

# CMC-N Mathematics Conference 2018

# ASILOMAR

[www.cmc-math.org](http://www.cmc-math.org)



CMC North Conference 61st Annual Conference

*Student Voice: Let's Hear It!*

November 30 - December 2, 2018

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

# 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!



Rita Nutsch - Conference Coordinator  
 Monica Rock - Program Chair  
 Julie Crozier - Registration  
 Linda Goulet - Pacific Grove MS Coordinator  
 Grayson Fong - Pacific Grove MS Tech Coordinator

Thank You

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Evaluate the conference by December 31, 2018 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 Katherine Wolfman and Danielle Gallagher.**



Go to [bit.ly/19ConEval](https://bit.ly/19ConEval) to enter to win a **free** registration or **free** housing at next year's conference by completing the **Conference Evaluation.**

## Kick-off | Mini Conference

Speaker	Topic (Session descriptions on page 4.)	Grade Level	Room
Shalek Chappell-Nichols	Integrating Nature of Math and the Arts...	PK-2	Heather
Mike Flynn	Beyond Answers: Creating Meaningful Mathematical Experiences for K-5 Students	K-5	Acacia
Emma Trevino, Alisa Brown, Hilda Borko	Deconstructing Student Math Content Knowledge and Groupwork Through Video-based Discussion	6-8	Oak Shelter
Shelly Carranza, Michael Fenton	Building Social+Creative Classrooms with Technology	7-12	Evergreen
Grace Kelemanik, Amy Luento	Developing Justification in ALL Students Through the Decide and Defend Instructional Routine	GI	Toyon

## Program | Friday - Sunday

	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	<b>KEYNOTE SESSION:</b> (information on page 5) Maria del Rosario Zavala, PhD, San Francisco State Univ. Teaching Mathematics in Times of Intolerance	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
	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)	
	8:00am-5:00pm	CMC Community Hub	Afterglow, Asilomar
	12:00-1:30pm	Lunch (refer to page 8)	Dining Hall, 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	<b>Ignite!</b> and <b>President's Party</b> 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, Asilomar
	9:00-10:15am	<b>MORNING KEYNOTE SESSION:</b> Grace Kelemanik and Amy Luento — #EmpoweredMathThinkers	Merrill Hall, Asilomar
	10:15-10:45am	Coffee Break	
	10:45am - Noon	<b>MID-MORNING KEYNOTE SESSION:</b> Anthony Muro Villa — Authorship of Mathematical Opportunities	Merrill Hall, Asilomar

# Kick-off Mini Conference

Friday | Asilomar 1:30 - 4:30

Pre-registration required.

**Shalek Chappell-Nichols**

## **Integrating Nature of Math and the Arts....**

In the integrating nature of math and the arts, we will explore hands-on ways to integrate math and visual and performing arts (drama, music, dance and visual arts) into the daily curriculum. Participants will be able to create lesson plans and other material they can take back to the classroom. A | PK-2 | Heather

**Mike Flynn**

## **Beyond Answers: Creating Meaningful Mathematical Experiences for K-5 Students**

Students develop a love and appreciation for mathematics when teachers value the process as much as, if not more than, the product. Getting answers certainly has its place but it's often the least interesting part of the work in math class. In this session, we will unpack specific methods teachers can use to engage students in mathematical practices and rich tasks that help them develop a deeper understanding of the number system and operations.

Participants in this session will engage in adult learning activities designed to mirror the experiences of K-5 students so they gain the perspective of the learner involved in productive struggle. By experiencing what it's like to be a student engaged in the mathematical practices, teachers will develop a better understanding of the practices and how they can leverage them in the classroom to elevate students' interest and sense-making. We will then debrief the experience and consider the instructional decisions and teacher moves that made the work interesting and increased participants' motivation to dig deeply into the ideas. You will leave with a number of frameworks they can use with their students that take advantage of existing resources and do not require a complete restructuring of their math classrooms. B | K-5 | Acacia

**Emma Trevino, Alisa Brown, Hilda Borko**

## **Deconstructing Student Math Content Knowledge and Groupwork Through Video-based Discussion**

In this session, participants will do math together before engaging in a video-based discussion to discuss student learning in math groups. Participants will construct a video-based discussion beginning with exploring what kinds of questions lead to authentic adult learning and collaboration. We will create and review various focal questions and discuss how those questions direct our attention to different aspects of video viewing. Participants will practice selecting a 2-3 minute video clip and try out various facilitation moves and participation structures while rehearsing a video-based discussion. We will close with a discussion about how video-based discussions are used or can be used in the participants' various contexts. C | 6-8 | Oak Shelter

**Shelly Carranza and Michael Fenton**

## **Building Social+Creative Classrooms with Technology**

At its best technology fosters creativity and connects people. Too often in classrooms, however, technology is isolating and stultifying: videos, writing numbers in blanks. Together, we'll look how technology can support a social & creative classroom. We'll focus especially on how to implement the 5 practices using Desmos.

D | 7-12 | Evergreen

**Grace Kelemanik and Amy Lucento**

## **Developing Justification in ALL Students Through the Decide and Defend Instructional Routine**

Creating and critiquing mathematical arguments is essential and often difficult for students – it takes repeated and explicit practice. Decide and Defend is a robust instructional routine designed to develop students' capacity to construct viable arguments and critique the reasoning of others (MP3). In it, students interpret and consider the validity of another's math work; decide for themselves if they agree with the work; and then defend their decision. During this session, participants will engage in the routine as math learners, unpack the routine, and discuss how it helps a wide range of learners critique and construct viable math arguments. They will leave understanding the components of the Decide and Defend instructional routine, how they work in concert to develop students' capacities to construct viable arguments and critique the reasoning of others, and how to get started implementing the routine for themselves and for their students. E | GI | Toyon



**Maria del Rosario Zavala, PhD.,**  
Assistant Professor of Elementary Education  
Mathematics, Bilingual Education, San Francisco  
State Graduate College of Education

*When I think about student voice I think about those voices in the margins. In addition to historically marginalized populations of students, our current political climate is creating new ways to oppress and exclude students from being visible and participating in school. Student trauma is a growing issue. Seeing our students clearly is essential for being an effective mathematics teacher. When we think of student voice, who can we not hear clearly? How can we center mathematics teaching on those students?*

### **Teaching Mathematics in Times of Intolerance**

This plenary session will be a chance to begin to think about ideas and questions to guide participants' work throughout the conference. I propose that shifting our teaching to draw in students from the margins requires disequilibrium. In the same way that teachers need students to experience productive disequilibrium when learning mathematics, participants will explore what productive disequilibrium may mean if they are to truly enact change. Using examples from contemporary research and policy, I will ask participants to think about what questions are truly necessary to ask of themselves, and what values underlie particular questions and decisions.

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.

Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00-5:00 and **pick up your swag**, learn about the **Scavenger Hunt** and your chance to win a \$250 voucher for any one of our three conferences!



Asilomar, Merrill Hall | 9:00-10:15

### **Grace Kelemanik and Amy Lucenta,**

Math Education Consultants and Co-Founders of Foster Math Practices

#### **#EmpoweredMathThinkers**

Students face a constantly changing, data-drenched world, filled with fake news and powerful technologies. Learning concepts and skills will not suffice, and leaving students behind is not an option. Every student needs to develop mathematical thinking and reasoning. This can only happen when students are talking together to make sense of important mathematics and each and every student is contributing to the conversation. So, how do we ensure that all students develop as mathematical thinkers and communicators? Leverage the predictable nature and uniform design of instructional routines to support students and teachers alike.



Asilomar, Merrill Hall | 10:45-noon

**Anthony Muro Villa,** Doctoral Candidate in Mathematics Education, Graduate School of Education, Stanford Univ.

#### **Authorship of Mathematical Opportunities: Examining the Ebb and Flow of Student Authority During Mathematical Groupwork**

Groupwork gives students the opportunity to build on others' ideas, grapple with challenges, and dig into conceptual understandings. It can help students develop autonomy, agency, and a sense of authority over their own learning process. But how does this happen—and how can it go wrong? This talk examines how classroom conditions and the delegation of authority can shape students' access to the mathematics. I focus on two middle school classrooms where student authority gets enacted in different ways, and question how authority is tied up with norms, expectations,

students' perception of status among their peers, and the mathematics tasks. One classroom is labeled as regular seventh grade and the other is designated as an accelerated seventh grade class. Using video clips of groupwork, excerpts from interviews, and results from a small-measures survey, I will share my analysis of student mathematical thinking in an authentic setting, and compare that analysis with students' own self-reported perceptions of groupwork and status. Using the lens of authority, I will advance an argument for how students variously share or usurp each other's opportunities to engage in mathematics while working collectively on a mathematics task.

## 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. 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 Council of Math Educators, AC3ME
- Santa Clara Valley Math Association, SCVMA
- Monterey Bay Math Council Education, MBMC



Join us for  
appetizers and  
beverages!

## Ignite! (April Goodman-Orcutt, emcee), and President's Party

Come join us at our President's Party, sponsored by CMC-North (appetizers and no-host bar), and the final Ignite! session produced by Annie Fetter. 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!

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

**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.



**CMC-Hub** will be open Saturday, 8:00am-5:00pm in Afterglow. Don't forget to stop by!

### Top 10 reasons why you should stop by the Hub!

- 10 - Connect with other members and find out what CMC can do for YOU
- 9 - Play some really cool math games
- 8 - Relax by the fire with a warm beverage
- 7 - It is centrally located and you'll regret it if you miss out
- 6 - Take a photo in front of our media wall
- 5 - There will be candy
- 4 - Hear what students have to say
- 3 - Buy your book for our upcoming book clubs
- 2 - Complete a Scavenger Hunt for the chance to win a \$250 voucher for any of our three conferences
- 1 - Pick up some fabulous CMC Swag! Who doesn't want that?

**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.



## CMC-NORTH OFFICERS

<b>President</b> .....	Rita Nuntsch
<b>President Elect</b> .....	Sarah Ives
<b>Vice President</b> .....	Monica Rock
<b>Treasurer</b> .....	Brian Lim
<b>Secretary</b> .....	Alison Nash

## CONFERENCE VOLUNTEERS

### Program Chair

Monica Rock

### Program Committee

Hope Bjerke, Mia Buljan, Michael Hernandez,  
Elizabeth Street, Carmen Whitman

#### With special help from:

Jessica Balli, Patrick Callahan,  
Solana Lee and Dan Meyer

### Evaluations

Linda Flood

### Registration

Julie Crozier

### Exhibits

Chris Tsuji, Mark Mosheim

### NCTM Representatives and Sales

Mary Ann Sheridan

### Mini Grant Awards

Linda Flood

### Pre-Service Volunteers

Brennan Brockbank, Jaime Bonato

### Asilomar Presiders

Robert Preston

### Conference Signs

Julie Stephens; Chair  
Linda Gillette-Koyen

### Information Booth

Julie Swenson

### Equipment Committee

Paul Juarez; Chair  
Chris Hill, Geoff Kent, MhaLou Galendez

### Newcomers' Orientation

Sherry Rodgers, Linda Shumate

### Program Logo and T-shirt Design

Rebecca Lewis

### T-shirt Sales

Linda Gillette-Koyen

### Conference Program

Connie Anderson

### Middle School Coordinator

Linda Goulet

### Middle School Tech Coordinator

Grayson Fong

### Onsite Registration

Jan Simutis, Amy Burke

### CMC Hub

Joan and Rick Easterday

### 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.





## CMC-North | Mobile App

The CMC-N conference app is available for Apple and Android devices. Search for "CMC Conferences"

The conference app will allow you to use your smart-phone or tablet onsite to easily:

- Access session details and create a personal schedule
- Rate and take notes on sessions
- Access sponsor and exhibitor details
- Receive news alerts
- View map of the exhibit hall layout
- Access social media
- Post tweets via Twitter – @CAMathCouncil #cmcmath

**Download  
Conference  
app!**

## Conference & Speaker | Evaluations



Go to [bit.ly/19ConEval](https://bit.ly/19ConEval) to enter to win a **free** registration or **free** housing at next year's conference by completing the **Conference** evaluation.

Your feedback is important to us! Please take a moment to complete the **Speaker** evaluation at [bit.ly/19SpkrEval](https://bit.ly/19SpkrEval)



## Social Media

@CAMathCouncil

Stay connected with CMC



[www.facebook.com/CAMathCouncil](http://www.facebook.com/CAMathCouncil)

**Hashtag CMC MATH**



@CAMathCouncil



CALIFORNIA MATHEMATICS COUNCIL

how to use twitter



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>

#cmcmath

@camathcouncil

Facility	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00
<b>FIRESIDE</b>	<b>Fred Farr</b> Seats 80 <b>Patrick Callahan</b> Desmos: Deeper Understanding Through Writing Explanations 6-8   PRS   101   BT	<b>David Foster</b> Apprentice and Expert Tasks GI   INT   201   BT	<b>Henri Picciotto</b> Reaching the Full Range 8-12   PRS   301   BT	<b>Michael Fenton</b> A Different Approach to Personalization 6-8   INT   401   BT	<b>Sarah Galasso</b> Literacy in the Math Classroom: Unlocking Student Voices GI   INT   501   BT
	<b>Kilin</b> Seats 54 <b>Mardi Gale</b> Launching Performance Tasks and What are They Good For? GI   PRS   102   BT	<b>John Martin</b> Photomath: Friend or Foe 8-12   PRS   202   BT	<b>Gail Burrill</b> Ten Ways to Help Make Formative Assessment Integral to Learning 8-12   INT   302   BT	<b>Christen Schwartz</b> Facilitate Student Discourse Through Math in Science Talks PK-5   INT   402   BT	<b>Mike Flynn</b> Understanding and Addressing Resistance in Math Education GI   PRS   502 <b>COACHING</b>
	<b>Oak Shelter</b> Seats 32 <b>Tammy Schultz</b> Using Teacher Observations to Advance Young Mathematicians PK-5   PRS   104   BT	<b>Eben LaPier</b> Building Math: Designing Project-Based Curriculum 6-8   INT   204   BT	<b>Tyler Auer</b> Notice, Wonder, Show: Proofs in the Elementary Grades PK-5   INT   304   BT	<b>Tracy Sola</b> The Long and Short of It: Primary Non-Standard Measurement PK-2   INT   404   BT	<b>Rhonda McEntee</b> Students Voice Through Math Talks 3-5   INT   504   BT
	<b>Evergreen</b> Seats 32 <b>Todd "TJ" Jemison</b> How Our Beliefs Impact Student Learning GI   INT   105   BT	<b>Cecilio Dimas</b> Leveraging Language in Mathematics to Open Minds & Hearts 3-5   INT   205   BT	<b>Shelley Kriegl</b> Mathematics Intervention: Helping Students Catch Up 6-8   INT   305   BT	<b>Ivy Kong</b> Jump-Start Student Thinking in a Math Classroom 6-8   PRS   405   BT	<b>Vicki Vierra</b> Think and Speak Like a Mathematician 6-8   INT   505   BT
<b>NORTH WOODS</b>	<b>Heather</b> Seats 60 <b>Caroline Loomis</b> Slice it up! Discussing Equal Sharing Fraction Strategies PK-5   INT   103   BT	<b>Jessica Balli</b> Do I Reteach or Move On? A Third Choice: Re-Engagement Lessons 6-8   INT   203   BT	<b>Solana Ray</b> K-2 Students Creating Beautiful Explanations in Math Class PK-2   PRS   303   BT	<b>Diane Resek</b> Strategy Games for the Last 10 Minutes of Class 6-8   INT   403   BT <b>GAMES</b>	<b>Barbie Buckner</b> International Space Station Microgravity: Mass vs. Weight 8-12   MITI   503   BT
	<b>Scripps</b> Seats 33 <b>Howard Alcosser</b> I Love My AP Calculus Class! 8-12   PRS   106   BT <b>COACHING</b>	<b>Eli Luberoff</b> Building Social + Creative Classrooms with Technology 8-12   PRS   206	<b>Jennifer Clinkenbeard</b> Enduring Understanding of Functions: Who's an X? Who's a Y? 8-12   INT   306   BT	<b>Arjan Khalsa</b> 5-Minute Journal Prompts: Formative Assessment with Flair PK-5   INT   406   BT	<b>Alisa Brown</b> Connected Mathematics: The Progressions and Math Identity GI   INT   506   BT
	<b>Acacia</b> Seats 24 <b>Amanda Jain</b> Figure it Out! Putting Students in the Drivers Seat 8-12   PRS   107   BT <b>COACHING</b>	<b>Patty Morrison</b> Using Literature to Teach Math in the PreK to 1st Grade PK-2   PRS   207   BT	<b>Julie Villeneuve</b> Yakity-Yak! Please Talk Back! 3-5   INT   307   BT		<b>Agnes Tuska</b> "Make or Break" Issues When Students Work on Math Problems Tchr Ed   INT   507   BT
	<b>Toyon</b> Seats 24 <b>Jennifer Hein deMause</b> Re-Claiming Sense-Making in Math for Students with IEPs GI   INT   108   BT		<b>Ed Campos</b> 360 Degree Math: A Math Classroom Revolution GI   INT   308   BT	<b>Jacob Disston</b> Using 5 Practices to Prep Teachers for Equity and Excellence Tchr Ed   PRS   408 <b>CAMTE</b>	<b>PJ Hallam</b> You Can't Hear My Voice If I'm Not in the Room GI   INT   508
<b>VIEW CRESCENT</b>	<b>Marlin</b> Seats 34 <b>Yuka Walton</b> Building Powerful Learning Communities to Support Equity Ldrshp   INT   109 <b>LDRSHP</b>	<b>Ho Nguyen</b> Focal Students: Focus the Lens, Deepen the Learning for All GI   INT   209   BT	<b>Priscilla Sustaita Clark</b> Student Vision: Empower with Numberless Math Stories PK-5   INT   309   BT	<b>Michael Stern</b> Fraction Action: Modeling the Operations: +, -, x, / 3-5   INT   409   BT	<b>Kimberly Samaniego</b> What are You Thinking? Engaging in Performance Task Learning 8-12   INT   509   BT
	<b>Curlew</b> Seats 34 <b>Sean Nank</b> Seven Steps for Adapting Technology in a 1:1 Environment GI   INT   110   BT	<b>Tom Lewis</b> Student Ownership with Their Learning Progress 6-8   PRS   210   BT	<b>Casey Ulrich</b> Re-envisioning Group Roles to Promote Conversation, Equity GI   INT   310   BT	<b>Chuck Biehl</b> Computational Geometry: A Teacher's Introduction 8-12   INT   410   BT	<b>Perrin Phillips</b> Launching Math Workshop: Cognitively Guided Instruction 3-5   INT   510 <b>CAMTE</b>
	<b>Sanderling</b> Seats 24 <b>Courtney Ortega</b> The TRUth About PLCs 8-12   INT   111   BT	<b>Kawthar Duncan</b> Two-For-One: Teach Math and Language Together For ELLs PK-5   INT   211	<b>Ben Nathan</b> Wrong Classroom: Using Incorrect Answers to Build Learning 8-12   PRS   311   BT	<b>Stuart Moskowitz</b> Would Have Been a Great School Math Teacher! GI   PRS   411   BT <b>GAMES</b>	<b>Cory Henwood</b> Empowering Student Voice in Digital 3 Act Math Tasks GI   INT   511   BT
<b>DOLPHIN</b>	<b>Dolphin</b> Seats 24	<b>Lyra Hua</b> Building Agency: Helping Students Deal with Math Anxiety 8-12   PRS   212   BT	<b>Travis Bower</b> Geometric Probability: Scaffolded 8-12   INT   312   BT <b>CAMTE</b>	<b>Allison Krasnow</b> Drop Everything & Math: Desmos as a Tool for Art and Joy GI   INT   412   BT	<b>Kristie Donovan</b> Linear Functions Roadmap: Making Connections Across Grades 8-12   INT   512   BT



Facility	8:00 - 9:00	9:30 - 10:30	11:00 - 12:00	1:30 - 3:00	3:30 - 5:00	
SEA GALAXY	Triton Seats 24	<b>Newcomer's Session</b>	<b>Alejandra Leon-Castella</b> Math of Every Day- eBook with Multimedia in Spanish GI   PRS   215   BT	<b>Frank Griffin</b> Three Easy Ways to Maximize Student Voices in the Classroom 8-12   INT   315   BT	<b>Ellen Byron</b> Slower and Louder Won't Work: Changing Students' Mindset 6-8   PRS   415   BT	<b>Shannon McCaw</b> Engaging All Students in Rigor 6-8   INT   515   BT
	Nautilus E Seats 24	<b>Chris Luzniak</b> Debate That! Empowering Students Through Debate in Math 8-12   INT   116   BT	<b>Brad Huff</b> How Big? Making Proportional Reasoning Real GI   PRS   216   BT	<b>Josh Deis</b> Learning From Student Interviews GI   PRS   316   BT	<b>Craig Schneider</b> Mathematical Language Routines: Foster All Students' Voices GI   INT   416   BT	<b>Peter Glynn</b> Division of Fractions: Empowering Students with Visual Model 6-8   INT   516   BT
	Nautilus W Seats 24	<b>Diana Zaragoza</b> Problem Solving + Talk = Student Voice + Discourse Celebrate Math PK-2   INT   117   BT	<b>Rebecca Heneise</b> Amplifying Student Voice: Warm-ups in DL Classrooms PK-5   INT   217   BT	<b>Cristina Paul</b> Curiosity & Student Ownership of Ideas: Three Act Tasks 3-5   INT   317   BT	<b>Cassie Sisemore</b> Secondary Mathematics Vertical Articulation Processes 8-12   INT   417	<b>Matt Wallace</b> Real Learning versus Apparent Learning GI   INT   517   BT
MERRILL H.	Merrill Hall Seats 500	<b>Zack Miller</b> Many People Hate Math but Love Stories: What an Opportunity! GI   PRS   118   BT	<b>Karl Schaffer</b> Let's Get Loopy with Geometry GI   INT   218   BT	<b>Scott Farrand</b> Disequilibrium >>(-_)<< Can Create Intellectual Need 8-12   INT   318   BT	<b>Andrew Stadel</b> Bring More Students Into Math Conversations and Sense-Making GI   INT   418   BT	<b>Brad Fulton</b> Math Games that Motivate and Educate 3-5   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.

speaker — **Alicia Alberts**

title of presentation — Teaching Math Concepts

target audience: — 3-8 | INT | 748 | BT

GI: general interest  
K-C: grade level  
Ldrshp: Teacher Leaders  
TchEd: Teacher Education

**STRAND**

exhibits —

BT: interest to beginning and new teachers

session number —

strands focused on special interest —

session type (see page 8 for more information) —

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

### 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*

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	<b>Dennis Mulhearn</b> Cubes Offer a Rich Setting for Problem Solving 3-5   INT   131   BT <b>CAMTE</b>	<b>Laurie Duerksen</b> Measure Up! Bringing Geometry to Life 6-8   INT   231   BT	<b>Breanne Phillips</b> Talk Nerdy to Me: Increasing Student Discourse 8-12   INT   331   BT	<b>Stephanie Bainbridge</b> Math Fun"die" Mentals: Interactive Middle Years Math Games 6-8   INT   431   BT <b>GAMES</b>	<b>Stephanie Bainbridge</b> Oh The Math That They'll Know PreK-K PK-2   INT   531   BT <b>GAMES</b>
Room 4 Seats 30	<b>Taik Kim</b> Making Sense of Multiplication 3-5   INT   133   BT <b>CAMTE</b>	<b>Margaret Cagle</b> Rich Tasks Require Rich Implementation for Rich Learning 8-12   W   233   BT	<b>Christina Marin</b> Blow It Up! Facilitating Controversial Sorting Task Debates 6-8   INT   333   BT		<b>Marisa Aoki</b> Visual Equations 6-8   PRS   533   BT
Room 5 Seats 30	<b>Roberta Newton</b> Counting: It's More than 123 PK-2   MITI   134   BT	<b>Nicki Newton</b> Math Running Records in Action PK-5   INT   234   BT	<b>Scott Davidson</b> Make Math Pop Out With 3D Printing GI   INT   334   BT	<b>Cynthia Raff</b> An Equation Journey: Strategies to Spark Engagement 6-8   INT   434   BT	
Room 6 Seats 30		<b>Paul Jorgens</b> Fire Up the Math Classroom with Conversation 6-8   INT   235   BT	<b>Dionne Iguar</b> Math Talks TK-2 PK-2   PRS   335   BT	<b>Laura Pesavento</b> Math Workshop in a Primary Classroom PK-2   PRS   435   BT	<b>Emiliano Gomez</b> Gerrymandering for Budding District Map Drawers 8-12   INT   535 <b>GAMES</b>
Room 7 Seats 30	<b>Kim Velasquez</b> An Ethnomathematics Lens on Social Justice Maths Practice 6-8   INT   136	<b>Elmano Costa</b> Empowering ELs in Math! Giving Students' Voice in Classrooms PK-5   INT   236   BT	<b>Amanda Mudde</b> Creation of Math Projects with Low Floor and High Ceilings 8-12   INT   336	<b>Isha Jain</b> Student Voice in Project-Based Learning 6-8   INT   436   BT <b>CAMTE</b>	<b>Ethan Weker</b> Rethinking Homework's Role in Math Class GI   PRS   536   BT
Room 13 Seats 30	<b>Lyn Scott</b> Math and Dual Language Learners: What Every Teacher Needs PK-5   INT   140   BT	<b>Peggy McLean</b> Mirror Explorations 3-5   INT   240   BT	<b>Elizabeth Reiff</b> Academic Conversation: You Can't Do it Alone! 6-8   PRS   340   BT	<b>Noam Szoke</b> MathRoom Management: Norms Build a Safe, Powerful Math Class PK-5   INT   440   BT	<b>Jane Scott</b> The Quantile Framework for Mathematics: Math Differentiation 6-8   PRS   540   BT <b>CAMTE</b>
Room 21 Seats 30	<b>Juan Gomez</b> Creating Rabbit Holes via Mathematical Applications 8-12   INT   141   BT	<b>Cyndee Kawalek</b> Differentiating Does Not Have to Be Hard! Tchr Ed   W   241   BT	<b>Suzanne Damm</b> Cooperative Learning Structures and Study Team Strategies 3-5   INT   341   BT	<b>Heather Tackett</b> Using Multiple Representations: Make Connections in Algebra 8-12   INT   441   BT	<b>Kyle Atkin</b> Teaching Strategies to Engage Students 8-12   INT   541   BT
Room 22 Seats 30	<b>Vriana Kempster</b> Playing with Data: Dynamic Statistics in Grades 6 through 9 6-8   INT   142   BT	<b>Cornelia Ritter</b> Dialogic Learning: An Inquiry-based Swiss Approach GI   PRS   242   BT	<b>Karin Lee</b> The Math Writing Sojourn 8-12   INT   342   BT	<b>Tim Erickson</b> Connect Geometry to Functions with Data and Modeling 8-12   INT   442   BT	<b>Rita Levinson</b> Students as Puzzle Makers: Developing Algebraic Thinking 6-8   INT   542   BT <b>GAMES</b>
Room 23 Seats 30	<b>Hallie Foster</b> 1 If By Hand, 2 if By Ge(ogebra) 8-12   INT   158   BT	<b>Chris Anspach</b> Cultivating Student Voice: Building Agency with Discussion 8-12   INT   248   BT	<b>Brigitte Lahme</b> Number Lines: A Journey Through Middle School 6-8   INT   358   BT	<b>Mayra Lara</b> Math as a Lever for English Learner Equity GI   INT   458   BT	<b>Joanne Rossi Becker</b> Transition to College Level Mathematics 8-12   INT   558   BT
Room 24 Seats 30	<b>Duane Graysay</b> Effective Questions to Get Students to Think Mathematically 8-12   INT   143   BT	<b>Crista Leamons</b> Talks and Tasks: Access and Agency for Students with IEPs 6-8   INT   243   BT	<b>Jennifer Bourque</b> Aha! Student-Driven Investigations of Number Patterns PK-5   INT   343   BT <b>CAMTE</b>		<b>Shannon Hoos</b> Choice Boards: A Choose Your Own Math Adventure 6-8   INT   543   BT
Room 25 Seats 30	<b>Doug McKenzie</b> Sequences: The Foundation for Understanding Linear Patterns 6-8   INT   144   BT	<b>Dennis Kombe</b> Learning to Enact Math Discourse Practices 8-12   INT   244   BT	<b>Jody Anderson</b> Using Children's Literature in Mathematics PK-2   INT   344   BT	<b>Leeanne Branham</b> A Plan for More Responsive Math Support Classrooms 6-8   INT   444   BT	<b>Richard Sgroi</b> Using Financial Applications: Real-World Student Discourse 8-12   PRS   544   BT
Room 26 Seats 30	<b>Theodore Sagun</b> Choral Counting from Elementary to Middle School 6-8   INT   145   BT	<b>Gary Eisenberg</b> Singing, Dancing, and Playing Through K-3 Mathematics PK-2   W   245   BT	<b>Helen Arrington</b> Promoting Instructional Coaching to Improve Teacher Practice Ldrshp   PRS   345 <b>COACHING</b>		<b>Shira Helft</b> The Best Algebraic Reasoning Tool You've Never Heard Of 8-12   INT   545   BT



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	<b>Ryan Burke</b> Teacher Explorations of a Virtual Tutor for Linear Equations 6-8   PRS   146   BT	<b>Jessyann Ceron</b> Exploration, Not Explanation PK-5   INT   246   BT	<b>Brandolyn Patterson</b> Achieve Equity of Voice Through Global Competence 6-8   INT   346   BT	<b>Brian Lindaman</b> Unusual Shapes, Angles, and Supercool... wait for it... Wallpaper 8-12   MITI   446   BT	
Room 28 Seats 30	<b>Ivan Cheng</b> How to Desmo-fy Your Math Lesson to Promote a Growth Mindset 8-12   INT   147   BT	<b>Katie Salguero</b> Worked Examples & the Mathematics Teaching Practices 6-8   INT   247   BT	<b>Angela Knotts</b> Increasing Access to Algebra by Examining Worked Examples 6-8   INT   347   BT	<b>Judy Kysh</b> Teaching Strategies for Problem Solving is an Equity Issue 6-8   INT   447   BT	
Room 29 Seats 30	<b>Christen Schwartz</b> Let's Talk Algebra! 6-8   INT   148   BT	<b>Ralph Connelly</b> Dicey Situation 6-8   INT   258   BT	<b>Charlene Pugh</b> Explain Your Thinking: What is That? 3-5   PRS   348   BT	<b>Douglas Silva</b> Nearpod: Effectively Using Technology with 1-1 Tablets 8-12   MITI   448   BT	<b>Janice Carr</b> Meeting Environmental Challenges with Math 6-8   INT   548   BT
Room 32 Seats 30	<b>Juan Gonzalez</b> Moving Beyond Popsicle Sticks 8-12   INT   150   BT	<b>Denise McDowell</b> Using Feedback to Motivate Learning 3-6   INT   250   BT	<b>Duane Habecker</b> Integrating ELD Strategies in Mathematics PK-5   PRS   350   BT	<b>Glenn Kenyon</b> Making Math Visual: The Power of Tape Diagrams K-6 PK-5   INT   450   BT	<b>Bruce Grip</b> What If All Students Were Smart in Math GI   INT   550   BT
Room 33 Seats 30	<b>Gloria Brown Brooks</b> Opening the Doors to Student Communication Tchr Ed   PRS   151   BT	<b>Darlene Fish Doto</b> Counting Complex Collections in the Upper Grades 3-5   INT   251   BT	<b>Erin Hohler</b> 1-2-3, Do Re Mi: Warming Up Student Voices PK-5   INT   351   BT	<b>Alison Chappell</b> Counting Collections in Primary Classrooms PK-2   INT   451   BT	<b>Liz Collier</b> Promoting Structured Student Talk Using Engaging Math Tasks 8-12   INT   551   BT
Room 36 Seats 30	<b>Federico Chialvo</b> Awesome Mathematical Adventures for Early Elementary PK-5   INT   154   BT	<b>Andrew Farrell</b> Trigonometry Spirograph 8-12   INT   254   BT	<b>Monterey Bay Area Math Project Meeting</b> Meeting   354	<b>John Martin</b> Making Mathematics Learning Visible Using Algebra Tiles 8-12   INT   454   BT	<b>Ann Carlyle</b> Tools for Thinking and Talking in K-2 PK-2   INT   554   BT
Room 37 Seats 30	<b>Kristie Donovan</b> Small Tweaks, BIG IMPACT 8-12   INT   155   BT	<b>Jeanne Ramos</b> Encouraging Student Voice Through Math Language 6-8   INT   255   BT	<b>Greisy Winicki Landman</b> Visual Reasoning as a Way of Mathematical Thinking 8-12   INT   355   BT	<b>Julie McNamara</b> You Want Students to Talk? Give Them Something to Talk About GI   INT   455   BT	<b>Noah Prince</b> Modern Geometries: A Case Study 8-12   INT   555   BT
Room 38 Seats 30	<b>Kim Bambao</b> Counting Our Way to Number Sense: How Counting Collections PK-2   PRS   156   BT	<b>Elizabeth Lomeli</b> Dirty Dozen Countdown: Choice for Student Voice 8-12   INT   256   BT	<b>Becky Bob-Waksberg</b> Warm Up to Mathematical Freedom 6-8   INT   356	<b>Christine Roberts</b> CVNIC: A Journey Toward Improving Math Outcomes for Students GI   PRS   456   BT	<b>Dennis Mulhearn</b> Excite and Energize Teaching Area by Using Contest Problems 6-8   INT   556   BT
Room 39 Seats 30	<b>Lesley Schooler</b> Initial Results of New, Innovative Algebra I Program 8-12   PRS   157   BT	<b>Sara Moore</b> Unpacking Mathematical Operations: Multiplication and Division 3-5   INT   257	<b>Ken Pinkerton</b> Community Math Festivals Strategies & Hints that Work GI   PRS   357   BT	<b>Shelley Carranza</b> Designing with Desmos 8-12   MITI   457	<b>Michelle Morikawa</b> Ancient Architecture Excites Young Learners PK-5   INT   557   BT
Auditorium 700	<b>Dan Meyer</b> Recipes for Mathematical Surprise GI   INT   153   BT	<b>Megan W. Taylor</b> What Will it Take to (re-)humanize Mathematics? GI   PRS   253   BT	<b>Steve Leinwand</b> The Surprising Power of Gradual Release in Our Math Lessons GI   PRS   353   BT	<b>Chris Shore</b> Making Group Work Work with Less Work GI   INT   453   BT	<b>Chris Shore</b> We Have Already Built the Wall: In and Between Our Schools GI   PRS   553   BT
Library Seats 49	<b>Kathy Morris</b> Maker Tasks for Mathematics: Make a Measuring Tool GI   INT   160   BT	<b>Devin Rossiter</b> Same/Different: A Mathematical Language Routine 6-8   MITI   260   BT	<b>Al Mendle</b> Build and Use an Abacus 3-5   MITI   360   BT	<b>Martin Joyce</b> Creating Graphs in Desmos to 3D Print 8-12   MITI   460   BT	<b>Marc Roth</b> Bowling Pin Puzzles 8-12   MITI   560   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.

**Alcasser, Howard — AP Calculus Teacher, Diamond Bar HS**  
**I Love My AP Calculus Class!**

Using my experience as a College Board AP Calculus Consultant and Diamond Bar high school teacher, 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. Teachers and students say, "I love my AP Calculus class!"

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

**Anderson, Jody — California Reading Assoc. VP**  
**Using Children's Literature in Mathematics**

Having trouble finding time in your day for one more read aloud? Combine your read alouds with your math lessons and ignite the passion for both in your students. Join me in exploring many primary books including, *Deck the Walls*, *The Relatives Came* and *The Tortoise and the Hare* to strengthen math vocabulary, encourage exploration, make number stories, engage in TPR, explore probability and geometry. Lessons you can take back home and use on Monday! Primarily for TK-1.

PK-2 | INT | 344 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 25 | BT

**Anspach, Chris — Teacher, Sonoma Valley USD**  
**Cultivating Student Voice: Building Agency with Discussion**

Creating student voice and buy-in is an extremely difficult task. This is made even more difficult in a mathematics classroom where students can feel uneasy about the content being discussed. We will examine how productive mathematical discussions can be used to develop a classroom culture centered around student voice and ideas. Letting student ideas and methods drive our lessons will help empower all of our students.

8-12 | INT | 248 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 29 | BT

**Aoki, Marisa — Math Teacher**  
**Visual Equations**

For many students, algebra has become an obstacle blocking graduation rather than a tool for problem solving. Yet, if we give those same students a context they can understand, suddenly things make sense. Come experience a progression of resources that develops algebraic thinking through visuals, puzzles, and diagrams. Capitalize on students' strength with visual representations to leverage sense-making and conceptual development when working with equations.

6-8 | PRS | 533 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 4 | BT

**Arrington, Helen — Instructional Coach, San Jose USD**  
**Promoting Instructional Coaching to Improve Teacher Practice**

Participants will learn about how the role of the site Instructional Coach in San Jose Unified School District has supported teaching and student learning in the mathematics classroom. This session will focus on techniques used by the instructional coach to engage teachers in coaching cycles to improve their practices. Participants will learn about the five phases of the coaching cycle and specific Learn Phase activities to foster teacher growth and development.

Ldrshp | PRS | 345 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 26

Co-presenter: Melissa Becchina — Instructional Coach, San Jose USD

**Atkin, Kyle — Mathematics Program Coordinator**  
**Teaching Strategies to Engage Students**

This session will focus on activities that are visual and open which will contribute to implementing some of NCTM's eight Effective Teaching Practices described in Principles to Action. Other teaching strategies such as anticipating, pacing, monitoring, and sequencing will also be discussed to help deepen our understanding of some of these practices.

8-12 | INT | 541 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 21Lab | BT

**Auer, Tyler — Math Specialist**  
**Notice, Wonder, Show: Proofs in the Elementary Grades**

Our elementary students explain, reason, and justify, but we rarely describe this work as what it truly is: mathematical proof. In this session we will generate our own informal conjectures and try to prove or disprove them, enabling us to better guide our students in leading this process themselves. We will also see what elementary proofs look like and better understand how proofs support sense making in the elementary grades.

PK-5 | INT | 304 | Saturday, 11:00 - 12:00 | Asilomar, Oak Shelter | BT

**Bainbridge, Stephanie — Consultant, Box Cars and One Eyed Jacks**  
**Math Fun "die" Mentals: Interactive Middle Years Math Games**

Who knew teaching and learning math could be this much fun? Set your students up for success! Use regular cards and dice to enhance your curriculum and state standards. Come play and learn games for both mixed and order of operations, algebra, coordinate geometry, and analytical thinking. Participants will learn engaging hands-on activities that they can differentiate to help each student, at their own level, achieve success in math. Game-boards, student samples and journal extensions shared.

6-8 | INT | 431 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 1 | BT

**Oh The Math That They'll Know PreK-K**

Finally! A tailor made workshop for the kindergarten - grade 1 levels. Come prepared to play games that incorporate the use of cards, dice, and multi-sided dice that teach counting, place value, comparing numbers as greater or less than, odd even, counting on from a given number, patterns, early addition and subtraction strategies, doubles and more. Ideas for developing Math Talk, journal drawing/writing and response activities will be shared through the workshop.

PK-2 | INT | 531 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 1 | BT

**Balli, Jessica**  
**Do I Reteach or Move On? A Third Choice: Re-Engagement Lessons**

Teachers often feel pressure to cover curriculum, even if students aren't ready to move on. Alternatively, teachers can opt to reteach material, even though some students have already shown mastery. There must be another way! Come learn how to design lessons that re-engage all students with the content by having them analyze and reflect on student work. Whether you're a classroom teacher or you support math teachers, you'll leave with new strategies and ways to re-engage students in mathematics.

6-8 | INT | 203 | Saturday, 9:30 - 10:30 | Asilomar, Heather | BT

Co-presenter: Solana Ray

Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00am-5:00pm and **pick up your swag!**

**Bambao, Kim — Mathematics Director, San Mateo COE**  
**Counting Our Way to Number Sense: How Counting Collections**

Counting Collections is a learner-centered activity that supports students in making sense of quantity and the number system while counting collections of objects. We will share video and student work samples of preschool through second grade students focusing on how teachers use questioning strategies to help students voice their sense making and understanding of mathematical ideas. Counting Collection is a straight forward practice and aligns with the Common Core Standards so it enhances any curriculum.

PK-2 | PRS | 156 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 38 | BT

Co-presenter: April Cherrington — Math Coach, Silicon Valley Math Initiative

**Biehl, Chuck — Enthusiast**  
**Computational Geometry: A Teacher's Introduction**

Many modern geometry problems require algorithms and other types of mathematics to solve them. This session features an overview of the field and its applications in high school. Take a close look at three sample problems: the Art Gallery Problem, which places surveillance cameras or guards in various places around polygons, and the Facility Location Problem (from ComMuniCator 3/18) and Steiner networks, both of which mathematically locate sites for new hospitals, prisons, restaurants, etc.

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

**Bob-Waksberg, Becky — Teacher, Park Day School**  
**Warm Up to Mathematical Freedom**

We will explore how class warmups can create space for students to feel mathematically free. I will model a simple, open-ended warmup routine and share its underlying values (including curiosity, social construction of knowledge, and multiple paths to correctness). We will think together to build an understanding of mathematical freedom, and how it might connect with joy, ownership, and voice. Finally, we will discuss and plan warmup routines for different classroom settings and goals.

6-8 | INT | 356 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 38

**Bourque, Jennifer — Level III Lead Teacher, Synapse School**  
**Aha! Student-Driven Investigations of Number Patterns**

This session will introduce participants to two investigations: Palindromes and Pascal's Triangle. We will look at student work, examine mistakes as teachable moments, and make connections between operations, place value, probability, and triangular numbers as we work through the investigation. Opportunities to build, draw, and use tools enhances our understanding. By giving students access to authentic problems in mathematics, they are challenged to dig deep and think about number patterns.

PK-5 | INT | 343 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 24 | BT

Co-presenter: Michelle Morikawa — Level II Lead Teacher, Synapse School

**Bower, Travis — Math Teacher, Dos Pueblos HS**  
**Geometric Probability: Scaffolded**

Geometric probability provides many low floor – high ceiling problems. Is it easier to hit a circle in a square or a square in a circle? We will explore this with: compass/tech creation, eyeball estimation, grid estimation, geometric dissection, and technology. I will refer to Notability, TI-Nspire iPad app, Neo LMS, Wootmath and Apple Classroom. As time permits we will explore some challenging problems while emphasizing process as well as the final answer. Bring some of your favorites.

8-12 | INT | 312 | Saturday, 11:00 - 12:00 | Asilomar, Dolphin | BT

**Branham, Lianne — Teacher on Special Assignment, Clovis USD**  
**A Plan for More Responsive Math Support Classrooms**

Stop shopping for a curriculum. Effective math support courses do not come in a box. They cannot be prescribed or contained by a pacing calendar. Much like a good conversation, the complete dialogue cannot be planned without hearing the thinking the students bring to the table. Workshop includes: a) Our story: How we worked together to reinvent our support classrooms, b) What we do: Participate in the types of activities we use on a daily basis, c) The results: What our students and the data say.

6-8 | INT | 444 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 25 | BT

**Brown, Alisa — Math Coach, San Francisco USD**  
**Connected Mathematics: The Progressions and Math Identity**

What are students voicing in their math and how is Math identity a part of this? K-8 schools present interesting challenges in collaboration as well as exciting opportunities for looking at Math progressions. In this session, participants will replicate a multi-grade math team in a K-8 school reviewing video and student work aligned with a progression in order to hear and understand students' math connections and agency while planning bridges to desired mathematical content.

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

Co-presenter: Toni Allen — Math Coach

**Brown Brooks, Gloria — Teacher, TODOS, NCTM, NCSM, WME**  
**Opening the Doors to Student Communication**

During this session we will discuss different methods of communicating with our students. These methods will address writing in mathematics, access and equity and empowerment. The journey towards mathematical empowerment through dialogue and engagement, provides us a deeper understanding of Social Justice in Mathematics as well.

Tchr Ed | PRS | 151 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 33 | BT

Co-presenter: Isabel Garcia-Bertalotto — Mathematics Teacher

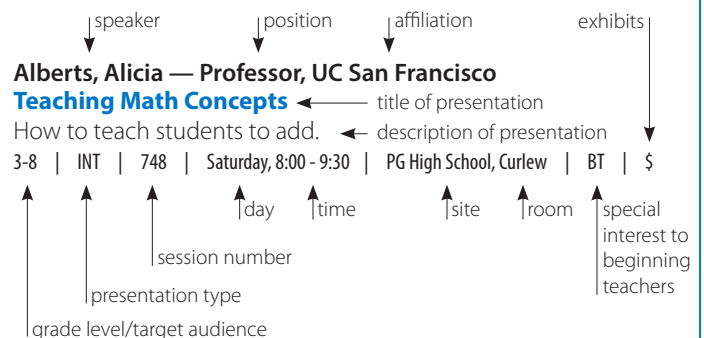
**Buckner, Barbie — Education Specialist,**  
**NASA Armstrong Flight Research Center**  
**International Space Station Microgravity: Mass vs. Weight**

Come learn about the difference between mass and weight. Engage in "out of this world" hands-on, standards-aligned STEM experiments. Analyze your experimental data by creating charts and graphs and then compare your results by watching video clips of similar experiments performed on-board the International Space Station in micro-gravity by NASA astronauts.

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

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

**HOW TO READ SPEAKER LIST**



**Burke, Ryan — Research Assistant, WestEd**

**Teacher Explorations of a Virtual Tutor for Linear Equations**

How can a virtual tutor foster meaningful learning experiences in math classrooms? This session introduces ways middle school teachers used a virtual tutor system that provides adaptive problem solving assistance during their linear equations and functions unit. In this session we will also share about the student experience. Teachers will consider and discuss how technology, like an adaptive virtual tutor, can be used effectively in supporting meaningful math experiences for students.

6-8 | PRS | 146 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 27 | BT

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

**Burrill, Gail — Academic Specialist, Michigan State Univ.**

**Ten Ways to Help Make Formative Assessment Integral to Learning**

Formative assessment has been identified as a strategy for improving student learning. However, formative assessment as implemented is often inconsistent with the literature. Participants will consider how to design classroom opportunities using tasks and questioning strategies, often involving interactive dynamic technology, that can help us refocus our instruction based on what our students say and do.

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

**Byron, Ellen — Math Coach, Elk Grove USD**

**Slower and Louder Won't Work: Changing Students' Mindset**

This session provides the nuts and bolts on how we designed a math class to support students who were below standards, but not too far below. So often students are taught using the same format as their regular math class just with more time. We broke the mold and designed a growth mindset and SMP model that helps the long-term success of our students. We will share the format, free resources and student success data detailing how you too can implement this student-centered class.

6-8 | PRS | 415 | Saturday, 1:30 - 3:00 | Asilomar, Triton | BT

Co-presenter: *Louis Silva — Math Dept Chair, Elk Grove USD*

**Cagle, Margaret — Math Teacher, Los Angeles USD**

**Rich Tasks Require Rich Implementation for Rich Learning**

For over 20 years, research has documented the critical role of rich tasks in generating high-quality opportunities to learn math, develop conceptual understanding and procedural fluency, and build efficacy and agency. Examine pedagogical choices and routines that ensure the richness of opportunity for developing student thinking is maintained throughout the task implementation. Explore ways to use everyday tasks in rich ways, increasing opportunities for students to think and act as mathematicians.

8-12 | W | 233 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 4 | BT

**Callahan, Patrick — Consultant, Callahan Consulting**

**Desmos: Deeper Understanding Through Writing Explanations**

Many Desmos classroom activities include questions where students are asked to WRITE mathematical explanations. Do your students skip these? Do you make the most of their responses? We will share examples, tools and teaching strategies for maximizing these underutilized writing prompts both for instruction and as powerful embedded assessments.

6-8 | PRS | 101 | Saturday, 8:00 - 9:00 | Asilomar, Fred Farr Forum | BT

**Campos, Ed — Program Trainer, Brown Univ.**

**360 Degree Math: A Math Classroom Revolution**

Flip the script in the math class by putting your students center stage with 360 degree math. Get your students up, performing, solving, and persevering by livening up the environment with whiteboard surfaces, music cues, visible random groupings, and strategic questioning. Use an iPad and Airserver to untether yourself from your doc cam and fully mobilize yourself in the classroom. Attendees will experience 360 degree math and leave with the resources to join the 360 Math revolution.

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

**Carlyle, Ann — Supervisor/Instructor, UC Santa Barbara**

**Tools for Thinking and Talking in K-2**

We'll explore dot card, bead boards, ten frames, same but different tasks, number paths and number lines, and hundred charts. With these basic tools, students learn that numbers can be broken down into other numbers using decomposition. They also begin to recognize the relationship of parts to the whole. The relationships of more, less, the same, how many more, how many less, and the sequencing of numbers are all ideas that can be student constructed through exploration and talking.

PK-2 | INT | 554 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 36 | BT

**Carr, Janice — Professor Emerita, Foothill College**

**Meeting Environmental Challenges with Math**

In this STEM-focused workshop, discover hands-on activities that use real-world data to create mathematical models as a way to understand trends in land use, population growth, climate change and more. Build students' environmental IQ while developing skills in measurement, data analysis, modeling and problem solving. Receive lesson plans in an electronic format matched to state standards.

6-8 | INT | 548 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 29 | BT

**Carranza, Shelley — Lead Instructional Designer, Desmos**

**Designing with Desmos**

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

8-12 | MITI | 457 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 39

Co-presenter: *Jenny Wales — Lead Designer, Desmos*

**Ceron, Jessyann — Teacher**

**Exploration, Not Explanation**

Peer interactions and discussions in a kindergarten classroom are enhanced with meaningful tasks in which students have a chance to explore ideas and solutions rather than giving explicit explanations on how to problem solve. Using the book *Intentional Talk*, I will demonstrate how to facilitate discussions to deepen understanding of difficult math concepts.

PK-5 | INT | 246 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 27 | BT

#hashtag **CMCMATH**

**T-shirts & 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.





**Chappell, Alison — Educator, San Carlos Charter Learning Center**  
**Counting Collections in Primary Classrooms**

Come see how children experience quantity, develop number sense, deepen place value understanding, and develop a positive mathematical identity through counting collections. Counting collections allows for multiple entry points and for number sense to be easily differentiated in the classroom. Our session is based on supporting student engagement, participation, developing a community of active learners and encouraging articulation of mathematical ideas.

PK-2 | INT | 451 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 33 | BT

Co-presenter: Darlene Fish Doto — Educator, San Carlos Charter Learning Center

**Cheng, Ivan — Professor, CSU Northridge**  
**How to Desmo-fy Your Math Lesson to Promote a Growth Mindset**

In this session you will experience growth mindset activities on Desmos and learn what it takes to make your own. Ready to use activities will be shared. Be sure to bring your laptop to engage in this interactive workshop.

8-12 | INT | 147 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 28 | BT

Co-presenter: Matt Kim — Teacher, Assurance Learning Academy

**Chialvo, Federico — Director of Mathematics, Synapse School**  
**Awesome Mathematical Adventures for Early Elementary**

The study of mathematics has generated some of the most beautiful, magical and surprising discoveries! Many of these discoveries provide fantastic activities for our students to experience being surprised by maths, needing to know how and why it works and then forging a path through the unknown to develop an explanation. In this session, we will explore a few of maths' greatest hits, discuss how to facilitate these discoveries, and why all kids deserve to experience mathematics in this way.

PK-5 | INT | 154 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 36 | BT

**Clinkenbeard, Jennifer — Assistant Professor, CSU Monterey Bay**  
**Enduring Understanding of Functions: Who's an X? Who's a Y?**

Participants work together to explore functions in the context of data about the sea otters in the nearby Elkhorn Slough. This "rich task" has a low-entry, high-ceiling structure suitable for math-anxious students or students with varying levels of prerequisite knowledge. This activity is adapted from a lesson in a new co-requisite university general education mathematics course. Materials suitable for classroom use are provided for participants.

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

**Collier, Liz — Instructional Coach, San Jose USD**  
**Promoting Structured Student Talk Using Engaging Math Tasks**

Participants will engage in whole and small group collaborative structures that encourage productive math talk and allow students of all levels to access rigorous content. We will provide strategies by using Algebra math tasks that allow teachers to foster a collaborative community of learners in their classroom. Teachers will actively participate in the structures and then we will reflect together on the strategies and the norms which will lead to successful implementation in their classroom.

8-12 | INT | 551 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 33 | BT

Co-presenter: Danyale Bell — Instructional Coach, San Jose USD

**Connelly, Ralph — Professor Emeritus, Brock Univ.**  
**Dicey Situation**

Participants will work through a variety of unusual dice activities that will effectively build students' understanding of concepts of chance.

6-8 | INT | 258 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 23 | BT

**Costa, Elmano — CSU, Stanislaus**  
**Empowering ELs in Math! Giving Students' Voice in Classrooms**

How can we give ELs voice in math when they speak so many languages? English Learners can be active participants when instruction is orchestrated to meet their needs. This workshop shows how to plan and deliver lessons that make instruction comprehensible for ELs and permits them to become active participants regardless of their level of English. The session begins by presenting the key features of EL lesson design and then models how to implement them in a math lesson taught in Portuguese.

PK-5 | INT | 236 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 7 | BT

**Damm, Suzanne — Santa Clara Univ.**  
**Cooperative Learning Structures and Study Team Strategies**

We will explore strategies to truly engage students in group work. Teachers often ask, "How can we get students to work together and talk about the math and the mathematical thinking?" We will look at grouping strategies, group roles and group evaluation techniques. We will engage in activities ready to take to your classroom.

3-5 | INT | 341 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 21 Lab | BT

**Davidson, Scott — Math Instructor, Clovis USD**  
**Make Math Pop Out With 3D Printing**

Have you ever imagined a 3D printer in your classroom? Come and find out how you can instantly engage students with 2D and 3D models that help them visualize and understand topics in algebra, geometry, proportional thinking, probability, and more. We will demonstrate how 3D printed objects can drive activities that encourage students to physically connect with mathematics. Bring your own laptop to design a math toy, and a few lucky participants can print their own to take back to the classroom!

GI | INT | 334 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 5 | BT

Co-presenter: Ethan Weker — Math Instructor, Mid-Peninsula HS

**Deis, Josh — Mathematics Coordinator, Sonoma COE**  
**Learning From Student Interviews**

Listening to students is an exhilarating and powerful means for understanding the complex world of teaching and learning mathematics. During this session we will watch interviews and explore what we have learned about students' Agency, Identity, and Ownership through interviews. Participants will also be provided resources and tools for conducting their own student interviews.

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

**Dimas, Cecilio — Partner/Director of Innovation and Strategy, Silicon Valley Mathematics Initiative**  
**Leveraging Language in Mathematics to Open Minds and Hearts**

In this session, participants will engage in Math Language Routines anchored in a progression of mathematics through the use of performance tasks. Additionally, we'll analyze the power of utilizing the relationship between language and math as a source to shift and change mindset and expand identity to include mathematics. Participants will leave with a set of routines and performance tasks, as well as guidelines about how to implement a student-driven and cognitively-guided performance task experience.

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

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.

**Disston, Jacob — Education Program Director**  
**Using 5 Practices to Prep Teachers for Equity and Excellence**

We'll share experiences using the 5 Practices (anticipating, monitoring, selecting, sequencing, connecting) to prepare secondary pre-service math teachers to elicit and capitalize on student thinking. We'll examine examples of activities enacted in the UC Berkeley MACSME program's methods course, which was organized weekly at Berkeley High School, and involved our pre-service teachers engaging in approximations of core practices with small groups of students in a 9th grade algebra classroom.

Tchr Ed | PRS | 408 | Saturday, 1:30 - 3:00 | Asilomar, Toyon  
 Co-presenter: Megan Taylor — Trellis Education Founder

**Donavan, Kristie — Math Teacher, Woodbridge HS**  
**Small Tweaks, BIG IMPACT**

Make an immediate positive impact on student learning with easy-to-use strategies and routines that can be used in any course, at any level. Engage in strategies that support class discourse, self-assessment, flexible grouping, and differentiation.

8-12 | INT | 155 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 37 | BT

**Linear Functions Roadmap: Making Connections Across Grades**

The key to deep understanding is connecting to prior and future knowledge. We will explore the progression of linear functions from proportional relationships in 6th grade to interpreting linear models in 9th to comparing with other function families in higher grades. Participants will leave with a clear roadmap of linear functions and tasks that build a deep understanding through all middle and high school courses.

8-12 | INT | 512 | Saturday, 3:30 - 5:00 | Asilomar, Dolphin | BT  
 Co-presenter: Martha Barrett — Teacher on Special Assignment, Irvine USD

**Duerksen, Laurie — Teacher on Special Assignment**  
**Measure Up! Bringing Geometry to Life**

This workshop introduces participants to modeling activities to build conceptual understanding in middle grades geometry. Participants will look at the progression of middle grades measurement geometry and the connections between grade levels. This session encourages participants to work collaboratively exploring area, surface area, and volume of 2D and 3D figures through real world modeling activities. Explorations will contain multiple pathways and points of entry supporting all learners.

6-8 | INT | 231 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 1 | BT  
 Co-presenter: Breanne Phillips — Teacher on Special Assignment

**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.



**Duncan, Kawthar — Math Content Specialist, San Francisco USD**  
**Two-For-One: Teach Math and Language Together For ELLs**

Students are empowered when we provide them with tools to make sense of math in ways that are creative, interactive, and relevant. This applies to all students but has particular urgency for EL students, many of whom may experience either limited linguistic access or less rigorous instruction. This session will present structures to enhance both the rigor and the access to rich math tasks while also attending to language. Participants with experience these structures and discuss their merits.

PK-5 | INT | 211 | Saturday, 9:30 - 10:30 | Asilomar, Sanderling  
 Co-presenter: Glenn Kenyon — Math Specialist, San Francisco USD

**Eisenberg, Gary — Seminar Leader, Bureau of Educ. and Research**  
**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 | W | 245 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 26 | BT

**Erickson, Tim — Senior Scientist**  
**Connect Geometry to Functions with Data and Modeling**

Do the whole modeling cycle in a classroom-practical, tech-rich investigation. You will measure parts of geometric figures, plot the measurements as data (using Desmos or CODAP), find functions that fit the data, and then use the functions to understand the original geometrical context. You'll experience both linear and non-linear situations. We'll also see real student work and discuss assessment. If you can, bring your own laptop. If you can't, you can share!

8-12 | INT | 442 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 22 | BT

**Farrand, Scott — Professor, Sacramento State**  
**Disequilibrium >>(-\_-)<< Can Create Intellectual Need**

Wonderful things can happen when a student encounters an idea or information that conflicts with their prior understanding. This state of disequilibrium can motivate students to search aggressively for a greater understanding. Join me and we'll do some math that is intended to create disequilibrium, to be reminded of how it feels to be strongly motivated to find an explanation.

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

**Farrell, Andrew — Corning HS**  
**Trigonometry Spirograph**

Do you still use a TI-84 in your classroom? This session will explore sin and cos using parametric equations to make several geometric shapes, designs and spirals. The activity will give students a chance to explore and investigate how and why changes in the functions and settings can create interesting patterns. This is an activity that can be used in many grade levels.

8-12 | INT | 254 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 36 | BT

**Fenton, Michael — Desmos**  
**A Different Approach to Personalization**

For some, personalizing the math classroom means computer cubicles, digital badges, and every student working on something different. This isn't why I entered teaching. And it isn't what's best for students. In this session, we'll explore another way to personalize – and humanize – the math classroom by infusing it with creative and social experiences.

6-8 | INT | 401 | Saturday, 1:30 - 3:00 | Asilomar, Fred Farr Forum | BT

**Fish Doto, Darlene — Educator, SCCLC/UCLA Lab School**  
**Counting Complex Collections in the Upper Grades**

What does Counting Collections look like in the Upper grades? How do we extend the foundational work accomplished in grades K-2, to grow with our students? How and what can children count in the way of very large collections? What kinds of collections encourage multiplicative thinking and allow us to tackle the mathematical properties? The benefits of developing stronger collaboration, communication skills, and complex recordings to further mathematical understandings will be discussed.

3-5 | INT | 251 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 33 | BT  
 Co-presenter: Julie Kern Schwerdtfeger — Teacher, UCLA Lab School

**Flynn, Mike — Director, Mount Holyoke College**  
**Understanding and Addressing Resistance in Math Education**

Encountering educators that are resistant to change is a common challenge for many leaders and it is easy to slip into an unproductive “us versus them” frame of mind. In this session, we will look at the root causes of resistance and explore productive strategies that will help educational leaders and coaches support all teachers through the change process. Finally, we will review a powerful framework that can help make the change process easier for all stakeholders involved.

GI | PRS | 502 | Saturday, 3:30 - 5:00 | Asilomar, Kiln

**Foster, David — Director, SVMU**  
**Apprentice and Expert Tasks**

Math performance tasks are essential curricula for mathematically powerful classrooms. Teachers are often challenged with insuring that ALL students have access into high cognitive mathematics. The use of coupling apprentice and expert tasks is a great strategy to address this challenge. This session will introduce these strategies and share apprentice and expert tasks for grades K-12.

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

**Foster, Hallie — Terra Linda HS**  
**1 if By Hand, 2 if By Ge(ogebra)**

Some discoveries in geometry are done well by paper folding, compass and straight edge constructions, or with patty paper. Some discoveries are better explored with dynamic geometry software. This session will introduce lessons where students begin their exploration by hand and then use dynamic software to deepen their findings. All of the roads lead to reasoning. You will explore geometric ideas by hand and tech, and will leave with lesson ideas that continue this pattern of learning.

8-12 | INT | 158 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 23 | BT

**Fulton, Brad — Mistletoe ES**  
**Math Games that Motivate and Educate**

These are no ordinary games. Mathematical rigor and fun both abound. All the games are easy to implement and produce effective results. Practice the skills with excitement and engagement. All content areas are covered. A classroom-ready handout is available.

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

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**Galasso, Sarah — Senior Manager of School Partnerships, Carnegie Learning**  
**Literacy in the Math Classroom: Unlocking Student Voices**

Communication and literacy in math have never been more important than they are now, but how do we incorporate reading and writing into our classes? Using context rich scenarios, we will focus on reading and writing strategies to develop a deeper understanding of math, a voice for all of our students, engage in math practices and provide optimal formative assessment.

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

**Gale, Mardi — Senior Research Associate, WestEd**  
**Launching Performance Tasks and What are They Good For?**

What makes performance tasks effective, successful learning experiences and provides formative assessment for teachers? And how many do students need to do? How do we use them to encourage student voices? Then, what do we do with the student work? Experience essential elements for launching performance tasks allowing for application of skills and maintaining rigor. Ideas for using these tasks to their full potential.

GI | PRS | 102 | Saturday, 8:00 - 9:00 | Asilomar, Kiln | BT

**Glynn, Peter — Math Specialist, Crane Country Day School**  
**Division of Fractions: Empowering Students with Visual Model**

Traditional instructional strategies for teaching division of fractions are typified by memorization of procedures. We show an alternative instructional strategy to empower students to obtain conceptual understanding by the use of visual models.

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

**Gomez, Emiliano — MDTP Site Director, UC Berkeley**  
**Gerrymandering for Budding District Map Drawers**

Come learn the basics for making some voices louder and others unheard! Do you want an election to turn out in your favor? Why rely on fairness? We will learn the mathematical tools of packing and cracking, and use them to alter election results by redrawing electoral district maps. We will also discuss the merits and shortcomings of the “efficiency gap,” a formula that attempts to detect and reject unfair maps.

8-12 | INT | 535 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 6

Co-presenter: Risa Wolfson

**Gomez, Juan — Math Teacher/Coach**  
**Creating Rabbit Holes via Mathematical Applications**

Secondary teachers are tasked with teaching students with a wide range of interests, aptitudes, and prior math experiences. How do you differentiate instruction while still ensuring content is covered? Come learn how to create a mathematical routine that fosters intellectual curiosity through applications. We will focus on finding applications and integrating them into your secondary math classroom. You will receive digital resources you can modify to fit your classroom practices.

8-12 | INT | 141 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 21Lab | BT

**Gonzalez, Juan**  
**Moving Beyond Popsicle Sticks**

We need to work to rehumanize our math classrooms. Student stories can engage diverse learners in math content in authentic and relevant ways. We will explore tasks and strategies for eliciting, engaging and capitalizing on student ideas, starting by valuing and creating space for student voice through their own stories.

8-12 | INT | 150 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 32 | BT

Co-presenter: Scott Paine

**Graysay, Duane — Assistant Professor, Syracuse**  
**Effective Questions to Get Students to Think Mathematically**

How do you find out what students know? How do you support their problem solving without doing the math for them? Participants will join us in exploring how to enact teaching practices from Principles to Actions using a set of communication moves to elicit evidence of student thinking and to advance student thinking. We will examine some mathematical problems, plan how we might support students in those problems, and use tools to reflect on some cases of classroom teaching.

8-12 | INT | 143 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 24 | BT

Co-presenter: Benjamin Freeburn — Mathematics Education Consultant

**Griffin, Frank — Teacher, Cate School**  
**Three Easy Ways to Maximize Student Voices in the Classroom**

Participants will explore problem-based learning activities and inquiry-based techniques where students demonstrate their understanding through discussion, presentations, and problem-solving process journals. Their voice is heard through their explanations and expressed in writing through personal reflections. Integrated activities include problems in algebra, geometry and trigonometry. Free, classroom-tested, problem sets with teaching resources using Desmos and iPads will be shared.

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

Co-presenter: Taylor Wyatt — Teacher, Cate School

**Grip, Bruce — Field Faculty Advisor, Claremont Graduate Univ.**  
**What If All Students Were Smart in Math**

...and we only valued a few because our definition of “math smart” was too limited? What we define as “good in math” and how we measure “good” unfairly disadvantages some students, impacts their math identity and stops their journey.

GI | INT | 550 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 32 | BT

**Habecker, Duane — Math Coordinator, Merced COE**  
**Integrating ELD Strategies in Mathematics**

In this session we will learn language-rich strategies to effectively engage ELs in high-quality mathematics instruction. We will also explore how to seamlessly adapt your curriculum to connect mathematical understanding with language development.

PK-5 | PRS | 350 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 32 | BT

**Hallam, PJ — Teacher Trainer, Time To Teach**  
**You Can't Hear My Voice If I'm Not in the Room**

NCTM's position on equity states that factors contributing to differential access to high-quality mathematics instruction must be addressed. With research consistently indicating that African American students disproportionately miss classroom instruction due to behavioral issues, this interactive session helps educators by modeling effective strategies that use students' voice and agency to establish mutual understandings and routines which support students' self-accountability development.

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

**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.



**Hein deMause, Jennifer — Math Specialist, San Francisco USD**  
**Re-Claiming Sense-Making in Math for Students with IEPs**

How do students with IEPs make sense of grade-level math? When there's so much pressure to “fill gaps,” how do we even create opportunities to engage in rigorous sense-making? We will explore the use of structures and concept progressions that allow teachers to go beyond teaching skills in isolation, and towards creating opportunities for students to authentically leverage their curiosity and prior knowledge to learn grade level math. Your students with IEPs can have agency in their learning!

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

Co-presenter: Sarah Gleason — Math Coach, San Francisco USD

**Heft, Shira — Math Teacher/Coach, Gateway HS**  
**The Best Algebraic Reasoning Tool You've Never Heard Of**

If math is a toolbox, we often fill it with lots of one-use gizmos that students half-master. Teachers are already starting to replace these with fewer, more powerful tools (like the area model). In this session, we will get to know one versatile tool – the GEMA table – that has transformed how we teach Algebra 1, Algebra 2 and Pre-Calculus. We will also consider how the metaphor of a toolbox can be applied to our teaching practice in general.

8-12 | INT | 545 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 26 | BT

Co-presenter: Taryn Pritchard — Math Teacher, Gateway HS

**Heneise, Rebecca — Dual Language Demonstration Teacher**  
**Amplifying Student Voice: Warm-ups in DL Classrooms**

The goal of this session is to develop a repertoire of number sense warm-ups for dual language classrooms. We will engage in math routines that empower kids to increase their mathematical understanding and vocabulary in two languages. Warm-ups provide a low floor high ceiling opportunity to create conjectures, collaborate, and communicate ideas. We will reflect on how warm-ups can be used to learn about students' math and language identities. This helps teachers create responsive instruction.

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

Co-presenter: Cristina Paul — Dual Language Demonstration Teacher

**Henwood, Cory — Math Consultant, Iron County Schools**  
**Empowering Student Voice in Digital 3 Act Math Tasks**

Three Act Math tasks are known for their ability to engage students, but how do we move from engaging to empowering all to be self-directed and deeply explore problems in ways that are meaningful to each of them? The answer lies in two parts, 1) Using digital tools to help facilitate such a differentiated task, requiring the equitable participation of all students and, 2) Having every student's voice direct their learning path in problems with an open middle in varying math content. Come discover!

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

**Hohler, Erin — Educator, San Carlos Charter Learning Center**  
**1-2-3, Do Re Mi: Warming Up Student Voices**

Research shows that children who engage in productive warm-ups and feel successful at the beginning of class are more likely to persevere and take risks when faced with challenges, as they are primed for problem solving. In this interactive session, participants will engage in warm-up activities used to hook children into a mathematics lesson. These warm-ups provide multiple entry points to differentiate instruction, with an emphasis on communication, to set students up for success.

PK-5 | INT | 351 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 33 | BT

Co-presenter: Darlene Fish Doto — Educator, San Carlos Charter Learning Center

**Hoos, Shannon — Teacher**

**Choice Boards: A Choose Your Own Math Adventure**

Choice boards provide access and equity, organizational freedom, honor student voice, and empower them to take control of their own learning. Learn how to implement choice boards for individualized learning while making the most of your instructional time. We will explore how students can prove content mastery in a variety of ways while developing 21st century skills and mathematical practices. We will also discuss challenges, feedback tips and strategies for classroom management.

6-8 | INT | 543 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 24 | BT

**Hua, Lyra — Curriculum Coordinator, East Side Union HSD**

**Building Agency: Helping Students Deal with Math Anxiety**

Research has shown that for students who don't do well in math, the answer does not lie in giving them more math classes. So what might we do as educators? Perhaps we can explore ways to build positive relationships with our students thereby giving them control of their math anxiety. This session will allow us to look at research and data that will support all our students in being able to access math content while understanding themselves more as learners.

8-12 | PRS | 212 | Saturday, 9:30 - 10:30 | Asilomar, Dolphin | BT

**Huff, Brad — Coordinator, CSU Fresno**

**How Big? Making Proportional Reasoning Real**

When asked how much bigger one quantity is than another, many people subtract rather than find the ratio. Their answer is correct, but overlooks the importance of thinking proportionately, such as finding rates, such as interest. This presentation uses examples from literature: *Gulliver's Travels* and *Alice in Wonderland* to illustrate the usefulness of proportional thinking as well as physical examples: if people were half your height, would their natural gait be half as fast?

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

**Igual, Dionne — Teacher, Hayward USD**

**Math Talks TK-2**

Math Talks are quick, 10 minute lessons that encourage students to create mental strategies for solving different math problems and equations. They allow students to agree and disagree with strategies and/or answers in a respectful and productive manner. They also promote exposure to many different ways to solve the same problems. Come learn about different types of math and number talks that will keep your students interested and engaged all year.

PK-2 | PRS | 335 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 6 | BT

Co-presenter: *Laura Pesavento — DLI Teacher, Hayward USD*

**Jain, Amanda — Math Teacher, Carondelet HS**

**Figure it Out! Putting Students in the Drivers Seat**

This session will share various strategies for shifting the classroom paradigm from teacher-driven to student-driven. When students act as their own teachers (figuring out concepts, planning their own review sessions, reflecting on their discoveries and making connections on their own) their learning is deeper and more sustaining. Examples include: Reverse Engineer Teachable Content; Design Think Assessment Review; What do you know/What do you wish you know/What do you wonder activities.

8-12 | PRS | 107 | Saturday, 8:00 - 9:00 | Asilomar, Acacia | BT

**Jain, Isha — Math Teacher, Synapse School**

**Student Voice in Project-Based Learning**

Project-based environments provide opportunities for authentic learning, increasing students' voice and choice through an open-ended process. In this interactive session, we will explore how we can take student interests and convert them into authentic learning opportunities to deliver interdisciplinary projects. We will work in groups to design projects centered around student interest, and identify avenues for skills acquisition, practice, and assessment of math content.

6-8 | INT | 436 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 7 | BT

**Jemison, Todd "TJ" — Education Consultant**

**How Our Beliefs Impact Student Learning**

Budgets are tight. Program materials and teacher training are expensive. How can we get the most bang for our education buck? When all teachers truly believe every student can learn and grow student achievement increases. We will explore how to impact teacher and student beliefs about their ability to learn. We will examine some resources and collaboratively work together to brainstorm additional ways to positively impact teacher beliefs.

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

**Jorgens, Paul — Teacher, Palo Alto USD**

**Fire Up the Math Classroom with Conversation**

How can we bring the voice of all students into the classroom? How can we start each class with an energizing accessible activity to launch the lesson? We will bring our favorite routines from our middle school classrooms that encourage student discourse. In this session, participants will engage in tasks that promote conversation and explore how tools such as Desmos can help the teacher facilitate the discussion.

6-8 | INT | 235 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 6 | BT

Co-presenter: *Richard Hung — Teacher on Special Assignment, Palo Alto USD*

**Joyce, Martin — Math Teacher, Millbrae ES**

**Creating Graphs in Desmos to 3D Print**

Remember ceramics or wood shop class when you brought home a flower pot or drink coaster you had worked on? Let's do the same with an artifact from math class. Join us in creating your own Desmos name tag using linear functions and beyond, and then prepare it for 3D printing. Scaleable from 5th to 12th grade! Bring a device.

8-12 | MITI | 460 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Library A | BT

**Kawalek, Cyndee — Cyndee's Teacher Training**

**Differentiating Does Not Have to Be Hard!**

Understanding how to use students modes of reception and multiple intelligences is the first step in DI. First and foremost, a teacher does not need to develop each lesson plan to meet every student's needs. Each lesson plan can use three modes of reception and fit in as many learning styles as is feasible. Each student can benefit from this approach as they can utilize their learning strengths and pull from weaker areas to enrich their learning and experience authentic learning success.

Tchr Ed | W | 241 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 21Lab | BT

Your feedback is important to us! Please take a moment to complete the **Speaker** evaluation at [bit.ly/19SpkrEval](https://bit.ly/19SpkrEval)



#hashtag **CMCMATH**

**Kempster, Vriana — Math Specialist, San Francisco USD**  
**Learning with Data: Dynamic Statistics in Grades 6 through 9**

How do you bring creativity and student voice into the exploration of statistics? You'll experience how to bring the Common Core statistic standards to life by exploring a rich dataset using free online technology. We'll analyze how the standards from grades 6, 7, 8, and Algebra progress using the technology exploration to anchor the discussion. We'll see how students have the freedom to ask and answer their own questions using dynamic representations. Bring a laptop or tablet.  
 6-8 | INT | 142 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 22 | BT

Co-presenter: Elizabeth DeCarli — Math Specialist, San Francisco USD

**Kenyon, Glenn — Math Content Specialist, San Francisco USD**  
**Making Math Visual: The Power of Tape Diagrams K-6**

Students are empowered when they can strategically use tools to make sense of and solve increasingly complex math problems. Participants will learn how tape diagrams can be used to make sense of different types of problems, identify math relationships, and justify thinking. They will discuss how the tape diagram helps distinguish between the different problem types with each operation. Participants will experience a scope and sequence starting in early elementary up through 6th grade.  
 PK-5 | INT | 450 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 32 | BT

Co-presenter: Kawthar Duncan — Content Specialist, San Francisco USD

**Khalsa, Arjan — STEM Advocate, Conceptua Math, Activate Learning**  
**5-Minute Journal Prompts: Formative Assessment with Flair**

What takes 5 minutes, includes models, text, and numbers, and has the highest correlation to student achievement of any activity? You guessed it: Journal Prompts! Learn to design "exit tickets" that engage your students while guiding your practice. Can students construct viable arguments? Yes! Make the last 5 minutes their favorite part of the lesson. See how movement from hands-on manipulatives to visual representations to procedures promotes written work that students love.  
 PK-5 | INT | 406 | Saturday, 1:30 - 3:00 | Asilomar, Scripps Conference | BT

**Kim, Taik**

**Making Sense of Multiplication**

Common Core State Standards suggests that 4th graders should be proficient in multiplication of a whole number of up to four digits by a one or two digit whole number, using strategies based on place value and the properties of operations. This session will provide information on how teachers can improve children's abilities in multiplication using equations, rectangular arrays, and/or area models. The speaker will present a variety of strategies and innovative ways to teach multiplication.  
 3-5 | INT | 133 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 4 | BT

**Knotts, Angela — Research Associate, WestEd**  
**Increasing Access to Algebra by Examining Worked Examples**

How can worked examples increase access to Algebra success for more students? Come learn how lessons built around analysis of both correct and incorrect worked examples can provide opportunities for engagement and deep understanding for diverse groups of students. We'll discuss two student solutions – one correct and one incorrect – and explore a lesson focused on making sense of both work samples. We also share discussion builders, sentence frames, other tools that support worked example lessons.  
 6-8 | INT | 347 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 28 | BT

Co-presenter: Katie Salguero — Research Associate, WestEd

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

**Kombe, Dennis — Assistant Professor, CSU Monterey Bay**  
**Learning to Enact Math Discourse Practices**

This session is designed to share activities and strategies enacted during a year-long PD to promote classroom discourse in support of all learners, based on Smith and Stein's 5 practices for orchestrating productive mathematics discussions. Participants will engage in sample activities and see how these classroom discussion practices impact student learning. We will share how teachers used rich mathematical tasks to deepen student understanding of mathematics.  
 8-12 | INT | 244 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 25 | BT

Co-presenter: Denise Green — Administrator of Mathematics, Monterey COE

**Kong, Ivy — Teacher, Pacific Grove USD**  
**Jump-Start Student Thinking in a Math Classroom**

How do we reveal and support student thinking? How do we bring student voice to the front and center? Through the use of classroom routines and strategies, we will help learners persevere beyond procedures and empower their voice and ideas. We will look at how to make tweaks to our existing curriculum, utilize resources beyond our regular textbook as well as employing tools like whiteboards and Desmos to promote classroom discourse and content understanding.  
 6-8 | PRS | 405 | Saturday, 1:30 - 3:00 | Asilomar, Evergreen | BT

**Krasnow, Allison — Technology Coordinator, East Bay**  
**Drop Everything and Math: Desmos as a Tool for Art and Joy**

How you wished for a mathematical equivalent to silent reading or reading for fun at home? In this workshop we'll explore ways to use the Desmos graphing calculator for students to create artwork, explore geometric compass drawing, and jump into Daily Desmos graphing challenges. Each of these activities are ideal for giving students free time to explore math, in parallel ways to silent reading or reading at home. They can be used in class, as homework, or as summer projects.  
 GI | INT | 412 | Saturday, 1:30 - 3:00 | Asilomar, Dolphin | BT

**Kriegler, Shelley — President, Center for Mathematics and Teaching**  
**Mathematics Intervention: Helping Students Catch Up**

Struggling learners deserve programs that help them catch up. Yet typically support classes focus on below grade level skills – an insidious form of tracking that does little to help students do better in their core mathematics class. Come experience six research and reality based strategies, in the context of proportional reasoning, that will make mathematics intervention programs more effective.  
 6-8 | INT | 305 | Saturday, 11:00 - 12:00 | Asilomar, Evergreen | BT

Co-presenter: Cynthia Raff — Vice President Prof. Dev., Center for Mathematics and Teaching

**Kysh, Judy — Professor, San Francisco State Univ.**  
**Teaching Strategies for Problem Solving is an Equity Issue**

If our goal is for students to learn and develop powerful mathematical practices, we need to explicitly teach problem solving strategies in grades 4-9, such as Make an Organized List, Guess & Check, Look for Patterns, Identify Subproblems, and Solve a Simpler Problem. These strategies are "academic learning tools," often developed and nurtured in middle class homes where parents went to college. Sample strategies and problems will be worked on and discussed.  
 6-8 | INT | 447 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 28 | BT

Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00-5:00 to learn about the **Scavenger Hunt** and **your chance to win a \$250 voucher** for any one of our three conferences!

**Lahme, Brigitte — Professor, Sonoma State Univ.**  
**Number Lines: A Journey Through Middle School**

Number lines are a powerful tool for developing conceptual understanding and number sense throughout middle school math. Students can use number lines to investigate concepts of ratios, percentages, and rational numbers (6th, 7th) and large and small numbers with scientific notation and decimal representations of rational and irrational numbers (8th). We will explore number line examples from the Illustrative Math open education resource curriculum to tell a coherent story through middle school.

6-8 | INT | 358 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 23 | BT

Co-presenter: Kathy Morris

**LaPier, Eben — Math Specialist, Synapse School**  
**Building Math: Designing Project-Based Curriculum**

How do you build project-based lessons that also address necessary math skills? How can you use the tools you have to create something long-lasting, meaningful, and mathematically relevant? We will explore the answers to these questions and more through a two year cycle of Synapse School's project-based 7th and 8th grade math curriculum, experience hands-on problems from Geometry, Statistics, and Algebra projects, and discuss how we create project-based curriculum from the ground up.

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

Co-presenter: Federico Chialvo — Director of Mathematics, Synapse School

**Lara, Mayra**  
**Math as a Lever for English Learner Equity**

Join The Education Trust-West and Dr. Ivannia Soto to learn promising practices for advancing math learning for English learners. Participants will engage with a protocol for shadowing English learners, as well as practice instructional strategies to cultivate academic language mastery in mathematics. Participants will leave with instructional resources and recommendations for school and district level practices to advance access and equity for English learners.

GI | INT | 458 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 23 | BT

**Leamons, Crista — Instructional Coach, Cupertino Union SD**  
**Talks and Tasks: Access and Agency for Students with IEPs**

Balancing access to content curriculum and time for targeted interventions in a single period is one of the most difficult parts of meeting the needs of our students with IEPs. In this session, you will learn number sense/fluency routines and problem solving routines that can become a part of your daily teaching practice. These routines provide opportunities to both access content and bridge gaps for our students.

6-8 | INT | 243 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 24 | BT

Co-presenter: Sarah Kurdziel — Instructional Coach, Cupertino Union SD

**Lee, Karin — Teacher, San Jacinto USD**  
**The Math Writing Sojourn**

I don't know about you ... but I chose to teach math because I didn't have to write! Now we all do! As we head down that path, students and teachers alike are discovering that writing can be an interesting and useful tool for us all. We will show how we have spent the last year slowly adding writing in short bursts so that our students incorporate writing in their everyday lessons. By adding writing, we support a standards continuum that spans the educational landscape.

8-12 | INT | 342 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 22 | BT

Co-presenter: Jordan Smith — Teacher, San Jacinto USD

**Leinwand, Steve — Principal Research Analyst, American Institutes for Research**  
**The Surprising Power of Gradual Release in Our Math Lessons**

Teachers have known for years the power of gradual release when teaching reading. It's time to apply this powerful strategy to mathematics. In this fast-paced, example-laden presentation we'll look at using the gradual release strategy - supported by animated slides - on word problems, data tables, graphs, patterns, videos and geometric figures - all in support of generating higher levels of interest and motivation.

GI | PRS | 353 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Auditorium | BT

**Leon-Castella, Alejandra — Director, CIENTEC**  
**Math of Every Day- eBook with Multimedia in Spanish**

Presentation of a collaborative project that started as short radio programs in Costa Rica to promote interest in math in daily life, through stories and connections. The initial resources were later expanded with curiosities and more, to produce an illustrated book (republished by Editorial Tecnologica 2016). Since it has been very successful it was transformed into a larger project, that gathers the radio programs and further animations into a multimedia eBook (2017).

GI | PRS | 215 | Saturday, 9:30 - 10:30 | Asilomar, Triton | BT | \$

**Levinson, Rita — Math Teacher, Peninsula Bridge**  
**Students as Puzzle Makers: Developing Algebraic Thinking**

Explore puzzles that help students build understanding of important algebraic concepts while practicing problem-solving strategies. Students love puzzles, but their engagement gets even deeper when creating their own for peers to solve. Even students whose voices are usually quiet in math class enjoy presenting their own activities. Investigate several types of puzzles that lend themselves to being adapted by students at different levels. Come prepared to solve puzzles and create your own.

6-8 | INT | 542 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 22 | BT

**Lewis, Tom — Math Coach, Napa Valley USD**  
**Student Ownership with Their Learning Progress**

Four simple questions have taught our students how to self-report their grade - accurately and with clarity. Harvest I.B. Middle School has implemented these 4 questions and a tool called a "Progress Chart" with HUGE impacts on our students' learning. Come learn about the 4 questions, what a "Progress Chart" is, how it works, how to create them for your units, and how to use them early, often, and ongoing in your classroom and see how this has changed the way we teach and our students learn.

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

Co-presenter: Meiko Smith — Math Teacher, Napa Valley USD

**Lindaman, Brian — CSU, Chico**  
**Unusual Shapes, Angles, and Supercool...wait for it...Wallpaper**

Looking for ways to inspire your students to access the beauty in geometry? Come explore several inquiry-oriented activities which enable you to lead your students on a journey into a realm of unusual angles, Golden shapes, pentagons, and the coolest wallpaper ever! The activities are designed to foster classroom discourse about fundamental principles of geometry, as well as connections to art, history, and nature. Let your students wonder, wander, and, ultimately, widen their geometry gaze!

8-12 | MITI | 446 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 27 | BT

Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00am-5:00pm and **pick up your swag!**

**Lomeli, Elizabeth — Teacher, Placer HS**  
**Dirty Dozen Countdown: Choice for Student Voice**

Do you want to establish a classroom where every student feels like they are being heard? This session will address 12 simple yet effective strategies to obtain feedback from your kids regardless of ability or confidence level. Come learn games, witness visual communication tools, experiment with apps, and use google forms to create graphical representations of student responses. This will be a fast-paced presentation. Please bring a device for best access to the activities.

8-12 | INT | 256 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 38 | BT

**Loomis, Caroline — Math Teacher, Davis Joint USD**  
**Slice it up! Discussing Equal Sharing Fraction Strategies**

Learn about the five-level framework for the learning trajectory for equal sharing problems. Using the principals of Cognitively Guided Instruction, this framework enables teachers to engage in formative assessment so they can orchestrate classroom discussions to advance the thinking of children at different levels of understanding. We examine and reflect on student video and work samples and learn about the framework by interpreting student's thinking and using it to plan focus discussions.

PK-5 | INT | 103 | Saturday, 8:00 - 9:00 | Asilomar, Heather | BT  
 Co-presenter: Rebecca Ambrose — Professor, UC Davis

**Luberoff, Eli — Founder of Desmos**  
**Building Social+Creative Classrooms with Technology**

At its best technology fosters creativity and connects people. Too often in classrooms, however, technology is isolating and stultifying: videos, writing numbers in blanks. Together, we'll look how technology can support a social and creative classroom.

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

**Luzniak, Chris — Math Teacher, The Archer School**  
**Debate That! Empowering Students Through Debate in Math**

Imagine: Debate, often a staple of the humanities classroom, as an integral part of your math class! Debate activities are known to increase student achievement and understanding. So let's explore ways to incorporate debate into your every day lessons. Come learn and experience techniques and routines for creating a healthy math-debating classroom that will empower and engage students of all levels.

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

**Marin, Christina — Math Teacher**  
**Blow It Up! Facilitating Controversial Sorting Task Debates**

Have you ever led an awesome sorting task only to have the end of class fall flat? Have you felt unsatisfied because groups have unresolved misconceptions and are in all different places? We will explain our method of making giant versions for the class to see, move, and debate. We will share strategies about how to keep the controversy flowing, equitably encourage students to participate, and provide access to language learners.

6-8 | INT | 333 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 4 | BT  
 Co-presenter: Brittany Leknes — Math Teacher

**Martin, John — Academic Coach, Madera South HS**  
**Making Mathematics Learning Visible Using Algebra Tiles**

Participants will use both physical and digital manipulatives to help students create a visual picture of mathematics. The topics covered range from operations on integers to solving equations to operations on polynomials. We will explore the continuum of moving from concrete to representational to abstract.

8-12 | INT | 454 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 36 | BT | \$

**Martin, John — Math Teacher, Santa Rosa Junior College**  
**Photomath: Friend or Foe**

The free app Photomath can solve many textbook problems and its latest version can also recognize handwriting. The app not only gives an answer, but it also shows the steps in the solution process. Your students know about Photomath, do you? Join us for a lively discussion on the pros and cons.

8-12 | PRS | 202 | Saturday, 9:30 - 10:30 | Asilomar, Kiln | BT

Co-presenter: Gale Bach — Math Teacher, Santa Rosa Junior College

**McCaw, Shannon — Consultant and Author, EdGems Math LLC**  
**Engaging All Students in Rigor**

In this workshop, teachers, instructional coaches and administrators will learn strategies for increasing student engagement that can be easily inserted into the daily classroom routine. Teachers will be provided with structures to engage ALL levels of students in a classroom in addressing conceptual understanding, procedural skills and application. Participants will play the role of middle school math students to experience the strategies firsthand.

6-8 | INT | 515 | Saturday, 3:30 - 5:00 | Asilomar, Triton | BT | \$

**McDowell, Denise**  
**Using Feedback to Motivate Learning**

B.R. Jones, Superintendent, said what is different between a video game challenge versus the challenge of learning? The answer to that question is feedback. In this workshop we will examine feedback and the three essential questions that guide the process: where are you going, where are you now, what next steps are you going to take?

3-6 | INT | 250 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Room 32 | BT

**McEntee, Rhonda — Teacher**  
**Students Voice Through Math Talks**

In this fast paced session participants will be presented with numerous math talks. Math talks are a great way to get your students talking math! You'll learn the importance of doing them, how to structure them, as well as practical strategies and applications. Walk away with many ready-to-try first thing Monday morning talks.

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

**McKenzie, Doug — Math Teacher, Crane Country Day School**  
**Sequences: The Foundation for Understanding Linear Patterns**

From 6th to 8th grade, students develop their understanding of algebraic expressions and " $px+q$ " or linear equations. Behind the equations, tables and graphs, numerical patterns can help explain how they all fit together. I will share how my students explore linear patterns, use them to write expressions and equations, and explore tables and graphs to lay the groundwork for slope and intercept in 8th grade. We will also look at related online resources such as visualpatterns.org and Desmos.

6-8 | INT | 144 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 25 | BT

**McLean, Peggy — Math Specialist, Synapse School**  
**Mirror Explorations**

Using different configurations and types of mirrors, predict and observe the changes resulting from sliding, flipping, and turning three dimensional objects. Identify and describe line and rotational symmetry by folding paper polygons. Test understanding by building designs that demonstrate different symmetrical properties. This is a hands-on workshop! Handout provided.

3-5 | INT | 240 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 13 | BT

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**McNamara, Julie — Assistant Professor, Cal State East Bay**  
**You Want Students to Talk? Give Them Something to Talk About**

Engaging students in rich mathematical discourse can be challenging due to a variety of reasons. Students often feel that unless they know the one “right” answer, their ideas are not worth sharing. This session focuses on several routines that encourage students to think creatively and flexibly about mathematics, and can be implemented in classrooms from kindergarten to grade 12. We’ll also work together to prepare for responding to students’ ideas and plan for unexpected student responses.

GI | INT | 455 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 37 | BT

**Mendle, Al — Lecturer/Supervisor, UC Davis**  
**Build and Use an Abacus**

Participants will build a suanpan or a simplified Chinese abacus out of craft sticks, pony beads and dowels. Once built, participants will begin to look at how it can support mathematical thinking in the classroom. Without the use of batteries and technology, this amplified place value device can be used by elementary students to think about multiple representations and invented algorithms. And be warned, it’s fun to make and use but it can be challenging!

3-5 | MITI | 360 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Library A | BT

**Meyer, Dan — Desmos**  
**Recipes for Mathematical Surprise**

If our students wrote down adjectives to describe math class, “surprising” might not make the top ten. And yet surprise is an emotion that makes us interested, prepares us to learn, and prepares us to prove. We’ll experience mathematical surprise and discuss three recipes for creating surprise throughout K-12 mathematics.

GI | INT | 153 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Auditorium | BT

**Miller, Zack — Director of Math Curriculum, Summit Public Schools**  
**Many People Hate Math but Love Stories: What an Opportunity!**

Cognitive scientists and marketing wizards agree: stories are immensely powerful. Humans are hard-wired to find stories inherently appealing, easy to understand, and memorable. They are mankind’s most efficient compression algorithm. Other industries capitalize on this by baking their messages into stories. Math class should take note. Bringing stories and their structure into class can increase engagement and learning and also acknowledges students’ humanity. So how might we do it better?

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

Co-presenter: Cameron Yuen-Shore

**Moore, Sara — Director of Professional Learning, ORIGO Education**  
**Unpacking Mathematical Operations: Multiplication and Division**

Solving word problems, students often say “I don’t get what they want me to do!” In this session, learn to build a stronger understanding of the meaning of multiplication and division as operations. Students who know the “work” each operation can do in problem situations can translate their understanding into equations. Learning extends from whole numbers to decimals and fractions. Students are empowered to better understand word problems, and to mathematize real world modeling or PBL situations.

3-5 | INT | 257 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 39

Co-presenter: Kimberly Morrow-Leong — Mathematics Education Specialist, George Mason Univ.



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

**Morikawa, Michelle — Level II Lead Teacher, Synapse School**  
**Ancient Architecture Excites Young Learners**

In this session, teachers will be introduced to an integrated study of the Maya in a lower elementary classroom. Participants will use geometric concepts such as area, perimeter, and spatial reasoning, as well as the four operations. These math concepts will be integrated with social studies content and social justice themes in a hands-on investigation. Reviewing social studies standards, teachers will be encouraged to consider connections to their own curriculum and classrooms.

PK-5 | INT | 557 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 39 | BT

Co-presenter: Jennifer Bourque — Level III Lead Teacher, Synapse School

**Morris, Kathy — Professor Emerita, Sonoma State Univ.**  
**Maker Tasks for Mathematics: Make a Measuring Tool**

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. You will make an accurate yardstick or trundle wheel with minimal tools, rapidly prototyping and revising. You’ll see how students take up these challenges, exploring important measurement ideas and math practices (tools and attend to precision). We’ll explore how the math extends through the grades.

GI | INT | 160 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Library A | BT

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

**Morrison, Patty — Teacher, CMC Central**  
**Using Literature to Teach Math in the PreK to 1st Grade**

Literature is a great way to teach Math! Children love a good story! Using that story to teach a math concept helps children get engaged! I will be presenting lessons I wrote that were published in the *ComMuniCator*. I will also be giving each participant a book to take with them! Come and get some ideas to take back and use on Monday!

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

**Moskowitz, Stuart — Humboldt State Univ.**  
**Lewis Carroll Would Have Been a Great School Math Teacher!**

Charles Dodgson, aka Lewis Carroll (Alice in Wonderland), was an uninspiring math teacher at Oxford U. But away from Oxford, he used puzzles and games to make math meaningful and he used math to bring meaning to things not mathematical. After he visited a high school, a child wrote: “...to our surprise the lecturer appeared with a large black handbag, from which he proceeded to draw white envelopes...we were to play a game!” Dodgson practiced Common Core guidelines 100 years before they were written!

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

Co-presenter: Stan Issacs

**Mudde, Amanda — Math Teacher**  
**Creation of Math Projects with Low Floor and High Ceilings**

In this session, we will discuss how we created a number of projects, small and large, which promote student growth and mathematical competency. We will explore how to create rubrics, promote student reflection, guide students through the process, and discuss grading practices. Participants will discuss ways to modify these projects to fit their particular schools and workshop a new idea. Participants will leave with timelines and documentation of many of the projects discussed in the session.

8-12 | INT | 336 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 7

Co-presenter: Danielle Dell and Veena Krishnan — Math Teachers

**Mulhearn, Dennis — Retired Teacher, Valley Stream South HS**  
**Excite and Energize Teaching Area by Using Contest Problems**

Help teaching area at the middle school level can be found in an unexpected place – math contests. Participants will be shown ways to develop higher-order thinking in students, using rich, authentic problems that allow for multiple methods of solution. The teaching of problem solving will be modeled with an emphasis on permitting participants to take ownership of the problems and solutions. Participants will leave with these and over 50 additional rich problems.  
 6-8 | INT | 556 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 38 | BT

**Cubes Offer a Rich Setting for Problem Solving**

A cube is the starting point for many rich problems. Stack cubes, count cubes, paint cubes and do some real math at the same time. Work on a dozen classic problems. The setting may be geometric but many topics and concepts are involved including factors, combinatorics, volume, surface area, networks. Take home these and more than 50 additional problems.  
 3-5 | INT | 131 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 1 | BT

**Nank, Sean — Professor, CSU San Marcos**  
**Seven Steps for Adapting Technology in a 1:1 Environment**

Has your school or district spent money on technology only to see lackluster results? Come discuss the seven steps that can aid in using technology in math classrooms in a meaningful way. We will address lessons learned during a quarter of a million dollar 1:1 implementation program, discuss how classrooms were able to work toward a zero percent failure rate, and see how these lessons can inform your district, school, and classroom.  
 GI | INT | 110 | Saturday, 8:00 - 9:00 | Asilomar, Curlew | BT

**Nathan, Ben — Teacher, Berkeley HS**  
**Wrong Classroom: Using Incorrect Answers to Build Learning**

The presenter will share strategies, activities, and student sample work to show how incorrect responses from students can enrich the learning environment. There will be specific examples of methods used in diverse, urban mathematics classrooms that have increased access to the material and equity. By focusing on the use of incorrect responses to facilitate lessons, attendees will be better able to engage and involve students while creating deeper learning through student input.  
 8-12 | PRS | 311 | Saturday, 11:00 - 12:00 | Asilomar, Sanderling | BT

**Newton, Roberta — Author/Consultant, Newton Education Solutions**  
**Math Running Records in Action**

Math Running Records is an assessment system that helps us to unpack the basic fact fluency levels of K-5 learners. It is used to get evidence about where students are stuck and then plan a developmentally appropriate learning trajectory. It is the GPS of fluency, now being used in countries such as the U.S.A. Canada, Qatar and Japan. In this workshop, through videos and discussion, Dr. Nicki explains what they are, how to administer and analyze them, and then develop data driven instruction.  
 PK-5 | INT | 234 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 5 | BT

**Counting: It's More than 123**

In this session Dr. Nicki will discuss the 20 levels of counting and the implications for the primary classroom. We will look at assessment and data driven activities for daily math routines, guided math and math workstations. We will also discuss how to differentiate these lessons based on the nuances of the levels and discuss the important question of rigor and what that looks like in designing counting activities. Come join us for games, songs, and activities that engage and teach.  
 PK-2 | MITI | 134 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 5 | BT

**Nguyen, Ho — Math Program Administrator, San Francisco USD**  
**Focal Students: Focus the Lens, Deepen the Learning for All**

Ever feel overwhelmed by the number of students and the diversity of their needs? Learn how we can look at 2-3 focal students to deepen the conversation around teaching and learning. Develop a strengths-based lens through the discipline of documenting student strengths and their connection to teacher moves. Coaches and teams of teachers can work together to think deeply about what it means to be a student in an equitable classroom, where agency and self-identity are promoted and valued.  
 GI | INT | 209 | Saturday, 9:30 - 10:30 | Asilomar, Marlin | BT  
 Co-presenter: Mary Maher — Math Coach, San Francisco USD

**Ortega, Courtney — Math Coordinator, Oakland USD**  
**The TRUth About PLCs**

In Oakland, site math teams use the Teaching for Robust Understanding (TRU) framework to plan and reflect upon individual lessons and overall teaching practice. This has transformed business-centered department meetings into student-centered PLCs, focused on examining what students say and do. Experience the TRU tools by watching classroom video, using questions from the Observation Guide and Conversation Guide to do a deep dive into one TRU dimension - role playing a PLC conversation.  
 8-12 | INT | 111 | Saturday, 8:00 - 9:00 | Asilomar, Sanderling | BT  
 Co-presenter: Mary Reed — Math Specialist, Oakland USD

**Patterson, Brandolyn — Teacher, Mill Valley SD**  
**Achieve Equity of Voice Through Global Competence**

By teaching through a global lens (and implementing other research based practices), we can create classrooms in which equity of voice (and opportunity) is achieved and the achievement gap closed. Come prepared to discuss, and learn from others how you have changed (or would like to change) your pedagogy to foster equity.  
 6-8 | INT | 346 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 27 | BT

**Paul, Cristina — Dual Language Demonstration Teacher, UCLA Lab School**  
**Curiosity and Student Ownership of Ideas: Three Act Tasks**

The goal of this session is to familiarize teachers with three act tasks and high-leverage mathematics experiences that foster curiosity and collaborative thinking. We will engage in a warm-up that builds understanding and offers opportunities to move and talk about fractions. Together, we will engage in a three act task and share resources. Finally, we will reflect upon how to choose, use, and create high-leverage tasks that are responsive to our students' mathematical curiosity and lives.  
 3-5 | INT | 317 | Saturday, 11:00 - 12:00 | Asilomar, Nautilus West | BT  
 Co-presenter: Rebecca Heneise

**Pesavento, Laura — Teacher, Hayward USD**  
**Math Workshop in a Primary Classroom**

Math Workshop allows students to create their own mathematical understanding and uncover strategies to solve open-ended problems. They productively struggle with the math independently and then convince other students of their reasoning. In this session, you will learn about: finding problem types, setting up problems, creating an environment for independent work, having students justify and prove their thinking, and debriefing with the intent of highlighting strategies and Math Practices.  
 PK-2 | PRS | 435 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 6 | BT  
 Co-presenter: Dionne Iguar — Teacher, Hayward USD

**Phillips, Breanne — Math Coach, Visalia USD**  
**Talk Nerdy to Me: Increasing Student Discourse**

This session will take participants through an English-Language Learners math class experience, dissect lesson components, and further investigate where ELL students struggle. Participants will engage in structures and strategies that encourage and support ELL discourse within the classroom. Our objective is for teachers to leave with structures and strategies that can be embedded in instruction and for coaches to gain knowledge on how to introduce and support the structures and strategies.

8-12 | INT | 331 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 1 | BT  
 Co-presenter: Laurie Duerksen — Math Coach, Visalia USD

**Phillips, Perrin — Instructional Coach, Hayward USD**  
**Launching Math Workshop: Cognitively Guided Instruction**

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

**Piccio, Henri — Consultant, MathEducationPage.org**  
**Reaching the Full Range**

All classes are heterogeneous: students learn math at different rates. What should we do about it? I will present the non-traditional two-prong response I developed in my 42 years in the classroom and 30 years as department chair. a) Some easy to implement structural practices: lagging homework, separating related topics, and alternative assessments. This takes no extra time and supports a growth mindset. b) Pruning the curriculum and a tool-rich pedagogy, using manipulatives and technology.

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

**Pinkerton, Ken — Math Festival Coordinator, Humboldt Math Festival and Redwood Discovery Museum**

**Community Math Festivals Strategies and Hints that Work**

In April 2018 the Humboldt Math Festival celebrated its 11th annual "community celebration of math" with 50+ STEAM activities, contests, games, demos, make and take, artists, authors, professionals and more. The Saturday festival, organized by local teachers, brought together students from more than 56 local schools, with 1000+ students, family and community members attending. This FUN session will share strategies on organization, sponsors, activities and ideas to showcase student work.

GI | PRS | 357 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 39 | BT

**Prince, Noah**  
**Modern Geometries: A Case Study**

Recently, the Illinois Mathematics and Science Academy introduced a new elective called Modern Geometries to serve an overlooked population of students. The class focuses on exploration of non-Euclidean geometries and gives students lots of opportunities to question, conjecture, build, discover, and think creatively about these new spaces. In this session, we will discuss the rationale for and content of the course and participate in some of its inquiry-based activities.

8-12 | INT | 555 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 37 | BT

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

**Pugh, Charlene — Teacher, Hayward USD**  
**Explain Your Thinking: What is That?**

It is no longer enough for students to just calculate, they need to demonstrate their understanding. In this session, you will see different ways students can explain their thinking in problem solving situations. You will take away some forms to make this easier for you to manage and formats students can use to assist them. It is more than turn and talk and sentence frames. Come listen, participate and find out.

3-5 | PRS | 348 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 29 | BT

**Raff, Cynthia — Vice President, Center for Mathematics and Teaching**  
**An Equation Journey: Strategies to Spark Engagement**

Experience various strategies and engaging problems that develop equation solving concepts. Hook problems, with a low floor and high ceiling, will be explored. Problems presented will show the value of cooperation, not competition. Activities will spark conversation and engage all students in the ownership of learning about equation solving.

6-8 | INT | 434 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 5 | BT

Co-presenter: Shelley Kriegler

**Ramos, Jeanne — Math Administrator, Los Angeles USD**  
**Encouraging Student Voice Through Math Language**

Participants will experience various mathematical language development routines that are structured to promote simultaneous acquisition of the mathematical practices, content and language. The routines emphasize the use of language in a meaningful way across lessons and grade levels and provide increased opportunities to support students in using and improving their English and mathematical language.

6-8 | INT | 255 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 37 | BT

**Ray, Solana — Teacher/Consultant, Callahan Consulting**  
**K-2 Students Creating Beautiful Explanations in Math Class**

Children can start in the primary grades to create beautiful mathematical explanations. If we want our future leaders to be flexible thinkers and powerful communicators, we should begin practicing these skills in the early years. Come learn about resources, instructional strategies and formative assessment tools that provide students, with opportunities to practice and refine the art of communicating reasoning in the primary math class.

PK-2 | PRS | 303 | Saturday, 11:00 - 12:00 | Asilomar, Heather | BT

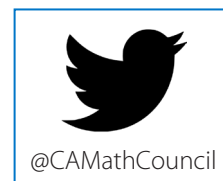
Co-presenter: Jessica Balli — Math Education Consultant

**Reiff, Elizabeth — Math/Science Teacher, San Francisco USD**  
**Academic Conversation: You Can't Do it Alone!**

Do you encourage your middle school students to TALK about Math learning? We do, but we have observed that their table talk often consists of one-sided statements that fizzle and plop in the middle of the table. Join us to explore interactive structures that get students conversing about Math thinking as well as observation data collection tools that will help you analyze patterns: who is talking? to whom? how much? are they responding to each other? how does this influence sense making?

6-8 | PRS | 340 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 13 | BT

Co-presenter: Margaret Dominguez — Math/Science Teacher, San Francisco USD



**Resek, Diane — Professor Emerita, San Francisco State Univ.**  
**Strategy Games for the Last 10 Minutes of Class**

In teaching K-8 classes and university classes for teachers, the students and I sometimes finished my planned lesson early. Rather than starting something new, I would teach them a game that could be won by finding and using a strategy. Participants will play games and discuss winning strategies.

6-8 | INT | 403 | Saturday, 1:30 - 3:00 | Asilomar, Heather | BT

**Ritter, Cornelia — Math Teacher**  
**Dialogic Learning: An Inquiry-based Swiss Approach**

Through a dialog about a math problem, Ruf and Gallin, two high school teachers and professors for education, realized in the 70s that learning is more than a one-way street from task to answer and established Dialogic Learning with its key components of core idea, assignment, journal, and feedback. The session will focus on how the teacher, by passing out or projecting students works for all to see, fruitfully feeds back great ideas, pearls of mistakes, or different ways of solving a problem.

GI | PRS | 242 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 22 | BT

**Roberts, Christine — Curriculum Specialist, TCOE**  
**CVNIC: A Journey Toward Improving Math Outcomes for Students**

Discover how eight districts are collaborating to learn what impacts student learning in mathematics. Teachers, coaches, and administrators focused on developing growth mindset, learning about instructional practices, and supporting continuous improvement. Providing access to rich mathematics for our students has resulted in positive outcomes for students overall and growth for specific student groups. Learn how our journey began, what we have learned, and what we're curious about learning next.

GI | PRS | 456 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 38 | BT

Co-presenter: Kim Webb — Curriculum Specialist, TCOE

**Rossi Becker, Joanne — Professor Emerita, San Jose State Univ.**  
**Transition to College Level Mathematics**

The Monterey County Consortium for math readiness has developed a 12th grade course based on math modeling for those not ready for college level math. We will describe the course, engage teachers in sample course modeling activities, and present assessment results. Designed for students deemed not yet ready for college-level math at the end of 11th grade, the course is student-centered and deals with core mathematical concepts, developing deeper understanding of big ideas such as functions.

8-12 | INT | 558 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 23 | BT

Co-presenter: Lipika Dekka — Associate Professor, CSU, Monterey Bay

**Rossiter, Devin — Academic Coach, Walter Stiern MS**  
**Same/Different: A Mathematical Language Routine**

The "Same/Different" Mathematical Language Routine (MLR) has gained momentum as a means for students to explore visual models of foundational concepts. Two images or methods are presented and students are asked, "What is different?" and "What is the same?" This session moves the Same/Different structure into math strategies as participants make connections between two presented methods, share resources for samples of Same/Different prompts, and examine the process of designing their own.

6-8 | MITI | 260 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Library A | BT

**Roth, Marc — Teacher, Main Street Scholars**  
**Bowling Pin Puzzles**

Bowling Pin Puzzles were described in Martin Gardner's column on Pascal's triangle. Participants will have the opportunity to discover the various shortcuts to their solutions. The mathematics involved includes algebra 1 (solving equations) and algebra 2 (logarithms). It also includes some accessible enrichment topics such as modular (clock) arithmetic. These puzzles are the ultimate in having a low floor, high ceiling in that they can be used from first grade through college.

8-12 | MITI | 560 | Saturday, 3:30 - 5:00 | Pacific Grove MS Library A | BT

**Sagun, Theodore — Mathematics Consultant, UCLA**  
**Choral Counting from Elementary to Middle School**

Choral counting is often thought of solely as an elementary school practice. In our time together, we will explore the possibilities for choral counting in middle school and beyond, discuss strategies used in the middle school classroom, and important connections to rates, linear functions, tables and graphs.

6-8 | INT | 145 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 26 | BT

Co-presenter: Brandon McMillan — Mathematics Consultant, UCLA

**Salguero, Katie — Research Associate, WestEd**  
**Worked Examples and the Mathematics Teaching Practices**

How can teachers use worked examples to support students with challenging algebra readiness topics? In this session, we will examine worked examples, both correct and incorrect, of math tasks related to rational numbers and linear equations. We will also explore how worked examples can be a pathway toward five of the effective Mathematics Teaching Practices from NCTM's Principles to Action publication and support students' engagement in the Standards for Mathematical Practice.

6-8 | INT | 247 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Rm 28 | BT | \$

Co-presenter: Angela Knotts — Research Associate, WestEd

**Samaniego, Kimberly — Director, UC San Diego**  
**What are You Thinking? Engaging in Performance Task Learning**

In this interactive session, participants will solve high-ceiling, low-floor tasks designed to elicit evidence of student thinking in support of SBAC Performance Task expectations. We will incorporate student-centered instructional strategies designed to enhance access to the course content and discuss how anticipating students' errors in advance informs targeted follow-up instruction. Teachers walk-away with access to open-ended tasks and strategies ready for Monday's lesson.

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

**Schaffer, Karl — Math Faculty Emeritus, 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 | 218 | Saturday, 9:30 - 10:30 | Asilomar, Merrill Hall | BT

Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00-5:00 and **pick up your swag**, learn about the **Scavenger Hunt** and your chance to win a \$250 voucher for any one of our three conferences!

#hashtag **CMCMATH**

**Schneider, Craig — Mathematics Coach, Santa Barbara USD**  
**Mathematical Language Routines: Foster All Students' Voices**

Join us to engage in elementary and middle school content using adaptable routines that promote mathematical sense making and language development simultaneously! We will practice routines that support students to describe mathematical reasoning to others, orally, visually, and in writing. As students develop facility with English and disciplinary language, these routines cultivate equity and access by providing appropriate support to all students to engage in mathematical conversations.

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

Co-presenter: Janet Hollister — Teacher on Special Assignment, Santa Barbara USD

**Schooler, Lesley — Mathematics Dept. Chair, Carondelet HS**  
**Initial Results of New, Innovative Algebra I Program**

Our team-taught Algebra program provides students with challenging, inter-connected math tasks that allow them to struggle, persevere, discover and grow. Students work collaboratively as they self-pace through teacher-designed curriculum working on open ended application problems. Multiple sections of non-tracked Algebra students meet during the same period with four teachers and can go as fast as completing two courses in one year or as slow as completing one course in two years.

8-12 | PRS | 157 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 39 | BT

Co-presenter: Kristina Levesque — Math Teacher, Carondelet HS

**Schultz, Tammy — Math Education Consultant,**  
**Monterey Bay Area Math Project**

**Using Teacher Observations to Advance Young Mathematicians**

The power of thoughtful listening and careful observation can transform instruction. Through the use of videos and teacher notes, participants will investigate how intentional formative assessment techniques allow for strategic planning, with students working on the edge of their academic development and the structure of mathematics.

PK-5 | PRS | 104 | Saturday, 8:00 - 9:00 | Asilomar, Oak Shelter | BT

**Schwartz, Christen — Math Coordinator, Contra Costa COE**  
**Let's Talk Algebra!**

Algebra is not scary! Algebra is in everything we do. Gain strategies to support students in exploring 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. These strategies support real time implementation and student engagement. Participants communicate reasoning with peers and gain tools to facilitate discussions giving every learner access and a mathematical voice.

6-8 | INT | 148 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 29 | BT

**Facilitate Student Discourse Through Math in Science Talks**

Many students and teachers see Math and Science as silo disciplines. Participants will explore an increase in student access to phenomena and connections to math in science. We will share our journey of educator collaboration and classroom implementation using prototypes of "Math in Science Talks." Experience a deepened understanding of key math and science concepts using peer academic conversation and discourse. Bring your math talks to the next level integrating them into your science lessons!

PK-5 | INT | 402 | Saturday, 1:30 - 3:00 | Asilomar, Kiln | BT

Co-presenter: Lizzy Hull Barnes — Math Supervisor, San Francisco USD

**Scott, Jane — Senior Educational Facilitator, MetaMetrics**  
**The Quantile Framework for Mathematics: Math Differentiation**

Differentiating math instruction is critical in helping to prepare students for college and career goals. However, educators need time, tools, and resources to be able to differentiate effectively. The Quantile Framework is here to help! By using a common scale to measure both student readiness and content materials, educators can more effectively address students' individual needs by using the FREE resources that will be shared.

6-8 | PRS | 540 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 13 | BT

**Scott, Lyn — Assistant Professor, CSU, East Bay**  
**Math and Dual Language Learners: What Every Teacher Needs**

This interactive session immerses teachers in hearing and experiencing the multilingual voices of their students. Participants will engage in hands-on fraction, pattern, graphing, number sense, and academic language activities appropriate for all students. The session features a language simulation that incorporates CCSS math content and second language principles of teaching English and dual language learners. Teachers will create, evaluate, and reflect on various scaffolds to support students.

PK-5 | INT | 140 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 13 | BT

**Sgroi, Richard — Retired Math Teacher, Bedford Central Schools**  
**Using Financial Applications: Real-World Student Discourse**

Advanced Algebra with Financial Applications is a perfect 3rd/4th year math course that helps students of ALL ability levels develop their mathematical and financial voices by recognizing the relevance of the math they are learning. The course builds student confidence and advanced algebra competence within the contexts of discretionary expenses, banking, credit, auto ownership, employment, taxes, housing, investing, entrepreneurship, retirement, and budgeting. Handouts will be distributed.

8-12 | PRS | 544 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 25 | BT

**Shore, Chris — Math Coach, Temecula Valley USD**  
**We Have Already Built the Wall: In and Between Our Schools**

My school's story of self-discovery reveals that many of the barriers to equity and access that contribute to the achievement gap are built by the well-intended hands of both the decision makers within our schools and the families that we serve. Learn the evidence that you can collect to discover your school's own story and see some potential solutions to closing the opportunity gap.


GI | PRS | 553 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Auditorium | BT

**Making Group Work Work with Less Work**

The 21st Century Classroom calls for a great deal of student collaboration. Would you like your groups to be more on-task and productive? Receive very practical principles on giving students a voice by learning WHY to group, WHICH group structures to use, HOW to manage your groups, and WHEN to group.

GI | INT | 453 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Auditorium | BT

**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.



**Silva, Douglas — Math Teacher, Santa Maria HS**  
**Nearpod: Effectively Using Technology with 1-1 Tablets**

Your students have tablets/ipads/chromebooks but you are not sure how to use them. Kahoot, Quizzizz and CoolMath can only take you so far. Actively engage all students and hold every student accountable at all times. Get immediate (formative) feedback in Real-time. Participants will need internet access, you will learn how Nearpod operates and have the tools to create your own lessons! To be beneficial, bring a powerpoint/google slides lesson you have created and enhance it using Nearpod!

8-12 | MITI | 448 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 29 | BT  
 Co-presenter: Rogelio Ordonez — Math Teacher, Pioneer Valley HS

**Sisemore, Cassie — Mathematics Coach, Visalia USD**  
**Secondary Mathematics Vertical Articulation Processes**

Do teachers look to you for guidance on which standards, topics or depth they should be teaching? How much would your teachers benefit from learning how to work collaboratively to make these decisions as a team? In this session, we will explore ways to develop teacher teams' abilities to interpret and vertically articulate the CCSSM. We will share methods on how to support teacher teams in the development of a common understanding of the vertical articulation of secondary mathematics.

8-12 | INT | 417 | Saturday, 1:30 - 3:00 | Asilomar, Nautilus West  
 Co-presenter: Laurie Duerksen — Mathematics Coach, Visalia USD

**Sola, Tracy — Assist. Director, Silicon Valley Mathematics Initiative**  
**The Long and Short of It: Primary Non-Standard Measurement**

Journey with students as they experience and reason about non-standard measurement through participation in activities and debrief discussions to solidify their understanding. Learn about the foundations of primary measurement. Video cases and student work bring this presentation to life. Engage in discussions about the activities, videos, and student work to address best practices and insights into students learning. Receive a Non-Standard Measurement unit of study to bring back to your own practice.

PK-2 | INT | 404 | Saturday, 1:30 - 3:00 | Asilomar, Oak Shelter | BT

**Stadel, Andrew — Instructional Coach, Tustin USD**  
**Bring More Students Into Math Conversations and Sense-Making**

Do you wish more students were able to join mathematical conversations? Do you wish more students could make better sense of mathematical tasks? Come engage in secondary math tasks in which students of all math abilities can join conversations and make sense of the math. I will share three lesson design principles and classroom routines that have been classroom-tested and can be implemented immediately with students from Math 6 to Calculus.

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

**Stern, Michael — Teacher, Bayside/MLK Academy**  
**Fraction Action: Modeling the Operations: +, -, x, /**

Struggling to comprehend the complexities of fractions is an educational birthright. In this interactive session, participants will engage in three hands-on activities, which employ scratch paper, graph paper, rulers and scissors; they will fold, cut and measure, providing tactile and visual ways of seeing fractions in action. Students gain a deeper understanding of computational procedures involving fractions. These lessons offer access and equity to students who struggle with fractions.

3-5 | INT | 409 | Saturday, 1:30 - 3:00 | Asilomar, Marlin | BT  
 Co-presenter: Mary Ann Terrell — Teacher, Wardlaw ES

**Sustaita Clark, Priscilla — Instructional Coach**  
**Student Vision: Empower with Numberless Math Stories**

Use math during Designated ELD? See how it CAN be done for language learners. Using student visualization to begin the process of sentence unpacking (from the ELD Framework), to scaffold the technique of analyzing language for primary students. Numberless Math stories are the perfect vehicle to empower them to understand how to construct and deconstruct the language of mathematics.

PK-5 | INT | 309 | Saturday, 11:00 - 12:00 | Asilomar, Marlin | BT  
 Co-presenter: Sarah Crocker — Instructional Coach

**Szoke, Noam — Math Content Specialist, San Francisco USD**  
**MathRoom Management: Norms Build a Safe, Powerful Math Class**

How can all students, including students from high-trauma backgrounds, engage in powerful mathematics? What role does classroom community play in this? In this session, we will explore how and why we use norms to set up our math community. We will look at how norms are introduced and built into the classroom fabric and routines. When the classroom is a safe and supportive place, all students can take the risks necessary to develop their math identity as mathematicians.

PK-5 | INT | 440 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 13 | BT  
 Co-presenter: Kawthar Duncan — Content Specialist, San Francisco USD

**Tackett, Heather — CPM Teacher Leader, Selma USD**  
**Using Multiple Representations: Make Connections in Algebra**

Learning to use multiple representations helps students build a deeper understanding of algebra. This session will focus on linear and quadratic functions while building connections between table, equation, pattern and rule. We will begin with silent board game, and continue with strategies to build student discourse. Strategies include: jigsaw, swapmeet and whiparound. Teachers will receive materials they can use in their Algebra or Integrated Math 1/2 classes. SMP 1, 2, 3, 4, 6 and 7.

8-12 | INT | 441 | Saturday, 1:30 - 3:00 | Pacific Grove MS, Rm 21Lab | BT

**Taylor, Megan W. — CEO/Founder, Trellis Education**  
**What Will it Take to (re-)humanize Mathematics?**

Aligned with the Mayan precept of In Lak'Ech, rehumanizing is about all of us. So the fact that the experience of teaching and learning mathematics is dehumanizing for so many students and teachers is a shared and critical issue. What does it mean to rehumanize it? We'll explore some of the recent thinking of Dr. Rochelle Gutierrez, Dr. Jeff Duncan-Andrade, and others about the "slow violence" of dehumanization, what that really means for our day to day teaching, and what we can do about it.

GI | PRS | 253 | Saturday, 9:30 - 10:30 | Pacific Grove MS, Auditorium | BT

**Tuska, Agnes — Professor, CSU Fresno**  
**"Make or Break" Issues When Students Work on Math Problems**

How do students interpret mathematical tasks and problems? What habits of mind distinguish effective problem solvers from their counterparts? How can we develop characteristics in students that make them successful problem solvers? We incorporate the analysis of diagnostic testing results and video recordings of students in problem solving "action" to discuss the above questions. Participants will also be engaged in some problem solving activities and in predictions of students' responses.

Tchr Ed | INT | 507 | Saturday, 3:30 - 5:00 | Asilomar, Acacia | BT

**Ulrich, Casey — Math Teacher, San Francisco International HS**  
**Re-envisioning Group Roles to Promote Conversation, Equity**

Stymied by how to get your students to use group roles while promoting conversation and participation? So were we, until we made a few small but strategic changes. Join us as we explore some of the struggles that helped us figure out how to effectively use and adapt group roles to more consistently encourage student talk while moving group tasks forward. We adapted group roles for a high school of emerging multilinguals (English Language Learners), but our learnings are applicable at all levels.

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

Co-presenter: Nicholas Chan — Math Teacher, San Francisco International HS

**Velasquez, Kim — Math Teacher, Albany USD**  
**An Ethnomathematics Lens on Social Justice Maths Practice**

Participants will have an opportunity to see how one teacher from a Social Justice Maths Community of Practice was inspired and supported to take EthnoMathematics to their classroom. Participants will have time to collaboratively create one or more SJ math lessons for their own classroom, based on their own classroom grade level, and walk away with their own plan as well as access to those of the entire group. Bring our own device.

6-8 | INT | 136 | Saturday, 8:00 - 9:00 | Pacific Grove MS, Rm 7

Co-presenter: Celine Liu — Program Manager, Mathematicx, Alameda COE

**Vierra, Vicki — Math Coordinator, Ventura COE**  
**Think and Speak Like a Mathematician**

Avoid the unreasonable answers of “number pluckers.” Think like a mathematician before jumping to calculations - “Contemplate, then Calculate.” Represent and explain your thinking, as you “Decide and Defend.” Learn to use instructional routines that support ALL students to reason mathematically.

6-8 | INT | 505 | Saturday, 3:30 - 5:00 | Asilomar, Evergreen | BT

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

**Villeneuve, Julie — Math Program Specialist, Elk Grove USD**  
**Yakity-Yak! Please Talk Back!**

Learn how engaging students in conversations builds mathematical thinking and a deeper understanding of mathematics. This workshop will focus on practical strategies and activities, which empower English Learners, students with special needs, and under-served math students to become an integral part of the math conversation. Through active engagement in this workshop, participants will leave with several strategies they can implement in their classrooms on Monday to get ALL students talking.

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

Co-presenter: Kami Cadeaux — Math Coach, Elk Grove USD

**Wallace, Matt — Lecturer and Supervisor, UC Davis**  
**Real Learning versus Apparent Learning**

Math teachers strive to help their students understand math. But what does it mean to understand? In this session, we will explore the difference between when students really know something as opposed to when they give the appearance of knowing – students’ real learning as opposed to their apparent learning. Practical teaching and assessment practices, as well as short vignettes will be shared. Come prepared to learn how to plan, teach, and assess for real learning!

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

**Walton, Yuka — Math Instructional Coach, San Francisco USD**  
**Building Powerful Learning Communities to Support Equity**

Working towards equity requires deep collaboration so that the Adult Learning Community becomes the unit of change. San Francisco has developed a reflective tool that lays out essential domains for powerful collaboration, centered on strengths and an equitable vision of teaching and learning. See examples of how teachers have used this tool to support their department. Join us in a conversation of reflecting and building upon the work of learning communities.

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

Co-presenter: Ho Nguyen — Math Prog. Administrator, San Francisco USD

**Weker, Ethan — Math Instructor, Mid-Peninsula HS**  
**Rethinking Homework's Role in Math Class**

Students often spend hours each day on homework, but are they spending their time effectively and efficiently? We will explore different research-based homework plans that help students increase the effectiveness of their practice outside class, and reduce their overall stress. Come away from this session with immediate changes to your homework policies and lasting changes to the role of homework in your classes.

GI | PRS | 536 | Saturday, 3:30 - 5:00 | Pacific Grove MS, Rm 7 | BT

**Winicki Landman, Greisy — Professor of Math, Cal Poly Pomona**  
**Visual Reasoning as a Way of Mathematical Thinking**

One of the focuses of the course Mathematical Reasoning with Connections – is to highlight the links among several mathematical ideas and techniques. Explore visual reasoning as a way to encourage students to develop robust understandings and to approach mathematics with greater flexibility. Explore grouping and discussion strategies to implement this high school curriculum that emphasizes active learning.

8-12 | INT | 355 | Saturday, 11:00 - 12:00 | Pacific Grove MS, Rm 37 | BT

**Zaragoza, Diana — Prof. Early Childhood Education, Sacramento City College**

**Problem Solving + Talk = Student Voice + Discourse Celebrate Math**

Providing equitable access to high quality mathematical experiences is a key component to student success. Effective educators utilize low floor/high ceiling problems to engage all students in mathematical conversations and diverse learning experiences. Come join us in this hands-on, activity based session that encourages everyone to participate in tasks/games that stimulate critical thinking and ignite mathematical discourse. You will leave with ideas and materials ready to use right away.

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



Go to [bit.ly/19ConEval](https://bit.ly/19ConEval) to enter to win a **free** registration or **free** housing at next year's conference by completing the **Conference Evaluation**.

**Access & Equity** strand will develop Awareness in Equity and Social Justice in Mathematics and The Five Dimensions of Powerful Classrooms encompassing Equitable Access to Content and Agency, Authority, and Identity.

**California Association of Mathematics Teacher Educators (CAMTE)** brings together a set of speakers whose presentations focus on areas of interest to those involved in pre-service and in-service mathematics teacher education.

**Coaching** strand will focus on the coaches role in supporting all aspects of the teaching and learning of mathematics.

Each hour during the day different elementary, middle, and high school teachers will share **games** they have been using with their students. There are games for practice, strategy games from the ComMuniCator, and hand games.

**Lang & Math** focuses on giving students a voice that develops agency that supports students to feel engaged and empowered in their learning.

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

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

**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.



- **Access & Equity**
- Anspach, Chris
- Aoki, Marisa
- Arvanitis, Randi
- Balli, Jessica
- Bob-Waksberg, Becky
- Brown Brooks, Gloria
- Brown, Alisa
- Burrill, Gail
- Byron, Ellen
- Cagle, Margaret
- Campos, Ed
- Chappell, Alison
- Cheng, Ivan
- Collier, Liz
- Costa, Elmano
- Deis, Josh
- Donavan, Kristie
- Fish Doto, Darlene
- Gale, Mardi
- Gomez, Juan
- Gonzalez, Juan
- Grip, Bruce
- Habecker, Duane
- Hallam, PJ
- Hein deMause, Jennifer
- Helft, Shira
- Henwood, Cory
- Hohler, Erin
- Hoos, Shannon
- Hua, Lyra
- Jemison, Todd "TJ"
- Kenyon, Glenn
- Khalsa, Arjan
- Knotts, Angela
- Kombe, Dennis
- Kong, Ivy
- Krasnow, Allison
- Kriegler, Shelley
- Kysh, Judy
- Lara, Mayra
- Leamons, Crista
- Lewis, Tom
- Lomeli, Elizabeth
- Marin, Christina
- Martin, John
- McCaw, Shannon
- McEntee, Rhonda
- McKenzie, Doug
- McLean, Peggy
- McNamara, Julie
- Miller, Zack
- Morikawa, Michelle
- Morris, Kathy
- Morrison, Patty
- Mudde, Amanda
- Nank, Sean

- Nathan, Ben
- Nguyen, Ho
- Ortega, Courtney
- Patterson, Brandolyn
- Paul, Cristina
- Pesavento, Laura
- Picciotto, Henri
- Prince, Noah
- Raff, Cynthia
- Rossi Becker, Joanne
- Roth, Marc
- Sagun, Theodore
- Salguero, Katie
- Samaniego, Kimberly
- Schooler, Lesley
- Schultz, Tammy
- Sgroi, Richard
- Shore, Chris
- Sola, Tracy
- Stadel, Andrew
- Stern, Michael
- Szoke, Noam
- Taylor, Megan W.
- Tuska, Agnes
- Ulrich, Casey
- Velasquez, Kim
- Vierra, Vicki
- Villeneuve, Julie
- Weker, Ethan

- **CAMTE**
- Bambao, Kim
- Bourque, Jennifer
- Bower, Travis
- Chialvo, Federico
- Disston, Jacob
- Farrell, Andrew
- Glynn, Peter
- Jain, Isha
- Kim, Taik
- Mulhearn, Dennis
- Phillips, Perrin
- Pinkerton, Ken
- Scott, Jane

- **Coaching**
- Alcosser, Howard
- Arrington, Helen
- Flynn, Mike
- Jain, Amanda
- Sisemore, Cassie

- **Games**
- Bainbridge, Stephanie
- Connelly, Ralph
- Fulton, Brad
- Gomez, Emiliano

- Levinson, Rita
- Moskowitz, Stuart
- Resek, Diane

- **Lang & Math**
- Auer, Tyler
- Carlyle, Ann
- Carr, Janice
- Ceron, Jessyann
- Damm, Suzanne
- Dimas, Cecilio
- Donavan, Kristie
- Duerksen, Laurie
- Duncan, Kawthar
- Eisenberg, Gary
- Foster, David
- Foster, Hallie
- Galasso, Sarah
- Graysay, Duane
- Griffin, Frank
- Heneise, Rebecca
- Huff, Brad
- Igual, Dionne
- Jorgens, Paul
- Lee, Karin
- Leon-Castella, Alejandra
- Loomis, Caroline
- Luzniak, Chris
- Moore, Sara
- Phillips, Breanne
- Ramos, Jeanne
- Reiff, Elizabeth
- Ritter, Cornelia
- Rossiter, Devin
- Schneider, Craig
- Schwartz, Christen
- Scott, Lyn
- Silva, Douglas
- Sustaita Clark, Priscilla
- Tackett, Heather
- Winicki Landman, Greisy

- **Leadership**
- Roberts, Christine
- Walton, Yuka

- **MITI**
- Anderson, Jody
- Buckner, Barbie
- Carranza, Shelley
- Davidson, Scott
- Joyce, Martin
- Lindaman, Brian
- Mendle, Al
- Newton, Roberta
- Pugh, Charlene
- Zaragoza, Diana



Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	Lshhp/1chEd	GI		
Alcosser, Howard	I Love My AP Calculus Class!				√			√	
Anderson, Jody	Using Children's Literature in Mathematics	√						√	
Anspach, Chris	Cultivating Student Voice: Building Agency with Discussion				√			√	
Aoki, Marisa	Visual Equations			√				√	
Arrington, Helen	Promoting Instructional Coaching to Improve Teacher Practice					√			
Arvanitis, Randi	Get Techie With Your Jigsaw				√			√	√
Atkin, Kyle	Teaching Strategies to Engage Students				√			√	
Auer, Tyler	Notice, Wonder, Show: Proofs in the Elementary Grades	√	√					√	
Bainbridge, Stephanie	Math Fun"die" Mentals: Interactive Middle Years Math Games			√				√	
	Oh The Math That They'll Know PreK-K	√						√	
Balli, Jessica	Do I Reteach or Move On? A Third Choice: Re-Engagement Lessons			√				√	
Bambao, Kim	Counting Our Way to Number Sense: How Counting Collections	√						√	
Biehl, Chuck	Computational Geometry: A Teacher's Introduction				√			√	
Bob-Waksberg, Becky	Warm Up to Mathematical Freedom			√					
Bourque, Jennifer	Aha! Student-Driven Investigations of Number Patterns	√	√					√	
Bower, Travis	Geometric Probability: Scaffolded				√			√	
Branham, Leeanne	A Plan for More Responsive Math Support Classrooms			√				√	
Brown, Alisa	Connected Mathematics: The Progressions and Math Identity						√	√	
Brown Brooks, Gloria	Opening the Doors to Student Communication					√		√	
Buckner, Barbie	International Space Station Microgravity: Mass vs. Weight				√			√	
Burke, Ryan	Teacher Explorations of a Virtual Tutor for Linear Equations			√				√	
Burrill, Gail	Ten Ways to Help Make Formative Assessment Integral to Learning				√			√	
Byron, Ellen	Slower and Louder Won't Work: Changing Students' Mindset			√				√	
Cagle, Margaret	Rich Tasks Require Rich Implementation for Rich Learning				√			√	
Callahan, Patrick	Desmos: Deeper Understanding Through Writing Explanations			√				√	
Campos, Ed	360 Degree Math: A Math Classroom Revolution						√	√	
Carlyle, Ann	Tools for Thinking and Talking in K-2	√						√	
Carr, Janice	Meeting Environmental Challenges with Math			√				√	
Carranza, Shelley	Designing with Desmos				√				
Ceron, Jessyann	Exploration, Not Explanation	√	√					√	
Chappell, Alison	Counting Collections in Primary Classrooms	√						√	
Cheng, Ivan	How to Desmo-fy Your Math Lesson to Promote a Growth Mindset				√			√	
Chialvo, Federico	Awesome Mathematical Adventures for Early Elementary	√	√					√	
Clinkenbeard, Jennifer	Enduring Understanding of Functions: Who's an X? Who's a Y?				√			√	
Collier, Liz	Promoting Structured Student Talk Using Engaging Math Tasks				√			√	

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tch.	Comm. Product
		K-2	3-5	6-8	8-12	Ldship/TchEd	GI		
Connelly, Ralph	Dicey Situation			√				√	
Costa, Elmano	Empowering ELs in Math! Giving Students' Voice in Classrooms	√	√					√	
Damm, Suzanne	Cooperative Learning Structures and Study Team Strategies		√					√	
Davidson, Scott	Make Math Pop Out With 3D Printing						√	√	
Deis, Josh	Learning From Student Interviews						√	√	
Dimas, Cecilio	Leveraging Language in Mathematics to Open Minds & Hearts		√					√	
Disston, Jacob	Using 5 Practices to Prep Teachers for Equity and Excellence					√			
Donavan, Kristie	Small Tweaks, BIG IMPACT				√			√	
	Linear Functions Roadmap: Making Connections Across Grades				√			√	
Duerksen, Laurie	Measure Up! Bringing Geometry to Life			√				√	
Duncan, Kawthar	Two-For-One: Teach Math and Language Together For ELLs	√	√						
Eisenberg, Gary	Singing, Dancing, and Playing Through K-3 Mathematics	√						√	
Erickson, Tim	Connect Geometry to Functions with Data and Modeling				√			√	
Farrand, Scott	Disequilibrium >>(-_-)<< Can Create Intellectual Need				√			√	
Farrell, Andrew	Trigonometry Spirograph				√			√	
Fenton, Michael	A Different Approach to Personalization			√				√	
Fish Doto, Darlene	Counting Complex Collections in the Upper Grades		√					√	
Flynn, Mike	Understanding and Addressing Resistance in Math Education						√		
Foster, David	Apprentice and Expert Tasks						√	√	
Foster, Hallie	1 If By Hand, 2 if By Ge(ogebra)				√			√	
Fulton, Brad	Math Games that Motivate and Educate		√					√	
Galasso, Sarah	Literacy in the Math Classroom: Unlocking Student Voices						√	√	
Gale, Mardi	Launching Performance Tasks and What are They Good For?						√	√	
Glynn, Peter	Division of Fractions: Empowering Students with Visual Model			√				√	
Gomez, Emiliano	Gerrymandering for Budding District Map Drawers				√				
Gomez, Juan	Creating Rabbit Holes via Mathematical Applications				√			√	
Gonzalez, Juan	Moving Beyond Popsicle Sticks				√			√	
Graysay, Duane	Effective Questions to Get Students to Think Mathematically				√			√	
Griffin, Frank	Three Easy Ways to Maximize Student Voices in the Classroom				√			√	
Grip, Bruce	What If All Students Were Smart in Math						√	√	
Habecker, Duane	Integrating ELD Strategies in Mathematics	√	√					√	
Hallam, PJ	You Can't Hear My Voice If I'm Not in the Room						√		
Hein deMause, Jennifer	Re-Claiming Sense-Making in Math for Students with IEPs						√	√	
Helft, Shira	The Best Algebraic Reasoning Tool You've Never Heard Of				√			√	
Heneise, Rebecca	Amplifying Student Voice: Warm-ups in DL Classrooms	√	√					√	
Henwood, Cory	Empowering Student Voice in Digital 3 Act Math Tasks						√	√	
Hohler, Erin	1-2-3, Do Re Mi: Warming Up Student Voices	√	√					√	

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	LdsHp/TchEd	GI		
Hoos, Shannon	Choice Boards: A Choose Your Own Math Adventure			√				√	
Hua, Lyra	Building Agency: Helping Students Deal with Math Anxiety				√			√	
Huff, Brad	How Big? Making Proportional Reasoning Real						√	√	
Igual, Dionne	Math Talks TK-2	√						√	
Jain, Amanda	Figure it Out! Putting Students in the Drivers Seat				√			√	
Jain, Isha	Student Voice in Project-Based Learning			√				√	
Jemison, Todd "TJ"	How Our Beliefs Impact Student Learning						√	√	
Jorgens, Paul	Fire Up the Math Classroom with Conversation			√				√	
Joyce, Martin	Creating Graphs in Desmos to 3D Print				√			√	
Kawalek, Cyndee	Differentiating Does Not Have to Be Hard!					√		√	
Kempster, Vriana	Playing with Data: Dynamic Statistics in Grades 6 through 9			√				√	
Kenyon, Glenn	Making Math Visual: The Power of Tape Diagrams K-6	√	√					√	
Khalsa, Arjan	5-Minute Journal Prompts: Formative Assessment with Flair	√	√					√	
Kim, Taik	Making Sense of Multiplication		√					√	
Knotts, Angela	Increasing Access to Algebra by Examining Worked Examples			√				√	
Kombe, Dennis	Learning to Enact Math Discourse Practices				√			√	
Kong, Ivy	Jump-Start Student Thinking in a Math Classroom			√				√	
Krasnow, Allison	Drop Everything & Math: Desmos as a Tool for Art and Joy						√	√	
Kriegler, Shelley	Mathematics Intervention: Helping Students Catch Up			√				√	
Kysh, Judy	Teaching Strategies for Problem Solving is an Equity Issue			√				√	
Lahme, Brigitte	Number Lines: A Journey Through Middle School			√				√	
LaPier, Eben	Building Math: Designing Project-Based Curriculum			√				√	
Lara, Mayra	Math as a Lever for English Learner Equity						√	√	
Leamons, Crista	Talks and Tasks: Access and Agency for Students with IEPs			√				√	
Lee, Karin	The Math Writing Sojourn				√			√	
Leinwand, Steve	The Surprising Power of Gradual Release in Our Math Lessons						√	√	
Leon-Castella, Alejandra	Math of Every Day- eBook with Multimedia in Spanish						√	√	√
Levinson, Rita	Students as Puzzle Makers: Developing Algebraic Thinking			√				√	
Lewis, Tom	Student Ownership with Their Learning Progress			√				√	
Lindaman, Brian	Unusual Shapes, Angles, and Supercool...wait for it...Wallpaper				√			√	
Lomeli, Elizabeth	Dirty Dozen Countdown: Choice for Student Voice				√			√	
Loomis, Caroline	Slice it up! Discussing Equal Sharing Fraction Strategies	√	√					√	
Luberoff, Eli	Building Social+Creative Classrooms with Technology				√				
Luzniak, Chris	Debate That! Empowering Students Through Debate in Math				√			√	
Marin, Christina	Blow It Up! Facilitating Controversial Sorting Task Debates			√				√	
Martin, John	Making Mathematics Learning Visible Using Algebra Tiles				√			√	√
	Photomath: Friend or Foe				√			√	
McCaw, Shannon	Engaging All Students in Rigor			√				√	√

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		
McDowell, Denise	Using Feedback to Motivate Learning		√	√				√	
McEntee, Rhonda	Students Voice Through Math Talks		√					√	
McKenzie, Doug	Sequences: The Foundation for Understanding Linear Patterns			√				√	
McLean, Peggy	Mirror Explorations		√					√	
McNamara, Julie	You Want Students to Talk? Give Them Something to Talk About						√	√	
Mendle, Al	Build and Use an Abacus		√					√	
Meyer, Dan	Recipes for Mathematical Surprise						√	√	
Miller, Zack	Many People Hate Math but Love Stories: What an Opportunity!						√	√	
Moore, Sara	Unpacking Mathematical Operations: Multiplication and Division		√						
Morikawa, Michelle	Ancient Architecture Excites Young Learners	√	√					√	
Morris, Kathy	Maker Tasks for Mathematics: Make a Measuring Tool						√	√	
Morrison, Patty	Using Literature to Teach Math in the PreK to 1st Grade	√						√	
Moskowitz, Stuart	Lewis Carroll Would Have Been a Great School Math Teacher!						√	√	
Mudde, Amanda	Creation of Math Projects with Low Floor and High Ceilings				√				
Mulhearn, Dennis	Excite and Energize Teaching Area by Using Contest Problems			√				√	
	Cubes Offer a Rich Setting for Problem Solving		√					√	
Nank, Sean	Seven Steps for Adapting Technology in a 1:1 Environment						√	√	
Nathan, Ben	Wrong Classroom: Using Incorrect Answers to Build Learning				√			√	
Newton, Roberta	Math Running Records in Action	√	√					√	
	Counting: It's More than 123	√						√	
Nguyen, Ho	Focal Students: Focus the Lens, Deepen the Learning for All						√	√	
Ortega, Courtney	The TRUth About PLCs				√			√	
Patterson, Brandolyn	Achieve Equity of Voice Through Global Competence			√				√	
Paul, Cristina	Curiosity & Student Ownership of Ideas: Three Act Tasks		√					√	
Pesavento, Laura	Math Workshop in a Primary Classroom	√						√	
Phillips, Breanne	Talk Nerdy to Me: Increasing Student Discourse				√			√	
Phillips, Perrin	Launching Math Workshop: Cognitively Guided Instruction		√						
Picciotto, Henri	Reaching the Full Range				√			√	
Pinkerton, Ken	Community Math Festivals Strategies & Hints that Work						√	√	
Prince, Noah	Modern Geometries: A Case Study				√			√	
Pugh, Charlene	Explain Your Thinking: What is That?		√					√	
Raff, Cynthia	An Equation Journey: Strategies to Spark Engagement			√				√	
Ramos, Jeanne	Encouraging Student Voice Through Math Language			√				√	
Ray, Solana	K-2 Students Creating Beautiful Explanations in Math Class	√						√	
Reiff, Elizabeth	Academic Conversation: You Can't Do it Alone!			√				√	
Resek, Diane	Strategy Games for the Last 10 Minutes of Class			√				√	
Ritter, Cornelia	Dialogic Learning: An Inquiry-based Swiss Approach						√	√	
Roberts, Christine	CVNIC: A Journey Toward Improving Math Outcomes for Students						√	√	

Speaker	Presentation Title (Refer to alpha section for presentation description.)	Target Audience						Beginning Tchr.	Comm. Product
		K-2	3-5	6-8	8-12	LdsHp/TchEd	GI		
Rossi Becker, Joanne	Transition to College Level Mathematics				√			√	
Rossiter, Devin	Same/Different: A Mathematical Language Routine			√				√	
Roth, Marc	Bowling Pin Puzzles				√			√	
Sagun, Theodore	Choral Counting from Elementary to Middle School			√				√	
Salguero, Katie	Worked Examples & the Mathematics Teaching Practices			√				√	√
Samaniego, Kimberly	What are You Thinking? Engaging in Performance Task Learning				√			√	
Schaffer, Karl	Let's Get Loopy with Geometry						√	√	
Schneider, Craig	Mathematical Language Routines: Foster All Students' Voices						√	√	
Schooler, Lesley	Initial Results of New, Innovative Algebra I Program				√			√	
Schultz, Tammy	Using Teacher Observations to Advance Young Mathematicians	√	√					√	
Schwartz, Christen	Let's Talk Algebra!			√				√	
	Facilitate Student Discourse Through Math in Science Talks	√	√					√	
Scott, Jane	The Quantile Framework for Mathematics: Math Differentiation			√				√	
Scott, Lyn	Math and Dual Language Learners: What Every Teacher Needs	√	√					√	
Sgroi, Richard	Using Financial Applications: Real-World Student Discourse				√			√	
Shore, Chris	We Have Already Built the Wall: In and Between Our Schools						√	√	
	Making Group Work Work with Less Work						√	√	
Silva, Douglas	Nearpod: Effectively Using Technology with 1-1 Tablets				√			√	
Sisemore, Cassie	Secondary Mathematics Vertical Articulation Processes				√				
Sola, Tracy	The Long and Short of It: Primary Non-Standard Measurement	√						√	
Stadel, Andrew	Bring More Students Into Math Conversations and Sense-Making						√	√	
Stern, Michael	Fraction Action: Modeling the Operations: +, -, x, /		√					√	
Sustaita Clark, Priscilla	Student Vision: Empower with Numberless Math Stories	√	√					√	
Szoke, Noam	MathRoom Management: Norms Build a Safe, Powerful Math Class	√	√					√	
Tackett, Heather	Using Multiple Representations: Make Connections in Algebra				√			√	
Taylor, Megan W.	What Will it Take to (re-)humanize Mathematics?						√	√	
Tuska, Agnes	"Make or Break" Issues When Students Work on Math Problems					√		√	
Ulrich, Casey	Re-envisioning Group Roles to Promote Conversation, Equity						√	√	
Velasquez, Kim	An Ethnomathematics Lens on Social Justice Maths Practice			√					
Vierra, Vicki	Think and Speak Like a Mathematician			√				√	
Villeneuve, Julie	Yakity-Yak! Please Talk Back!		√					√	
Wallace, Matt	Real Learning versus Apparent Learning						√	√	
Walton, Yuka	Building Powerful Learning Communities to Support Equity					√			
Weker, Ethan	Rethinking Homework's Role in Math Class						√	√	
Winicki Landman, Greisy	Visual Reasoning as a Way of Mathematical Thinking				√			√	
Zaragoza, Diana	Problem Solving+Talk=Student Voice+Discourse Celebrate Math	√						√	

## Exhibits

Company	PG Middle Gym	Company	PG Middle Gym
American Institute of Mathematics/BATMATH	242	EdGems Math, LLC	245-246
ARTriangles	209	Get More Math!	226
Bedford, Freeman & Worth	234	Heinemann Publishing	231-232
Box Cars and One-Eyed Jacks	239	Ignited	263
California Casualty Auto and Home Insurance	222	McGraw-Hill Education	261
California Jump\$tart	243	Melon Rind	257
California Teachers Association	224	MOEMS - Math Olympiads for Elem. and MS	252
Carnegie Learning	249	Moore Educational Resources	241
Carney Sandoe and Associates	251	Mountain Math/Language	266
Center For Mathematics and Teaching	256	MPollard Educational Solutions	233
CMC ComMuniCator	202-203	Music Notes	219
CMC Grants, Student Activity Trust	213	National Council of Teachers of Mathematics	211-212
CMC-N Bag Pick Up	205	National Geographic Learning/Cengage	271-274
CMC-N Exhibits	214	Next Gen Math	221
CMC-N T-Shirts	204	Pearson	227-229
Connect Core Math	235	Polyup	247-248
CPM Educational Program	276-277	ST Math by MIND Research Institute	218
CSU/UC Mathematics Diagnostic Testing Project	236	TEAM UP! For Common Core Learning	275
Curriculum That Matters, Inc.	276-277	Texas Instruments	215-216
Dreambox Learning Math	237	The Math Learning Center	206-208
EAI Education	265	UC Davis C-STEM Center	254

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.

### WIN AN AWESOME PRIZE!

Bring the six tickets included with your registration sheet to the PGMS Gym. Check out the exhibits and choose which drawing boxes to drop them. Thanks to the 32 exhibitors offering various prizes! Make sure to check your texts, the app, or the exhibits Saturday afternoon to see if you've won.

**Must pick up prize by 4:30pm.**



<b>271</b> National Geographic Learning/Cengage	<b>272</b> National Geographic Learning/Cengage	<b>273</b> National Geographic Learning/Cengage	<b>274</b> National Geographic Learning/Cengage	<b>275</b> TEAM UP!	<b>276</b> Curriculum That Matters, Inc	<b>277</b> Curriculum That Matters, Inc
--	--	--	--	------------------------	--	--

**EXIT  
LADIES  
ROOM**

<b>209</b> ARTriangles
<b>208</b> The Math
<b>207</b> Learning
<b>206</b> Center

**ENTRANCE**

<b>205</b> CMC-N Bag pickup
<b>204</b> CMC-N T-Shirts
<b>203</b> CMC
<b>202</b> CMC

<b>219</b> Music Notes	<b>229</b> Pearson
<b>218</b> ST Math by Mind Res	<b>228</b> Pearson
<b>217</b>	<b>227</b> Pearson
<b>216</b> Texas	<b>226</b> Get More Math
<b>215</b> Instruments	<b>225</b>
<b>214</b> CMC-N Exhibit	<b>224</b> Calif Teachers Assoc
<b>213</b> SATF Mini Grants	<b>223</b>
<b>212</b> National Council of	<b>222</b> Calif Casualty Insurance
<b>211</b> Teachers of Math	<b>221</b> Next Gen Math

<b>239</b> Box Cars One-Eyed Jacks	<b>249</b> Carnegie Learning
<b>238</b>	<b>248</b> Polyup
<b>237</b> Dreambox Learning Math	<b>247</b> Polyup
<b>236</b> CSU/UC Math Diagnostic	<b>246</b> EdGems
<b>235</b> Connect Core Math	<b>245</b> Math LLC
<b>234</b> Bedford Freeman Worth	<b>244</b>
<b>233</b> MPollard Educ Solutions	<b>243</b> Calif Jump \$tart
<b>232</b> Heinemann	<b>242</b> American Institute Math
<b>231</b> Publishing	<b>241</b> Moore Education

<b>258</b>
<b>257</b> Melon Rind
<b>256</b> Center For Math Teaching
<b>255</b> CPM
<b>254</b> Educational
<b>253</b> Program
<b>252</b> MOEMS
<b>251</b> Carney Sandoe Assoc

<b>261</b> McGrall Hill Educ	<b>262</b>	<b>263</b> Ignited	<b>264</b> UC Davis C-STEM Center	<b>265</b> EAI Education	<b>266</b> Mountain Math Language	<b>267</b>
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**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, 2019.*

## 2018 PAEMST Award | Finalists

*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 K-6 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:*

### **Mrs. Megan Smith**

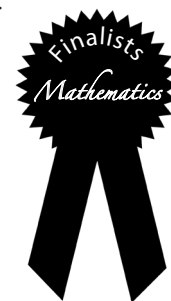
Megan is a teacher at Lincoln Fundamental Elementary School in the Corona Norco Unified School District. She has been teaching for eleven years. She currently teaches fifth grade at a public magnet school. She has served as a district professional development co-presenter and allows other teachers to come to observe her classroom. She has been video taped many times and serves as an exemplar for district professional development. She also produces powerpoints of instructional materials for the district math resource site.

### **Mrs. Robyn Stankiewicz-Van Der Zanden**

Robyn teaches at the La Verne Science and Technology Charter in the Pomona Unified School District. She has been teaching nineteen years. She currently teaches kindergarten at a district dependent charter school that has a focus on science and technology. She is co-authoring a book chapter on the cycle of Mathematical Modeling in the Kindergarten Classroom. She recently presented at NCTM's INNOV8 Conference in Las Vegas, Nevada, and has worked with the Cotsen Foundation for the Art of Teaching.

### **Mrs. Stacy Zagurski**

Stacy is a teacher at Merlinda Elementary School in West Covina Unified School District. She has been teaching 36 years. She currently teaches kindergarten, but has taught K-5 grades. She has presented at math conferences throughout the state as well as the Southern California Kindergarten Conference. She co-authored an article titled "Flipping the Hundreds Chart" for the CMC journal, The Communicator. She has demonstrated that she is a life-long learner and continues to pursue math professional development.



*If you know a great math teacher, go to the PAEMST portal to nominate a 7-12 teacher of mathematics for the 2019 award. Computer Science teachers may also apply. To nominate a teacher or to download an application for yourself visit [www.paemst.org](http://www.paemst.org). The nomination period is open until March 1, 2019 and the application must be completed by May 1, 2019.*

For more information about awards, or to nominate, visit Presidential Awards at [cmc-math.org/paemst-awards](http://cmc-math.org/paemst-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 | November 30 - December 2, 2018*

*Rita Nutsch*  
Rita Nutsch, CMC-N President



Stay connected with CMC



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

### CALL FOR SPEAKERS

#### CMC-North 62<sup>nd</sup> Annual Conference

Asilomar and Pacific Grove Middle School, Pacific Grove

### Embracing Cultural Diversity in Mathematics

December 6-8, 2019

Proposals will be accepted online at [www.cmc-math.org/activities/north\\_speakers.html](http://www.cmc-math.org/activities/north_speakers.html) from January 30 to May 1, 2019. 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: Monica Rock at [northprogram@cmc-math.org](mailto: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](http://www.cmc-math.org/awards), or [www.cmc-math.org/awards-grants-scholarships](http://www.cmc-math.org/awards-grants-scholarships) or contact **Bernadette Salgarino** at [bernadette.salgarino@gmail.com](mailto:bernadette.salgarino@gmail.com)

## Board Members

2018-20

State

President.....Cathy Carroll  
 Past President.....Vicki Vierra  
 President-Elect.....Christine Roberts  
 Secretary.....April Goodman-Orcutt  
 Treasurer.....Bruce Grip

North

President.....Rita Nutsch  
 Past-President.....Rebecca Lewis  
 President-Elect.....Sarah Ives  
 Vice President.....Monica Rock  
 Secretary.....Alison Nash  
 Treasurer.....Brian Lim

## Calendar of Math Events



### March 8-9, 2019

CMC Central Mathematics Symposium

### April 1-3, 2019

NCSM Annual Conference, San Diego, CA

### April 3-6, 2019

NCTM Annual Conference and Exposition, San Diego, CA

### November 15-16, 2019

CMC South Mathematics Conference, Palm Springs, CA

### December 6-7, 2019

CMC North Mathematics Conference at Asilomar, Pacific Grove, CA

For information and links to these math events go to:

[www.cmc-math.org](http://www.cmc-math.org)

## Affiliated Groups

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

California Math Council to the Far North (CMCN<sup>∞</sup>)  
 Mary Ann Sheridan, masheri@suddenlink.net

Mt Lassen Math Council (MLMC)  
 Sarah Oldfield, soldfield@chicousd.net  
 Catherine Thompson, cc91thompson@gmail.com

Sonoma County Math Council (SCMC)  
 Joan Easterday, jeasterday@scoe.org

Sacramento Area Math Educators (SAME)  
 Brian Lim, lim128@yahoo.com

Monterey Bay Math Council (MBMC)  
 Denise Green, abbasd09@gmail.com  
 James Schierer, jschierer@smcjuhsd.org

Math Educators of Solano County (MESOC)  
 Julie Crozier, crozier4mesc@aol.com

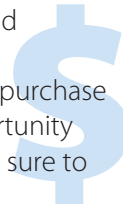
Alameda Contra Costa Council of Math Educators (AC<sup>3</sup>ME)  
 Paul Juarez, pj.juarez@gmail.com

Santa Clara Valley Math Association (SCVMA)  
 Steve Blasberg, steve\_blasberg@westvalley.edu

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

## Exhibits

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



Stop by the **CMC-Hub** in Afterglow, Saturday, between 8:00-5:00 and **pick up your swag**, learn about the **Scavenger Hunt** and your chance to win a \$250 voucher for any one of our three conferences!

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

## In Memoriam

In July, CMC-North lost a friend and colleague. Those who had the privilege of working with her, knew that she was a quiet force who preferred to stay behind the scenes both in CMC and in the world of assessment.

Jean was born in Davis, California on August 25, 1922. She began her education in a one-room school in Monticello, in the Berryessa Valley. At age 10, her family moved to Modesto. Being an avid reader, she was far ahead academically, so the school skipped her ahead two grades. She remained in school in Modesto, graduating from Modesto High and Modesto Junior College before attending U.C. Berkeley, where she majored in economics. She graduated with honors from Cal in 1942 at the age of 19.

After graduation she went to work as a clerk at the Naval Supply Center in Oakland. As part of her work, she was sent to the east coast, where she was trained to take apart and reassemble airplane engines. When the war ended, she resigned from her job with the Navy and took accounting courses at Golden Gate University. Over the next eight years she worked as an accountant for several companies in San Francisco.

As a young adult, Jean became an avid skier. She joined the Viking Ski Club and became a member of the ski patrol and an avalanche ranger at Donner Pass. It was there she met her husband. She and her husband had three children, Ruthann, John, and Jane.

In 1967, Jean went back to school to earn a teaching credential. She taught in the Oakland Unified School District, first as a classroom teacher and later as a math resource teacher. During this time, she became passionate about improving math education in California.

In 1980, she joined the staff of the EQUALS program at Lawrence Hall of Science, where she led workshops and co-authored numerous publications including:

- Family Math
- Family Math for Young Children
- Math for Girls and Other Problem Solvers
- 101 Short Problems/101 Problemas Cortos: A Collection of Open Mathematics Problems
- Assessment Alternatives in Mathematics: An Overview of Assessment Techniques That Promote Learning

Jean served as Vice President and President of CMC North and as President of the Alameda County Math Educators. She served as an advisor for The California Department of Education for both the CAP and CLAS assessment programs.

She also co-authored two books for NCTM:

- *Mathematics Assessment: Myths, Models, Good Questions and Practical Suggestions*
- *Mathematics Assessment: A Practical Handbook for Grades 3-5*

In 1992, she was presented with the Edward Begle Memorial Award by CMC for her accomplishments as a math educator. Her dedication to making math meaningful and accessible to all students was an inspiration to all those who knew her.

Jean Kerr Stenmark



*Leader, Author, Mentor, and  
Mathematics Assessment Advisor*

*August 25, 1922 - July 24, 2018*

## 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.

If you enjoyed this conference and want to attend another CMC section conference, consider filling out an application next year!

# STAY CONNECTED WITH CMC

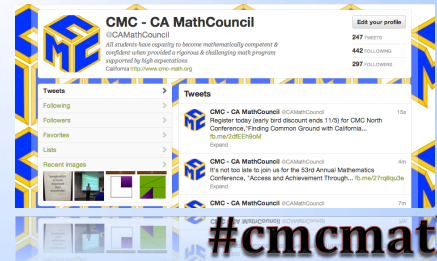
www.facebook.com/CAMathCouncil



Like Us On  
facebook



@CAMathCouncil



#cmcmath

www.cmc-math.org

The 61st Annual CMC - North Conference Committee  
wishes to thank all of the speakers for  
contributing to an amazing conference  
for all math educators.



# Continuing Education Units

## SPECIFICS:

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

Course Code: **18F EDU 870B 01**

CEUs: **1.5**

Course Fee: **\$65**

Date: **11/30/18 - 12/2/18**

- 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 2019. Please do NOT call before that time. After February 1, 2019 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, 2018.

## 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, 2018 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](http://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
18F EDU 870B 01	California Mathematics Council North Annual Confer	11/30/18 - 12/2/18

**PAYMENT**

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

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.

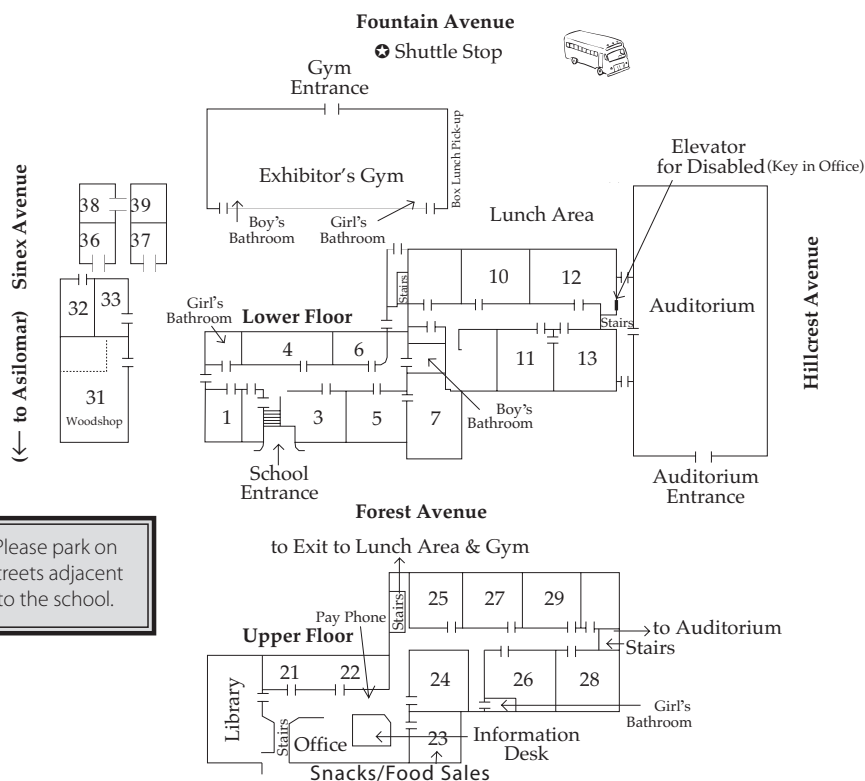
### Apply online:

Minigrants.CMCN@gmail.com  
(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

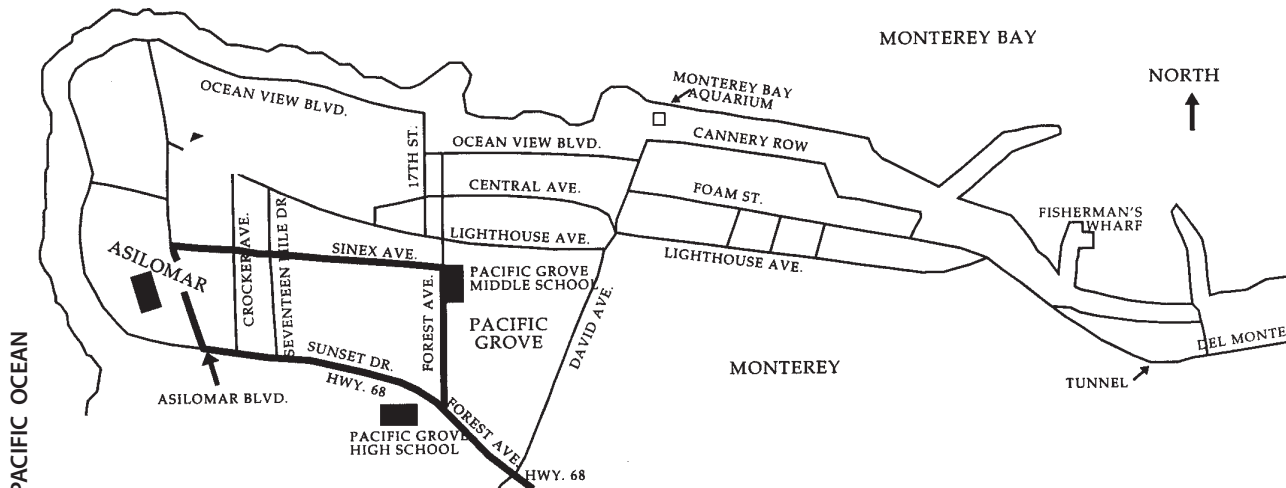


Please park on streets adjacent to the school.

**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.



# PACIFIC GROVE



Go to [bit.ly/19ConEval](http://bit.ly/19ConEval) to enter to win a **free** registration or **free** housing at next year's conference by completing the **Conference** evaluation.



Your feedback is important to us! Please take a moment to complete the **Speaker** evaluation at [bit.ly/19SpkrEval](http://bit.ly/19SpkrEval)



**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 C5
Cypress Rooms 717-724	Dolphin C5
Deer Lodge Rooms 121-150	Evergreen F1
Director's Cottage Rooms 133-1324	Fred Farr Forum E2
Engineer's Cottage Rooms 1202-1211	Heather C4
Forest Lodge Rooms 901-903	Klin E2
Guest Inn Rooms 1325-1336	Madrone G3
Hearth Rooms 101-110	Manzanita I & II B4
Live Oak Rooms 201-218	Marlin D4
Lodge Rooms 101-110	Merrill Hall G4
Long View North Rooms 101-110	Nautilus H4
Long View Middle Rooms 111-120	Oak Knoll & 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	Whitehead G3
Spindrift South Rooms 841-848	OTHER
Stuck-up Inn Rooms 401-414	BBQ Area E6
Surf Rooms 601-604	Crocker Dining Hall F6
Tree Tops Rooms 111-120	Fire Pits H5
Whitecaps North Rooms 809-820	Guest Check-In E5
Whitecaps South Rooms 801-808	Hearth Social Hall F1
Willow Inn Rooms 1025-1036	Human Resources A3
Windward Rooms 701-708	Meditation Space G1
Woodside Rooms 1212-1223	Mott Training Center G2
	Park Store E5
	Phoebe's Café E5
	Seascape F6
	Swimming Pool A5
	Conference and Event Sales E4
	Viewpoint E4
	Volleyball Court H5
	Woodlands F5
	Yoga Room A3
	<b>PARKING LOTS</b>
	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