 | INT | 431 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 1 | BT

Co-presenter: Lissie McAlvey — MS Math Teacher, The Nueva School

Green, Jillian — Alliance Schools

Fostering Inquiry and Independence in the Math Classroom

Oftentimes students will default to sitting around and waiting for one-on-one help when they get stuck during class. We hope to provide strategies and activities that can be implemented to help foster an atmosphere of independence and student-centered inquiry. When students are curious self-starters, we are able to focus on helping students access content instead of putting energy towards getting students motivated and answering the same question about a task over and over.

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

Co-presenter: Flor Perez — High School Teacher

Hagman, Jennifer

Why Do Students Struggle? The Matter of Units

Do your students struggle with proportional reasoning, solving equations or word problems? We will utilize tools such as Cuisenaire rods, number lines, area models and graphs to explore multiplication and division concepts, as well as the relationship between slope and rate of change. Come see how exploring these concepts with multiple representations, tools and context can lead to student understanding.

6-8 | INT | 144 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 25 | BT

Co-presenter: Kelli Wasserman — Mathematics Consultant

Hayden, John — Math Teacher, Piedmont HS

Grading For Growth In Mathematics

For the past two years, I have graded my students solely on their ability to do mathematics. Behaviors (e.g. HW, tardies) did not factor into the grade. Students could redo any assessment for up to full credit, increasing students' feeling of control of their learning and grade. The students were more willing to try challenging problems knowing they could learn from their mistakes and show what they learned. Come learn how I implemented this system and the results for students.

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

Hein deMause, Jennifer — Math Content Specialist

Reaching SPED Students Through Concept Progressions

How do you provide access to grade level content for SPED students who lack some prerequisite understanding? We will share tools that we have used to create units for students in multi-grade SPED settings that use the same activity to teach multiple levels of related concepts by connecting them to an essential understanding.

Learn how to use concepts and visual models from the CCSS-M Progressions to build the road to understanding using any grade level curriculum in any classroom setting.

PK-5 | INT | 106 | Saturday, 8:00 - 9:00 | Asilomar, Scripps Conference | BT

Co-presenter: Kathy Bradley — Math Specialist, San Francisco Unified SD

Henwood, Cory — Math Teacher, Iron County Schools

Experience Digitally Enhanced 3 Act Math Tasks

Join us as we explore rich 3 Act Math Tasks and witness how digital tools make the exploration and collaboration more meaningful and accessible for students. We'll participate in an activity examining the task with both a student perspective and our teacher hat. We will outline the teacher moves that scaffold effective collaboration and problem solving. Teachers will learn how to empower even the most disengaged and hesitant students through digital means. BYOD and prepare to learn and have fun.

GI | INT | 111 | Saturday, 8:00 - 9:00 | Asilomar, Sanderling | BT

Holmes, Jamie — Eighth Grade Math/Science Teacher, High Tech Middle Chula Vista

Amp Up Engagement Through Projects & Math-tivities

Amp up the energy and engagement through math learning Math-tivities and exciting projects like Graph-it Art, The Dream Job, Mathmonics and others that will promote discourse, differentiation and authentic performance tasks. You'll leave with tons of ideas and strategies to leverage math learning and engagement in your classroom.

6-8 | INT | 548 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 29 | BT

Co-presenter: Dan Thoene — Ninth Grade Math Teacher, High Tech High International

Be sure to rate the sessions you attend using the **EduPlus app**.

Hoos, Shannon — Teacher**Calculated Risk: Building Community in Middle School**

Risk taking is a by-product of a trusting, authentic relationship. Participants will explore easy to implement community-building strategies while engaging in innovative low-risk activities that provide equity, build toward radical risk-taking and powerful collaboration. By engaging in tasks like these, that use the 8 Mathematical Practices, students learn their ideas have value, they come to consider themselves as equals with their classmates and are empowered to take even greater risks.

6-8 | INT | 331 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 1 | BT

Horgan, Connie — Professional Learning Specialist**Curiosity and Collaboration: The Power of Divergent Problems**

Curiosity is a basic human drive. How do we tap into our naturally curious nature, the math power of divergent problems and the curiosity they can generate in a diverse group of students.

Co-presenter: Treve Brinkman, Professional Learning Specialist

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

Hull Barnes, Lizzy — Math Supervisor, San Francisco Unified SD**Building Teacher Leadership with Video Based Discussion**

Math Leaders from six SFUSD middle schools use video based discussions to support their own learning and the learning of their peers. Through SFUSD's partnership with a research and implementation team at Stanford University, these leaders develop both their lenses for a mathematically rich discussion, and also rehearse how they will use the video back at their own departments. Come experience this one piece of the larger Problem Solving Cycle with a cross organizational SFUSD Stanford team.

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

Co-presenter: Anthony Muro Villa III — Doctoral Candidate, Stanford Univ.

Humphreys, Cathy**Kindling Students' Mathematical Agency Through Number Talks**

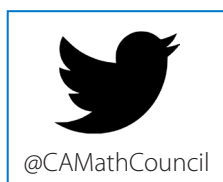
What is agency? How would we know it if we saw it? And how can we kindle agency in our students? Participants will actively engage with these questions and look for examples of student agency in videos from a five-week study in two high school classrooms while students were learning Number Talks. Finally, we will consider together how our teaching might support or inhibit agency.

GI | PRS | 402 | Saturday, 1:30 - 3:00 | Asilomar, Kiln | BT

Johnson, Jordan — Teacher/Curriculum Director, Kirby School**It's Not About the Grades: Teaching Without Scores**

We've all had students who haggle over grades, and had the experience of marking up a student assignment with detailed comments and seeing the student look only at the grade. We also know formative assessment is crucial. So, how can we keep students informed and motivated without grades? In this talk, I'll share my experience teaching a math course without points or grades—using rubrics, checklists, notes, and interviews to replace the traditional grading model.

GI | PRS | 212 | Saturday, 9:30 - 10:30 | Asilomar, Dolphin | BT

**Jones, Brittany — Anderson Heights****Spice Up Math Time!**

Want to add a little sizzle to your daily math block or math groups? Join me as I give oodles of hands on, engaging math ideas, games and strategies that will be sure to make your students wanting more! Whether you teach kindergarten or up to second grade, there will be ideas and tips for everyone.

PK-2 | PRS | 342 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 22 | BT

Joseph, Julie — Math Consultant, Tulare COE**Building Fraction Understanding Through Number Talks**

Fractions are often difficult for students. This session will focus on number talks and routines that support students in communicating their thinking and deepening their understanding of fractions and fraction operations. Participants will learn key types of fraction number talks and routines that support the development of student visualization and reasoning.

3-8 | INT | 107 | Saturday, 8:00 - 9:00 | Asilomar, Acacia | BT

Joyce, Martin — Taylor MS**Cooperative Learning Strategies**

In this session attendees will experience how a positive and collaborative classroom culture is maintained through a variety of strategies. Attendees will experience the power of using study team strategies such as participation quizzes to reinforce study team norms, pairs check to demonstrate the "5 Practices" with Google Drive, Hot Seat, Learning Log as an exit ticket, and more. These ideas encourage completion of classwork as well as homework problems in and outside of the classroom.

6-8 | INT | 147 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 28 | BT

Kanemoto, John — Teacher on Special Assign., Natomas Unified SD
Differentiation 101

Participants will: (1) Understand the difference between difficulty and complexity (2) Read and process depth as defined in the CA math framework. (3) Begin to discuss the difference between differentiation by content, process, and product. (4) Explore low and high prep differentiation strategies. Results in the Classroom: (1) More rigor. (2) More Student Talk versus Teacher Talk. (3) Start/Continue Teacher implementation of differentiation strategies.

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

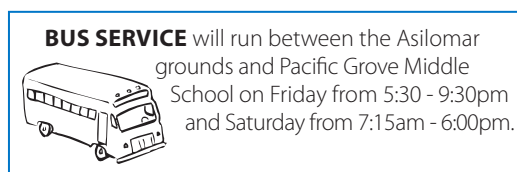
Co-presenter: Brenda Carvalho — Teacher on Special Assign., Natomas USD

Katayama, Mary — Instructional ToSA, Carlton ES**Increase Mathematical Thinking Through Talking and Writing**

Talking and writing are powerful tools that allow students to communicate, collaborate, and develop their mathematical thinking. When learners share and discuss their strategies for solving a problem, all students, especially English language learners, have an opportunity to make sense of mathematical concepts. Many fun and engaging ways to integrate talking and writing will be shared. Also, learn about apps that can be used to record students' thinking for a formative assessment.

PK-2 | INT | 146 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 27 | BT

Co-presenter: Chanmi Chun — Instructional ToSA, Union SD



**Kelemanik, Grace — Fostering Math Practices
Using Routine Rehearsals to Transform Teaching Practices**

Teaching students to think mathematically requires additional teaching practices, many of which require developing new teaching muscles. Because they are designed to be repeated, instructional routines are effective vehicles for developing teacher practice. Rehearsing routines allows teachers to build teaching muscles by trying, rethinking, and retrying teaching moves in-the-moment—without harming students in the process. Learn to leverage routine rehearsals to develop critical teaching practices.

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

**Khalsa, Arjan — CEO, Conceptua Math
Conceptua Math 1 to 1 Million: Number Sense Progressions**

How do we tie together number representations to form consistent and deep understanding in our K–5 students? Come explore step-by-step grade K–5 progressions from number paths to open number lines and from counting collections to place value disks. Receive free online links and handouts for counting and place value resources!

PK-5 | INT | 316 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus East | BT

**Kim, Talk — Associate Professor, New Mexico Highlands Univ
Success in Fractions**

The goal of this presentation is to provide teachers with methods for developing the concept of fractions to students. The speaker will present a variety of strategies and innovative ways to teach fractions. Participants will learn how to engage students in the classroom so that they understand basic concepts and fundamental structures of mathematics that lie beneath the rules and procedures of simple arithmetic.

3-8 | INT | 157 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 39 | BT

**Knotts, Angela — Research Associate, WestEd
Building Algebra: Laying Powerful Foundations**

Did you know students' understanding of fractions and division at age 10 predicts Algebra success at age 16? Come learn how we can use students' number and operations work in grades 3–5 to lay critical foundations for Algebra. We'll explore connections between upper elementary and secondary tasks, and consider how presenting the content in ways that emphasize mathematical structure and noticing repetition can "set the stage" for success in formal Algebra as students enter middle school.

3-5 | INT | 350 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 32 | BT

Co-presenter: *Katie Salguero — Research Associate, WestEd*

**Kossover, Zeke — Exploratorium
Surprising Strategies for Games that Use Probability**

For example, how should your strategy in a dice game change, if at all, based on the number of players? How about an NCAA bracket pool? We'll look at spinners, dice, cards, and random draws and see how only careful computation of probabilities will help you make the right choices to win the most often.

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

**Kotko, Andy — Teacher
Making Sense of Problem Solving in Grades 1–2**

Do your students tend to revert to procedures when faced with solving word problems? This session will help you foster sense-making in your students. Help them develop the skills and habits to approach problems thoughtfully and to apply their mathematical knowledge and tools to develop and communicate their solutions. This session primarily targets grades 1 & 2.

PK-2 | INT | 254 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 36 | BT

**Krasnow, Allison — Instructional Technology Coordinator
Fostering Discourse & Reasoning with Desmos Activity Builder**

Have you tried running a Desmos Activity, found yourself tethered to your computer, reading student work as it comes in, unsure how to best support struggling students? In this workshop we'll look at several strategies to ensure that all students are able to engage with the deeper concepts included in Desmos Activities including how to best leverage the teacher dashboard, using word banks and sentence frames, and supporting students to do error analysis on common misconceptions.

6-8 | INT | 104 | Saturday, 8:00 - 9:00 | Asilomar, Oak Shelter | BT

**Kriegler, Shelley — Center for Mathematics and Teaching
Linear Functions: Four Strategies to Spark Engagement**

Come experience four strategies that engage students in concept development and practice of linear functions: a poster problem, a blank paper lesson, a card sort, and a technology (Desmos) activity. These activities are appropriate for a wide range of abilities and needs from English learners and struggling learners to those who crave enrichment!

GI | INT | 256 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 38 | BT

Co-presenter: *Caitlin Craig*

**Kysh, Judith — Professor, Univ. of California, San Francisco
Balancing Core Practices and Core Content and Time**

Every teacher has dealt with the problem of trying to fit it all in. Decisions have to be made. Some content may not get "covered." Or development of practices may be sacrificed. How can teachers make these decisions without jeopardizing their students' opportunities to succeed. We will consider specific content/practices dilemmas that arise in Algebra I and how teachers can work together to resolve them.

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

**LaBelle, Laura — Consultant, Big Red Educational Products, LLC
Building Measurement Lessons While Moving Full STEAM Ahead**

Research reveals measurement to be an oft forgotten domain. This workshop consists of activities, including STEAM performance tasks, to move beyond abstract teaching towards a more concrete approach. After a discussion of the metric system, attendees will examine lessons and tools that bring measurement to life. Participants will leave with a booklet of activities, instructions for homemade measurement tools, assessment tasks, and ideas that will help build lessons while moving full STEAM ahead.

PK-5 | PRS | 134 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 5 | BT

Co-presenter: *Gregg Nelsen — Consultant, Big Red Educational Products, LLC*

**Lahme, Brigitte — Sonoma State Univ.
Maker Tasks for Mathematics: Make a Yardstick**

Learn about an innovative approach to incorporating Maker Ed into your teaching. This hands-on session provides a model for teaching grade level math through a maker-math cycle. We'll challenge you to create an accurate yardstick with minimal tools, rapidly prototyping and revising. You'll see how 2nd graders take up this challenge, exploring important measurement ideas and math practices (tools and attend to precision). We'll explore how the math extends through the elementary grades.

PK-5 | MITI | 160 | Saturday, 8:00 - 9:00 | PG Middle School, Library A | BT

Co-presenter: *Kathy Morris — Professor, Sonoma State Univ.*

@CAMathCouncil

Lambertson, Lori — Staff Teacher, The Exploratorium
Size and Scale of Earth and Moon with Exploratorium “Snacks”

The Exploratorium Teacher Institute has developed 100s of hands-on science activities (aka “Snacks”), published for free on our web site. Come explore some of our latest published “Snacks”, exploring the size and distance relationships of the earth, sun and moon. All cultures have connections to these celestial bodies, and naked-eye astronomy is available and accessible to all students. Engaging phenomenon and investigative questions lead us into NGSS based explorations. Also good for grades 6-8.

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

LaLonde, Nikki — Dir. of Professional Learning, Math Solutions
Break the Cycle: Reframing Behaviors to Re-Engage Students in Learning Mathematics

Students caught in a cycle of failure indirectly communicate their struggle with questions such as “When am I ever going to use this?” Come learn strategies that empower you to help students break free from the cycle as you identify common indicators and decide how to target your efforts to re-engage every student in active learning.

Co-presenter: Jennifer Van Zante, Senior Instructional Designer
 6-8 | INT | 553 | Saturday, 3:30-5:00 | PG Middle School, Auditorium

Langbort, Carol
Spatial Visualization Activities: Tangrams and Pentominoes

Both activities, Making and Using Tangrams, and Making and Using Pentominoes, will improve your own spatial abilities and those of your students. We will do a variety of activities with each manipulative that you can use in your own classrooms.

3-5 | INT | 333 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 4 | BT

Lantsman, Denis — Senior Software Engineer
Computer Science in the Math Classroom

Use the problems you’re already assigning in class to introduce your students to the fast-growing field of computer science. In this session, we will solve some problems that lie at the intersection of math and CS. We will examine the core skills that computer scientists use in their work, discover ways that CS and math can reinforce each other, and find opportunities for incorporating CS in your daily math teaching.

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

Lau, David
Discrete Mathematics: Combinatorics

Use of distribution models for identical objects and distinct objects applied to various topics such as non-negative integer solutions to equations, multinomial expansions, finding coefficients within multinomial expansions including the use of pigeonhole principle in solving a variety of problems in the area of combinatorics. This is a main topic in Discrete Mathematics and we will be focusing on problem solving skills.

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

Lazzarini, Jeanne — Math Master Educator/R&D
Making Mathematical Sense Through Design Challenges

Investigate the power of learning by doing with exciting hands-on design challenge activities! This workshop uses the design thinking process to inspire design challenges that integrate math with science, technology, engineering, art, and more. Participants will learn and experience different activities that teach the steps of the design thinking process, and they will co-develop a mini-lesson that allows students to design and produce an original product to demonstrate proficiency.

6-8 | MITI | 557 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 39 | BT

Leamons, Crista — Cupertino Union SD
Capture and Communicate: Granting Student Voice with Tech

Capture the thinking and learning that is happening in your classroom! Using technology, students can communicate their thinking and capture their hands on discovery with digital portfolios that incorporate pictures, videos, and voice recordings. In this session we will explore a variety of free resources that are easily implemented in the primary classroom. Some devices will be available to use, but bringing your favorite tablet or laptop is recommended.

PK-2 | INT | 105 | Saturday, 8:00 - 9:00 | Asilomar, Evergreen | BT
 Co-presenter: Sarah Kurdziel — Instructional Coach

Lee, Solana — Elem. Teacher/Math Consultant,
Callahan Consulting
Capturing Mathematical Thinking in the Elementary Grades

Elementary teachers, especially in the primary grades, are often hard-pressed to find classroom activities or assessments that gather quality evidence about student mathematical thinking. District benchmarks or publisher assessments often focus solely on skill mastery or procedures. Come learn about a teacher-led assessment writing project committed to designing assessments which capture evidence of a student’s ability to problem solve, communicate reasoning and model with mathematics.

PK-5 | PRS | 110 | Saturday, 8:00 - 9:00 | Asilomar, Curlew | BT
 Co-presenter: Jessica Balli — Math Teacher/Ed. Consultant, Callahan Consulting

Leinwand, Steven — Principal Research Analyst
Math Homework: It’s Time for a Major Overhaul

When we are honest with each other, it is hard to escape the fact that homework—doing it and reviewing it—represents an incredibly large waste of time. When we are charged with implementing the Common Core in as few as 45 minutes/day, it is criminal to spend as many as 15 of those precious minutes assigning and reviewing homework. There has got to be a better way and this session will explore a range of options for assigning, grading and reviewing mathematics homework.

GI | PRS | 500 | Saturday, 3:30 - 5:00 | Asilomar, Chapel | BT

Luberoff, Eli — Desmos, Inc.
Technology That Thinks WITH Students, Not FOR Students

Technology wears two faces. With one, it amplifies student thinking and creativity, helping them create and understand like they haven’t before. With the other, it thinks and creates FOR the student, dazzling or grading them without inspiring or educating them. We’ll look at easy and free technology – including handheld calculators, Sketchpad, and Desmos – that thinks **with** you and your students, not **for** them.

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

Marti, Andres — Math Content Specialist,
San Francisco Unified SD

Strategic Use of Technology Tools for Statistics in Algebra

Experience activities that you can do with students, both with and without technology, involving statistical representations, measures of spread and variability, normal curves, scatter plots, and linear regression. We will feature a variety of free online apps and websites that provide students with visual and dynamic representations of statistics concepts, while providing them with the appropriate tools they need to experience in order to use them strategically. Bringing own device encouraged.

8-12 | INT | 535 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 6 | BT
 Co-presenter: Christine Sierra — Math/Comp. Sciences Teacher, Washington HS, San Francisco USD

Matthews, Mary Elizabeth — Asst. Prof. of Mathematics, CSU, Chico
Probability and Statistics: The Middle Grades Connection

Middle School is the perfect time to connect probability and statistics! We will play probability games, review probability activities, and look at the data analysis standards across the middle grades. Attendees will learn about opportunities within the California State Standards for their students to make powerful, meaningful connections between probability and statistics. This session will illuminate the “hidden” probability connections that lie within every middle grade.

6-8 | PRS | 558 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 23 | BT

Co-presenter: Krista Strand — Assistant Professor of Mathematics, CSU, Chico

McClain, Maria — Math Teacher/Dept. Chair
Maximizing Math Potential: Mastering Algebra X and Y

Mastering Algebra X and Y takes the traditional two-year Algebra 1 model and incorporates teaching strategies and practices designed to increase mastery in Algebra 1 while providing students with the knowledge, work habits, and critical thinking/problem solving skills needed to successfully complete Algebra 1, Geometry, and Algebra 2. In this session, we will share the struggles and successes of developing and implementing this program in a diverse high school of 2,200 students.

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

Co-presenter: Jessika Tate — Math Teacher, Deer Valley HS

McDowell, Denise — VP of Curriculum
Eye the Prize

Experience the delight of math through a child’s eyes using activities to develop conceptual and perceptual subitizing skills. Activities will focus on counting skills, operations and algebraic thinking, cardinality, and numbers and operations in base ten. The prize will be your students’ understanding! Activities and website materials available.

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

McEntee, Rhonda — Saratoga Union SD
Sparking Deeper Understanding Through Real-World Problems

Problem solving is the cornerstone of all good math programs. In this fast-paced session we will use real-world problems to ignite your students’ higher level thinking skills. You will be provided with high interest, real-world problems where your students take what they’ve learned and apply the concepts to real-world problems. You will leave ready to try one first thing Monday morning. Handouts will be provided.

3-5 | INT | 435 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 6 | BT

McGrath, Lauren
Spiraled Assessment for Spiraled Learning

In this session teachers will learn about creating an assessment that uses a mixture of current and past topics to focus on deeper learning. This adaptive mixture of formative and summative assessment develops a growth mindset in students and supports the notion that all students will master the math concepts at varying rates. This effective approach to feedback is a tool for both teachers and students so that students develop and sustain deeper understanding of middle school math topics.

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

Co-presenter: Karen Sierra — Sixth Grade Math Teacher

McNamara, Julie — Assistant Professor, CSU, East Bay
Blast from the Past: Return of the Tug of War

Marilyn Burns’ “Mathematical Tug-of-War” is a great task that has been engaging students in the Standards for Mathematical Practice for over 25 years! We’ll work on an updated version in which students intuitively use algebraic reasoning to determine the outcome of a contest involving rebel fighters, storm troopers, and (of course) Chewbacca. We’ll also engage with other “oldies but goodies”—tasks that may have been around for awhile, but definitely encourage student innovation.

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

Medina, Elsa — Professor
Fun with Algebraic Thinking

This workshop will focus on the hands-on pattern problems and activities used during a summer Math Academy for high school students underrepresented in STEM fields. Because this academy welcomes students from diverse mathematical backgrounds, the problems posed to develop the students’ algebraic knowledge are rich and have many access points. We will present the most successful problems as well as pre and post data to show students’ gains in algebraic thinking and mathematical dispositions.

8-12 | INT | 303 | Saturday, 11:00 - 12:00 | Asilomar, Heather | BT

Co-presenter: Amelie Schinck-Mikel — Professor, Cal Poly, San Luis Obispo

Meier, Nancy — Modesto City Schools
Number Talks for Struggling Students

This presentation will use Sherry Parrish’s book Number Talks as a starting point. We will examine the rationale behind number talks and how they support the math content standards and the math practices. Our focus will be on supporting struggling students, ELs, and students with special needs when doing number talks. We will also look at how number talks can address foundational standards, language standards, and IEP goals. Participants will engage in hands-on practice with number talks.

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

Meyer, Dan — Chief Academic Officer, DESMOS
Full Stack Lessons

Two teachers can take the same idea for a lesson and experience vastly different results in class – both in terms of student learning and student interest. Often times this is because one teacher taught from the full stack of questions and the other taught from just part of it. We’ll look at the contents of that stack and learn practical strategies for making over your lesson and putting the entire stack of questions to work in your classrooms.

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

Miller, Brian — Analy HS
The Pedagogy of Origami

Learn how to apply the Art of Origami to specific learning goals in the classroom. We developed Origami-based lessons with the teacher in mind—realizing the potential to present content standards by demonstrating how to fold simple but fun models. In this hands-on session, we fold a Samurai Hat, Whale, and Crow as tools to teach endless topics! Learn how to get started developing engaging lessons with resources, worksheets, and videos all utilizing basic techniques of Origami.

8-12 | MITI | 560 | Saturday, 3:30 - 5:00 | PG Middle School, Library A | BT

Co-presenter: Dave Casey — Math Teacher

#hashtag CMC MATH

Mitchell, Kathy — Bilingual Teacher**Beyond TENS & ONES: Developing Place Value Concepts**

We will focus on building teachers' conceptual understanding of Place Value, to support us in developing deep levels of student understanding. How are unitary & unitize different? How about face value & place value? Too often students, especially ELs, simply follow rules or use terms, but don't know why. As we analyze student responses, we'll identify levels of understanding & common misconceptions. We'll discuss how to help all students move beyond procedures to construct place value concepts.

PK-2 | INT | 356 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 38 | BT

Mohanty, Yana — Imathgination LLC**Spatial Reasoning: Hands-on Volume and Surface Area Lessons**

A growing body of research links spatial reasoning with future success in academic pursuits that reach far beyond geometry. Therefore, developing spatial reasoning empowers students to succeed in a broad range of STEM subjects. This workshop will focus on spatial reasoning within the framework of volume and surface area. Manipulatives, primarily Geometiles, will be used as a teaching tool. Especially effective with teaching low achievers, manipulatives go further to empower underserved students.

6-8 | INT | 436 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 7 | BT | \$

Moore, Sara**I Don't Get What They Want Me to Do!**

What is it about word problems? How do we help middle school students use whole number situations to support problem solving with integers and rational numbers? Learn to use multiple representations & engaging discourse to help students become better problem solvers. We will focus on problem-solving with integers, sharing strategies and tasks which build on students' earlier experiences with word problems using whole numbers. These vertical connections empower teachers and students alike.

6-8 | PRS | 517 | Saturday, 3:30 - 5:00 | Asilomar, Nautilus West | BT

Morris, Kathy — Professor, Sonoma State Univ.**Fractions Are Numbers Too!**

Capitalize on students' prior knowledge by teaching fractions as an expansion of the number system, not just parts of a whole. Resources and experiences will help you leverage familiar whole number strategies including number lines, decomposition/regrouping, and benchmark numbers to teach operations with fractions. Explore common misconceptions and strategize ways to help students overcome them. Quantitative & Abstract Reasoning, Structure, and Repeated Reasoning (SMP 2, 7-8) are emphasized.

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

Morrison, Patty**Using Literature to Engage PreK-1 Student Understanding**

Children love literature! As a Kindergarten Teacher I enjoy finding math in many different types of books. These are lessons I have done with my own students to promote conceptual understanding of addition, subtraction, and graphing. I will provide ready to use lessons that I created in my own classroom and give each participant one book that is used so you can do the lesson in your own room. I will provide some extensions for the first grade teachers to meet standards in their room.

PK-2 | PRS | 131 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 1 | BT

@CAMathCouncil

Morrow-Leong, Kimberly — Mathematics Specialist**Mining the Professional Power of the Student Work Clinic**

The richest source of assessment data is the student work samples that are generated in classrooms. Participants will learn a protocol for diving deeply into a set of student work samples, working collaboratively to detail evidence of student thinking, and consulting the latest research about student learning trajectories to make inferences about student understanding. Participants will leave with task guidelines and a protocol to replicate the Student Work Clinic in their own setting.

3-8 | INT | 257 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 39

Moschkovich, Judit — Univ. of California, Santa Cruz**Mathematics, the Common Core, and Language**

This talk presents research-based recommendations for mathematics instruction for English Learners (ELs) aligned with the Common Core State Standards. The presentation has two parts. The first part summarizes what research says about effective teaching for ELs and effective mathematics teaching. In the second part, I use two short vignettes (each with a video clip and short transcript) to illustrate recommendations for supporting mathematical reasoning for ELs in secondary classrooms.

GI | PRS | 100 | Saturday, 8:00 - 9:00 | Asilomar, Chapel

Moskowitz, Stuart — Lecturer, Humboldt State Univ.**TI84 Art Project: A Creative Test Alternative for Algebra**

Use graphs of functions to design pictures of people, cars, trees, landscapes, flags, or whatever you choose. Learn advanced features of your calculator such as piecewise functions with restricted domains, graph styles and graphing with lists. You decide the level: anything from beg. alg. thru pre-calc. We'll do computer graphics: a real application of algebra & a great motivator for your students. Any model can work. I'll use the TI-84 Plus CE. BYO Calc or I will have loaners available.

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

Mulhearn, Dennis — Retired Teacher**My Favorite Contest Problems Are for All Students**

Problem solving is central at all levels of math. Carefully choosing the setting and content can make math fun and exciting too. Challenge your students with these 20 classic contest problems and they will discover multiple solutions that enrich understanding. Teaching problem solving will be modeled as you contribute solutions. Leave with these and 50 additional problems.

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

Nank, Sean — Professor, CSU, San Marcos**How Do I Adapt a Growth Mindset in My Assessments?**

We know about Growth Mindset, but how do we use this in assessments? Online formative assessments gives teachers an avenue to randomize assessment items, provide students multiple opportunities for success, and provide students opportunities to experience success. We will experience how to create assessments that align to the CCSS and provide immediate data to teachers and students. Attention will be given to accessing resources online via tablets or Chromebooks in the classroom.

8-12 | PRS | 302 | Saturday, 11:00 - 12:00 | Asilomar, Kiln | BT

Enter to win a free registration or free housing at next year's conference by downloading the **conference evaluation** at EduPlus app.

2017 CMC North Conference Going Mobile with EduPlus
EduPlus

Newell, Christine — Stanislaus COE
Building Mathematical Language & Precision Through Routines

How do we support students who don't say anything in math class because they fear they won't say the perfect thing? Mathematics Language Routines (MLR) provide scaffolding for all students to engage in meaningful discussions by intentionally and systematically developing the language of mathematics. In this session, experience MLRs and see them in action in classrooms as we explore how to build students' precision by honoring and amplifying their emerging language and ideas.

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

Nguyen, Ho — Math Program Administrator, STEM Mathematics
Strengths-Based Coaching to Support Deep Learning for Equity

We have two premises: all students are brilliant mathematically and all teachers care about their work and their students. A belief in those premises and their interconnectedness drives this strengths-based approach to coaching that has potential transformative impact with teachers. In this session we'll share with you how we put those premises into action to help coaches support deep teacher learning for equity in a diverse urban school district.

Ldrshp | PRS | 117 | Saturday, 8:00 - 9:00 | Asilomar, Nautilus West

Co-presenter: Mallika Scott — Coaching Consultant, San Francisco Unified SD

Novelli, Barbara — Consultant
Making the M in STEM Powerful and Meaningful Mathematics

Meaningful science investigations create a tremendous opportunity to teach and reinforce math concepts and skills. Mathematics is more meaningful when it is taught in context and Science is a perfect context to do and learn mathematics. For the reluctant learner or English Language Learner this integrated approach provides excellent opportunity for language acquisition. Come spend time with Barbara making the Math in the Science Math connection powerful and meaningful.

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

Orton, Chase — Mobius Educational Consulting, Inc
Storming the Ivory Tower: Bringing Calculus to All

Calculus is an accessible topic for all K-8 students and is embedded in content you already teach! This workshop is a numberless, algebra-less introduction into the concepts that make calculus a joyful topic to study and is appropriate for all teachers, particularly those with no prior knowledge. Come have fun as you give a confidence boost to the math geek inside yourself. You'll leave empowered and inspired to help your students uncover the calculus they are already doing.

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

Parker, Ruth — CEO
Transforming Math Classrooms: A Deep Dive Into Number Talks

This session will look at the pedagogies and practices of Number Talks that can positively impact all of mathematics teaching and learning. We'll examine how Number Talks can deepen mathematical understandings and transform mathematical dispositions for students and teachers alike. Specific teacher moves that optimize learning will be explored and modeled.

6-8 | INT | 400 | Saturday, 1:30 - 3:00 | Asilomar, Chapel

Drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of our three conferences. See page 7.

Patterson, Brandolyn — Teacher, Mill Valley MS
Developing Global Competency in Mathematics

Global competency is a frame of mind in which students understand different perspectives, recognize that global issues are interconnected, and communicate understanding by responding appropriately. In mathematics, this means that students are able to analyze patterns, quantify relationships and probability, and apply this understanding to solve issues of global significance. Bring your device and collaborate to create math projects (units) that develop math thinking and global competency.

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

Pesavento, Laura — Second Grade DLI Teacher, Schafer Park ES
Routines! Routines! Routines!

Routines are fun, engaging ways to expose students to math standards and Mathematical Practices daily. Math talks are one type of routine. We will focus on other routines to get students excited about math and become flexible mathematicians. We will focus on daily calendar and homework routines that will give students hundreds of opportunities to play with numbers in meaningful ways. You will leave with ideas to use immediately and fun, new math homework differentiated for TK-2.

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

Co-presenter: Dionne Igual — Second Grade Teacher, Hayward Unified SD

Piccitto, Henri — Consultant, MathEducationPage.org
Geometric Puzzles in the Classroom

Geometric puzzles are accessible to all students, and provide a popular change of pace from the daily routine. They offer opportunities for hands-on explorations and challenging problems about area, perimeter, congruence, similarity and scaling, symmetry, and the square root of two. In this workshop, you will make tangrams by tearing, discover pentominoes and supertangrams in order to use them in puzzles of increasing difficulty, and use the Pythagorean theorem to get insight into reptiles.

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

Pickford, Avery — Lick-Wilmerding HS
First Days of School: Blending Classroom Culture and Content

Building classroom culture and teaching mathematical content can, and should be, interwoven. Too often, building culture is the focus for the first days of school, and then there is a transition to mathematical skills and concepts. In this session, participants will actively investigate tasks and routines I use to bridge mathematics and classroom culture, from the first day of school to the first assessment.

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

Pickford-Murray, Bredeen — The Bay School of San Francisco
High Tech, Low Tech: Striking the Balance

From logarithm tables to slide rule to graphing calculator to Desmos, the math classroom looks different than it used to. How much is too much? When does technology get in the way of content and when does it illuminate ideas? This workshop will explore ways we can determine when and how to use technology to help students learn.

GI | PRS | 236 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 7

Preston, Robert — Math Educator
Empowering Educators: Coaching 101

How can you, as a coach, leverage your expertise to advance the practice of others? Come and engage in a discussion around the potential power (and common missteps) of coaching on the instructional practices of others.

Ldrshp | PRS | 305 | Saturday, 11:00 - 12:00 | Asilomar, Evergreen

Queen, LaMar — Locke HS**Music, Math, Rigor, Hip Hop, Excitement, and Empowerment**

Music can effectively lower anxiety, promote deep student discourse, empower students, and create an exciting learning environment.

Let's tap into student emotions, lower the affective filter, be culturally relevant, and TEACH STUDENTS before teaching math. You will leave with a lesson plan, strategies that you can use immediately with students, and a solid understanding of how to effectively use music with your students.

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

Ramos, Jeanne — Administrator, South Gate HS**Developing Students Algebraic Thinking & Academic Language**

Participants will engage in activities that build students' access to and confidence in doing rigorous mathematics, in particular for English learners, through problem solving tasks and strategies that develop algebraic thinking and academic language proficiency.

6-8 | INT | 502 | Saturday, 3:30 - 5:00 | Asilomar, Kiln | BT

Reardon, Tom**Discover Transformational Geometry in 15 Seconds**

Hands-on experience. Play-Investigate-Explore-Discover geometric properties. Using a handheld, iPad, or software, students become engaged quickly, deeply. Free materials. Integrate creative exploration and pedagogy via technology and collaboration. We will simulate a grade 8-11 math classroom. We will use appropriate technology and we will Play-Investigate-Explore-Discover geometry as their students will do. They will see how to obtain this unit of student activities and teacher notes for free.

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

Reeves, David — Teacher, Andrew Carnegie MS**Transforming with Tessellations: Math Meets Technology & Art**

Transformational geometry should be interactive and fun. Students who struggle in other areas of math often find their niche in motion geometry. Exploring transformations with technology and art can help students believe math can be beautiful and give them a new vision for seeking similar success in other areas of math. Experience a hands-on project using technology to create a polygon that tessellates. Then use that polygon to create a beautiful tessellation.

8-12 | INT | 412 | Saturday, 1:30 - 3:00 | Asilomar, Dolphin | BT

Resek, Diane — Professor Emerita**Proof That Makes Sense to Students**

Writing a proof can make sense to students if they are invested in showing that something is true. Participants will engage in thought provoking situations where they will come up with conjectures about what they think may be true. Finally, they will write proofs to show which of their conjectures is in fact true. Participants will discuss their own experiences in learning and in teaching proof writing.

8-12 | INT | 344 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 25 | BT

Reyerson, Hardy — Bellarmine College Prep**Sir Isaac Newton: The Man, the Mathematician, the Legend**

What does his Calculus have to do with your Calculus? Learn how his Calculus can help your students as they begin their adventure into this exciting area of mathematics. Over the past several years, this veteran teacher has used the Calculus of Newton to excite his students who continue to amaze him! Newton's proofs were amazing!

C | PRS | 233 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 4

Rodgers, Sherry — Parsons Jr. HS**Newcomers' Session**

Are you new to Asilomar? Come for a 20-minute repeating presentation on how to navigate your first conference at Asilomar.

We will show you all you need to know!

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

Rodriguez, Marin — Lead Math Teacher**Using Games and Toys to Build Number Sense**

In this hands-on workshop, we will learn how to use card games and common toys that will build your students number sense and ability to persevere in problem solving. You will take away games and ideas that can be used immediately in class and that will help with mental multiplication skills, exponential notation, prime factorization, factor pairs, greatest common factor, least common multiple/denominator, understanding the concept of relatively prime, and simplifying fractions.

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

Rossi Becker, Joanne — Professor Emerita, San Jose State Univ**New 12th Grade Course in Mathematical Modeling**

The Monterey County Consortium for Math Readiness is developing a 12th grade course for students who have finished Courses 1, 2 & 3 but are deemed not ready for college level math. A course in math modeling was developed in spring 2017 and is being taught in 2017-18 in 12 high schools in Monterey County. This session will describe the course and its impact so far, and engage participants in a short example of a problem from the course.

8-12 | INT | 512 | Saturday, 3:30 - 5:00 | Asilomar, Dolphin | BT

Co-presenter: Alison Lynch — Professor Mathematics, CSU, Monterey Bay

Ruibal, Michael — Black Diamond**Engaging High Needs Learners with Communication Strategies**

Having trouble getting your high needs learners not just talking but communicating mathematical ideas to one another? These various strategies will get students talking about mathematics and get them working with concepts verbally. Teachers will practice/demo these strategies that include: Quiz-Quiz-Trade, Stations, Only a TRUE GENIUS can solve this, Bongard problems, and review other strategies that can use the Mathematical Practices on a daily basis.

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

Saarnio, Lora — Nueva School**Mathematical Mini-Universes**

What problem types allow students to experience math as an experimental science wherein they enter an unfamiliar landscape of numbers and data and then develop and vigorously test their conjectures? This presentation gives insight into innovative, disruptive, and classroom-tested problems in mathematics that promote equity in the classroom (since these problems do not pivot around computation per se) and offer a low-floor and high ceiling. The session will focus on K-2 problems.

PK-2 | INT | 343 | Saturday, 11:00 - 12:00 | PG Middle School, Rm 24 | BT

Stay connected with CMC



www.facebook.com/CAMathCouncil

Safi, Farshid — Mathematics Educator
Mathematical Sense Making Through Purposeful Technology Use

Explore relevant, classroom-ready tasks that highlight ways to engage students in mathematical sense making through purposeful uses of dynamic technology. Throughout the session, we will work together to leverage technology and emphasize the coherence of mathematics while focusing efforts on analyzing student conjectures and exploring “What if . . . ?” scenarios. Experience this technology-enhanced approach in order to empower students to explore the world in meaningful ways through mathematics.

8-12 | INT | 506 | Saturday, 3:30 - 5:00 | Asilomar, Scripps Conference | BT

Sagun, Theodore — Univ. of California, Los Angeles
Ratios & Proportions from Elementary to Algebra

Come explore student strategies to solve division and fraction problems lending themselves to ratio and proportions topics. These sense making strategies provide a lens to deeper understanding of coherence of proportional reasoning.

6-8 | INT | 531 | Saturday, 3:30 - 5:00 | PG Middle School, Rm 1 | BT

Co-presenter: Brandon McMillan — Mathematics Consultant, Univ. of California, Los Angeles

Schaffer, Karl — Math Faculty, De Anza College
Let’s Get Loopy with Geometry

Mathematics and dance both involve patterns and shapes in space. Learn how to use string and rope loops to engage students by creating movement patterns that demonstrate their understanding of polygons and scale models. Explore similarity by drawing maps to plan dance phrases and work with congruence when creating regular polygons. See how math and dance interact to create accessible ways of leading, assessing, and extending movement experiences in your classroom that align with the standards.

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

Schierer, James — King City HS
Seniors Financially Literate for Today and Tomorrow

Seniors will go through their financial life from first job to retirement. The class covers banking, loans, credit cards, taxes, budgeting and retirement. The students will partake in projects that show how they utilize the skills we learn in class. The class also does a life simulation where they earn a paycheck to cover their expenses as they are living on their own and need to cover the regular expenses as well as be prepared for life’s surprises.

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

Schneider, Craig — Teacher on Special Assignment, Santa Barbara Unified SD
Structure and Repeated Reasoning: Growing Student Thinking

By providing tasks for students to look for structure and repeated reasoning, students are empowered to make sense, develop conjectures and then jump off into mathematical explorations, thus reaching a wide range of learners. Join us to do mathematics together with tasks that allow us communicate our strategies, perspective, and reasoning and which support all learners to participate in a mathematical discourse community.

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

Co-presenter: Anna Scharfeld — Assist. Principal, Santa Barbara Unified SD

Drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of our three conferences. See page 7.

Schultz, Tammy — Teacher Leader, Monterey Bay Area Math Project
Exploring the Geometry of Islamic Tiles

Participants will explore the hidden geometry within Islamic tiling, an ancient art that occurs in a variety of forms throughout the world. Using only a compass and a ruler, teachers will be guided to draw and design an ornate art piece from basic geometric shapes. The lesson is designed to deepen teacher understanding and to provide direction on how to share this art with students.

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

Schwartz, Christen — Math Coordinator, Contra Costa COE
“New” Math in CCSS-M: This Isn’t the Way I Learned It!

No longer do rules and procedures drive our mathematics learning. Experience and observe patterns in math. Participants will explore mathematics conceptually, building a deeper understanding of how math works using Algebra Tiles. Connections will be made to algebraic thinking and progressions through grade levels. Participants will have an opportunity to collaborate with peers on shifts in teaching and learning through the implementation of the common core state standards.

3-8 | INT | 202 | Saturday, 9:30 - 10:30 | Asilomar, Kiln | BT

Seashore, Kimberly — Assistant Professor, SFSU Mathematics
Beyond Tacos: Culturally Responsive Math for Teachers

What does it feel like to integrate students lives into a math class? How can students’ cultural identities and funds of knowledge be genuinely engaged while teaching math? Math teachers are being asked to enact culturally responsive pedagogy, often without ever having been a student in such a classroom. In this interactive workshop, we’ll explore math lessons for credentialing and practicing teachers to experience culturally responsive teaching as learners.

Tchr Ed | INT | 112 | Saturday, 8:00 - 9:00 | Asilomar, Dolphin | BT

Selby, Victor — Curriculum Consultant, www.enrichmath.com
Math as the Language of Science: Building the Great Models

This session will focus on how to bring some of the most important scientific ideas into the classroom. Emphasis will be on the use of the symbol system, “Mathematics”, to model the real world. Topics will include Einstein’s use of the Pythagorean Theorem to derive his time dilation formula and the derivation of “e” and modeling population growth and radioactive decay. We will build a tesseract to introduce 4-dimensional spaces. My book “Mathematics and the Human Condition” is free on-line.

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

Shore, Chris — Math Coach, The Math Projects Journal
Teaching the Forgotten 4th C: Creativity in the Math Class

Three of the 4 C’s of 21st Century Education (Critical Thinking, Communication Collaboration) are getting attention in Math classes, while the 4th (Creativity) is being ignored. Let’s define what creativity in math class is, what it is not, and let’s do some creative math together.

8-12 | INT | 401 | Saturday, 1:30 - 3:00 | Asilomar, Fred Farr Forum | BT

Shumate, Linda — Shasta COE
Newcomers’ Session

Are you new to Asilomar? Come for a 20-minute repeating presentation on how to navigate your first conference at Asilomar. We will show you all you need to know!

GI | W | 135 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 6 | BT

#hashtag **CMCMATH**

Sola, Tracy — Assistant Director, Silicon Valley Math Initiative
Growing a Mathematical Community in Primary Classrooms

The use of Math Talks and Problems of the Month that promote academic discourse and student engagement strategies in TK–1 will be highlighted. Video cases and student artifacts from a Title 1 school will showcase how students can grow their Agency, Identity, and Authority through problem solving, and how students are supported to engage in peer interactions and other empowering participatory discourse strategies.

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

Co-presenter: *Cecilio Dimas — Partner and Director, Silicon Valley Mathematics Initiative*

Spencer, Joi — Univ. of California, San Diego
CAMTE Business Meeting

Tchr Ed | PRS | 515 | Saturday, 3:30 - 5:00 | Asilomar, Triton

Standiford, Gail — Retired, Fairfield HS
Catapults, Captured Royalty and Desmos

Quadratics in Action. A catapult's trajectory is captured on video, processed using Logger Pro and imported into Desmos. Your team will analyze data and problem solve to calculate the optimal placement of your catapult so that you can fling escape tools into selected castle windows. You will have five tries launching a catapult to free the royal family. Handouts and student video of the project will be shared.

8-12 | INT | 450 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 32 | BT

Statmore, Elizabeth — Math Teacher, Lowell HS
Creating a Culture of Exploratory Talk

Exploratory talk is the greatest single predictor of whether students' group work will be effective or not, yet most student talk remains stubbornly cumulative (positive but uncritical) or disputational (merely trading uncritical disagreements back & forth). This session will explore Talking Points, an evidence-based method for improving student talk. Immersive segments will be followed by reflective, "master class" segments. Problem sequences & tasks will be challenging but accessible & free.

8-12 | INT | 445 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 26 | BT

Stern, Michael — MS Math/Science Teacher, Bayside/Martin Luther King School
Math Steeplechase!

This activity is based on the Math Steeplechase competitions, in which teams of students proceed from station to station, tackling problems and puzzles which require creative, out-of-the-box solutions. Teamwork and collaboration are vital ingredients for success. In this interactive session, participants will run through a simulated competition. This activity can be held inside or outside the classroom and is easily modified as a review session for tests in a wide variety of subjects.

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

Co-presenter: *Mary Ann Terrell — 4th Grade Teacher, Wardlaw ES*

EduPlus from the App Store, Google Play,
 or at <http://e.confplusapp.com/>



And be sure to visit
<http://event.confplusapp.com/cmcn17/>

Sullivan, Margaret — Mills HS

Rigor 4 All: Examining How to Unite Access and Rigor

Structuring a lesson that provides access for all students while holding the rigor is a difficult task. Join us in an interactive session where we will examine a task, the many possible teacher choices to support students, and how these choices interact with access and rigor. We will discuss how your classroom strengths and context can best inform your choices. Leave with ready to implement strategies and ideas, including ideas for manipulatives and technology, to add to your teacher toolbox!

8-12 | INT | 511 | Saturday, 3:30 - 5:00 | Asilomar, Sanderling | BT

Co-presenter: *Angeala Torres — Math Specialist, San Francisco Unified SD*

Sulsberger, Megan

The STEM Rubric: A Tool for Pre-Service Teacher Preparation

This session will showcase one powerful way to prepare the next generation of educators versed in CCSS-M instructional demands and STEM practices. We will discuss and disseminate our co-created STEM rubric tool and accompanying protocols as a means of effectively coaching pre-service teachers in Mathematics and STEM teaching.

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

Co-presenter: *Slown Corin*

Svensson, Elizabeth — Santa Cruz COE

Connecting Math to Sustainability for All Kinds of Learners

Show students the necessity of math for environmental understanding and stewardship in this hands-on session. Participants create mathematical models using manipulatives and engage in group problem solving around natural resource and population growth. Presented activities are designed for a diverse classroom and to stimulate interest in STEM fields.

6-8 | INT | 310 | Saturday, 11:00 - 12:00 | Asilomar, Curlew | BT

Taylor, Megan — CEO & Founder, Trellis Education

From Tsuruda to Sicherman (v 6.0): Old School v. New School

Rich tasks + digital technology = mathematical joy. Some of the greatest mathematics tasks are best posed and solved with nothing more than a pencil and a flat surface. The richness of other tasks depends on the digital tools that bring them to life. But it is often difficult to translate a task from one form to the other or know when you should. Come join us as we bring back an "old" session with a new twist: rich tasks in which one version requires digital tech and the other does not.

8-12 | INT | 453 | Saturday, 1:30 - 3:00 | PG Middle School, Auditorium | BT

Co-presenter: *Dan Meyer*

Math Teaching As an Act of Social Justice

Rochelle Gutierrez says that "Mathematics, like Whiteness, operates with unearned privilege in society." When we accept math teaching as a sociopolitical act of social justice, it becomes obvious that teachers have great power in disrupting inequities that disproportionately affect students of color. In this session we will reflect critically on what mathematics we teach, how we teach it, and to whom we teach it, and consider philosophical and practical shifts we can make in our teaching.

8-12 | INT | 102 | Saturday, 8:00 - 9:00 | Asilomar, Kiln | BT

Co-presenter: *Krista McAtee*

Drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of our three conferences. See page 7.

Toncheff, Mona — Project Director, AZ Mathematics Partnership
Building a Student-Centered Classroom

How do you build rich and meaningful discussions into your daily lesson design to ensure learning for all? How do you transition from 32+ individual students to a community of learners that support each other in the learning process? Examine strategies on how to make student thinking visible to promote critical thinking and build student-centered classroom culture. Learn ways to explicitly engage each and every student with defending their thinking and critiquing the thinking of others.

8-12 | INT | 501 | Saturday, 3:30 - 5:00 | Asilomar, Fred Farr Forum | BT

Trescott, Ann — MDTP
You've Got the Data: Now What?

Having and analyzing data is the first step. In this session, engage and learn the next step; a cyclical, formative assessment data-informed process involving all learners in student-centered classroom practices with the goal of remedying math misconceptions and gaps. This process incorporates brain research on how students learn mathematics and re-engagement strategies on streamlining intervention practices. The process is done along side regular classroom instruction.

6-8 | INT | 308 | Saturday, 11:00 - 12:00 | Asilomar, Toyon | BT

Trevino, Emma — Program Manager, STEM
Student Discourse in Mathematics: What Are They Thinking?

Experience mathematical discourse as learners, identify the different pedagogical strategies underlying those experiences and their purposes, and learn about a new tool, Practical Measures, that can be used to inform group work instruction to promote student discourse and learning. You will consider ways as an instructional leader to support discourse becoming a reality for all students.

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

Co-presenter: *Alisa Brown — Content Coach, San Francisco Unified SD*

Tuska, Agnes — Professor
Teaching Heuristic Thinking 60 Years Ago and Now

George Polya, one of the founders of CMC, has successfully promoted the emphasis on problem solving through heuristic thinking at all levels of teaching and doing mathematics in his publications and workshops for teachers and learners of mathematics for decades. How is his influence present these days? What evidence does the analysis of a particular textbook show in regard of this question? How can we keep Polya's legacy alive?

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

Co-presenter: *Robert Duyst — Preservice Teacher, CSU, Fresno*

Vacca, Nick — Carnegie Learning
The Journey to Providing Equitable Access to Equations

The journey of solving equations begins in early Mathematics Education and continues to build as students go through Middle and High School. Join this journey as we begin by looking at bar models, travel through double number lines and continue into uncharted worlds that will support providing all students with opportunities to productively struggle and have equitable access to grade level content.

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

Veater, Carl — Mathematics Coordinator,

Fresno County Supt. of Schools
Making Decisions Mathematically: Real Mathematical Modeling

Create equity in your classroom by asking questions that involve all ability levels and create shared experiences. 1) Should you buy an electric or hybrid car? What does the mathematics say? We will use data to determine who should invest in electric or hybrid vehicles. 2) They always tell you there is a limit to how small you can be when getting on a roller coaster, but is there a maximum height as well? We will investigate using the data we collect from the participants. TI Navigator.

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

Vierra, Vicki — K-12 Math Specialist, Ventura COE
Build a Maths-Positive Culture: Support Great Maths Teaching

Administrators, coaches, teacher leaders learn to recognize, support and evaluate effective mathematics teaching. What should we look for in teachers' talk and actions? What should we see and hear in students' work and talk? Examine some observation tools.

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

Co-presenter: *Jim Short — Math Coordinator, Ventura COE*

von Pallandt, Allen — Senior Product Manager, SpringBoard Math, The College Board
Creating a Collaborative Math Classroom

Deepen your understanding of how to create a collaborative mathematics learning environment and examine what effective collaboration looks like in the classroom. Walk away with a tool for purposeful planning with collaboration in mind. Participants will engage in paired and small-group discussions and collaborative online activities. Moreover, participants will use their laptops or mobile devices to submit responses to questions embedded in the presentation (e.g., Poll Everywhere, Padlet).

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

Co-presenter: *Ray Ishimoto — Math Teacher, San Jose Unified SD*

Waddle, Katie — San Francisco International HS
Getting the Most Out of a Test

We found that tests weren't showing us what all students had learned, but we weren't ready to completely abandon a traditional assessment structure. We will describe the progress we've made in developing tests that actually show us what students know. These small changes have really made a difference for our teaching and for our students. We teach in classrooms of English learners, but this workshop will be applicable to any context.

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

Co-presenter: *Nicholas Chan — Mathematics Teacher*

Wales, Jenny — Lead Designer
Workshop: How to Design Great Digital Activities

Ever wonder what goes into designing a digital math activity? In this session, you'll learn about design techniques from the Lead Designer at Desmos. We'll go through the principles of design thinking, then split into groups for a few hands-on exercises. The skills you'll learn will help you evaluate products and activities—and build your own—inside and outside of Desmos.

8-12 | PRS | 503 | Saturday, 3:30 - 5:00 | Asilomar, Heather | \$

Co-presenter: *Shelley Carranza — Math Teacher, Desmos*

@CAMathCouncil



Available during the conference at Merrill Hall, Fred Farr and Curlew on Friday and Saturday.

Waller, Patrice — Assistant Professor, CSU, Fullerton
Ensuring College Readiness for All

This session is designed to share 4 modules designed for pre-service teachers of mathematics that increase their understanding of what it means to be college ready in mathematics. The modules will include mathematics content, mathematical practices, interactive tasks, and video cases. Modules topics include Linear functions, quadratics, factoring and ratios. Each module has piloted with pre-service and in-service teachers to inform revisions. Feedback is requested.

8-12 | INT | 315 | Saturday, 11:00 - 12:00 | Asilomar, Triton | BT

Co-presenter: Cherie Ichinose — Mathematics Professor, CSU, Fullerton

Wasserman, Kelli — Math Consultant,
Univ. of California, Santa Barbara
Is the Unit Always 1? Nope!

Do your students struggle with number sense, math facts or understanding word problems? We believe that student understanding of “the unit” is essential to developing number sense and the ability to operate with numbers. Together we will explore addition and subtraction concepts using multiple representations, context and tools. Come see how the use of manipulatives, exploration and classroom discussion, can allow your students to see that $3+4$ and $3/7+4/7$ are really not that different!

PK-5 | INT | 250 | Saturday, 9:30 - 10:30 | PG Middle School, Rm 32 | BT

Co-presenter: Jennifer Hagman — Mathematics Consultant

Weker, Ethan — Math Instructor, Mid-Peninsula HS
How to Have Effective Math Debates Using Technology

In Math Practice 3, students are expected to “construct viable arguments and critique the reasoning of others,” and debate is a great vehicle to achieve this goal. In this session, we will explore the use of technology in various methods to improve the engagement and quality of debates. Participants who would like to participate in a demonstration debate during the session should come with a device that can access Google docs.

8-12 | INT | 443 | Saturday, 1:30 - 3:00 | PG Middle School, Rm 24 | BT

White, Catherine — Math Facilitator, Chase Avenue
What Did You Say? Effective Classroom Discussion

Shares activities and strategies to promote classroom discourse in support of all learners; exploration of thinking routines and classroom discussion. Engage in activities and student examples to see the impact class discussion has on achievement.

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

Co-presenter: Mindy Fullerton — Math Facilitator, Cajon Valley USD

Willmore, Craig — Learning Services Educator, ORIGO Education
Celebrating Conceptual Math and Engaging Games

Teachers will be shown a variety of strategies and engaging games that focus attention on conceptual understanding and retention of basic multiplication facts. Participants will be able to make connections with the strategies learned and practice these through games focusing on the Standards for Mathematical Practice 3: Constructing Viable Arguments and Critiquing the Reasoning of Others through appropriate language.

3-5 | INT | 145 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 26 | BT | \$

Willson, Dianne — Math Program Specialist, Elk Grove Unified SD
Strategies for Student Discourse

We know that student discourse is essential for learning. In this interactive workshop, participants will engage in easy-to-implement activities that encourage quality student discourse. Join us as we set students on a path that will enable them to self-monitor their own contributions when working in small groups.

3-8 | INT | 136 | Saturday, 8:00 - 9:00 | PG Middle School, Rm 7 | BT

Co-presenter: Nick Freathy — Math Instructional Coach, Elk Grove Unified SD

Wilson, Johnnie
Working Word Problems: Focus on Problem Solving/Communication

Word problems are a challenge for our teaching and our students’ learning. Take back the math in word problems. Focus on opportunities to build students’ problem solving ability and math communication skills. This session will share strategies developed in PD in a school with a largely English Learner student body. We will learn ways to make language accessible, how to use word problems to examine mathematical language and how to make problem solving the central, essential activity.

3-5 | PRS | 403 | Saturday, 1:30 - 3:00 | Asilomar, Heather | BT

Winicki Landman, Greisy — CA State Polytechnic Univ., Pomona
PWWx2: Proofs Without Words + Ponder, Wonder and Write

A Proof without Words-PWW is a diagram or sequence of diagrams that help us see why a particular mathematical statement is true even without accompanying verbal explanations. Making sense of a given diagram and building a sequence of valid logical steps from the provided information to the conclusion statement constitute the challenge that PWW brings. The participants accepting the challenge will experience the great pedagogical value of a series of stimulating exercises in visual thinking.

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

Zaragoza, Diana — Sacramento City College
GAMES+TASKS=LEARNING+ASSESSMENT:
A Balanced Approach to Math

Engaging students is an important component of mathematical learning and development. High-quality games and engaging tasks are a powerful way to inspire mathematical thinking and discourse. Participants will engage in fun games and rich tasks that ignite student learning and support formative assessment of mathematical development. This hands-on, take it with you workshop will provide you with games, tasks and alternatives to traditional assessment. Fluency is much more than facts!

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

Be sure to rate the sessions you attend using the **EduPlus app**.

Please stay on the paved pathways 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.



Enter to win a free registration or free housing at next year’s conference by downloading the **conference evaluation** at EduPlus app.



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	8-12	Ldship/TchEd	GI		
Acosta, Kristen	The Initial Hook of a Math Journey	X						X	
Albrecht, Masha	Students as Decision Makers: Activities for Social Justice				X			X	
Alcosser, Howard	AP Calculus: My Favorite Class!				X			X	
Anderson, Jody	Using Children's Literature in Math to Ignite the Passion	X						X	
Ani, Karim	Math as the New Civics (aka: Teach Math, Save Country)				X			X	X
	Lesson Modeling, Mathalicious				X				
Aoki, Marisa	Number Sense in the Secondary Classroom			X				X	
Arth, Karen	Empowering Students to Make Mathematical Connections				X			X	
Asturias, Harold	Maker Projects: Activating Students' Agency, Authority, and Identity			X					
Auer, Tyler	Classifying and Writing Story Problems	X	X					X	
Baker, Elizabeth	Student Teamwork Strategies			X				X	
Balli, Jessica	Assessments That Capture Evidence of More Than Just Skills			X				X	
Bastable, Virginia	Support Math Argument by Linking Arithmetic to Algebra (K-8)	X	X	X	X			X	
	Using Contexts to Examine Division: Whole to Fractions		X	X					
Beatini, Tom	Want to Develop Math Power? Use High Level Tasks!			X				X	
Berglund, Jorgen	Making Sense of the Standard Long Division Algorithm		X	X				X	
Biehl, Chuck	The Facility Location Problem: Modeling in Algebra and Precalculus				X			X	
Blaschke, Mike	Engage & Assess Understanding with Desmos Activities			X				X	X
Blinstein, Anna	Beyond Showing Work: Bring Students' Thinking to the Front				X			X	
Bob-Waksberg, Becky	Select and Sequence: Empower Students Through Discourse			X					
Bonsangue, Martin	Full STEAM Ahead: Blending Art, Geometry, and Number Theory		X	X				X	
Boswell, Laurie	Hanging Out On a Number Line: You're on the Spot!		X					X	
Bradley, Kathy	Math and Language; not Math or Language		X	X				X	
Brown, Kyndall	An African Mathematical Legacy: Culturally Relevant Pedagogy						X	X	
Brownell, Chris	HexaFlexagons: A Mathematical Curiosity & Joyous Depth						X	X	
Buckner, Barbie	NASA's Scale of Discovery: Ratios, Conversions & Scale			X				X	
Buljan, Mia	Practical Strategies for Powerful Explanations	X	X					X	
Burns, Marilyn	Lessons Learned from Classroom Teaching						X	X	
Burrill, Gail	Functions: What Makes Them So Difficult?				X			X	
Cagle, Peg	Purposely Leveraging Community (PLC): To Go From Good to Great						X	X	
Callahan, Patrick	AP Mathematical Modeling? This Changes Everything						X	X	
Carlyle, Ann	K-2 Number Talks with Number Lines	X						X	
Carter, Sally	Empowering Students in a TRU Math Classroom	X	X					X	
Chai, Yun Ji	How to Help EL Students Access Mathematical Text	X	X					X	
Chamberlain, David	A Hands-on Approach to Applying The Distributive Property		X	X				X	
Champagne, Zachary	Learning to Listen Through Rich Mathematical Tasks	X						X	
Chappill, Shalek	Superhero Math Style	X						X	
Cheng, Ivan	Transforming How To Teach Transformations				X			X	
	How to Desmo-fy Your Math Lessons to Guide Student Discovery				X			X	
Chialvo, Federico	Authentic Mathematics: For the Love of Mathematics		X	X				X	
Clark, Heather	Mindful of Math		X					X	
Commons, Joan	Fraction Division: 4 Meanings and "Why the Reciprocal?"		X	X				X	

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	8-12	Ldship/TchEd	GI		
Connelly, Ralph	Making Sense of Number Sense		X	X				X	
Cook, Marcy	Seeing & Understanding Before Memorizing: Basics & Beyond		X					X	
Costa, Elmano	Powerful Math for ELs: It Only Takes a Change in Mindset!	X	X					X	
Curran, Elizabeth	Using Anchor Tasks to Ignite Learners		X					X	
Curtiss, Josh	Seductive Mathematics			X				X	
Damm, Suzanne	Enhancing Mathematical Practices in the Classroom		X					X	
Danielson, Christopher	From Counting to Calculus: All Students Are Mathematicians						X	X	
DeCarli, Elizabeth	Doing Math with Teachers: PD to Transform Instruction				X				
Dimas, Cecilio	Reasoning About Proportional Reasoning			X				X	
Dorman, Brandon	Universal Design for Learning Strategies for All Teachers						X	X	
Douglas, Lew	A Transformational Approach to Congruence Proofs in Geometry				X				
Dow, Seth	Teaching Statistics Using R				X				
Echaves, Toni	ELD Strategies Are Not Just for ELD Time!	X						X	
Edmonds, Ellen	Pose Planned, Intentional Questions to Get Students Talking						X	X	
Eisenberg, Gary	Singing, Dancing, and Playing Through K-3 Mathematics	X						X	
Ellis, Wade	Developing Flexibility in Solving Linear Equations			X				X	
Erickson, Tim	Data Science Games				X			X	
Fambrough, Rayshell	Tech Tools for Conceptual Understanding		X	X				X	
Farrand, Scott	Anticipate the Coolness of Math				X			X	
Farrar, Scott	The Wrong Answers of Khan Academy and How to Use Them				X			X	
Fender, Tierra	Collaborating to Disrupt Racialized Participation Patterns						X	X	
Fenton, Michael	Applying the Five Practices to Visual Patterns			X				X	
Fetter, Annie	Think, Talk, Write, & Type Math: The Problem Solving Process		X	X				X	
Fish Doto, Darlene	Counting and Number Sense	X	X					X	
Flynn, Mike	Using Robotics to Engage Students in Mathematical Practices				X				
Foster, David	Remembering 44 of the 60 Years of CMC at Asilomar						X	X	
Foster, Hallie	I've Got Problems				X			X	
Frandsen, Eric	Do You Know it When You See it? Rigorous Math Implementation					X			
Fullerton, Mindy	Mixing It Up With Math: Blended Learning		X	X				X	
Gale, Mardi	Coaching/Being Coached for the SMPs: Essential Elements						X	X	
Garcia, Javier	Mathematics and the Art of Storytelling						X	X	
Garner, Jamie	Fluency: Facts or Fiction?	X	X					X	
Garrison, Derrall	Engage Students in Math With Design Thinking: VR and Coding	X	X						X
Gilliam, Sandie	Growth Mindset and the Value of Mistakes in Learning			X				X	
Goebel, Lori	Creating a Mathematician's Mindset		X					X	
Gojak, Linda	Linking Teaching Practices and Visible Learning						X	X	
Goldenstein, Donna	Enriching the Geometry/Masurement CCMS Content Through Art		X					X	
Gomez, Emiliano	Let's Do Some Beautiful Math Problems				X			X	
Gray, Carolyn	Renewable Energy House: An interdisciplinary Project				X			X	
Green, Jillian	Fostering Inquiry and Independence in the Math Classroom				X			X	
Hagman, Jennifer	Why Do Students Struggle? The Matter of Units			X				X	
Hawkinson, Lawrence	An Old Timer's Remembrances						X	X	

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	8-12	Ldship/TchEd	GI		
Hayden, John	Grading For Growth In Mathematics				X			X	
Hein deMause, Jennifer	Reaching SPED Students Through Concept Progressions	X	X					X	
Henwood, Cory	Experience Digitally Enhanced 3 Act Math Tasks						X	X	
Horgan, Connie	Curiosity and Collaboration: The Power of Divergent Problems				X				
Holmes, Jamie	Amp Up Engagement Through Projects & Math-tivities			X				X	
Hoos, Shannon	Calculated Risk: Building Community in Middle School			X				X	
Hull Barnes, Lizzy	Building Teacher Leadership with Video Based Discussion					X			
Humphreys, Cathy	Kindling Students' Mathematical Agency Through Number Talks						X	X	
Johnson, Jordan	It's Not About the Grades: Teaching Without Scores						X	X	
Jones, Brittany	Spice Up Math Time!	X						X	
Joseph, Julie	Building Fraction Understanding Through Number Talks		X	X				X	
Joyce, Martin	Cooperative Learning Strategies			X				X	
Kanemoto, John	Differentiation 101						X	X	
Katayama, Mary	Increase Mathematical Thinking Through Talking and Writing	X						X	
Kelemanik, Grace	Using Routine Rehearsals to Transform Teaching Practices						X		
Khalsa, Arjan	1 to 1 Million: Number Sense Progressions	X	X					X	
Kim, Talk	Success in Fractions		X	X				X	
Knotts, Angela	Building Algebra: Laying Powerful Foundations		X					X	
Kossover, Zeke	Surprising Strategies for Games that Use Probability				X			X	
Kotko, Andy	Making Sense of Problem Solving in Grades 1-2	X						X	
Krasnow, Allison	Fostering Discourse & Reasoning with Desmos Activity Builder			X				X	
Kriegler, Shelley	Linear Functions: Four Strategies to Spark Engagement						X	X	
Kysh, Judith	Balancing Core Practices and Core Content and Time				X			X	
LaBelle, Laura	Building Measurement Lessons While Moving Full STEAM Ahead	X	X					X	
Lahme, Brigitte	Maker Tasks for Mathematics: Make a Yardstick	X	X					X	
LaLonde, Nikki	Break the Cycle: Reframing Behaviors to Re-Engage Students in Learning Math			X					
Lambertson, Lori	Size and Scale of Earth and Moon with Exploratorium "Snacks"				X			X	
Langbort, Carol	Spatial Visualization Activities: Tangrams and Pentominoes		X					X	
Lantsman, Denis	Computer Science in the Math Classroom				X			X	
Lau, David	Discrete Mathematics: Combinatorics				X			X	
Lazzarini, Jeanne	Making Mathematical Sense Through Design Challenges			X				X	
Leamons, Crista	Capture and Communicate: Granting Student Voice with Tech	X						X	
Lee, Solana	Capturing Mathematical Thinking in the Elementary Grades	X	X					X	
Leinwand, Steven	Math Homework: It's Time for a Major Overhaul						X	X	
Luberoff, Eli	Technology That Thinks WITH Students, Not FOR Students				X			X	
	Designing Effective Digital Activities				X			X	
Marti, Andres	Strategic Use of Technology Tools for Statistics in Algebra				X			X	
Matthews, Mary Elizabeth	Probability and Statistics: The Middle Grades Connection			X				X	
McClain, Maria	Maximizing Math Potential: Mastering Algebra X and Y				X			X	
McDowell, Denise	Eye the Prize	X						X	
McEntee, Rhonda	Sparking Deeper Understanding Through Real-World Problems		X					X	
McGrath, Lauren	Spiraled Assessment for Spiraled Learning			X				X	

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	8-12	Ldship/TchEd	GI		
McNamara, Julie	Blast from the Past: Return of the Tug of War		X	X				X	
Medina, Elsa	Fun with Algebraic Thinking				X			X	
Meier, Nancy	Number Talks for Struggling Students	X	X					X	
Meyer, Dan	Full Stack Lessons						X	X	
Miller, Brian	The Pedagogy of Origami				X			X	
Mitchell, Kathy	Beyond TENS & ONES: Developing Place Value Concepts	X						X	
Mohanty, Yana	Spatial Reasoning: Hands-on Volume and Surface Area Lessons			X				X	X
Moore, Sara	I Don't Get What They Want Me to Do!			X				X	
Morris, Kathy	Fractions Are Numbers Too!		X					X	
Morrison, Patty	Using Literature to Engage PreK-1 Student Understanding	X						X	
Morrow-Leong, Kimberly	Mining the Professional Power of the Student Work Clinic		X	X					
Moschkovich, Judit	Mathematics, the Common Core, and Language						X		
Moskowitz, Stuart	T184 Art Project: A Creative Test Alternative for Algebra				X			X	
Mulhearn, Dennis	My Favorite Contest Problems Are for All Students		X	X				X	
Nank, Sean	How Do I Adapt a Growth Mindset in My Assessments?				X			X	
Newell, Christine	Building Mathematical Language & Precision Through Routines		X	X				X	
Nguyen, Ho	Strengths-Based Coaching to Support Deep Learning for Equity					X			
Novelli, Barbara	Making the M in STEM Powerful and Meaningful Mathematics	X	X					X	
Orton, Chase	Storming the Ivory Tower: Bringing Calculus to All						X	X	
Parker, Ruth	Transforming Math Classrooms: A Deep Dive Into Number Talks			X					
Patterson, Brandolyn	Developing Global Competency in Mathematics			X				X	
Pesavento, Laura	Routines! Routines! Routines!	X						X	
Phillips, Perrin	Launching Math Workshop in Your Classroom		X						
Picciotto, Henri	Geometric Puzzles in the Classroom						X	X	
Pickford-Murray, Breedeen	High Tech, Low Tech: Striking the Balance						X		
Pickford, Avery	First Days of School: Blending Classroom Culture and Content				X				
Preston, Robert	Empowering Educators: Coaching 101					X			
Queen, LaMar	Music, Math, Rigor, Hip Hop, Excitement, and Empowerment		X	X				X	
Ramos, Jeanne	Developing Students Algebraic Thinking & Academic Language			X				X	
Reardon, Tom	Discover Transformational Geometry in 15 Seconds				X			X	
Reeves, David	Transforming with Tessellations: Math Meets Technology & Art				X			X	
Resek, Diane	Proof That Makes Sense to Students				X			X	
Reyerson, Hardy	Sir Isaac Newton: The Man, the Mathematician, the Legend				X				
Rodgers, Sherry	Newcomers' Session						X		
Rodriguez, Marin	Using Games and Toys to Build Number Sense			X				X	
Rossi Becker, Joanne	New 12th Grade Course in Mathematical Modeling				X			X	
Ruibal, Michael	Engaging High Needs Learners with Communication Strategies				X			X	
Saarnio, Lora	Mathematical Mini-Universes	X						X	
Safi, Farshid	Mathematical Sense Making Through Purposeful Technology Use				X			X	
Sagun, Theodore	Ratios & Proportions from Elementary to Algebra			X				X	
Schaffer, Karl	Let's Get Loopy with Geometry						X	X	
Schierer, James	Seniors Financially Literate for Today and Tomorrow				X			X	

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	8-12	Ldship/TchEd	GI		
Schneider, Craig	Structure and Repeated Reasoning: Growing Student Thinking						X	X	
Schultz, Tammy	Exploring the Geometry of Islamic Tiles						X	X	
Schwartz, Christen	"New" Math in CCSS-M: This Isn't the Way I Learned It!		X	X				X	
Seashore, Kimberly	Beyond Tacos: Culturally Responsive Math for Teachers					X		X	
Selby, Victor	Math as the Language of Science: Building the Great Models				X			X	
Shore, Chris	Teaching the Forgotten 4th C: Creativity in the Math Class				X			X	
	The Clothesline Grows Up: Functions on the Number Line				X			X	
Shumate, Linda	Newcomers' Session						X	X	
Sola, Tracy	Growing a Mathematical Community in Primary Classrooms	X						X	
Spencer, Joi	CAMTE Business Meeting					X			
Standiford, Gail	Catapults, Captured Royalty and Desmos				X			X	
Statmore, Elizabeth	Creating a Culture of Exploratory Talk				X			X	
Stern, Michael	Math Steeplechase!		X	X				X	
Sullivan, Margaret	Rigor 4 All: Examining How to Unite Access and Rigor				X			X	
Sulsberger, Megan	The STEM Rubric: A Tool for Pre-Service Teacher Preparation					X			
Svensson, Elizabeth	Connecting Math to Sustainability for All Kinds of Learners			X				X	
Taylor, Megan	From Tsuruda to Sicherman (v 6.0): Old School v. New School				X			X	
	Math Teaching As an Act of Social Justice				X			X	
Toncheff, Mona	Building a Student-Centered Classroom				X			X	
Trescott, Ann	You've Got the Data: Now What?			X				X	
Trevino, Emma	Student Discourse in Mathematics: What Are They Thinking?		X	X					
Tuska, Agnes	Teaching Heuristic Thinking 60 Years Ago and Now				X			X	
Vacca, Nick	The Journey to Providing Equitable Access to Equations			X				X	
Veater, Carl	Making Decisions Mathematically: Real Mathematical Modeling				X			X	
Vierra, Vicki	Build a Maths-Positive Culture: Support Great Maths Teaching						X	X	
von Pallandt, Allen	Creating a Collaborative Math Classroom				X			X	
Waddle, Katie	Getting the Most Out of a Test				X			X	
Wales, Jenny	Workshop: How to Design Great Digital Activities				X				X
Waller, Patrice	Ensuring College Readiness for All				X			X	
Wasserman, Kelli	Is the Unit Always 1? Nope!	X	X					X	
Weker, Ethan	How to Have Effective Math Debates Using Technology				X			X	
White, Catherine	What Did You Say? Effective Classroom Discussion		X	X				X	
Willmore, Craig	Celebrating Conceptual Math and Engaging Games		X					X	X
Willson, Dianne	Strategies for Student Discourse		X	X				X	
Wilson, Johnnie	Working Word Problems: Focus on Problem Solving/Communication		X					X	
Winicki Landman, Greisy	PWWx2: Proofs Without Words + Ponder, Wonder and Write				X			X	
Zaragoza, Diana	GAMES+TASKS=LEARNING+ASSESSMENT: A Balanced Approach to Math	X						X	

Be sure to rate the sessions you attend using the **EduPlus app**.

Drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of our three conferences. See page 7.

EXHIBITS

Company	PG Middle Gym	Company	PG Middle Gym
Activate Learning	214	McGraw-Hill Education	223-225
Bay Area Teachers and Mathematicians	237	MOEMS - Math Olympiads for Elem. and Middle Schools	217
Big Ideas Learning	244	Moore Educational Resources	228-229
Brush with Science	209	Mountain Math/Language	249
Buzzmath	238	Music Notes	219
California Casualty Auto and Home Insurance	246	Nasco	222
California State University, San Marcos	233	National Council of Teachers of Mathematics (NCTM)	211-212
Carnegie Learning	234-235	National Geographic Learning/Cengage Learning	206-208
Center for Math and Teaching	256	Next Gen Math	221
CMC ComMuniCator	202-203	ORIGO Education	239
CMC-N bag pickup	205	Pearson	247-248
CMC-N Exhibits	213	Reasoning Mind	277
CMC-N Mini Grants	213	Sadlier	251
CMC-N T-shirts	204	Stenhouse Publishers	245
CPM Educational Program	253-255	Stokes Publishing Company	266-267
CSU/UC Mathematics Diagnostic Testing Project (MDTP)	236	Sumboxes	264
Curriculum Associates	227	Symphony Math	265
Curriculum That Matters, Inc.	258-259	Teacher Wear	262
Fresno Pacific University	257	TEAM UP! For Common Core Learning	276
Heinemann Publishing	274-275	Texas Instruments	215-216
Houghton Mifflin Harcourt	271-273	The College Board - SpringBoard	218
Ignited	263	The Math Learning Center	241-243
Imathgination LLC	226	TPS Publishing Inc.	231-232
Mathscribe	261	Western Governors University	252

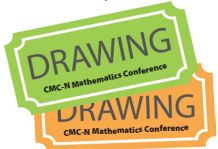
Pacific Grove Middle School
 Friday, 6:00 - 7:30pm **and** Saturday, 7:30am - 4:30pm
 Saturday, Drawing at 3:00pm
Exhibits close promptly at times listed above so visit early!

~ 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.

Check out the Exhibits Hall in the Pacific Grove Middle School Gym, submit your drawing ticket (**on your registration form**), and drop by after 3pm Saturday to see if you've won a prize!

Prizes will include vouchers for materials from some exhibits, a Chromebook, Bluetooth speakers, a document camera, wireless earbuds, flash drives, power banks, registration for Asilomar 2018, and more!

Winners will receive a text message and must pick up their prize in the gym before Saturday evening.



EXHIBITS — PACIFIC GROVE MIDDLE SCHOOL

271 Houghton Mifflin	272 Harcourt	273 Harcourt	274 Heinemann	275 Publish	276 TEAM UP Common Core	277 Reasoning Mind
--------------------------------	------------------------	------------------------	-------------------------	-----------------------	---	---------------------------------

**EXIT
LADIES
ROOM**

209 Brush with Science
206-208
National Geographic
Cengage

ENTRANCE

205 CMC-N Bag Pickup
204 CMC-N T shirts
202-203
CMC ComMuniCator

219 Music Notes	228-229 Moore
218 Spring Board	Educational Resources
217 MOEMS	227 Curriculum Associates
215-216 Texas Instrument	226 Imathgi nation
214 Activate Learning	223-225 McGraw Hill Education
213 CMC -N Exhibit	Mini Grants
211-212 NCTM	222 Nasco
	221 Next Gen Math

239 ORIGO	249 Mountain Math
238 Buzzmath	247-248 Pearson
237 Bay Area Teachers & Mathematicians	
236 CSU/UC MDTP	246 Calif Casualty
234-235 Carnegie Learning	245 Steinhouse Publish
233 CSU San Marcos	244 Big Ideas Learning
231-232 TPS Publishing	241-243 The Math Learning Center

259 Curriculum That Matters
258 Curriculum That Matters
257 Fresno Pacific U
256 Center Math Teaching
253-255 CPM Educational Program
252 Western Governors University
251 Sadlier

261 Mathscribe	262 Teacher Wear	263 Ignited	264 Sumboxes	265 Symphony Math	266 Stokes Publishing Company	267
--------------------------	-------------------------------	-----------------------	------------------------	--------------------------------	---	------------

**EXIT
MEN'S
ROOM**

AWARD NOMINATIONS

It is time to nominate those individuals who might be recognized for their contributions to mathematics education. CMC has three awards:

1 The **George Polya Memorial Award** may be conferred upon a teacher K-16, who has been deemed as an outstanding teacher of mathematics over a sustained period of time, has supported CMC activities, has been an active participant in CMC, and has high visibility throughout the state of CA.

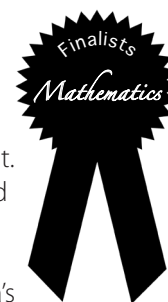
2 The **Edward Begle Memorial Award** may be conferred on an educator who has, for a sustained period of time, been supportive of CMC activities, has offered continual encouragement, and has been actively involved in California mathematics.

3 The **Walter Denham Memorial Award** may be presented to a person who is recognized as an advocate for mathematics education, not only at the local level, but also at the broader state and national levels.

For more information about the nomination process, check the CMC-Math website under Awards and Recognition. Nominations are due May 1, 2018.

2017 PRESIDENTIAL AWARD FINALISTS ANNOUNCED!

The Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) are the nation's highest honors for teachers of mathematics and science. Since 1983, more than 4,700 teachers have been recognized for their contributions in the classroom and to their profession. This year the state panel has selected three 7-12 teachers to go forward as finalists in mathematics. A national panel of distinguished mathematicians and educators make the final recommendation to the White House and one of the three will be selected to receive the award for California. The three finalists are:



Mr. Clayton Dagler

Clayton is a high school teacher at Luther Burbank High School in the Sacramento City Unified School District. He has been teaching 17 years. He currently teaches International Baccalaureate math SL classes, one applied math class with computer programming and robotics and an intro to computer science class. He has been one of the main trainers for the UC Davis C-STEM program. He was the 2013 C-STEM Teacher of the Year at the UC Davis Center for Integrated Computing and STEM Education. In 2016, he was named one of California's Distinguished Teachers by Teach California. He is often a speaker at the CMC North Conference as well as the Sacramento Area Math Educators conference. He recently spoke at the Smarter Government Through Innovation Conference hosted by the California Department of Technology. He is a previous California PAEMST finalist (2015).

Mr. James Snyder

James teaches at the Anderson Valley Junior Senior High School in Boonville, California. He has been teaching ten years. He has taught every level of mathematics from 7th grade through AP Calculus. He currently teaches two periods of Integrated Mathematics II, one period of AP Calculus, two periods of Music Production and Technology and one period of STEM. He is the Mathematics Department Chair. He is also the Founder and Director of the Boonville Space Program that challenged students to build a weather balloon payload to collect data and imagery from space. In 2015, he was the California State Science Fair Teacher of the Year, Senior Division.

Mr. Andrew Walter

Andrew is a teacher at Alonzo Stagg Senior High in Stockton Unified School District. He has been teaching 25 years. He currently teaches Pre-Calculus, AP Calculus and pre-Engineering. He is Nationally Board Certified. He is a MESA (Mathematics, Engineering, Science Achievement) advisor and received the award of excellence in 1994, 1996, 1999, and 2000. He led student groups to the national competitions in 2006, 2012 and 2014. He has received the Carlson Foundation Outstanding Teacher of America Award and was a previous PAEMST finalist (2013).

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

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 1 - December 3, 2017

Rebecca Lewis

Rebecca Lewis, CMC-N President



Drop off your **Scavenger Hunt** for your chance to win a \$250 voucher to attend any of our three conferences. See page 7.

CALL FOR SPEAKERS

CMC-North 60th Annual Conference

Asilomar and Pacific Grove Middle School, Pacific Grove

Student Voice: Let's Hear It!

November 30 - December 2, 2018

Proposals will be accepted online at www.cmc-math.org/activities/north_speakers.html from January 30 to May 1, 2018. We welcome new and returning speakers to submit proposals. Speaking at a conference is a great way to share your ideas and expertise with your colleagues.

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

CMC STUDENT ACTIVITIES TRUST

Tax Deductible Contribution

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

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

Applications

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

BOARD MEMBERS

2016-17	State	President Vicki Vierra Past President Kathlan Latimer President-Elect Cathy Carroll Secretary Ruby Durias Treasurer Bruce Grip	North	President Rebecca Lewis President-Elect Rita Nutsch Vice President Ana England Secretary Alison Nash Treasurer Brian Lim
	2018-19	State	President Cathy Carroll Past President Vicki Vierra President-Elect Christine Roberts Secretary April Goodman-Orcutt Treasurer Bruce Grip	North

CALENDAR OF MATH EVENTS



April 23-25, 2018

NCSM Annual Conference, Washington D.C.

April 25-28, 2018

NCTM Annual Meeting and Exposition, Washington D.C.

November 2-3, 2018

CMC Southern Section Mathematics Conference, Palm Springs, CA

November 30-December 2, 2018

CMC Northern Section Mathematics Conference at Asilomar, Pacific Grove, CA

March 9-10, 2018, Visalia, CA

CMC Central Section Mathematics Symposium

For information and links to these math events go to:

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

AFFILIATED GROUPS

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

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

Mt. Lassen Math Council (MLMC)
Hope Bjerke, hbjerke1@gmail.com

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, crozier4mesc@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

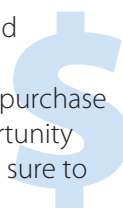
Santa Clara Valley Math Association (SCVMA)
Rita Korsunsky, rikorsunsky@gmail.com

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

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

EXHIBITS

Be sure to make time in your schedule to visit the exhibits at the Pacific Grove Middle School Gym. You'll find a remarkable collection of mathematics education books, curriculum materials, teaching resources, games, manipulatives, and technology and services. Exhibit hours allow ample opportunity to explore, try out, and purchase product/services for use in your classroom or to help you meet your career goals. You'll also have the opportunity to get fresh ideas, valuable information and resources and to see demonstrations of how products work. Be sure to check the list of exhibits and map of the exhibit hall on page 38.



In Memoriam

~ Malcolm Swan ~



Malcolm's talent for eliciting mathematical thought from students was generational and unique, but he did more than any of us could have hoped to explain it. Through his talks, books, and workshops, he added to our profession in permanent ways far more than his death now subtracts. I know we will still be learning from Malcolm for decades, and throughout those decades, the best day of my week will be any day I get to introduce a new teacher to his work.

~ Carol Edwards ~



Dr. Carol Abe Edwards (1938 – 2017), Professor Emerita, St Louis Community College at Florissant Valley, Missouri; long time volunteer for, and Member of, NCTM, NCSM, and TODOS: Mathematics for ALL; wonderful friend and mentor for mathematics educators across North America. Carol shared her gifts with grace, compassion, and respect as she served on Boards, chaired NCTM Annual and Regional conference program committees, chaired an NCSM Annual meeting; or served as executive secretary for TODOS. Dr Edwards' presence will be missed; her words and actions will continue to shape mathematics educators and organizations as they work towards the goal of creating socially-just spaces for ALL youth and teachers to succeed.

~ Diana Herrington ~



In May of 2017, California lost a powerful, passionate, talented, influential, and beloved mathematics educator. Diana Herrington taught at Clovis High School for 30 years and was a full-time lecturer at CSU, Fresno. She coauthored a recently-published book, Teaching Math with Google Apps, has written and been the lead on numerous math exams, was a Presidential Award for Excellence in Math and Science Teaching (PAEMST) recipient, and has even had a theorem named after her at NASA. Diana was actively involved in CMC in the Central Section as well as at the state level.

THE LURIE CENTER SCHOLARSHIP

The California Mathematics Council supports three annual scholarships honoring the memory of Lurie Center who dedicated her career as a teacher to improving the mathematical literacy of students. This award will enable three teachers of color (one from each CMC section) to attend any CMC section conference.

This Lurie Center Scholarship will cover up to \$500 in conference expenses such as room, board, travel, and instructional materials (with no more than \$100 of the award to be used for instructional materials). Each awardee will also receive complimentary conference registration and a one year subscription to the ComMuniCator with CMC membership.

Criteria: ✓ K-14 teacher of color ✓ Teaching assignment includes mathematics ✓ Commitment to help students learn mathematics

The application is due on May 1st each year. Check the CMC website for more information. CMC-South members should also check on The Lurie Center Elementary Teaching Award, which has different qualification criteria.

We have not had anyone apply for this scholarship in recent years. If you enjoyed this conference and want to attend another CMC section conference, consider filling out an application next year!



Annie Fetter • Arjan Khalsa • Federico Chialvo
 Harold Asturias • Jamie Garner • Kim Morrow-Leong
 LaMar Queen • Lora Saarnio • Peg Cagle • Steve Leinwand
 Ignite Doyenne Suzanne Alejandre • Emcee Rebecca Lewis



CMC NORTH 2017
SATURDAY 7:30 PM, MERRILL HALL



STAY CONNECTED WITH CMC

www.facebook.com/CAMathCouncil

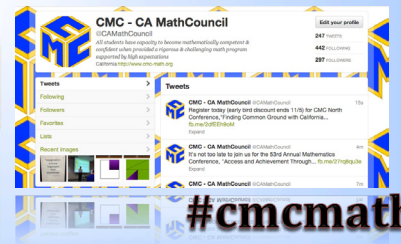


Like Us On
facebook



FOLLOW US ON
twitter

@CAMathCouncil



www.cmc-math.org

ASILOMAR CONTINUING EDUCATION UNITS (CEU)

SPECIFICS:

Course Title: **California Mathematics Council North Annual Conference**

Course Code: **17F EDU 870B 01**

CEUs: **1.5**

Course Fee: **\$65**

Date: **12/1/17 - 12/3/17**

- Earn 1.5 CEU (Continuing Education Units) for your Asilomar participation.
- Units are from **College of Continuing Education at Sacramento State University**. Generally it cannot 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 Spring Semester. Grades will not be available until May 2018. 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:

- ✓ Register for the conference.
- ✓ Attend the opening session Friday evening 7:30-9:00 p.m. at Pacific Grove Middle School Auditorium.
- ✓ Attend at least three sessions on Saturday, visit either exhibit area, and attend a Sunday closing session.
- ✓ 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.
- ✓ Complete the **Registration Agreement** and mail with credit card information or your check for \$65.00 (payable to CSUS College of Continuing Education) with your paper to Brian Lim by December 31, 2017.

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, 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 December 31, 2017 to:

CMC, Attn: Brian Lim
PO Box 234
Kentfield, CA 94914

Download form at
<http://cmc-math.org/temp/wp-content/uploads/2016/09/2017-Registration-Agreement.pdf>

Contract Education Program
Registration Agreement

SACRAMENTO STATE
COLLEGE OF CONTINUING EDUCATION

For CEU/Non-Credit Courses

Please submit registration form to: College of Continuing Education, 3000 State University Drive East, Sacramento, CA 95819-6103 Attention: Information and Registration Services.
 For your convenience you may also phone in your registration to (916) 278-4433.

- Registration and payment must be received no later than two weeks following the last class meeting.
- Please check with your district office regarding whether or not they will accept these units toward salary advancements.
- Refund requests will not be accepted. This policy applies to all non-credit, and CEU contract courses.
- For more information on the College of Continuing Education refund policy please go to www.cce.csus.edu.

PLEASE PROVIDE THE FOLLOWING INFORMATION:

Name - Last First

Home Address (Number, Street, Apt.)

City State Zip

Occupation

Home Phone Work Phone

E-mail

Birthday Sex Male Female

Highest level of education completed:
 High School A.A. B.A./B.S. M.A./M.S. Ph.D.
 Trade School/Other Some College

COURSE INFORMATION

5-DIGIT COURSE CODE	COURSE TITLE	DATES
17F EDU 870B 01	California Mathematics Council North Annual Confer	12/1/17 - 12/3/17

PAYMENT

<input type="checkbox"/> Check - payable to CSUS College of Continuing Education	Card Number <input type="text"/>
<input type="checkbox"/> Visa	Expiration Date <input type="text"/>
<input type="checkbox"/> Master Card	Amount <input type="text"/>
<input type="checkbox"/> Discover	Name of Cardholder <input type="text"/>
Cardholder's Signature <input type="text"/>	

All courses, instructors, locations and fees are subject to change or deletion without notice.

California Mathematics Council - Northern Section

Purpose:

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

Who May Apply:

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

Requirements:

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

Deadlines:

November 1 – up to \$500 **and** March 1 – up to \$500

Application:

1. Title Page

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

2. Description of Materials Use

- a. How will materials be used and with what goals in mind?
- b. Statement of need as related to your students
- c. Projected activities and timeline, if applicable
- d. Impact – Who and how many will be affected?

3. Materials Budget

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

4. Approval Signatures

- a. Grant Leader and Building Site Administrator and title

End Report:

Submit a short report to the Mini-Grant committee by the end of the year on how the purchased materials were used and the effectiveness of the purchased materials in order to be considered for a grant in the future

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

MAIL TO

US Mail:

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

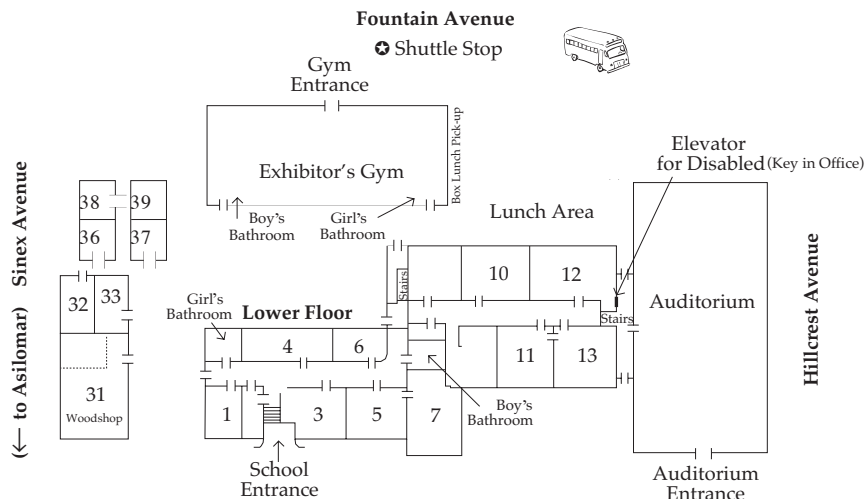
Via email:

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

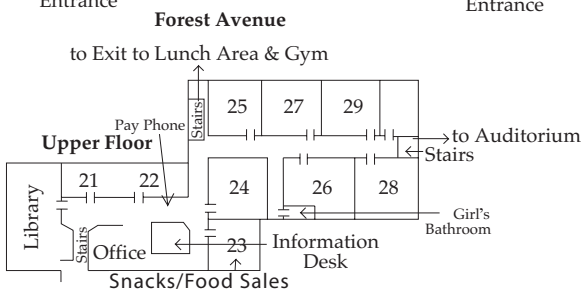
NOTE:

- Grant covers materials only, not teacher work time or compensation.
- Only one Mini-Grant can be awarded per applicant per school year.
- Grant is limited to current CMC-N members and to school sites in the CMC-N area.

PACIFIC GROVE MIDDLE SCHOOL



Please park on streets adjacent to the school.



BUS SERVICE will run between the Asilomar grounds and Pacific Grove Middle School on Friday from 5:30-9:30pm and on Saturday from 7:15am - 6:00pm.



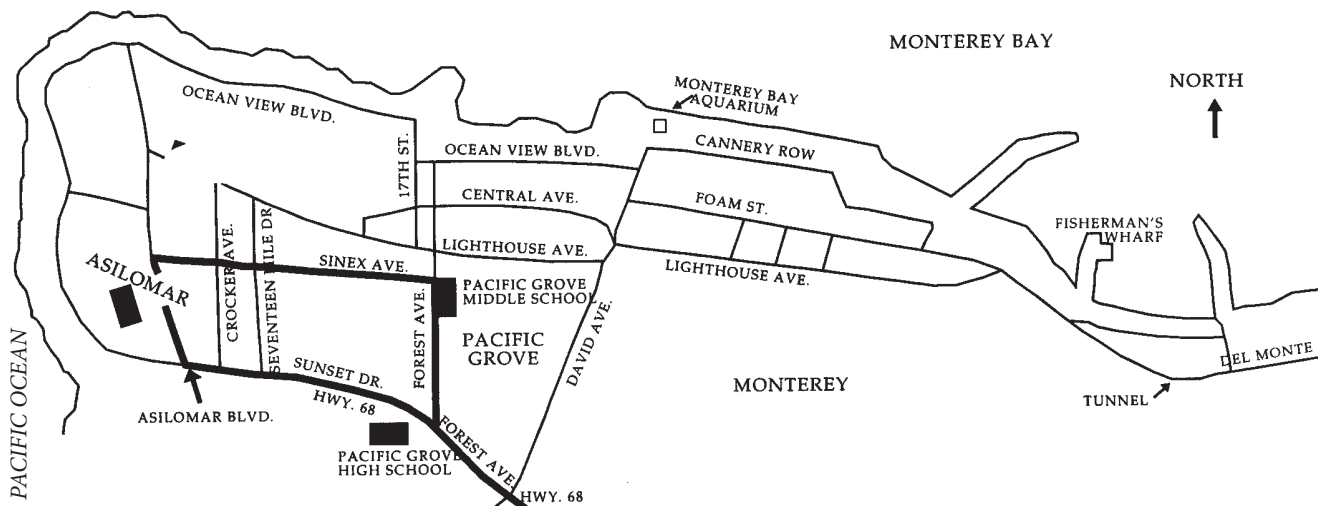
2017 CMC North Conference Going Mobile with EduPlus



CMC North Mathematics Conference 2017 goes mobile with EduPlus

Download EduPlus from the App Store, Google Play, or at <http://e.confplusapp.com/>. And be sure to visit <http://event.confplusapp.com/cmcn17/> to get a preview of the EduPlus features. Search sessions, create your own schedule, get notifications and evaluate sessions.

PACIFIC GROVE





Asilomar Math Conference Room Guide

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

LODGING	MEETING ROOMS
Afterglow Rooms 1501-1512	Acacia B4
Breakers East Rooms 821-832	Chapel Auditorium D5
Breakers West Rooms 833-840	Curlew C4
Cypress Rooms 717-724	Dolphin C5
Deer Lodge Rooms 121-150	Evergreen F1
Director's Cottage Rooms 133-1324	Fred Farr Forum E2
Embers Rooms 101-110	Heather C4
Engineer's Cottage Rooms 1202-1211	Klin E2
Guest Inn Rooms 901-903	Madrone G3
Hearth Rooms 1325-1336	Manzanita I & II B4
Live Oak Rooms 1101-1100	Marlin D4
Lodge Rooms 2.01-218	Merrill Hall G4
Long View North Rooms 101-110	Nautilus H4
Long View Middle Rooms 111-120	Oak Knoll I & II C4
Long View South Rooms 121-130	Oak Shelter F1
Manzanita Rooms 1001-1012	Sanderling C6
Oak Knoll Rooms 103-1024	Scripts D4
Pirates' Den Rooms 501-510	Surf & Sand G5
Sand Rooms 605-610	Toyon B4
Scripts Rooms 301-323	Triton H4
Shores Rooms 709-716	Whitehead B4
Spindrift North Rooms 849-856	OTHER
Spindrift South Rooms 841-848	BBQ Area E6
Stuck-up Inn Rooms 401-414	Crocker Dining Hall F6
Surf Rooms 601-604	Fire Pits H5
Tree Tops Rooms 111-120	Guest Check-In E5
Whitecaps North Rooms 809-820	Hearth Social Hall F1
Whitecaps South Rooms 801-808	Human Resources A3
Willow Inn Rooms 1025-1036	Meditation Space A3
Windward Rooms 701-708	Mott Training Center G1
Woodside Rooms 1212-1223	Park Ranger Office G2
	Phoebe's Café E5
	Seascape F6
	Swimming Pool A5
	Conference and Event Sales E4
	Viewpoint E4
	Volleyball Court H5
	Woodlands F5
	Yoga Room A3
	PARKING LOTS
	Parking Lot A E5
	Parking Lot B G5
	Parking Lot C H4
	Parking Lot D F2
	Parking Lot E E3
	Parking Lot F D4
	Parking Lot G D3
	Parking Lot H B3
	Parking Lot J A4
	Parking Lot K B4
	Parking Lot L B5
	Parking Lot M E2
	Parking Lot N H2
	Parking Lot P I3