

Hosted by:  
Hawaii Council of Teachers of Mathematics  
and  
Moanalua High School  
2825 Ala Ilima St.  
Honolulu, Hawaii

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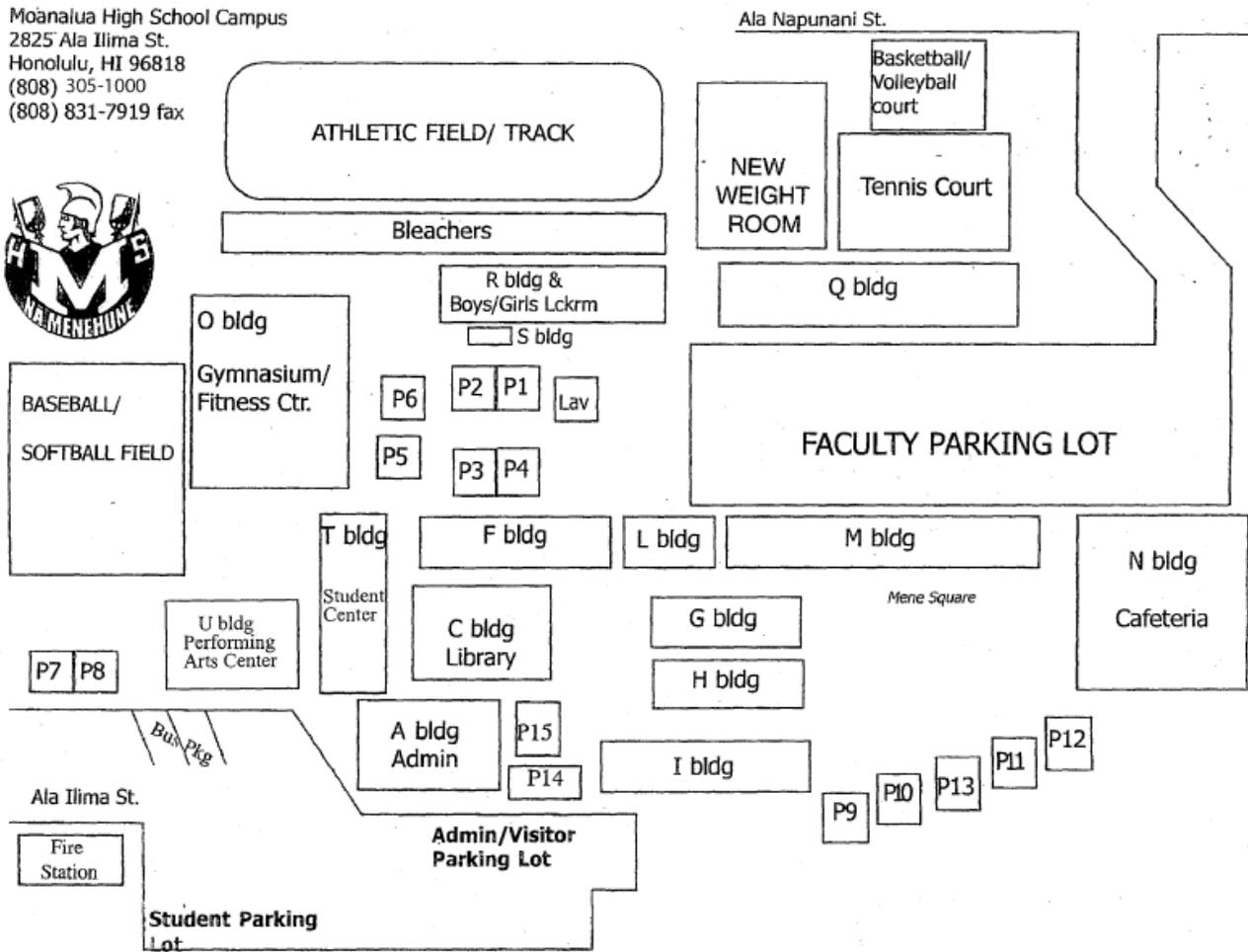


The Hawaii Council of Teachers of Mathematics is a local affiliate of the National Council of Teachers of Mathematics

# Conference Schedule

7:30 - 8:20	Registration/Continental Breakfast
8:30 - 9:20	Keynote - <b>Dr. Barbara Dougherty</b>
9:30 - 10:30	Session 1
10:40 - 11:40	Session 2
11:40 - 1:00	Lunch/Exhibitors
12:15 - 1:00	Poster Sessions
1:10 - 2:10	Session 3
2:20	Raffle Drawing and Closing

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## A Message from the HCTM President

Happy New Year! Welcome to a wonderful opportunity for professional learning and networking. The Hawaii Council Teachers of Mathematics (HCTM) Executive Board hopes that you will leave the conference today with new ideas that will inspire you with the work that you do every day.



Our committee worked diligently to provide you with standards-based, research-based breakout presentations to provoke your thinking, improve your understanding or engage you in mathematics. Last year, poster sessions were popular so we are having poster sessions once again. Please take some time to visit our poster sessions presentations after lunch. We hope that you will find some interesting breakout sessions and poster sessions.

A huge mahalo to Moanalua High School for the use of their campus. Thank you to Moanalua High School's principal, Robin Martin and to the Moanalua High School JROTC cadets who volunteered their time for the duration of the conference. Also, a big thank you to the wonderful presenters who worked hard to bring forth the highest quality of professional development.

Please take some time to visit our generous exhibitors who bring a variety of products to share with you. They would love for you to visit with them at their booths in the cafeteria.

Thank you to all conference attendees for taking the time out of your busy weekend to join us this Saturday. Please don't forget to fill out your conference evaluation as this will guide us for our next HCTM conference.

HCTM is always looking for volunteers or awesome people to be a part of our executive board. Please consider volunteering at our next conference or serving on our executive board. Feel free to stop and chat with our executive board members --- we can be identified with our pink name tags. We would love to hear from you!

Last but not least, based on the feedback from our participants and following suit (a little early) from the National Council Teachers of Mathematics, HCTM will be moving our annual conference earlier in the school year so that teachers will be better able to implement their new learning sooner. Next year, HCTM annual conference will be held at 'Iolani School on Saturday, September 15, 2018! Please consider doing a breakout presentation, doing a poster session or volunteering for the conference. If not any of those, please be sure to join us at the next conference. Mark your calendars!

Enjoy your day!

Stacie  
President

## HCTM Board of Directors

President	Stacie Kaichi-Imamura	2-Year College Director	Jean Okamura
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HCTM is currently looking for volunteers.

Contact Stacie Kaichi-Imamura at [stacie\\_kaichi@notes.k12.hi.us](mailto:stacie_kaichi@notes.k12.hi.us) for more information.

## Special Thanks to...

**Robin Martin**, Principal at Moanalua High School, for hosting HCTM on their beautiful campus.

**The faculty and staff of Moanalua High School** for going above and beyond the call of duty to support this conference on their campus.

**The Moanalua High School JROTC** for volunteering their services today.

**'Iolani School** for printing the program book.

**The speakers** for their knowledge of teaching techniques, new standards and practices, and latest technologies.

**The exhibitors** for bringing a wide variety of educational resources. We would like to send a special thank you to those exhibitors who have donated door prizes as well.

**The conference organizers and other volunteers** for their time spent planning and organizing today's program.

**Zippy's** for their generous donation of raffle prizes.

**Big Ideas Math/National Geographic/Cengage** for sponsoring the continental breakfast.



**BIG IDEAS MATH**

## Exhibitor Information

(Exhibits will be open in the Cafeteria)

### Big Ideas Math/National Geographic/Cengage

Website: <http://ngl.cengage.com>

At National Geographic-Cengage Learning, we believe that an engaged and motivated learner will be a successful one. We design our classroom materials with a highly interactive storytelling approach which is a great way to invoke these connections. We offer leading PreK–12 digital and curricular classroom materials for schools in the following subject areas: Math (Including Big Ideas Math Larson titles), Science, Social Studies, Reading & Writing, ESL/ELD, Spanish, Advanced Placement, Honors, Electives, and Career and Technical Education.



### BIG IDEAS MATH



### CPM Educational Program

Website: <http://cpm.org>

CPM Educational Program is a non profit company creating grades 6-12 math texts using problem based learning in student centered classrooms. Teachers are supported with 8 days of professional development.

### Curriculum Associates

Website: [www.CurriculumAssociates.com](http://www.CurriculumAssociates.com)

Founded in 1969, Curriculum Associates designs research-based print and online instructional materials, screens and assessments, and data management tools. The company's products and outstanding customer service provide teachers and administrators with the resources necessary for teaching diverse student populations and fostering learning for all students.



### ORIGO Education

Website: <http://origoeducation.com>

ORIGO provides mathematical resources and professional learning to educators throughout the world. Our national headquarters in St. Charles, Missouri, provides customers with quality service, support and resources.



8:30am – 9:20am  
Library

**Break a Rule!**  
**Moving from Tricks and Tips to Conceptual Understanding**  
**Dr. Barbara Dougherty**, University of Hawaii at Manoa

Students often tend to overgeneralize and focus only on 'doing' what a math rule says when they are given a trick or a tip. Sometimes, these 'rules' expire later in students' mathematical experiences, and students become even more confused. In this keynote, we will explore ways in which research-based techniques can be used to create strong generalizations across multiple grade levels

*Dr. Barbara Dougherty is currently the Director of the Curriculum Research & Development Group at the University of Hawai'i, Mānoa. Previously the Director of the of the Center for Excellence in Science, Mathematics & Engineering Education at Iowa State University, Dr. Dougherty is a distinguished national leader of mathematics education and specializes in mathematics instruction with struggling learners. Dr. Dougherty's most recent work includes the development of screening and progress monitoring tools for algebra and the development of intervention modules to prepare middle grades students for algebra experiences.*



9:30am – 10:30am

### **Using Desmos to Increase Engagement and Improve Understanding**

**Dewey Gottlieb & Yanna Weiss**

**Room G101**

Middle School | High School

The way mathematical ideas appear in student materials often hinders effective learning. We will share high school mathematics teachers' experiences learning from Desmos faculty to makeover lessons to remedy what Dan Meyer calls the "paper disease." Learn to use Desmos tools to increase student engagement and understanding.

### **Exploring Angles in Three Ways**

**Elizabeth Peyser**

**Room G102**

Elementary | Middle School | High School | Pre-Service Teacher | General Audience

Shape, fraction, turning! Explore the 3 perspectives of an angle in the 4.MD.5 standard, and apply this understanding to MS and HS topics: geometry, ratios, linear algebra, and trigonometry. Participants will use a variety of tools to align an arc of understanding. The session will span the 4-10 grade band.

### **Math Instruction (K-5) to Increase Access and Engagement**

**Cheryl Yamamoto & Stacie Kaichi-Imamura**

**Room G103**

Elementary | Pre-Service Teacher

Students possess a range of knowledge and skills, various learning styles & social/cultural differences. To create opportunities for ALL students to learn, we must differentiate instruction & vary assessment techniques. This session will provide resources & ideas to consider when differentiating instruction to ensure success for ALL students.

### **Improving Student Engagement Through the Use of An Interactive Notebook in the Math Classroom**

**Diana Ching-Teruya & Regina Byrom**

**Room G104**

High School

The workshop will begin with a description of an Interactive Notebook. We will discuss the rules that students follow to create their personal interactive notebooks. Student work samples will be shown. We will present research conducted within our own classrooms that demonstrates students increased engagement in Geometry. We will show different ways that the interactive notebook can be implemented in a math classroom. We will look at math specific resources as well as other content area resources that can be adapted to fit the needs of the teacher. The final activity will be design and assemble a sample interactive notebook entry over a math topic.

### **Going Beyond Exploding Dots - Using Hands-On Activities for Student Engagement (Grades 3-8)**

**Laurie James & Veny Liu**

**Room H102**

Elementary | Middle School | Pre-Service Teacher

There is a need to build a strong foundation in the mathematical learning process by identifying multiple ways for students to learn concepts. We want to provide opportunities for students to feel comfortable sharing their thought process with their peers. The primary purpose for this presentation is to model mathematics. This presentation will focus on demonstrating how to use hands-on activities making mathematics fun and engaging for students.

## **Strategies that Work: Classroom Practices that Strengthen Mathematical Understanding**

**Holly Pope**

**Room H103**

Elementary | Middle School

Come to learn about tried and true classroom practices that increase student understanding. You will walk away with activities that can easily be implemented in your classroom instruction, such as number talks, math games, math talk moves, and glyphs.

## **Enacting the Math Lesson, Developing Habits of Practice that Focus on Students' Mathematical Thinking**

**Linda Venenciano & Seanyelle Yagi**

**Room H104**

Middle School | High School | Pre-Service Teacher

In this session we will share strategies for centering the focus of your lesson on the math and students' thinking, and ways for establishing productive discourse. Teachers in their first years of teaching are especially encouraged to attend.

## **Ethnomathematics Lesson Planning: How to Create Math Lessons with a Culturally Relevant Theme**

**Janel Marr**

**Room M101**

Elementary | Middle School | High School | Pre-Service Teacher | General Audience

This session highlights lesson planning using culturally relevant themes and the integration of place based activities. The session is for all grade levels. Presenters will share their lesson plans, discuss their experience with Ethnomathematics & STEM Institute and how they have continued its philosophy in their classes. Participants will have an opportunity to plan their own Ethnomathematics lesson.

Session 2  
10:40 am – 11:40 am

### **Desmos: More Than a Calculator**

**Jay Chow Jr. & Nikki Chiba**

**Room G101**

Elementary | Middle School | High School | Pre-Service Teacher | General Audience

How many times have you seen technology hinder a classroom? Participate in a discussion about the benefits of good tech use in the classroom and learn about how to utilize Desmos to promote productive struggle and intellectual need with students.

### **If Mathematics is the Universal Language, Why Do So Few Speak It? Inspiring Students to Engage in Mathematical Discourse**

**Elizabeth Peyser**

**Room G102**

Elementary

Developing rich mathematical discourse in the classroom is important to build reasoning and conceptual understanding; yet it is a challenge for many educators. Come discuss how teachers and administrators can support math discourse in the classroom through well-planned & well-sequenced discussions of student work.

### **Increase K-5 Student Engagement by Using Outdoor Teaching Spaces**

**Laurie James & Paul Church**

**Room G103**

Elementary | Pre-Service Teacher | General Audience

Are you looking for ways to get elementary students more engaged in math? By creating meaningful and relevant differentiated learning opportunities, the students can retain mathematical information in a non-traditional learning environment. This presentation will focus on number sense activities in an outdoor learning space. Anyone attending this session will walk away with three engaging elementary math activities that can be integrated into their lesson plans right away.

### **Let's Fly a Kite**

**Lynda Vaughn & Julien Vaughn**

**Room G104**

Middle School | High School | Pre-Service Teacher | General Audience

Tetrahedral Kites. Join us where you will learn to make a tetrahedral kite. Your kite and all instructions will be yours for a fun project with your students. Great activity for MS and HS students, math clubs & afterschool programs. Geometry teachers find it a discussion opportunity as well as a fun kite flying event for their students. The kites really do fly!

### **Discussing True and Flawed Definition for the Operations**

**Bryan Moseley & Travis Mukina**

**Room H102**

Elementary | Middle School | Pre-Service Teacher

The four basic operations (addition, subtraction, multiplication and division) are a foundational component of both mathematical reasoning and teaching for understanding. This presentation provides a discussion framework and activities to address the basic operations.

### **Numbers are Cool! Activities to support Place Value Understanding (Gr. K-1)**

**Julie Lum**

**Room H103**

Elementary

Place value is an important foundation for mathematics. Gain ideas for centers and small group instruction to help support student understanding of place value.

### **Investigating Place Value Concepts Through a Measurement Approach**

**Seanyelle Yagi, Fay Zenigami, Linda Venenciano, Kara Suzuka**

**Room H104**

Elementary

Place value concepts are foundational to students' development of number sense, operations, and beyond. This session focuses on developing students' understanding of place value concepts through length and area where concurrent representations are used to investigate multi-digit numbers.

### **Learning Menus: Providing Students Access to Equitable Learning with Ethnomathematics**

**Kaipo Tam**

**Room M101**

Elementary | Middle School | High School | Pre-Service Teacher | General Audience

Learning menus are great tools to allow students to have a choice in showing their proficiency & provide efficiency & equitable learning and easily lends itself to ethnomath/ethnoscience & cross-curricular lesson implementations. This session will showcase better practices of learning menus and provide some sample ethnomath lesson plans that have been implemented by the presenter. Participants will take away the confidence to be able to start their own learning menu for their next lesson, chapter, or unit.

Poster Session  
12:15pm – 1:00pm

### **What is the Role of a Middle School Math Teacher?**

**Alexander Apo (c/o Laurie James)**

What do you say when a student asks, “Why doesn’t my middle school math teacher teach me math the way I learn best?” Differentiating instruction so all students have the greatest potential for learning mathematics is difficult in an educational setting. This poster presentation will provide insight on how three middle school teachers believed their students grasp math concepts. Data collected from the teachers’ survey will be presented. Based on the findings, our poster will display relevant data focusing on the teachers’ instructional methods and their role in the math classroom.

### **Mathemagic Ikigai**

**Kelvin Chun**

Integrated hobbies with a meaning in life.

### **Food For Thought**

**Emilie Uyehara**

How to use cultural icons to teach core curriculum, Food Segment.

### **Building a Love of Math Through Make and Take Math Games**

**Kacey Kikuchi**

This session will introduce participants to the importance of games in elementary school curricula and possible role in getting parents involved with their children's learning. Participants will be able to make and take a math game.

### **Little Big Pumpkins - Measuring Mass**

**Rebecca Bootes**

This poster session focuses on the development and adaptation process of a lesson plan to make learning more meaningful for kindergarten students. Follow the evolution of this introductory lesson designed around HCCPS III standard K.MD.2.

### **More Action, Less Confusion!**

**Alexis Asuncion**

This poster describes the “What, How, and Why” of a “More or Less” lesson taught to a Kindergarten class. It highlights the challenges that were faced before, during, and after the lesson, along with the effectiveness of this math experience.

### **Guided Math**

**Janel Marr**

How Guided Math can be used to address Rtl at every grade level. The components of guided math, the advantages and disadvantages of guided math, how it can work in the classroom.

### **Integrating Scientific Inquiry with Hawaiian Cultural Practices**

**Phillippe Galicinao**

My lesson is aligned to my Kilo Project, which allows my students to ask a question associated with their cultural practices in traditional Hawaiian arts, create an experiment, collect about 3 quarters of data, and create an 'Ōlelo No'eau (Hawaiian proverb) based on their data that addresses their question. The Kilo Project allows the student to integrate skills in scientific inquiry into their cultural practices in 'ulana lauhala (lauhala weaving) and using 'olena as a natural dye as part of ka hana kapa (kapa making).

### **Chickens, Genetics, and Binomials**

**Cuyote Corey Harkins**

Why did the chicken cross the road? To complete the Punnett Square! In Cuyote's biology class, students are making connections between math, science, and culture by learning about chickens. Learn a simple way to connect binomials, FOIL, and genetics.

## **The Desmos Guide to Building Great (Digital) Math Activities**

**Jay Chow Jr. & Nikki Chiba**

Learn the building principles used by the Desmos faculty to ensure the quality of the instructional materials created. See some examples and learn how you can implement these principles in your daily lessons.

## **OPIHI In Grade 6 Math**

**Beth Kauwe**

In conjunction with UH's OPIHI Project, students surveyed the tide pools in Salt Pond on Kauai. Being introduced to the various equipment in the classroom first, they learned how to collect quality data through mock trials. Students also classified various limu through classroom activities before heading on site. Data was collected and analyzed to see which species of limu/organisms are thriving at Salt Pond. A final showcase was shared with the school and the community during an exhibition day.

## **Incorporating Math In An Apple-Themed Unit**

**Lynn Dagli**

Math truly is all around us! Using an Apple-Theme unit as a springboard, Lynn and her students dove into patterning, counting, and data analysis using a variety of modalities. Getting the math in children's bodies, finding the math in children's literature, and analyzing data were a few ways that these Kindergarteners were able to explore some of the Big Ideas of early math.

Session 3  
1:10pm – 2:10pm

**Cure the Paper Disease - Advanced (Create your own lessons using Desmos Activity Builder)**

**Jay Chow**

## Room G101

Elementary | Middle School | High School | Pre-Service Teacher | General Audience

This session is for users of Desmos who want to create their own custom content! Learn how to use Desmos Activity Builder to create lessons that go beyond the page!

## Introduction to Desmos - Beginner Level

Nikki Chiba

Room G102

Middle School | High School

This session will introduce participants to Teacher.Desmos.com and Desmos Activity Builder. How to navigate dashboard, start an activity, search, bookmark, and check history of an activity. Participants will be able to take back engaging activities to enhance and enrich students understanding of the mathematics.

## Selecting and Sequencing Student Work to Develop and Empower All Learners in the Math Classroom

Katie Randall

Room G103

Elementary | Middle School | Pre-Service Teacher

Session focuses on developing teacher habits for orchestrating a discourse-driven classroom by exploring effective ways of "selecting & sequencing" student solutions to tasks. Participants will analyze student work, practice making decisions about how they would select and sequence the students' solutions.

## Fun With Origami

Lynda Vaughn & Julien Vaughn

Room G104

Middle School | High School | Pre-Service Teacher | General Audience

Triangular Origami Boxes. A great project for Geometry students, folding various angles and completing these popular triangular shaped boxes which are great for gifts or student treasures – and provide an introduction to origami. Take a fun break and make your own box. Discuss with others how you could fit this into your curriculum as a supplemental activity – especially if your school is trying to build up STEAM with art/math activities.

## 21st Century Financial Literacy with the Stock Market Game

Ilisha Newhouse

Room H102

Elementary | Middle School | High School | General Audience

Grow with your students. Build a fundamental understanding of investing while providing students with real-world skills and practice in math, English language arts, economics, social studies, and other subjects.

## Visualizing Fractions: Meaningful Fraction Tasks

Travis Mukina

Room H103

Elementary | Middle School

The visual recognition of fractions is a skill all students should have in order to understand the underlying concepts of comparing fractions and performing operations on fractions. This presentation demonstrates helpful ways to allow student to visualize fractions along with providing meaningful follow-up fraction tasks.

### **BreakOut of Your Routine**

**Amy Yonashiro**

**Room H104**

**Middle School | High School | Pre-Service Teacher | General Audience**

Escape Rooms are everywhere. In these fast-paced, challenging, and exciting games, participants use clues to “breakout” before time expires. Use a similar activity in your classroom. Participants must decode several locks to “break in” to a box. Collaboration, creative thinking, and communication required when discussing course content to solve problems that unlock the mystery. Suitable for all grades.

### **"Shaping Up" in Geometry: Beyond Naming the Shapes**

**Phyllis Nakama-Kawamoto**

**Room M101**

**Elementary | Pre-Service Teacher**

Geometry is much more than learning the names of shapes! It establishes the necessary groundwork for ongoing and future mathematics learning. Come join this session and learn about the “big ideas” in geometry and spatial thinking and learn new activities that support the big ideas.

**The annual conference for HCTM will be moving to the Fall Semester beginning in the 2018 – 2019 school year.**

**Join us at ‘Iolani School  
September 15, 2018**