

***Sandwich Public Schools
Community Report Card
2002***



Prepared by the

CENTER FOR POLICY ANALYSIS
UNIVERSITY OF MASSACHUSETTS DARTMOUTH

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**UNIVERSITY OF MASSACHUSETTS DARTMOUTH
CENTER FOR POLICY ANALYSIS**

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Progress Report

The *Progress Report* highlights improvements from the 1996 baseline year Community Report Card, while calling attention to the remaining challenges faced by the Sandwich Public Schools. Because the time frames for the data vary, the reader should pay careful attention to the periods that are being compared for each indicator.

The Sandwich Public Schools and its students have demonstrated improved performance in several areas when compared to the 1996 Community Report Card and to its peer communities:

- Sandwich has the highest total MCAS score among the peer communities. Sandwich's total MCAS score is 56 points above the state average, 18 points above the like community average, and 2 points above the aspirant community average.
- The MCAS scores of Sandwich students are above the state averages in all nine subject tests. Sandwich students perform at or above the like community average in all nine subject tests and above the aspirant community average in six out of the nine subject tests.
- In 2002, the SAT verbal score of Sandwich students (523) was 11 points higher than the state average (512) and 19 points higher than the national average (504). The SAT math score of Sandwich's students (528) was 12 points higher than the state and national averages (516).
- The number of Advanced Placement exams taken by Sandwich students has nearly doubled since 1996. For the Class of 2002, 118 students took 187 advanced placement exams. This compares to 69 students taking 84 exams for the Class of 1996. Ninety-percent of students scored a 3 or higher, qualifying them for college/university credit. This compares to 74.6% of students for the Class of 1999 who scored a 3 or higher.
- Sandwich has the highest percentage of staff who are teachers among the peer communities. In FY 2002, 68.9% of the staff in the Sandwich Public Schools consisted of teachers. This compares to 61.7% of the staff who were teachers in FY 1995.
- In 2001, Sandwich had the best student/computer ratio among the peer communities (1.15 computers per student). This ratio is primarily a result of the addition and renovation at the high school.

While Sandwich's students have attained many successes, there are some areas where improvement can occur in comparison to the peer communities:

- As a community, Sandwich experienced a decline of 6.2% in its scaled index score since the baseline year Report Card. Sandwich ranks third among the eight communities in terms of its overall Comparative Performance Index Score for FY 2002, while it ranked 2nd in the baseline year of 1996.
- Sandwich's annual SY 2001 dropout rate ranks 6th highest among the peer communities, although this rate (2.0%) is still below the statewide average (3.5%) and is lower than in the baseline year of SY 1994 (2.1%).
- Sandwich has the 7th lowest percentage of students taking the SAT examination among the peer communities. In 2001, 77% of all high school students in Sandwich took the SAT examination, compared to 76% in the baseline year of 1995. However, the percentage of students taking the SAT in Sandwich is above the statewide average of 69%.

Community Challenges

Community challenges are those issues that can not be addressed solely by the Sandwich Public Schools, but require the involvement of the entire community.

The Sandwich Public Schools is continuing to work within the limits of the Massachusetts Education Reform Act of 1993. The continuing growth in student enrollment is placing a financial burden on the Sandwich Public Schools as it tries to keep per pupil spending at foundation levels, while being constrained by Proposition 2 1/2 tax limits. Many Sandwich residents are seasonal residents and do not claim the town as their official place of residency. Thus, while Sandwich's assessed property values per capita are high compared to the state average, Sandwich residents are not as wealthy as this statistic might suggest, because seasonal residents give an inflated measure of the community's wealth and its ability to support the public schools. Furthermore, seasonal residents do not have children in the school system and are less likely to favor property tax increases to support public schools. Thus, while Sandwich had an excess capacity of \$454,142 in FY 2002 and could have raised this additional money through property tax increases, tax increases may be difficult considering the number of property owners whose primary residence is not in Sandwich and who likely do not have children in the Sandwich Public Schools. Sandwich's fiscal effort in FY 2002 is the third lowest fiscal effort among the eight peer communities.

The lack of state and local funding presents the greatest challenge to Sandwich High School. While the Sandwich tax payers approved a \$25 million dollar bond to finance the cost of a newly expanded and renovated high school facility, the town has not been willing to support an override since 1996 or to utilize general funds to provide additional teachers to accommodate increased enrollment and program expansion.

From FY 1993 to FY 2002, the district had the lowest increase in state aid per pupil among the eight peer communities (\$683). In Fiscal Year 2000, the Sandwich Public Schools spent \$4,211 per pupil to educate regular day students (non special education and bilingual), a **decline** of 1.5% from the baseline year of FY 1994. Conversely, the expenditure per pupil for regular day students increased by 21.0% in the like communities, 27.1% in the aspirant communities, and 34.5% statewide over this period. Sandwich ranks last among the eight peer communities in terms of per pupil expenditures for regular day students for FY 2000. In FY 2000, only 3 districts in the state had lower per pupil expenditures for regular day students than the Sandwich Public Schools.

The district's FY03 budget reflects a significant decrease in local aid. Major cuts are being made in all non-personnel line item accounts. In FY 04, the district may be forced to lay off teachers and cut programs in spite of increased enrollment. Lack of adequate funding will play a major role in future student performance. As class sizes increase and elective courses and non-essential programs are cut, Sandwich Public Schools may not be able to provide a comprehensive educational program to meet the needs of all students.

Community Performance Index Total Scaled Scores

The Comparative Performance Index is a weighted aggregate index that compares the overall performance of the Sandwich Public Schools to its peer communities based on the community characteristics, school system characteristics, and educational outputs included in this report card. The Comparative Performance Index allows one to compare the performance of a community to all other peer communities and to compare its performance to maximum and minimum levels of performance. A more detailed explanation of the Comparative Performance Index is included in Appendix A.

While the format and indicators in the *Community Report Card* have remained essentially the same as in previous years, some comparative data is no longer available and is not included in the Performance Index. Thus, direct comparisons of the Community Performance Index scores over time are not valid because some of the indicators have changed since the baseline year. To accurately measure progress over time, a scaled index value for the years 1996 and 2002 was calculated (see table below and Appendix A). Using scaled scores allows one to measure each district's progress from year to year and to measure the degree of progress in relation to the peer communities.

As the table below indicates, Sandwich's scaled index score has declined by 6.2% since the 1996 baseline year Report Card. The decline can be attributed to several factors, including the average attendance rate, the 4-year drop-out rate, a lower SAT verbal score, the percentage of students attending four-year colleges, and the percentage of students taking the SAT. While Sandwich experienced improvements in each of these areas since the baseline year (except for the verbal SAT score), the **rate** of these improvements was lower than in many of the peer communities. Thus, while Sandwich improved in these areas in relation to baseline year data, the district lost ground when measured against its peer communities.

Additionally, per pupil spending in Sandwich has not kept pace with spending in its peer communities. While this indicator has only a small effect in terms of Sandwich's comparative index score, low per pupil spending may be affecting student performance in other areas. Importantly however, Sandwich has improved since the baseline year in most of the educational outcomes indicators (e.g. MCAS) and the decline in its scaled score may be attributable to a one-year event. This is especially true since the district's scaled score has increased in each of the previous years' report cards. Future report cards will allow one to determine if this year's decline is a trend or simply a one-year drop. Additionally, it is important to remember that the district outperforms students statewide in all of the educational outcomes indicators (Section 3).

COMMUNITY PERFORMANCE INDEX TOTAL SCALED SCORES					
<u>Like Communities</u>					
	<u>Scaled Score 1996</u>	<u>Scaled Score 2002</u>	<u>Rank Baseline 1996</u>	<u>Rank 2002</u>	<u>Difference 1996 to 2002</u>
Abington	50.5%	47.8%	7	7	-2.7%
Foxborough	59.3%	72.4%	5	2	13.2%
Grafton	55.1%	57.0%	6	6	1.9%
Norton	38.9%	43.4%	8	8	4.5%
Sandwich	76.4%	70.2%	2	3	-6.2%
Stoneham	76.4%	70.2%	2	3	-6.2%
Average:	59.4%	60.2%			0.8%
<u>Aspirant Communities</u>					
Duxbury	86.6%	89.0%	1	1	2.4%
Marshfield	65.3%	64.3%	4	5	-0.9%
Average:	75.9%	76.7%			0.7%

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Mission of the Sandwich Public Schools

The mission of Sandwich Public Schools is to provide each and every child with the core values, knowledge and skills needed to achieve full potential in his or her personal and work life and to contribute actively in our diverse and changing democratic society. We all share the responsibility to fulfill this mission.

Professional staff must recognize and respond to the intellectual capacity and learning style of each individual student. Individuals grow intellectually at different rates and in different ways. A complete education exposes all students to a wide range of learning opportunities to enable them to develop an awareness of their own specific style of learning. In keeping with the desire to place the student at the center of learning the teacher will also function as a facilitator and coach. All staff will establish an appropriate learning environment and provide feedback to allow each student the opportunity to master the developmentally appropriate academic, social and emotional skills for which the student is ready.

We believe that all children can learn and can meet high standards. This fundamental belief provides the foundation for establishing high expectations for all children with the goal that they will be able to lead productive, fulfilling, and successful lives in an increasingly complex, diverse and changing world.

The Sandwich Public Schools are committed to educational excellence. Our success depends upon all aspects of the community working together in a spirit of mutual support.

CORE VALUES

The ultimate commitment of the school system is to the children. The Sandwich School Community is dedicated to fostering these core values on behalf of all students.

All children can learn.

All staff will recognize and meet the varying needs of all students. All staff will provide a positive learning environment that allows each student the opportunity to master the developmentally appropriate academic, social, and emotional skills for which the child is ready.

Learning begins at home.

Students are born with a natural curiosity and the ability to learn. Parents must foster these traits at home.

The teacher's primary role is to foster learning and to serve as a catalyst for interactive instruction.

Varied curricula and teaching styles will develop inquisitive minds and problem solving skills. Teachers will serve as facilitators, motivators, helpers and coaches.

Learning will take place in all environments.

All school related activities will present opportunities for learning. Our goal is to develop life long learners; therefore, students must be encouraged to learn outside of the classroom. To foster the educational process, the school system will seek to provide appropriate learning environments and adequate support services. A fundamental learning tool will be the utilization of state of the art technology.

All staff will exhibit respect for diversity and human differences.

We will cooperate with fellow educators, parents, students and others in a respectful way. We will respect individual differences. We will foster a respect for our environment and make a commitment to contribute in a "global society."

Each administrator will provide leadership and support to insure that the Core Values and the environment described above are developed and nurtured.

PRINCIPLES OF LEARNING

To meet the needs of all students, it is essential that we have a clear sense of direction. Recognizing that well prepared teachers are crucial to an effective education process, the school committee will provide staff with ongoing opportunities for professional growth. The following represents the Principles of Learning for Sandwich Public Schools.

1. Learning occurs when teachers hold high expectations that all students can be successful and that all students can and will learn.

As a result, students will:

- Develop positive self-esteem and a positive attitude.
- Achieve a sense of accomplishment that results from hard work and persistence.
- Demonstrate sensitivity to and respect for the needs and feelings of others.

- Continually experience a variety of effective instructional approaches which meet his/her individual needs.
- Involve him/herself in classroom and homework activities.

2. Learning is maximized when teachers have a command of content knowledge, curricula knowledge, developmental patterns and knowledge of the individual student's abilities and learning styles.

As a result, students will:

- Exhibit his/her understanding through performances, portfolios, logs, projects, reports, speaking and writing assignments, exhibitions, experiments and other appropriate measures. Demonstrate the ability to distinguish the relationship of concepts within and between subject areas.

3. Learning is characterized by active, engaged, collaborative and integrated exploration with the student at the center of all activities.

Learning occurs when:

- Students experience discussion, exploration, investigation, validation, conjecture, questioning, construction and representation, and reinforcement.

4. Learning optimally occurs through interactive and cooperative involvement among teachers, students, parents and other community resources.

Types of interactive involvement include:

- Seminar, discussion teams, cooperative work groups and small discussion groups.
- Opportunities for peer education.

5. Learning is enhanced when teaching promotes higher order thinking, reasoning and questioning skills.

As a result, students will:

- Frequently make conjectures, hypotheses, generalizations and summaries.
- Frequently respond to and investigate the "why" and "how" in addition to the "what", "where", and "who".

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Overview of Accomplishments 1993-2002

Since the eve of Educational Reform, the Sandwich School Department has worked to provide a rigorous academic curriculum, a safe school environment, and a school culture that supports all aspects of diversity through innovative teaching and enrichment programs to meet the academic, social, and developmental needs of all students. The district has established a Professional Development Program that provides its teachers with a menu of cost free opportunities for growth that is exemplary. The district has successfully infused technology into all aspects of its curriculum and management information systems.

The district has also partnered with the Sandwich Police Department, County Court Systems, and many regional social service agencies. The district has also been proactive in advocating the importance of the fine and applied arts through innovative curriculum integration and varied enrichment programs. While its budget has been limited, the district has been able to institute a significant number of new initiatives. A list of initiatives and accomplishments is provided below.

2002

- District Goals Presented to Community
- MCAS Action Plan Implemented
- Teacher Fellowships Established for FY 03
- Teacher Mentoring Program Established for FY 2003
- 1.6 million dollars in grant funds awarded to Sandwich Public Schools
- Curriculum using research based model completed at SHS in preparation for NEASC in visit 2003
- Gosnold Counseling Program expanded to include K-8 students
- Title 1 Math Program Implemented
- Advanced Placement and Vertical Teams implemented in grades 5-12
- Exemplary Curriculum using "Wiggins" model implemented in K-12
- Homework Zones "cyber space assignments and tutorials established
- K-8 computer labs are expanded and fully staffed through "Lighthouse" Technology Grants
- Sandwich Coalition to Prevent Substance Abuse established through Title V and other federal grant awards.
- Cops in Schools Program expanded to include K-8 buildings.
- 200 + hours of cost free professional development offered for teachers
- After-school enrichment programs expanded to include 15-20 programs/activities per-school implemented with \$40,000 + in grant funding
- Cultural Collaborative Grant funds the development of Integrated Arts Curriculum and strengthens Music Program
- Nurse Leadership Grant funded to expand building health services.
- Breakfast Program Grant Awarded to computerize food services.

2001

- District Goals Presented to Community
- MCAS Action Plan Implemented
- \$1.4 million in grants awarded to Sandwich Public Schools
- Major Technology Grants for Computer Repair, Virtual Education Space and Curriculum Integration
- Plan for NEASC preparation is implemented
- SHS Building Project Completed
- 200 + hours of cost free professional development offered to teachers
- Title 1 Reading Program fully implemented with 12 staff members
- After-school enrichment program developed for K-8

- Gifted and Talented Enrichment Program and Professional Development Program Funded

2000

- 3rd Community Report Card presented to the community
- District Goals presented to community
- MCAS Action Plan implemented
- Saturday School implemented for students grades 4-10
- School based and " District Improvement Plans" presented
- Alternative School piloted at SHS
- \$1 million + in major grant awards
- New and innovative curriculum and initiatives showcased
- Traditional Business Department eliminated and Technology, Communication Management Program is fully implemented
- Community/Business/Post Secondary Partnerships expanded
- High School Strategic Plan for Accreditation developed
- Guided Reading Program and DRA implemented
- In house Professional Development Plan included 300+ hours of cost free professional development

1999

- System wide Goals presented to the community
- MCAS Action Plan presentation
- School based and "District Improvement Plans" presented
- Federal Funding awarded to fund "School Resource Officer" at Sandwich High School
- Gonsold Counseling Program established at Sandwich High School
- Major Grant Awards as they relate to DIP
- New and Innovative Curriculum Initiatives Listing
- Community/Business/Post Secondary Partnerships Listing
- 3 "Lighthouse" Technology Awards to Integrate Technology into all aspects of the community

1998

- System wide Goals Presented to the community
- English Language Arts and History/Social Sciences Curriculum implemented with district curriculum frameworks alignment
- Major Technology Grant "Project MEET" awarded for intensive professional development in all aspects of technology integration
- Formal Evaluation of the Block Schedule completed
- Curriculum Action Plans for each grade and subject area articulated
- First Administration of MCAS TEST and MCAS Action Plan Presented
- School Site Council Action Plans incorporated into District Improvement Plans (DIP)
- Major Grant Awards presented to community as they relate to DIP

1997

- 2nd Community Report Card Presented to the community
- Curriculum Goals and Flow Chart established
- Guiding Principles of the Curriculum Frameworks implemented
- "Common Threads" Connecting all Academic Areas presented
- Assessment Team established
- Curriculum Leadership Teams in-place
- Math and Science Curriculum Alignment completed

- Writing Across the Curriculum Philosophy and Goals articulated
- Formal, External Evaluation the Block Schedule published

1996

- First Community Report Card distributed to the community
- Education Reform/Curriculum Action Plan implemented
- System wide goals presented to the community
- New reading program developed
- District Professional Development Plan implemented
- SCAN's Report integrated into School to Career Program
- High School Restructuring Team begins with internal Evaluation of the Block Schedule

1995

- Commitment to Education Reform and Professional Development articulated
- Technology Training initiated in K-12
- Reading Program - In depth evaluation
- School to Career Program initiated
- Social Development-Saturday School for "at risk" students piloted
- Block Schedule at SHS implemented
- Common Chapters of Curriculum Frameworks Action Plan implemented
- Curriculum Study Groups in-place
- In-depth analysis/teacher interviews re: Reading Program conducted
- Writing Program and Portfolio Assessment developed
- Humanities Program developed
- Hands-on Science "Palms" Program and Leadership Teams established
- District presents school by school comparisons of standardized test scores
- IOWA Reading Scores presented to the community
- Terra Nova Test Scores presented to the community

1994

- Mission Statement developed
- Core Values articulated
- Principles of Learning implemented
- K-8 Curriculum Articulation Teams established
- Curriculum Liaisons/Facilitators established
- Technology Vision Statement/Goals and Plan
- Report on Curriculum Projects completed
- Grant Development/Awards and Plans presented
- Health Grant/Curriculum developed
- Block Scheduling introduced to the community

1993

- Curriculum Mapping for Grades K-8 completed
- Listing of District Curriculum Initiatives and Mini Grants for teachers
- Initial District Grant Development and Awards
- First Administrative Retreat to discuss Education Reform
- Begin elimination of the general track and high school restructuring
- Career Explorations Program I Developed with Tech.Prepare.

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INTRODUCTION

• WHAT IS A COMMUNITY REPORT CARD?

During the 1996-1997 school year, the Sandwich School Department responded to state and federal education reform initiatives by producing its first *Community Report Card*. The *Community Report Card 1996* was a set of objective indicators that provided baseline data for measuring the Town of Sandwich's progress in achieving its major educational goals. Thus, the *Community Report Card* was provided to the citizens of Sandwich in order to help them assess the relationship between their community and the school system. **Importantly, it reaffirmed the commitment by the Superintendent of Schools, school administrators, teachers, and support staff to be accountable to the people they serve: students, parents, the business community, and public officials.**

The idea of developing community report cards as a means of measuring progress toward national education goals originated at a national education summit held in Charlottesville, Virginia in 1989. At the 1989 education summit, the President of the United States, George H. Bush, the U.S. Secretary of Education, William Bennett, and the governors of the 50 states agreed to establish measurable goals for education reform that were embodied in a report called *America 2000*. The *America 2000* report identifies eight major goals for education reform:

Goal I. All children will start school ready to learn.

Goal II. The high school graduation rate will be at least 90 percent.

Goal III. Students will leave grades four, eight, and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history, and geography. Every school will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy.

Goal IV. The Nation's teaching force will have access to programs for the continued improvement of their

professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.

Goal V. Our students will be first in the world in science and mathematics achievement.

Goal VI. Every adult will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

Goal VII. Every school will be free of drugs and violence and will offer a disciplined environment conducive to learning.

Goal VIII. Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

The Massachusetts Department of Education adopted these goals as a guideline for implementing the Massachusetts Education Reform Act of 1993. As part of their Education Reform strategy, the state is required to define what "every student should know and be able to do" after completing twelve years in the Massachusetts public education system. The Education Reform Act also specifies required minimum funding levels, a core curriculum, and fourth, eighth, and tenth grade performance criteria, while providing schools with new management flexibility to meet these objectives.

• THE NO CHILD LEFT BEHIND ACT

On January 8, 2002, President W. Bush signed a reauthorization of the federal Elementary and Secondary Education Act, also known as "No Child Left Behind" (NCLB). The four pillars of the new legislation -- accountability, flexibility, scientifically based research, and options for parents -- call for a multi-faceted approach to holding schools accountable for improving the academic achievement of disadvantaged students. In turn, districts will be permitted greater flexibility in combining and using federal dollars to address the specific needs of

students and families, while strengthening the professional skills of teachers and paraprofessionals assigned to work with them, with funds earmarked for professional development, program innovation, and school-wide training.

As part of this legislation, NCLB will require state assessments that measure what students in grades 3 to 8 know and learn in reading and mathematics. NCLB will provide parents, citizens, educators, administrators, and policymakers with data from those annual reports. The data will be available in annual report cards on individual school performance and statewide progress. In addition, the report cards will give parents information about the quality of their children's schools, the qualifications of teachers, and their children's progress in key subjects.

The Sandwich Public Schools, through their collaboration with the Center for Policy Analysis at UMass Dartmouth, has been meeting these requirements since 1997 by producing its bi-annual Community Report Card. In continuing its commitment to students, parents, the business community, and public officials, as well as to meet the requirements of NCLB, the Sandwich School Department asked the Center for Policy Analysis to produce a subsequent Community Report Card for 2002. The Sandwich Community Report Card 2002 will enable the Sandwich School Department to continue measuring its progress from the 1996 baseline year and also to meet the requirement of the No Child Left Behind Act.

- **HOW WAS THE REPORT CARD DEVELOPED?**

To ensure the credibility and impartiality of its *Community Report Card*, the Superintendent of Schools asked the University of Massachusetts Dartmouth Center for Policy Analysis to consider appropriate indicators and to gather baseline data for the initial report card. Research staff at the Center for Policy Analysis reviewed several report cards from communities throughout the country to assess their strengths and weaknesses. There is no single national standard for constructing community report cards and those examined by the Center's research staff revealed a great deal of variety. Some were dry statistical compilations that compared year-to-year

data such as SAT test scores and graduation rates without any explanatory narrative or analysis.

Moreover, most of these report cards did not measure school performance in comparison to other communities. Others provided only annual data without any baseline for measuring progress from year-to-year. At best, these report cards might compare a particular school system's performance to statewide statistical averages. Finally, some report cards were merely "progress reports," loaded with color photographs, describing the previous year's school activities such as field trips, band competitions, and football championships, but providing little insight into the school system's academic performance.

School Superintendent Peter J. Cannone approached the Center's research staff to collaborate in the preparation of a credible report card to measure the school system's progress from year to year *and* to compare its performance to similar - or peer - communities in Massachusetts. To our knowledge, the Sandwich Public Schools are among the first school systems nationwide to adopt this innovative approach. Over time, the *Sandwich Community Report Card* has given the residents of Sandwich *two* yardsticks for measuring the pace and success of educational reform initiatives; one internal yardstick for measuring progress from year-to-year and one external yardstick for comparing Sandwich's performance relative to school systems in peer communities throughout the state.

- **HOW WERE THE PEER COMMUNITIES SELECTED?**

Sandwich's peer communities in Massachusetts were determined on the basis of four criteria: (1) population, (2) population growth, (3) percentage of residential property taxes as a local revenue source, and (4) median household income.

1. POPULATION. *Towns with a population ranging from 13,000 to 25,000 were selected for these reasons:*

The population or size of a community is important because it affects the structure of municipal government, the structure of the school system, and the general environment in which education occurs. The smaller the population of a community, the greater the likelihood that it will be

administered under a Town form of government. Likewise, Sandwich faces problems and challenges that are unique to a small community. For example, because residents of small towns such as Sandwich are largely Caucasian and have incomes above federal poverty levels, it is difficult for such communities to obtain federal and state grants to support education reform initiatives. Thus, small communities are more reliant on “own source” funding than are larger communities.

A small community may also foster an environment where interaction among the parties involved in school politics is fueled by a “grapevine effect” in which contentious issues such as education funding and reform are often conducted on a personal level rather than in a larger public arena. School personnel, therefore, may often be more alert to the personal consequences of their decisions. Indeed, while it is often easier to introduce systemic change in a small community, this environment may permit small factions to gain political clout more easily and to apply pressure on school officials that makes significant reform more difficult.

The problem of economies of scale is also inherent to a small community. For example, because the student population of the Sandwich Public Schools is relatively small, enrollment figures from year to year can have a profound effect on school operations. An increase in enrollment of 50 students over a two-year period creates a volatile environment that may necessitate a restructuring of schools, classrooms, finances, and personnel. Furthermore, because the school system does not purchase goods in quantities as great as larger school districts, items such as textbooks and supplies can be more expensive for a small school system to purchase. This also holds true for services such as busing and the school lunch program, which are often more costly for a small school system to provide.

Therefore, the population or size of a community not only increases the probability that communities will share similar structural characteristics, it also results in a greater likelihood that communities will face the same range of issues that students bring with them to school, that affect learning in school, and that require the attention of school administrators and teachers. The following communities were selected as Sandwich’s peer communities on the basis of population:

Population - Peer Communities		
Municipality	Kind of Community	2000 Population
Abington	Rural Economic Center	14,605
Duxbury	Residential Suburb	14,248
Foxborough	Econ. Developed Suburb	16,246
Grafton	Econ. Developed Suburb	14,894
Marshfield	Residential Suburb	24,324
Norton	Growth Community	18,036
Sandwich	Residential Suburb	20,145
Stoneham	Econ. Developed Suburb	22,219
	Average:	18,090

Source: U.S. Census Bureau, 2000

2. POPULATION GROWTH. *Towns that have exhibited a significant growth in population from 1980 to 2000 were selected for these reasons:*

Sandwich has experienced one of the fastest growing populations in Massachusetts. The population of Sandwich has more than doubled since 1980 and it was the 3rd fastest growing community in the Commonwealth over this period. Sandwich’s population has increased by 30.0% since 1990. Such growth places increased demands on the Sandwich Public Schools to provide services that meet the needs of a growing student population.

The growth in Sandwich’s population occurs at a time when spending increases mandated by the Education Reform Act of 1993 have not kept pace with Sandwich’s rising enrollments and costs (Moscovitch 1994). The Education Reform Act ensures adequate spending on public schools by establishing a foundation budget for each school department. School departments that do not spend at foundation budget levels must bring spending to foundation levels through an increase in local property taxes. This required increase, called the municipal revenue growth factor, measures the increase in available revenues to the town from allowable increases in property tax levies, the increase in state aid, and increases in other local receipts.

Sandwich’s difficulty in raising revenue to meet the foundation budget despite significant population growth has been troublesome primarily because the municipal revenue growth factor compares *estimated* revenues for the present year with *actual* enrollment

from the previous year. Because most communities, including Sandwich, typically underestimate local receipts, estimated revenues and the town's municipal revenue growth factor are lower than what available revenue sources reflect. While enrollments continue to grow and the foundation budget increases, property tax increases are constrained under Proposition 2½ (Moscovitch 1994). Combined with an underestimated municipal revenue growth factor, Sandwich cannot meet its foundation budget without decreasing per student spending or raising revenue through a Proposition 2 ½ override.

In sum, Sandwich is in the position of having to provide services to a growing population of students through a foundation budget based on underestimated revenues and past year enrollments that are typically lower than the actual figures. The budget shortfalls have limited the ability of the Sandwich Public Schools to institute new programs or to expand existing ones. **While the district's students have performed well on the MCAS and SAT tests, continued improvement will be more difficult to sustain under the current funding formula.** One solution has been the supplemental funding obtained from a surplus in Chapter 70 monies. School Superintendent Peter J. Cannone was at the forefront among affected towns statewide in urging the state to release these surplus monies to school districts who have been negatively impacted by the Education Reform funding formula.

Population growth was used as a criteria for the *Community Report Card* because towns which have experienced a population increase since 1980 are likely facing similar challenges as Sandwich in providing services to a growing student population and meeting the requirements of the Education Reform Act of 1993. While few towns have experienced a population increase as significant as Sandwich, these are the communities in Massachusetts that have evidenced a growth in population and meet the other criteria established for peer communities.

Population Growth Peer Communities	
Town	Pop. Growth 1980 to 2000
Massachusetts	10.7%
Abington	8.0%
Duxbury	20.7%
Foxborough	14.8%
Grafton	32.5%
Marshfield	16.3%
Norton	42.1%
Sandwich	130.8%
Stoneham	3.7%
Source: U.S. Census Bureau, 2000	

3. PERCENTAGE OF RESIDENTIAL PROPERTY TAXES AS A LOCAL REVENUE SOURCE.

A town's reliance on property taxes affects its ability to provide financial support for the public schools and for other municipal services. Under the Education Reform Act of 1993, the state education funding formula uses property values as the principal factor in determining a community's wealth and in calculating funding for local school departments. Thus, communities with high property values receive less state financial support and are more reliant on local property taxes to support their public schools.

However, because many property owners in Sandwich do not live in the town for the full year, property values give a somewhat inflated measure of the community's wealth. Furthermore, because seasonal residents do not have children in the school system, they are less likely to favor property tax increases to support public schools. Thus, communities whose residential property taxes are near or above the state average (72.0%, 1996) in terms of the percentage of residential property taxes as a local revenue source were selected as peer communities. These towns are more likely to face similar issues regarding the ability and willingness of the community to support its public schools.

Since the initial Community Report card in 1996, the percentage of residential property taxes as a local revenue source has increased statewide from 72.0% (FY 96) to 74.4% in (FY 02). In Sandwich the percentage has decreased by 1.1 percent.

Property Tax Percentage		
Town	% Property Tax of Local Revenues - FY 96	% Property Tax of Local Revenues - FY 02
Massachusetts	72.0%	74.4%
Abington	78.8%	75.7%
Duxbury	80.4%	76.6%
Foxborough	74.0%	73.2%
Grafton	86.8%	78.7%
Marshfield	74.7%	68.2%
Norton	79.1%	78.8%
Sandwich	88.6%	87.5%
Stoneham	70.2%	70.0%

Source: Massachusetts Department of Revenue, FY 2002

4. MEDIAN HOUSEHOLD INCOME.

Property taxes are the main form of own-source revenues for most municipalities. However, because many who live in Sandwich and similar communities are part-time residents, equalized property values are often an inflated indicator of a town’s wealth and the ability to support its public schools. Sandwich has among the highest equalized property values of the peer communities, but ranks below most peers in measures of income. Thus, a disparity exists between actual “ability-to-pay” by full-time residents and the formula based measures that rely on property values.

According to 1990 U.S. Census Bureau statistics, Sandwich ranked 129th among the 351 municipalities in Massachusetts in terms of median household income, which placed the town in the second quartile of all Massachusetts communities (in 2000, Sandwich ranks 119th). To make external peer comparisons to other municipalities, it was determined that peer communities should be separated into “like communities” and “aspirant communities.” This delineation makes it easier to see the differences, if any, that the wealth of a community’s residents has on a community’s public schools. Where such

differences are evident, the aspirant communities provide a yardstick for measuring what Sandwich should aspire toward.

- ◆ *Like Communities.* Cities determined to be peers on the basis of median household income were designated “like communities” if they were in the second quartile of Massachusetts municipalities in terms of median household income. Thus, like communities are not only similar to Sandwich in terms of population and population growth, but also have residents who possess similar incomes. The cities of Abington, Foxborough, Grafton, Norton, and Stoneham are communities like Sandwich in the sense that they have similar size populations and are each in the second quartile of all Massachusetts municipalities as measured by median household incomes.
- ◆ *Aspirant Communities.* Cities determined to be peers on the basis of median household income were designated “aspirant communities” if they were in the top quartile of Massachusetts municipalities in terms of median household income. The cities of Duxbury and Marshfield are aspirant communities in the sense that they have similar size populations, but have residents who possess higher median household incomes than those of the like communities. Including data from the two aspirant communities provides a broader context for assessing not only where the Town of Sandwich and its schools are now, but for measuring the types of changes that might be expected in the schools with a higher level of education funding from local sources.

Median Household Income	
Like Communities	
Town	Median Hshld. Income: 2000
Massachusetts	\$50,502
Abington	\$57,100
Foxborough	\$64,323
Grafton	\$56,020
Norton	\$64,818
Sandwich	\$61,250
Stoneham	\$56,605
Aspirant Communities	
Duxbury	\$97,124
Marshfield	\$66,508
Source: U.S. Census Bureau, 2000 (1999 dollars)	

● **WHERE DOES INFORMATION IN THE REPORT CARD COME FROM?**

The statistical information contained in the *Sandwich Community Report Card* comes from several sources. Fiscal capacity, population, and much of the demographic information was obtained from the Massachusetts Department of Revenue’s Municipal Database and the U.S. Census Bureau. The comparative information on school characteristics and academic performance was obtained from the Massachusetts Department of Education. Some of the

data was obtained directly from the Sandwich School Department. *In reviewing the Report Card, readers should always remember that there are limits to the comparative value of even the best statistics.* Appendix B describes these limitations in detail.

In interpreting the data to create an accurate assessment of the current state of the Sandwich schools, it is more useful to view the overall broad picture than to focus narrowly on a particular table or a specific number that may not mean anything apart from the overall context of the community and the school system.

● **HOW IS THE COMMUNITY REPORT CARD STRUCTURED?**

The *Sandwich Community Report Card* is divided into three sections which describe: (1) Community Characteristics that affect classroom learning, (2) School System Characteristics, and (3) an assessment of Educational Outcomes. In each instance, an interpretive narrative is provided as a guide to the statistical data. Taken together this information provides a well-rounded picture of the Sandwich Public Schools and the environment in which they operate, as well as equivalent data on like and aspirant peer communities for comparison on a statewide level.

SECTION 1

COMMUNITY CHARACTERISTICS

Schools do not exist in a vacuum. In many ways, they are windows on the communities they serve and support. A community's character can contribute to a positive environment for student learning or may have a highly negative impact on the educational climate in the schools. These factors not only affect the students' readiness and ability to learn, but in the aggregate, they also create conditions which school systems must respond to with human and financial resources. Thus, a community's characteristics are a crucial part of the context in which the schools operate, and they help to shape both the educational and social issues with which school systems must deal.

ECONOMIC COMPARISONS

- INCOME**

The per capita income of Sandwich residents is 3.6% higher than the statewide average while median household incomes are 21.3% higher than residents statewide. Importantly, many residents of Sandwich are seasonal residents and do not claim the town as their official place of residency. Therefore, the U.S. Bureau of the Census does not include their incomes in calculating income statistics. Thus, while the assessed property values per capita may be high for these communities, other income data may be unexpectedly lower since different populations are included in calculating these measures of wealth.

- ◆ **Per Capita Income.** *Sandwich has a per capita income of \$26,895. This compares to a statewide average of \$25,952. Sandwich ranks 6th among the eight peer communities in terms of per capita income.*
- ◆ **Median Household Income.** *Sandwich residents have a median household income of \$61,250. This compares to a statewide average of \$50,502. Sandwich ranks 5th among the eight peer communities in terms of median household income.*

Income: 2000				
Like Communities				
Town	Per Capita Income	R	Median Household Income	
			R	R
Massachusetts	\$25,952		\$50,502	
Abington	\$23,380	8	\$57,100	6
Foxborough	\$32,294	2	\$64,323	4
Grafton	\$26,952	5	\$56,020	8
Norton	\$23,876	7	\$64,818	3
Sandwich	\$26,895	6	\$61,250	5
Stoneham	\$27,599	4	\$56,605	7
Average:	\$26,833		\$60,019	
Aspirant Communities				
Duxbury	\$40,242	1	\$97,124	1
Marshfield	\$28,768	3	\$66,508	2
Average:	\$34,505		\$81,816	

R = Ranking
Source: U.S. Census Bureau, 2000 (1999 dollars)

Summary

Sandwich's residents have a per capita income that is 3.6% higher than the state average and a median household income that is 21.3% higher than the state average.

- POVERTY**

Poverty poses a serious challenge to children's access to quality learning opportunities and their potential to succeed in school (NCES 1996). Data on poverty and welfare dependency rates in Sandwich are well below state averages.

- ◆ **Families Living in Poverty.** *In Sandwich, 2.2% of all families live below the official poverty level as defined by the U.S. Department of Labor (2000). This compares to a statewide average of 6.7%. The*

percentage of Sandwich families living below the poverty level in 1990 was 3.5%. Sandwich ranks 5th among the eight peer communities in terms of having the lowest percentage of families living below the poverty level.

- ◆ **Students Meeting Low Income Guidelines.** In SY 2001, 3.2% of all Sandwich students were classified as low-income based on U.S. Department of Housing and Urban Development guidelines. This compares to a statewide average of 25.1%.

Sandwich ranks 2nd among the eight peer communities in terms of having one of the lowest percentages of students meeting low-income guidelines. Sandwich also ranked 2nd in the baseline year of SY 1995 (4.6%).

Poverty				
Like Communities				
Municipality	*% Families		**Students Mtng. Low Income	
	< Pov. Line	R	Guidelines	R
Massachusetts	6.7%		25.1%	
Abington	2.1%	2	7.8%	6
Foxborough	2.3%	5	6.7%	4
Grafton	2.3%	5	8.0%	7
Norton	2.2%	3	8.0%	7
Sandwich	2.2%	3	3.2%	2
Stoneham	3.0%	7	6.8%	5
Aspirant Communities				
Duxbury	1.7%	1	0.8%	1
Marshfield	3.8%	8	6.1%	3
R=Ranking				
* U.S. Census Bureau, 2000				
** Massachusetts Department of Education, SY 2001				

Summary

Sandwich is well below state averages in terms of families living below the poverty level and students meeting low-income guidelines

EDUCATIONAL COMPARISONS

Wage and salary levels are increasingly determined by an individual's educational attainment. As modern economies move more and more toward information-, service- and technology-based industries, the relationship between educational attainment and income levels is growing stronger.

Each successively higher educational level is associated with an increase in earnings (U.S. Census Bureau 2002). For example, from 1997 to 1999, average earnings for adults age 25 to 64 ranged from \$18,900 for high school dropouts, to \$25,900 for high school graduates, \$45,400 for college graduates, and \$99,300 for workers with professional degrees. These differences in earnings have grown over the past 25 years and are expected to widen even more in the future.

On average, an individual with a bachelor's degree can expect to earn \$1.1 million more in real lifetime income than a high school dropout and \$1.0 million more than a high school graduate with no college experience and this gap continues to grow wider each year (U.S. Census 2000).

● PARTICIPATION IN CIVIC ACTIVITIES

A college education enriches students' lives and provides benefits that are passed on to future generations and society as a whole and plays a vital role in preparing individuals to participate actively in the political, economic, and social aspects of their communities (Pascarella 1991; NCES 1998). There is a positive relationship between the educational attainment of adults and their participation in civic activities. For example, adults with less than a high school diploma or GED are less likely to read a newspaper and are less likely to participate in civic organizations (e.g. a community or church group) or to participate in ongoing community service (Center for Policy Analysis 2000; National Center for Education Statistics 1998). In light of what public officials, journalists, and scholars define as "the decline of American civic culture", education can

play an important role in improving the civic participation of a community's residents.

● **PARENTS' EDUCATIONAL LEVELS**

The relationship between parents' and their children's levels of education is well documented statistically. The higher the level of parents' education, the more education their children are likely to pursue. There are many factors involved in this relationship, including attitudes toward school, academic expectations for school-age children, and the known linkages between education and income levels. A study by the U.S. Census Bureau shows that children from families with higher incomes are also more likely to be enrolled in post-secondary education.

● **EDUCATIONAL ATTAINMENT DATA**

The data on adult educational attainment documents that Sandwich's residents are above state averages with regard to college experience.

- ◆ **Residents with Bachelor's and Graduate Degrees.** *More than a third (38.3%) of Sandwich's adult residents have earned a bachelor's degree or higher. This compares to the statewide average of*

33.2%. Sandwich ranks 2nd among the eight peer communities in terms of having the highest percentage of residents with a bachelor's or graduate degree.

- ◆ **Residents without High School Diploma.** *Only five percent (5.3%) of Sandwich's adult residents do not have a high school diploma. This compares to the statewide average of 15.2%. Sandwich ranks 2nd among the eight peer communities in terms of having the lowest percentage of residents who do not possess a high school diploma.*
- ◆ **Residents with High School Diploma.** *Just over twenty-one percent (21.7%) of Sandwich residents possess a high school diploma but no college experience, compared to the statewide average of 27.3%.*

Summary

Adult residents in Sandwich possess a comparatively high level of educational attainment and these levels have increased since 1990. This creates an environment that encourages a high level of community support for school-based activities and student success.

Educational Attainment: 2000						
Like Communities						
Municipality	% of Pop. w/ No High School Diploma		% High School Gra w/o College Experience		% Some College/ Degree or Higher	
	School Diploma	R	Experience	Assoc.	or Higher	R
Massachusetts	15.2%		27.3%	24.3%	33.2%	
Abington	10.2%	7	35.9%	31.9%	22.0%	8
Foxborough	7.5%	4	25.9%	29.2%	37.5%	3
Grafton	10.1%	6	27.0%	28.2%	34.8%	5
Norton	10.8%	8	28.4%	29.9%	30.8%	7
Sandwich	5.3%	2	21.7%	34.7%	38.3%	2
Stoneham	9.2%	5	31.8%	27.4%	31.6%	6
Aspirant Communities						
Duxbury	2.8%	1	13.3%	24.2%	59.6%	1
Marshfield	5.9%	3	24.7%	33.5%	35.9%	4
R = Rank						
Source: U.S. Census Bureau, 2000 (Adults 25 Years and Over)						

POLITICAL COMPARISONS

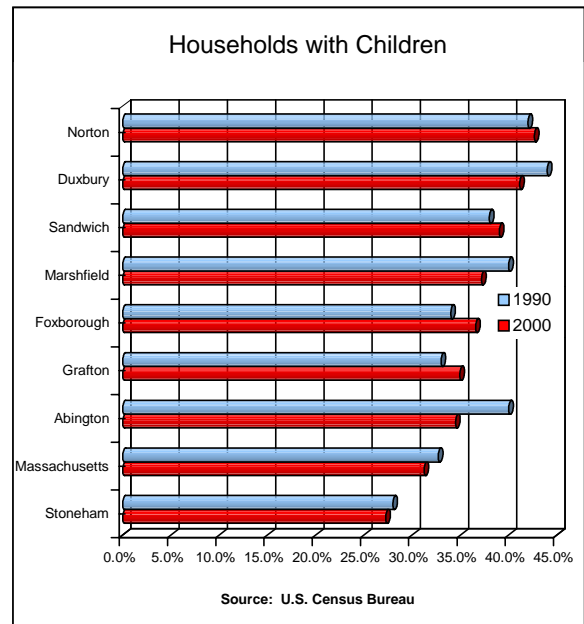
It is well documented that good public schools bring benefits to the entire community in many ways. More and more businesses consider the quality of public schools, rates of high school graduation, and ratios of adult educational attainment as major factors in their decisions to relocate, expand, or start-up in a particular community (Development Report Card for the States 1999). Good public schools also attract residents to a community and generally increase the value of residential and business properties (Carter and Jones 1991). Schools can also make positive contributions to a community's culture and to the information levels that support constructive political participation.

Public schools are dependent on municipal and state governments for most of their financial resources. Consequently, political factors can play a prominent role in determining the quality of a community's public schools. The pressure exerted on elected officials by citizens insisting that public schools receive budgetary priority will affect the level of financial resources devoted to public education and the willingness of elected officials to support educational initiatives, such as the construction of new schools.

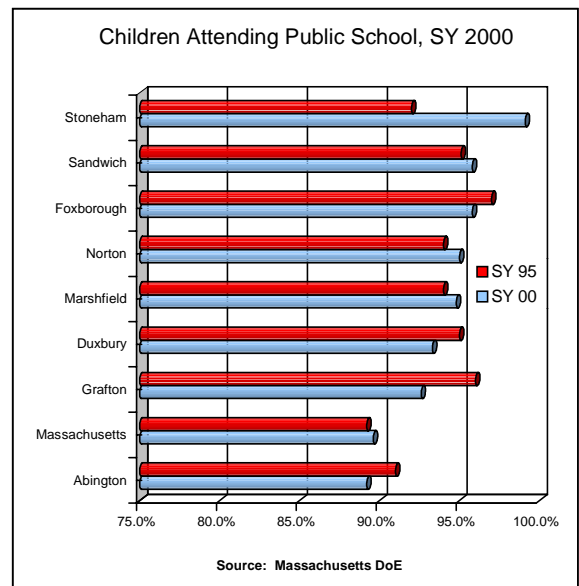
• DIRECT STAKE-HOLDERS IN THE PUBLIC SCHOOLS

Adults are more likely to perceive a direct stake in the public schools when they have school-age children and when their own children attend those schools. Furthermore, the number of children attending public school can have a major effect on the level of school funding and the allocation of school resources such as staff and classrooms.

- ◆ **Households With Children.** *Thirty-nine percent (39.0%) of the households in Sandwich have children. This compares to 31.2% of households statewide. Sandwich ranks 3rd among the eight peer communities in terms of the proportion of households that have children.*



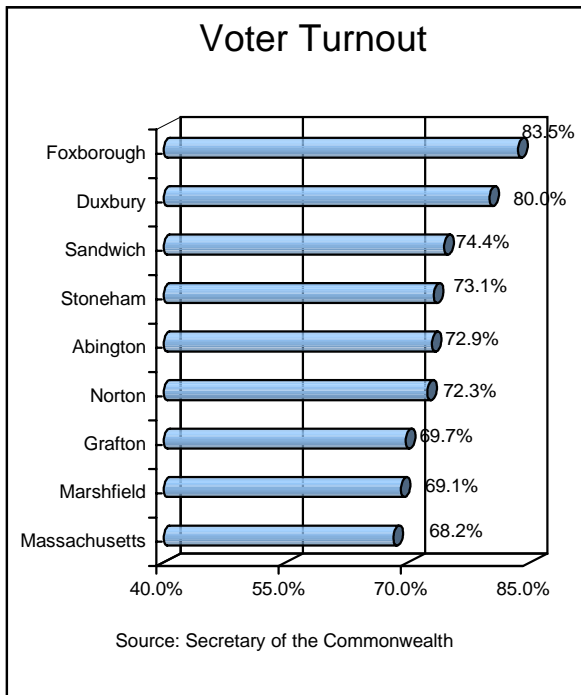
- ◆ **Percentage of Children Attending Public Schools.** *For the 1999-2000 school year, 95.8% of all children attending schools in Sandwich were enrolled in the Sandwich Public Schools. This compares to a state average of 89.6%. The percentage of children attending Sandwich Public Schools in the baseline year of 1994-1995 was 95.1%. Of the eight peer communities, Sandwich has the second highest percentage of children attending its public schools.*



● **VOTER TURNOUT**

One mechanism by which parents and others can communicate their interest in the public schools is by voting. Thus, voter turnout ratios are one measure of community interest in the public issues that affect schools. To the extent that participation in public affairs can be harnessed in support of public education, and to the degree that it makes students take a more active approach toward learning, this community characteristic can be a plus for education.

- ◆ **Voter Turnout.** *On the November 7, 2000 state/presidential election, 74.4% of Sandwich's registered voters went to the polls. Sandwich has the 3rd highest voter turnout among the peer communities. (Note: Due to reporting inconsistencies among different government agencies, voter turnout replaces the voter registration data that was reported in previous report cards).*



Summary

The comparatively high percentage of children attending Sandwich's public schools is an indication that residents who have children regard the school system favorably and are likely to support its efforts. Combined with the percentage of households with children, and a comparatively high voter turnout rate, there is potentially a high degree of community support for Sandwich's public schools. The proposition 2 1/2 override for 1996 is such an example. As the district continues to meet challenges in maintaining budget levels under the Education Reform Act funding formula, further community support will be essential in advancing initiatives designed to improve the quality of the Sandwich Public Schools.

Summary - Section 1

Sandwich ranks above the state averages with regard to income and educational attainment. The majority of Sandwich's residents are middle class and highly educated. Consequently one would expect the town's public school students to perform above state averages and that there would be a high degree of support for the public schools. However, because many residents in Sandwich do not live in the town for the full year, property values give an inflated measure of the community's wealth and its ability to support the public schools. Furthermore, seasonal residents do not have children in the school system and are less likely to favor property tax increases to support the public schools.

The Sandwich Public Schools is in a position of having to provide services to a growing student population through a foundation budget based on underestimated revenues and past year enrollments. Combined with Proposition 2 ½ constraints, it has been difficult for Sandwich to sustain current levels of financial support for the school system, despite strong public support for improvement initiatives. Thus, while residents of Sandwich rank above state averages in income, educational attainment, and the percentage of children attending public school, one should not assume that its schools will continue to perform at the current level without continued financial support.

The fact that the Sandwich Public Schools spent 41.5% less per pupil than the state average (FY 2000) is an indication that further financial support, both local and state, will be necessary to maintain and expand educational opportunities for the Town's children.

SECTION 2

SCHOOL SYSTEM CHARACTERISTICS

Policymakers and educators are able to affect student learning in positive ways through the efficient management and organization of schools. School characteristics such as per pupil spending, teacher salaries, class size, teacher qualifications, and enrollments can have a major impact on what and how students learn. Section 2 of the Community Report Card compares the financial, demographic, and instructional staff characteristics of the Sandwich Public Schools to its like and aspirant peer communities and to state averages where appropriate.

FINANCIAL COMPARISONS

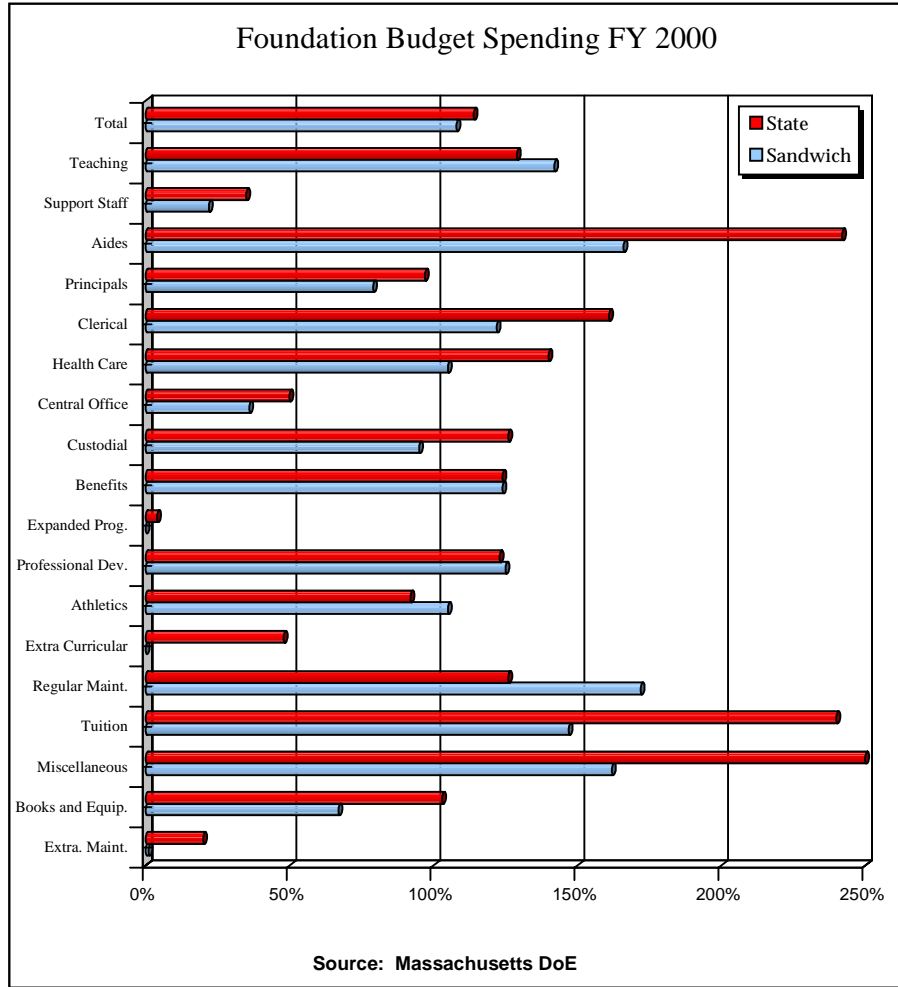
- **EDUCATION REFORM ACT OF 1993**

A major goal of the state's Education Reform Act of 1993 was to help equalize educational opportunities throughout the Commonwealth. The Education Reform Act requires all school departments to spend a minimum amount of funds per student each year. This minimum is achieved by mandating that each local government make a minimum local effort to fund its schools at adequate levels. Communities that are unable to achieve this minimum through their own efforts receive additional state aid to insure that spending does not fall below state minimum requirements in any community. In other words, wealthier communities will receive a smaller percentage of school funds from the state, while poorer communities will receive a larger percentage of school funds from the state in order to reduce inequalities in school spending among different communities.

The Massachusetts Taxpayers Foundation found that a large number of wealthier communities experiencing rapid enrollment growth have lost ground relative to the foundation budget in the past seven years (Massachusetts Taxpayers Foundation 2000). The report states that of the 143 school districts that spent more than the foundation budget in 1993, 71 districts lost ground relative to that standard by 1999, with rapid enrollment growth the principal reason for the decline. Sandwich is one of these communities.

As noted earlier, Sandwich is struggling to meet the Education Reform Act's funding requirements in light of rising enrollments and a foundation budget that has been increasing faster than the Town's local spending requirement. While Sandwich is meeting its foundation spending requirement, it will be increasingly difficult for the district to implement new programs and to adopt new initiatives without an increase in aid from state or local sources.

- ◆ **Foundation Budget Spending Comparison.** The foundation budget consists of nineteen separate categories. The following chart shows Sandwich's actual spending in each category for the 2000 fiscal year as a percentage of its foundation budget. If the percentage exceeds 100%, the district spent more in the category than suggested by the foundation budget. If the percentage is less than 100%, the district spent less. Significant variations between local spending and the foundation budget may indicate unique circumstances and needs within the district or may suggest potential areas for review and improvement



● **FISCAL CAPACITY AND FISCAL EFFORT**

Fiscal capacity is a general measure of a community's wealth or poverty relative to other communities. Fiscal capacity is usually defined as the assessed equalized property values, since property taxes are the main form of own-source revenues for municipalities throughout the United States. A city's fiscal capacity affects its ability to provide financial support for the public schools and for other municipal services. Under the Education Reform Act of 1993, the state education funding formula uses property values as the principal factor in determining a community's wealth and in calculating funding for local school departments.

In communities with a high fiscal capacity, financial support for the public schools is more reliant on local property taxes. The property tax rate

that a community assesses is called its fiscal effort. Approximately 80% of the current Sandwich Public Schools budget is funded by the Town, most of which comes from property tax collections. Only 20.2% percent of the Sandwich Public Schools budget is provided by the state (FY 02).

◆ **Fiscal Capacity.** *In FY 2000, equalized property values per pupil in Sandwich were \$511,302, an increase of 4.8% from FY 1994. Equalized property values increased by 14.8% statewide over this period. Sandwich ranks 3rd among the peer communities in terms of equalized property values per pupil among the peer communities.*

While equalized property values in Sandwich increased by 36.5% from 1994 to 2000, much of the increase has been offset by a 27.2% rise in enrollment. Thus, Sandwich still faces the difficulty of

maintaining per pupil spending levels through local property tax revenues, especially in light of Proposition 21/2 constraints and rising enrollments, although the situation has improved in comparison to past years when enrollment growth was outpacing increases in property values.

- ◆ **Fiscal Effort.** *Sandwich's fiscal effort in FY 2002 is \$12.86 per \$1,000 valuation. This is the third lowest fiscal effort among the eight peer communities.*
- ◆ **Increase in State Aid Per Pupil.** *From FY 1993 to FY 2002, Sandwich had the lowest increase in state aid per pupil among the eight peer communities (\$683).*

Financial Data						
Like Communities						
Municipality	*Equalized Prop. Value	R	**Fiscal Effort	R	***Increase State Aid Per Pupil	R
	Per Pupil FY 2000		FY 2002		FY 93 to FY 02	
Massachusetts	\$518,178					
Abington	\$370,466	8	16.46	1	\$1,222	5
Foxborough	\$459,253	5	14.15	5	\$1,254	4
Grafton	\$398,954	6	14.74	4	\$1,290	3
Norton	\$378,308	7	15.86	3	\$2,000	1
Sandwich	\$511,302	3	12.86	6	\$683	8
Stoneham	\$642,330	2	16.21	2	\$807	6
Average:	\$460,102		\$15.05		\$1,209	
Aspirant Communities						
Duxbury	\$660,431	1	12.42	8	\$749	7
Marshfield	\$476,025	4	12.71	7	\$1,675	2
Average:	\$568,228		\$12.57		\$1,212	

R = Rank
 * Massachusetts Department of Revenue and Mass. DoE Foundation Enrollment
 ** Massachusetts Department of Revenue
 *** Massachusetts Department of Education

Summary

Equalized property values per pupil in Sandwich increased by 4.6% from 1994 to 2000. While equalized property values in Sandwich increased by 36.5% over this period, the increase has been somewhat offset by a 27.2% rise in enrollment. Thus, Sandwich still faces the difficulty of maintaining per pupil spending levels through local property tax revenues, especially in light of Proposition 21/2 constraints and rising enrollments.

The Sandwich Public Schools will continue to encounter challenges in meeting budget needs as it implements new initiatives and provides services to a growing student population. While Sandwich students outperform their peers in most categories, one can not assume that Sandwich students will continue to be as successful without further support from the state and local community.

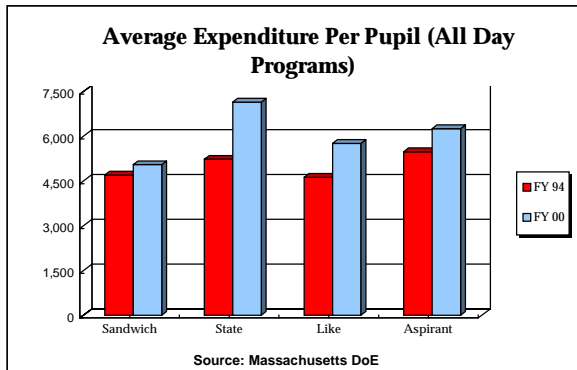
● PER PUPIL EXPENDITURES

Given the conflicting demands for improved education while avoiding an undue burden on taxpayers, a perennial issue facing education policy-makers is the amount spent on each student for education. While per pupil expenditures do not necessarily measure the quality of education being received by students, most experts agree that adequate funding is a necessary foundation for achieving educational quality and student success.

When comparing per pupil expenditures, it is important to remember two things. First, different levels and types of educational activities have different basic costs. For example, it usually costs more per pupil to educate high school students than to educate elementary school students. The cost of laboratories for science classes, more advanced computing facilities, and athletic activities require added expenditures. Likewise, special and bilingual education typically cost more than instruction in the regular day school.

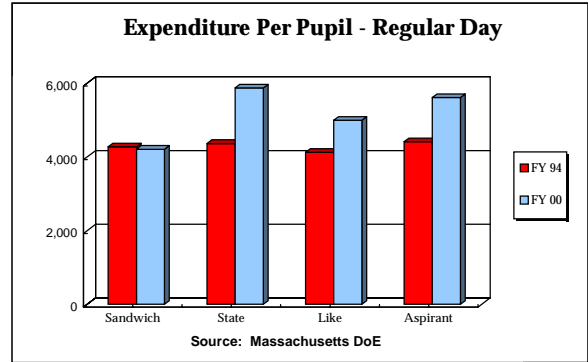
Second, it is not just how much public schools spend per pupil that is important; how those funds are spent is equally important. One would expect better educational outputs where funds are spent on direct instructional activities, such as teachers and textbooks, rather than on administrative overhead.

- ◆ **Average Per Pupil Expenditure - All Day Programs.** *In Fiscal Year 2000, the Sandwich Public Schools spent an average of \$5,052 per pupil for all day programs, an increase of 7.5% from the baseline year of FY 1994. The average per pupil expenditure increased 24.6% in the like communities, 14.2% in the aspirant communities, and 36.6% statewide over this period. Sandwich ranks last among the eight peer communities in terms of average per pupil expenditures for FY 2000, while it ranked 4th in FY 1994.*

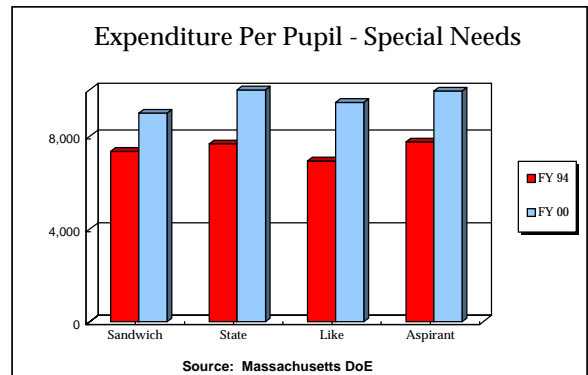


- ◆ **Expenditure Per Pupil - Regular Day Students.** *In Fiscal Year 2000, the Sandwich Public Schools spent \$4,211 per pupil to educate regular day students (non special education and bilingual), a decrease of 1.5% from the baseline year of FY 1994. The expenditure per pupil for regular day students increased 21.0% in the like communities, 27.1% in the aspirant communities, and 34.5% statewide over this period. Sandwich ranks last among the eight peer communities in terms of per pupil expenditures for regular day students for FY 2000, while it ranked 4th in FY 1994.*

Only 3 districts in the state have lower per pupil expenditures for regular day students than the Sandwich Public Schools.



- ◆ **Expenditure Per Pupil - Special Needs.** *In Fiscal Year 2000, the Sandwich Public Schools spent \$8,998 per pupil for special needs, an increase of 22.5% from the baseline year of FY 1994. The expenditure per pupil for special needs students increased 36.4% in the like communities, 28.3% in the aspirant communities, and 47.6% statewide over this period. Sandwich ranks 6th among the eight peer communities in terms of total per pupil expenditures for special needs in FY 2000, while it ranked 5th in FY 1994. As of October 1, 2002, Sandwich Public Schools had 164 students receiving special education*



- ◆ **Textbooks.** In FY 2002, the Sandwich Public Schools spent an average of \$21.53 per pupil on textbooks. This compares to \$70.01 in the baseline year of 1993.

FY 1993 - \$214,103
 FY 1994 - \$50,717
 FY 1995 - \$64,537
 FY 1996 - \$71,674
 FY 1997 - \$140,000 (Math adoption K-8)
 FY 1998 - \$160,000 (English Language Arts K-8)
 FY 1999 - \$130,000 (Guided Reading, Science, & Social Studies)
 FY 2000 - \$95,694
 FY 2001 - \$95,694
 FY 2002 - \$90,696
 FY 2003 - \$0.00

Source: Sandwich School Department
(No comparative data available)

Summary

Average per pupil spending in Sandwich is only 70.7% of the state average. Per pupil spending for regular day students actually declined by 1.5% from 1994 to 2000, compared to increases of 34.5% statewide, 21.0% in the like communities, and 27.1% in the aspirant communities.

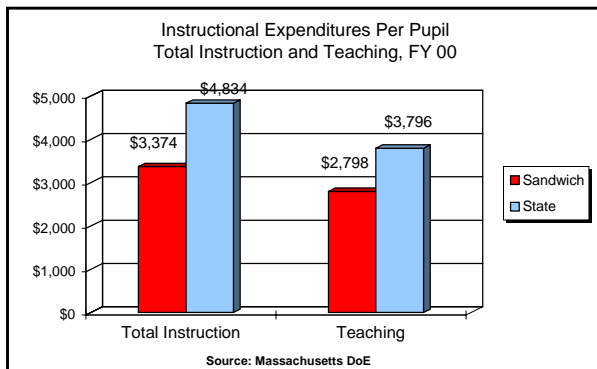
Despite spending less than the state average per pupil, Sandwich's students continue to perform at levels above most of its peer communities and above the state averages. However, the budget shortfalls have limited the ability of the Sandwich Public Schools to institute new programs or to expand existing ones. It will be increasingly difficult for continued student improvement if per pupil spending levels remain below state averages.

Per Pupil Expenditures: FY 2000						
Like Communities						
Municipality	All Day Programs	R	Regular Day	R	Special Needs	R
Massachusetts	\$7,149		\$5,876		\$11,311	
Abington	\$5,835	4	\$5,286	5	\$8,870	8
Foxborough	\$6,356	3	\$5,489	3	\$9,382	4
Grafton	\$5,818	5	\$5,321	4	\$8,984	7
Norton	\$5,216	7	\$4,452	7	\$9,125	5
Sandwich	\$5,052	8	\$4,211	8	\$8,998	6
Stoneham	\$6,368	2	\$5,502	2	\$10,791	1
Average:	\$5,762		\$4,995		\$9,456	
Aspirant Communities						
Duxbury	\$6,727	1	\$6,103	1	\$10,212	2
Marshfield	\$5,790	6	\$5,125	6	\$9,690	3
Average:	\$6,259		\$5,614		\$9,951	
R = Rank						
Source: Massachusetts Department of Education						

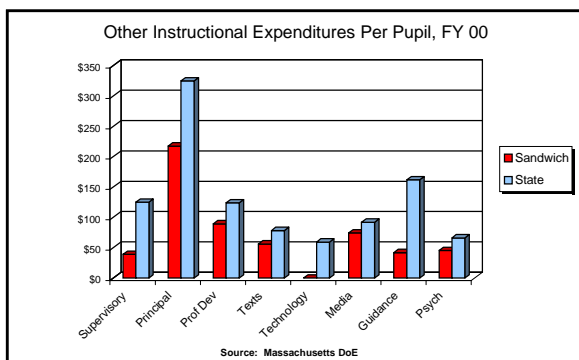
- **PER PUPIL EXPENDITURES BY FUNCTION**

Each district reports school spending on the annual *End of Year Pupil and Financial Report*. The following data presents per pupil spending by function in both instructional categories and non-instructional categories. Because Sandwich spends less per pupil than the state average, one would expect the school district's spending levels by function to be lower than state averages. All data below is for FY 2000.

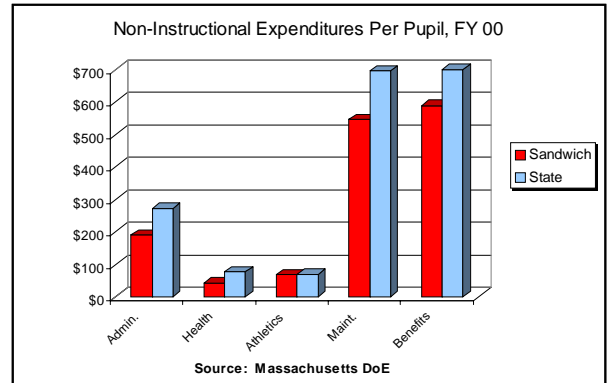
- ◆ **Instructional Expenditures Per Pupil – Total and Teaching.** *Sandwich spends less per pupil than the state average in terms of total instructional expenditures and teaching.*



- ◆ **Instructional Expenditures Per Pupil – Other.** *Other instructional expenditures include items such as technology, professional development, and guidance. Sandwich spends less than the state average in each of these categories.*



- ◆ **Non-Instructional Expenditures Per Pupil.** *Non-instructional expenditures include programs and items not directly related to instruction such as athletics and maintenance. Sandwich spends less than the state average in each of these categories.*



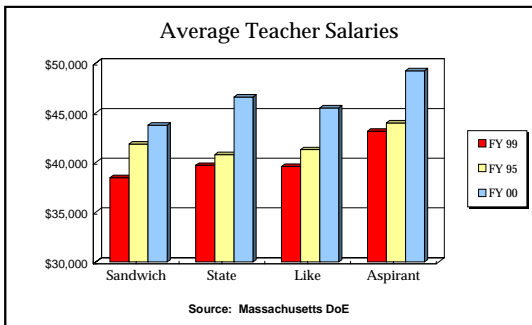
Summary

Sandwich spends less per pupil than the state average in each category including total instruction, teaching, administration, maintenance, and benefits.

- **TEACHER SALARIES**

Although teachers' salaries are often a controversial issue in the politics of public schools, good teachers with high morale are the core workforce of any school enterprise. If part of the objective of education reform is to make public schools more "market-oriented," then it should be recognized that the effect of market competition is a double-edged sword. In a competitive market environment, enterprises must pay competitive salaries to attract and retain a skilled professional workforce. Other items such as generous fringe benefits can also be important in attracting and retaining good teachers. (Note: Minimum and Maximum teacher salary data that was reported in previous report cards is no longer available from the Massachusetts Department of Education).

- ◆ **Average Teacher Salaries.** *The average salary for teachers employed by the Sandwich School Department in FY 2000 was \$43,751, a 2.3% increase from FY 1994. The average teacher salary increased by 9.2% in the like communities, 17.0% in the aspirant communities, and 19.4% statewide over this period. Sandwich ranks 7th among the eight peer communities in terms of average teacher salaries for FY 2000.*
- ◆ *The minimum teacher salary in Sandwich in FY 2002 is \$29,735 while the maximum salary is \$57,300. (No comparative data is available).*

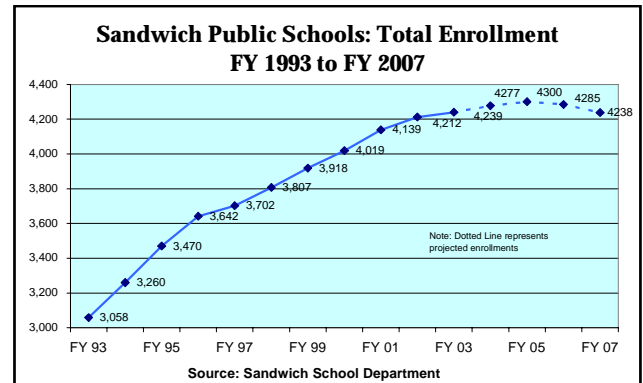


Teacher Salaries: FY 2000		
Like Communities		
Avg. Tchr.		
Municipality	Salary	R
Massachusetts	\$46,580	
Abington	\$45,833	6
Foxborough	\$46,633	5
Grafton	\$47,243	3
Norton	\$41,553	8
Sandwich	\$43,751	7
Stoneham	\$47,926	2
Average:	\$45,490	
Aspirant Communities		
Duxbury	\$51,768	1
Marshfield	\$46,682	4
Average:	\$49,225	
R = Rank		
Source: Massachusetts DoE		

ENROLLMENT AND STUDENT DEMOGRAPHICS

● ENROLLMENT

As of October 1, 2002, there were 4,212 students enrolled in the Sandwich Public Schools. Enrollment has increased 37.7% since 1993 but is expected to level off and decline by FY 2007. The continued growth in student enrollments is expected to place financial burdens on the Sandwich Public Schools in trying to keep per pupil spending at foundation levels while constrained under Proposition 2 ½ tax limits.



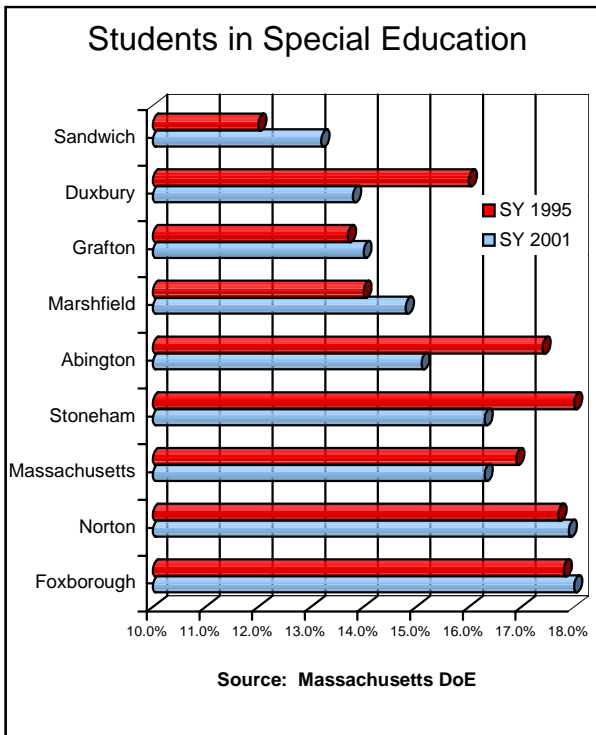
Summary

Enrollment in the Sandwich Public Schools has increased by 37.7% since 1993 but is expected to level off and decline by FY 2007.

● **SPECIAL EDUCATION**

In contrast to private schools, the nation’s public schools are required by law to educate all children within their jurisdiction, regardless of demographic background, language, or learning disabilities. Thus, nearly all public school departments in the United States today provide some type of special education for children with a range of disabilities and special needs.

- ◆ *In SY 2001, 13.2% of Sandwich’s students were enrolled in special education, which is lowest among the peer communities. This compares to 12.0% of Sandwich students enrolled in special education in the baseline year of SY 1995.*



Summary

Sandwich has the lowest percentage of special education students of all the peer communities.

SCHOOL AND CLASSROOM INFORMATION

● **GRADE CONFIGURATION**

The Sandwich Public Schools provide early childhood education programs for pre-school children in the district at no cost. Children are allowed to enter kindergarten if they turn age five on or before September 1st of the year they enter school. Sandwich is part of the Upper Cape Regional Vocational Tech District and offers a comprehensive educational program at the high school level. The school system does not participate in any school choice program.

Grade configurations in the Sandwich Public Schools are not typical of its peer communities; there are no middle schools in the public school system. Grades are divided into PK to 9 and 9-12.

Grade Configuration						
Like Communities						
Town	Grade Configuration			# Elem. Schools	#Middle Schools	#High Schools
	Abington	PK-6	7-8			
Foxborough	PK-4,	5-8	9-12	3	1	1
Grafton	PK-5,	6-8,	9-12	3	1	1
Norton	PK-5,	6-8,	9-12	3	1	1
Sandwich	PK-9,		9-12	3	0	1
Stoneham	PK-5,	6-8,	9-12	4	1	1
Aspirant Communities						
Duxbury	PK-4,	5-8,	9-12	2	1	1
Marshfield	PK-5,	6-8,	9-12	5	1	1

Source: Massachusetts Department of Education

● **PER PUPIL RATIO**

There are no absolute standards for defining the correct pupil/staff ratio for schools. However, it is generally accepted that lower ratios contribute to a positive learning environment, since teachers, teachers' aides, librarians, and other staff can provide more specialized and individual attention to each student. In other words, a low pupil/staff ratio makes it possible to adopt a student-centered educational process. The following table indicates the number of pupils per teacher for each grade level.

**Sandwich Public Schools
Per Pupil Ratio
SY 2003**

Grade	Ratio SY 03
Kindergarten	18.2
Grade 1	21.2
Grade 2	20.9
Grade 3	20.1
Grade 4	22.8
Grade 5	23.4
Grade 6	25.1
Grade 7	21.3
Grade 8	23.4
Grade 9	21.0
Grade 10	21.0
Grade 11	25.0
Grade 12	22.0

● **INSTRUCTIONAL STAFF RATIO**

A low pupil/staff ratio is generally viewed as a positive attribute in a school system. However, to fully realize the benefits of low pupil/staff ratios, it is important that a school system's personnel resources be deployed directly toward instructional activities. A high proportion of teaching staff and instructional aides is an indicator that this goal is being achieved by a school system.

- ◆ *In FY 2002, 68.9% of the total staff in the Sandwich Public Schools consisted of teachers. This compares to 61.7% of the total staff who were teachers in FY 1995. Sandwich has the highest percentage of staff who are teachers among the peer communities.*

Staff Ratios: FY 2002					
Like Communities					
Municipality	% Tchrs. of Staff	R	% Instruct. Support Staff	% Admin. & Support Staff	% Svc./ Oper./ Maint.
Massachusetts	60.7%		15.6%	11.2%	12.4%
Abington	61.6%	5	16.3%	9.7%	12.4%
Foxborough	59.6%	7	19.6%	6.6%	14.2%
Grafton	56.2%	8	21.2%	12.6%	10.0%
Norton	60.5%	6	15.5%	9.2%	14.8%
Sandwich	68.9%	1	11.9%	8.9%	10.2%
Stoneham	67.6%	2	11.8%	9.1%	11.5%
Average:	62.9%		15.7%	9.1%	12.2%
Aspirant Communities					
Duxbury	65.1%	4	9.4%	12.9%	12.6%
Marshfield	65.2%	3	10.4%	12.3%	12.1%
Average:	65.2%		10.0%	12.6%	12.3%
Source: Massachusetts Department of Education R=Rank					

Summary

Sandwich has the highest percentage of staff who are teachers among the peer communities.

INSTRUCTIONAL STAFF

It is often said that a school is only as good as its teachers. Yet, several tangible factors go into making a good teacher such as instructional credentials and continuing professional development.

● **EDUCATIONAL CREDENTIALS, PROFESSIONAL DEVELOPMENT, AND GRANTS**

The quality of teachers is an important determinant of school quality. A major goal of the Education Reform Act of 1993 is to develop a professional culture of continuous improvement among teachers. One measure of continuous improvement is the percentage of teachers and administrators who have continued their education to obtain post-baccalaureate degrees or other professional certifications. Another measure of continuous improvement is the number of hours each

year that teachers and staff spend on professional development activities.

- ◆ *Over sixty-two percent (62.4%) of the 293 teachers currently employed in the Sandwich Public Schools have earned a Master's degree or higher. This compares to fifty-eight percent of teachers who possessed a Master's degree or higher in the baseline year of 1996. More than eighty-four percent (84.1%) of teachers in the Sandwich Public Schools have a major in their teaching area, while 15.9% have a minor in their teaching area. (No comparative data is available).*

**Teachers By Degrees
FY 2002**

Degree	#
Bachelors	51
Bachelors + 15	56
Bachelors +40/Masters	98
Masters +15	31
Masters +30	28
Masters +45	15
Masters +60	14
Total:	293

- ◆ *Sandwich High School teachers participate in 3 full days and 6 half days of inservice/professional development annually. In addition, Sandwich Public Schools provides, at no cost to teachers, between 200 and 300 hours of training each year. This includes graduate level courses, classes for increment credit, and a wide variety of workshops and seminars for PDP's. All professional development activities are grant-funded.*

Specific professional development initiatives include:

- Three teacher fellows have been selected and have been released from normal teaching duties to become a part of the administrative team for the school year. This "internal scholarship program" gives select teachers the chance to gain valuable leadership experience and an opportunity to broaden their depth and scope of knowledge regarding the inner workings of our school district. Teacher fellows will work both building and district level initiatives and will participate in a leadership seminar, taught by the Superintendent of Schools.

- Administrative staff, teacher fellows and the 30+ teachers who received mentoring training last year according to DOE and MTA guidelines will work together to mentor new and beginning teachers
- The district will continue to provide ongoing, content based professional development workshops, courses and opportunities to assist teachers in the recertification process and to encourage staff members to pursue a content level/or graduate degree
- In FY 2002, the estimated percentage of staff who have received formal technology professional development (workshops, credit courses, study groups, summer institutes) sponsored or paid by the district was 80.0%.
- Sandwich offered an estimated 127 staff-hours of formal technology professional development activities in FY 2002. The effective use of technology as a teaching tool has affected all aspects of teaching and learning and most of the district's curriculum is available online to teachers, students, and the broader community.

Sandwich Public Schools benefits from approximately \$1.8 million annually in external funds/grant awards. The grants that have most recently supported specific initiatives and programs include:

- Health Protection (State)
- Safe and Drug Free Schools (Federal)
- Safe Schools Initiative (Federal)
- Title V. Delinquency Prevention (State and Federal)
- New Horizons: Sandwich High School-Police Department After School Enrichment (Federal)
- Community Policing Program (Federal)
- Cops in Schools Program (Federal)
- Alternative School Grant (State and Federal)
- Nurse Leadership (Dept. of Public Affairs)
- School to Career Grant (State Partnership w/ Cape Cod Community College)
- PALMS (State Partnership and Bridgewater State College)
- Restructuring Grant (DoE and Cape Cod Economic Development Council)
- Project Meet-Technology (State)
- Lighthouse Technology Grant (State)
- DoE Adoption Grants for Technology (State)

- VES Technology (DoE, UMass, & Mass CUE)
- TERC (Cambridge Based Non-Profit Foundation for Tech Integration)
- SATL – Students as Technology Leaders and “Help Desk” (DoE Grants)
- TSST – Implementing Technology Standards (State)
- Net Gains-Technology Training (UMass Collaborative Grant)
- Eisenhower: Math/Science/Tech Training (Federal)
- Title VI: Integrated Technology/Training (Federal)
- Advanced Placement – Vertical Training (State and College Board)
- Gifted and Talented Grant (State)
- Community Service Learning (Federal)
- Project Life (Museum Non-Profit Collaborative)
- Integrated Arts (Mass. Cultural Council)
- MCAS-Academic Support (State)
- Title 1 (Federal Targeted Assistance Year to Year at Sandwich High School)
- School Breakfast Program (State)

Summary

There are a substantial number of professional development opportunities provided to Sandwich’s instructional staff. Combined with an above average percentage of total staff who are teachers and a number of new curriculum initiatives, the Sandwich Public Schools are committed to the continued development and improvement of its teaching staff.

TECHNOLOGY

The Sandwich Public Schools recognize the critical need for access to new technologies as an essential element in improving teaching and learning. The district’s technology plan for FY 2002 listed the following goals:

- To further develop the technology budget to include software, supplies, and additional positions.
- To provide Internet and Internet e-mail for all staff
- To fund three Technology Integration Specialist Positions
- To improve the student-computer ratio at the K-8 buildings
- To register 100% of the faculty as VES users
- To continue to use online tools (CLASP and VES) for curriculum development

The results of these goals are:

- The district now has a small technology line item in the district budget.
- All staff has access to Internet and e-mail.
- The district has one funded TIS position
- The student-computer ratio has improved for grades 4 through 8
- Use of VES and CLASP is ongoing

Despite progress in meeting the goals of its technology initiatives, budget shortfalls in the Sandwich Public Schools are making it difficult for the district to maintain existing technology staff and services.

• TECHNOLOGY EXPENDITURES

Technology expenditures in the Sandwich Public Schools for FY 2002 were \$313,000. This compares to \$365,463 in FY 1999. Of the FY 2002 amount, \$105,000 was spent for salaries, while \$75,000 was spent for contracted services, \$57,000 for software, \$54,000 for

hardware purchases, \$20,000 for supplies, and \$2,000 for other expenditures. Two-thirds (66.5%) of Sandwich's technology budget is funded through grants (Source: Sandwich School Department).

• **INVENTORY**

Sandwich Public Schools have made every effort to provide equity of technology access across the district, across grade levels, within subject areas, and for all student populations.

- **Computers Per Student.** Sandwich's computer ratio for newer multi-media computers has improved from 25.6 students per computer in FY 1999 to 5.26 students per computer in FY 2002. Sandwich now has 87.9% of its classrooms connected to the Internet. All classrooms at the high school are connected to the Internet and a local area network (Source: Sandwich Public Schools).

Other technology includes:

- There is a 16 station IBM lab adjacent to each K-8 library and the district is planning to install an additional 30-station lab this spring.
- Laptops are available for teachers on a "take out" basis and there are dedicated computers for exclusive teacher use.
- There is a state of the art PICTEL Lab at the high school that is used for professional development and for after hours courses for students and teachers.
- There are fourteen mobile big-screen teaching computers in each building as well as an additional 16-station lab in each K-8 building.
- There are seven teaching labs at the high school and mobile Gateway units for each academic area program.

The accompanying table lists the student-computer ratio and the percentage of classrooms connected to the Internet for FY 2001. Comparative data for FY 2002 is not available.

Students Per Type A/B Computers			
Like Communities			
Municipality	Type A/B	R	Internet
Abington	12.6	7	14.0%
Foxborough	2.4	2	100.0%
Grafton	7.7	6	100.0%
Norton	4.9	3	100.0%
Sandwich	1.2	1	89.0%
Stoneham	7.0	5	92.0%
Average:	6.0		82.5%
Aspirant Communities			
Duxbury	5.5	4	100.0%
Marshfield	17.3	8	38.0%
Average:	11.4		69.0%
R=Rank			
Source: Massachusetts Department of Education, FY 01			

• **TEACHER TECHNOLOGY TRAINING**

In the last eight years, the Sandwich Public Schools has implemented professional development programs using technology to access and integrate curriculum as the district prepares for a complete alignment with the State Frameworks K-12. This was done in concert with the development of the District Technology Plan.

- In FY 2002, the estimated percentage of staff who have received formal technology professional development (workshops, credit courses, study groups, summer institutes) sponsored or paid by the district was 80.0%.
- Sandwich offered an estimated 127 staff-hours of formal technology professional development activities in FY 2002. The effective use of technology as a teaching tool has affected all aspects of teaching and learning and most of the district's curriculum is available online to teachers, students, and the broader community.

- Approximately 7.0% of the district's budget is spent on technology professional development expenditures.
- Professional development categories include computer troubleshooting and repair, computer basics, word processing, spreadsheet and database, use of the Internet, web page construction, graphics and multimedia software, assistive technologies, and presentation tools.

(teacher driven, Curriculum Study Groups will be scheduled on a monthly basis for PDP's):

OTHER INITIATIVES

• CURRICULUM GOALS AND INITIATIVES

The Sandwich Public Schools curriculum initiatives are guided by an annual Curriculum Action Plan. The Plan's goals are:

1. To continue to improve student learning by aligning our curriculum to the State's Frameworks and the MCAS Test
 - Expand Title 1, ELA and remedial math programs with a focus on early intervention and ongoing support through grades 1-6.
 - Expand the MCAS Review, after-school and Saturday School Programs to include all identified students in grades 4-10. (This year, the district will begin MCAS review in the fall).
 - Continue to develop "effective teaching" strategies for differentiated instruction using the research based "Wiggins Model" for Curriculum Design.
 - Expand the after-school enrichment program to include an "Integrated Arts" collaborative program with a focus upon music and visual and performing arts.
 - Develop learning extension opportunities to move the "proficient learner" to the advanced category.
2. Continue to provide high quality, professional development programs to staff members in order to meet both district goals and recertification requirements. The following workshops and courses will be offered for increment credit

- Differentiated Instruction K-8
 - Math Strategies and Assessments K-8
 - Using VES and the Homework Zone
 - Using technology in the Classroom
 - Using the Wiggins' Model to Write Exemplary Curriculum Units
 - Integrating Music, Art and Theater into the Classroom
3. Continue to integrate technological resources and exemplary practice into the curriculum and to implement "cutting edge" management information systems for assessment and data collection into all aspects of the district's organizational structure.
- Develop Online, K-8 Homework Zone in conjunction with public library to post all major district assignments, projects and tutorials K-12 (SHS zone is in-place).
 - Expand utilization of the Plato Software System for remediation and acceleration.
 - Continue to build a Management information system to provide access to comprehensive student profiles: schedules, grades, MCAS, insurance information, counseling and enrichment referrals etc.
 - Develop online forms for attendance, Professional Days/course requests etc.
 - Refine electronic grading system (and progress reports) for students in grades 5-12.
 - Continue to uphold and share the exemplary curriculum via our Web and VES.
 - Offer additional online courses for teachers and fully utilize satellite technology and PIC Tel equipment for classroom instruction and for professional development.
4. Expand School Safety Initiatives and federal programs in cooperation with the local police, regional law enforcement and external social service agencies.
- New Horizons Grant: in place in conjunction with the Police Department. The program funds after school "focused detentions" and a variety of support and enrichment activities for students K-8 including the "Police Academy", the Ropes Course, Dare-like classroom instruction and the Court Program.
- Title V-Delinquency Prevention grant is in place and provides for counseling and intervention services for students and families in K-12. The Title V Consortium meets on a quarterly basis and serves as an Advisory Board to the Superintendent of Schools and to the Chief of Police. This board, comprised of representatives from the schools, police, county court, Sheriff's department, clergy, parent groups, business and community advocacy groups is working hard to leverage additional federal funds for Safe and Drug Free School and other community initiatives.
 - The Crisis Plan is in place and updated on a yearly basis in conjunction with the schools, police and fire departments, as well as with other governmental agencies.
 - The Safe and Drug Free Schools Grants is in place and funds counseling, peer negotiation, alternative ed. in-house suspension and student support programs K-12.
5. Expand counseling, remedial and leadership programs to all "at risk" students through the Gosnold/social service agency collaborative and to implement bimonthly "Crisis Team" meetings in each school building for the student referral process.
- A Gosnold Counselor is in the district 5 days per week to facilitate "Crisis" and Student Support Team Meetings to refer students and families to counseling and other support or enrichment programs. Gosnold counselors also provide ongoing direct counseling services to students. The district serviced over 180 Students/families last year.
 - Students determined "at risk" according to either academic or social indicators, will be reviewed by the Student Support Team on a regular basis. Close contact with the parent will be monitored and documented at the close of each semester.

Specific curriculum initiatives include:

- All Sandwich teachers were trained and required to implement the Collins Writing Program throughout the curriculum.
- All Sandwich High School science and math teachers participated in PALMS training using the constructivist approach for the teaching of math and science.
- Sandwich High School teachers are certified PALMS and consultants to Bridgewater State College, the district's regional provider. Trainers include the Math and Science Department Heads.
- Most Sandwich High School teachers have been trained to incorporate and to "bookmark" online resources within their curriculum. Sandwich teachers have developed over 100 web-based lessons, which are available via the district's award winning Home Page-Web Site.
- Sandwich High School instituted a School to Career strand and grade 9 requirements in conjunction with the DECA and Technology Prep programs sponsored in collaboration with Cape Cod Community College.
- Sandwich High School has developed a model Technology Communications and Management Program to replace antiquated Business Education offerings and is available to all students with both accelerated course offerings and certification opportunities. The district's "TCM" Program has won acclaim throughout the State and is a DOE "Lighthouse Site."
- As a part of the district's Advanced Placement Program, Sandwich High School has developed vertical teams, involving teachers in grades 5-12 in 6 content areas. These teams infuse College Board/AP sponsored "best practices and vocabulary" sequentially across the curriculum beginning in grade 5.
- All Sandwich High School teachers have been trained via Department Heads and teacher/consultants to use the Grant Wiggins researched based model for developing curriculum using a "planning backward template."

● **BLOCK SCHEDULING**

The Sandwich Public Schools developed an intensive-block schedule for the high school that took effect in September 1995. The major goal of the project was to reschedule the high school with longer blocks of learning time and fewer courses during the school day to allow for more rigorous and in-depth study of subject matter. By utilizing this ninety-minute block schedule model, the Sandwich Public Schools are able to revise curriculum and vary teaching strategies to insure a more student-centered classroom.

In order to assess the results of the block scheduling initiative, Sandwich High School commissioned an in-depth analysis of the block scheduling and restructuring efforts in 1997. The evaluation included outside evaluators and extensive interviews with parents, students, faculty, staff, and administrators. The evaluation has been acclaimed as the most in-depth analysis of school restructuring in the state. Results of the analysis include:

- Since the implementation of block scheduling, the percentage of students with honors and high honors increased from 21% in SY 1995 to 32% in SY 1997.
- The percentage of students receiving a grade of "F" decreased from 10% in SY 1995 to 3.3% in SY 1997.
- The percentage of students that qualified 3 or better in the advanced placement exams has changed significantly.
- The percentage of students taking the SAT and SAT scores did not change significantly since the implementation of block scheduling.

As part of the evaluation, a survey of 100 students in each high school year (9th, 10th, 11th, and 12th grades) was conducted. Results included:

- Most students (ranging from 63% in the 9th grade to 71% in the 12th grade) agree that more is learned in a 90-minute class than in a 45-minute Class.
- The majority of students believe that preparing for three or four classes is better than preparing

for six or seven classes (ranging from 84% in the 12th grade to 91 % in the 11th grade).

A survey of 100 teachers from Sandwich High School was also conducted. Results include:

- Seventy-four percent (74%) of the teachers prefer the current schedule to a seven period day, and also believe that the schedule allows them to better prepare a class.
- Sixty-percent (60%) of teachers surveyed indicated that their students are more comfortable in an extended block schedule.
- Seventy-five percent (75%) of teachers surveyed indicated that they are more able to develop, locate, and incorporate new activities in a classroom since the implementation of block scheduling.

● **SCHOOL PLANNING INITIATIVES**

To address continual changes occurring in business and education, employers and schools must work together to form partnerships which prepare both to meet new economic realities. School to Career initiatives prepare students for the working world by linking school with work and providing students with needed skills and an opportunity to develop career awareness at an early age. In doing so, businesses play an integral part in the process by employing students, assisting with career development, and providing internships and apprenticeships. Such partnerships also encourage teenagers to stay in school by linking employment opportunities with educational achievement.

The Sandwich Public Schools are focusing on utilizing Instructional Technology to develop a variety of Math/Science, School-to-Career Pathways at the high school. This initiative also involves curriculum alignment with the frameworks. Once this High School curriculum is designed, it is the hope of the Sandwich Public Schools to develop a middle school level, transition program focusing upon career pathways in math, science and technology.

Sandwich High School spent the 1998-1999 school year implementing the Research Based Model of Planning Backwards for significant school change. This model requires extensive community involvement and the district linked the School Council, Teacher Leaders and Fellows, and the Restructuring Team in order to involve more community members in the design and restructuring efforts of Sandwich High School. An analysis of the Planning Backwards profile showed that students need more work on understanding and appreciating the linkages between school and careers, to make personal plans for themselves - including setting and prioritizing goals, consumer education - including finances, and making real life connections between school and the world.

The Sandwich Public Schools have completed the redesign of the Business Education program. The Business Education program, now renamed and redesigned as the Technology and Communications Management (TCM) program, extensively incorporates the "real world" within the course of study. Beginning in the 9th grade, participating students will take an integrated management, accounting, law, and career awareness course. In grades 10 through 12, participating students will take a half-year, 90-minute course that will teach the fundamental technology skills for that strand. In grades 10 through 12 students will take a half year, 90-minute Applied Learning course which will integrate academic knowledge with community based, real world learning activities, combined with national certification exams in the subject under study. This model, which will be piloted within the new TCM program, will be incorporated into the core academic subject areas in subsequent years. To facilitate this transfer, academic and TCM faculty will cross teach academic core subjects and TCM courseware, and the district will make extensive use of each educator's areas of interest and expertise in the cross teaching model.

● **COMMUNITY PARTNERSHIPS**

The Sandwich Public Schools understands the importance of reaching out to the community to enhance the social, emotional, and academic growth of children. The school district actively promotes partnerships that increase involvement among parents, businesses, and the community at large. The Sandwich Public Schools has implemented a number of collaborative and community outreach programs with:

- Barnstable County Court System
- Barnstable County Sheriff's Department
- Bridgewater State College
- Cape Cod Community College
- Heritage Plantation
- Massachusetts Cultural Council
- Massachusetts Maritime Academy
- Sandwich Police Department
- Thorton Burgess Society

● **SUPPORT SERVICES – ALTERNATIVE EDUCATION OPPORTUNITIES**

There is an academic support/alternative Program at the High School. Sandwich Public Schools has also established the following services:

- A substantially separate SPED Social Development Program for students with mental disorders and/or learning disabilities.
- Through the Safe and Drug Free Schools Program and Title V and other federal funds, the district funds an in school, alcohol and drug counseling program through the Gosnold Thorne Clinic. This program is funded for 5 days a week.
- A Student Assistance Program, (referral mechanism) and a Crisis Team are in-place.
- A 3-10 day, alternative to suspension program has been developed in conjunction with the Sheriff's Youth Ranch in Barnstable.
- An in-house suspension program has been developed at the high school (3 days/week).

- The School Nurse runs an after school, Anger Management Program.
- A School to Career/DECA Program is in-place.
- The district has developed an after school employment/community service program for students.
- The district has trained staff and the capacity to run alternative curriculum Programs via technology (Project MEET and PALMS teacher leaders).
- A Community Policing Program and New Horizons “Enrichment Programs” are in-place.
- Sandwich Public Schools chairs the Community Coalition for Substance Abuse
- A Diversity Club is in-place.
- A Community based Youth Task Force is in-place.
- A Police Academy is in place for grades 5-8.

Summary - Section 2

While equalized property values in Sandwich increased by 36.5% from 1994 to 2000 the increase has been somewhat offset by a 27.2% rise in enrollment. Thus, Sandwich still faces the difficulty of maintaining per pupil spending levels through local property tax revenues, especially in light of Proposition 2 1/2 constraints and rising enrollments.

The Sandwich Public Schools will continue to encounter challenges in meeting budget needs as it implements new initiatives and provides services to a growing student population. While Sandwich students outperform their peers in many categories, one can not assume that Sandwich students will continue to be as successful without further support from the state and local community. Average per pupil spending in Sandwich is only 70.7% of the state average. Per pupil spending for regular day students actually declined from 1994 to 2000, compared to increases of 34.5% statewide, 21.0% in the like communities, and 27.1% in the aspirant communities. Sandwich ranks last among the eight peer communities in terms of per pupil expenditures for regular day students for FY 2000. Only 3 districts in the state have lower per pupil expenditures for regular day students than the Sandwich Public Schools.

Despite spending less than the state average per pupil, Sandwich’s students continue to perform at levels above most of its peer communities and above the state averages. However, the budget shortfalls have limited the ability of the Sandwich Public Schools to institute new programs or to expand existing ones. It will be increasingly difficult to continue improving student performance if per pupil spending levels remain below state averages.

Despite the challenge of maintaining current spending levels, Sandwich offers a substantial number of professional development opportunities for its teachers. Sandwich also has the highest percentage of staff that are teachers among the peer communities. Thus, the Sandwich Public Schools continue to focus its educational initiatives on instructional development.

The district boasts a number of curriculum initiatives that focus on aligning the curriculum to the State’s Frameworks and the MCAS Test, increasing the number and quality of professional development opportunities for teachers, expands school safety initiatives, and expands counseling, remedial and leadership programs to all “at risk” students Sandwich has also made the jump to technology based teaching and boasts the lowest student/computer ratio among the peer communities. The district also offers training to insure that the school’s growing technology infrastructure is being used effectively by teachers.

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SECTION 3 EDUCATIONAL OUTCOMES

The reason for setting educational goals, restructuring school system characteristics, and implementing education reform initiatives is to improve educational outcomes. Setting goals and measuring progress can help communities determine how well they are doing, where they would like to be, and what they will have to do to move the results in the desired direction. Section 3 of the Community Report Card compares the educational outcomes of the Sandwich Public Schools to its like and aspirant peer communities and to state averages where appropriate.

LEARNING ENVIRONMENT

The quality of a student's education is reflected not only in the subjects taught and by the achievement levels attained, but also by the learning environment in schools. A school's learning environment is enhanced by students who attend school regularly and by schools that provide safe surroundings for students.

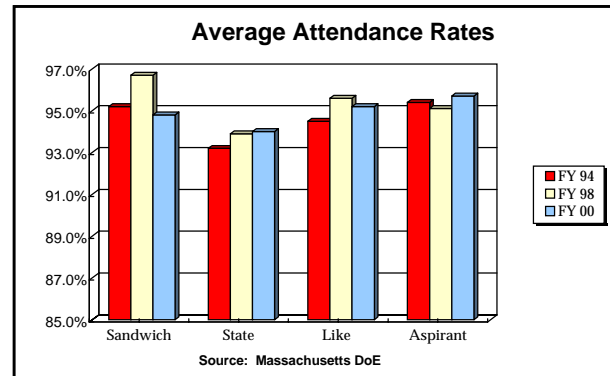
- SCHOOL ATTENDANCE**

A positive learning environment begins with the expectation that students will attend class on a regular basis. When students are absent from school, arrive late, or cut class, they forgo opportunities to learn. While significant efforts to improve student learning and performance are being undertaken in Sandwich's public schools, students will not benefit from these initiatives if they do not attend school on a regular basis.

Furthermore, when students disrupt classes by being late or frequently absent, they interfere with other students' opportunities to learn. And perhaps most importantly, the habits of consistent and on-time attendance are habits that will serve young people well in their future work lives.

- ♦ **Average Attendance.** *In Sandwich, the average school attendance rate for SY 2000 is 94.8%.*

Sandwich has the 6th lowest average attendance rate among the peer communities, although this rate is above the state average of 94.0%.



Average Attendance, FY 2000				
Like Communities				
Municipality	FY 1994		FY 2000	
	All Grades	R	All Grades	R
Massachusetts	93.2%		94.0%	
Abington	94.2%	7	94.6%	8
Foxborough	94.6%	5	94.8%	6
Grafton	92.9%	8	95.4%	4
Norton	94.6%	5	95.7%	3
Sandwich	95.2%	3	94.8%	6
Stoneham	95.6%	2	96.1%	1
*Average:	94.5%		95.2%	
Aspirant Communities				
Duxbury	95.8%	1	96.1%	1
Marshfield	94.9%	4	95.3%	5
*Average:	95.4%		95.7%	

Source: Massachusetts Dep't. of Education
* unweighted average

Summary

Attendance rates in the Sandwich Public Schools continue to be above state averages, but below that of most of the peer communities.

- **DISRUPTIVE BEHAVIOR**

Disruptive behavior includes many types of activities, from talking out of turn in class, to vandalizing school property, to physical assaults against teachers and other students. Such behaviors disrupt the learning process in school and create an educational environment where students are less likely to take learning seriously and where teachers are likely to become demoralized and cynical over time.

Schools cannot be held responsible for the levels of violence and juvenile delinquency in our society, but at some point they must take responsibility for student behavior in the schools. The Education Reform Act of 1993 gives principals and school departments expanded disciplinary powers, especially the right to expel and suspend students who engage in chronically disruptive or violent behavior.

- ◆ **In-School Suspensions**

Students who are suspended in school remain in school during the suspension period, but are removed from academic classes and placed in a separate environment, supervised by a teacher. These suspensions are typically imposed for lesser types of disruptive behavior such as coming to class late, failing to complete assignments, or talking in class.

Importantly, because schools set different standards regarding discipline, suspension data can sometimes be misleading in comparing several communities, since a school district with a high rate of suspensions may have simply instituted stronger disciplinary rules. For example, skipping class may warrant suspension in one school system whereas the problem is handled through less severe means in another school system. Consequently, a higher rate of suspension does not necessarily indicate that a greater number of discipline problems exist.

In the 2001-2002 school year, a total of 420 Sandwich students were suspended in-school. This compares to 10 in the 1998-1999 school year. The increase is attributable to the hiring of an in-house coordinator who runs the district's academic support program (funded through a grant). Consequently, the increase in the number of in-school suspensions is not

an indicator of growing disciplinary problems in the school system, but that these disciplinary problems are being dealt with through different and more effective means. As in past years, the majority of the offenses were classroom disruptions, excessive tardiness, unauthorized absences from school or class, and failure to attend detention.

Students Suspended In-School: SY 1999 & SY 2002

	9 th	10 th	11th	12th	Total
# Suspended SY 1999	3	1	5	1	10
# Suspended SY 2002	59	49	67	35	420

- ◆ **Out-of-School Suspensions**

Students are suspended out of school for more egregious forms of disruptive behavior or for chronic disruptions that interfere with other students' ability to learn. Students who are suspended out of school are prohibited from attending school during the suspension period. Again, a higher number of suspensions does not necessarily indicate that a greater number of discipline problems exist. A total of 109 Sandwich students were suspended out-of-school in SY 2002, compared to 108 in SY 1999 (the data below counts each student only once, regardless of how many times they were suspended).

Student Suspended Out-of-School: SY 1999

	9 th	10 th	11th	12th	Total
# Suspended SY 1999	19	28	37	24	108
# Suspended SY 2002	29	29	25	26	109

Summary

Most of the discipline problems at Sandwich High School are less egregious forms of misbehavior such as tardiness and cutting class. More serious behavior such as theft, physical assault, and drugs are not as prevalent, though these offenses do occur and must continue to be addressed.

◆ **Student Violence**

The Sandwich High School Student Code of Conduct contains the following offenses that would be considered acts of violence if committed by one of its students:

- Possession of a dangerous weapon
- Assault on a school employee
- Assault on a student
- Indecent assault on another student
- Threats of violence
- Sexual harassment
- Malicious destruction
- Acts of arson
- Hazing, fighting, extortion, or physical intimidation

DROP-OUT AND HIGH SCHOOL GRADUATION RATES

Completing high school is not only an indirect measure of how much subject matter students may have learned, but also of how much students potentially have grown in learning civic responsibilities, social skills, work ethics, and life skills. The best paying careers in today’s economy are demanding ever-higher educational qualifications. Individuals who complete higher levels of education, on average, have higher earnings, better benefits, and more satisfying work. Conversely, students who drop out of school have fewer opportunities to succeed in the work force or to assume a fully functional place in society.

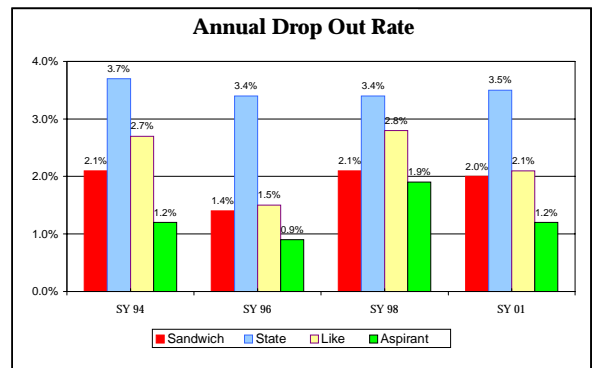
Adults ages 25-34 with at least a Bachelor’s degree have higher earnings than those who have less education. For example, in 2000, college graduates earned 60 and 95 percent more, respectively, than those who completed only high school or a GED. In contrast, adults ages 25-34 who dropped out of high school earned 27 and 30 percent less, respectively, than their peers who had a high school diploma or GED (NCES 2002).

Quite simply, individuals and communities can no longer expect to achieve or maintain prosperity through hard work alone; it will also require “smart work.” At a minimum, an ever-larger percentage of the population must obtain a high school diploma,

which they are not likely to do once they drop out of school.

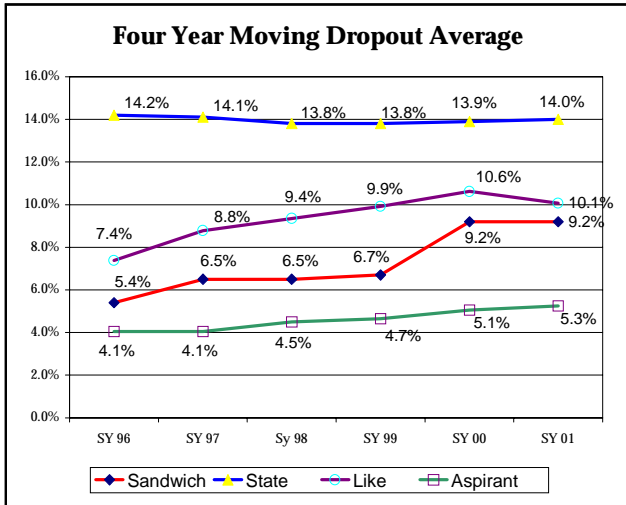
A favorable outcome consists of comparatively low drop out rates, while positive improvement can be measured over time by relative decreases in drop out rates.

- ◆ **Annual Drop Out Rate (9-12).** *The annual drop out rate measures the percentage of students in grade 9-12 who drop out of school in a particular year. In Sandwich, the drop out rate in SY 2001 was 2.0%. This compares to a statewide average of 3.5%. The dropout rate in Sandwich was 2.1% in the baseline year of SY 1994. Sandwich’s annual SY 2001 dropout rate ranks 6th among the peer communities. Sandwich ranked 5th in 1994.*



- ◆ **Four-Year Moving Dropout Average.** A four-year moving average of drop-out rates provides a rough measure of the percentage of students who complete the 8th grade, but who never complete high school. In other words, it measures the percentage of each class who dropout over the four year period when most students normally complete high school.

In Sandwich, the four-year moving average dropout rate for the Class of 2001 is 9.2%. This compares to a statewide average of 14.0%. Sandwich ranks 4th among the peer communities in terms of its four-year moving average dropout rate for the Class of 2001.



Student Drop-Out Rates				
Like Communities				
Municipality	Annual Drop Out Rate SY 2001	R	Four-Year Moving Avg. SY 2001	R
Massachusetts	3.5%		14.0%	
Abington	1.6%	3	10.7%	6
Foxborough	1.9%	5	6.8%	3
Grafton	3.3%	7	14.8%	8
Norton	3.3%	7	14.5%	7
Sandwich	2.0%	6	9.2%	4
Stoneham	0.7%	2	4.4%	2
*Average:	2.1%		10.1%	
Aspirant Communities				
Duxbury	0.3%	1	1.2%	1
Marshfield	1.8%	4	9.3%	5
*Average:	1.2%		5.3%	
Source: Massachusetts Department of Education				
* Moving Drop-Out Rate average is unweighted				

Summary

Sandwich's annual and moving four-year dropout rates are below the state average.

CURRICULUM

One of the National Education Goals states that students leaving grade 12 will have demonstrated competency in English, mathematics, science, and social studies. The extent to which students participate in these courses is an indication of the level of support that educators are giving this goal. Additionally, the courses that students take in high school are an indirect indication of the content of students' knowledge and are key to providing students with the skills necessary to compete in the new economy.

Compared with regular academic courses, advanced courses generally demand greater effort and challenge students more. Trends in high school course-taking can thus provide an indication of changes in levels of student effort and learning (Chaney, Burgoff, and Atash 1997). The most direct way to assess whether students are being exposed to the appropriate curriculum is to determine the percentage of students who take various types of classes by the time they graduate high school. The data below is taken from the Massachusetts Department of Education's Math and Science tables, which are comparable to other systems.

Grade 7

Course	Boys	Girls	Total SY	Total SY
			02	98
Life Science	192	165	357	306
Math, Accelerated	0	0	0	68
Math, Regular	189	165	354	211
SPED Math	0	0	0	23

Grade 8

Course	Boys	Girls	Total SY	Total SY
			02	98
SPED Math	19	5	24	17
Math, Algebra	24	27	51	44
Math, Enriched	0	0	0	66
Math, Regular	122	123	245	140
Physical Science	161	151	312	266

(Continued on next page)

Grades 9 –12: Science

Course	Boys	Girls	Total SY 02	Total SY 98
Astronomy	37	37	74	0
Biology AP -II	3	12	15	0
Biology, 1 st Year	154	129	283	190
Biology, AP - I	3	12	15	22
Botany	24	27	51	0
Chemistry, 1 st Year	50	66	116	169
Chemistry 2 nd Year AP	5	6	11	20
Chemistry Acc.	27	34	61	0
Chemistry AP-I	5	6	11	0
Chemistry AP-II	5	6	11	0
Earth/Space Sci. Acc	31	41	72	0
Earth/Space Science	110	111	221	297
Ecology	15	17	32	0
Environmental Science	0	0	0	227
Environmental Tech.	32	20	52	0
First Aid/CPR	19	24	43	0
Health	140	158	298	332
Human Anatomy	5	14	19	0
Human Relations	25	34	59	0
Meteorology	27	33	60	0
Oceans,Ponds,Marshes	31	20	51	0
Physics AP-1	10	4	14	0
Physics AP-2	10	4	14	0
Physics, 1 st Year	19	30	49	87
Regional Planning	11	6	17	0
Success Health	6	7	13	0

Grades 9-12: Math

Course	Boys	Girls	Total SY 02	Total SY 98
Algebra 1 ACC	26	37	63	0
Algebra 1A: Level 1	76	61	137	175
Algebra 2 (1) : Level 3	7	14	21	0
Algebra 2 (2): Level 5	6	12	18	0
Algebra 2/Trig. Acc.	41	46	87	0
Algebra 2: Level 3	47	39	86	193
Calculus AP I: Level 5	10	11	21	53
Calculus AP II: Level 6	10	11	21	0
Calculus: Level 4	14	22	36	0
Geometry ACC	39	42	81	0
Geometry: Level 2	60	57	117	148
Integrated Math 1	40	30	70	34
Integrated Math 2	42	36	78	22
Integrated Math 3	27	43	70	0
Integrated Math I A	26	21	47	0
Integrated Math I B	29	22	51	0
Integrated Math 4	22	27	49	0
Math Theory & Appl.	13	11	24	17
Math Topics	7	2	9	0
Pre-Algebra, Algebra	0	0	0	169
Pre-Calc: Level 4	41	39	80	149
Precalculus Acc: Level 4	18	39	57	0
Success Math	5	4	9	0

(No comparative data is available for this indicator).

STUDENT PERFORMANCE

Indicators that measure what students have learned in school are perhaps the most important measure of the outcomes of education (National Center for Education Statistics 1998). However, while standardized testing and performance on examinations are an important measure of student achievement, student performance should be assessed against several output measures, including courses taken in high school, drop-out rates, and college attendance.

• MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM

The Massachusetts Comprehensive Assessment System (MCAS) is the Commonwealth's statewide assessment program for measuring the performance of students and public schools in achieving the academic learning standards contained in the Massachusetts Curriculum Frameworks. Although the fundamental elements of MCAS reporting remain in place, there are several changes to the reporting of MCAS test results since 1999. Twelve tests were administered in spring 2002, although results for only ten of these tests are reported. It is important to remember that while the MCAS is not administered in all grades, it is an assessment of performance in all grades. When scores increase or decrease over time, it is important to look at what is occurring in the previous grades as well as the tested grade. Additionally, as with any evaluation, test results are most meaningful when compared to other indicators and when examined over several years.

◆ Sandwich Public Schools MCAS Action Plan 2003

The Sandwich Public Schools has instituted an MCAS action plan. The goal of the Plan is to continue to improve student performance by:

- Strengthening the district's curriculum.
- Providing alternative/remedial and enrichment opportunities to students both during and after school, on weekends, and in the summer.

- Providing continued professional development to staff.

The MCAS Action Plan includes:

Curriculum Activities

The Sandwich Public Schools will continue to assess sub test scores and implement adjustments to curriculum based on findings from an item by item test analysis.

- Align/revise report cards to reflect district curriculum standards and assessment with more detailed information to parents and students.
- Complete writing assessment of students and articulate standards and expectations for the holistic grading of student work on a regular basis.
- Complete text/materials adoption for science and social studies in primary grades.
- Complete guided reading inventories for grades 1-4.
- Utilize technology to improve inquiry skills.
- Utilize technology to communicate curriculum and standards to the community.
- Work with the SPED Department to realign personnel and resources into the mainstream of curriculum and instruction.

Opportunities for Students:

- Title I Reading intervention and assessment model to students in grade K-6 in both reading and in math.
- Further developed an after school remediation program for students in grades 5-8.
- Further developed and scheduled an alternative Remedial Program that takes place during the school day for those students who have failed the MCAS in grade 8 and are currently failing at the high school.
- Continue to offer a Saturday Remedial Program for grade 4-12 students who are currently at risk

of failing the "high stakes test" which awaits them in grade 10.

- Continue to work with Community Schools to develop a more rigorous Summer School Program that meets our curriculum standards and expectations.
- Continue to develop an after school enrichment program for grades 5-8.

◆ **MCAS Total Scores**

Overall, Sandwich has the highest total MCAS score among the peer communities (this result does not include the Grade 3 Reading test, which is based on a different scale). Sandwich's total MCAS score is 56 points above the state average, 18 points above the like community average, and 2 points above the aspirant community average.

MCAS Total Scores 2002		
Like Communities		
Town	Total Score	Rank
Massachusetts	1,887	
Abington	1,912	7
Foxborough	1,942	2
Grafton	1,928	5
Norton	1,907	8
Sandwich	1,943	1
Stoneham	1,919	6
Average:	1,925	
Aspirant Communities		
Duxbury	1,940	4
Marshfield	1,941	3
Average:	1,941	
Source: Mass. Dep't. of Education		

In comparison to all Massachusetts school districts, Sandwich's MCAS scores are above the state averages in all three grades and in all subject areas.

SANDWICH PUBLIC SCHOOLS MCAS RESULTS 2002
Percent of Students Scoring Advanced or Proficient vs. State Averages

READING									
Grade (1)	All Students						Regular Ed Students		
	District		State		% Above State		District 2002	State 2002	% Above State 2002
	2001	2002	2001	2002	2001	2002			
3	78	83	62	67	4	16	88	74	14

ENGLISH/LANGUAGE ARTS									
Grade	All Students						Regular Ed Students		
	District		State		% Above State		District 2002	State 2002	% Above State 2002
	1998	2002	1998	2002	1998	2002			
4	24	69	20	54	4	15	78	61	17
7	NA	84	NA	64	NA	NA	88	72	16
10	61	80	38	59	23	21	85	66	19

MATH									
Grade	All Students						Regular Ed Students		
	District		State		% Above State		District 2002	State 2002	% Above State 2002
	1998	2002	1998	2002	1998	2002			
4	44	51	34	39	10	12	59	45	14
6	NA	64	NA	41	NA	NA	73	48	25
8	54	55	31	34	23	21	64	39	25
10	31	61	24	44	7	17	66	48	18

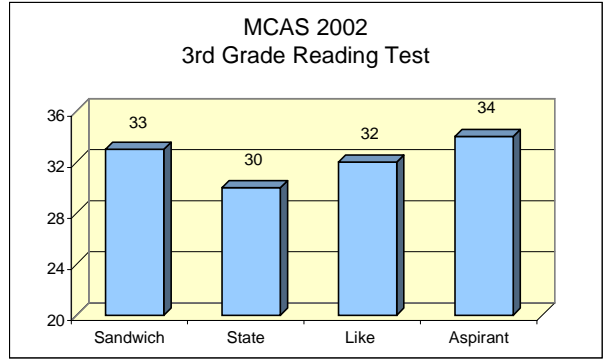
HISTORY AND SOCIAL SCIENCE									
Grade	All Students						Regular Ed Students		
	District		State		% Above State		District 2002	State 2002	% Above State 2002
	1998	2002	1998	2002	1998	2002			
8	NA	19	NA	12	NA	NA	21	14	7

(1) Raw scores are not linked from year to year, therefore direct comparisons should not be made between raw scores on the 2001 and 2002 Reading test.

- ◆ **Grade 3 Reading.** Sandwich ranks 3rd among the peer communities in terms of its grade 3 Reading score. Results for this test are only reported for three reporting levels (proficient, needs improvement, warning/failing) and are not reported on the 200-280 scaled score used for other MCAS tests.

2002 MCAS Results - Grade 3 Reading						
<u>Like Communities</u>						
District	Prof	Needs Imp	Warning/Failing	Raw Score	R	# Points Incr./Decr. 2001 to 2002
State	67	27	6	30		0
Abington	73	23	4	32	5	1
Foxborough	84	14	1	34	1	0
Grafton	76	21	3	32	5	0
Norton	77	21	2	32	5	1
Sandwich	83	16	2	33	3	0
Stoneham	74	21	5	31	8	-1
Average:	78	19	3	32		
<u>Aspirant Communities</u>						
Duxbury	86	12	2	33	3	0
Marshfield	88	11	1	34	1	0
Average:	87	11	1	34		

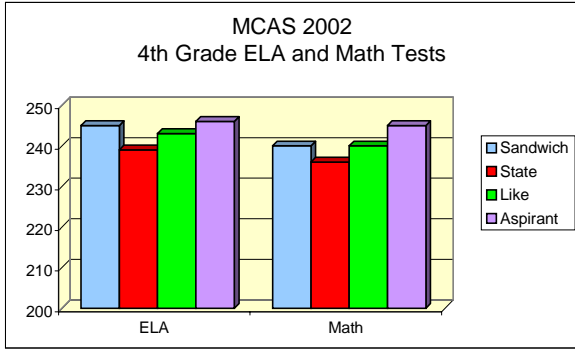
Source: Massachusetts Department of Education, 2002 R= Rank



- ◆ **Grade 4 English Language Arts.** Sandwich ranks 3rd among its peer communities in terms of its grade 4 ELA score. Sandwich's ELA score has increased by 12 points since 1998. The district's score is above both the state and like community averages and one point below the aspirant community average.
- ◆ **Grade 4 Mathematics.** Sandwich ranks 4th among its peer communities in terms of its grade 4 Mathematics score. Sandwich's Mathematics score has increased by 2 points since 1998. Sandwich's Mathematics score is above the state and like community averages and below the aspirant community average.

2002 MCAS Results - Grade 4														
<u>Like Communities</u>														
District	English Language Arts						Mathematics							
	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1998 to 2002	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1998 to 2002
State	8	46	37	10	239		9	12	27	42	19	236		2
Abington	3	53	35	9	240	7	7	9	27	48	15	235	8	-4
Foxborough	13	67	17	3	248	2	14	25	46	24	5	248	1	6
Grafton	9	61	29	2	244	4	10	14	26	49	11	238	5	0
Norton	4	49	40	6	239	8	8	10	32	48	10	238	5	7
Sandwich	14	55	26	4	245	3	12	14	37	38	11	240	4	2
Stoneham	9	54	35	2	242	6	9	16	27	46	11	238	5	6
Average:	9	56	30	4	243		10	14	33	42	11	240		15
<u>Aspirant Communities</u>														
Duxbury	10	55	31	5	243	5	7	21	32	39	8	242	3	-2
Marshfield	19	65	15	1	249	1	13	28	41	28	3	247	2	2
Average:	39	61	22	3	246		14	25	37	33	5	245		8

Source: Massachusetts Department of Education, 2002 R= Rank



- ◆ **Grade 6 Mathematics.** Sandwich ranks 1st among the peer communities in terms of its grade 6 Mathematics score. Sandwich's Mathematics score is above the state average and the like and aspirant community averages. The district's score decreased by 1 point from the previous year.

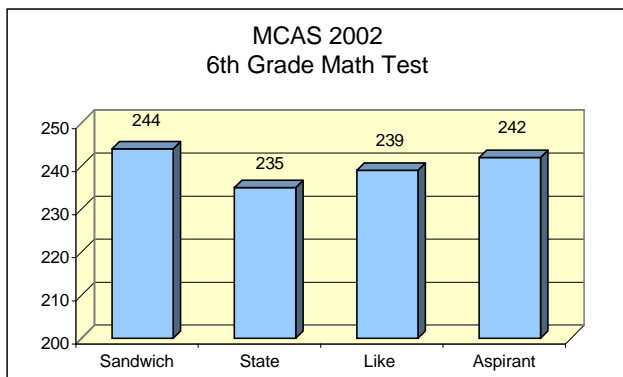
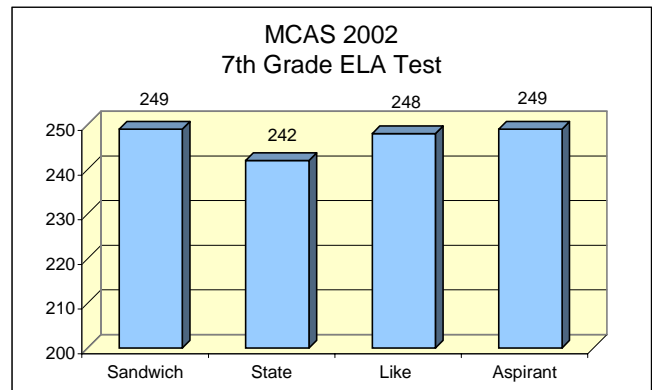
2002 MCAS Results - Grade 6 Mathematics							
Like Communities							# Points
District	Adv	Prof	Needs Imp	Warning/ Failing	Scaled Score	R	Incr./Decr. 2001 to 2002
State	13	28	29	30	235		2
Abington	11	29	41	19	236	7	0
Foxborough	23	38	26	13	244	1	5
Grafton	25	39	20	17	244	1	8
Norton	6	24	37	33	230	8	-4
Sandwich	19	45	25	11	244	1	-1
Stoneham	13	33	35	19	237	6	3
Average:	16	35	30	18	239		
Aspirant Communities							
Duxbury	20	37	27	16	241	5	-3
Marshfield	20	39	27	15	242	4	3
Average:	20	38	27	15	242		

Source: Massachusetts Department of Education, 2002 R= Rank

- ◆ **Grade 7 English Language Arts.** Sandwich ranks 3rd among its peer communities in terms of its grade 7 English Language Arts score. This is the first year that this test had been administered. Sandwich's ELA score is above the state and like community averages and equal to the aspirant community average.

2002 MCAS Results - Grade 7 English Language Arts							
Like Communities							# Points
District	Adv	Prof	Needs Imp	Warning/ Failing	Scaled Score	R	Incr./Decr. 2001 to 2002
State	9	55	28	8	242		3
Abington	8	71	20	1	247	6	1
Foxborough	10	72	16	2	246	7	8
Grafton	8	67	22	3	244	8	1
Norton	22	65	11	2	251	1	7
Sandwich	16	68	14	2	249	3	4
Stoneham	15	66	17	1	248	4	3
Average:	14	68	16	2	248		
Aspirant Communities							
Duxbury	18	68	12	2	250	2	2
Marshfield	16	65	18	1	248	4	3
Average:	56	66	15	1	249		

Source: Massachusetts Department of Education, 2002 R= Rank

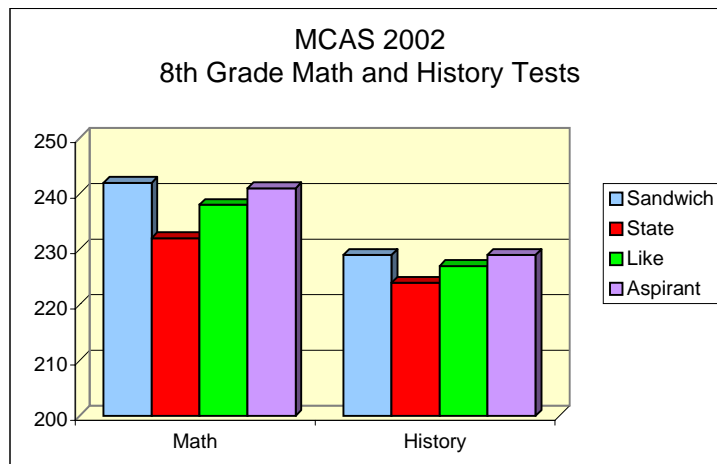


- ◆ **Grade 8 Mathematics.** Sandwich ranks 1st among its peer communities in terms of its grade 8 Mathematics score. Sandwich's Mathematics score has increased by 2 points since 1998, and is above the state average and the like and aspirant community averages.
- ◆ **Grade 8 History & Social Science.** Sandwich ranks 1st among the peer communities in terms of its

grade 8 History and Social Science Score, though the district's score has declined by one point from 1999. Sandwich's History & Social Science score is above the state and like community averages and equal to the aspirant community average.

2002 MCAS Results - Grade 8														
Like Communities														
Mathematics								History & Social Science						
District	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1998 to 2002	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1999 to 2002
State	11	23	33	33	232		5	1	11	46	42	224		3
Abington	8	29	46	17	236	7	8	1	17	59	23	229	1	2
Foxborough	14	31	37	18	237	5	6	0	6	56	38	224	7	-1
Grafton	20	33	26	21	239	4	5	2	15	52	31	227	6	3
Norton	10	29	39	23	234	8	4	1	15	59	25	228	5	7
Sandwich	23	32	29	16	242	1	2	1	18	56	26	229	1	-1
Stoneham	15	29	39	17	237	5	2	2	14	52	32	227	6	-1
Average:	15	30	36	18	238		5	1	14	56	29	227		13
Aspirant Communities														
Duxbury	19	37	31	13	242	1	3	1	17	62	20	229	1	1
Marshfield	17	34	35	14	240	3	8	0	19	60	21	229	1	5
Average:	18	35	33	14	241		0	0	18	61	21	229		-5

Source: Massachusetts Department of Education, 2002 R= Rank

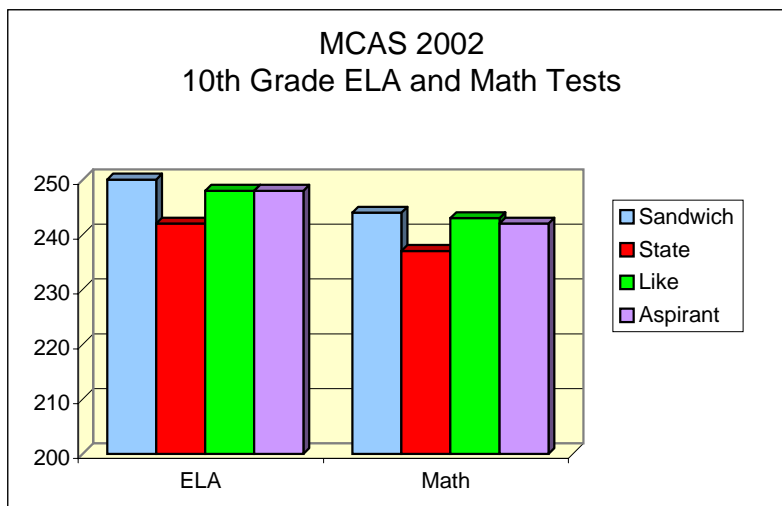


◆ **Grade 10 English Language Arts.** *Sandwich ranks 1st among the peer communities in terms of its grade 10 ELA score. This score has increased by 10 points since 1998. Sandwich's ELA score is above the state average and the like and aspirant community averages.*

◆ **Grade 10 Mathematics.** *Sandwich ranks 4th among its peer communities in terms of its grade 10 Mathematics score. This score has increased by 14 points since 1998. Sandwich's Mathematics score is above the state average and above the like and aspirant community averages.*

2002 MCAS Results - Grade 10														
English Language Arts								Mathematics						
District	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1998 to 2002	Adv	Prof	Needs Imp	Fail	Scaled Score	R	# Points Incr./Decr. 1998 to 2002
State	19	40	27	14	242		12	20	24	31	26	237		15
Abington	20	56	19	5	247	5	18	23	33	35	9	242	5	22
Foxborough	32	44	20	4	249	4	13	31	34	25	9	246	1	21
Grafton	19	56	21	4	246	7	2	38	29	18	14	246	2	8
Norton	25	48	19	9	247	5	3	24	28	31	17	240	6	2
Sandwich	30	50	17	2	250	1	10	25	36	31	7	244	4	14
Stoneham	37	41	16	6	250	1	6	21	30	38	11	240	6	7
Average:	28	49	18	5	248		26	27	32	30	11	243		31
Aspirant Communities														
Duxbury	29	55	16	0	250	1	5	25	41	30	4	245	3	10
Marshfield	17	54	24	4	246	7	9	20	28	38	14	239	8	13
Average:	22	54	21	2	248		16	22	33	35	10	242		17

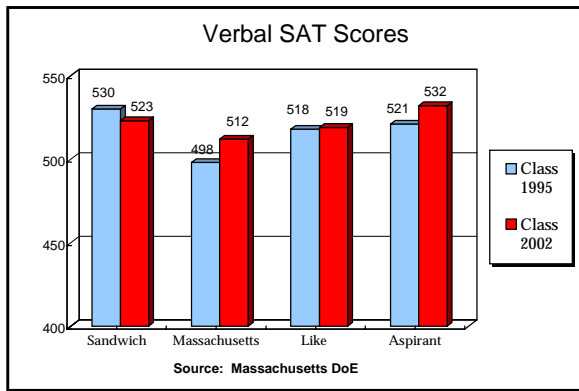
Source: Massachusetts Department of Education, 2002 R= Rank



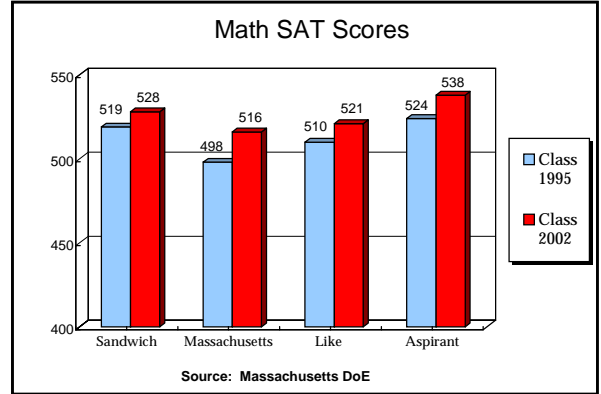
● **SAT TEST SCORES – CLASS OF 2002**

SAT scores are required for admission to the vast majority of four-year colleges and universities in the United States. Students' SAT scores are often used as one criterion in determining the quality of the four-year institution that college-bound students can attend.

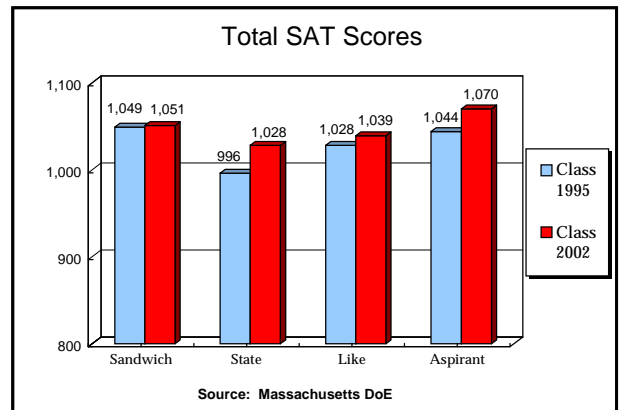
- ◆ **Percentage of Students Taking the SAT.** *In 2002, 78% of all high school students in Sandwich took the SAT examination, compared to 76% in the baseline year of 1995. Sandwich ranks 7th in terms of the percentage of students taking the SAT.*
- ◆ **Verbal SAT Scores.** *The average SAT verbal score in Sandwich for the Class of 2002 was 523, a seven-point decrease from the baseline year of 1995. The average SAT verbal score for Sandwich is 11 points higher than the state average.*



- ◆ **Math SAT Scores.** *The average SAT math score in Sandwich for the Class of 2002 was 528, a nine-point increase from the baseline year of 1995. The average SAT math score for Sandwich is twelve points higher than the state average.*



- ◆ **Combined SAT Scores.** *In Sandwich, the combined (mathematics and verbal) SAT score for the Class of 2002 was 1,051, an increase of 2 points from the baseline year of 1995. The combined SAT score for Sandwich is 23 points higher than the state average. Sandwich ranks 3rd among the eight peer communities in terms of combined SAT scores for the Class of 2002.*



Because small differences in SAT scores are often statistically insignificant, the SAT scores of the peer communities were ranked into quartiles. The rankings for SAT Verbal and Math scores are calculated using the following quartiles based on 1999 test averages from all Massachusetts school districts:

Verbal	Math	Quartile Ranking
200-430	200-440	4th
431-500	441-510	3rd
501-580	511-600	2nd
581-800	601-800	1st

Source: The College Board, 2002

Student SAT Performance: Class of 2002								
Like Communities								
Municipality	% Taking SAT's	R	Verbal Scores	Q	Math Scores	Q	Total Scores	R
Nation	NA	---	504	---	516	---	1,020	---
Massachusetts	69%	---	512	---	516	---	1,028	---
Abington	88%	3	500	3	523	2	1,023	6
Foxborough	89%	2	528	2	512	2	1,040	5
Grafton	81%	5	524	2	537	2	1,061	2
Norton	78%	8	511	2	497	3	1,008	8
Sandwich	80%	7	523	2	528	2	1,051	3
Stoneham	81%	5	525	2	526	2	1,051	3
*Average:	83%		519		521		1,039	
Aspirant Communities								
Duxbury	94%	1	553	2	563	2	1,116	1
Marshfield	83%	4	511	2	512	2	1,023	6
*Average:	89%		532		538		1,070	
*Unweighted average Q = Quartile R=Ranking								
Source: Massachusetts Department of Education								

● **STUDENTS IN ADVANCED PLACEMENTS**

Restructuring the high school to a block scheduling format has resulted in the need to improve and expand Sandwich’s Advanced Placement Program. The number of AP exams taken has more than doubled since 1996. For the Class of 2002, 118 students took 187 advanced placement exams. This compares to 114 students taking 165 advanced placement exams for the Class of 1999, 100 students taking 155 exams for the Class of 1997, and 69 students taking 84 exams for the Class of 1996. Other successes are:

- ◆ 100% of students taking AP exams in Biology, Calculus AB, English Language Composition, Spanish, and Psychology scored a 3 or higher (scale 1-5), qualifying them for college/university credit.
- ◆ Ninety-percent of students scored a 3 or higher, qualifying them for college/ university credit. This compares to 74.6% of students for the Class of 1999 who scored a 3 or higher.

**Sandwich Public Schools
Advanced Placement Examinations
Class of 2002**

Candidates	Subject	% Score 3 or Better
7	Art – Drawing	43
14	Biology	100
23	Calculus AB	100
11	Chemistry	91
14	Eng. Lang./Comp.	100
8	Eng. Lit/Comp.	88
27	European History	93
8	French Language	88
2	Govt. & Pol. Comp.	50
13	Physics B	69
3	Psychology	100
11	Spanish Lang.	100
48	U.S. History	92

● **STUDENTS MAKING HONOR ROLL**

In the baseline year of 1996 approximately 30% of Sandwich High School students made the honor roll. In 2002, this percent increased to approximately 35%.

● **PLANS OF HIGH SCHOOL GRADUATES**

A college education produces both individual and public benefits. As previously discussed, a college graduate with a bachelor’s degree earns significantly more income than a person with only a high school diploma. A college education also enriches students’ lives and provides benefits that are passed on to future generations and society as a whole.

Furthermore, more and more jobs in our new economy require college experience. Increasingly, schools must prepare students for admission to two-year colleges and four-year colleges and universities so they may participate and prosper in the new economy.

◆ **Two-Year College Attendance.** *In Sandwich, 21.0% of 2000 high school graduates planned to attend a two-year college after graduation. This compares to 24.4% in the baseline year of 1994. Sandwich has the highest percentage of graduates planning to attend a two-year college among the eight peer communities.*

◆ **Four-Year College Attendance.** *In Sandwich, 63.0% of 2000 high school graduates planned to attend a four-year college after graduation. This compares to 58.1% in the baseline year of 1994. Sandwich has the 7th lowest percentage of 2000 high school graduates planning to attend a four-year college among the eight peer communities.*

◆ **Most Recent College Attendance Data – Class of 2002.** *In Sandwich, 17.5% of 2002 graduates planned to attend a two-year college or business technical school, while 71.1% planned to attend a four-year college or university. No comparative data is available for this indicator.*

Plans of High School Graduates: Class of 2000						
Like Communities						
Municipality	2 yr.		4 yr.		work	R
	college	R	college	R		
Massachusetts	18.6%		53.2%		16.2%	
Abington	20.0%	3	65.0%	5	11.0%	3
Foxborough	13.0%	5	75.0%	2	7.0%	6
Grafton	17.0%	4	74.0%	3	8.0%	5
Norton	21.0%	1	62.0%	8	12.0%	2
Sandwich	21.0%	1	63.0%	7	7.0%	6
Stoneham	10.0%	7	71.0%	4	10.0%	4
Average:	18.2%		68.3%		9.1%	
Aspirant Communities						
Duxbury	6.0%	8	84.0%	1	5.0%	8
Marshfield	13.0%	5	64.0%	6	15.0%	1
Average:	9.8%		73.1%		10.6%	
Source: Massachusetts Department of Education						

Sandwich graduates attended are smaller regional colleges, community colleges, or technical schools, the magazine did not rank these institutions nationally. This is not necessarily a reflection of the quality of these institutions. Overall, the Sandwich Class of 2002 is attending 79 post-secondary institutions in all regions of the country.

Of the 30 schools that were ranked nationally, 23.3% were ranked in the first tier, 50.0% in the second tier, 16.7% in the third tier, and 10.0% in the fourth tier. Of the 36 schools that were ranked regionally, 36.1% were ranked in the first tier, 22.2% in the second tier, 16.7% in the third tier, and 25.0% in the fourth tier.

● COLLEGE SCHOLARSHIPS

A college or university education is becoming more and more expensive throughout the United States, but both public and private higher institutions cost more to attend in New England than anywhere else in the country. Consequently, communities that are interested in promoting college attendance among their high school graduates must not only improve high school graduation rates and standardized test scores, they must encourage students to attend college by providing tangible financial assistance. Many communities now provide tuition assistance through various types of community-based scholarships.

- ◆ *In Sandwich, a total of \$197,955 in college scholarships was provided to 2002 high school graduates by the local community. This compares to \$74,525 in scholarships for the Class of 199, \$94,175 for the Class of 1997, and \$113,750 for the Class of 1999.*

● COLLEGE ACCEPTANCE

Following is a list of the institutions that the Sandwich Class of 2002 had committed to attend. The institutions are grouped by their year 2002 national and regional ranking as determined by *U.S. News and World Report* in its annual "America's Best Colleges" report. The magazine ranked higher education institutions into four tiers, with tier one being the highest ranking. Because many of the institutions that

U.S. News and World Report - "America's Best Colleges" Rankings - 2002

• **NATIONALLY RANKED SCHOOLS**

Tier One

Bates College
Boston College
Brandeis University
College of the Holy Cross
Duke University
Gettysburg College
Wake Forest

Tier Two

American University
Boston University
Clark University
Florida State University
George Washington University
North Carolina State University
University of Connecticut
University of Delaware
University of Maryland
University of Massachusetts Amherst
University of New Hampshire
University of Vermont
Washington College
Wheaton College
Worcester Polytechnic Institute

Tier Three

Arizona State University
Northeastern University
St. Anselm College
University of Hartford
University of Rhode Island

Tier Four

Florida Atlantic
Franklin Pierce
Massachusetts College of Liberal Arts

• **REGIONALLY RANKED SCHOOLS**

Tier One

Assumption College
Bentley College
Bryant College
Florida Southern
Ithica College
Merrimack College
Providence College
Quinnipiac College
Roger Williams University
Regis College
Simmons College
Stonehill College
Villanova University

Tier Two

Champlain College
Lesley College
Salve Regina University
Springfield College
Suffolk University
University of Massachusetts Dartmouth
University of Tampa
Western New England College

Tier Three

Green Mountain College
Johnson and Wales University
Loyola-Marymount
Plymouth State College
St. Leo University
University of Southern Maine

Tier Four

Bridgewater State College
Castleton State College
Eastern Nazarene
Framingham State College
Husson College
Mt. Ida College
Salem State University
Westfield State College
Worcester State College

- **COLLEGES AND UNIVERSITIES NOT RANKED**

Hesser College
Babson College
Massachusetts Maritime Academy
Massachusetts Communication
New Hampshire Tech.
New England Institute of Technology
Queens College
Wentworth Institute

- **COMMUNITY AND JUNIOR COLLEGES**

Cape Cod Community College
Cape Fear Community College
Dean Junior College
Holyoke Community College
Santa Monica Community College

Summary - Section 3

Sandwich's public school students perform above the state average in all of the educational outcomes indicators. Overall, Sandwich has the highest total MCAS score among the peer communities. Sandwich's total MCAS score is 56 points above the state average, 18 points above the like community average, and 2 points above the aspirant community average.

The SAT scores of Sandwich students are also above state averages. The total SAT score in the district is 23 points above the state average and 31 points above the national average. Ninety-percent of Sandwich students who took an advanced placement exam in the 2001-2002 school year scored a 3 or higher, qualifying them for college/ university credit. More than seventy percent (71.1%) of 2002 graduates planned to attend a four-year college or business technical school, while 17.5% planned to attend a two-year college. Overall, the Sandwich Class of 2002 is attending 79 post-secondary institutions in all regions of the country.

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APPENDIX A

COMPARATIVE PERFORMANCE INDEX©

The Comparative Performance is a weighted aggregate index that compares the overall performance of the eight peer communities based on the community characteristics, school system characteristics, and educational outputs included in this report card. The Comparative Performance Index allows one to compare the performance of one community to all other peer communities and to compare its performance to maximum and minimum levels of performance.

METHODOLOGY

Rankings: The eight peer communities were ranked 1 through 8 on the most important indicators used to define community characteristics, school system characteristics, and educational outputs. The highest rank (i.e., 1) was assigned to the community with the best performance on a particular indicator and the lowest rank (i.e., 8) was assigned to the community with the worst performance on a particular indicator.

Scores: The eight peer communities were assigned a score of 1, 2, 3, or 4, based on their quartile ranking. A score of “4” is considered the “highest” score possible, while a score of “1” is considered the “lowest” score possible. Thus, on each indicator included in the performance index, the highest performing quartile of communities received a score of “4,” the second highest performing quartile of communities received a score of “3,” the second lowest performing quartile of communities received a score of “2,” and the lowest performing quartile of communities received a score of “1”. Where data was not available, the peer community was assigned a score of 1.

Adjustments: In those cases where communities had identical performance on a particular indicator (e.g., average SAT scores), they received the same ranking and, therefore, the same score, *as if* they were in the same quartile. Thus, in some cases, there may be more than two communities in a particular quartile, or less than two communities in a particular quartile because of equal performance among several communities. This adjustment was made because it potentially allows all communities to perform well in comparison to the maximum possible score (see below). Thus, in an ideal situation, where all communities had high levels of performance, all communities would be ranked as if they were in the first quartile.

Example A:

Combined SAT	Score	Rank
Community A	1100	1
Community B	1000	2
Community C	900	3
Community D	800	4

Example B:

Combined SAT	Score	Rank
Community A	1100	1
Community B	1000	2
Community C	1000	2
Community D	900	4

Weighting Factors: The scores used to calculate the Comparative Performance Index were weighted on the basis of their direct proximity to educational outcomes and the direct ability of schools to affect performance in the short- to intermediate-term. Thus, educational outcomes receive the heaviest weight, school system characteristics receive less weight, and community characteristics receive the least weight. The weighting factors are:

- Community Characteristics = 1
- School System Characteristics = 2
- Educational Outputs = 3

Thus, the score on each community characteristic was multiplied by 1; the score on each school system characteristic was multiplied by 2; and the score on each educational output was multiplied by 3.

Calculation of the Index Score: The index score for each of the eight communities is calculated as:

$$(\text{Score}_1 * \text{Weighting Factor}) + (\text{Score}_2 * \text{Weighting Factor}) + (\text{Score}_3 * \text{Weighting Factor}) \dots = \text{Total}$$

Maximum and Minimum Scores: The lowest possible score that a community may receive is 1*Weighting Factor (i.e., 1, 2, or 3) in each indicator included in the performance index. The highest possible score that a community may receive is 4*Weighting Factor (i.e., 4, 8, or 12) in each indicator included in the performance index. The maximum possible score for a community ranked in the top quartile in all categories of indicators is 200. The minimum possible score for a community ranked in the bottom quartile in all categories of indicators is 50.

Year to Year Comparisons: The *Community Report Card* enables the district to measure its progress from the baseline year (see Table 1). While the format and many of the indicators in the *Community Report Card* have remained essentially the same as in previous years, some comparative data is no longer available and is not included in the Performance Index. Thus, direct comparisons of the Community Performance Index scores over time are not valid because some of the indicators have changed since the baseline year.

To accurately measure progress over time, a scaled index value was calculated (see Table 2). The scaled score was calculated by dividing the total index score by the maximum possible score for that year. Using scaled scores allows one to measure each district’s progress from year to year and to measure the degree of progress in relation to the peer communities.

As Table 1 indicates, Sandwich ranks 3rd among the peer communities in terms of its Community Performance Index total. Sandwich ranked 2nd in the baseline year of 1996.

Table 1					
COMMUNITY PERFORMANCE INDEX TOTAL					
Like Communities					
	Scores	Minimum	Maximum	Rank	Rank
	<u>2002</u>	<u>Possible Score</u>	<u>Possible Score</u>	<u>2002</u>	<u>Baseline 1996</u>
Abington	130	68	272	7	7
Foxborough	197	68	272	2	5
Grafton	155	68	272	6	6
Norton	118	68	272	8	8
Sandwich	191	68	272	3	2
Stoneham	191	68	272	3	2
Aspirant Communities					
Duxbury	242	68	272	1	1
Marshfield	175	68	272	5	4

As the Table 2 indicates, Sandwich's scaled index score has declined by 6.2% since the 1996 baseline year Report Card. The decline can be attributed to several factors, including the average attendance rate, the 4-year drop-out rate, a lower SAT verbal score, the percentage of students attending four-year colleges, and the percentage of students taking the SAT. While Sandwich experienced improvements in each of these areas since the baseline year (except for the verbal SAT score), the **rate** of these improvements was lower than in many of the peer communities. Thus, while Sandwich improved in these areas in relation to baseline year data, the district lost ground when measured against its peer communities.

Additionally, per pupil spending in Sandwich has not kept pace with spending in its peer communities. While this indicator has only a small effect in terms of Sandwich's comparative index score, low per pupil spending may be affecting student performance in other areas. Importantly however, Sandwich has improved since the baseline year in most of the educational outcomes indicators (e.g. MCAS) and the decline in its scaled score may be attributable to a one-year event. This is especially true since the district's scaled score has increased in each of the previous years' report cards. Future report cards will allow one to determine if this year's decline is a trend or simply a one-year drop. Additionally, it is important to remember that the district outperforms students statewide in all of the educational outcomes indicators (Section 3).

Table 2					
COMMUNITY PERFORMANCE INDEX TOTAL					
SCALED SCORES					
<u>Like Communities</u>					
	<u>Scaled</u> <u>Score 1996</u>	<u>Scaled</u> <u>Score 2002</u>	<u>Rank</u> <u>Baseline 1996</u>	<u>Rank</u> <u>2002</u>	<u>Difference</u> <u>1996 to 2002</u>
Abington	50.5%	47.8%	7	7	-2.7%
Foxborough	59.3%	72.4%	5	2	13.2%
Grafton	55.1%	57.0%	6	6	1.9%
Norton	38.9%	43.4%	8	8	4.5%
Sandwich	76.4%	70.2%	2	3	-6.2%
Stoneham	76.4%	70.2%	2	3	-6.2%
Average:	59.4%	60.2%			0.8%
<u>Aspirant Communities</u>					
Duxbury	86.6%	89.0%	1	1	2.4%
Marshfield	65.3%	64.3%	4	5	-0.9%
Average:	75.9%	76.7%			0.7%

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COMPARATIVE PERFORMANCE INDEX SCORES

COMMUNITY CHARACTERISTICS

The Comparative Performance Index allows one to compare the performance of one community to all other peer communities and to compare its performance to maximum and minimum levels of performance. The eight peer communities were assigned a score of 1, 2, 3, or 4, based on their quartile ranking. The highest performing quartile of communities received a score of "4," the second highest performing quartile received a score of "3," the second lowest performing quartile received a score of "2," and the lowest performing quartile of communities received a score of "1."

A community's characteristics are a crucial part of the context in which the schools operate, and they help to shape both the educational and social issues with which school systems must deal. The table below measures various Community Characteristics of the Town Sandwich and its peer communities, such as income and educational attainment. Overall, Sandwich ranks 2nd among the eight peer communities in terms of having one of the highest Community Characteristics scores.

COMPARATIVE PERFORMANCE INDEX SCORES

COMMUNITY CHARACTERISTICS

WEIGHTING FACTOR = 1

Like Communities	Per Cap. Income	Med Hshld. Income	Students Low Income	% Families < Poverty	Residents w/ Bach's Degree	Residents w/o HS Diploma	Voter Turnout	% Children Attend PS	Comm Char Subtotal	Rank
Abington	1	2	2	4	1	1	2	1	14	7
Foxborough	4	3	3	2	3	3	4	3	25	3
Grafton	2	1	1	2	2	2	1	1	12	8
Norton	1	3	1	3	1	1	2	3	15	6
Sandwich	2	2	4	3	4	4	3	4	26	2
Stoneham	3	1	2	1	2	2	3	4	18	5
Aspirant Communities										
Duxbury	4	4	4	4	4	4	4	2	30	1
Marshfield	3	4	3	1	3	3	1	2	20	4

R=Rank

Minimum Possible Score: 8

Maximum Possible Score: 32

SCHOOL SYSTEM CHARACTERISTICS

The School System Characteristics section of the Sandwich Community Report Card compares the financial, enrollment, and instructional staff characteristics of the Sandwich Public Schools and its peer communities. The scores for the School System Characteristics indicators were weighted by a factor of 2 because they are more directly related to educational outcomes and the direct ability of schools to affect performance than are the Community Characteristics indicators. Thus, the highest performing quartile of communities received a score of "8," the second highest performing quartile received a score of "6," the second lowest performing quartile received a score of "4," and the lowest performing quartile of communities received a score of "2."

Overall, Sandwich ranks 3rd among the eight peer communities in terms of its School System Characteristics score. Sandwich ranked 7th in 2000, 2nd in 1997, and 3rd in the baseline year of 1996.

COMPARATIVE PERFORMANCE INDEX SCORES

SCHOOL SYSTEM CHARACTERISTICS

WEIGHTING FACTOR=2

Like Communities	Equal. Property Values/Pupil (Fiscal Capacity)	Fiscal Effort (Tax Rate)	Avg Per Pupil Expenditure All Day Stdnts.	Average Salary	% Teachers of Total Staff	Students Per Computer	Schl Char Subtotal	Rank
Abington	2	8	6	4	4	2	26	5
Foxborough	4	4	6	4	2	8	28	4
Grafton	4	6	4	6	2	4	26	5
Norton	2	6	2	2	4	6	22	6
Sandwich	6	4	2	2	8	8	30	3
Stoneham	8	8	8	8	8	4	44	1
Aspirant Communities								
Duxbury	8	2	8	8	6	6	38	2
Marshfield	6	2	4	6	6	2	26	5

R = Rank

Minimum Possible Score: 12

Maximum Possible Score: 48

EDUCATIONAL OUTCOMES

Weighting Factor = 3

The reason for setting educational goals and for implementing education reform initiatives is to improve educational outcomes. Students should be expected to pursue an exciting and challenging academic life that will prepare them for meaningful careers and for their future roles as citizens in a democracy. The Educational Outcomes section of the report card measures a school system's success in achieving these goals. The scores for the Educational Outcomes indicators were weighted by a factor of 3 because these indicators are most directly related to student success and the quality of the Sandwich Public Schools. Thus, the highest performing quartile of communities received a score of "12," the second highest performing quartile received a score of "9," the second lowest performing quartile received a score of "6," and the lowest performing quartile of communities received a score of "3."

Overall, Sandwich ranks 2nd among the eight peer communities in terms of its Educational Outcomes score.

COMPARATIVE PERFORMANCE INDEX SCORES

EDUCATIONAL OUTCOMES

WEIGHTING FACTOR=3

Like Communities	School Attendance Overall Avg	Annual Drop Out Rate	4 FR Missing Dropout Rate	Massachusetts Comprehensive Assessment System - Scaled Scores										% Taking SAT	SAT Verbal Score	SAT Math Score	4 Yr College Attendance	EDUC OUTCOME	
				Grade 3 Reading	Grade 4 ELA	Grade 4 Math	Grade 5 Math	Grade 7 ELA	Grade 8 Math	Grade 9 History	Grade 10 ELA	Grade 10 Math	Grade 11 Math					SUBTOTAL	Rank
Abington	3	9	6	6	3	3	3	6	3	12	6	6	9	3	6	6	90	7	
Foxborough	6	6	9	12	12	12	12	3	6	3	9	12	12	12	6	12	144	2	
Grafton	9	3	3	6	9	6	12	3	9	6	3	12	6	9	12	9	117	6	
Norton	9	3	3	6	3	6	3	12	3	6	6	6	3	6	3	3	81	8	
Sandwich	6	6	6	6	9	9	12	9	12	12	12	9	3	6	9	3	135	3	
Stoneham	12	12	12	3	6	6	6	9	6	6	12	6	6	9	9	9	129	4	
Aspirant Communities																			
Duxbury	12	12	12	9	9	9	6	12	12	12	12	9	12	12	12	12	174	1	
Marshfield	6	9	6	12	12	12	9	9	9	12	3	3	9	6	6	6	129	4	

R = Rank

Minimum Possible Score: 48

Maximum Possible Score: 192

COMPARATIVE PERFORMANCE INDEX SCORES

Total Scores

The table below lists the total scores for the three sections of the Sandwich Community Report Card: Community Characteristics, School System Characteristics, and Educational Outcomes. Overall, Sandwich ranks 2nd in terms of its total score for all indicators. Sandwich ranked 2nd in 2000, 3rd in 1997 and 2nd in the baseline year of 1996.

COMPARATIVE PERFORMANCE INDEX SCORES

Total Scores

Like Communities	COM PERFM INDEX TOTAL 2000	Rank	MAX PSSBLE SCORE	MIN PSSBLE SCORE
Abington	130	7	272	68
Foxborough	197	2	272	68
Grafton	155	6	272	68
Norton	118	8	272	68
Sandwich	191	3	272	68
Stoneham	191	3	272	68

Aspirant Communities

Duxbury	242	1	272	68
Marshfield	175	5	272	68

APPENDIX B

INTERPRETING THE STATISTICAL DATA

In reviewing the report card, readers should always remember that there are limits to the comparative value of even the best statistics:

- ◆ *Reporting Delays.* In all cases, the data used to compile the *Community Report Card* is the most recent data available. However, different government agencies process data at different speeds depending upon staff levels, technical proficiency, and the complexity of the data being compiled by the agency. Moreover, state-level agencies that compile data from the reports of local agencies must wait for local agencies to submit those reports. One to two year delays in the availability of comparative data are normal so the reader should pay particular attention to the dates being compared.
- ◆ *Reporting Years.* Even when reporting years appear to be the same (e.g., 1998), the data being reported does not always cover the exact same time frame. Fiscal agencies report data according to a “Fiscal Year” established by the Massachusetts General Laws (July 1 through June 30). Educational agencies typically report academic data according to a traditional “Academic Year” (September 1 through August 31). Other public agencies will rely on a standard “Calendar Year” (January 1 through December 31).
- ◆ *Reporting Consistency.* Comparative data nearly always has some inconsistencies, partly because of the way different school districts report information to the Massachusetts Department of Education and partly because of differences in the way school services are actually delivered. Another problem with interpreting comparative data is that school departments sometimes deliver the same educational service in different ways and, therefore, classify the same expenditure data under different categories. For example, some districts have moved more rapidly than most toward “site-based management.” Thus, school principals receive large discretionary accounts from which they are expected to purchase many of the textbooks and computers used at their individual school. Consequently, school department expenditures on textbooks and computers can appear to be among the lowest in the state, while “administrative expenditures” appear comparatively high.
- ◆ *Reporting Volatility.* The *timing* of expenditures can also produce statistical volatility. Like all public agencies, school departments tend to make major purchases on a sporadic basis. Moreover, purchases of capital equipment and buildings are not amortized in public accounting or annual reporting procedures and, consequently, these expenditures may fluctuate dramatically from one year to another.
For example, a school department may decide to update its textbook inventory one year and these books will serve many students for several years. However, the textbook expenditure will only show up statistically in the fiscal year of the actual purchase even though the “value” of the textbooks may be spread over several years. In this case, fiscal year expenditures on textbooks might appear to very high and then very low for several years subsequently. Comparisons to other communities would appear quite favorable in one year and less favorable in subsequent years. Thus, single-year comparisons can often be misleading.
- ◆ *Reporting Reliability.* Statistical data are often called “hard facts.” Yet many of the statistics accepted as hard facts are really estimates or approximations. For example, there are three official sources of population estimates for communities in Massachusetts. The U.S. Bureau of the Census collects data on a decennial basis. The Massachusetts Department of Revenue makes biennial estimates of town and city populations. Town and City Clerks maintain an annual census. Although one might expect that population estimates are a fairly simple matter, the three official estimates for Massachusetts routinely vary by 8% to 10% (i.e., 8,000 to 10,000 persons in a city of 100,000). Thus, a statistic as simple as population can pose substantial difficulties that affect per capita statistical comparisons quite dramatically.

Definitions of Terms

4-year Dropout Rate: an estimate of the percentage of ninth graders who may not graduate. It shows the accumulated rate of four years of dropping out for a single graduating class.

Advanced Placement: Data are included for all AP exams taken by any students in the class of 1998 who took an AP exam in their senior year. District and statewide data are for public school students, and national data are for public and non-public school students. Results are not included for schools or districts for which fewer than 10 students participated.

Annual Dropout Rate: indicates the percentage of students in grades 9-12 who dropped out of school between July 1, 1996, and June 30, 1997, and who did not return to school by October 1, 1997. Dropouts are defined as students who leave school prior to graduation for reasons other than transfer to another school.

Attendance Rate: indicates the average percentage of enrolled students present in school for the 1997-1998 school year.

Children Attending Public School: indicates the proportion of students in each city and town in the Commonwealth-attending public and non-public schools. The proportion of students attending public schools includes the total of pupils in local public schools, other public school districts, educational collaboratives, and special needs day and residential programs.

Educational Attainment: data reflect the highest level of education completed by adults 25 years of age and older.

Equalized Property Values Per Pupil: calculated by dividing a town or city's equalized property value by net average pupil membership. Net average pupil membership (NAM) is the number of a community's public school pupils averaged to account for fluctuations in membership, such as pupils moving to and from the community.

Graduation Rate: The graduation rate is defined as the percentage of students entering high school who actually receive a high school diploma.

Median Household Income: represents the midpoint of incomes for all households in the district. Half of the families have income less than the median; half have incomes more than the median. A household is defined as any unit occupied, whether by one person or several.

Per Capita Income: total income of a community divided by the total population.

Per Pupil Expenditures: calculated by dividing a district's operating costs by its average pupil membership. Operating costs include expenditures for administration, instruction, pupil services, transportation, plant maintenance, and fixed charges. These costs do not include capital outlay and long-term interest on school debt. Average pupil membership includes students who receive services in the district's schools, as well as students receiving home or hospital instruction.

Percentage of Households w/ Children: determined by comparing households with children to the total number of households. A child includes a son or daughter by birth, a stepchild, or adoption by marriage or who live together.

Plans of High School Graduates: reflect the post-graduate intentions of all high school seniors. Colleges include both public and private institutions. Two- and Four-Year college attendance does not include business or technical schools. Work includes graduates looking for work as well as those who have found employment.

SAT: indicates the average scores on the math and verbal sections of the SAT I, administered by the College Board, and the percentage of students taking the test, for the classes of 1995 and 1998. All data are for public school students only. Results are not included for schools or districts for which fewer than 10 students participated. For students who took the SAT I more than once, their latest score is used by the College Board in determining school and district average scores.

Service/operational/Maintenance: personnel includes food service, health, transportation, and operations and maintenance staff.

Support Personnel: include aides (instructional, administrative and service-related), clerks, and secretaries.

Teachers: refers to personnel providing classroom instruction including regular education, special education, transitional bilingual education, English-as-a-second language, and occupational education.

Students in Special Education: refers to those students who receive special education services solely within regular education classrooms or out of regular education classrooms for not more than 25% of the school day.

Violent Acts: the reporting of violent acts is left to the discretion of individual school principals.

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