



Mendham Township Middle School



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February 2, 2007

Re: Math Fact Fluency – Action Plan

Dear Fifth Grade Parents / Guardians,

As you may have recognized, our renewed mathematics curriculum encompasses a great deal of complex open-ended problem solving. This year, we added a supplemental problem solving class to our enrichment period to ensure our students increased opportunities to independently develop solutions to complex mathematical prompts requiring a higher-order critical thinking process. Although we continue to guide our students through the problem solving process by teaching specific strategies and techniques, there is no doubt that teacher-made tests, state tests, SAT tests, entrance tests, and even career tasks will challenge our students to develop solutions to problems that they have never seen before. In the end, there is no formula that we can merely 'teach to children' that will make them good problem solvers. However, there is a very concrete objective that we (home and school) can address to increase 'problem solver' effectiveness and efficiency ... **math fact fluency**.

The concept is simple and research supported. When engaged in a complex mathematical task, if students can merely recall multiplication and division facts, the brain's focus remains on the complex task. If, on the other hand, a student must 'figure out' 9×7 during this complex thinking process – the brain's focus becomes shared and disjointed. While this is a very unscientific example, think about how many times you have lost your 'big picture' train of thought because you have stumbled to find just the right word. The same type logic applies to having math facts committed to memory – it allows our students to focus on the 'big picture' task at hand – problem solving through critical thinking. As you are aware, Mrs. BaRoss has been testing our students' ability to memorize multiplication and division math facts and charting progress very closely. At this point in the year, less than half of our students are demonstrating fluency and as a result, we are putting an action plan in place to assist our student in becoming more fact fluent, and ultimately, better / more efficient problem solvers.

Action Plan:

We need your help. Your child learned his/her multiplication and division facts at the elementary school. We are confident that every one of our students can 'figure out' the answer to every multiplication fact 0 – 12. However, this process of 'figuring out' is counterproductive to the problem solving process and therefore, our students must commit multiplication/division facts 0 -12 to memory. Mrs. BaRoss and I have devised the following plan:

1. Students will spend time every night memorizing facts individually and or with family members;
2. On February 27th, Mrs. BaRoss will administer a math fact fluency assessment (80 facts in 3 minutes);
3. Any student scoring below a 70% will attend a 'fact strengthening class' during recess everyday until reassessment on March 13th;
4. Students will bring home the reassessment for parent signature (notification of progress); and
5. All students will continue to be monitored at the end of every marking period through the end of sixth grade.

Please note that committing multiplication facts to memory and the constant drill and practice that is tied to accomplishing this task is NOT an end in and of itself. **The end is creating more effective / more efficient problem solvers!** Together we CAN bring all of our students to fact fluency.

Special thanks to Mrs. BaRoss for recognizing the need to go above and beyond to provide additional assistance to our students in such a critical task. I am very confident that this will serve as a wonderful learning opportunity for our students – especially as we ultimately believe this initiative will positively effect student achievement. If you have any questions or concerns about the scheduling of this period, please direct you questions to me. Good Luck!

Very truly yours,

cc: Dr. Christine Johnson, Superintendent of Schools

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