Linda Dilger, Mathematics Coordinator/Administrator
ldilger@monterey.k12.ca.us
(831) 755-0393 (831) 224-6292

**Informational /Issues Update** (Federal/State/Regional/County/Committees)

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## Local Focus

MCOE will continue to provide one-day, grade level specific workshops comparing the national CCSS with our current California State Standards, and developing grade-specific lessons for teaching the content found in both the CCSS and our current standards.
The lesson design will incorporate the Eight Mathematical Practices of the CCSS:

1. Make sense of problems, and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Contact Linda Dilger (831) 755-0393 for information on how your district can participate.

**LARS Mathematics CCSS Workshop**
Day 2 January 29, 2013

**Regional MATH CCSS Meetings**

- ***South County Soledad Jack Franscioni School***
  - April 15, 2013
- ***Salinas MCOE***
  - March 14, 2013
- ***Monterey MPUSD IMC***
  - March 6, 2013

## David Foster Returns-Another View of the Next Generation of Mathematics Assessments-March 20, 2013

The next generation assessments for mathematics are being created by the SMARTER-Balance Assessment Consortium (SBAC). These assessments are being aligned to the Common Core State Standards for Mathematics (CCSSM). SBAC is creating task models for their new assessments.
In this workshop participants will learn to follow SBAC's criteria for creating task models that address the CCSSM. Participants will align the task model to performance assessment items and share with other participants the work created.
This will be beneficial in two ways:

- Educators will better understand the standards and how they will be assessed;
- Educators will be able to share their learnings with others in their schools and/or district.

**Date:** March 20, 2013

**Location and time:**

MCOE Rooms A & B
8:30 AM to 3:30 PM

**Cost per participant:**

Free to Monterey County teachers *of 2nd grade to High School Geometry students* (Space is limited)

**Presenter:** David Foster, Executive Director
Silicon Valley Mathematics Initiative

To register for this course visit: **http://monterey.k12oms.org/** On the calendar square for March 20, click on *Next Generation*.

## Dan Meyer-Perplexing Mathematics High School Mathematic Lessons June 17 & 18, 2013 Cost $20

**MCOE presents** a workshop facilitated by Dan Meyer on perplexity. Perplexity is invaluable currency in the mathematics classroom. Perplexity is the stuff of being perplexed. When students are perplexed, they aren't asking "when will we use this in real life?" because they're too busy chasing down answers to rich mathematical questions they came up with themselves. When curriculum is perplexing, the teacher doesn't have to announce the day's objective, because perplexity nudges yesterday's concept naturally into today's. In this hands-on workshop, we will discover methods for capturing perplexity and turning it into CCSS-aligned problems that develop the mathematical practices of every student.

**Date:** June 17-18, 2013

**Location and time:**

MCOE Rooms A & B
8:30 AM to 3:30 PM

**Cost per participant:**

$20 – includes lunch both days
(Space is limited)

**Presenter:** Dan Meyer

As seen on CNN, Good Morning America, TED.com, and Every Day With Rachel Ray, Dan Meyer taught high school math for six years to students who, in many cases, did not like high school math. He is currently a doctoral candidate at Stanford University in the field of math education, and speaks internationally. Mr. Meyer was named one of Tech & Learning's 30 Leaders of the Future and an Apple Distinguished Educator, and lives in Mountain View, CA.

To register for this workshop visit: **http://monterey.k12oms.org/**
On the calendar square for June 17, 2013, click on *Perplexity*.

Though it's not necessary for attendance, we highly recommend that you bring your laptop so you can create and save lessons. (WiFi and power outlets will be provided.)

**Mathletics 2013**, May 11, 2013. Naval Postgraduate School

## Federal Focus

### Recipients of Race to the Top--District Competition Announced

**Source:** U.S. Department of Education
**URL**: www.ed.gov/news/press-releases/education-department-announces-16-winners-race-top-district-competition

On December 11, the U.S. Department of Education announced that 16 applicants--representing 55 school districts across 11 states and D.C.--have won the 2012 Race to the Top--District competition. These districts will share nearly $400 million to support locally developed plans to personalize and deepen student learning, directly improve student achievement and educator effectiveness, close achievement gaps, and prepare every student to succeed in college and their careers.

"Districts have been hungry to drive reform at the local level, and now these winners can empower their school leaders to pursue innovative ideas where they have the greatest impact: in the classroom," said U.S. Secretary of Education Arne Duncan. "The Race to the Top-District grantees have shown tremendous leadership though developing plans that will transform the learning environment and enable students to receive a personalized, world-class education."

The 2012 Race to the Top-District grantees will receive four-year awards that range from $10 million to $40 million, depending on the number of students served through the plan. The winning applicants were the top scorers among the 372 applications the Department received in November, which were evaluated and scored by independent peer reviewers.

Race to the Top-District plans are tailored to meet the needs of local communities and feature a variety of strategies, including using technology to personalize learning for each student; giving students opportunities to learn beyond the traditional school day and environment; supporting students' transitions throughout their education, including from high school to college and careers; expanding partnerships with community organizations to provide students with targeted social services like crisis intervention, individual counseling and life enrichment opportunities; and providing professional development and coursework options to deepen learning in science, technology, engineering and math (STEM) fields.

For more information about the Race to the Top-District program, including a list of winners, requested award amounts and additional materials, visit the Department's website:

http://www2.ed.gov/programs/racetothetop-district/index.html.

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**Related Article:**

**"Three California Districts Win in Federal Race to the Top Competition"** by Lillian Mongeau
**Source**: EdSource - 11 December 2012
**URL**: http://www.edsource.org/today/2012/three-california-districts-win-in-federal-race-to-the-top-competition/24081#.UNUKVGlYsfs

Three California school districts are among 16 winners in the latest round of the federal Race to the Top funding competition. The relatively small districts beat out several of the state's largest districts, which didn't make it into the final round.

This round of funding was the first in the series of Race to the Top competitions to be made available to individual districts. New Haven Unified in Union City, with about 13,000 students, was the largest of the California winners. Lindsay Unified, in the Central Valley midway between Fresno and Bakersfield, and Galt Elementary District, south of Sacramento, also won. Each of those districts has around 4,000 students. The three districts won a combined total of just under $50 million to implement a range of reforms... [Visit the Web site above for details about the proposals from the three California districts.]

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**International Study Results (TIMSS and PIRLS) Released**
**Source:** National Center for Education Statistics
**URL:** http://nces.ed.gov/whatsnew/commissioner/remarks2012/12_11_2012.asp

On December 11, the National Center for Education Statistics (NCES) released results of the performance of U.S. students on two international studies: the Progress in International Reading Literacy Study (PIRLS) and the Trends in International Mathematics and Science Study (TIMSS)... The results show improvement... at grade 4 in mathematics since 2007, when TIMSS was last administered. Eighth-graders' average scores held steady in both mathematics and science since the last TIMSS administration in 2007, as did fourth-graders' average scores in science.

Nine states participated in TIMSS or both TIMSS and PIRLS in 2011 as separate state samples, as well as part of the national sample, and some of the states had among the top average scores in both studies... Florida participated in PIRLS, and TIMSS at both grades 4 and 8; North Carolina participated in TIMSS at both grades 4 and 8; and Alabama, California, Colorado, Connecticut, Indiana, Massachusetts, and Minnesota participated in TIMSS at grade 8.

The NCES reports, *Highlights from TIMSS 2011: Mathematics and Science Achievement of U.S. Fourth- and Eighth-Grade Students in an International Context* (available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013009) and *Highlights from PIRLS 2011: Reading Achievement of U.S. Fourth-Grade Students in an International Context* (available at http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2013010), provide international comparisons of average performance in reading at grade 4 and mathematics and science at grades 4 and 8; average scores by sex for the United States and other education systems; average scores by student race/ethnicity and school socioeconomic contexts within the United States; the percentages of students reaching international benchmark levels; and changes in performance over time...

**U.S. Performance in Mathematics at Grade 4: Results From TIMSS**

At grade 4, the U.S. average mathematics score (541) was higher than the TIMSS scale average of 500. The United States was among the top 15 education systems (8 education systems had higher averages and 6 were not measurably different) and scored higher, on average, than 42 education

systems. The 8 education systems with average mathematics scores above the U.S. average were Singapore, Korea, Hong Kong-China, Chinese Taipei, Japan, Northern Ireland, North Carolina, and Flemish Belgium... The U.S. average score in mathematics at grade 4 rose 12 points between 2007 and 2011.

**U.S. Performance in Mathematics at Grade 8: Results from TIMSS**

At grade 8, the U.S. average mathematics score (509) was higher than the TIMSS scale average of 500. The United States was among the top 24 education systems in mathematics (11 education systems had higher averages and 12 were not measurably different) and scored higher, on average, than 32 education systems. The 11 education systems with average grade 8 mathematics scores above the U.S. average were Korea, Singapore, Chinese Taipei, Hong Kong-China, Japan, Massachusetts, Minnesota, the Russian Federation, North Carolina, Quebec-Canada, and Indiana... California's average score was not measurably different from the TIMSS scale average, but was below the U.S. national average.

**U.S. Performance in Science at Grade 4: Results From TIMSS**

At grade 4, the U.S. average science score (544) was higher than the TIMSS scale average of 500. The United States was among the top 10 education systems (6 education systems had higher averages and 3 were not measurably different) and scored higher, on average, than 47 education systems. The 6 education systems with average science scores above the U.S. average were Korea, Singapore, Finland, Japan, the Russian Federation, and Chinese Taipei.

**U.S. Performance in Science at Grade 8: Results from TIMSS**

At grade 8, the U.S. average science score (525) was higher than the TIMSS scale average of 500. The United States was among the top 23 education systems (12 education systems had higher averages and 10 were not measurably different) and scored higher, on average, than 33 education systems. The 12 education systems with average science scores above the U.S. average were Singapore, Massachusetts, Chinese Taipei, Korea, Japan, Minnesota, Finland, Alberta-Canada, Slovenia, the Russian Federation, Colorado, and Hong Kong-China... California's average score was not measurably different from the TIMSS scale average, but was below the U.S. national average...

For more information on PIRLS and the U.S. PIRLS 2011 results, visit the PIRLS website at http://nces.ed.gov/surveys/pirls. For more information on TIMSS and the U.S. TIMSS 2011 results, visit the TIMSS website at http://nces.ed.gov/timss.

## State Focus

### CCSS-Mathematics Modifications

During the first week of January, Superintendent of Public Instruction (SSPI) Tom Torlakson and the California State Board of Education (SBE) held two public hearings on (a) proposed changes to the California additions to the Common Core State Standards for Mathematics (CCSSM) and (b) outlines for model courses in two pathways for higher mathematics. The SBE took action on the recommendations at its meeting on 16 January 2013.

Senate Bill 1200 authorizes the SSPI to recommend, and the SBE to adopt, reject, or modify, modifications to the Common Core State Standards for Mathematics that were adopted by the SBE on 2 August 2010. The SSPI recommendations are presented in "Recommended Modifications to the Common Core State Standards for Mathematics with California Additions and Model Courses for Higher Mathematics," available at http://www.cde.ca.gov/ci/ma/cf/documents/att1jan13item04.doc (Attachment 1 of the agenda item). The recommendations include the organization of standards for higher mathematics into model courses in both the traditional pathway (Algebra I, Geometry, Algebra

II) and integrated pathway (Mathematics I, II, and III).

Table 1 in Attachment 2 of this agenda item (www.cde.ca.gov/ci/ma/cf/documents/att1jan13item04.doc) provides a summary of the recommended modifications to the California additions. For 8th grade, the proposed modification for California additions is to "replace the Grade 8 Algebra I course with an Algebra I course based on the CCSSM." The rationale for this modification is that the *Education Code (EC)* "states that there can be only one set of standards adopted at each grade level. *EC* Section 60605.11(b)(4) requires that the content standards for Algebra I be based on the common core academic content standards for mathematics."

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**Reviewers Found for Mathematics Supplemental Instructional Materials**
**Source:** Common Core State Standards (CCSS) Update - December 2012; California Department of Education
**URL**: www.cde.ca.gov/ci/cr/cf/suptsupmatreview.asp

The California Department of Education (CDE) and State Board of Education (SBE) found reviewers for review of supplemental instructional materials in mathematics. This review will cover a second category of mathematics materials in addition to those recently approved by the SBE; more information is available at the following CDE Web site: www.cde.ca.gov/ci/cr/cf/suptsupmatreview.asp

Reviewers will evaluate materials for alignment to a subset of the CCSS and evaluation criteria approved by the SBE. Reviewers will attend a one-day training held at the San Joaquin County Office of Education in Stockton in February 2013. They will review materials independently at home and reconvene for two days of deliberations in April 2013. The CDE will reimburse travel costs and substitute costs for current classroom teachers for the meeting days. No stipend or honorarium will be provided.

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**Smarter Balanced Assessment Consortium Preliminary Test Blueprints Released**
**Source:** Smarter Balanced Assessment Consortium
**URL:** www.smarterbalanced.org/smarter-balanced-assessments/

The Smarter Balanced Assessment Consortium (SBAC) preliminary test blueprints describe the content of the (a) English language arts/literacy and (b) mathematics summative assessments for grades 3-8 and high school and how that content will be assessed. Developed with broad input from member states, partners, and stakeholders, the preliminary test blueprints reflect the depth and breadth of the performance expectations of the Common Core State Standards. Smarter Balanced Governing States adopted the preliminary summative test blueprints in November 2012.

The test blueprints include critical information about the number of items, score points, and depth of knowledge for items associated with each assessment target. They will guide the development of items and performance tasks, the Pilot and Field Tests, score reporting, standard setting, and ongoing research. These blueprints are "preliminary" because they establish assessment design features that may be subject to refinement and revision after the analysis of the Pilot and Field Tests.

The Smarter Balanced Preliminary Summative Assessment Blueprints are available at http://tinyurl.com/prelimblueprints

The estimated testing time for each SBAC summative assessment is available online at http://tinyurl.com/SBACtesttime

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**Smarter Balanced Assessment Consortium Pilot Test Schools**
**Source:** California Department of Education
**URL**: http://www3.cde.ca.gov/sbacpilots/selectedschools.aspx

The Smarter Balanced Assessment Consortium (SBAC) will conduct a Pilot Test of its assessments from February 20 through May 10, 2013 in grades 3-11. The "Scientific" component of the Pilot Test will target a representative sample of schools to yield critical data about the items developed so far, as well as how the test administration system is functioning. The Web site above has a drop-down menu to display the list of schools selected for the "Scientific" component by county and district.

The "Volunteer" component is open to all schools in Smarter Balanced states (e.g., California). Participation in the volunteer component will allow schools to administer a version of the assessment with released test questions and will ensure that all schools have the opportunity to experience the basic functionality of the test administration system. Schools can volunteer for the Pilot Test by completing the online survey located at https://www.surveymonkey.com/s/SmarterBalancedPilot

See the following flyer for more information about the Pilot Test:
http://www3.cde.ca.gov/sbacpilots/pilotflyer.pdf

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**Mathematics Teacher Retention Monograph Released**
**Source:** California Mathematics Project
**URL** http://cmpstir.cmpso.org/monograph

*Mathematics Teacher Retention* is a new online monograph published by the California Mathematics Project (CMP) and edited by Axelle Faughn (Western Carolina University). The volume, which is available free of charge at http://cmpstir.cmpso.org/monograph, is a product of the recently-concluded statewide project, *California Mathematics Project Supporting Teachers to Increase Retention* (CMP STIR). In the monograph's Introduction, CMP Executive Director (1999-2012) and CMP STIR Project Director Susie Hakansson wrote the following:

"The purpose of this monograph is to bring together research and studies on mathematics teacher retention from a variety of perspectives and regions. Some themes permeate many of the papers. Other themes are context specific. We view this monograph as a first step in bringing to the forefront the issues and factors that contribute to teacher retention and the role of professional development in teacher retention. We organized paper contributions around four major strands of teacher retention:
- Research, Mathematics Content, and Pedagogy
- Models of Support
- Communities of Practice and Teacher Identity
- Teacher Leadership and Policy...

"The goals for this monograph are to make the issue of teacher retention more public, to encourage more research that identifies specific factors contributing to teacher retention, and to encourage the study of additional models of professional development that address teacher retention. We hope that in 10 years, another monograph will appear, adding to the existing knowledge of mathematics teacher retention..."

In the monograph's Foreword, Penn's Richard Ingersoll notes that "while concern over math and science teacher shortages is longstanding and widespread, this problem is not well understood. In my own research, I have found that the problems many schools face staffing classrooms with qualified math and science teachers are not a result of an insufficient production of new mathematics and science teachers. Indeed, our data document that the supply of newly qualified mathematics and science teachers has more than kept pace with both increases in student enrollments and with increases in teacher retirements in recent decades. However, this is not the case when we include

the departures of teachers before retirement--a figure that is many times larger than retirement and a primary factor behind the need for new hires. In short, the data document that the main story behind the so-called shortages that confront many schools is teacher turnover.

"In order to help educators, policymakers and school officials address the roots of the problem, rather than continue with policy based on myth and misunderstandings, what is urgently needed is research that improves our understanding of the realities of teachers and educators in classrooms and their decisions to stay or leave. This is exactly what this excellent volume, compiled by the California Mathematics Project, seeks to accomplish. It brings together a series of papers and studies, many by educators, on a variety of issues related to the sources of, and solutions to, the problem of math and science teacher retention."

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**California Commission on Teacher Credentialing Addresses Foundational-Level Mathematics Credential**
**URL:** www.ctc.ca.gov/commission/agendas/2012-12/2012-12-agenda.html
**URL** (Video): http://video.ctc.ca.gov/2012-12-06-Commission

At its meeting on December 6, the California Commission on Teacher Credentialing (CTC) discussed "the authorization of the current Foundational Mathematics and the CSET subtests that are one route for an individual to satisfy the subject matter requirement for the Foundational Mathematics credential. The item presents concerns from mathematics faculty members and the California Association of Mathematics Teacher Educators (CAMTE)." A link to the audio for this agenda item (4F) is available online at www.ctc.ca.gov/commission/agendas/2012-12/2012-12-agenda.html (direct link to audio: http://www.ctc.ca.gov/audio/agendas/2012-12/2012-12-4F.mp3). An archived video of the December 6 meeting can be viewed at http://tinyurl.com/ctcdec62012
This agenda item, which was presented by CTC's Teri Clark and Rebecca Parker, generated a lot of discussion among Commissioners. Jorgen Berglund, representing CAMTE, noted that his research suggests that many holders of Foundational-Level Mathematics (FLM) credentials have taken relatively few collegiate mathematics courses and yet they are authorized to teach high school courses such as Algebra II and Statistics.
CTC Chair Linda Darling-Hammond made a strong pitch for including a pedagogical focus as well as a content focus to produce the most effective mathematics teachers. Berglund agreed that a blending of mathematics pedagogy and content would be important for this authorization and that this could be possibly be reflected in revised Subject Matter Requirements for the FLM credential.
Some commissioners stated that they believed the original intent of the FLM was to help provide more fully credentialed math teachers at the middle school level; but with a shortage of mathematics teachers at the high school level, districts are doing what is necessary to staff the classes. Confirming this, David Simmons, Director of Human Resources for the Ventura County Office of Education, noted that he was on the panel that developed the FLM and that the relatively broad authorization was intentional due to the shortage of credentialed high school math teachers in 1999. He cautioned that this is still the case and that the authorization shouldn't be changed.
Additional topics discussed included the importance of conducting additional research, developing stakeholder surveys, the implications of the Common Core State Standards for Mathematics, and the need for future agenda items on this topic. Those interested in this topic are strongly urged to listen to the audio (www.ctc.ca.gov/audio/agendas/2012-12/2012-12-4F.mp3) or watch the archived Webcast of the proceedings.

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**Hold the Date: CMC-Central's STEMposium**
**Source:** California Mathematics Council (CMC)
**URL**: http://cmc-math.org/activities/central_registration.html

California Mathematics Council-Central will be holding its annual STEMposium at Fresno Pacific University's Visalia Campus on 8-9 March 2013. Registration is open at the Web site above.