

Everyday Mathematics® Success Stories



Nashua, New Hampshire is located in southern New Hampshire approximately 10 miles north of Massachusetts. The Nashua School District includes 12 elementary schools, 3 junior-high schools, an alternative middle school and 2 high schools. The school district educates 13,400. At the district level approximately 82% of students are Caucasian, 11% are Hispanic, 4% are Asian-American, and 3% are African-American. Approximately 23% qualify for the free or reduced-price lunch program.

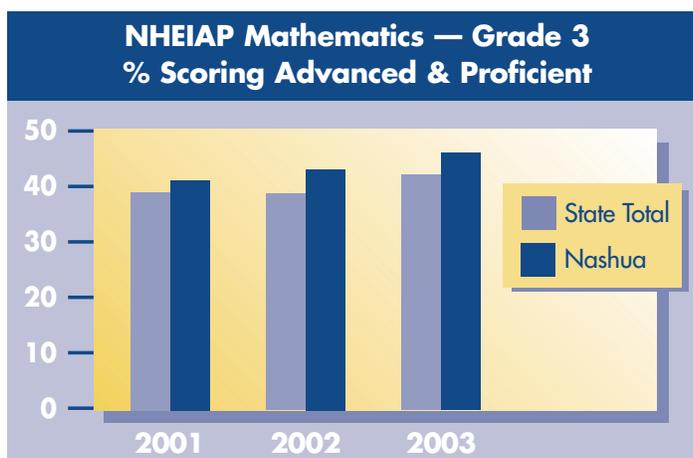
Nashua was voted by *Money* magazine 'Best Place to Live in America' in 1987 and again in 1997. The quality of the city's schools definitely contributes to these rankings.

Seeking Standards-Based Mathematics

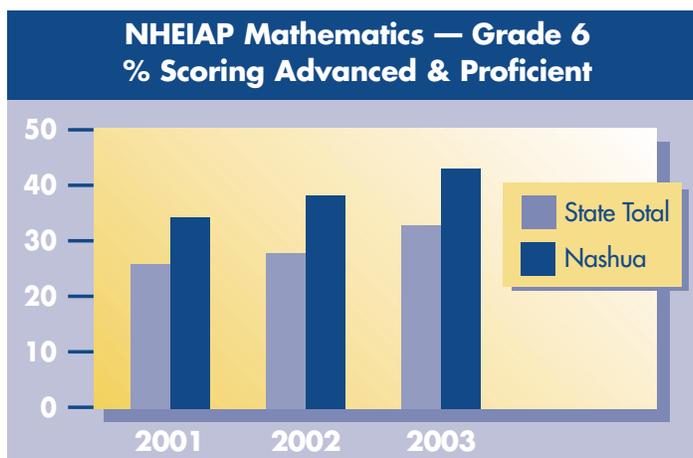
The quest for a standards-based mathematics program began in February of 2000. During the 10 years prior to this, the Nashua School District had been implementing a basal mathematics text supplemented with a blend of hands-on materials. In order to address state frameworks aimed at increasing student achievement in New Hampshire, the Nashua School District began its search for a more rigorous mathematics program.

During the 1999–2000 school year, teachers across the district were involved in piloting *Everyday Mathematics* as well as a traditional basal mathematics

Implementing Standards-Based Mathematics in Nashua Schools



In 2003, 46% of Grade 3 students achieved at the Advanced and Proficient Ranges of the NHEIAP in mathematics.



At Grade 6, 43% of Nashua students achieved at the Advanced and Proficient Ranges of the 2003 NHEIAP in mathematics.

text. Each grade level had at least three classrooms where *Everyday Mathematics* materials were piloted, and all 12 elementary schools in the district participated in the pilots.

The Nashua School District organized an Elementary Mathematics Text Selection (EMTS) committee that met in spring 2000. Constituents of the EMTS

committee included administrators, teachers and parents. This committee spent time discussing what constitutes a standards-based program and coming to consensus on an acceptable definition. These beliefs, in short, were based on the following underpinnings.

- Mathematical literacy is essential to becoming an informed and competent citizen.

- All students can (and should) become mathematically literate, not just those students who have traditionally performed well in mathematics classes.
- Literacy involves understanding mathematical principles (such as change, function and quantitative relationships); developing mathematical ways of thinking; and developing fluency with number, geometry and data.
- Students develop this literacy by actively doing mathematics — using their skills and knowledge to solve problems and investigate mathematical ideas.

With the adoption of a new mathematics program, the committee was seeking a curriculum that supported standards-based mathematics, that helped teachers to teach math in a new way and that provided opportunities for parents to be involved in their children's class work.

The EMTS committee recommended the adoption and implementation of the *Everyday Mathematics* program, provided that consistent staff development opportunities would be offered. The recommendations were accepted and Grades K-2 began the implementation of *Everyday Mathematics* in fall 2000, while Grades 3-6 began in fall 2001.

Staff Development

The EMTS committee had highlighted the importance of professional staff development to the successful implementation of *Everyday Mathematics* in the Nashua School District, and many staff development opportunities were made available. These included initial, two-day training sessions provided in the early summer months leading up to the new school year, early release workshops during the school year on mathematical content and monthly

grade-level support sessions. *Everyday Mathematics* teacher consultants provided the initial trainings.

In addition, the teachers from Nashua who were involved in piloting the *Everyday Mathematics* materials took part in extended training periods that included learning about the development of *Everyday Mathematics*, tracing how concepts were developed across the grade levels and providing guidelines for offering parent nights. Through these "train the trainer" sessions, a cadre of Nashua teachers became *Everyday Mathematics* teacher leaders for the school district. These teacher leaders frequently provide workshops and support sessions for their colleagues.

Results

The New Hampshire Educational Improvement and Assessment Program (NHEIAP) has been used as the state assessment since the mid-1990s. The purpose of the test is to set high standards and provide a means to mark progress toward those standards that have been developed with input from teachers, parents, business people, policy makers and administrators. The mathematics portion of the NHEIAP includes multiple choice items and open-response questions. The NHEIAP tests are given to elementary school students in Grades 3 and 6.

With the implementation of the new *Everyday Mathematics* curriculum in Nashua, members of the textbook selection committee carefully noted that expectations for NHEIAP results should be modest. Maintaining district NHEIAP scores was seen as a sufficient goal given the major shift in curriculum. The year 2001 represents the baseline, as all Nashua schools were implementing *Everyday Mathematics* in Grades K-2.

When 2002 NHEIAP results for the Nashua School District were released, mean scaled scores and the percentage of students scoring in the Advanced and Proficient ranges increased in both Grade 3 and Grade 6. Further advances at both grades were noted when 2003 NHEIAP results were announced.

In Grade 3, the district mean scaled score on the NHEIAP increased from 254 in 2001 to 258 in 2003. The combined Advanced and Proficient ratings increased from 41% in 2001 to 46% in 2003.

The mean scaled score for the Nashua School District at Grade 6 improved from 252 in 2001 to 256 in 2003. Over the 2 year period, the combined Advanced and Proficient ratings increased from 34% to 43%, and the combined Advanced and Proficient rating in the Nashua School District was 10 percentage points higher than the state, 43% vs. 33%.

"Many good things have resulted in Nashua schools with the adoption of *Everyday Mathematics*," states Cecile Carlton, math curriculum coordinator in the district. "The children are excited about math, and parents are impressed with what their children are learning. Our teachers have developed their mathematical understanding and are able to convey this to the students." Carlton looks to the coming years, "As students and teachers have more experience and a greater comfort level with using the program, we anticipate NHEIAP scores to increase and students to raise their mathematical proficiency."

For additional information on the *Everyday Mathematics* program, please contact us toll-free at 1-888-772-4543 and visit our Web site at www.WrightGroup.com.

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