

Summary of Massachusetts student data

Orienting information

The Commonwealth of Massachusetts has 391 operating school districts, including 53 Commonwealth charter schools and 8 Horace Mann charter schools. It also includes 32 educational collaboratives, which provide services to groups of districts, primarily in rural areas.

	1998		2003		2008	
Public school enrollment	950,405		983,313		962,766	
Grade	#	%	#	%	#	%
Pre-kindergarten	18,226	1.9	22,803	2.3	25,853	2.7
Kindergarten	73,125	7.7	69,324	7.1	67,900	7.1
Grades 1–5	386,451	40.7	373,655	38.0	354,507	36.8
Grades 6–8	213,871	22.5	235,268	23.9	217,984	22.6
Grades 9–12	252,519	26.6	281,939	28.7	295,937	30.7
Other	6,213	0.0	324	0.0	625	0.1
Race						
African American	80,618	8.5	86,069	8.8	78,449	8.1
Asian	38,754	4.1	45,549	4.6	47,403	4.9
Hispanic/Latino	92,306	9.7	110,256	11.2	133,441	13.9
Native American	2,008	0.2	3,136	0.3	2,644	0.3
White	736,719	77.5	738,303	75.1	681,851	70.8
Native Hawaiian, Pacific Islander	N/A	N/A	N/A	N/A	1,171	0.1
Multi-race, non-Hispanic/Latino	N/A	N/A	N/A	N/A	17,847	1.9
Gender						
Female	461,431	48.6	477,418	48.6	467,796	48.6
Male	488,974	51.4	505,895	51.4	494,970	51.4
Selected Populations						
Special education	159,042	16.7	150,551	15.2	164,298	16.9
First language not English	119,838	12.6	141,408	14.4	145,508	15.1
Limited English proficient	45,412	4.8	51,622	5.2	55,730	5.8
Low income	240,753	25.3	257,368	26.2	283,827	29.5

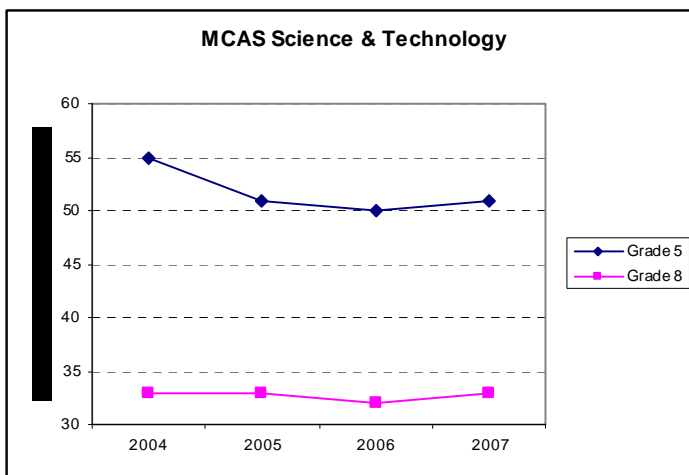
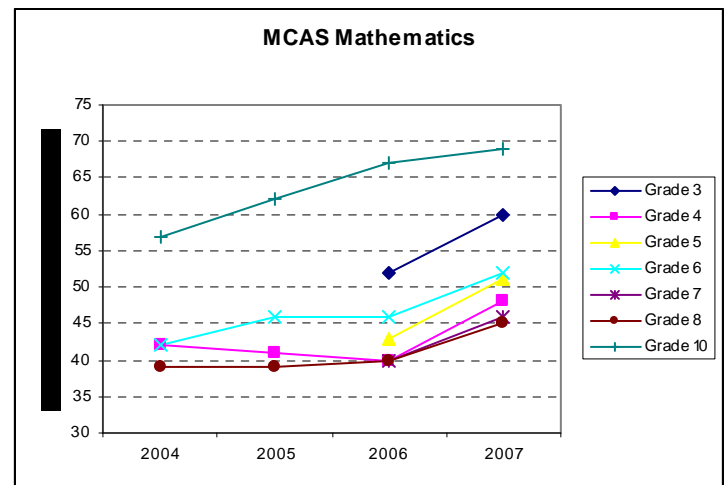
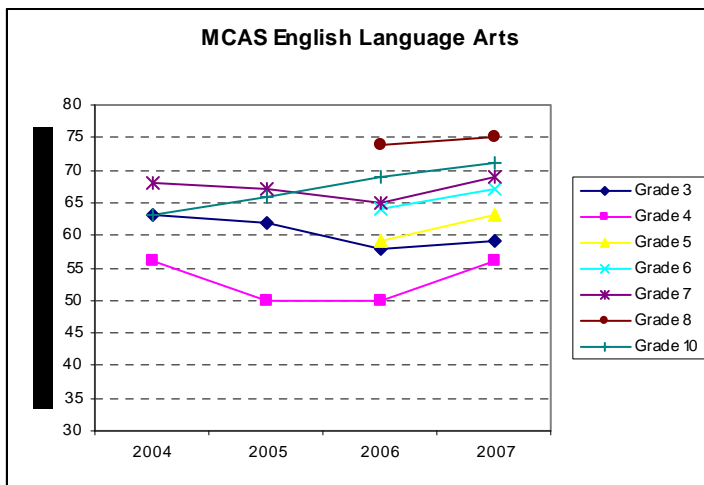
Total # of teachers	73,176
% of teachers licensed in teaching assignment	95.4
Total # of teachers in core academic areas	60,604
% of core academic teachers identified as highly qualified	95.1
Student/teacher ratio	13.2 to 1

More information of this kind is available at <http://profiles.doe.mass.edu/state.asp#>.

MCAS results

Performance on MCAS over the last four years has been level or trending upward in most subjects and grades. We have seen strong gains in mathematics in particular but have been concerned about the relatively low performance of the state's third graders on both reading and mathematics.

The class of 2010 (this year's tenth graders) will be the first required to score needs improvement or above on a state end-of-course science or technology examination. So far over 40 percent of students in that class have already scored high enough to meet the state requirement.

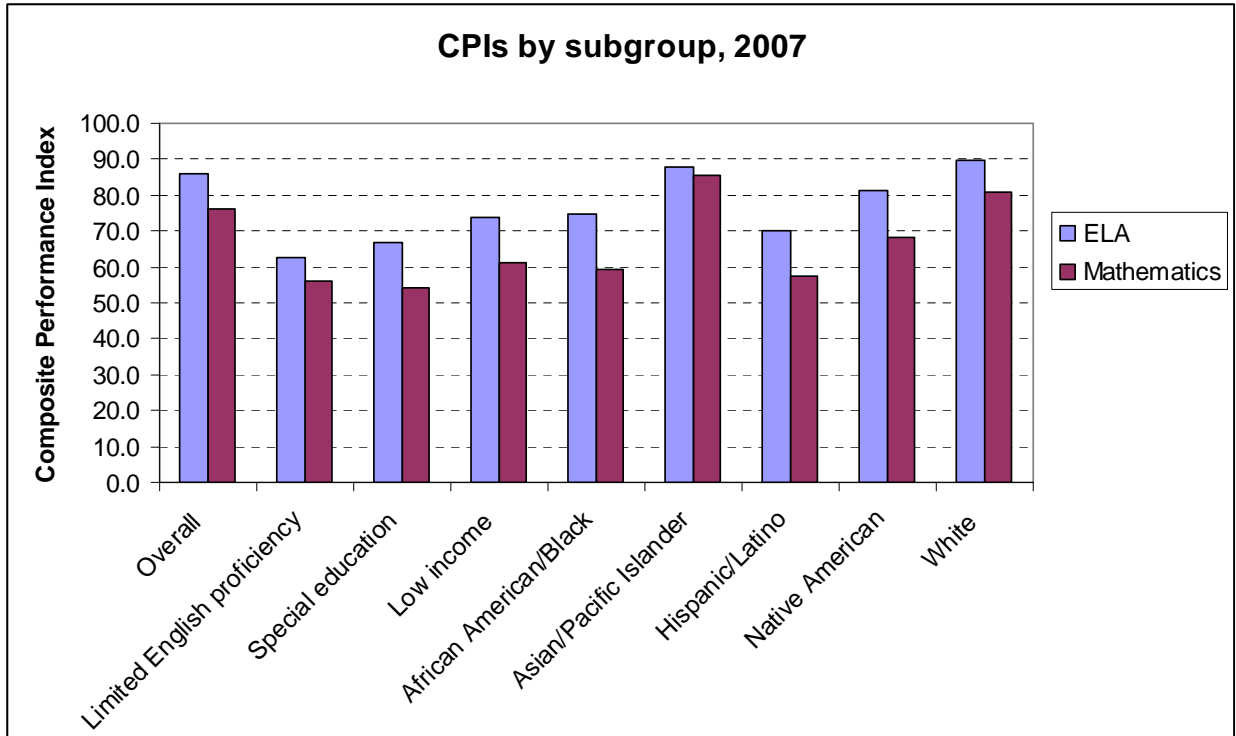


Percent proficient or advanced on high school science assessments in 2007:

- Biology: 42% (n tested = 65,930)
- Chemistry: 35% (n tested = 15,645)
- Introductory physics: 56% (n tested = 18,200)
- Technology/engineering: 25% (n tested = 2,034)

Another way to examine trends in MCAS data is with the CPI (composite performance index): a way of aggregating student performance for subgroups, schools, or districts. The CPI is a 100-point index that assigns 100, 75, 50, 25, or 0 points to each student participating in MCAS and MCAS-Alt tests based on his or her performance. The total points assigned to each student are added together across all students and the sum is divided by the total number of students assessed. The result is a number between 0 and 100 that can be interpreted as a measure of students' progress toward proficiency. It is roughly, but not completely, analogous to the percent of students proficient in that subject and student group.

Below is a chart of CPIs by subgroup for the 2007 MCAS ELA and mathematics assessments.



These same data are presented below in table format.

Composite performance index by subgroup, 2007

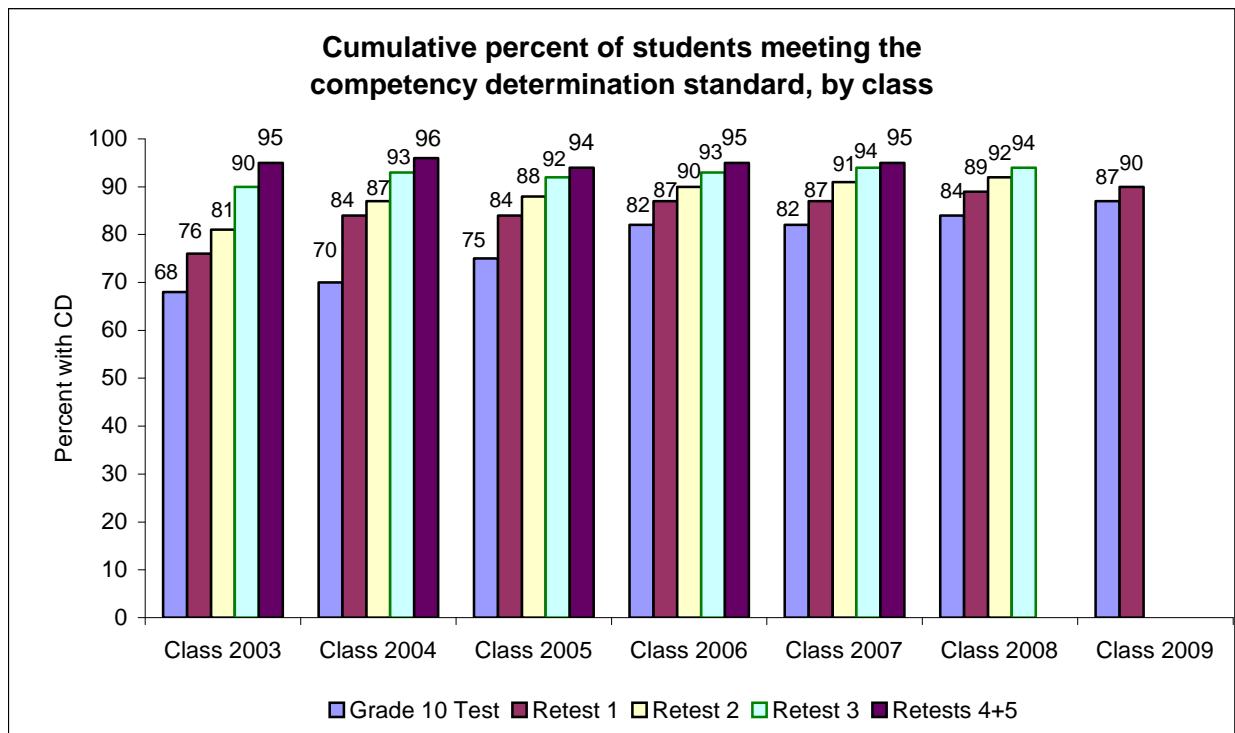
	ELA	Mathematics
Overall	85.8	76.2
Limited English proficiency	62.7	56.3
Special education	66.7	54.0
Low income	73.7	61.0
African American/Black	74.6	59.5
Asian/Pacific Islander	88.0	85.6
Hispanic/Latino	70.2	57.7
Native American	81.1	68.1
White	89.7	80.9

Further breakdowns of MCAS results by year, subgroup, etc. are available on the state Profiles web page: <http://profiles.doe.mass.edu/>

Competency determination

In order to meet state requirements for high school graduation (that is, to earn a competency determination), students must score at least *Needs Improvement* on the grade 10 English language arts and mathematics MCAS tests. Students also have the opportunity to demonstrate that they meet the standard through the MCAS performance appeals process and, for students with severe disabilities, through the MCAS alternate assessment. Starting with the class of 2010 (this year's tenth graders), students who score below *Proficient* must complete an Educational Proficiency Plan in order to meet the state standard for graduation, and all students must also meet the MCAS science requirement.

Each graduating class has seen a greater proportion of its students achieve the competency determination. Further, the cumulative percent of students meeting the standard after each retest opportunity equaled or exceeded that of each preceding graduating class.



NAEP results

In 2007, more than 18,800 Massachusetts public school students in grades 4 and 8 participated in the Massachusetts administration of the National Assessment of Educational Progress (NAEP). The state ranked first alone among all states on three of the four 2007 NAEP tests and tied for first on the fourth NAEP test—the first time any state has topped the nation two years in a row in student performance.

Based upon both average scaled scores and the percent of students at or above *Proficient*, Massachusetts scored statistically higher than the other 49 states in reading at grade 4 and mathematics at grades 4 and 8. In reading at grade 8, Massachusetts tied for first in the nation with three other states (Montana, New Jersey, and Vermont). More than 43 percent of the state’s students scored *Proficient* and above in reading in 2007, and more than 50 percent scored *Proficient* and above in mathematics.

2005 & 2007 Massachusetts NAEP results

		Average Scaled Score	Percent of Students			
			<i>Advanced</i>	<i>Proficient and above</i>	<i>Basic and above</i>	<i>Below Basic</i>
Reading						
Grade 4	2007	236	16	49	81	19
	2005	231*	12*	44*	78*	22*
Grade 8	2007	273	4	43	84	16
	2005	274	5	44	83	17
Mathematics						
Grade 4	2007	252	11	58	93	7
	2005	247*	8*	49*	91*	9*
Grade 8	2007	298	15	51	85	15
	2005	292*	11*	43*	80*	20*

* Denotes a value that is significantly different from the value for 2007.

Grade retention

In the 2005–06 school year, 21,676 students (2.5 percent) were repeating the grade they had enrolled in during the previous year. This rate has remained stable over the last five years. The most common grade in which students are retained is grade 9 (7.9 percent retention rate); 30 percent of all grade retentions in the state occur in grade 9. Next most common are grade 10 (3.9 percent retention rate, 14 percent of all retentions) and grade 1 (3.8 percent retention rate, 12 percent of all retentions).

Grade retention rates, 2005–06

	Retention rate		Retention rate
Asian	1.9%	Non-low income	1.5%
Black	5.6%	Low-income	4.8%
Hispanic	5.7%	Non-limited English proficient	2.3%
Multi-race, non-Hispanic	2.3%	Limited English proficient	5.7%
Native American	3.7%	General education	2.1%
Native Hawaiian	4.4%	Special education	4.7%
White	1.6%	Overall	2.5%

Dropouts

In 2006–07, 11,436 (3.8 percent) of students in grades 9 through 12 dropped out of school. Changes to our methodology for counting dropouts make it difficult to compare these rates across years, so below is simply a comparison of rates by subgroup for this year.

Analysis of dropout MCAS data shows that 61 percent of grade 11 and 12 dropouts had earned their competency determination. 72 percent of grade 12 dropouts had earned their CD, versus 49 percent of grade 11 dropouts.

Annual dropout rates by subgroup, 2006–07

		Total HS enrollment	Number of dropouts	Annual dropout rate	Percent of all dropouts
Grade	9	82,320	3,229	3.9%	28.2%
	10	75,421	2,827	3.7%	24.7%
	11	72,673	2,599	3.6%	22.7%
	12	67,619	2,781	4.1%	24.3%
Race/ Ethnicity	Asian	13,468	347	2.6%	3.0%
	Black	25,974	1,653	6.4%	14.5%
	Hispanic/Latino	37,190	3,372	9.1%	29.5%
	Multi-race, non-Hispanic	3,644	152	4.2%	1.3%
	Native American	822	40	4.9%	0.3%
	Native Hawaiian	495	21	4.2%	0.2%
	White	216,440	5,851	2.7%	51.2%
Gender	Female	146,763	4,822	3.3%	42.2%
	Male	151,270	6,614	4.4%	57.8%
Special Education	Special education	44,257	2,550	5.8%	22.3%
	General education	253,776	8,886	3.5%	77.7%
Limited English Proficient	LEP	10,997	1,139	10.4%	10.0%
	Non-LEP	287,036	10,297	3.6%	90.0%
Low Income	Low income	76,780	4,449	5.8%	38.9%
	Non-low income	221,253	6,987	3.2%	61.1%

The annual dropout rate is calculated as the number of high school students who dropped out during the year minus the number of students who returned to school during the year, divided by total high school enrollment at the beginning of the year, times 100.

Cohort graduation rate

The first year for which we could report a four-year cohort graduation rate was 2006, since our Student Information Management System began statewide in 2002. In 2007, we were able to produce both a four-year cohort graduation rate for the class of 2007 and a five-year rate for the class of 2006.

Overall, 80.9 percent of the class of 2007 graduated within four years. Four-year graduation rates were lowest for students with limited English proficiency (53.3 percent), Hispanic/Latino students (58.5 percent), and urban students (63.9 percent). Most groups saw improvement in their four-year graduation rates over the previous year.

Comparing four- and five-year graduation rates for the class of 2006, 79.9 percent graduated within four years and 82.7 percent within five years, a 2.8 percentage point improvement in the total graduation rate for the class. Differences across groups are similar for both the four- and five-year rates.

Four-year cohort graduation rates, class of 2007

	Graduates			Non-graduates				
	Cohort #	4-Year Rate	2006 Diff.	Still in school	Non-grad completer	GED	Dropped out	Expelled
All Students	75,912	80.9%	+1.0	6.6%	0.9%	2.0%	9.4%	0.2%
Male	38,571	77.8%	+1.4	8.0%	0.9%	2.1%	10.8%	0.3%
Female	37,341	84.1%	+0.6	5.2%	0.9%	1.8%	7.9%	0.1%
Limited English Proficient	3,981	53.3%	-1.2	15.9%	5.4%	0.6%	24.6%	0.2%
Special Education	13,594	62.8%	+1.7	16.6%	2.4%	1.9%	16.1%	0.2%
Low income	24,495	65.2%	+3.2	12.3%	1.9%	2.6%	17.8%	0.3%
African-American	6,519	65.2%	+0.8	14.3%	2.5%	1.7%	15.8%	0.5%
Asian	3,419	83.7%	-0.2	7.0%	1.0%	1.3%	6.8%	0.3%
Hispanic/Latino	9,156	58.5%	+1.6	13.6%	2.5%	2.2%	22.8%	0.4%
Native American	193	68.4%	-1.4	10.9%	2.1%	2.6%	16.1%	0.0%
White	55,704	86.4%	+1.3	4.5%	0.4%	2.0%	6.6%	0.1%
Pacific Islander	132	63.6%	+13.1	13.6%	1.5%	6.1%	15.2%	0.0%
Multi race, non-Hispanic	789	79.6%	-6.5	8.2%	2.0%	1.3%	8.7%	0.1%
Urban	20,771	63.9%	+1.6	12.2%	2.0%	2.1%	19.5%	0.2%

The four-year cohort for a graduating class is the number of first-time ninth graders four years prior, minus transfers out, plus transfers in. The four-year cohort graduation rate is the number of students in the cohort who graduate in four years divided by the total number in the cohort. More explanation of the difference between the cohort graduation rate and the annual dropout rate is available at <http://www.doe.mass.edu/infoservices/reports/gradrates/dropoutvsgrad.html>.

College readiness

This year for the first time, the Department has collaborated with the Department of Higher Education to produce a *School-to-College Report* detailing public high school graduate enrollment and performance in public higher education. This year's report focuses on the high school class of 2005; future reports will generally come in spring about two years after the cohort's high school graduation.

A statewide report is available at <http://www.doe.mass.edu/research/reports/research.html>. Every high school with 10 or more graduates going on to public higher education received a custom report, as well; these school-level reports are available at <http://www.doe.mass.edu/research/reports/s2c.html>.

Some highlights from the statewide report:

- Among the public high school class of 2005, more than 19,000 students (33 percent) enrolled in a Massachusetts public postsecondary institution in fall 2005.
- Of these students, 45 percent enrolled at a community college, 25 percent at a state college, and 30 percent at a state university campus.
- African American, Hispanic, low-income and limited English proficient students and students receiving special education services in high school were more likely to enroll at a community college. Asians were more likely to enroll at a state university campus.
- Among public high school graduates, 37 percent enrolled in at least one developmental (remedial) course in their first semester in college.
- Of students enrolled at community colleges, 65 percent enrolled in at least one developmental course, versus 22 percent at state colleges and 8 percent at state university campuses.
- Remediation rates were higher for some student groups:
 - 63 percent of students receiving special education services in high school
 - 59 percent of African Americans
 - 58 percent of Hispanics
 - 52 percent of low-income students
 - 50 percent of limited English proficient students
- Among students who passed the grade 10 mathematics MCAS test at the *Needs Improvement* level, 50 percent enrolled in developmental math, as opposed to 20 percent of students who passed at the proficient level and 4 percent at the advanced level.
- More than 80 percent of first-time, full-time degree seeking students reenrolled for a second year of college in fall 2006.