



Jean Bingham, mathematics intervention teacher from Central Elementary, **Knox County** is pictured above, seated, during a session in which she co-presented at the National Math Recovery Conference in Minneapolis, MN. She is one of four certified Math Recovery Leaders in Kentucky.

Knox Schools Expand Math Recovery into 3 other Elementary Schools, By David Cole, Knox County Schools

The Knox County School District saw some of its greatest gains made in mathematics at the elementary level on the 2006-2008 Kentucky Performance Report.

Five of Knox County's eight elementary schools saw their overall math scores increase by more than 10 points from 2007 to 2008, with the highest score topping 100. The remaining three schools had slightly lesser but still substantial gains. The schools' overall math scores were a composite of math scores in grades 3, 4, 5 and 6.

This district-wide success, local educators say, stems from the emphasis being placed on math at both the school and district levels. All elementary schools and the district itself have improvement plans reflecting math as a priority need and all are utilizing research-based programs, including Everyday Math, which is used in all the elementary schools.

See the full article at www.kymath.org/docs/KnoxCountyNews1.pdf

Mathematics Intervention Paying off at Kingston Elementary

By Susan Riddell, susan.riddell@education.ky.gov

Ruth Montgomery truly believed mathematics intervention would help her school. She was right.

The Kingston Elementary School (Madison County) principal said the school's prior year's Commonwealth Accountability Testing System (CATS) data showed students had the skills required but struggled when asked to apply concepts learned at a deeper level. In her view, this indicated a possible lack of "number sense," which resulted in unsustainable growth.

Mathematics intervention began at Kingston during the 2006-07 school year, and the school is now in the third year of a Mathematics Achievement Fund grant, which was co-written by Amy Smith, a grant writer for Madison County, and former Madison County Curriculum Coach Krista Althaus.

See the full article at <http://kymath.org/docs/2009/Kentucky%20Teacher-March.pdf>



Mathematics interventionist Mary Greene plays a game with 1st-grade student Dalton Hatton at Kingston Elementary (**Madison County**).

After 35 Years of Teaching, the Best Was Saved for Last

By Lynn Hambrick,
Mathematics Intervention Teacher,
Carlisle County Elementary

Becoming the math intervention teacher (MIT) at my school has been the most rewarding experience of my teaching career. My appreciation and thanks go to the state for developing the Kentucky Center for Mathematics (KCM) which was given the challenge of developing a math intervention program. The challenge was met with excellence.

This is my 36th year to teach and I am more excited about my job this year than I have ever been. I keep learning new ways to help struggling students achieve success and for a teacher it doesn't get any better than being able to help a child understand. The KCM developed a great intervention plan and as they continue to study the results that are being gathered, they continue to improve the plan. I have been a teacher benefiting from the Mathematics Achievement Grant since 2006, the first year of the grant, and each year has been better than the year before. The KCM developed a wonderful support system with great leaders at the top, regional coordinators and excellent trainings to grow a strong intervention program.

Nothing thrills a teacher's soul like having a student express appreciation for his/her teaching. One of my third grade students arrived in my class last year with a huge smile and his face and a very important announcement. He stated that he was going to be a math teacher just like me. He said, "I am going to explain math the way you do so my students can understand." These words came out of the same mouth that earlier in the school year had said, "I can't do math. I am not good at it."

Far Reaching Impact

By Johnsie Tucker, Mathematics Intervention Teacher. Sutton Elementary,
Owensboro Schools



Mathematics intervention teacher Johnsie Tucker works with students and families during a family math event at Sutton Elementary.

I started my teaching career in 1966. Yes, it has been over 40 years ago. I have taught grades K-8. This is my first year as a math intervention teacher. I have been a second grade team teacher for the past six years. I am more excited about teaching, due to the success of this program, than I have been in many years.

The extensive training has made me realize that basic number sense has been missing in past math instruction. We

have been teaching the same methods for addition and subtraction, but the true concepts of taking numbers apart and combining them has been absent.

Our curriculum at the primary level is too full of abstract units (time, money, measurement) to allow time to investigate the true number sense (age appropriate) and how it relates to other areas. I see this as I work with upper level students who know a process but cannot rationalize their answers.

Now I hear parents and teachers commenting on changes they see in their children's attitudes and confidence. Children are more eager to come to Math Club because "Math is fun!" They can develop a variety of strategies instead of just learning basic facts.

While this program targets the under-achievers, it has a far-reaching impact for all students. Recently we celebrated a Family "Math is Fun" Night and 58% of my intervention students came with at least one adult. Parents who never attend other functions, nor feel comfortable in an educational situation, were involved because their child was feeling successful. We had a total of 154 children and adults in attendance to take part in simple, fun activities to reinforce math concepts.

Our principal and faculty are becoming involved as they see the growth due to this program. Teachers are being provided with books and professional development time to learn about the approach that is being so successful.

Not only are the students excited but so are the parents. As I was helping to load students on the bus one afternoon a parent stopped me to say that she heard the most beautiful words she had ever heard come from the mouth of her daughter. She went on to explain that she had told her daughter that she would help with math homework. The daughter's reply to her mom was, "That's OK Mom, I can do math by myself now, I understand what I am doing."

I can't imagine life getting any better than having the opportunity to be the MIT (mathematics intervention teacher) for Carlisle County Elementary.



Filling in the Gaps

By Olivia Winkle
Mathematics Intervention Teacher
Northern Elementary
Scott County Schools

The professional development provided through Kentucky Center for Mathematics and the Math Achievement Fund has been the most valuable teacher training I have received anywhere as an elementary teacher. As a regular classroom teacher with experience in all grade levels K-5, mathematics was the subject of greatest interest to me. My area of specialization during my undergraduate and graduate work at the University of Kentucky was mathematics. I served as a presenter for the Alabama Math, Science & Technology Initiative (AMSTI) during my time teaching in Alabama. I always felt that math was my best subject in the classroom. I never could overcome the feeling, however, that there was something missing for my students. Especially during my years of teaching 5th grade, I knew that there were gaps in their understanding, but I could never quite pinpoint exactly what the gaps were.

Working as a Mathematics Intervention Teacher with the Math Achievement Fund has finally given me the opportunity to work with small groups and receive the professional development and support to begin to understand and assess those gaps. The gains that young students make in the regular classroom when they are afforded the time and instruction to fill in the missing pieces of their understanding of number are tremendous. I have never felt so excited about how I am teaching and what I am teaching as I do as an MIT. At the same time, my mind has been opened to an entirely new dialogue about the teaching and learning of mathematics. There is so much more that I have to learn.

More Reflections from Primary Grades Mathematics Intervention Teachers

“The intervention program has been the best program not only for the students that need additional help, but for the teachers as well. Teachers are becoming more comfortable with teaching math and understanding how students think and learn. Each year the trainings are getting better and better and is spreading out throughout our schools. Parents are even commenting on what an improvement they are seeing in their child.”
-Helen Blevins, Hogsett Elementary, **Danville Independent**

“I have watched my students gain confidence and begin taking risks in the area of mathematics. Students have come to me lacking the basic skills needed to go forward in mathematics. They have been unable to count, add, or subtract correctly. They were the students who never attempted problem solving or cared to participate in their regular classroom. They were the students who hated math. Throughout the course of this intervention program, these students have gained the basic skills, and now have the confidence and ability to succeed in the regular classroom. They are excited about learning math, and are taking risks with problem solving that they would have never taken before.”
-Rachel Ray, South Heights Elementary, **Henderson County Schools**

“This program allows children the opportunity to get interested in and allows for more success in math. They no longer see math as basic, boring computation. It allows them the opportunity to understand why math works. Teachers have also struggled with finding appropriate strategies for specific skills...through this intervention program, I am able to offer additional resources and support to teachers that weren't readily available before.”
-Rebecca Stephens, Second Street School, **Frankfort Independent**

“The gains Interventions students have made have been extraordinary. More teachers, as well as the leadership team, are acknowledging the gains students are making. Also, as I collaborate with teachers I have the opportunity to interact with past intervention students that are near the top of their class in math.”
-Kathie Hamilton, Lakewood Elementary, **Hardin County Schools**

“We are seeing so much growth in both the students and the staff. The classroom teachers have implemented many of the strategies in their classrooms. We have begun a school-wide intervention time for math when all students receive either intervention or enrichment based on their individual needs.”
- Catherine Rose, 9th District, **Jenkins Independent**

“The [intervention] students in my school have shown tremendous growth within the classroom and on standardized tests. By working with students from the first grade up, we are limiting the number of students who fall significantly behind and who qualify for special education services.”
-Amanda Wurtman, Bonnieville Elementary, **Hart County schools**



KCM Numeracy Conference a Success

The Kentucky Center for Mathematics (KCM), housed at Northern Kentucky University, recently hosted a numeracy conference focused on helping teachers of students in all grades develop a deep understanding of how numbers work. On March 5th and 6th, 2009, more than 300 mathematics educators from across the state gathered at the Downtown Hyatt Regency in Louisville, KY to participate in a diverse array of sessions with topics ranging from the mental images young children use in early mathematics to making algebra meaningful for high school students. In all, 47 sessions were conducted by 74 presenters from Kentucky and beyond. Coaches, mathematics intervention teachers, other Kentucky experts, and distinguished educators and researchers from around the nation shared their passion and knowledge to an enthusiastic audience. Among these, Cathy Fosnot (*City College of New York*), Mark Thames (*University of Michigan*), Sally Moomaw (*University of Cincinnati*), Patty King (*US Math Recovery Council*), and Janet Tassel (*Western Kentucky University*) each led presentations on different aspects of mathematical learning. Among the most popular presentations were 6 consecutive sessions led by skilled specialists from the Partnership in Mathematics and Science Education Reform (PMSER) that addressed student development at all grade levels.

The conference concluded with a luncheon for attendees and closing remarks by Kentucky Education and Workforce Development Cabinet Secretary, Helen Mountjoy. In this talk, Secretary Mountjoy underscored the importance of meaningful mathematics as well as the opportunities ahead for Kentucky educators and their students as a result of the KCM intervention and coaching initiatives.



Kentucky Education and Workforce Development Cabinet Secretary Helen Mountjoy made closing remarks.



A primary focus of the KCM is the training and support of mathematics intervention teachers and mathematics coaches. Currently, KCM coordinates programs in 68 counties with plans for future expansion. This was the first conference that the KCM has hosted, and responses from the attendees indicate that this was a successful event. Denise Justice, a math coach for the Raceland-Worthington School district (**Greenup County**), remarked, "I feel it was a successful conference in many ways. The sessions were informative, thought provoking and very hands on for the participants. Many of the activities from the sessions could be taken back to the classroom and used the next day." Similarly, Stephanie Gastauer, assistant principal of Tollsboro Elementary School (**Lewis**

County), stated, "I found that the information provided served many audiences which helped those of us in a particular educational setting to network and glean many helpful ideas from others. Last, and certainly not least, I gained a much better understanding of the progressions of mathematical thinking." Anonymous survey responses revealed that nearly 95% of attendees were either satisfied or very satisfied with the conference sessions, materials, organization, and presenters. In light of this response from the mathematics education community, the KCM is currently exploring opportunities for similar events in the future including the possibility of co-sponsoring an event with the Kentucky Council of Teachers of Mathematics.

