

Beyond 2000: a Plan for Educational Improvement in the Next Decade

by Dr. Robert Ervin, Superintendent of Schools

(This is the second of a four part series detailing Bangor School Department's new strategic plan. In the next issue, Part Three: Core Values. The entire Beyond 2000 plan can be viewed at www.bangorschools.net/Beyond2000.htm)

Part Two: Challenges

In the coming decade, the maintenance and improvement of schools will face unparalleled and interconnected challenges:

- A family structure that is fluid and challenged by economic constraints
- Schools will be asked to create and sustain educational support from home environments increasingly preoccupied with social and economic issues and will experience increased pressure to act as extended family
- Schools will experience increased pressure to certify the achievement of an increasingly mobile student population
- Increasing diversity in student needs created by social, medical, and demographic forces
- Diversity will increase minority representation, cultural orientation, physical and mental disability, and behavioral issues in our schools
- Shrinking availability of new teachers and administrators and a limited ability to retain talent
- Schools will recruit more actively from traditional and nontraditional sources and devise incentives, both financial and organizational, to hold qualified teachers and administrators
- Shrinking resource support exacerbated by competition with other public agencies for increasingly limited tax dollars
- Schools will present a better case for a greater share of public funds in the face of competing local interests buffeted by regional and even national influences
- A widening income gap between those with and those without quality education
- Schools will build economic opportunity through academic achievement
- Increasing individualization in all aspects of education driven by individual rights
- Schools will have to find ways to turn narrow self-interest into reasonable accommodation
- A shrinking population of students with increasing demand for organizational performance
- Children will become more valued by society, and schools will be asked to do more in spite of the challenges that students bring to the classroom
- Accelerating technological change that requires the "creative deployment" of knowledge, dynamic forging of new connections, and an expanding entrepreneurial spirit
- Schools will scramble to find the resources that they know must be allocated to implement the expanding uses of technology in learning
- The influence of the Internet and telecommunications will expand, presenting both opportunities to learn and challenges to the delivery and quality of education
- Pre-emptive federal and state interests in local education
- Schools will face continued centralization of governmental interest in education through legislative "initiatives," many of which will be unfunded
- National interests, such as the privatization of education and assessment, will increasingly impact local education policy
- Limited time
- While schools will be asked to do more, school time will remain fixed by internal and external influences
- Sustained support by a community that has a diminishing number of parents with children in schools
- Schools will engage learners of all ages
- An increasingly unpredictable environment
- Schools must have the flexibility to adjust to an uncertain environment that presents immediate security, health, and political challenges
- Devising a local curriculum for global participation
- Curriculum and instruction must prepare students for an appreciation of global interdependence and develop the skills to make and sustain cultural connections

Bangor Schools 2002 Performance Report: Students Continue to Achieve at High Levels

by Frank Hackett, Assistant Superintendent of Schools

Bangor students continue to outperform their counterparts at both the state and national levels on a variety of tests, revealed a 79-page performance report presented to the Bangor School Committee on Monday, December 2, 2002. The report, which combined student achievement data on national, state and local measures, also documented student progress on instructional support interventions. Scores on the Metropolitan Achievement Test (MAT), the Scholastic Aptitude Test (SAT), National Merit Semifinalist data, the Maine Educational Assessment (MEA), and local benchmark assessment information was included in the report, all of it demonstrating Bangor students' remarkably high performance levels.

Advanced Placement (AP) Advanced Placement (AP) tests are given in a variety of subject areas at Bangor High School. This data indicates that student aspirations are on the rise. The article on **page 8** details the performance of Bangor students on the past year's AP exams. It is impressive to note that the number of students taking AP tests since 1990 has gone up by 315%. With that kind of increase, one would expect that the percentage of students passing the tests (with a score of 3, 4, or 5) would be impacted; however, while there have been yearly fluctuations, students at BHS continue to pass about 78% of the exams taken.

National Merit Semifinalists Bangor High School continues to be the state-wide leader in the number of students who have been recognized as National Merit Semifinalists. In fact, when the numbers are looked at from 1992 to the current year, our total number of semifinalists outdistances the second closest high school by 21 students. This number is especially impressive when one considers that this comparison includes both public and private schools across the state.

Top Three NMS Producing Schools in Maine

Year	2000	2001	2002	Total 1992-2002
Bangor High School	6	3	6	52
Cape Elizabeth	3	3	3	30
Me. Math & Science	1	4	7	29

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Many teachers, administrators, and students contributed their time and expertise for this issue. To persons unidentified, we apologize. Each contribution is greatly appreciated.

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Bangor Schools Department 2002 Performance Report

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Metropolitan Achievement Test (MAT) Bangor students continue to score above average on national assessments. One measure used by the school department, the MAT, is administered annually to students in grades 2-10. The data generated from this test is used for a variety of purposes, such as identifying students who need instructional support. For many years, Bangor's performance standard for the MAT has been set at the fiftieth percentile. Students who do not reach that level are placed on individualized Student Instructional Plans (SIP's). This intervention, in coordination with other support systems including special education services, Title I (a federally funded intervention), Reading Recovery, and Math Recovery, demonstrates the commitment of Bangor educators to our fundamental belief that all children can learn at high levels. Scores on the MAT for the 2002 school year show high average national percentile performance levels at each grade level in all content areas. (see chart at top right).

Scholastic Aptitude Test (SAT) Another nationally administered test is the SAT, taken by college bound students. The performance of Bangor students on this measure is particularly impressive. Bangor scores are well above both state and national levels, but it is also important to note that the number of students taking the test is on the rise. (See charts at right) This is an interesting phenomenon; statistically one would expect that with a higher number of test takers, the average scores would decline. This is not the case in Bangor: we are not only seeing an increase in the number of students who take the test, but we are also seeing rising average scores. This data demonstrates the high aspirations of our students and the high expectations of our faculty. The charts at right graphically depict this achievement over the last three years.

Maine Educational Assessment (MEA) Administered to students in grades 4, 8, and 11, the MEA is aligned with the Maine Learning Results (MLR), and covers the following content areas: English Language Arts (reading and writing), Mathematics, Science and Technology, Social Studies, Health, and Visual and Performing Fine Arts.

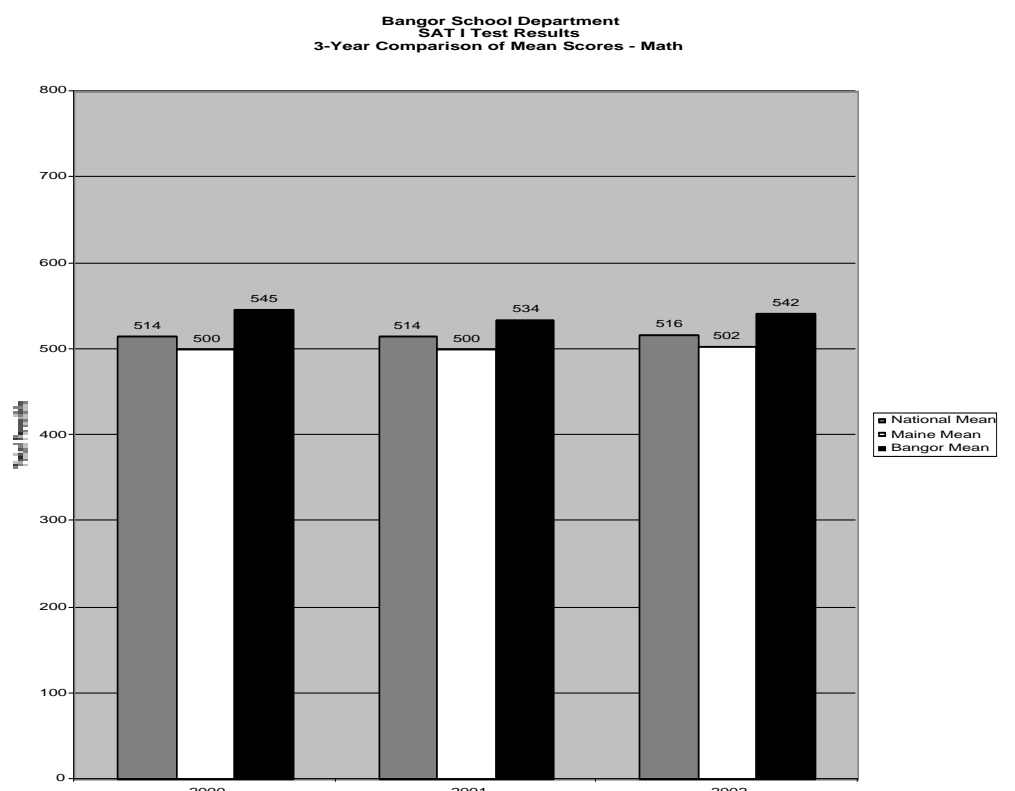
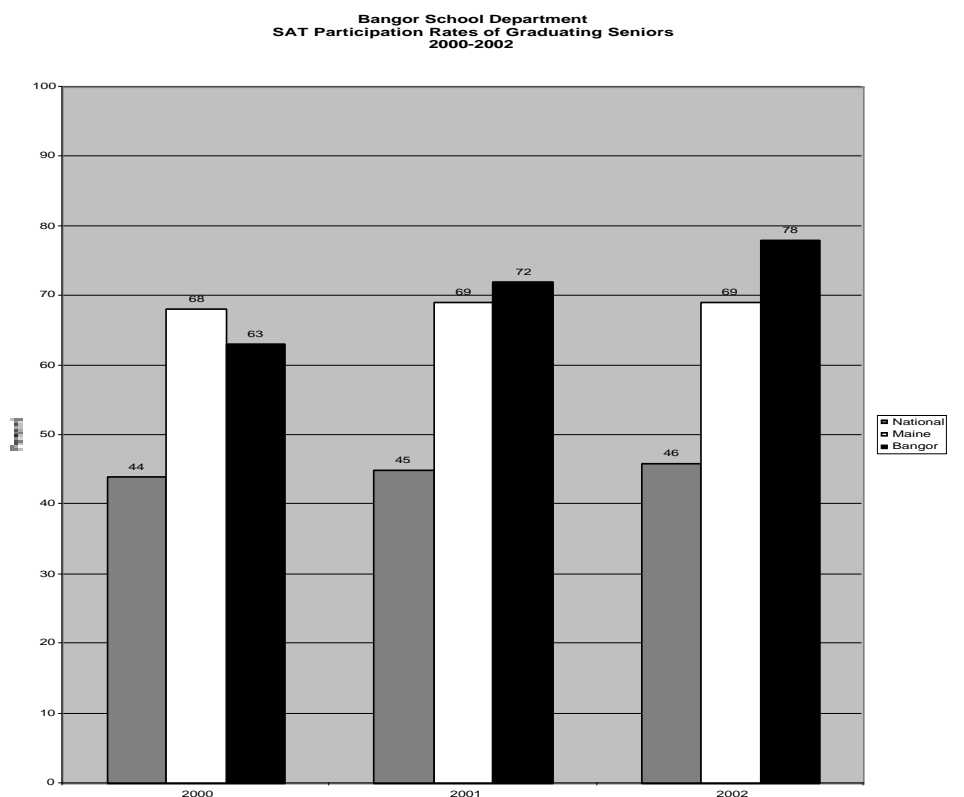
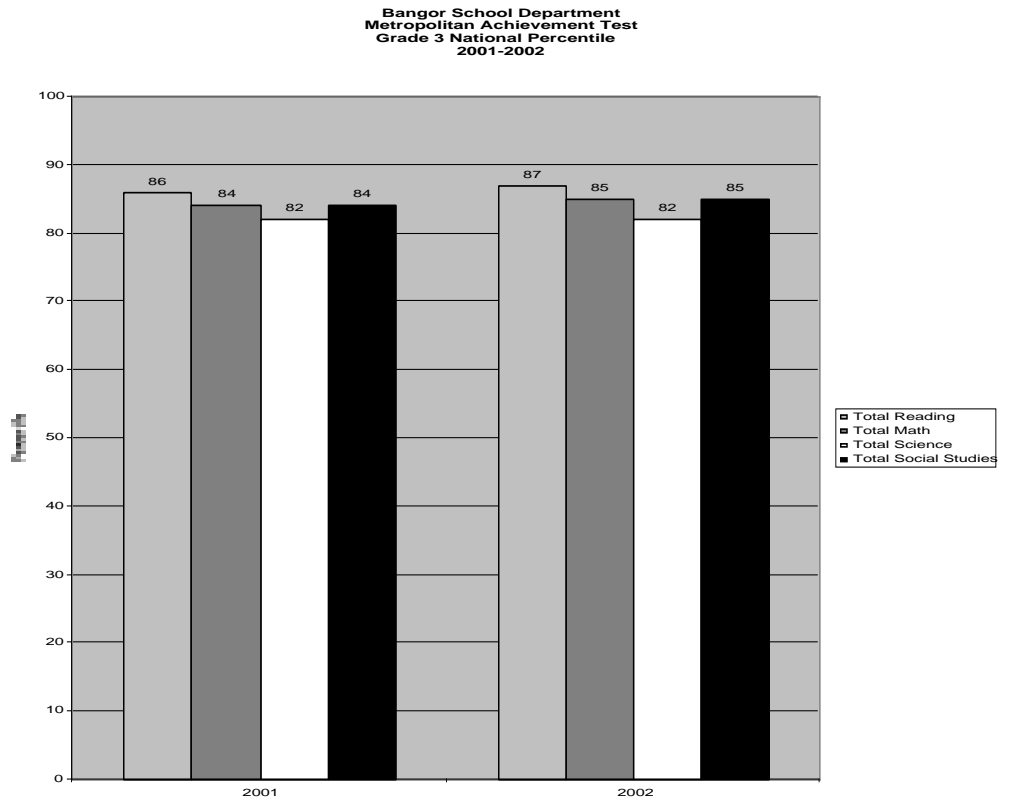
Bangor students continue to show strong performance on the MEA, outpacing the state average scaled score in all content areas in grades four, eight, and eleven. Additionally, we continue to see a shift in many content areas of students from the "Partially Meets the Standard" to "Meets the Standard" – a trend that is representative of our continued efforts to improve student achievement against the Maine Learning Results.

Local Assessments For many years, the Bangor School Department has been developing our own local assessments of student achievement. The grades one, two, and three literacy assessments are wonderful examples of the quality work done by teachers and administrators across the system in the way of measuring student performance. (See page 6 for details of the new third grade Literacy Assessment) Additionally, we have administered a grammar test at the middle school level, and a district-wide writing prompt for students in grades two through seven. Classroom teachers, for the purpose of making decisions about instruction, have relied heavily on this information.

Aggregating this data to the district level has been logistically difficult to do; we are currently devising ways in which we can bring student performance on our local measures into a more complete profile – of the individual student, the school, and the system as a whole. With the activation of a wide-area computer network now near completion, we are confident that we will be even closer to accomplishing this goal. This technological development will allow us to access data in ways never before possible, propelling us into a new era in data collection and analysis.

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Charts displayed on this page are a representative sample of the full 2002 Performance Report.



Third Grade

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a former international logging capital. Students explore the architecture of historical buildings in our city. As a culminating activity we take a one-day bus tour of Bangor's historical sites. We visit Native American burial grounds, Hannibal Hamlin's house, lumber barons' homes, Champlain's landing site, the logging museum at UM, and the Bangor River Drivers statue.

Hands-on experiments are woven into our science curriculum. One of our most popular units is "electricity". Students work in a group to create a product that will actually conduct electricity. We are grateful to Bangor Hydro Electric Company for their help each year with materials and presentations.

When June arrives our students are ready for the Third Grade Science Fair. Every third grader chooses a concept that has been studied during the year. Students create a poster and lab report. The entire school and parents are invited to visit the third grade classrooms to view a wide variety of fun presentations.

We feel fortunate to be part of the family-like atmosphere at Fourteenth Street School. As teachers, we have the unique opportunity to watch and celebrate the growth of each individual student through their first four years of school.

MATH "MUST KNOWS"

Bangor Elementary Schools Measure Critical Math Skills

by Frank Hackett and Bill Armstrong

What are the foundational skills essential to success in advanced mathematics? How is early mathematics instruction related to success in math later on? What are the skills that every child should have by grade three?

A team of Bangor's elementary teachers has tried to answer these questions, and in the process has determined what these essential skills are. This year, each 3rd grade student will have an opportunity to demonstrate mastery of each foundation skill. Soon, 5th grade students will also be tested annually to ensure successful completion of elementary mathematics skills.

Bangor's Elementary Mathematics Committee began to meet in 2000 with the purpose of identifying what children "must know" at the completion of grade 3 and grade 5 to ensure success in their mathematics program throughout their academic life. The committee

Kindergarten,

(continued from page 10)

ation of student-made books.

Literature, poetry, and teacher-prepared big books often serve as the starting point for such projects. Students add illustrations and parts of text to complete the simple, predictable story lines. These books are strong motivators and effective teaching tools. When each book is finished the children eagerly take them home to share with parents. Follow-through at home in the form of rereading and discussion reinforces the lessons taught at school. Echoes of "I can read it!" and "I can write it!" abound by the end of the year.

In addition to big books, student literacy is developed through a Bangor program called "Land of the Letter People". (see page 17 for more details)

The kindergarten year is a time when children's eagerness to learn and natural curiosity are blended with the development of many skills. This combination creates a foundation for learning, which supports Bangor's high expectations for academic success. The kindergarten faculty of Fourteenth Street School feels fortunate to be part of this important step in the journey of lifelong learning.

consisted of administrators and teachers from each elementary school up through 5th grade. Committee members scrutinized the vast array of skills included in the elementary curriculum as well as the Maine Learning Results to determine which skills were most critical to future success. The selected skills were dubbed "Must Knows" because they were considered essential for future growth.

The next and most daunting task involved the development of a test that could be used to certify each student's achievement of the "Must Knows". Two tests for 3rd grade students were developed during the summer of 2001; a pretest to be given early in the 3rd grade year, and a posttest for the end of the year. Piloting of both versions began in the fall of 2001. All third grade teachers reviewed the tests and pilot results later that year, and final piloting was completed in the spring of 2002. This

BHS Math Teams Flourish

by Steve Godsoe

Over one hundred students on six teams (Red, White, Gold, Silver, Bronze, and Platinum) continue to do well this year. After three meets, the Red Team is fourth in Maine out of 119 teams with many students excelling. All six teams are scoring in the top half of the State. David Kleinschmidt is tied for first in Maine (out of more than one thousand competitors), and Jue Wang is close behind.

In Eastern Maine, team members are strong at each grade level as shown by the following standings:

Seniors – Justin Vroom (3rd), Corey Mallonee (7th);

Juniors – Kayle Shapero (2nd), Janice Gunther (3rd);

Sophomores – David Kleinschmidt (1st), Jue Wang (2nd), Ben Weissman (4th), Andrew Kwak (6th), Ethan Lambert (7th), Eric Brown (10th), Kyle Cronin (12th), Will Owens (14th), Tony Alcalá (15th), James Bailey (16th);

Freshmen – Austin Smith (1st), Daniel Malmer (2nd), Stephanie Kleinschmidt (3rd), Melanie Craig (4th), and Andrew LeClair (5th).

Many others are very close to these leaders in their grade level. There are many strong upper-class students in addition to those listed such as Greta Alquist, Caleb Canders, Libby Russell, Claire Blanke, Aimee Patterson, and James Comins to name a few.

At the December 11th meet at Nokomis, nine of the top thirteen competitors were from Bangor High (with only two seniors), and Jue Wang and David Kleinschmidt had perfect scores. It appears that the underclass students are exceptionally strong this year, and that bodes well for the next few years.

In the New England Math League, Bangor High students are also doing very well. They are currently tied for first in Maine with the Maine School of Science and Mathematics, and are tied for twelfth out of 182 schools in New England, only a few points behind the leaders. Over one hundred fifty BHS students have competed in this contest.

It is clear that the students who strive to improve their mathematical skills by studying and competing in these contests gain much more than awards. Often, their overall mathematical understanding and strength improves dramatically.

Last year, twelve team members were part of a presentation about the math teams before the School Committee. The students were asked how many had scored an 800 on their math SAT exam or their math achievement tests. Ten of these students had done just that, and the other two were above 730.

Congratulations to these talented students and to all the other worthy Bangor High students who help to make this another outstanding year for our mathematics teams.

Performance Report

(continued from page 3)

Interventions The obvious question with all of the data that we collect and analyze is, "So What?" All school systems test their students, some more than others; however, what it means for the individual student is not as easy to answer. The Bangor School Department has been heavily involved in taking student data to the individual student level for quite some time. With the introduction of the Student Instructional Plan (SIP) process in 1992, Bangor students have been the beneficiaries of personalized plans for improvement based on their own achievement levels: and we believe that the achievement of our students on the various measures described within this article demonstrate the effectiveness of our efforts.

is the first year for full implementation of the fall pretest and spring posttest. The pretest results will be used by classroom teachers as a measure of skills already mastered by each student in the class. In addition, fall results will identify which students will benefit from tutorial help through our Community School and Title I programs. Posttest results will certify successful completion of the elementary mathematics curriculum.

It is important to understand that these "Must Knows" do not comprise the entire mathematics curriculum. Many students will demonstrate acquisition of other, more advanced, skills on Metropolitan Achievement Tests and other measure. Students are expected to demonstrate 85% proficiency in 2003 and 90% proficiency in 2004 on the "Must Knows" posttest.

Assessments for 5th grade students are currently in development.