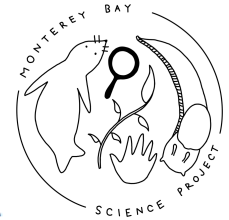


**UCSC's Monterey Bay Area Math Project & Monterey Bay Science Project**  
Present their 14<sup>th</sup> Annual Winter Conference



STEAM 2021 Presenters' bios, Session Description, Materials needed, and Audience.

1. PRESENTER NAME: Karl Schaffer

<https://www.youtube.com/watch?v=Ws2y-cGoWqQ>

BIO: Karl Schaffer is a dancer and choreographer who co-directs the Santa Cruz-based dance company MoveSpeakSpin, and is a math professor at De Anza College. He and his dance company have performed internationally and his work on dance and mathematics has been published widely. He and co-director Erik Stern are on the Kennedy Center Teaching Artist Roster, and have taught hundreds of professional workshops to teachers, artists, and mathematicians on how to integrate dance and mathematics in the classroom and on stage.

SESSION DESCRIPTION: MATH ... Moving with Circles

In this interactive workshop we play with several surprising ways of exploring circles and examine some of their surprising properties. We begin by looking at what happens when we rotate our limbs with very simple movements, and explore whole-body circular activities easily done in a very small space. We then apply these actions to create movement sequences with the ultimate mathematical prop — an ordinary sheet of paper. No dance experience necessary!

**Materials needed:**

- Several sheets of ordinary printer paper
- 5 ft/ by 5 ft. area in which to move (non-carpeted area preferred)
- A belt and two ordinary (long) socks

AUDIENCE: Math, Movement, General Audience

2. PRESENTER NAME: Denise Green

<https://www.montereycoe.org/programs-services/ed-services/meet-our-team/>

(presenting with Dr. Dennis Kombe;

<https://csumb.edu/directory/person/dkombe> )

BIO: Denise Green is the Educational Administrator of Mathematics at the Monterey County Office of Education, and as such she strives to support districts, schools, and educators to ensure students gain a rigorous math education. Denise aspires to empower all students in math class and to instill the belief that each and every student is good at math. She believes collaborative efforts are necessary to transform the way we understand and envision math teaching and learning and more importantly to ensure student success and narrow access, expectation, and achievement gaps.

SESSION DESCRIPTION: Title: Cultivating Students' Math Identities. How do your students' view themselves as mathematicians? In this session we will share activities and resources educators can use with students to cultivate a classroom community with positive math identities.

AUDIENCE: Math, General Audience



3. PRESENTER NAME: Valerie Sun, with Kheng Ly-Hoang,

<https://www.valeriesun.com/>

BIO: Valerie Sun, Ed.D. is a kindergarten teacher at heart, despite having taught across the entire span from preschool to doctoral level students. She enjoys leading student-centered learning experiences focused on discovery and discussion, especially for the most curious young learners. Valerie is currently a teacher specialist in EdTech & Info Services at Glendale Unified School District and she works as a consultant on the side training teachers in various tools and best practices.

Kheng Ly-Hoang earned her B.A and M.A. from California State University, Los Angeles in Child Development and Early Childhood Education, respectively. She is a former early childhood education practitioner and community college adjunct faculty. She is currently a lecturer, assistant fieldwork coordinator, and doctoral candidate at California State University, Los Angeles, and is a member of an Early Childhood Higher Education

Collaborative called PEACH. Her scholarship is centered around early childhood education, teacher preparation, pedagogy and curriculum, and STEM.

**SESSION DESCRIPTION:** What is the role of TPACK in science education for K-1 teachers? Our technical, pedagogical, and content knowledge has to do with everything in our science lessons! Join this session to learn tips, tricks, techy skills, and gather a bunch of resources to help integrate and make your science lesson engaging and successful with the young learners  
**AUDIENCE:** Science, Technology, K-1

4. PRESENTER NAME: Steve Pomerantz

**BIO:** Steve Pomerantz (Ph.D., UC Berkeley – '86) is a mathematical consultant and an adjunct faculty member of St. Joseph's College of New York. His paintings are inspired by the geometric art of world faiths. He is actively involved in MBAMP and elsewhere where he provides workshops in a variety of mathematical-art areas, some of which have been published in "Classical Geometry – An Artistic Approach". Art work and study notes are available at <https://circleofsteve.com/>  
<https://www.tandfonline.com/doi/abs/10.1080/10724117.2020.1768012>

**SESSION DESCRIPTION:** MATH. Use Desmos (or Compass/Straightedge) to enter the world of mathematical art. We will explore some traditional architectural patterns as a way to introduce the basic geometric concepts of angles, polygons, circles and transformations. Individual and Group projects are possible.

**Materials needed:**

**Desmos or Compass and Straightedge**

**AUDIENCE:** 5th to H.S., Geometry, Art General Audience



5. PRESENTER NAME: Sumita Jaggar

**BIO:** Sumita Jaggar is a veteran middle school math and science teacher. She is passionate about creating classrooms where the students are working harder than the teachers at making sense of material through discussion and collaboration.

SESSION DESCRIPTION: MATH and SCIENCE--- Our topic STAND AND TALKS -- a classroom routine which is used to help students engage with material. This routine can be used in a variety of ways -- to introduce a complex task, to introduce vocabulary, to examine data, and to consider social and political issues. Using this routine, students are able to access curriculum early in a lesson which enables them to maintain engagement throughout the lesson. In this session, teachers will learn what a Stand and Talk is, learn how to use them in class and how to create them for their own lessons. <https://www.saravanderwerf.com/stand-talks-the-best-thing-i-ever-did-to-get-students-talking-to-one-another/>

AUDIENCE: Math and Science, 5th to H.S.

6. PRESENTER NAME: Kevin Deutsch and The Cal Teach students (Pablo Gomez Echegaray, Morea Lee, Kevin Nguyen, Jasmine Tom, Jimmy Lujan )

( <https://calteach.ucsc.edu/>)

BIO: Kevin is a passionate believer in using math games in the math class. He currently is

H.S. Teacher at Oasis High school, developer of the website Hujaza: Classroom Games (<http://hujaza.com/math/>), BS in mathematics from UCSC, UCSC Cal Teach alum, a graduate of the UCSC Masters program in teaching and an MBAMP teacher leader.

UCSC Cal Teach STUDENTS...

Pablo Gomez Echegaray: Senior, one of his favorite math experiences was math games in elementary school, the enjoyment that I've gotten is from discovering the new techniques that they teach us in class.

Morea Lee: Sophomore, her favorite math experience was probably when I took AP Calculus in high school. I had an amazing teacher that really helped me find my passion for math.

Kevin Nguyen: Senior, his favorite math experience was in EDUC 185B. The class opened my eyes to how mathematics should be taught in the classroom and helped me appreciate the complexity of the subject, where math can be understood and applicable in any form possible; I think that is what makes math so interesting and vital to me.

Jasmine Tom: Sophomore, her favorite math experience is the satisfaction of finally solving difficult problems throughout my mathematical experience (all grade levels)

Jimmy Lujan: Senior, his favorite math experience was a project in High School where we had to set a fictional shop to show combinations and permutations. My project was a time machine shop and it was one of my most confident presentations I gave. I was able to explore the concept in a method that was very unique to myself.

SESSION DESCRIPTION: We will present a session on math games.

People will have an opportunity to join a break out session and play a few

AUDIENCE: Math games, grade 3 to H.S.



7. PRESENTER NAME: Virginia Guhin

<https://www.elkhornslough.org/profiles/virginia-guhin/>

<https://www.elkhornslough.org/education-program/>

BIO: Virginia Guhin is the Education Coordinator at the Elkhorn Slough National Estuarine Research Reserve and an Interpreter II with the Department of Fish and Wildlife. Virginia's work at the Reserve focuses on K-College education curriculum design, developing new teacher professional development workshops, managing an afterschool program, overseeing the annual Reserve Open House and other outreach events, and developing partnerships with regional informal education organizations. Virginia is committed to developing exciting and engaging education and Visitor programs which ignite curiosity and inspire caring for the environment in all audiences.

Virginia has 20 years of coastal and marine science education and outreach experience in the Monterey Bay area, developing and presenting programs that use science as a foundation of the learning experience. Virginia received a Biology degree from the University of California at Santa Cruz and received her teaching credential from San Jose State University. Virginia taught Biology at Aptos High, worked with the Seymour Marine Discovery Center and developed a Marine Science Program for the Santa Cruz Beach Boardwalk. Additionally, Virginia's work with the National Estuarine Research Reserve System involved developing and facilitating workshops for environmental consultants around pressing conservation issues. Her background in both formal and informal science education and her interest in the social science behind science communication is one of the strengths that enable her to engage diverse audiences around coastal conservation issues.

SESSION DESCRIPTION:

Taste of the Elkhorn Slough Reserve STEAM Resources – A Teacher PL Sampler!

Come explore the highlights of 5-unique workshops, each offering hands-on exploration of NGSS concepts with math and art extensions. During this session do science while discovering the highlights of each workshop. Take home fun lesson ideas and learn why these virtual, hybrid, and in-person workshops are so popular amongst California teachers!

AUDIENCE: Science, K to 3rd grade



8. PRESENTER NAME: Chelsea Prindle,

<https://montereybay.noaa.gov/vc/sec/distance.html>

BIO: Chelsea Prindle is the Manager of the Monterey Bay National Marine Sanctuary Exploration Center. Ms. Prindle has launched a 5-part distance learning program utilizing the plethora of Monterey Bay Sanctuary virtual learning resources available to the public.

SESSION DESCRIPTION: Dive Into Monterey Bay National Marine Sanctuary Virtually!

We will review online tools, resources, and activities to immerse your students in Monterey Bay National Marine Sanctuary!

AUDIENCE: Science, grades 3 to middle school



9. PRESENTER NAME: Will Franzell presenting with Rod Garcia

BIO: <https://www.montereycoe.org/programs-services/ed-services/meet-our-team/>

SESSION DESCRIPTION: Explore the integration of hands-on Science with Educational Technology! This engaging and interactive session supports the teaching and learning of the CA Computer Science AND CA Next Generation Science Standards!

AUDIENCE: Science, grades K to 5



10. PRESENTER NAME: Suzanne Damm

BIO: Suzanne Damm is a retired middle school teacher, principal and math coach.

She has provided professional development through many different venues. Suzanne has taught math methods or math for elementary school



teachers at SJSU, UC Santa Cruz, Santa Clara University, and currently at CSUMB.

**SESSION DESCRIPTION:** Let's Explore Fractions! We will look at conceptual understanding of fractions using virtual manipulatives and area models: Moving from, what is a fraction, to operations on fractions.

**AUDIENCE:** Grades 3 to 5

11. **BIO:** Louanne Myers has been facilitating professional development workshops for the past 10 years that focus mostly on math or STEAM concepts. She is currently an adjunct professor at National University, having recently retired from 35 years of classroom teaching and instructional coaching.

**SESSION DESCRIPTION:** Whether in class or online, Project/Problem based activities can add a new depth of engagement in learning for your students. They integrate subject matter areas, are inclusive, engaging and just plain fun. This workshop will explore some sample problems/projects created with math and science in mind to engage students and encourage exploration in either a home or school environment. We will discuss possibilities for creating your own or adapting/enhancing what you already have.

**AUDIENCE:** Math, Tech, Science and Art Grades K to 6

12. **BIO:** Amity Sandage serves as environmental literacy coordinator for the Santa Cruz County Office of Education. Her work focuses on connecting students, classroom teachers and community-based environmental educators together to explore the wonder of the natural world and people's place in environmental systems.

**SESSION DESCRIPTION:** This session will provide an overview of Science and Environmental Literacy K-12 Distance Learning Lesson Sequences and a collection of resources that support integrating outdoor learning and environmental topics with classroom curriculum. Participants will have time to explore grade level science lessons and accompanying resources and then discuss them with peers.

**Audience:** Science, General Audience