

Becoming fluent with the NYS p-12 Common Core Learning Standards for Mathematics Work for the 2011-12 School Year

1. Read the introduction to the standards to understand the building of the common core
 - The standards and appendices can be downloaded here:
http://www.p12.nysed.gov/ciai/common_core_standards/
 - The overview of the common core standards video segment by David Coleman, Commissioner King, and Kate Gerson can be viewed here: <http://engageny.org/resource/common-core-in-mathematics-overview/>
2. Review the “Shifts” in Mathematics
 - The shifts can be found here:
http://engageny.org/wp-content/uploads/2011/08/instructional_shifts.pdf
 - The video segment of David Coleman, Commissioner King, and Kate Gerson discussing shift 1 (FOCUS) can be found here: <http://engageny.org/resource/common-core-in-mathematics-shift-1-%E2%80%93-focus/>
 - The video segment discussing shifts 2-6 can be found here: <http://engageny.org/resource/the-common-core-in-mathematics-shifts-2-6/>
3. Read and understand the Standards for Mathematical Practice
 - Understand that these are K-12
 - Spend time discussing, making a bulleted list of skills, identifying how these are fostered in students using the content standards
4. Read the introduction to your grade level. The introduction to the high school standards is general with more specific introductions before each conceptual category, but there are also introductions to each “course” in the Appendix)
 - Recognize that the critical areas of focus are identified and described
 - To see the progressions of content areas, read the introductions to the grade(s) above and below yours
5. Review the priority focus areas for your grade
 - These can be found here:
<http://engageny.org/wp-content/uploads/2011/08/Math-Priorities.pdf>
 - For the focus areas for grade-bands, you can review slide 9 (of 10) from this David Coleman presentation found here: <http://usny.nysed.gov/rttt/docs/coleman-presentation-slides.pdf>
 - Again, to see the coherence from grade to grade, read the grade(s) above and below yours
6. Review the required fluencies at each grade level
 - These can be found here:
<http://engageny.org/wp-content/uploads/2011/07/CCSSFluencies.pdf>
7. Read the CCLS for your grade (and, preferably, a grade above and below)
 - As you read, several “activities” will need to happen, not necessarily in the following order:
 - ✓ Unpack the standards (beginning with those belonging to a focus area for your grade) - a template with directions and an example can be found here:
<http://www.dcmoboces.com/webpages/gizowski/index.cfm?subpage=812>
 - ✓ Identify which standards are currently being taught at your grade level, which ones are only partially taught (or may not meet the rigor of the CCLS), and which ones

will need to be added. Templates to assist with this work can be found here:
<http://www.dcmoboces.com/webpages/gizowski/index.cfm?subpage=812>

****** The state has requested/suggested that each teacher designs and delivers 2 common core aligned units this year – it makes sense to use content that is in both the 2005 standards AND the CCLS for your grade******

8. Follow the unpacking work with assessment design, using “backward design”
 - Ask
 - ✓ What standards am I teaching?
 - ✓ How will I know if students know/can do that?
 - Design the assessment first
 - THEN build learning activities that teach the knowledge and skills. The exemplar unit provided by NYSED can be found here: <http://engageny.org/resource/common-core-exemplar-for-middle-school-math/>

9. Work around aligning the rigor of the standards to the curriculum, understanding “what is meant” by each standard, filling gaps in the “change over” for students who may have missed content because of the change in content at grade levels, designing assessments, and designing units and lessons all must take place. There are resources available to help with this work.
 - For further understanding of the focal areas, read the Draft Content Frameworks from PARCC found here: <http://www.parcconline.org/parcc-content-frameworks>
 - ******For understanding the standards, the progressions of content focus areas, and instructional implications use Bill McCallum’s blog. He is a lead writer of the standards and his blog is found at:**
<http://commoncoretools.wordpress.com/>
 - **For all of the progressions of content:**
<http://commoncoretools.wordpress.com/category/progressions/>
 - North Carolina’s work from their unpacking process. This is full of examples. Be careful of possible typos/errors: <http://www.dpi.state.nc.us/acre/standards/common-core-tools/#unmath>
 - Books to help you:
 - Using Power Standards to Build an Aligned Curriculum* – Joe Crawford
 - Unwrapping the Standards: A Simple Process to Make Standards Manageable* – Larry Ainsworth
 - Power Standards: Identifying the Standards that Matter the Most* – Larry Ainsworth
 - Making Standards Work: How to Implement Standards-Based Assessments in the Classroom, School, and District* – Douglas B. Reeves, Ph.D
 - For Nan’s webpage at BOCES with support for the CCLS, click here:
 - ✓ www.dcmoboces.com/webpages/gizowski

Talking Points for Facilitating Common Core Work

****First, know that the outlined steps above do NOT have to be done in order. The order in which they were placed seemed logical. *****

1. Read the introduction to the standards. Allow for discussion regarding the contributors, the research base for the standards, and the idea of coherence. Also, the introduction explains how to read the standards.
2. Read the shifts in math. The document gives explanations of each shift, but the videos give detailed discussion about them. It is valuable to watch them and they are only about 15 minutes each.
3. Read the Standards for Mathematical Practice. It's nice if you introduce the structure of each standard description. The paragraphs begin with a description of the standard and then follow with examples for illustration. It has also been helpful for some people to spend time going through each standard and making a bulleted list of the skills that are outlined. It's important to understand that these standards are for students K-12. They also should be considered consciously as we build curriculum aligned to the common core.
4. Read the introduction to the grade level you teach. The grade level introductions give an overview of the critical focus areas for that grade. Highlight these as the important things you will spend the most time and energy on. Reading all of the grade level introductions, or at least those just below and above yours, can give a good sense of the progressions of content in the standards. ****At the high school level, there is an introduction of the overall section. This general introduction explains how the high school level standards are structured. Then there are introductions for each of the conceptual categories.**
5. Review the priority focus areas for your grade. These clusters of standards have been identified as those that will give the most "bang for the buck" in terms of number power. State ed refers to the biggest shift being the shift of time. This is to illustrate the importance of taking the time to REALLY make sure that students understand the focal standards for each grade. They talk of the "need to know" standards and the "nice to know" standards. The priority focus areas identify those that students "need to know."
6. Review the fluencies for each grade. The document talks of speed and accuracy and also uses the term "from memory". For more information on some of these fluencies, the progressions work done by Bill McCallum explains how these fluencies play into further learning by students as they move through the standards at each grade level. Those progressions documents are referred to again in # 9.
7. Read the standards. To draw attention to the knowledge and skills in each standards, use either 2 highlighters or a pen/pencil and either highlight the nouns one color and the verbs another OR circle the nouns and underline the verbs. This will help in the unpacking process described on the recommended document. When unpacking, start with the standards that are identified as priority standards. Also understand that the in-depth unpacking process may not be necessary for every standard. Some are sufficiently broken down.

Also, it helps to identify whether or not each standard is currently taught in your grade level or if it will be new to you. This will outline the work that will need to be done to changeover from the current standards to the common core. You will also want to pay attention to whether or not your current curriculum attends to the depth/rigor of the common core for content that you do already teach. There is also a document to help you record this.

8. Once you have been through the standards and unpacked those that need to be unpacked, you can begin the work of figuring out how to teach to them! You should be using what is termed “backward design”, meaning that you should first identify the standards that you are teaching. Then ask yourself how to assess that knowledge or skill. You should design the assessment first, making sure that it is at the desired level of rigor. Then design lessons to help students acquire the knowledge and skills of the standards. There is a state exemplar unit for us to review and use as a guide.
9. This work will be ongoing. While the state has asked that all teachers do at least 2 common core aligned units this year, we have the whole year to work on what we will use next year. We must attend to the idea of the gaps that students will have when the total changeover happens. Please have these discussions and make plans to help bridge those gaps. There are a variety of resources that are available to help as we make our way. The progressions work on Bill McCallum’s blog seems to be the most helpful when understanding the instructional implications of the new standards. The list the standards and highlight examples and discussion for each. The link to these and his site are above and are listed on Nan’s BOCES webpage.