Mathematics CCSS Planning Resources

Many state, organizations, and individuals have developed a variety of resources to assist teachers with implementation of the CCSSM. Below is a selected list of these resources that will be helpful to the planning process. To avoid fragmentation, this resource listing is provided in the Toolbox in all stages of planning: year-long, unit, and lesson. Types of documents are indicated using bold font in the descriptions provided. Resources provided by states are listed first with those generated by organizations and individuals following.

New York State Department of Education

The New York State Education Department (NYSED) has engaged teachers, administrators, and education experts across New York and the nation in the creation of c**urriculum maps (scope and sequences), modules (units), and lessons** with at least one module completed and posted for each grade/course at http://www.engageny.org/mathematics. Instructional videos showing some lessons are posted at http://engageny.org/video-library?keyword=&page=0%2C0 (filter by Network Teams and Math).

New York City

NYC educators and national experts are developing Common Core-aligned tasks for grades PreK-12. The components of the Common Core-aligned tasks with instructional supports include

- **Unit** overview and **task** description
- Teacher-annotated **student work** representing a range of performance levels
- **Rubrics** used to assess student work
- Other instructional support materials

http://schools.nyc.gov/Academics/CommonCoreLibrary/TasksUnitsStudentWork/default.htm

Maryland

The Maryland Curriculum Framework documents organize the CCSS for each grade K-8 into domains of study and for high school courses into **units of study.** The **Essential Skills and Knowledge**, statements that provide language to develop common understandings and valuable insights into what a student must know and be able to do to demonstrate proficiency with each CCSS, are identified. Maryland mathematics educators thoroughly reviewed the standards and, as needed, provided statements to help teachers comprehend the full intent of each standard. The frameworks are posted at http://mdk12.org/instruction/curriculum/mathematics/index.html.

Florida Department of Education

CPALMS provides educational resources that are reviewed by peer educators and subject area experts and are sorted into three types: Curriculum, Activity, or General. **Units/Lesson Sequence, Lesson Plans, and Teaching Ideas** are available in the Curriculum Resource section at http://www.cpalms.org/resources/ResourceSearch.aspx. Use drop down menus to select 1) Content Area, 2) Grade, 3) Instructional Type, and 4) Instructional Component Type. Note that the CPALMS system prompts visitors to create an account; however, materials may be accessed by anyone.

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Georgia Department of Education

Georgia refers to the CCSS as the Common Core Georgia Performance Standards Mathematics (CCGPS) and has created **year-long curriculum maps** and **unit frameworks*** for each grade or course from kindergarten through high school. **Teaching guides** are available for some courses. There is also a compacted pathway for teaching the CCSS in middle school allowing eighth graders to take Algebra I. To access these documents,

- Go to https://www.georgiastandards.org/COMMON-CORE/PAGES/MATH-K-5.ASPX.
- Click the cluster link in the orange box under Mathematics on the left side of the page.
- Expand the link beside the grade levels that appear in the blue section on the right side of the page.

*The CCGPS Mathematics framework units were developed under a grant from the U. S. Department of Education. This does not mean that these materials are endorsed by the federal government.

Hawaii Department of Education

A team of Hawaii teachers created over 200 **classroom assessments for use in grades K-2**. There are a variety of assessment types (interview, small group, whole class, individual tasks, games/activities) which include instructions and a rubric for teacher use. Several of the tasks address multiple/related standards. Tasks are located at http://standardstoolkit.k12.hi.us/common-core/mathematics/mathematics-assessments/.

K-5 Math Teaching Resources

This site, http://www.k-5mathteachingresources.com, provides an extensive collection of free resources, math games, and hands-on math activities aligned with the Common Core State Standards for Mathematics.

Balanced Assessment Project

From 1993 to 2003, the Balanced Assessment in Mathematics Program existed at the Harvard Graduate School of Education. The project group developed over 300 **innovative mathematics assessment tasks** for grades K to 12 which may be used by teachers in their own classrooms at no cost. Go to http://balancedassessments.concord.org/. To see all tasks, click on either *Task by Letter* or *Task by Number* from the option bar at the top of the home page. Links to favorite tasks are provided under *Our Library of Assessment Tasks* on the home page.

CCSS-CTE Engaging Tasks

Posted at http://www.achieve.org/ccss-cte-classroom-tasks, these tasks were developed by high school and postsecondary mathematics and CTE educators. Tasks demonstrate how the Common Core and CTE Knowledge & Skills Statements can be integrated into classroom learning and provide classroom teachers with authentic tasks for either mathematics or CTE courses.

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Dan Meyer's Three Act Math Tasks

Dan Meyer's three-act math problems help answer the question, "How do we turn the world outside the math classroom into a math problem that's both fun and challenging, not boring and easy?" A spreadsheet posted at http://tinyurl.com/kr6gzcd contains links to the tasks and provides grade levels and CCSS alignments.

Dana Center – The Mathematics Toolkit and PARCC Prototypes

The Dana Center provides three types of curriculum framework documents:

- **Year-at-a-Glance** documents – a one page overview of the math through a year of instruction
- **Sequenced Units** – show the standards clustered into units and suggest a sequence to the units
- **Elaborated Scope and Sequences for Algebra I and Geometry** – break down topics or lessons which address smaller chunks of material

The Dana Center also developed and houses **PARCC's *Prototyping Project*** which provides examples of **innovative assessment tasks**. Go to http://www.ccsstoolbox.com/. Click on *Resources for Implementation* and then on *Sample Curriculum framework documents*. Click on *PARCC Prototyping Project* in the left side bar to access the examples of the prototyped assessment tasks.

Illustrative Mathematics Project

This site provides **tasks** aligned to Math Practices and content standards which are designed to illustrate these standards. Instructional **videos** aligned to the Math Practices are also available. Go to http://www.illustrativemathematics.org/. In the left side bar, click on *Illustrations* to see a complete listing of content standards for which tasks are available. Click on *Practice Standards* to find videos to illustrate the practices. A video of the fractions progression can be accessed from the side bar as well.

Kansas Association of Teachers of Mathematics

Flipbooks were developed by the Kansas Association of Teachers of Mathematics (KATM) and make links between the mathematical practices and the content standards. Go to http://www.ksde.org/Default.aspx?tabid=5646.

LearnZillion

Learn Zillion provides **lessons** based on standards. While the lessons may be used for classroom instruction, they are particularly useful in helping teachers to understand the intent of a standard and to visualize strategies for teaching the content based on information found in the Math Progression documents. Go to http://learnzillion.com/lessons.

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Mathematics Assessment Project

The Mathematics Assessment Project, http://map.mathshell.org/materials/index.php, is the current major project of the Shell Centre for Mathematical Education. While the focus is on developing formative assessment lessons and rich summative performance tasks, the site includes the following:

- Classroom Challenges: **lessons for formative assessment** with some focused on developing math concepts, others on non-routine problem solving.
- Professional Development Modules: to help teachers with the new pedagogical challenges that formative assessment presents.
- **Summative Assessment Task Collection**: to illustrate the range of performance goals required by CCSSM.
- **Prototype Summative Tests**: designed to help teachers and students monitor their progress, these tests provide a model for examinations that may replace or complement current US tests.

National Council of Teachers of Mathematics (NCTM)

The NCTM Reasoning and Sense Making Task Library provides high school **tasks** linked to NCTM's *Focus in High School Mathematics: Reasoning and Sense Making,* NCTM's *Principles and Standards for School Mathematics, and the CCSSM.* Go to http://www.nctm.org/rsmtasks/.

NCTM's Core Math Tools is a **free**, downloadable suite of **interactive software tools** for algebra and functions, geometry and trigonometry, and statistics and probability. Core Math Tools can be saved on a computer or USB drive, making it possible to use without Internet access. Files can be saved and reloaded by students and teachers. The tools' portability allows easy access for students, teachers and parents outside the classroom. The site also provides **lessons** and **data sets** as well as instructions on how to use the software. Go to http://www.nctm.org/resources/content.aspx?id=32702.

Smarter Balanced Assessment Consortium Sample Items and Performance Tasks

While Louisiana is a member of the PARCC consortium, educators can use these sample items and performance tasks to begin planning the shifts in instruction that will be required to help students meet the demands of the new assessments. For further information, go to http://www.smarterbalanced.org/sample-items-and-performance-tasks/.