San Joaquin Valley Mathematics Project
Quarterly Newsletter

Promoting Excellence in Mathematics Education Since 1989
September 2014

FRESNO STATE
San Joaquin Valley Mathematics Project

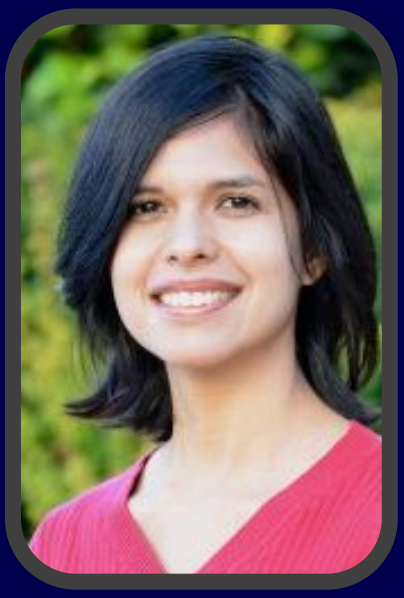
This issue

26th Annual SJVMP Summer Leadership

Mathematics educators from the central San Joaquin Valley had the unusual problem of dealing with a high of 68° during the middle of July and were appropriately dressed in sweatshirts and sweaters for the occasion. This can only mean one thing; they were at the beach! This year's annual San Joaquin Valley Mathematics Project Summer Leadership Institute spent three residential days enjoying the good food, weather, and beautiful scenery at Cayucos, CA. Highlights included: dining together at Dorn's Original Breaker Café in Morro Bay, a mathematical scavenger hunt in Cayucos with Agnes, a geometry-based buried treasure hunt on the beach with Rajee, and lots of food and fellowship. Most importantly, teachers were able to gain valuable content knowledge and pedagogical ideas to take back to the classroom. During the second week, Dr. Susie Håkansson, the current President of TODOS, joined the group for four days to help teachers in their support of English Learners. Also joining the group was Dr. Tiffany Friesen from Fresno City College, who led the K-6 group on a journey to see the connections between place value, the base ten system, decimals, and fractions. A highlight from her work for many was the time spent building and using a base-5 abacus. See pages 7 and 8 for more pictures of the event.

Focus on Alumni

In this section, we highlight one of the hundreds of accomplished SJVMP participants from our 26-year history, asking them to comment on the impact that the Math Project has had on their career.



Aileen Rizo

Aileen Rizo has been a mathematics educator for the past 19 years. During this time she served as a classroom teacher for 13 years, as an online teacher for 2 years, and as a Mathematics Consultant for the Fresno County Office of Education for the past 4 years.

SJVMP: I understand that after your experience as a high school teacher, you spent some time teaching in an inner-city setting.

Aileen: Yes. It was a rather large, grade 7-8 middle school in Arizona, where I taught mathematics to EL students.

SJVMP: So what caused you to pack up and move out to Fresno?

Aileen: I saw a job posting for a mathematics consultant, and I was ready to grow and take the opportunity to do something different with everything I had learned up to that point in my career.

SJVMP: When did you first get involved with SJVMP?

Aileen: My first summer (2010) at the county office, I heard about it, thought it would be a great opportunity, and signed up .

SJVMP: What is one the most exciting things about being a teacher-leader?

Aileen: The opportunities to learn, and the ability to share that new learning with someone else and see them excited about it.

SJVMP: What are the things that help a teacher grow and reach their full potential as an educator?

Aileen: I think there is a big difference amongst teacher expectations. Some truly believe they can have high expectations for all students. It is imperative to get away from saying, "I don't think my kids can do that."

(Continued on Page 3)

Problem of the Quarter (POQ)

During the annual back-to-school celebration, the principal, Mr. Crantz, volunteers to purchase an ice cream sundae for each student in grades K-5, and a banana split for each student in grades 6-8. Mr. Crantz knows that this year's K-8 student body population is 788.

The day of the event, only two-thirds of the grade 6-8 students decide to get a banana split, and 20% of the grade K-5 students turn down the offer of a free ice cream sundae.

If the sundaes are $5 and the banana splits are $6, how much is Mr. Crantz's bill?

Focus on Current Participants: Anne DeFord

Anne DeFord is currently teaching 5th grade at Roosevelt Elementary School in Selma, CA.

SJVMP: Going through the SJVMP pictures, it was evident that you brought a huge smile every day. Is that the case in the classroom as well?

Anne: I feel that it is a privilege to be a part of my students' lives, so, yes, I do smile every day! Many of my students come from broken homes where sadness is a part of their everyday lives, so I try to promote a positive climate for students to study, learn, and grow. Of course, laughter is also important!

SJVMP: When have you been most satisfied with your teaching?

Anne: I am most satisfied with my teaching when I look around the classroom and all my students are totally engaged in an activity. This happened yesterday. My students were working on a group project where problem solving and collaboration were evident throughout the room. When it came time for recess, they did not want to go out to play. They actually wanted to work! Yes!

SJVMP: Recall a favorite SJVMP experience while at Cayucos.

Anne: Cayucos was an excellent location! I have to say that the evening on the beach participating in the scavenger hunt and treasure hunt was my favorite. I was fascinated with the amount of math we were doing while having fun.

SJVMP: Give an example of an idea you've had or trying to implement this year as a result of your experience with the SLI.

Anne: Wow! There were so many great math ideas and resources that I obtained from my experience. I plan on creating a scavenger hunt and treasure hunt at my school for my students to be involved in. I also found the Base Ten sessions valuable for my 5th grade students.

SJVMP: What is the most valuable thing you wish to communicate to your students?

Anne: They are valued. I want each student who comes through my door to feel accepted, approved, and appreciated. When this is in place, then an environment for learning can exist.

Focus on Alumni

(continued from page 2)

SJVMP: You are famous around Fresno County as an innovative math educator that integrates traditional math topics with exciting activities like Legos, origami, and recently programming. How does one strike a balance with enrichment?

Aileen: I think that is something that I am still figuring out-- how to make that balance. I value the importance of creating an experience rather than just trying to distribute knowledge. Just doing 25 problems that I showed you how to do is not enough. It's so compelling when students have an experience in the classroom. They go home and they don't forget about it. When you create an experience, you create a long-lasting memory that is deeper. I think that teachers have to know their students and be discerning and wise about what's best for their students.

SJVMP: Thank you, Aileen, for all of your contributions to the SJVMP and students at large.

SAVE THE DATE—Winter Leadership Retreat

January 30-31, 2015

Location: Anthony's Retreat Center

Mathematics & Technology Mini-Conference

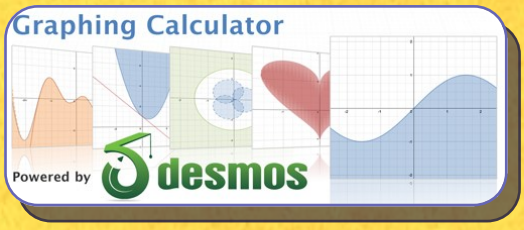
California Mathematics Project at Fresno State - San Joaquin Valley Mathematics Project

Friday/Saturday October 3-4, 2014

Keynote: Technology and the Curious Mind

Technology is everywhere. It's in our workplaces and homes, our backpacks and pockets, our eyeglasses and wristwatches, and—most crucially—our classrooms. And it's not going away. So the question becomes: Are you using technology in ways that stifle your students, or in ways that promote their most valuable, most human qualities? Join us as our keynote speaker Michael Fenton explores the role of technology in cultivating curiosity, creativity, and collaboration in the classroom. Michael blogs at reasonandwonder.com and connects with other educators on Twitter as @mjfenton.

12 unique, grade-span breakout sessions on Saturday



Generous support was given by Bitwise Industries (the mothership of technological education, collaboration, and innovation in Fresno), the Mathematics and Science Teacher Initiative (MSTI) at Fresno State, and the Fresno County Office of Education.

BITWISE INDUSTRIES

FRESNO STATE Mathematics & Science Teacher Initiative

Fresno County Office of Education — Jim A. Yovino, Superintendent of Schools

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Location/Time: Friday 4:00-5:30 p.m. - Hors d'oeuvres
Fresno State, Kremen School of Education and Human Development - Room 140
Saturday 8:30 a.m. - 3:00 p.m.
University High School—2611 Matoian Way, Fresno, CA

Registration Fee: (through September 22, 2014): $185 (Student Rate: $75)
Late Registration Fee: (September 23-26): $200
URL: http://fresno.k12oms.org/141-86950
More Information: Mike Chamberlain email: mchamberlain@fcoe.org
Registration: May Lee email: mayl@csufresno.edu

SAN JOAQUIN VALLEY Mathematics PROJECT

Saturday Schedule

Speaker	Session #1 9:15-10:45	Session #2 11:00:12:30	Session #3 1:15-3:00
Mike Fenton 	**10 Free Digital Tools)** Join us for a tour of 10 free digital tools that will transform your classroom. Learn how to use technology to engage student interest, spark mathematical dialogue, and develop conceptual understanding. **(K-12)**	**Dynamic Graphing: Desmos** Beautiful. Intuitive. Powerful. The world's greatest graphing calculator, available on anything with a web browser, from smartphones to tablets to laptops. Oh, and it's free! **(6-12)**	**Dynamic Graphing: Desmos** Join us for an interactive session on Desmos, the free and fantastically beautiful online graphing calculator. Design engaging tasks, facilitate multi-representational discussions, and encourage graphing inquiry in your classroom. The learning curve is low and the sky's the limit. (Bring a laptop or tablet to the session for maximum graphing joy.) **(6-12)**
Aileen Rizo 		**Coding and Mathematics** Gain access to resources and hands-on experience through demo lessons that integrate Scratch-based coding into your existing curriculum. This session is designed for teachers of mathematics in grades 4-8. **(4-8)**	**Coding and Mathematics** Gain access to resources and hands-on experience through demo lessons that integrate Scratch-based coding into your existing curriculum. This session is designed for teachers of mathematics in grades 4-8. **(4-8)**
John Martin 		**Spreadsheet Mathematics** Using Excel and GeoGebra, we can make use of CCSS shift towards active data collection. Learn how to display and analyze data using these dynamic software applications. **(6-12)**	**GeoGebra and Algebra** Experience how GeoGebra can bring coherence to an integrated mathematics approach. This session's focus is using GeoGebra to teach algebra without seeing it as a discrete, disconnected mathematical topic. **(6-12)**

Saturday Schedule

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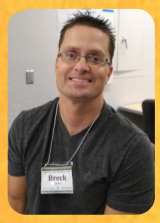
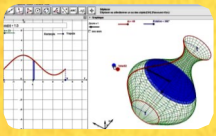
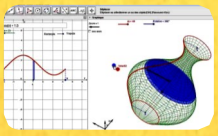
Breck Jacobs 	**GeoGebra and Geometry** Learn how to create dynamic interactive geometric objects, shapes, figures, and diagrams with GeoGebra to pursue conceptual understanding and procedural skill fluency; or get started now by using thousands of free GeoGebra activity workbooks available on geogebratube.org. **(6-12)**		
Carl Veater 	**TI-nSpire Technology** We will use TI-Nspire graphing calculators to achieve the goals of the Common Core State Standards. We can achieve the mathematical modeling demands as outlined in the CCSS, and keep our students perplexed if we engage them with technology. **(6-12)**		**TI-nSpire Technology** We will use TI-Nspire graphing calculators to achieve the goals of the Common Core State Standards. We can achieve the mathematical modeling demands as outlined in the CCSS, and keep our students perplexed if we engage them with technology. **(6-12)**
Bryan Sheldon 	**GeoGebra and Calculus** Although the topics of algebra and geometry are explicit in the name, “GeoGebra”, there are plenty of opportunities for students to make connections in a calculus course.  **(9-12)**	**GeoGebra and Calculus** Although the topics of algebra and geometry are explicit in the name, “GeoGebra”, there are plenty of opportunities for students to make connections in a calculus course.  **(9-12)**	

Anai and Maria

Breck, Jason, and Eric
How many math teachers does it take to...

Sherrianna and Rajee

Gudelia, Karen, and Casie
Treasure hunt winners get to bite the gold.

Ramona, Anne, and Gudelia
Feeling great about their zip line.

The fun never stops with Jay

"No Casie. You're ruining the experiment."

Rhiannon, Dina, and Margaret
Mock-up zip line is a success!

Karen and Christine
Go Los Baños Math Team!

Dr. Susie Håkansson, TODOS President, with Mike

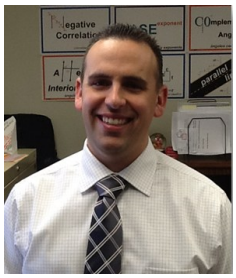
Elizabeth showing off her fabulous base 5 abacus.

Dr. Tiffany Friesen

Bryan is not talking about *e*, this year's theme number.

Celia hard at work.

PROJECT DIRECTOR



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