Helping Your Child Achieve Fluency with Math Facts

The Common Core State Standards are very explicit in the expectation that students should know the addition, subtraction, multiplication and division facts with fluency.

In kindergarten (K.OA.A.5) "Fluently add and subtract within 5."

Grade 1 (1.OA.C.6) "Add and subtract within 20, demonstrating fluency for addition and subtraction within 10."

Grade 2 (2.OA.B.2) "Fluently add and subtract within 20 using mental strategies. **By end of Grade 2, know from memory all sums of two one-digit numbers."**

Grade 3 (3.OA.C.7) "Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g.,knowing that 8x5=40,one knows 40÷ 5=8) or properties of operations. **By the end of Grade 3, know from memory all products of two one-digit numbers.**"

Fluency is accuracy with a fluid speed. Parents can help their children develop speed and accuracy with their facts while driving or walking to school or the store, getting ready for bed, or even while preparing a meal. Have a special fact day. Pick one troubled fact and ask it throughout the day, e.g. what's 6+8, 8+6?

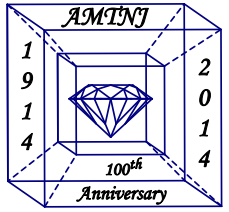
For additional ideas to help your children develop fluency with the math facts, please visit the following site:

Twenty-Two Fun Ways to Help Kids Learn Their Math Facts

http://www.examiner.com/article/22-fun-ways-to-help-kids-learn-their-math-facts-1

For questions or additional information, please send your requests to the Association of Mathematics Teachers of New Jersey (AMTNJ) at amtnj@juno.com.

Brochure created and designed by Jane Hannon for AMTNJ, September 2014



AMTNJ Offers Information to Parents as Students Head Back to School

The Association of Mathematics Teachers of New Jersey was started in 1914 and is now 100 years strong. It has a long history of promoting the learning and teaching of mathematics. AMTNJ encourages teachers, students, and parents to have an active interest in mathematics. This year, in particular, that interest will be intensified because of the upcoming PARCC Assessments that will reflect the Common Core State Standards.

What to Expect from the Common Core State Standards

The CCSS call for three key shifts in mathematics. The Common Core calls for greater **focus** on fewer topics. This means focusing deeply on the major work of each grade as follows:

- In grades K–2: Concepts, skills, and problem solving related to addition and subtraction

- In grades 3–5: Concepts, skills, and problem solving related to multiplication and division of whole numbers and fractions
- In grade 6: Ratios and proportional relationships, and early algebraic expressions and equations
- In grade 7: Ratios and proportional relationships, and arithmetic of rational numbers
- In grade 8: Linear algebra and linear functions

This focus is meant to help students gain strong foundations, a solid understanding of concepts, a high degree of procedural skill and fluency, and the ability to apply the math they know to solve problems.

The CCSS also emphasizes **coherence** that is the linking of topics and thinking across grades. Each standard is meant to be an extension of previous learning. Coherence is also built into the standards in how they reinforce a major topic in a grade by utilizing supporting, complementary topics.

The third shift called for by the CCSS is **rigor**. Rigor refers to deep, authentic command of mathematical concepts, not making math harder or introducing topics at earlier grades. To help students meet the standards, educators will need to pursue, with equal intensity, three aspects of rigor in the major work of each grade: conceptual understanding, procedural skills and fluency, and application.

The PARCC Assessments

The Partnership for Assessment of Readiness for College and Careers (PARCC) is a group of states working together to develop a set of computer-based K-12 assessments. These assessments will be based on the Common Core State Standards. Students in grades 3-8 and high school will take two summative assessments. The **Performance-Based Assessment (PBA)** will be administered in March for grades 3-8, and any time from February 20 through April 2 for high school. The **End of Year Assessment (EOY)** will be administered any time from April 27 through May 22 for all grades. Individual school districts will create their own testing schedule based on their technology capabilities and school calendars.

The mathematics **PBA** will focus on applying skills, concepts, and understandings to solve multi-step problems requiring abstract reasoning, precision, perseverance, and strategic use of tools. The **EOY** assessment will call on students to demonstrate further conceptual understanding of the major and supporting content of the grade and demonstrate mathematical fluency, when applicable to the grade.

There will be three types of tasks on the assessments: Type 1 which will assess concepts, skills and procedures, Type 2 which will assess expressing mathematical reasoning , and Type 3 which will assess mathematical modeling and applications. All three types can be on the EOY assessments while the PBA assessments will contain Type 2 and Type 3 tasks.

For further information on the PARCC Assessments and the Common Core State Standards as well as additional information for supporting your child's learning please visit the following links.

- What Parents Should Know About the Common Core - http://www.corestandards.org/what-parents-should-know/
- PARCC Parent Information - http://www.parcconline.org/for-parents
- NCTM – Back to School The Time to Engage Parents and Families http://www.nctm.org/news/highlights.aspx?id=43045&blogid=6806
- New Jersey Educator Resource Exchange: Family Corner http://njcore.org/resources/portal/18242
- Grade by Grade Learning Guide - http://www.pbs.org/parents/education/going-to-school/grade-by-grade/
- Supporting Your Learner - http://www.pbs.org/parents/education/going-to-school/supporting-your-learner/