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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 Francioni 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

Mathletics 2013, May 11, 2013. Naval Postgraduate School

Federal Focus

(1) Update on the Final Public Draft of the Next Generation Science Standards (NGSS)

Source: Achieve, Inc. - 26 November 2012

URL: <http://www.nextgenscience.org/ngss-second-public-draft-will-be-released-january-2013>

The release of the second and final public draft of the Next Generation Science Standards (NGSS) is set for the first week in January. In recognition of the hectic schedules in December and the approaching holidays, the NGSS staff wanted to ensure all educators, stakeholders and the public had appropriate access to the draft. All interested parties are encouraged to review the draft as individuals or in groups and provide feedback to the Lead States (e.g., California) and writers.

The NGSS will be completed in March of 2013. Since the May draft release, the Lead States and the writers evaluated all feedback and worked on revising the standards. As a result, over 90% of the standards have been revised. In addition, the Lead States charged the NGSS team with finalizing the definition for college and career readiness in science. The NGSS then went through a second round of revision to ensure the standards supported this definition.

Background: Next Generation Science Standards for Today's Students and Tomorrow's Workforce -- Through a collaborative, state-led process, new K-12 science standards are being developed that will be rich in content and practice, arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education. The NGSS will be based on the Framework for K-12 Science Education developed by the National Research Council. [Visit www7.nationalacademies.org/bose/Standards_Framework_homepage.html for several useful resources and to download the Framework.]

To learn more about the NGSS, go to www.nextgenscience.org/ The California Department of Education also maintains a comprehensive Web page on the NGSS: www.cde.ca.gov/pd/ca/sc/ngssintrod.asp The California Science Teachers Association's NGSS Web site includes useful information on the 2013 California Science Standards Revision--see www.cascience.org/csta/ngss.asp

(2) Webinar - 12/5/2012: Reasoning and Sense Making in Context: Algebra Resources that Support Common Core Standards

Source: National Council of Teachers of Mathematics

URL: <http://tinyurl.com/nctmwebinar2012>

On Wednesday, December 5, the National Council of Teachers of Mathematics (NCTM: www.nctm.org/) and THIRTEEN (www.thirteen.org/) jointly presented a free webinar exploring two online resources that provide teachers with comprehensive Common Core Standards-aligned materials, instructional strategies, and support for engaging students in problem solving, reasoning, and sense making. These resources will help engage students in interesting mathematics and help teachers meet the new Common Core standards for content and for mathematical practice, as well as new assessment expectations.

Produced by THIRTEEN for WNET, New York's flagship public media provider, *Get the Math* features a range of real-world algebra applications that come alive through videos and interactive challenges

online (see www.thirteen.org/get-the-math/). NCTM's *Reasoning and Sense Making Task Library* offers tasks, student materials, lesson guides, and more (see www.nctm.org/rsmtasks/).

The webinar will be presented twice on December 5, once at 1 p.m. PT and then again at 4 p.m. PT. Visit <http://tinyurl.com/nctmwebinar2012> for registration links to attend one of these sessions.

(3) U.S. Department of Education Announces 61 Applications as Finalists for \$400 Million Race to the Top - District Competition

URL: <http://www.ed.gov/news/press-releases/us-department-education-announces-61-applications-finalists-400-million-race-top>

URL (all applicants): <http://www2.ed.gov/programs/racetothetop-district/rtttd-applicants.pdf>

On November 26, the U.S. Department of Education announced that 61 applications have been selected as finalists for the Race to the Top-District (RTTT-D) competition. The 2012 RTTT-D program will provide close to \$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 for success in college and careers.

The 61 finalists, representing more than 200 school districts, were selected from 372 applications the Department received in November to demonstrate how districts could personalize education for students and provide school leaders and teachers with key tools that support them to meet students' needs.

"These finalists are setting the curve for the rest of the country with innovative plans to drive education reform in the classroom," U.S. Secretary of Education Arne Duncan said. "This competition was designed to support local efforts to close the achievement gap and transform the learning environment in a diverse set of districts, but no matter who wins, children across the country will benefit from the clear vision and track records of success demonstrated by these finalists."

Race to the Top-District applications were randomly assigned to three-person panels that independently read and scored each application, with independent reviewers' scores averaged to determine an applicant's score. The Department arranged the applications in rank order from high to low scores, and determined which were the strongest competitors to invite back based on "natural breaks" -- i.e. scoring gaps in the lineup. The top 61 applications were then selected as finalists.

Consistent with the Department's plan to select high-quality proposals from applications across a variety of districts, the finalists represent a range of districts, both rural and non-rural, from both Race to the Top states and non-Race to the Top states.

The Department expects to select 15-25 winning applications from the Race to the Top-District competition for four-year awards that will range from \$5 million to \$40 million, depending on the population of students served through the plan. Awards will be announced no later than 31 December 2012.

The Department has posted the list of districts that submitted an application on its website, as well as a list of districts that are finalists in the competition:

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Related Articles:

(a) **"Four CA Districts Make Race to the Top Finals"** by Kathryn Baron and John Fensterwald

URL: www.edsource.org/today/2012/four-ca-districts-make-race-to-the-top-finals/23353

The U.S. Department of Education passed over California's largest school districts in selecting finalists for the Race to the Top district competition. Out of 17 districts that applied for a share of the nearly \$400 million in federal grant money, only four made the cut to the finals: Galt Joint Union Elementary, Lindsay Unified, and New Haven Unified school districts, along with Ánimo Charter Schools, a division of Green Dot Public Schools. Districts that didn't make the cut include Los Angeles, Fresno, and Clovis Unified.

California's finalists will still be competing against huge urban districts, however. Included among the 61 finalists from around the country are New York City (the nation's largest school district), Philadelphia, Dallas and Miami-Dade.

Under this latest incarnation of the popular Race to the Top program, winning districts will receive between \$5 million and \$40 million over four years to implement model programs designed to close achievement gaps, improve teaching and boost student learning and achievement by personalizing education... [Visit the EdSource Web site above to read summary descriptions of the four proposals.]

(b) "**Competency-Based Schools Embrace Digital Learning**" by Katie Ash

Source: *Education Week Digital Directions*

URL: <http://www.edweek.org/dd/articles/2012/10/17/01competency.h06.html>

Tom Rooney sees competency-based education--supported by digital learning tools--as the path to building a better school district.

The superintendent of the 4,200-student Lindsay Unified School District in California, Rooney set in motion this school year a plan to move to a system in which students progress not on the basis of their age or a set school calendar, but by demonstrating proficiency on learning objectives...

The move to competency-based education--also known as proficiency-, standards-, and performance-based education--by Lindsay Unified and other districts will likely give them a head start in preparing for the new demands of the Common Core State Standards, experts point out, and in their ability to use technology more effectively to personalize learning.

"We have these practices that are ingrained in the traditional public education system that are not consistent with principles of learning and not consistent with how most of the rest of the world operates," says Rooney...

But just because students now learn at their own pace does not mean that students can take multiple years to get through one content level, emphasizes Rooney. "Pace does matter," he says. "Our system is about increasing the rigor and holding everyone accountable--administrators, learners, and learning facilitators."

[Visit the Web site above to read more about Lindsay Unified's plan, which helped the district to successfully compete in the recent Race to the Top competition.]

State Focus

(1) No Clear Path to Mathematics Learning in California

Source: Center for the Future of Teaching and Learning

URL: http://www.cftl.org/Press_Releases.htm?getRel=18

URL: http://www.cftl.org/documents/2012/CFTL_MathPatterns_Main_Report.pdf

Research funded by the S.D. Bechtel, Jr. Foundation and the Noyce Foundation that examined the

course-taking patterns of 24,279 students in 24 California unified school districts finds that students already doing well in mathematics in the 7th grade are more likely to take advanced math courses in high school and achieve proficiency on the California Standards Test (CST) in algebra. For the many students who struggle with mathematics in grade 7, however, there is no clear path to learning and achievement in this critical content area.

Released last Friday (11/30/2012) by the Center for the Future of Teaching and Learning at WestEd, *College Bound in Middle School and High School? How Math Course Sequences Matter* makes clear that doing well in grade 7 mathematics is predictive of enrollment in more advanced math classes in high school. More than half (56%) of students earning "B" or above in 7th grade math enrolled in geometry in 9th grade. However, just 16% of students scoring "C" or "D" in 8th-grade algebra enrolled in geometry in 9th grade. This enrollment discrepancy holds true through more advanced high school courses.

Additionally, the majority of students who achieve proficiency on the CST in Algebra 1 are those who already have strong math skills and are on an "accelerated math track" (i.e., Algebra I in grade 8, Geometry in grade 9, and Algebra 2 in grade 10). Of the 34 percent of students who achieve proficiency on the Algebra 1 CST, almost three-quarters were on this accelerated track.

"These results provide powerful evidence that school systems are struggling to successfully teach, or re-teach, mathematics to students who are not already performing well in math by the time they reach middle school," says Neal Finkelstein, Senior Research Scientist at WestEd and lead researcher on this study. "The data make it very clear that the struggle to successfully teach math starts before and continues after the middle grades."

For those students not on an accelerated track, the path to successful learning in mathematics is not clear. The study analyzed student course-taking patterns in math from grade 7 through high school and identified numerous different math course-taking patterns. Among students not on the accelerated math track, the study found far more complex course sequences. These students commonly repeated math courses yet rarely attained proficiency on the CST for the course they were being asked to repeat. For students who repeated Algebra 1 in grade 9, the grade 9 Algebra 1 CST proficiency rate was 21%. Among students who repeated Algebra 1 in grade 10, the grade 10 Algebra 1 CST proficiency rate was just 9%.

"Many students repeat algebra, but few repeaters achieve proficiency on their second attempt," added Finkelstein. "Repeating algebra is generally not an effective strategy for helping students progress in secondary mathematics."

"California's schools are striving, but struggling, to help more students learn the math they need for entry into college and career success, says Holly Jacobson, Director of the Center for the Future of Teaching and Learning at WestEd. "What we are doing now is not working for many kids. We urge school district leaders and state policy makers to consider the implications of these findings and act to strengthen learning opportunities in mathematics for California's students."

The study suggests that replication of similar research strategies used for this study, applied at the district level, can provide local educators with actionable data to inform conversations about how to strengthen math instruction for students. In undertaking this kind of analysis, districts should also consider ways to strengthen elementary math so students start 7th grade with a solid math foundation. Districts should also develop systems that support careful review of student readiness for algebra (e.g., mastery of prealgebra concepts as ascertained by "prior-year CST scores, teacher recommendations, results from district-administered benchmark assessments, and consultation with parents and counselors") as an integral part of making placement decisions and should develop and offer appropriate instructional supports. The grade in which students take Algebra 1 "is less important than whether students are ready to take it," according to the report.

The study's authors recommend that state policymakers revisit policies encouraging completion of Algebra 1 by grade 8 and take advantage of implementation of the Common Core State Standards to look carefully at the ways districts and schools can strengthen student progress in mathematics. Policymakers should also act to strengthen the supply of qualified math teachers in California.

The study, including an executive summary and listing of recommendations for educators and policymakers, can be found at www.cftl.org

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Related Article

"Students Failing Algebra Rarely Recover" by Jill Tucker

Source: *San Francisco Chronicle* - 30 November 2012

URL: <http://www.sfgate.com/default/article/Students-failing-algebra-rarely-recover-4082741.php>

(2) New CCSS Professional Learning Module Now Available from the California Department of Education (CDE)

Source: [Common Core State Standards \(CCSS\) Update from CDE, 1\(15\)](#)

The California Department of Education (CDE) is pleased to announce that the "Mathematics: Kindergarten through Grade Eight Learning Progressions" professional learning module (<http://myboe.org/portal/default/Content/Viewer/Content?action=2&scld=306589>) is now available online on the Brokers of Expertise California Common Core State Standards Professional Learning Modules Web page (<http://myboe.org/portal/default/Group/Viewer/GroupView?action=2&gid=2996>). This module is part of the "Common Core State Standards (CCSS) for California Educators" series and was developed in collaboration with the San Mateo County Office of Education. The module is available in two formats: online independent use and on-site blended group facilitation.

For more information, please visit the CDE CCSS Professional Learning Modules for Educators Web page: www.cde.ca.gov/re/cc/ccssplm.asp

(3) California Commission on Teacher Credentialing to Discuss Concerns about Foundational-Level Mathematics Credential at this Thursday's Meeting

URL: www.ctc.ca.gov/commission/agendas/2012-12/2012-12-agenda.html

The agenda for the December 6-7 meeting of the California Commission on Teacher Credentialing has been posted and is available via the following link: www.ctc.ca.gov/commission/agendas/2012-12/2012-12-agenda.html Links to the meeting Webcast are also available on this page.

Information Item 4F, "Discussion of the Foundational Mathematics Authorization and Associated Subject Matter Requirements for the Authorization," will be addressed on December 6. "This agenda item presents information about 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: www.camte.org).

(4) Joint Mathematics Meetings to be Held Next Month in San Diego

Sources: American Mathematical Society; Mathematical Association of America

URL: <http://jointmathematicsmeetings.org/jmm>

Billed as the largest mathematics meeting in the world (with NCTM's conference on 17-20 April 2012 in Denver being the nation's largest mathematics education event--www.nctm.org), the Joint Mathematics Meetings will be held at the San Diego Convention Center on 9-12 January 2013. The Mathematical Association of America (www.maa.org) and the American Mathematical Society (www.ams.org) partner each year to present this conference in January.

This year's top features include the following:

- A comprehensive and rich scientific program geared toward mathematicians of all ages and levels of expertise (http://jointmathematicsmeetings.org/meetings/national/jmm2013/2141_program.html),
- Recognition of numerous mathematical achievements through Prize and Award Ceremonies;
- Courses such as the MAA Short Course, the AMS Short Course, and the MAA Minicourses;
- Many activities for students, including the Graduate School Fair for undergraduate students;
- Poster sessions for young mathematicians and undergraduate students; employment opportunities; the Mathematical Art Exhibition that includes works by artists in various media;
- The *Who Wants to Be a Mathematician Competition* -- (www.ams.org/programs/students/wwtbam/wwtbam) on January 10 that showcases the brilliance of ten of the nation's best high school math students (including two from California); and
- Numerous exhibits in the exhibit hall.

Detailed information on this conference is available at <http://jointmathematicsmeetings.org/jmm>