



KENTUCKY CENTER FOR MATHEMATICS

Good News from KCM Coaching 2008-2009

Rising Math KCCT Scores at LaGrange Elementary

By Sandy Gavin, Senior Math Coach



For years, mathematics scores on the Kentucky CORE-Content Test (KCCT) at LaGrange Elementary remained stagnant, scoring in the mid-80s. The release of 2007 KCCT scores ended the plateau when Third, Fourth and Fifth grade students boosted math scores from a math academic index of 86 to 93.5. This upward trend continued in September 2008, when KCCT scores were released and the same population of students increased their math scores even more, to 98.6! What can be attributed to this strong upward swing in student performance in the area of mathematics at LaGrange Elementary in Oldham County?

Math Coaches Missy Cox and Sandy Gavin, both National Board Certified, cite three significant commitments of the school that reversed the stagnant scores: 1) Students and staff became more “Goal Oriented”; 2) The staff adopted Everyday Mathematics (EDM), a spiraled rigorous, research-based math program from the University of Chicago Math Project; and 3) The principal, John T. Finch, PhD, demonstrated his commitment to student learning by funding two half-time math coaches to support both primary and intermediate teachers in the implementation of the EDM program and also to mediate teacher thinking in the area

of mathematics.

School-wide Goal: Academic Index of 100

Goal setting has resulted in the students at LaGrange Elementary becoming self-directed learners. The goal of 100 has been taught and reinforced through principal visits to classrooms to share student progress on summative assessments, Pep Rallies, student self-assessment, and student-led conferences with teachers and parents in grades 4 and 5. The expectation at LaGrange is that everyone will work hard (students and staff) to ensure that the goal of 100 is achieved.

Everyday Mathematics

With the help of the two math coaches, the staff at LaGrange made the commitment to adopt and teach Everyday Mathematics “clean”, meaning that the teachers would follow the program closely and have a willingness to teach mathematics in a new and nontraditional manner.

The staff at LaGrange started off slowly with the adoption of EDM. In 2006, grades 3 – 5 implemented Everyday Mathematics at the school’s expense. Although the students and staff struggled at first with the rigorous content, fast pace and seemingly nonessential spiral, staff and students rose to the chal-

lenge. Everyday Mathematics was such a success in meeting the needs of the students and moving the students to become mathematical thinkers (grades 3 – 5), in 2007, second grade adopted the program and in the Fall 2008, the program went school-wide, grades K – 5.

Everyday Mathematics places an emphasis on real-world situational problem solving that develops student critical thinking ability. Focus is placed on the “why” not necessarily just the “how”. As an example, a fifth grade student new to the building, after being taught EDM’s Partial-Product Multiplication algorithm commented, “Gee, this is cool. Now I understand why it works.” This particular student was referring to the traditional method of multi-digit multiplication. He knew how to multiply large numbers but not until he was taught through EDM, with its emphasis on place-value and the “why” of numbers, did he understand “how” what he was doing really worked. Teaching students different ways to solve a problem not only improves their problem solving ability but also increases number sense and mental math capacity.

Math Coaches

Two, National Board certified Cognitive CoachingSM Math coaches, Missy Cox and Sandy Gavin, were appointed to work half time with teachers and half time with fifth grade students. These two coaches divide their time between primary and intermediate teachers, supporting teacher needs in the classroom and also leading teachers in becoming self-mediating thinkers. The coaches attend weekly CEN-TRA on-line meetings, discussing math pedagogy with other coaches throughout the state, facilitate grade-level Professional Learning Communities, lead Professional Development activities and meet with teachers on a regular basis to complete one-on-one Cognitive CoachingSM sessions.

According to one teacher, when asked about the Cognitive Coach-

ingSM process, she commented, "It's nice to think it (lesson) through. I typically don't think out loud about the lesson I teach each day, it is different when you hear it. You think about the strategies you'll use and all the different parts. I have a more-clear idea of what I am going to do."

What's new for 2008 – 2009? In the academic 2007 school year, the two math coaches dabbled in the area of integrating Thinking Strategies into Problem Solving, working with specific teachers and classrooms, getting their feet wet in leading teachers and students in incorporating the thinking skills they were learning in reading into mathematical problem solving. For 2008, integrating reading thinking strategies with mathematical problem solving is moving school-wide.

The students and staff are ready to go to the next level in mathematics. Both have two solid years of teaching EDM "clean" under their belts and the students have developed a strong understanding of how numbers work and are making connections between strands of mathematics, math to themselves, and also math to their world.

LaGrange staff and students have come a long way in a short amount of time. With emphasis remaining on sound mathematical instruction and encouraging students to become independent thinkers, the goal of an academic index of 100 is just around the corner; Perhaps in Spring 2009.

