

# Everyday Mathematics® Success Stories



## Test Scores in Fayetteville Increase with Standards-Based Mathematics

Situated at the foothills of the Ozark Mountains, Fayetteville is located in the rapidly growing northwest Arkansas metroplex. Several major corporations are headquartered here, spurring growth in employment and population; Fayetteville is also home to the University of Arkansas. Because of the presence of the university, Fayetteville has a reputation for progressive and innovative approaches in public education.

The Fayetteville School District enrolls nearly 8,500 students in Grades K-12. The district operates 1 K-7 school, 8 elementary schools, 2 middle schools, 2

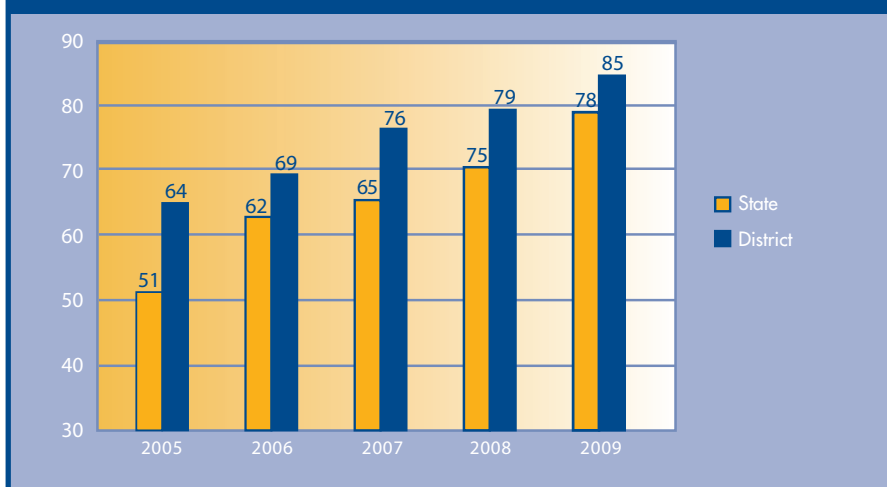
junior high schools and one senior high school, as well as an alternative high school. Among the increasingly diverse student population, approximately 35% of students qualify for the free and reduced-price meal program.

Fayetteville Public Schools is in the forefront of Arkansas school districts in recognizing the need for standards and accountability in mathematics and science instruction. Beginning in the 1996–1997 school year, the district formed a Math and Science Leadership team to develop and implement a long-term curriculum improvement plan.

Teachers and administrators on the improvement team first moved to align the math and science curriculum frameworks in Fayetteville Public Schools to state and national standards. The next step identified curriculum resources that aligned to the standards, and several research-based mathematics curricula were piloted during the 1997-98 school year. At the end of the pilots, teachers at each grade level determined that *Everyday Mathematics* was most closely aligned with the district's standards. In addition, pilot teachers reported that they themselves were learning more math using the teacher resources in the *Everyday Mathematics* program.

Percentage of Grade 4 Students Scoring Proficient or Advanced in Math

Source: Arkansas Benchmark Exam



The Arkansas Benchmark Exam was redesigned in 2004 making scores from earlier years non-comparable. Fayetteville's math scores in Grade 4 continue to rise and consistently outperform the state average.

### Implementing *Everyday Mathematics*

Realizing that Fayetteville was making a significant departure from past practices in mathematics instruction, a multifaceted, holistic approach to the implementation of *Everyday Mathematics* was necessary, recalls Denise Airola, the interim Director for Instructional Services at the time.

The first step in the implementation strategy focused on getting information back to the individual school buildings in Fayetteville. Teachers who had served on the Textbook Committee communicated the findings of the pilots and the decision to adopt *Everyday Mathematics* back to their schools.

The plan for professional development included several days during the summer to introduce teachers to the district standards and to *Everyday Mathematics*. Importantly, additional renewal training was scheduled during the school year, once teachers were using the program in their classrooms. These sessions allowed teachers to work collaboratively on pacing issues and implementation concerns.

In addition, Fayetteville Public Schools made the commitment that each classroom would receive an *Everyday Mathematics* manipulative kit. The goal was to put all of the materials at the teachers' easy reach, minimizing any obstacles to the full implementation of the new program.

### Anticipated State Initiative

In 1999, the Arkansas state legislature called for the implementation of the Arkansas Comprehensive Testing, Assessment and Accountability Program (ACTAAP). The ACTAAP legislation addresses the needs of all students in Grades K-12, and calls for a coordinated program of standards, professional development, assessment and accountability. The goals of the Arkansas legislation were reiterated in the federal No Child Left Behind Act.

When the federal legislation was announced, Fayetteville Public Schools realized that they were ahead of the pace in mathematics education reform, having already created a standards-based curriculum framework and having adopted the *Everyday Mathematics* curriculum that aligned with the standards.

### Results

The Arkansas Benchmark Exams are criterion-referenced exams that measure student performance on the state's grade-level benchmarks. Students are tested in mathematics and literacy at Grades 3 through 8.

Arkansas requires district accountability for the performance of all students, and therefore focuses on the achievement levels of combined population students. Combined population students are general population students as well as those classified as special education, Limited English Proficient or highly mobile.

In the Grade 4 combined population results, mathematics achievement for Fayetteville students has risen steadily since the first administration of the Arkansas Benchmark Exam. In 2009, 85% of Fayetteville Grade 4 students were performing at or above the proficient level, compared to 78% of the state total.

In analyzing the results on the Benchmark Exams of primary mathematics, Fayetteville teachers and administrators see the effects of the *Everyday Mathematics* curriculum on student achievement. *Everyday Mathematics*, the Arkansas Frameworks and the Benchmark Exams share the philosophy and goals of the standards and principles of the National Council of Teachers of Mathematics. As one example, when Benchmark Exam items in mathematics were released by the state, Fayetteville teachers recognized these as the types of problems they were already working on in *Everyday Mathematics*.

Airola offers, "*Everyday Mathematics* emphasizes conceptual understanding and the algebra strand, two areas that were lacking in our former series. Teachers have learned more mathematics, and thus are able to convey more mathematical content to the students. All of these factors have had an effect on increasing math scores on the Arkansas Benchmark Exam."

Sandi Rommel, a Grade 4 math and science teacher at Asbell Elementary in the district, offers these insights. "The hands-on activities in each unit are important for the children that need to use manipulatives to better understand the concept or skill. The distributed practice of the math skills also contributes to a more solid understanding each time a skill is revisited."

"The games in *Everyday Mathematics* are important in the development of computational fluency and reasoning. The games are particularly effective with children who have not been reached by traditional methods, allowing them to achieve success. This is but one way *Everyday Mathematics* meets the needs of so many different learners."

For additional information on the *Everyday Mathematics* program, please contact us toll-free at 1-800-648-2970 and visit our Web site at [everydaymath.com](http://everydaymath.com).

Expect More. Achieve More.