

# Lincoln Public Schools Annual Report 2012-2013

February 2013

# A statistical snapshot of the Lincoln Public Schools

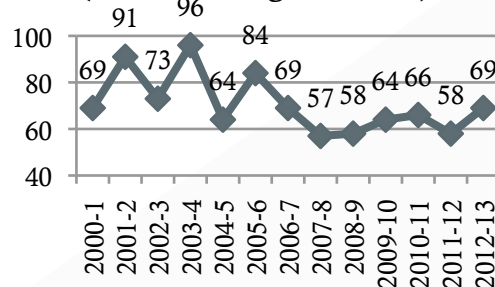
- In the 2011-12 school year, there were 1,149 students in grades K-8 in the Lincoln Public Schools -- 523 students at Hanscom and 626 on the Lincoln campus. In addition, there were 119 children at the Lincoln Preschool.
- In 2011-12, there were 110.3 full-time equivalent teachers in the district.
- The student/teacher ratio was 9.8, and the average class size was 16.2.
- The average teacher salary was \$81,963.
- There were 179 students in the Preschool and grades K-8 in special education. 88.4% of the students in special education spent at least 80% of their school time in general education classrooms.
- The gross expenditure per pupil in the 2010-11 school year (the most recent reported) was \$20,776. The net cost per Lincoln student funded directly from Lincoln tax dollars was \$15,598.21.
- 95% of the 8<sup>th</sup> graders at Lincoln School received “Advanced” or “Proficient” scores on the English Language section of the MCAS, 80% on the Math section, and 78% on the Science section.

# LPS Enrollment: 10-year downward trend may be ending

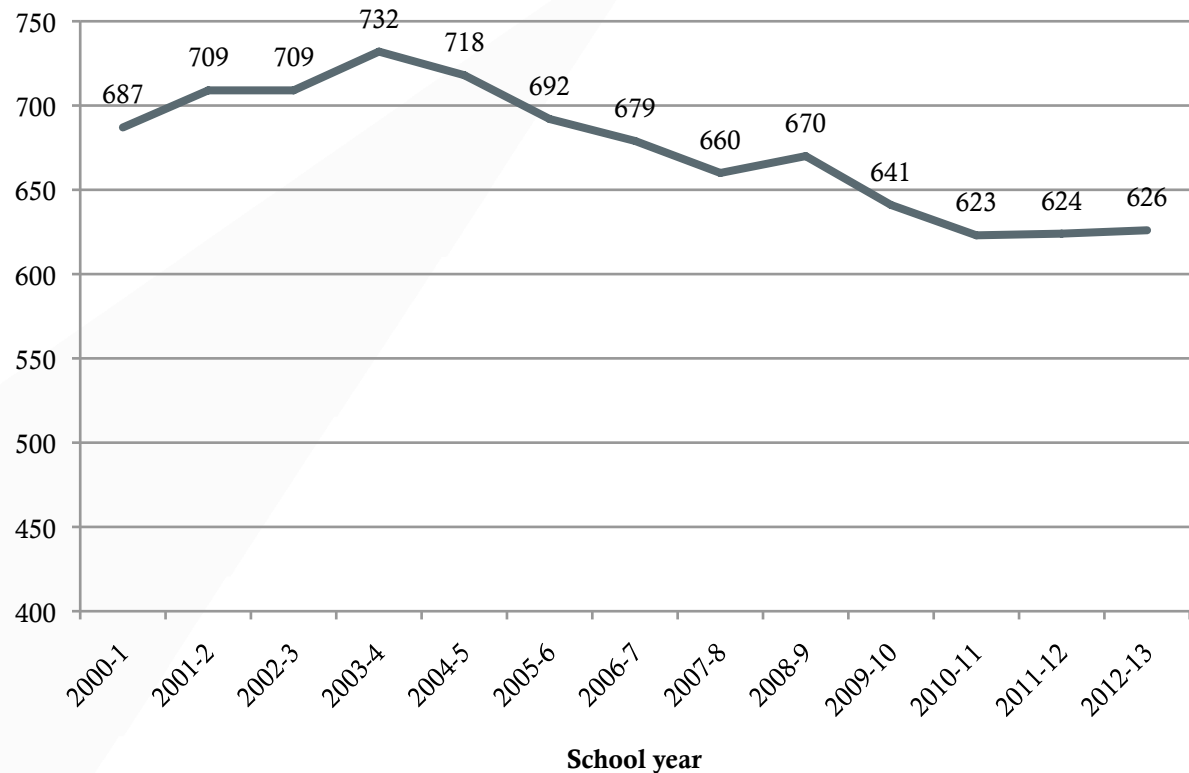
Over the last ten years, the number of students in grades K-8 on the Lincoln campus has been declining, from a peak of 732 in the 2003-4 school year.

However, the 1<sup>st</sup>-grade cohort in 2012-13 is larger than in 2011-12 (up to 69 from 58), and the number of Lincoln births in 2011 was 29, up from 24 in 2010 and 19 in 2009. These indicators, in addition to the greater stability of LPS cohorts – fewer students are leaving the school -- in the last three years, suggest that the trend of declining enrollment may be ending.

**First grade cohorts, LPS  
(2000-1 through 2012-13)**



**Lincoln School total enrollment, grades K-8  
(2000-1 through 2012-13)**

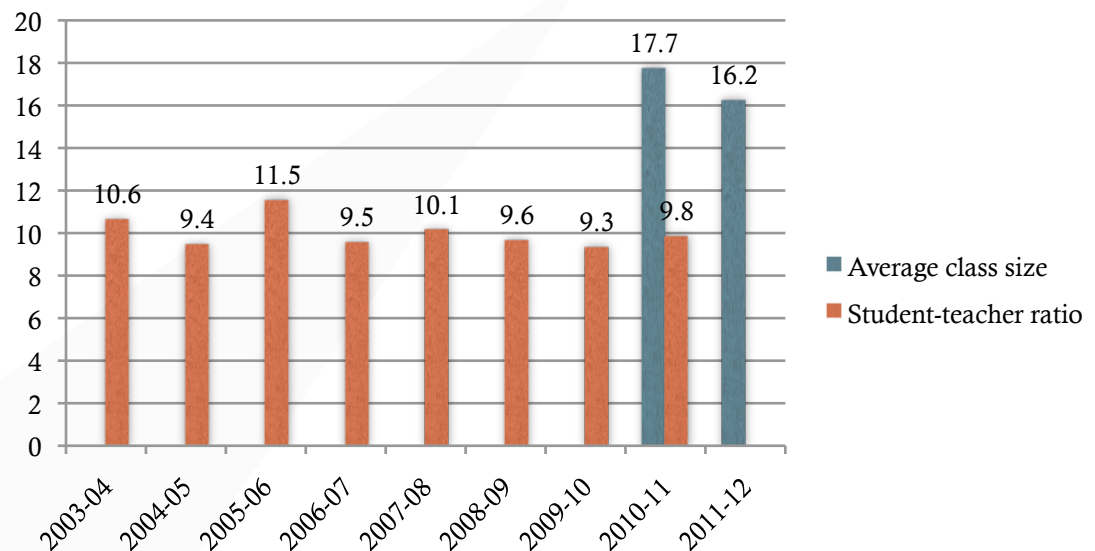


# Lincoln district has consistently low student-teacher ratio

The student-teacher ratio is the total number of K-8 students divided by the number of full-time equivalent teachers. The average class size is the total number of students divided by the total number of sections – there are typically 3 or 4 sections per grade level at both the Lincoln and Hanscom schools.

There are three significant factors that explain the gap between the two indicators: First, LPS has a commitment to a full curriculum at all grade levels, including music, art, health and wellness, science, and (starting in 3<sup>rd</sup> grade) foreign language. Second, LPS allocates more than the usual amount of time in the school day for teachers to spend on preparation, collaboration, and professional development. Third, LPS provides a high level of professional support to classroom teachers, including math and literacy specialists, social workers and counselors, and tutors and classroom assistants

**Average class size and student-teacher ratio,  
Lincoln district**



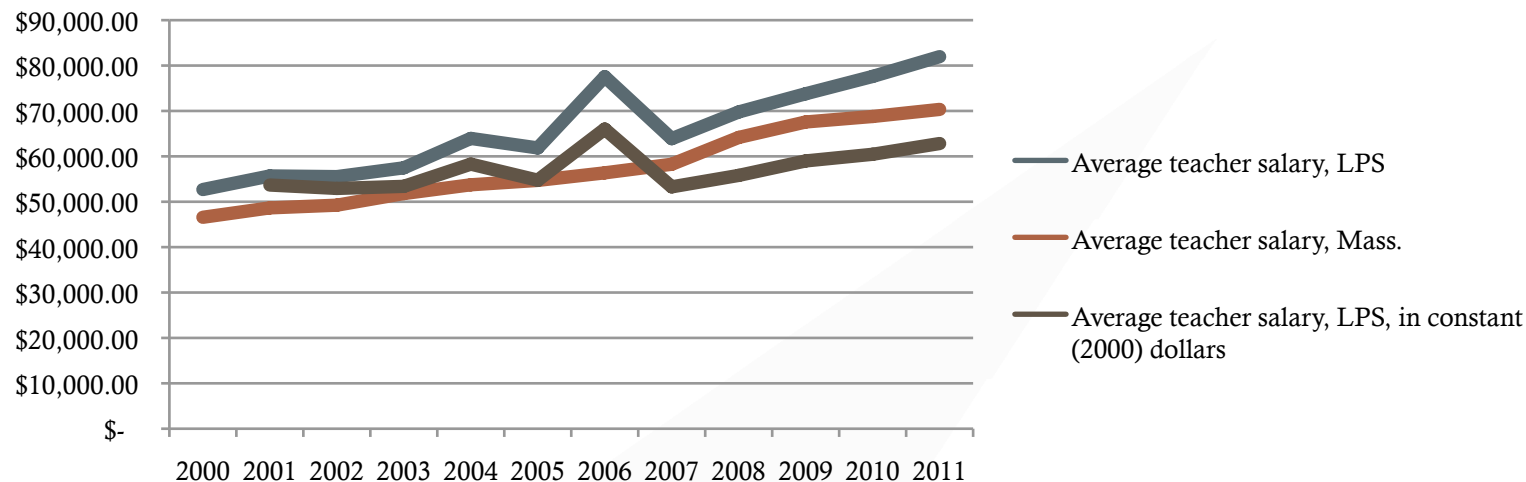
In the 2010-11 school year, the average class size for all Massachusetts districts was 19.2, and the statewide student-teacher ratio was 13.9.

(DESE did not record average class sizes prior to 2010.)



# Lincoln teacher salaries remain slightly above state average

## Average teacher salary, LPS and state (2000-2011)



In 2006, a temporary change in the reporting of Hanscom salaries produced a single outlier. The prior accounting method was restored in 2007, so the trend and average increases are valid and consistent.

The state Department of Elementary and Secondary Education (DESE) calculates the average teacher salary by dividing total teaching salaries for the district by the number of fte teachers.

The number of teachers has declined from a high of 136.6 in 2005 to 110.3 in 2011.

Since 2000, the average teacher salary at LPS has risen at an average annual rate of 4.55%, to a 2011 average salary of \$81,963. (This 2011 salary is equivalent to a salary of \$62,824 in constant dollars, in other words, adjusting for inflation.) The average salary in 2012 declined to \$79,839. (DESE has not yet published the statewide average for 2012.)

The average teacher salary depends to a large extent on the longevity, experience, and training of the teaching staff. LPS may be paying above the state average for its teachers because those teachers have more experience, because they have more specialized training – 99.2% of the core academic classes are taught by teachers who are highly qualified – and because those teachers stay in the district longer than teachers in other districts.

## LPS provides a full-inclusion education for large majority of its students in Special Education

Massachusetts requires public school districts to provide an appropriate education in the least restrictive environment for each resident child with special needs, age 3 and older. The districts have no control over the number of children with special needs in any given year, nor over the severity and variety of those needs, and in a small district like Lincoln, the size and character of this population can fluctuate significantly.

The overall costs of providing these services and the population of students in special education are not, therefore, reliable indicators of a successful program. Indicators of success are whether a district is consistently able to provide the optimal services in its own schools, rather than having to rely on (often very expensive) programs out of the district, whether the students with special needs are consistently educated with their typically-developing peers, and whether the staff can consistently support students who have identified needs but are not in special education.

**LPS students (PreK-8) in Special education**



**Percentage of LPS students in Special Education by Placement, 2009 - 2011**

	% in full inclusion	State target	% in out-of district placements	State target
2009	80.2%	55.5%	6.1%	6.2%
2010	85.6%	56.8%	2.9%	6.7%
2011	84.5%	58.0%	4.3%	5.5%

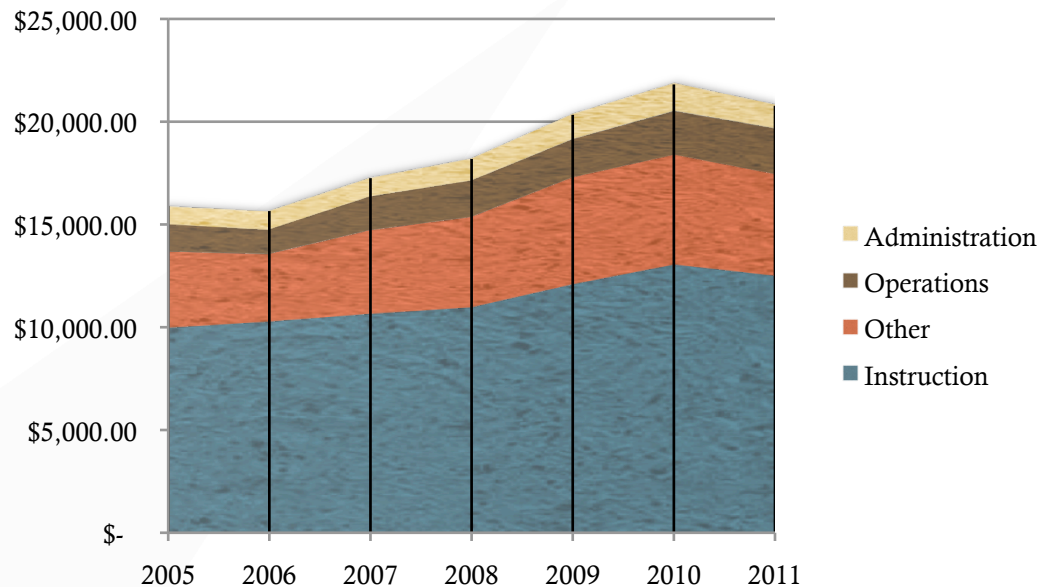
For a more detailed overview of the LPS program for children with disabilities, see the Department of Student Services section of [FY14 Preliminary Budget](#).

# District spending per pupil declines slightly in 2011

The total expenditure in 2011 for the LPS district was \$22,866,424. Of this amount, \$9,358,644 was allocated to the schools at the Town Meeting, and an additional \$3,203,482 was paid by the town and by the Hanscom contract for staff pensions and insurance.

The largest spending categories in the LPS budget are Classroom and Specialist Teachers (38.67% of the total spending in 2011), Insurance and Retirement Programs (14.01%), and Operations and Maintenance (10.57%).

## Per-Pupil Expenditure, by function



From the DESE database:

**Instructional** expenditure includes all expenditure on Instructional Leadership, Classroom and Special Teachers, Other Teaching Services, Professional Development, and Instructional Materials, Equipment and Technology.

**Other** expenditure includes Guidance, Counseling and Testing, Pupil Services, Insurance, Retirement Programs and Other, and Payments to Out-of-District Schools.

# LPS investment in teacher training fosters social and emotional learning

## Responsive Classroom and Developmental Design for Middle School

For the last five years, LPS has placed a high priority on building a school culture that supports learning, by training teachers in two well-established methods for creating a community of learners in every classroom. In the Smith School and the Hanscom Primary School, the program is Responsive Classroom, and in the Brooks and Hanscom Middle Schools, the parallel program is Developmental Design for Middle Schools.

In the primary schools, each classroom starts the year by establishing class rules, hopes and dreams. And then each day starts with a morning meeting, at which the children can raise issues, share important news, solve problems. Middle school students start the year by establishing a social contract in each section, and then they meet twice a week in advisory groups at the end of the school day, again to discuss their concerns, engaged in problem-solving and share news.

For a good overview of the effectiveness of these programs, see [this article by Sara Mosle from The New York Times, October 27, 2012](#): "... Teachers can't go it alone. They need sustained training and support using empirically tested methods in concert and collaboration with one another. This is how schools succeed."

"It took a bit for people to adjust to a new way of interacting with students, but now that most have internalized it, it's a much nicer school to be in every day."

– LPS principal

"The Responsive Classroom supports the joy of learning."

- LPS teacher

**Cost:** Initial professional development for instructional staff at roughly \$1,700 per teacher. New hires receive training at a cost to the district of \$700 each.

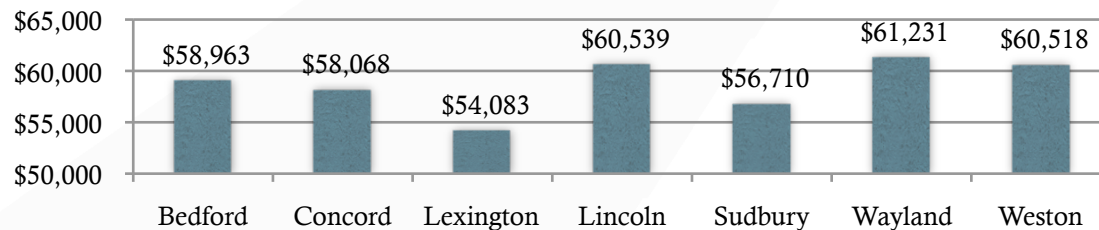
# Comparison: LPS is the smallest district in the neighborhood

The partnership with Hanscom provides meaningful economies of scale for the district, especially in the areas of administration and professional development, which help to provide a higher-quality education. However, even with the schools at Hanscom, LPS is still a very small district. In many areas, the small size limits flexibility and increases costs.

The chart below shows what a teacher with typical levels of experience and education would have had as a base salary in the peer communities in the 2011-12 school year.

District:	Students	Teachers	Avg. teacher salary	Per-pupil expenditure
Bedford	2443	198.3	\$ 78,281	\$ 16,693
(Bedford K-8)	1588			
Concord pre-K - 8	1991	152.4	\$ 83,291	\$ 16,637
Lexington	6397	523.8	\$ 73,400	\$16,358
(Lexington K-8)	4423			
<b>Lincoln K-8</b>	<b>1149</b>	<b>110.3</b>	<b>\$ 81,693</b>	<b>\$ 20,776 (see note)</b>
Sudbury pre-K – 8	3077	218.9	\$ 64,999	\$ 12,359
Wayland	2684	193.0	\$ 84,238	\$ 15,198
(Wayland K-8)	1815			
Weston	2361	192.4	\$ 81,619	\$ 19,352
(Weston K-8)	1549			

**Teacher salary, MA +30, Step 5, 2011-12**



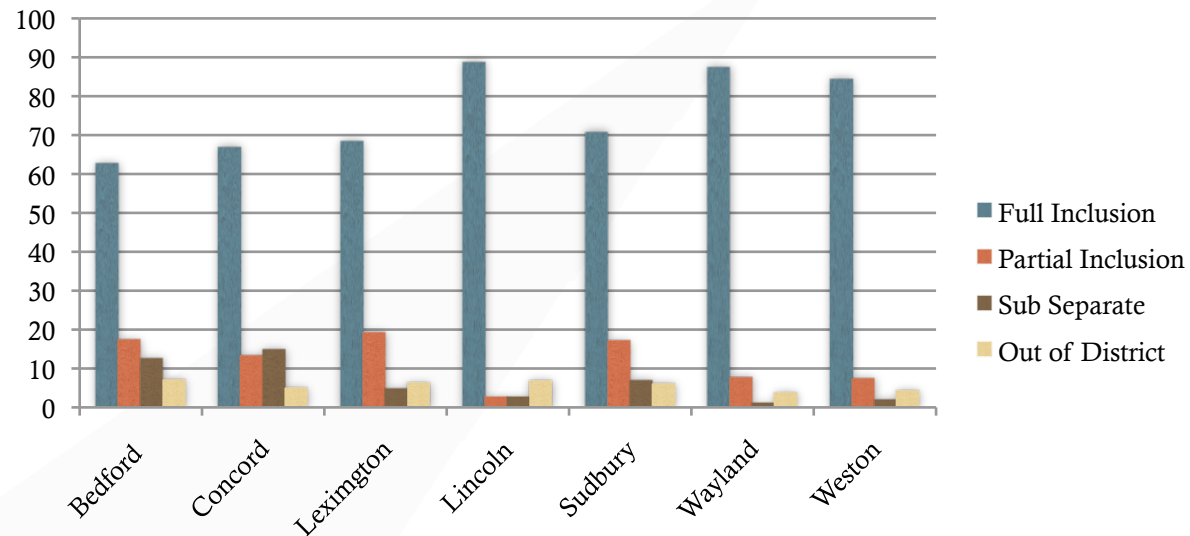
Note: If the costs of the schools at Hanscom are excluded from the calculations, then the per-pupil spending in Lincoln is roughly the same as that in Weston.



# Comparison: LPS has the highest percentage of full inclusion placements for its students in Special Education

**% of Students in Special Education by Placement, October, 2011**

In October, 2011, 88.4% of the LPS students in Special Education were in full inclusion programs. The average full inclusion rate for the six neighboring towns was 73.2%.



Full inclusion: at least 80% of school time in general education classroom

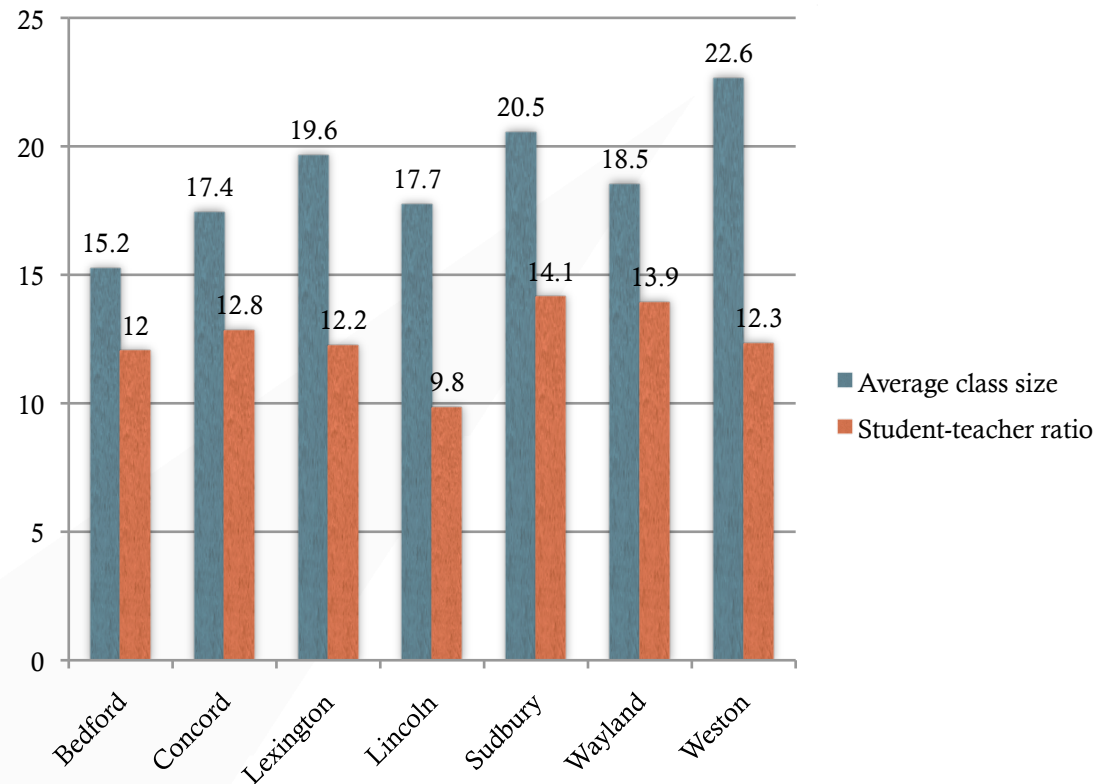
Partial inclusion: 40 – 79% of school time in general education classroom

Substantially separate: Less than 40% of school time in general education classroom

Out of District: Placed in a program offered by another public school district, by an educational collaborative, or by a private school providing full-day special education services

## Comparison: LPS has the lowest student-teacher ratio among comparison districts

LPS provides more staff members for each student than do our peer communities. In addition, LPS provides lots of time for teachers to spend on preparation, collaboration and professional development, outside of the classroom. Only Weston provides collaborative time more generously than Lincoln. In Bedford, by contrast, the gap between the student-teacher ratio and the average class size is relatively small, which indicates that teachers in that district have much less time outside the classroom for preparation and collaboration.





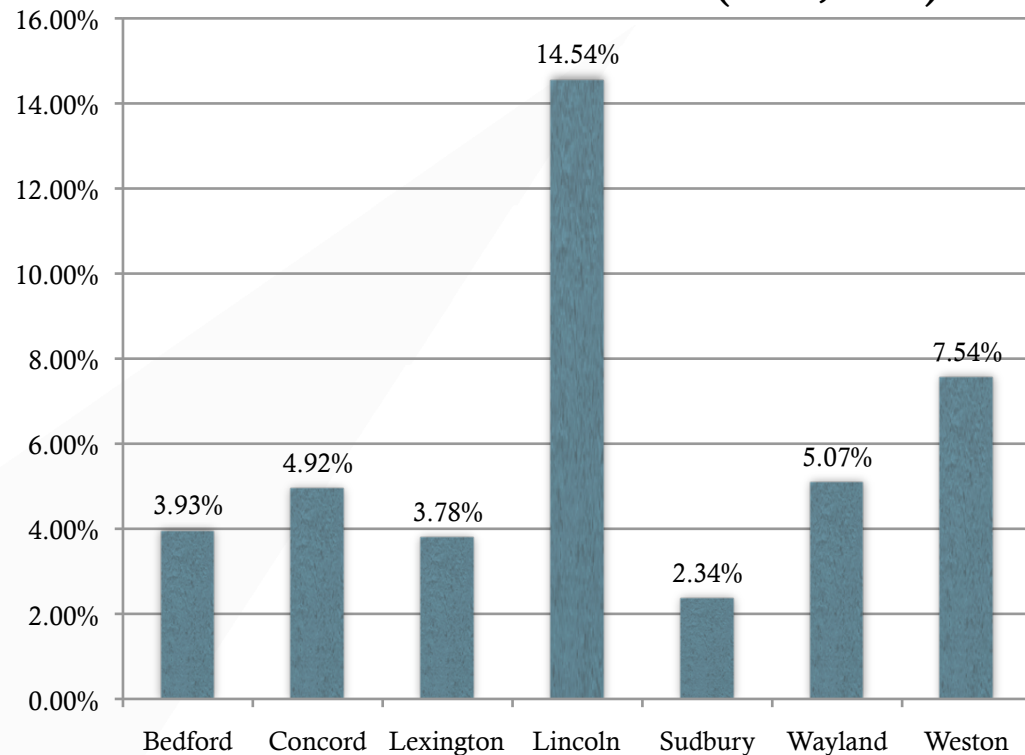
# Comparison: Lincoln sustains a major commitment to the METCO program

METCO – the Metropolitan Council for Educational Opportunity – is a voluntary desegregation program for Boston schoolchildren in which Lincoln has participated since its founding in 1966. There are 91 METCO students who travel every school day from Boston to the Lincoln campus, who comprise 14.54% of the total student body at the Lincoln School. (There are no METCO students on the Hanscom campus.)

The LPS leadership supports METCO both because it provides an important service to the Boston schoolchildren who are able to participate and because the experience of a diverse classroom is educationally valuable for the children of Lincoln.

Lincoln receives a state grant of \$459,685 (in the current school year) to underwrite the transportation and education of the students in the METCO program, which covers some but not all of the costs associated with the program.

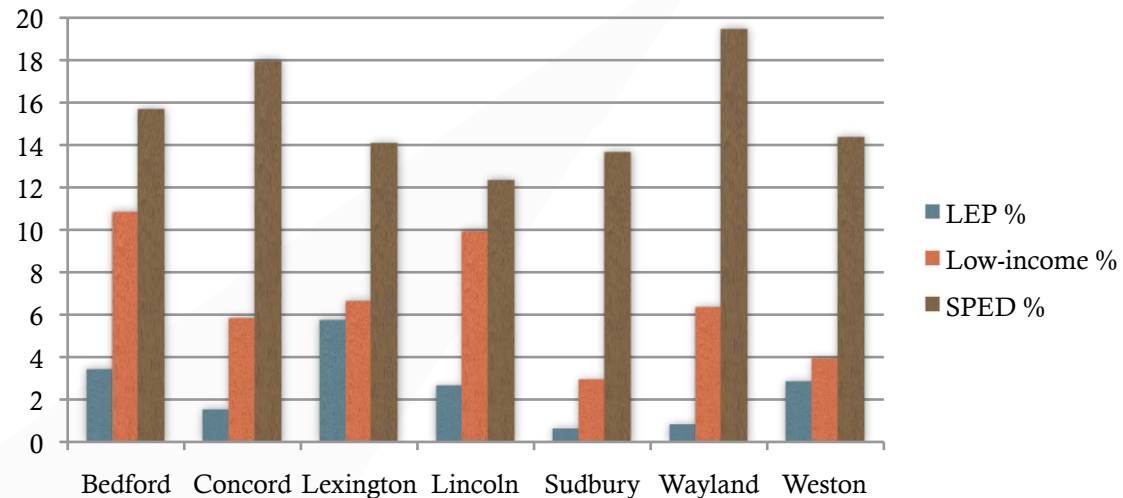
**METCO % of total students (Oct., 2011)**



# Comparison: LPS has a high percentage of low-income students, lowest percentage of students in Special Education

Lincoln and its peer communities are all wealthy towns, with relatively non-diverse populations, and so the percentages of students with limited-English proficiency and low-income families are far below the state average in all seven districts. But within this group, Lincoln has the second highest low-income population (9.9% of the students in the district). At the same time, Lincoln currently has the lowest percentage of students in special education.

Percentage of students in high-risk populations, 2011-12



LEP: Limited English Proficiency

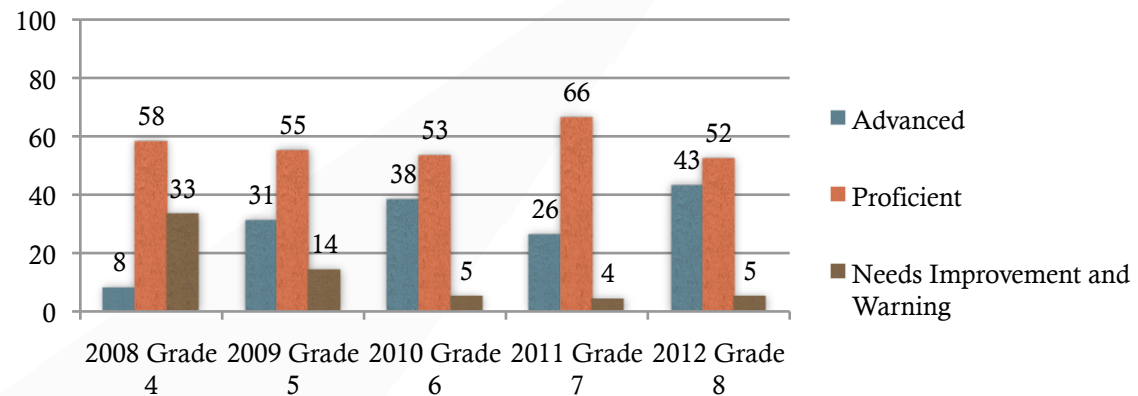
Low-income: Based on number of students qualifying for free or reduced lunch

SPED: Percentage of students with special needs qualifying for Individualized Education Plans

## Outcome: As a recent cohort progressed through Brooks School, the number of students with advanced scores on MCAS English exam increased dramatically

The Massachusetts Comprehensive Assessment (MCAS) is a mandated state-wide exam for all students in public education in grades 3 through 12. The students take exams in English Language Arts (ELA) and Mathematics every year, and an exam in Science and Engineering in the 5<sup>th</sup> and 8<sup>th</sup> grades. The scores are reported in four levels – Advanced, Proficient, Needs Improvement, and Warning – and the state asks all school districts to establish as an educational priority having all students in the district score in one of the top two levels.

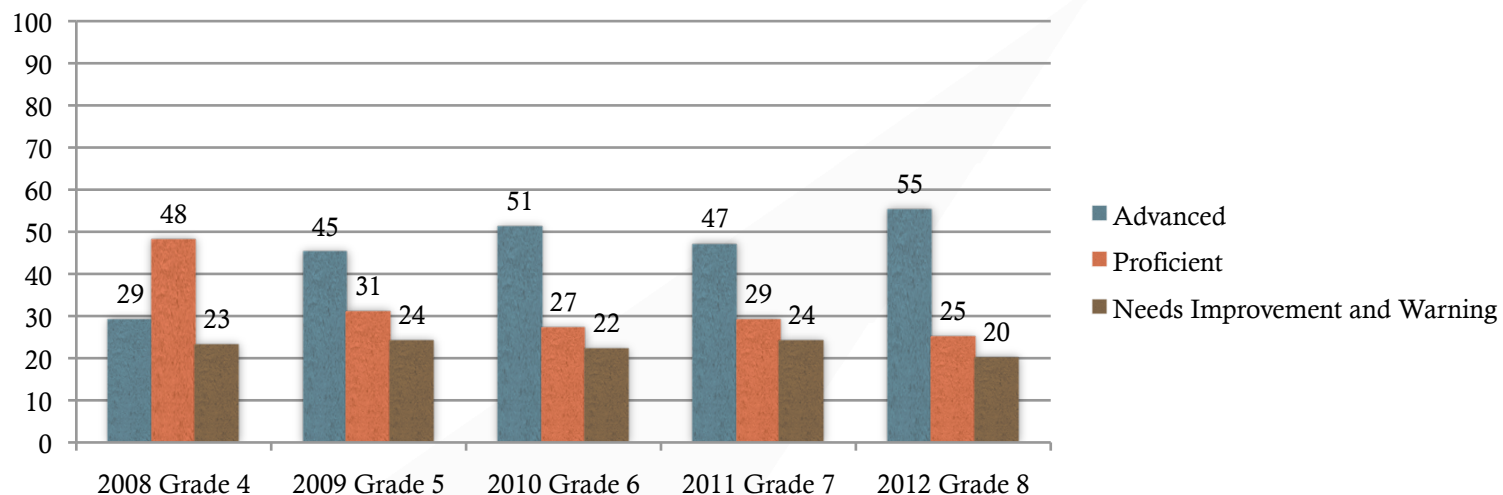
**MCAS English Language Arts (ELA) Results for the Cohort graduating from the Brooks School (Lincoln) in 2012, percentage of cohort by outcome level by year**



In 2008, 66% of the students in the 4<sup>th</sup> grade at the Lincoln School scored at Advanced or Proficient levels on the ELA section of the MCAS. The following year, 86% of the students in that cohort – now in 5<sup>th</sup> grade – scored at Advanced and Proficient levels on the MCAS ELA exam, and when that cohort reached 8<sup>th</sup> grade, 95% of the students scored in the top two levels.

## Outcome: MCAS Math results for recent Lincoln cohort show increasing number of advanced scores yet a persistent group of underperforming scores

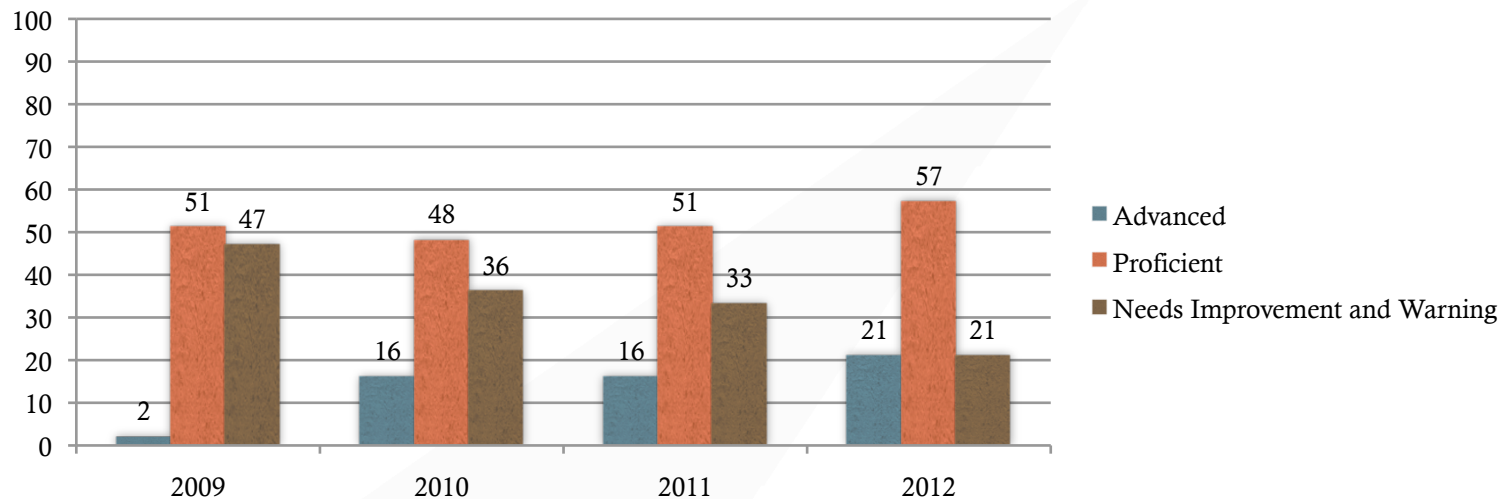
MCAS Mathematics Results for the cohort graduating from the Brooks School (Lincoln) in 2012, percentage of cohort by outcome category by year



The cohort of Lincoln School students who were in 8th grade in 2012 showed dramatic improvement in their MCAS ELA scores as they moved through the middle school. On the Mathematics section of the MCAS, the number of students in this cohort with unsatisfactory results declined only slightly from 4<sup>th</sup> to 8<sup>th</sup> grade. At the same time, the number of students scoring at the advanced level almost doubled, from 29% in 4<sup>th</sup> grade to 55% in 8<sup>th</sup> grade.

## Outcome: Performance of Lincoln 8<sup>th</sup> graders on MCAS Science & Engineering exam improves

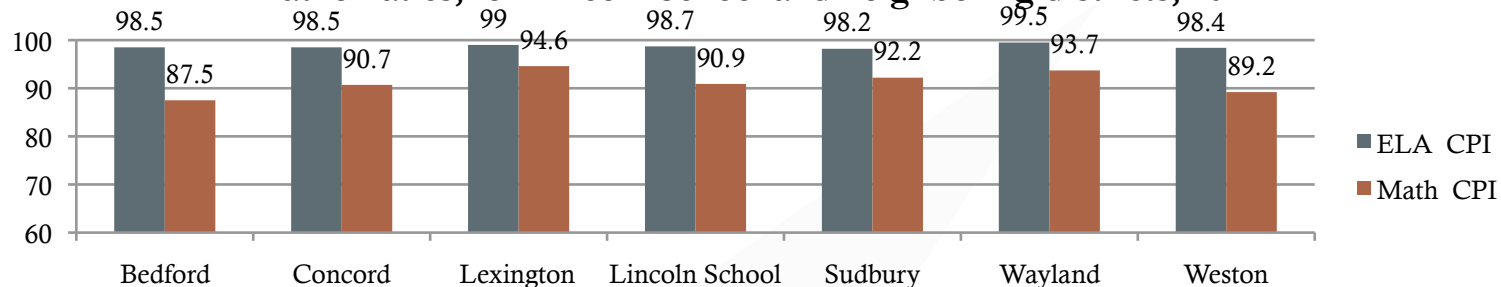
MCAS Science and Engineering results for the 8<sup>th</sup> grade at the Lincoln School, 2009 – 2012, percentage by outcome level by year



Over the last four years, the percentage of 8<sup>th</sup> graders scoring in the top two levels on the MCAS Science and Engineering exam has increased from 53% to 78%, and the percentage of students scoring at the advanced level has increased from 2% to 21%.

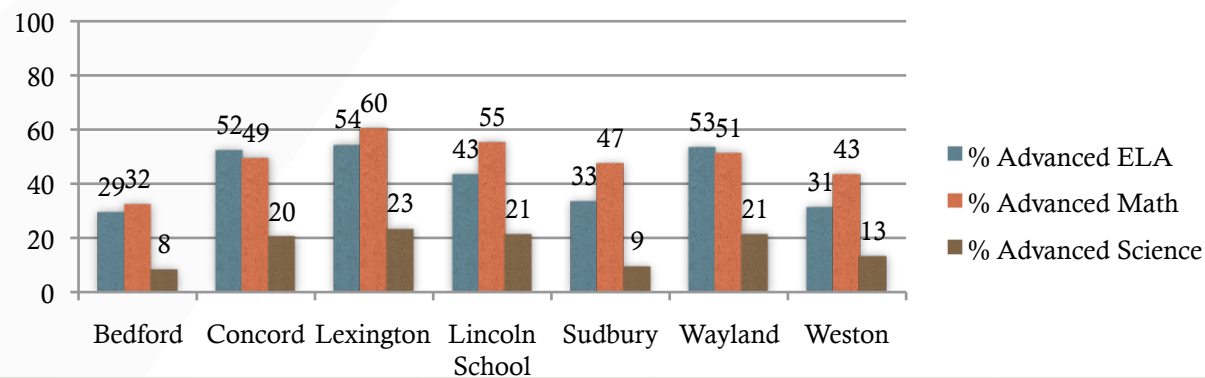
# Comparison: MCAS summary statistics show little significant difference among Lincoln and high-performing neighbors

**MCAS Composite Performance Index (CPI), 8<sup>th</sup> grade results for ELA and Mathematics, for Lincoln School and neighboring districts, 2012**



Composite Performance Index: A 100-point index that assigns 100, 75, 50, 25, or 0 points to each student participating in MCAS and MCAS-Alternate Assessment tests based on their performance. The total points assigned to each student are added together and the sum is divided by the total number of students assessed. The result is a number between 0 and 100, which constitutes a district, school or group's CPI for that subject and student group. The CPI is a measure of the extent to which students are progressing toward proficiency (a CPI of 100) in ELA and mathematics. CPIs are generated separately for ELA and mathematics, and at all levels - state, district, school, and student group.

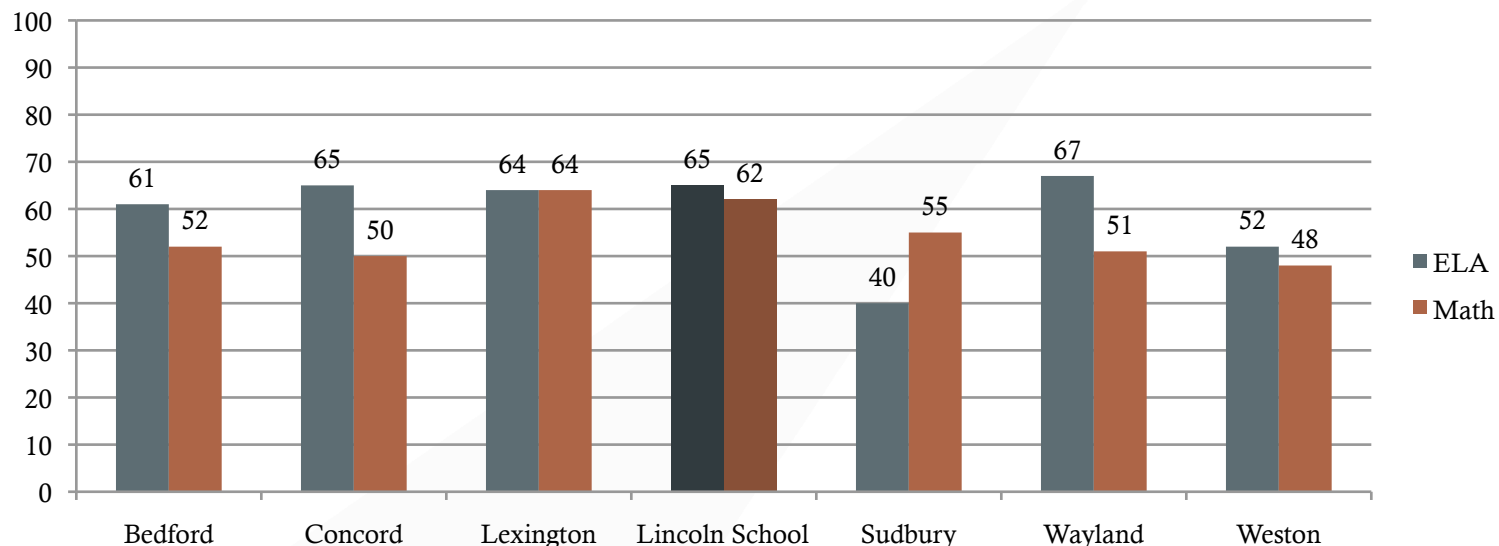
**% of 8<sup>th</sup> grade students scoring at the Advanced level, by MCAS section, Lincoln School and neighboring districts, 2012**





## Comparison: State measure of student improvement on MCAS exams shows Lincoln at level of best-performing neighbors

MCAS Student Growth Percentile (SGP), for 8<sup>th</sup> grade ELA and Mathematics results, for Lincoln School and neighboring districts, 2012



The state reports how each student performed on the MCAS compared to the students who scored in the same score range the previous year. This measure is the Student Growth Percentile. An SGP of 70, for instance, indicates that the student's performance on this year's MCAS section is better than that of 70% of the students who received the same score last year. The state also reports an aggregate SGP for each school for each MCAS section. The SGP is as important an indicator of a school or district's success in educating its students as the achievement MCAS scores.



# Summary

- LPS is a small district, distinctive among its neighbors by virtue of its schools on Hanscom Air Force Base, and its strong commitment to METCO.
- LPS has a high per-pupil expenditure, the main factors in which are the district's commitment to a full and varied curriculum and to the provision of professional time for collaboration, preparation and development.
- A look at LPS over the last few years shows a recent decrease in per-pupil expenditure and average teacher salary, consistency in the provision of services to children with special needs, and a slight uptick in enrollment.
- Among its neighbors, Lincoln has the lowest student-teacher ratio, the highest percentage of METCO students, the highest percentage of Special Education children in full inclusion placements, and the second highest percentage of low-income students.
- The principal state measures of student achievement and improvement show Lincoln performing at the high level of its neighboring districts.