SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT

Innovations in Early Childhood Instruction and Assessment

The When and Why of Innovative Ideas' Use

Rosa Serratore, PreK-12 Mathematics Coordinator

CA Mathematics Council Southern Section President

#CRESSTCON October 2, 2018

1. All students are socially just and ready for college and careers
2. English Learners will become proficient in English while engaging in a rigorous, culturally and linguistically responsive, standards-aligned curriculum in the core content areas
3. All students and families engage in safe, well-maintained schools that are culturally responsive and conducive to 21st century learning

District Goals

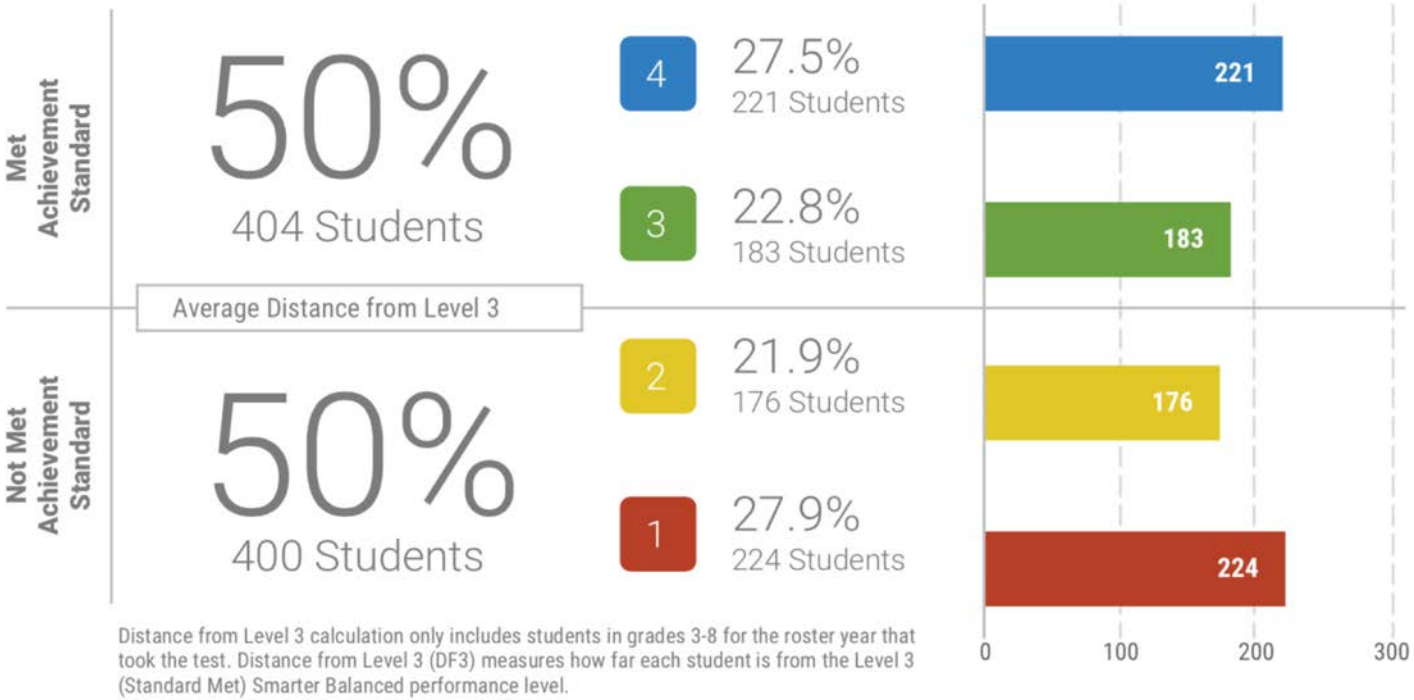
Based on LCAP

Local Control and Accountability Plan

A Three-Pronged Approach

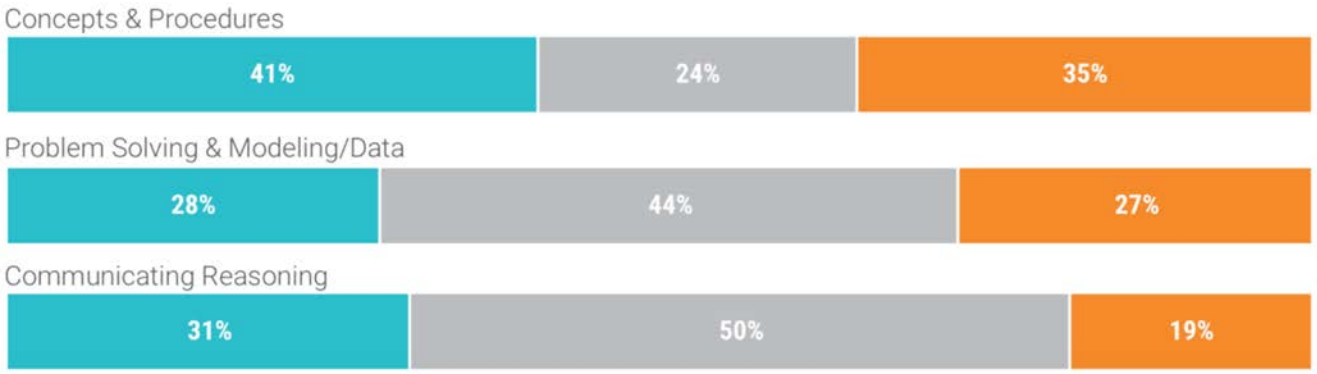
1. Create a Culture of Shared Accountability through a Systems Approach
2. Teach Cross-cultural and Socio-emotional Skills
3. Engage in Constant Self-reflection around Issues of Equity

Overall Performance: 804 Students Tested



Distance from Level 3 calculation only includes students in grades 3-8 for the roster year that took the test. Distance from Level 3 (DF3) measures how far each student is from the Level 3 (Standard Met) Smarter Balanced performance level.

Claim Performance: Percent of Students at Each Level



District 11th grade

Mathematics Achievement

- PISA (programme for international student assessment—used to compare achievement across countries, has a section about attitudes and beliefs) from 13 million students showed that the lowest achieving students worldwide were those who used a memorization strategy—those who thought of math as a set of methods to remember and who approached math by trying to memorize steps.

The highest achieving students were those who thought of math as a set of connected, big ideas. "America has more memorizers than almost any country in the world," Jo Boaler, Stanford

Our mathematics program in SMMUSD is based on the CA State Standards in mathematics and informed by the philosophy of Cognitively Guided Instruction, CGI. We will implement our program using My Math and other research based resources. Ongoing professional development will assist in building teacher capacity.

https://www.teachingchannel.org/video/pre-k-spatial-relations-dreme

UCLAMP @UCLAMathProject · Jul 24

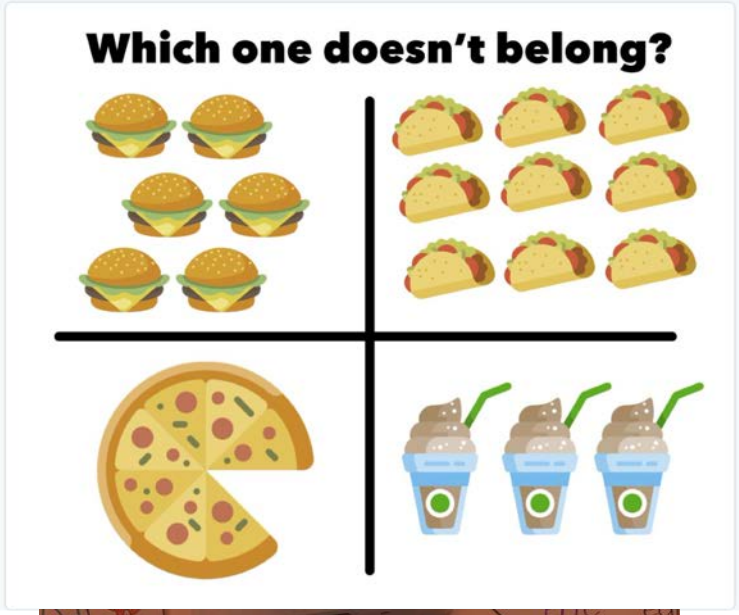
Join us for a 4 day K-5 #CGIMath Institute to focus on children's mathematical thinking in a Spanish #duallanguage context. #WODB

More information and registration at bit.ly/K-5_CGI_DL

Holly Hodges Retweeted

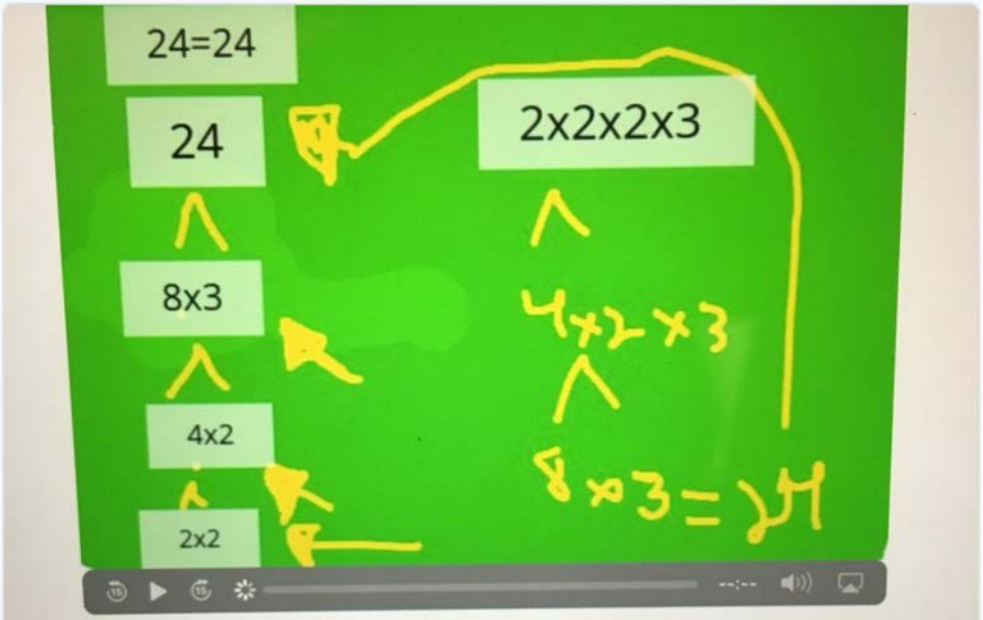
WithMathICan @WithMathICan · 12 Nov 2017

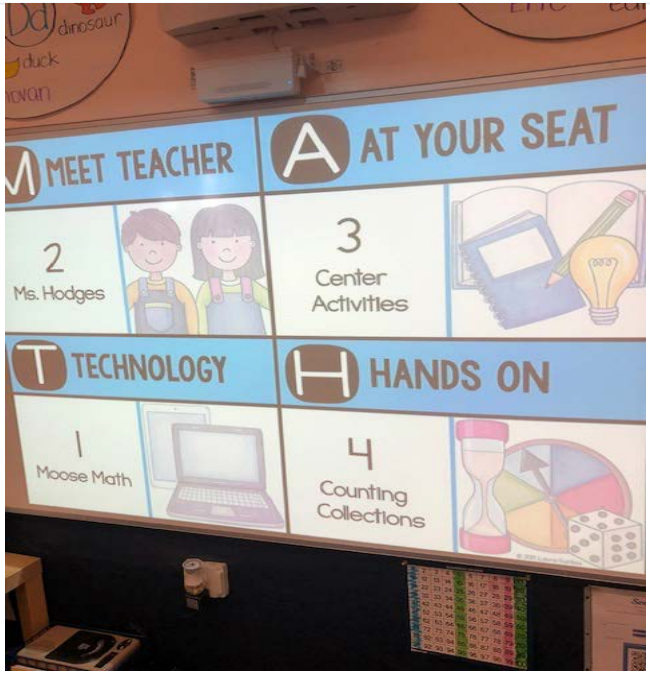
How You Can Use #WODB Activities to Ignite Student Thinking in #Math: buff.ly/2IHgj9f via @mashupmath #mtbos



Holly Hodges @hollyahodges · Mar 16

The depth that teachers get by having students do and explain their math on @Seesaw is INCREDIBLE #CUE18 @Miss_Dean





3-Act Tasks @gfletchy

1. What do you wonder?
2. Estimate how many peas are in each pod. Large, medium, and small.
3. If all the peas were in one pod, how many peas would there be?
4. Make an estimate you know is too big. Too small.

Notice and Wonder Routine @MFAnnie

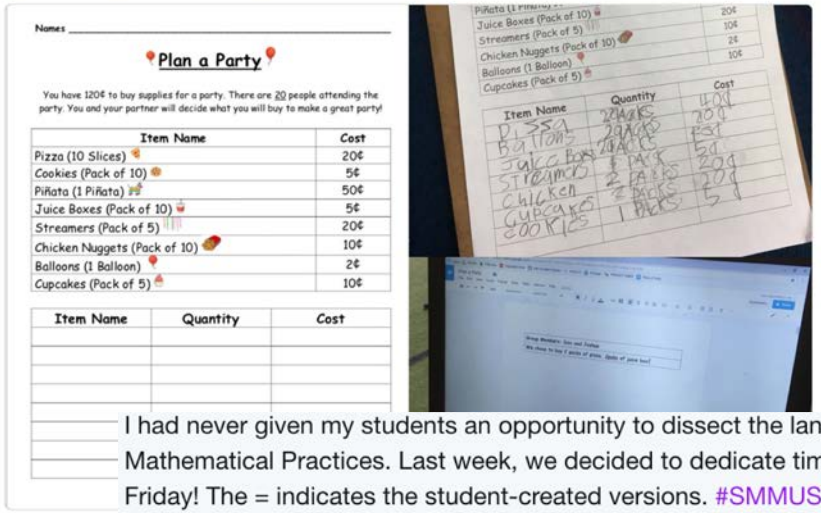
Mathematical Practices aligned to English Language Development and Next Generation Science Standards

Mathematical Practice	Explanation and Examples
MP.1 Make sense of problems and persevere in solving them.	**Transitional kindergarten** provides an opportunity for teachers to instill a joy of problem solving in mathematics. Mathematical activities should be both meaningful and challenging. Some of these activities are games (e.g., board games, card number games, dominoes, etc.) and are useful because mathematics is being used to solve problems. Consider using games in which no one "wins" until every student has finished and games that require collaboration. Encourage students to persevere in solving problems – they will find that those problems that take a bit of time to solve can be the most rewarding. Possible prompts: How do you know? What do you know about …? What would happen if…?

MP.3 Construct viable arguments and critique the reasoning of others	Young students are very capable of stating a point of view and defending it. Help students transfer these abilities to the domain of mathematics. Ask students how they arrived at the answer and discuss with others not only the correct answer, but also the strategies used for finding the answer. Frequently there is more than one "right" answer (e.g. "What number is greater than five?") and more than one strategy. Model how to explain answers and discuss other solutions with classmates. Possible prompts: How did you figure that out? What do you think about...?
MP.6 Attend to precision	Precision is more than the "right" answer. It involves being able to describe strategies, arguments and decisions with increasing skill. Descriptions become more and more precise. Triangle descriptions change from "Because it looks like a triangle" to "It has three sides and three corners." Students learn that if they do not provide accurate representations during problem solving (e.g., in drawing 3 + 5 they only draw two and five objects) then they will have problems determining accurate answers. There is a beauty in precision – many students are entranced by this beauty (2 + 3 is always 5 – a quite amazing concept!). Possible prompts: What do you know about...? What else do you notice?

Maddie Ross
@maddieteaches

We're planning a party... Well, not a real party, but we're using place value and addition to enhance our future ready skills! Love watching these little hands type. 🤲💻 #smmblend @shynding @serratore4 @bebaroman @dsdPD



Names: _____

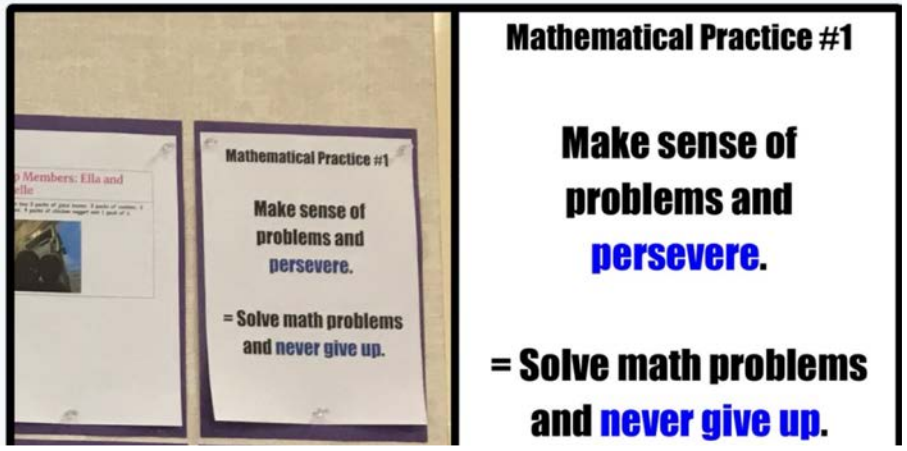
Plan a Party

You have 120¢ to buy supplies for a party. There are 20 people attending the party. You and your partner will decide what you will buy to make a great party!

Item Name	Cost
Pizza (10 Slices)	20¢
Cookies (Pack of 10)	5¢
Piñata (1 Piñata)	50¢
Juice Boxes (Pack of 10)	5¢
Streamers (Pack of 5)	20¢
Chicken Nuggets (Pack of 10)	10¢
Balloons (1 Balloon)	2¢
Cupcakes (Pack of 5)	10¢

Item Name	Quantity	Cost

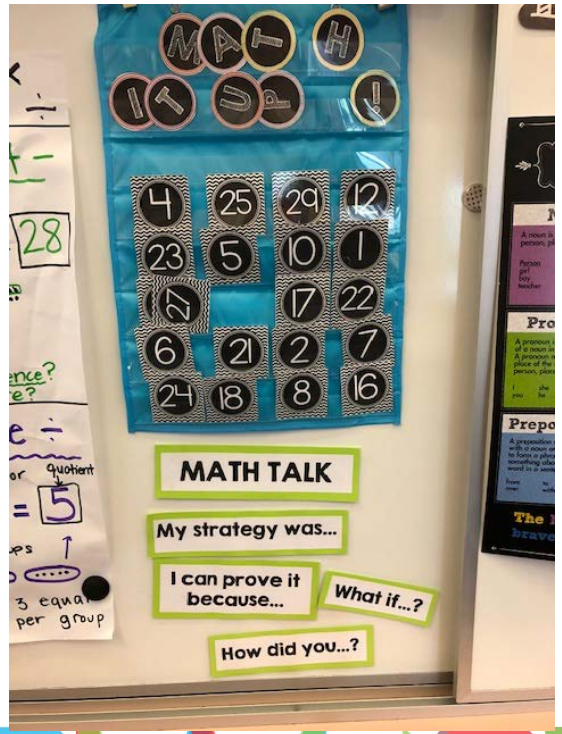
I had never given my students an opportunity to dissect the language of the 8 Mathematical Practices. Last week, we decided to dedicate time to it every Friday! The = indicates the student-created versions. #SMMUSDmath



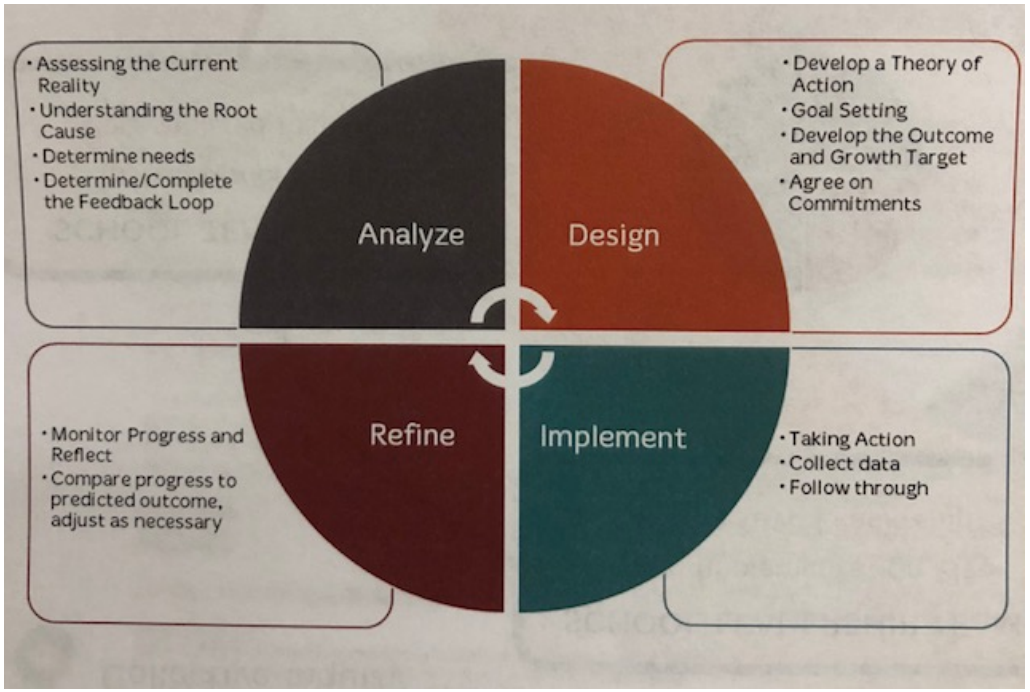
Alice Keeler
@alicekeeler

For reals I saw this in action and it is MIND BLOWING! MIND BLOWING!!!!!!!!!!!! #MATHCHAT

Texthelp for Education @texthelp
Trying to figure out how to add handwritten work to your Google Doc or #EquatIO mathspace? Stop going around in circles! Use #EquatIO Mobile to take a snapshot of your work, digitize it, and insert it in your document. It's like magic! okt.to/6REzzF …



ACTION RESEARCH THROUGH INQUIRY



September:
initiate analyze phase

October:
develop design phase

InnovateED team- Michael Fullan

For session 2: Research and analyze further the Critical Areas.
What assessments might help us learn about our students thinking within these critical areas?
What instructional strategies/tools might accelerate our students' understanding in these areas?
What do you think is our theory of action?