Design and Organization

Standards for Mathematical Practice:

- Carry across all grade levels
- Describe habits of mind of a mathematically expert student

Standards for Mathematical Content:

- K-8 standards presented by grade level
- Organized into domains that progress over grades
- Grade introductions give 2-4 focal points at each grade level

New Standards Implementation Timeline

Year / Grade level	K	1	2	3 – 12
2011-2012	F L	F L	L	L
2012-2013	F L	F L	F L	L
2013-2014 Fully Implemented	F L	F L	F L	B L
2014-2015 Fully Implemented and Assessed	F L	F L	F L	F L

F – Full Implementation of New Florida Standards

L – Full implementation of content area literacy standards including: text complexity, quality and range in all grades (K-12)

B – Blended instruction of New Standards with NGSSS; last year of NGSSS assessed on FCAT 2.0 (Grades 3-5); 4th quarter will focus on NGSSS/New Standards grade level content gaps

Parent Resources

National PTA: PARENTS' GUIDE TO STUDENT SUCCESS
http://www.pta.org/parents/

Florida Department of Education: FAMILIES
http://www.fldoe.org/families/

M-DCPS: THE PARENT ACADEMY
http://theparentacademy.dadeschools.net/

Office of Academics and Transformation

Division of Academics, Accountability, & School Improvement

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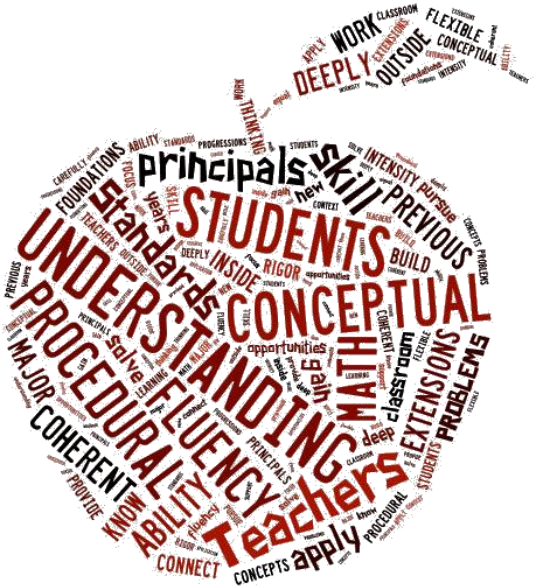
Math at a Glance

Mathematics



The New Florida Standards provide a **consistent, clear understanding of what students are expected to learn**, so teachers and parents know what they need to do to help them. The standards are designed to **be robust and relevant to the real world**, reflecting the knowledge and skills that our young people need for **success in college and careers**. With American students fully prepared for the future, our communities will be best positioned to **compete successfully in the global economy**.

Math at a Glance

Shifts in Mathematics

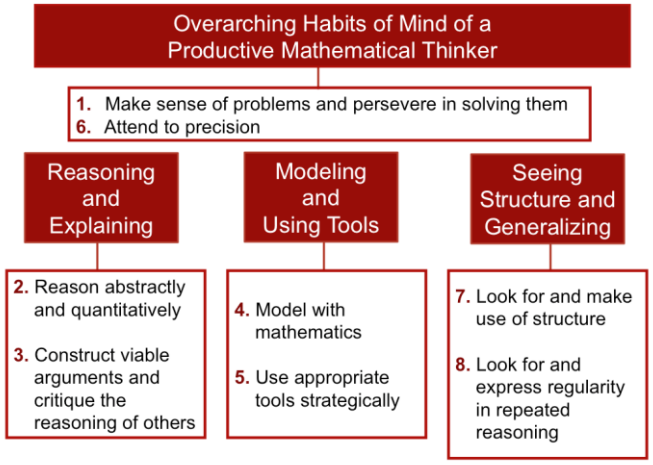
- ***Focus*** – Teachers use the power of the eraser and significantly narrow and deepen the scope of how time and energy **is** spent in the math classroom. They do so in order to focus deeply on only the concepts that are prioritized in the standards so that students reach strong foundational knowledge and deep conceptual understanding and are able to transfer mathematical skills and understanding across concepts and grades.
- ***Coherence*** – Principals and teachers carefully connect the learning within and across grades so that students can build new understanding onto foundations built in previous years. Teachers can begin to count on deep conceptual understanding of core content and build on it. Each standard is not a new event, but an extension of previous learning.

Components of Rigor:

- ***Fluency*** – Students are expected to have speed and accuracy with simple calculations and procedures so that they are more able to understand and manipulate more complex concepts.
- ***Deep Understanding*** – Teachers teach more than "how to get the answer"; they support students' ability to access concepts from a number of perspectives so that students are able to see math as more than a set of mnemonics or discrete procedures. Students demonstrate deep conceptual understanding of core math concepts by applying them to new situations as well as writing and speaking about their understanding.
- ***Application*** – Students are expected to use math and choose the appropriate concept for application even when they are not prompted to do so. Teachers provide opportunities to apply math concepts in "real world" situations. Teachers in content areas outside of math ensure that students are using math to make meaning of and access content.
- ***Dual Intensity*** – There is a balance between practice and understanding; both are occurring with intensity. Teachers create opportunities for students to participate in "drills" and make use of those skills through extended application of math concepts.

Mathematical Practices

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.*



What to Look For in the Math Classroom

- *Teachers use higher level questioning strategies such as "Why?" (probing for justifications)*
- *Teaching and learning for conceptual understanding and fluency*
- *Discussion of varied problem-solving approaches*
- *Making connections between problem situations and expressions/equations*
- *Students being asked to defend their actions and answers both verbally and in writing*
- *Students working in partners and groups*
- *Teachers using models during demonstrations*
- *Encouraging students to model math ideas with manipulatives, pictures, graphs, and technology*
- *Emphasis on students making decisions about which tools to use*
- *Accurate calculations*
- *Precise mathematical communication and attention to math vocabulary*
- *Questioning to prompt students to observe for patterns and relationships*
- *Investigations that allow students to gather data, look for patterns and interpret results*