

# Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress

**HIGHLIGHTS**



## About the Study

The report, *Achievement Gaps: How Hispanic and White Students in Public Schools Perform in Mathematics and Reading on the National Assessment of Educational Progress*, provides a detailed portrait of Hispanic and White academic achievement gaps and how students' performance has changed over time at both the national and state levels.

The report presents achievement gaps using reading and mathematics assessment data from NAEP for the 4th- and 8th-grade students. All results are for public school students.

Comparisons in the report are made between the most recent assessment year (2009) and all previous assessment years beginning from 1990. In addition, the report also examines national achievement gap data by gender, students' English Language Learner status and eligibility for the National School Lunch Program.

From 1990 to 2009, according to NAEP data, the Hispanic student population increased at grade 4 from 6 percent to 22 percent and at grade 8 from 7 percent to 21 percent. This report is the first to present comprehensive national and state data on the performance of these students in comparison to their White peers.

For the full report, please visit <http://nces.ed.gov/nationsreportcard/studies/gaps/>

# Scores of Hispanic and White students rise in 2009, but the overall achievement gap remains

## Trends in NAEP mathematics and reading scores and gaps since earliest comparison year, by grade and student group: 2009

Mathematics	Gap	Scores	
		Hispanic	White
<b>4th Grade</b>			
National Public	↔	↑	↑
NSLP <sup>1</sup>			
Eligible	↔	↑	↑
Not Eligible	↔	↑	↑
<b>8th Grade</b>			
National Public	↔	↑	↑
NSLP <sup>1</sup>			
Eligible	Narrowed	↑	↑
Not Eligible	↔	↑	↑

Reading	Gap	Scores	
		Hispanic	White
<b>4th Grade</b>			
National Public	↔	↑	↑
NSLP <sup>1</sup>			
Eligible	Narrowed	↑	↑
Not Eligible	↔	↑	↑
<b>8th Grade</b>			
National Public	↔	↑	↑
NSLP <sup>1</sup>			
Eligible	Narrowed	↑	↔
Not Eligible	↔	↑	↑

↔ no significant change in score or score gap.

↑ increased score.

<sup>1</sup> National School Lunch Program

NOTE: Comparison year for National Public is 1990 for mathematics and 1992 for reading; NSLP comparisons are made to 2003.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), Various years: 1990-2009 Mathematics and Reading Assessments.

- In 2009, at the national level, the achievement gap between Hispanic and White students at grades 4 and 8 in mathematics and reading was between 21 and 26 points on the NAEP scale.

## 2009 Hispanic-White Achievement Gaps

	White-Hispanic	Non-ELL Hispanic-ELL Hispanic	White-Non-ELL Hispanic
<b>Mathematics</b>			
Grade 4	21	19	14
Grade 8	26	34	19

## Reading

Grade 4	25	29	15
Grade 8	24	39	15

NOTE: Group that comes first has the higher score. White includes ELL and non-ELL White students.

- Mathematics gap narrowed for Hispanic and White 8th-graders eligible for the National School Lunch Program (NSLP) in 2009 compared to 2003.
- Reading gap also narrowed for eligible 4th- and 8th-graders in 2009 compared to 2003.
- Reading and mathematics gap narrowed between White and non-ELL Hispanic students in both grades since the earliest available comparison year.

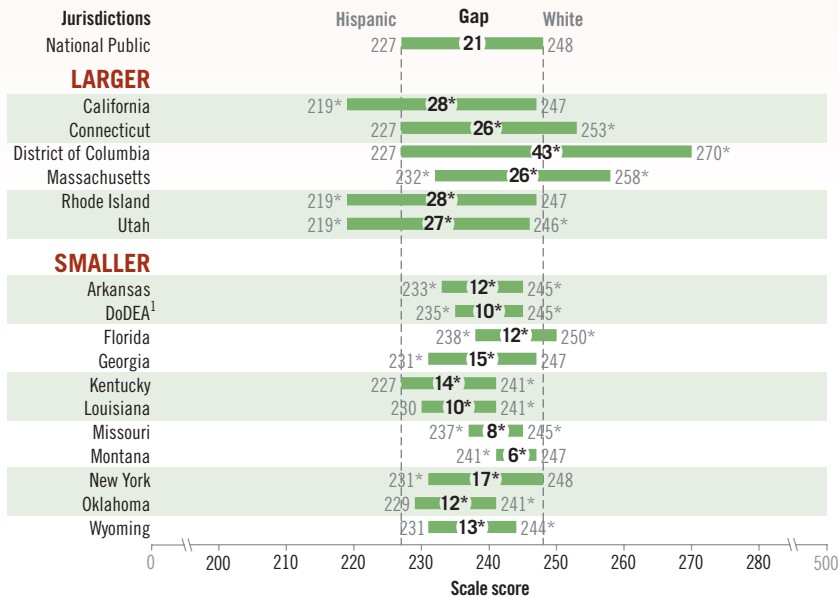
**Hispanics** are the second largest racial/ethnic group in the United States, comprising 16 percent of the nation's population, according to the 2010 Census. The size of the Hispanic population varies by state; the five states with the largest Hispanic population are California, Florida, Illinois, New York, and Texas.

According to NAEP reading data, more Hispanic students (76 percent at grade 4 and 72 percent at grade 8) compared to White students (29 percent at grade 4 and 24 percent at grade 8) are eligible for the National School Lunch Program. In 2009, 35 percent of all Hispanic fourth-graders and 20 percent of Hispanic eighth-graders were identified as English language learners, compared to 9 and 5 percent for all students (including Hispanics) at the two grades.

# State and National Gap Comparisons for Mathematics, 2009

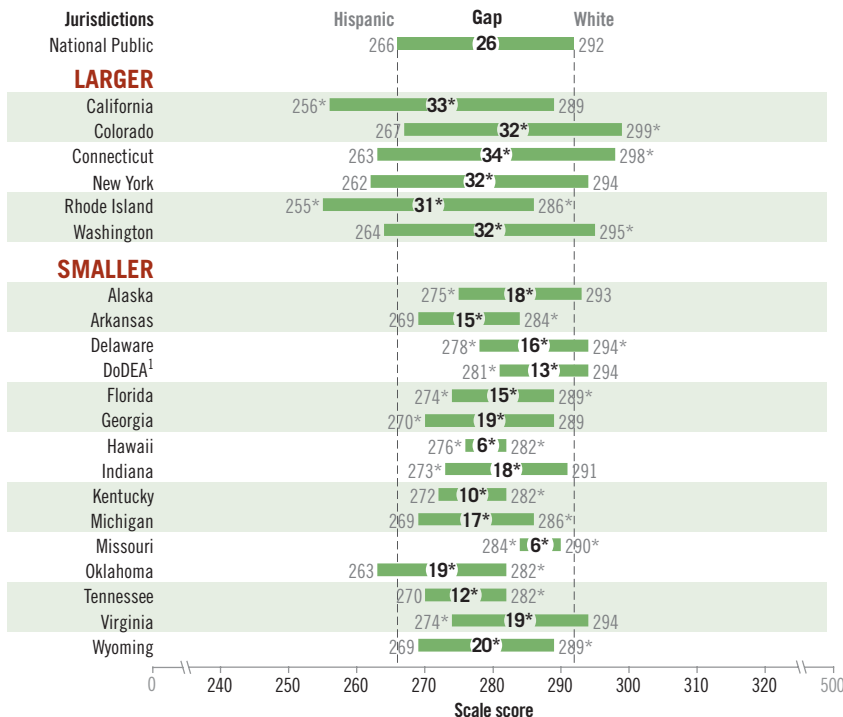
The gap in most states did not differ significantly from the national gap for mathematics in both grades. The following figures show the states where the gap is significantly larger or smaller than the national gap.

## Grade 4



**Eight** states—AR, DoDEA, FL, GA, KY, MO, OK, WY—had smaller achievement gaps in 2009 between Hispanic and White students than the national gap at both grades.

## Grade 8



**Three** states—CA, CT, RI—had larger achievement gaps in 2009 between Hispanic and White students than the national gap at both grades.

\* Significantly different ( $p < .05$ ) from the nation (public) when comparing one state to the nation at a time.

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: Score gaps are calculated based on differences between unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Mathematics Assessment.

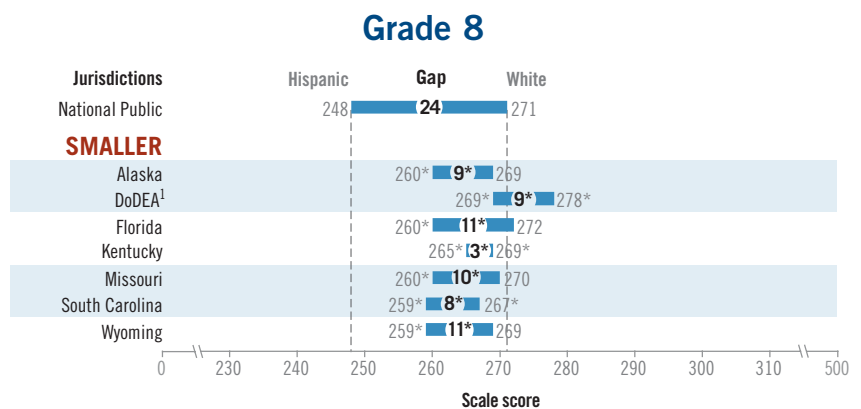
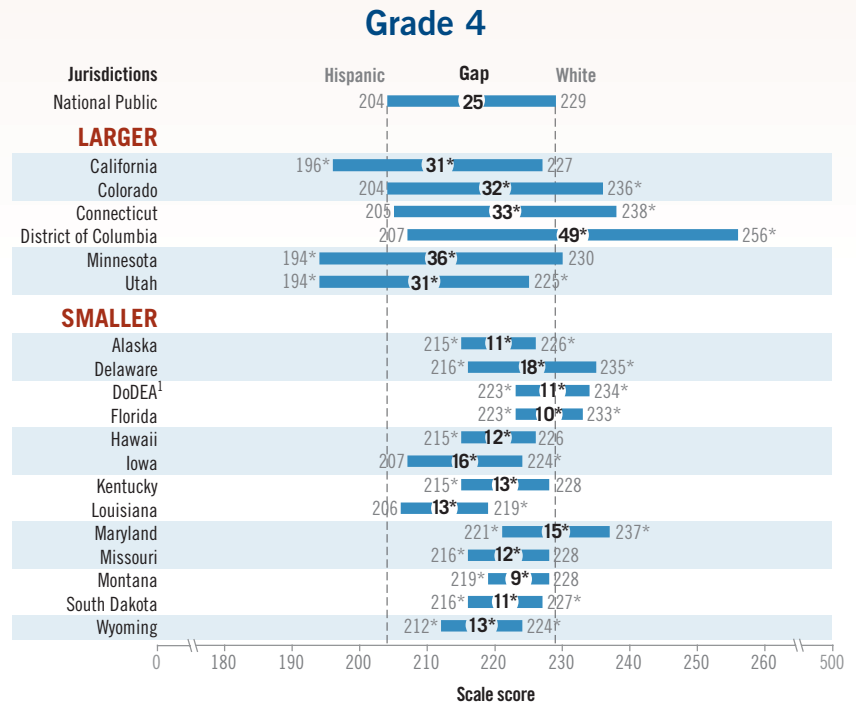
# State and National Gap Comparisons for Reading, 2009

The gap in most states did not differ significantly from the national gap for reading in both grades. The following figures show the states where the gap is significantly larger or smaller than the national gap.

**Six** states—AK, DoDEA, FL, KY, MO, WY—had smaller achievement gaps in 2009 between Hispanic and White students than the national gap at both grades.

**Six** states —CA, CO, CT, DC, MN, UT—had larger achievement gaps in 2009 between Hispanic and White students than the national gap at grade 4.

**No** state had a larger achievement gap than the 24-point national gap at grade 8.



\* Significantly different (p<.05) from the nation (public) when comparing one state to the nation at a time.

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: Score gaps are calculated based on differences between unrounded average scores.

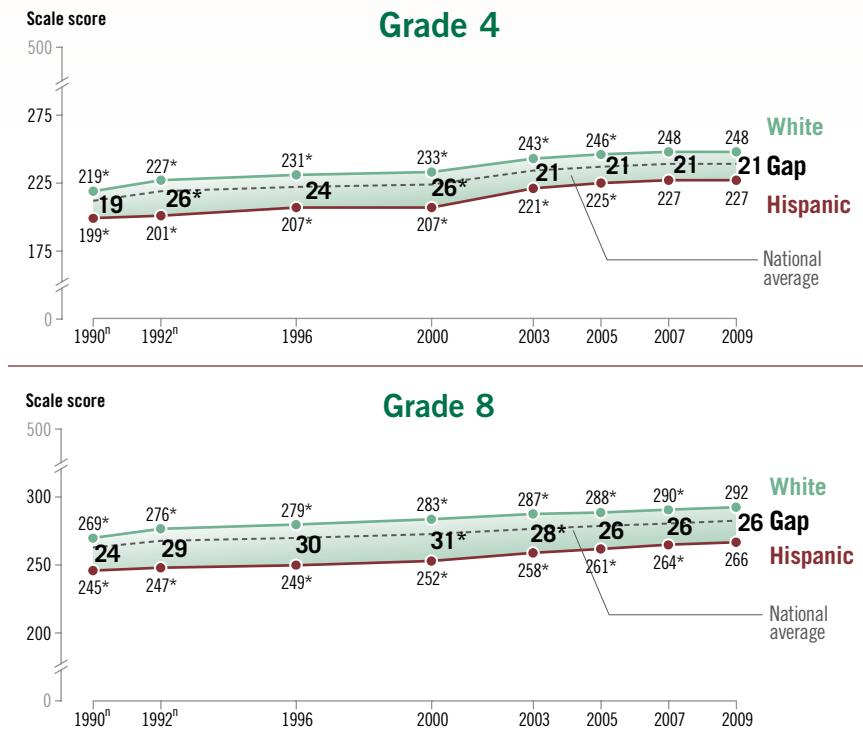
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 Reading Assessment.

# National Trends for Mathematics

The mathematics achievement gap showed few changes when comparing both 1990 and 2007 to 2009.

- From 2007 to 2009, scores remained unchanged for both Hispanic and White students in grade 4, and the gap remained at 21 points. The scores for both groups increased at grade 8, but the gap remained at 26 points.
- From 1990 to 2009, gaps between Hispanic and White students were 19 points at grade 4 and 24 points at grade 8.

## Mathematics achievement score gaps between Hispanic and White public school students at grades 4 and 8: Various years, 1990–2009



<sup>n</sup> Accommodations were not permitted for this assessment.

\* Significantly different ( $p < .05$ ) from 2009.

NOTE: Score gaps are calculated based on differences between unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2009 Mathematics Assessments.

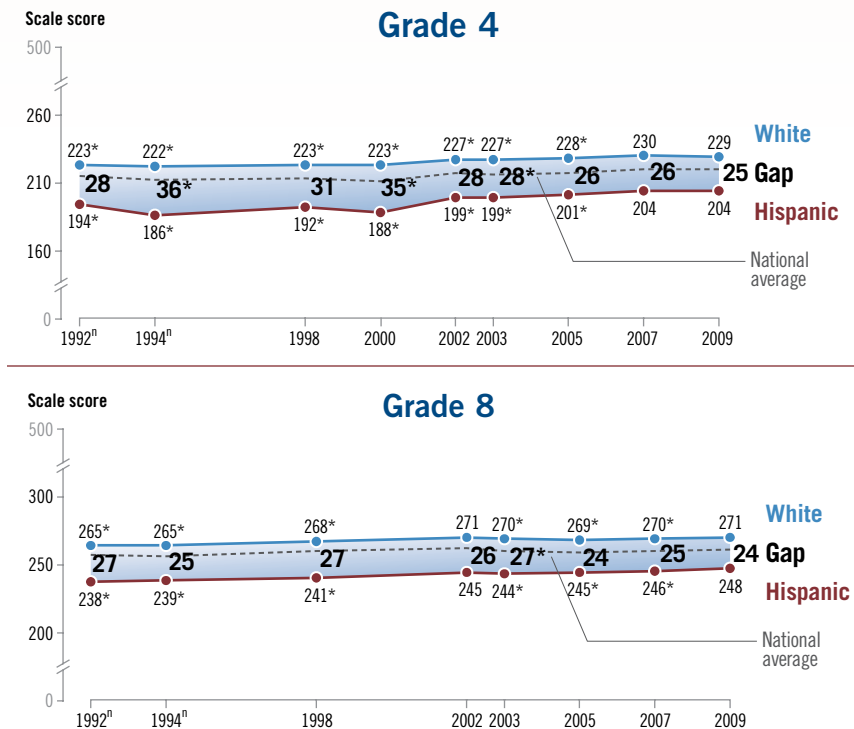
**NAEP** has collected data on the performance of various racial/ethnic groups since the early 1990s, making it possible to explore changes in gaps over time. Achievement gaps—statistically significant differences in average score between two student groups—can narrow in the ways shown on the following page.

# National Trends for Reading

The reading achievement gap showed few changes when comparing both 1992 and 2007 to 2009.

- From 2007 to 2009, scores were not significantly different for White students and remained unchanged for Hispanic students at grade 4; scores for both groups increased at grade 8. In 2009, the 25-point gap in grade 4 and the 24-point gap in grade 8 were not statistically different than the gaps in 2007.
- From 1992 to 2009, scores increased for both Hispanic and White students but gaps did not differ significantly at grades 4 and 8.

## Reading achievement score gaps between Hispanic and White public school students at grades 4 and 8: Various years, 1992–2009



<sup>n</sup> Accommodations were not permitted for this assessment.

\* Significantly different ( $p < .05$ ) from 2009.

NOTE: Data were not collected at grade 8 in 2000. Score gaps are calculated based on differences between unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1992–2009 Reading Assessments.

### Ways gaps can narrow

The average scores of *both* groups increase, while the score of the lower performing group increases even more.

The average scores of the *higher* performing group does not change, while the score of the lower performing group increases.

The average scores of *both* groups do not change, but the gap narrows.

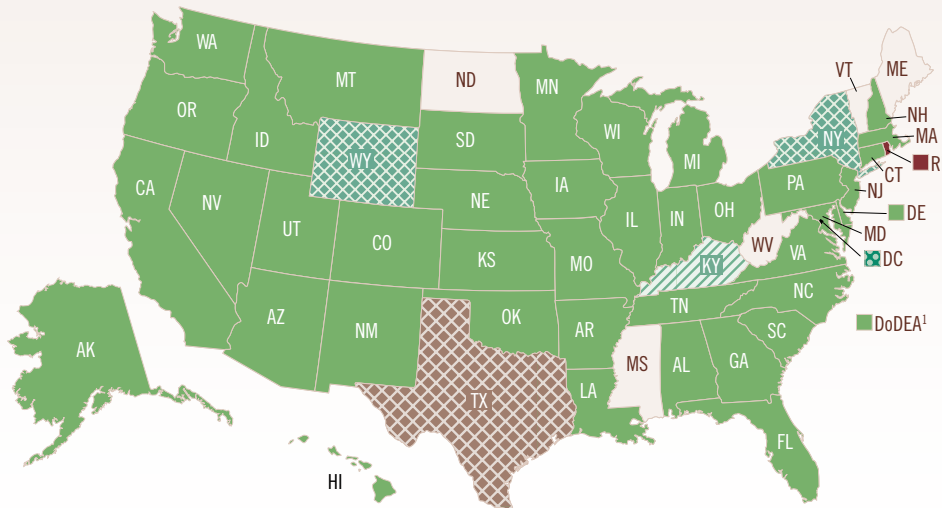
The average scores of the *higher* performing group declines, while the score of the lower performing group increases.

The average scores of the *higher* performing group declines, while the score of the lower performing group does not change.

The average scores of *both* groups decline, but the score of the higher performing group declines even more.

# State Trends for Mathematics, 2007–2009

## Grade 4

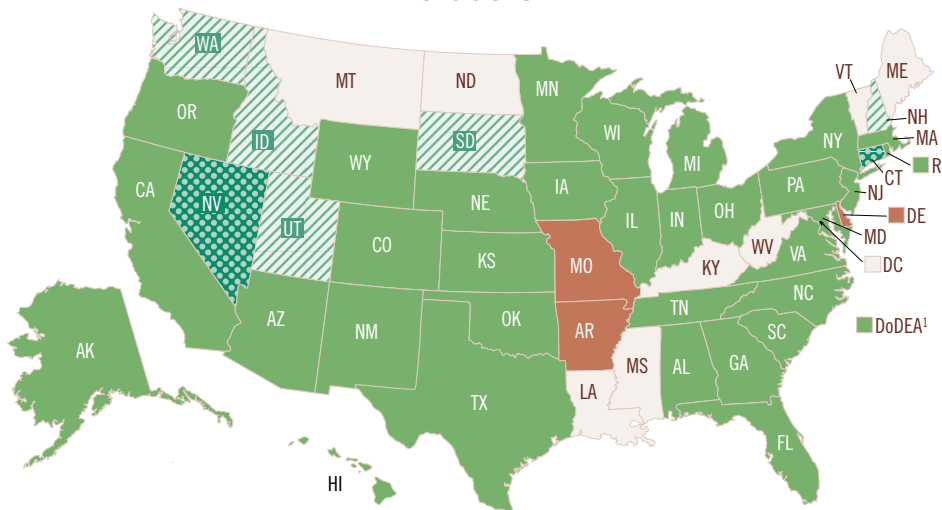


**Two** states—TX and RI—had gaps that widened at grade 4 in 2009 compared to 2007.

**Six** states—CT, DC, MA, NJ, NY, RI—had gaps that narrowed at grade 4 in 2009 since 1992.

**Three** states—AR, DE, MO—had gaps that narrowed at grade 8 in 2009 compared to 2007.

## Grade 8



**Two** states—CT and RI—had gaps that narrowed at grade 8 in 2009 compared to 1990.

**One** state—MD—had a gap that widened at grade 8 in 2009 compared to 1990.

The gap did not change in 45 states at grade 4 and 40 states at grade 8 in 2009 compared to 2007.

### Ways the Gap Narrowed

■ Hispanic students' scores increased while White students' scores did not change.

### Ways the Gap Widened

■ Hispanic students' scores decreased and White students' scores did not change.

■ Hispanic students' scores did not change, while White students' scores increased.

### Ways the Gap did not Change

■ Both Hispanic and White students' scores increased.

■ Hispanic students' scores did not change, while White students' scores increased.

■ Hispanic students' scores did not change, while scores of White students decreased.

■ Both Hispanic and White students' scores did not change.

■ Data not available.

	Grade 4	Grade 8
Ways the Gap Narrowed	No states	AR, DE, MO
Ways the Gap Widened	TX	No states
	RI	No states
Ways the Gap did not Change	DC	CT, NV
	KY	ID, NH, SD, UT, WA
	NY, WY	No states
	41 states	33 states
	5 states	9 states

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: Data for the comparisons between 2009 and the first assessment year are not shown.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Mathematics Assessments.



# State Trends for Reading, 2007–2009

**One** state—AK—had a gap that narrowed at grade 4 in 2009 compared to 2007.

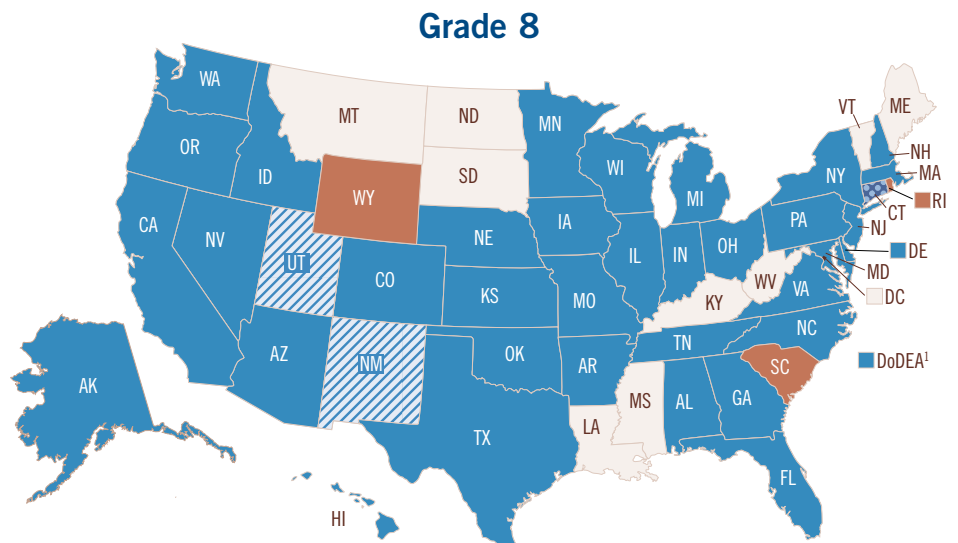
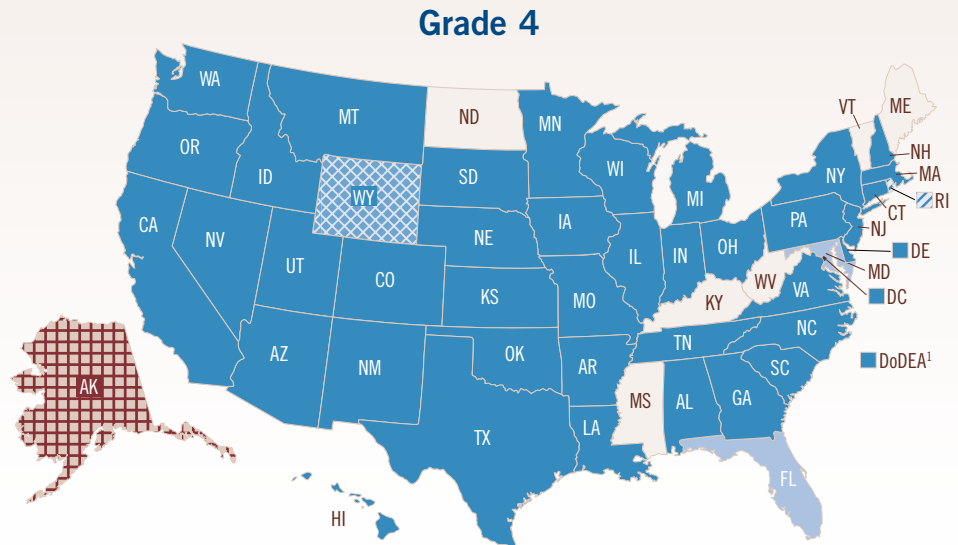
**Two** states—NJ and NY—had gaps that narrowed at grade 4 in 2009 compared to 1992.

**One** state—CO—had a gap that widened at grade 4 in 2009 compared to 1992.

**Three** states—RI, SC, WY—had gaps that narrowed at grade 8 in 2009 compared to 2007.

**No** states had a change in their gaps at grade 8 in 2009 compared to 1998.

The gap did not change in 45 states at grade 4 and 39 states at grade 8 in 2009 compared to 2007.



## Ways the Gap Narrowed

- Hispanic students' and White students' scores did not change.
- Hispanic students' scores increased while White students' scores did not change.

## Ways the Gap did not Change

- Both Hispanic and White students' scores increased.
- Hispanic students' scores did not change, while White students' scores increased.
- Hispanic students' scores increased, while White students' scores did not change.
- Hispanic students' scores did not change, while scores of White students decreased.
- Both Hispanic and White students' scores did not change.
- Data not available.

## Grade 4

AK  
No states

No states  
RI  
FL, MD  
WY

41 states  
6 states

## Grade 8

No states  
RI, SC, WY

CT  
NM, UT  
No states

No states  
36 states  
10 states

<sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: Data for the comparisons between 2009 and the first assessment year are not shown.

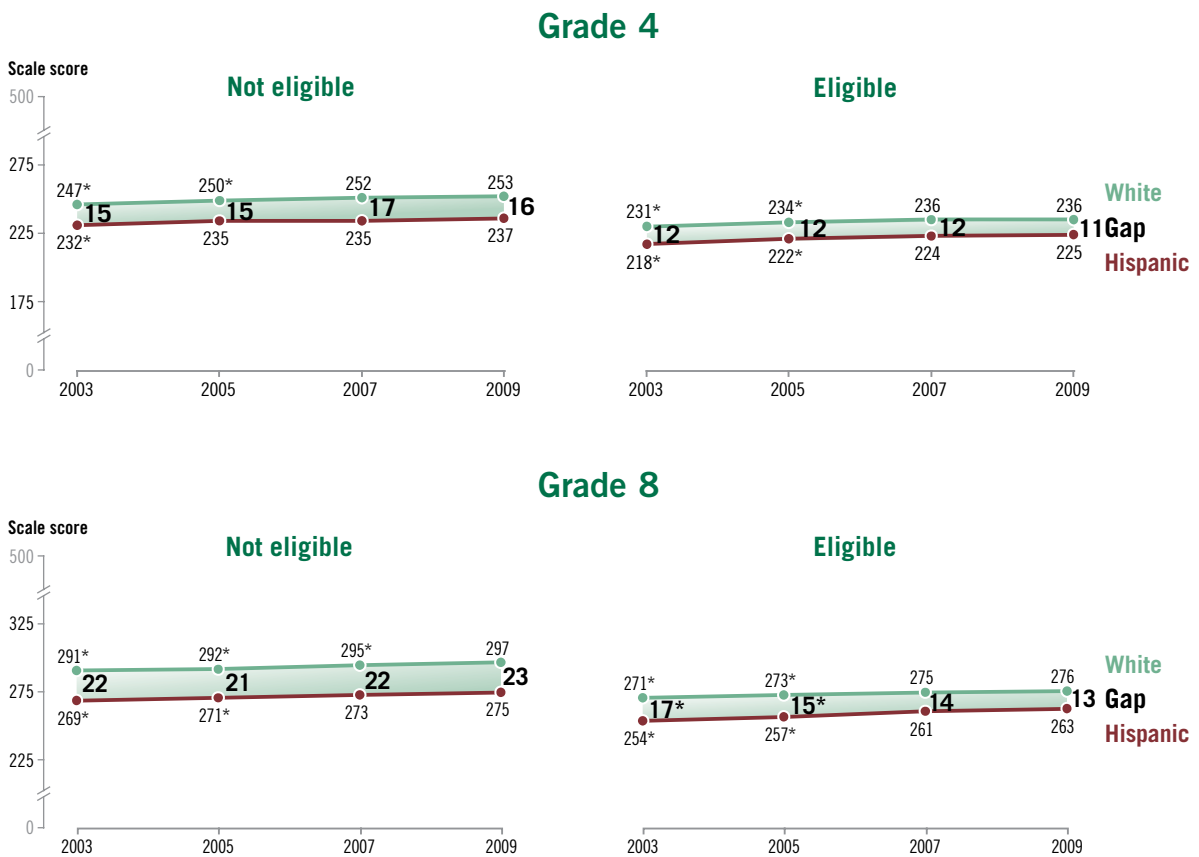
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2007 and 2009 Reading Assessments.

# National School Lunch Program

The gap between Hispanic and White students eligible for NSLP narrowed in 2009 when compared to 2003, in grade 8 mathematics and in grades 4 and 8 reading (see full report for reading results).

- In 2009 at grade 4, White not eligible students had an average score of 253 (left side of graph), while White eligible students had a score of 236 (right side of graph), resulting in a gap of 17 points. Hispanic not eligible students had an average score of 237, while Hispanic eligible students had a score of 225, resulting in a gap of 12 points, smaller 17-point gap between White eligible and White not eligible students. This pattern is similar at grade 4 reading.
- At grade 8, White not eligible students had an average score of 297 (left side of graph), while White eligible students had a score of 276 (right side of graph), resulting in a gap of 21 points. Hispanic not eligible students had an average score of 275, while Hispanic eligible students had a score of 263, resulting in a gap of 13 points, smaller 21-point gap between White eligible and White not eligible students. This pattern is similar at grade 8 reading.

## Mathematics achievement score gaps between Hispanic and White public school students at grades 4 and 8, by eligibility for the National School Lunch Program: Various years, 2003–2009



\* Significantly different ( $p < .05$ ) from 2009.

NOTE: Score gaps are calculated based on differences between unrounded average scores.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2003–2009 Mathematics Assessments.

# English Language Learners

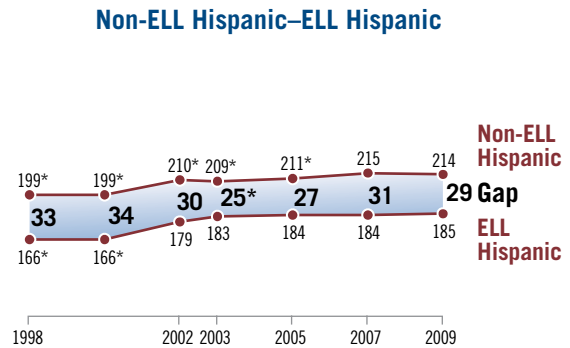
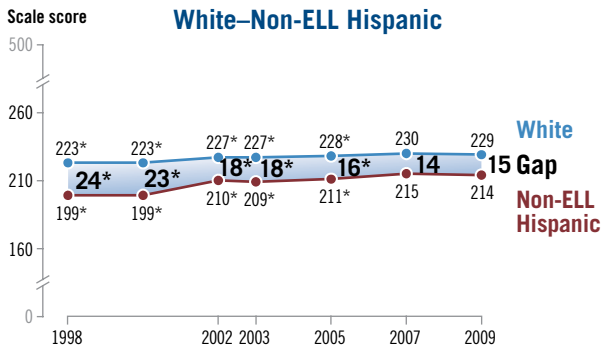
The gap between White and non-ELL Hispanic students narrowed in both grades in 2009 compared to the earliest assessment year in reading and mathematics (see full report for mathematics results).

■ In 2009, the 15-point reading gap between grade 4 White and non-ELL Hispanic students was narrower than the 24-point gap in 1998. Scores increased for both groups but the increase was larger for non-ELL Hispanic students. In 2009 at grade 4, the 29-point achievement gap between non-ELL Hispanic and ELL Hispanic students was not statistically different from the gap in 1998.

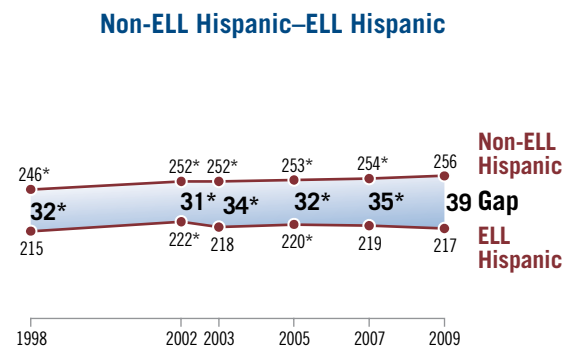
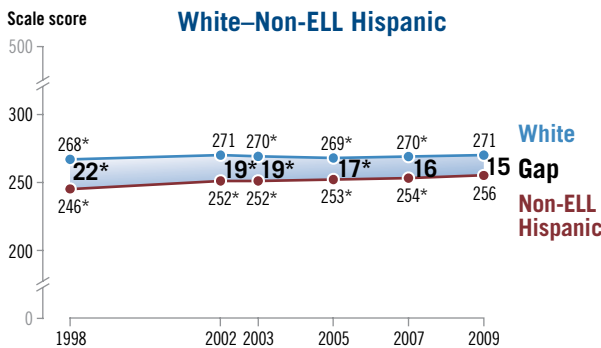
■ In 2009, the 15-point reading gap between grade 8 White and non-ELL Hispanic students was narrower than the 22-point gap in 1998, but not significantly different than the gap in 2007. Scores increased for both groups but the increase was larger for non-ELL Hispanic students. In 2009 at grade 8, the 39-point achievement gap between non-ELL Hispanic and ELL Hispanic students was statistically different from the gaps in 1998 and 2007.

## Reading achievement score gaps between Hispanic and White public school students at grades 4 and 8, by English Language Learner status: Various years, 1998–2009

### Grade 4



### Grade 8



\* Significantly different ( $p < .05$ ) from 2009.

NOTE: Data were not collected at grade 8 in 2000. Score gaps are calculated based on differences between unrounded average scores. White includes ELL and non-ELL White students.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1998–2009 Reading Assessments.

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The National Center for Education Statistics (NCES), located within the U.S. Department of Education and the Institute of Education Sciences, is the primary federal entity for collecting and analyzing data related to education.

The National Assessment of Educational Progress (NAEP) is a congressionally mandated project sponsored by the U.S. Department of Education and administered by NCES. The Commissioner of Education Statistics is responsible by law for carrying out the NAEP project. The National Assessment Governing Board is responsible for setting policy for NAEP, including the NAEP achievement levels.

National Center for Education Statistics  
Institute of Education Sciences  
U.S. Department of Education  
1990 K Street NW  
Washington, DC 20006-5651

To download the full report and highlights, please visit  
<http://nces.ed.gov/nationsreportcard/studies/gaps/>

Contact: Taslima Rahman  
(202) 502-7316  
taslima.rahman@ed.gov

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