Recommended Professional Resources

In support of the Common Core State Standards for Mathematics and the CPS Mathematics Content Framework

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Resources that Support the Teaching and Learning Expected by the CCSS-M and the CPS Mathematics Content Framework

Sites for Sample High Quality Tasks

**Illuminations**
from NCTM. These are aligned to the NCTM standards (not CCSS-M), but are still great resources for rigorous tasks/lessons and ideas for more.

**Illustrative Mathematics**
A collection of tasks and problems that demonstrate what each of the standards means. Ultimately all standards will be illustrated, but for now it’s many. Site is working on making printable versions of each of the problems.

**Inside Mathematics**
A website with many resources based on the MARS tasks. MARS (Mathematics Assessment Resource Service) is an organization that was and is at the forefront of rigorous tasks and this site connects those tasks to CCSS-M. Look for the tasks along with scoring rubrics, videos of the tasks in use in classrooms and explicit connections to the Standards for Mathematical Practice.

**Math Assessment Project**
More of the rigorous tasks created by the MARS folks. Look at the tasks as well as the associated lessons for ideas about how to reach the rigor intended by the tasks and expected by the CCSS-M.

**Math Solutions** (Marilyn Burns)
CCSS-M PD packed with samples and video clips.

**Middle School Portal for Math**
Links to problems and resources, organized by math strand. Joint effort of the National Middle School Association and the National Science Digital Library, and funded by the NSF.

Other Instructional/Practice Resources

**Khan Academy**
Clear, concise, skill-based videos that explain and show step-by-step processes of TONS of topics. Great for student use as well as teacher review.

**Library of Virtual Manipulatives**
A collection of online manipulatives that will help students develop understanding of a selection of mathematical concepts.

CCSS-M Informational Sites

**Common Core Math Blog Spot**
A blog where a great deal of conversation happens around the CCSS-M. Contributors include the three lead authors of the CCSS-M: Bill McCallum, Phil Daro, and Jason Zimba.

**CCSS Toolkit**
Tools for supporting and implementing the CCSS-M, created through a partnership between the Dana Center at University of Texas - Austin and Agile Mind.

**Gismo: Turn On CC Math**
Site designed to elaborate the "scientific basis" of learning trajectories research and links to the Common Core State Standards for. Unpacked descriptors describe students' movement from naive to sophisticated ideas. Identifies: bridging standards; underlying cognitive principles; student misconceptions; strategies and inscriptions; and models-
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**Institute for Mathematics and Education** – Organization led by Bill McCallum, lead author of the CCSS-M. Of particular interest are the Progressions Documents that lay out the learning trajectory of any of the domains in the CCSS-M. Also look for opportunities for professional development.

**ISBE Common Core site**

Illinois State Board of Education website for CCSS-M. Look for opportunities for PD as well as links to some great resources.

**PARCC**

The Partnership for Assessment of Readiness for College and Careers developed the CCSS-M and is developing the assessments that will be implemented District-wide in 2014-2015. This site is the place to go for the most recent information about the upcoming PARCC assessments.

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**Teacher Development**

There are costs associated with the following resources, but they are worth the money.

- **NCTM Membership** – provides access to journals and other resources for improving teaching as well as shared problems for use in the classroom.

- **Fostering Algebraic Thinking** by Mark Driscoll – great book for 6-8th grade teachers, especially for use in a cohort setting or Professional Learning Community.

- **Now I Get It!** by Susan O’Connell – great book for K-5th grade teachers, especially for use in a cohort setting or Professional Learning Community.
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Performance Tasks that Inform Instruction: A Guide


How Performance Tasks are Used to Inform Instruction

Performance assessment opportunities are scheduled periodically throughout the school year to provide formative information to guide instruction. Most often performance tasks are administered the first week that school is in session, a second time at the end of the first semester, a third time at the end of the third quarter and then at the end of the year. The tasks are carefully selected to measure student growth from a pre-determined perspective. The most common perspectives are listed as follows:

1. Identify a big mathematical idea linked to a standard at a grade level. The students are assessed as to whether they understand and utilize that mathematical idea with tasks throughout the year.

2. Some examples might be multiplication at third grade, rational numbers at fifth grade, proportional reasoning at seventh grade or exponential growth at ninth grade.

3. Select specific tasks that measure the learning of students after a specific unit of instruction. These would be selected according to the mathematics of the curriculum taught each quarter. A unit of instruction might involve spatial visualization. The task administered following the teaching of that unit would involve spatial visualization and be tied to the geometric standard on spatial visualization at that grade span.

4. Select different types of tasks that would measure students' problem solving abilities with non routine, unrelated problems. A set of tasks that focus on different math strands as well as elicit different types of mathematical thinking and analysis are selected. Comparing the success of students in attacking, analyzing, solving and communicating their results as the year progresses is informative.

5. Select a specific strand or mathematical idea that is taught in more depth as a student proceeds through the grades. Mathematically related tasks, appropriate to a grade level, are administered to students at three or four grade levels to see comparison over a vertical slice.

6. The same mathematical task is given to two or three grades in a grade span to assess growth as students proceed through school and become more sophisticated mathematicians. These assessments can chart and compare depth in mathematical understanding.