

# *NAEP: CHARTS, CURVES AND CONCLUSIONS*

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National Assessment of Educational Progress (NAEP)

*New Jersey School Counselor Association  
Professional Development Conference*

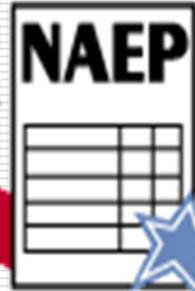
Ocean Place Resort & Spa  
Long Branch, NJ  
October 22, 2007

*Barbara Smey-Richman, EdD.  
New Jersey NAEP Coordinator*

Hi! I'm from the "NJDOE" and I'm here to help!!



The  
Nation's  
Report  
Card



NEW JERSEY

NAEP:  
National Assessment  
of Educational  
Progress

NAEP is also called the  
*Nation's Report Card*

NAEP  
Rhymes  
with  
"Grape"

# Session Topics (NAEP 101):

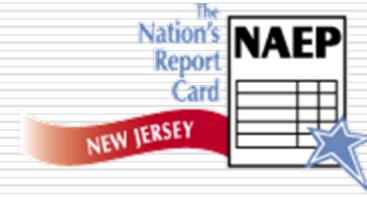
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- What's NAEP?
- NJ results compared to others
- Trend lines
- Hit the Achievement "Gap"(s)

# What is NAEP?

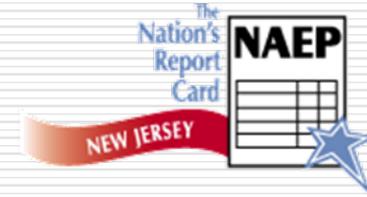
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NAEP was authorized by Congress in 1969 to create a *reliable way* of determining areas of strengths and weaknesses in the American school system

NAEP is the only test of its kind, and it performs an important function - -to track the achievement of U.S. students over time

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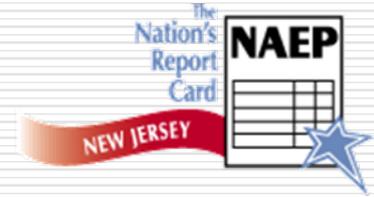


# What is NAEP?

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NAEP was created to answer the question:

*Are students in American schools learning what they should be learning?*

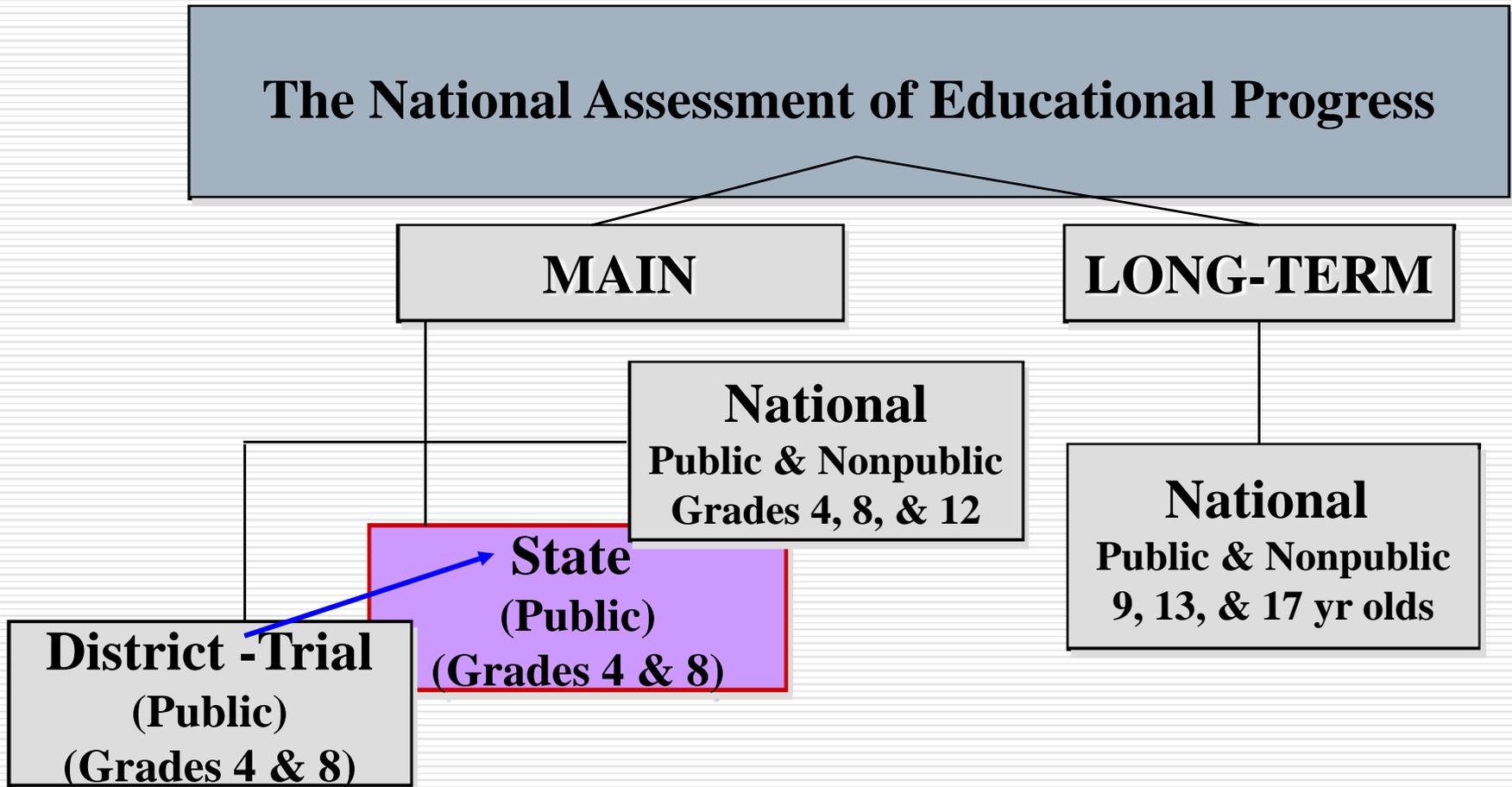


# What is NAEP?

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- NAEP's mission is to produce national and state-level results for student populations
- NAEP does **not** provide individual student, school or district results

# NAEP Has Many Components

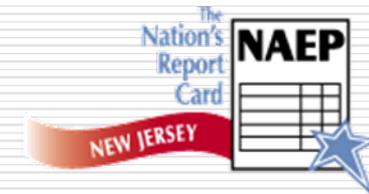


# Many NAEP Assessments

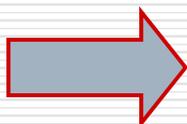
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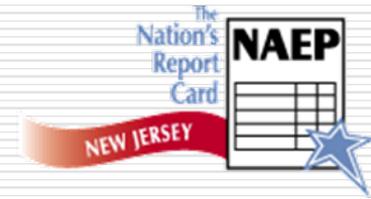
- NAEP tests for grades 4, 8 and 12
- The subjects tested are:
  - **Reading - Math** - major focus
  - Writing - Science
  - Others (e.g., civics, history, etc)
- NAEP also funds "special studies"
- NAEP is called the "Gold Standard"

# NAEP Assessment Schedule



Year	National	State
2003	Reading, Mathematics	Reading, Mathematics
2004	Foreign Language, Long-term Trend <i>(Cancelled)</i>	
2005	Reading, Mathematics, Science	Reading, Mathematics, Science
2006	U.S. History, Civics, Economics	
2007	Reading, Mathematics, Writing	Reading, Mathematics, Writing
2008	Arts, Long-term Trend	
2009	Reading, Mathematics, Science	Reading, Mathematics, Science
2010	World History, Geography	
2011	Reading, Mathematics, Writing	Reading, Mathematics, Writing
2012	Civics, Foreign Language, Long-term Trend	





# What is State NAEP?

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- State NAEP was created in 1990, and permits cross-state comparisons
  - It is a biennial (2003, 2005, 2007 etc.) of students in grades 4 and 8
  - It is administered to a sample of schools in all 50 states and some other jurisdictions
  - Approximately 3,000 students are tested for each subject at each grade level (e.g., Grade 8 math)
  - For New Jersey, the sample size is about 3% of the approximate 100,000 students (i.e., the population for each of New Jersey's grade-level cohorts)
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NAEP  
and  
New Jersey  
Assessments

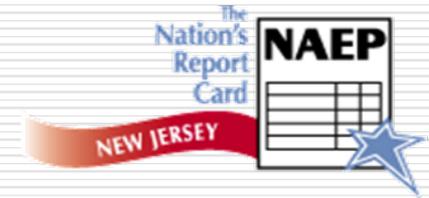
# Pop Quiz #1

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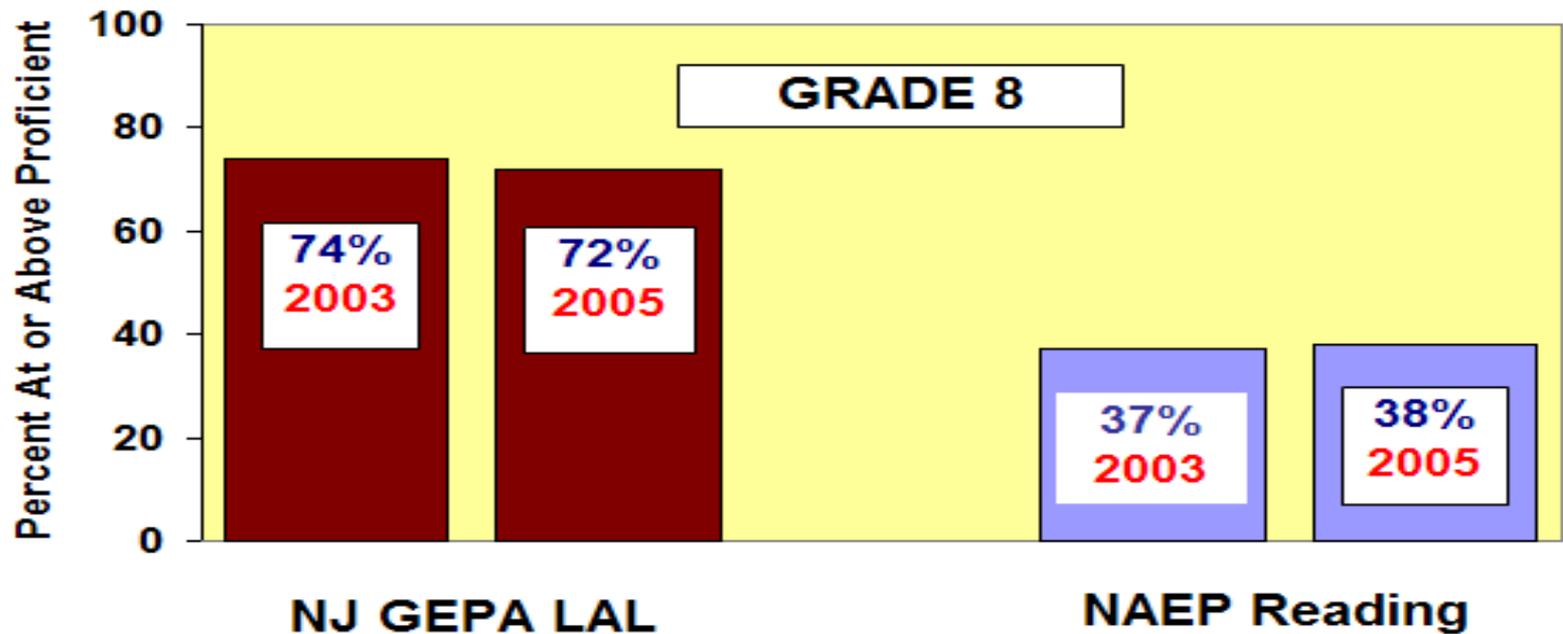


Why do the NJ and NAEP results look so different?

# What's Going on Here?



**NAEP and NJ GEPA Language Arts Literacy (LAL): Different Tests Yield Different Results (2003-2005)**

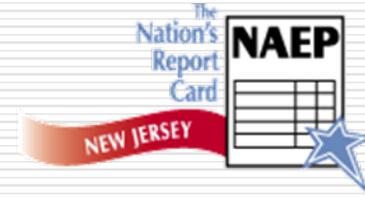


# The Power of the Metaphor

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Comparing NAEP with  
the New Jersey  
tests is like  
comparing ...??  
Apples and Oranges



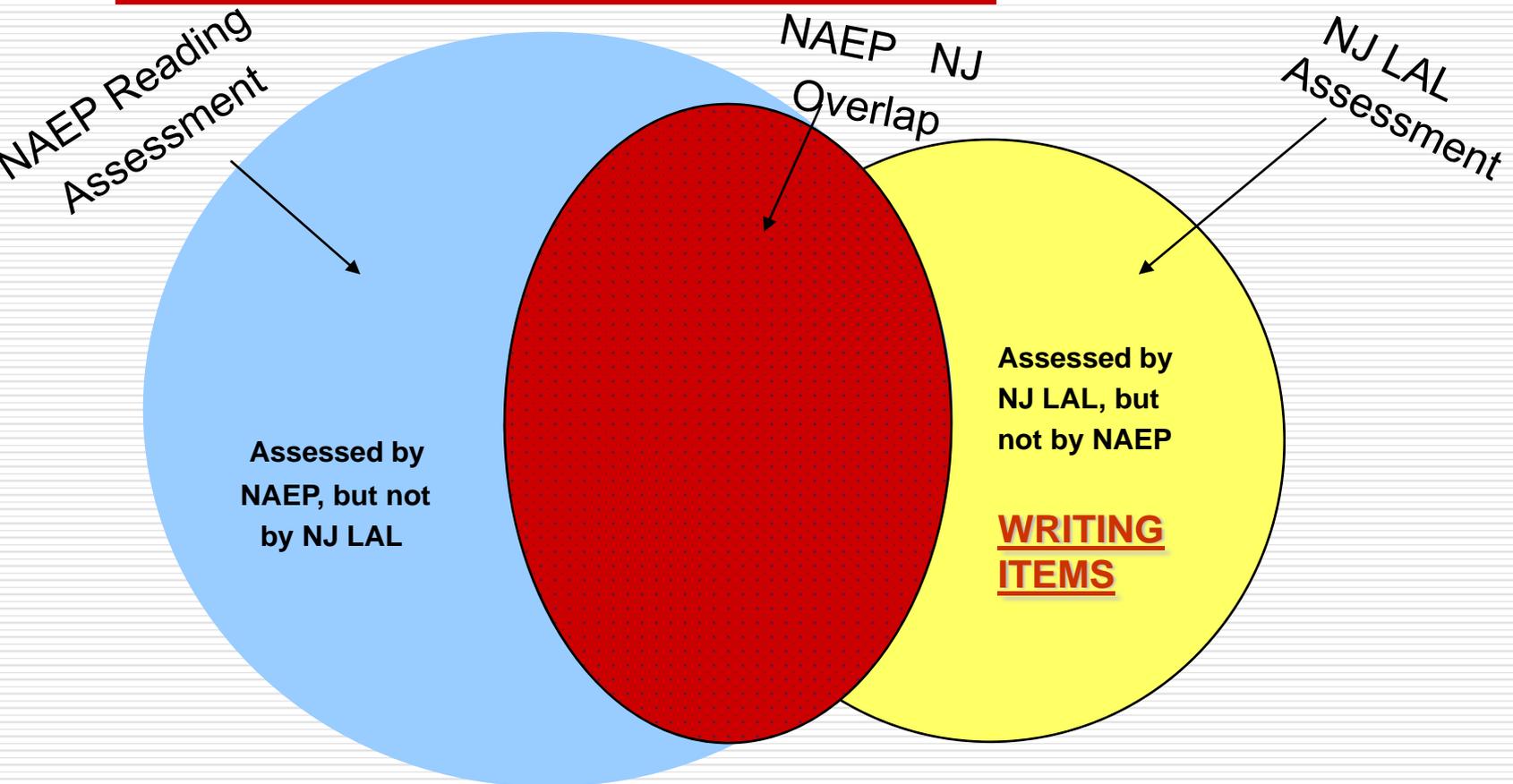
# NAEP and State Tests

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- NAEP's assessment frameworks are developed as a result of a *national-based process* and reflect a *national view*
- New Jersey's content standards and test specifications for NJASK 4 and GEPA reflect the *New Jersey perspective*

# The Tests Assess Different Content: Conceptual Model

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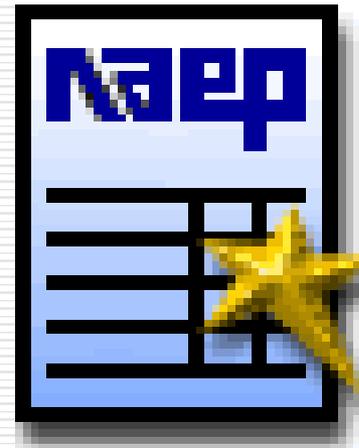


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This diagram is only an approximation of how the NAEP reading and New Jersey LAL tests relate to each other. The diagram is not drawn to “scale,” and the extent to which the tests overlap is not based on an alignment study.

# An Obvious Difference

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## Language Arts Literacy

- Combined Tests
- Combined Scores only

## Reading and Writing

- Separate R/W Tests
- Separate R/W Scores

# NJ Tests - How Difficult?

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- NJ state tests are high-stakes with major consequences for students, schools, and districts (AYP)
- In accordance with NCLB, state tests must assess grade-level performance
- Cut-scores are determined with the awareness of these two factors

# NAEP - How Difficult?

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- NAEP is *not* a grade-level test
- **Proficient** refers to:
  - "Aspirational," world-class performance
  - Mastery of knowledge and skills beyond what is commonly associated the grade assessed
- NAEP has no consequences for test takers, but indirect consequences for all schools since used by policymakers

# NAEP's Achievement Levels

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## Level Descriptors

- **Basic:** Partial mastery of prerequisite knowledge/skills that are fundamental for proficient work **(At grade level)**
- **Proficient:** Solid academic performance -- demonstrated competency over challenging subject matter
- **Advanced:** Superior performance

+++++

[**Below Basic:** Incomplete knowledge/skills necessary for proficient work]

# Achievement Levels Labels

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	<u>Below</u> Grade Level	Grade Level	<u>Above</u> Grade Level
<b>NJ State Assessments</b>	<b>Partially Proficient</b>	<b>Proficient</b>	<b>Advanced</b>
<b>NAEP</b>	<b>Below Basic</b>	<b>Basic</b>	<b>Proficient/Advanced</b>

Performance equivalency:

*NAEP Basic & Above = NJ Proficient & Above*

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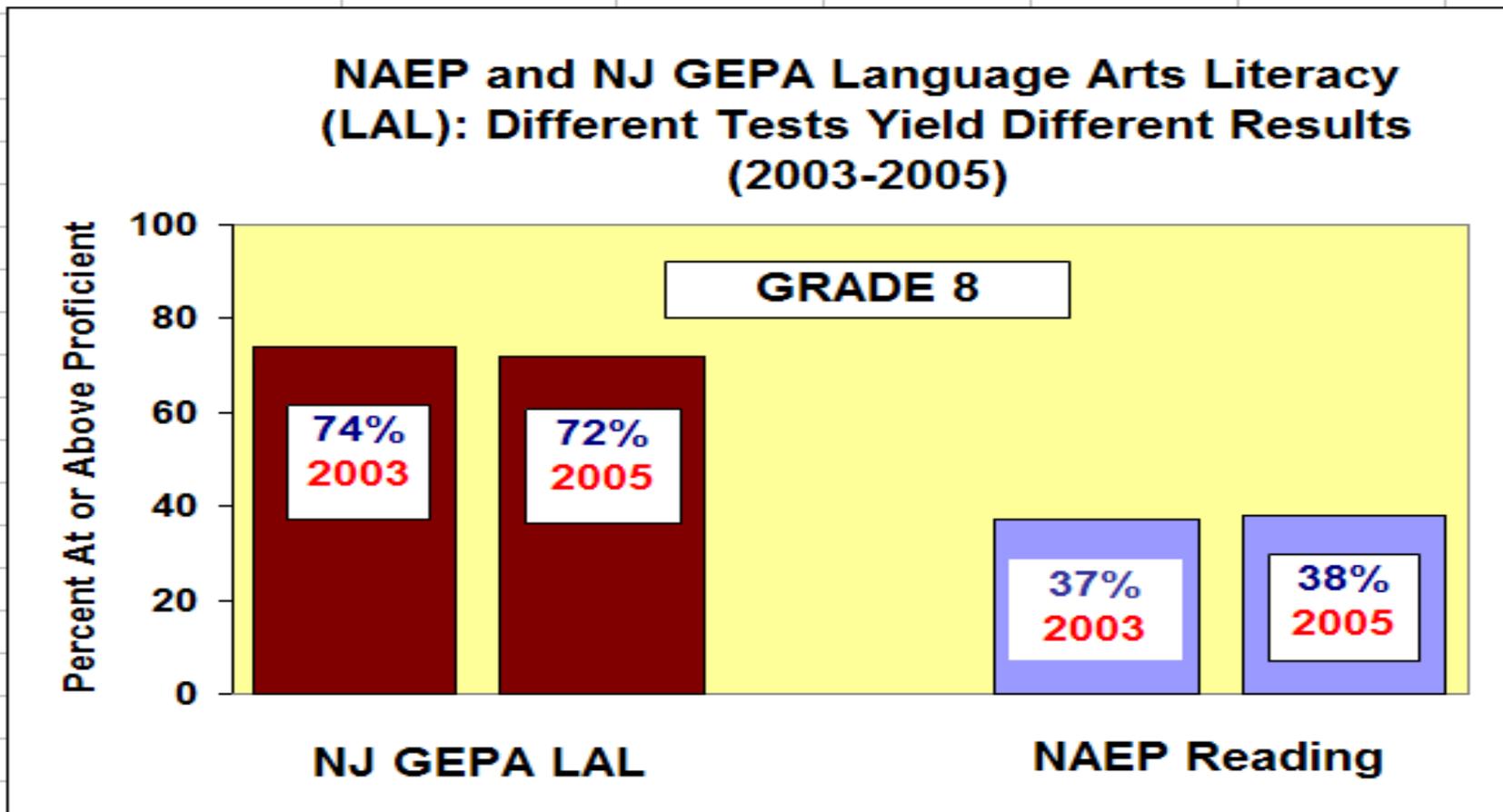
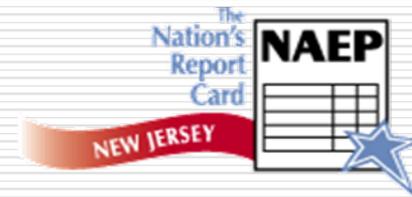
# What are the Implications?

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The definitions of “proficient” set by states and by NAEP have no observable agreement\*

\* Linn, Robert, *Large-Scale Assessment Conference*, San Antonio, TX, June 2005

# Faulty Assumptions About the Meaning of Proficient





# NAEP 12<sup>th</sup> Grade Findings

Only National Results

# High School Transcript Study, 2005

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- Graduates completed more rigorous curriculum than previous graduates
  - 68% took at least a standard curriculum
  - 41% took college prep
  - 10% took AP or International Baccalaureate Program
- The overall grade-point average (GPA) climbed since 1990 and was 2.98 in 2005

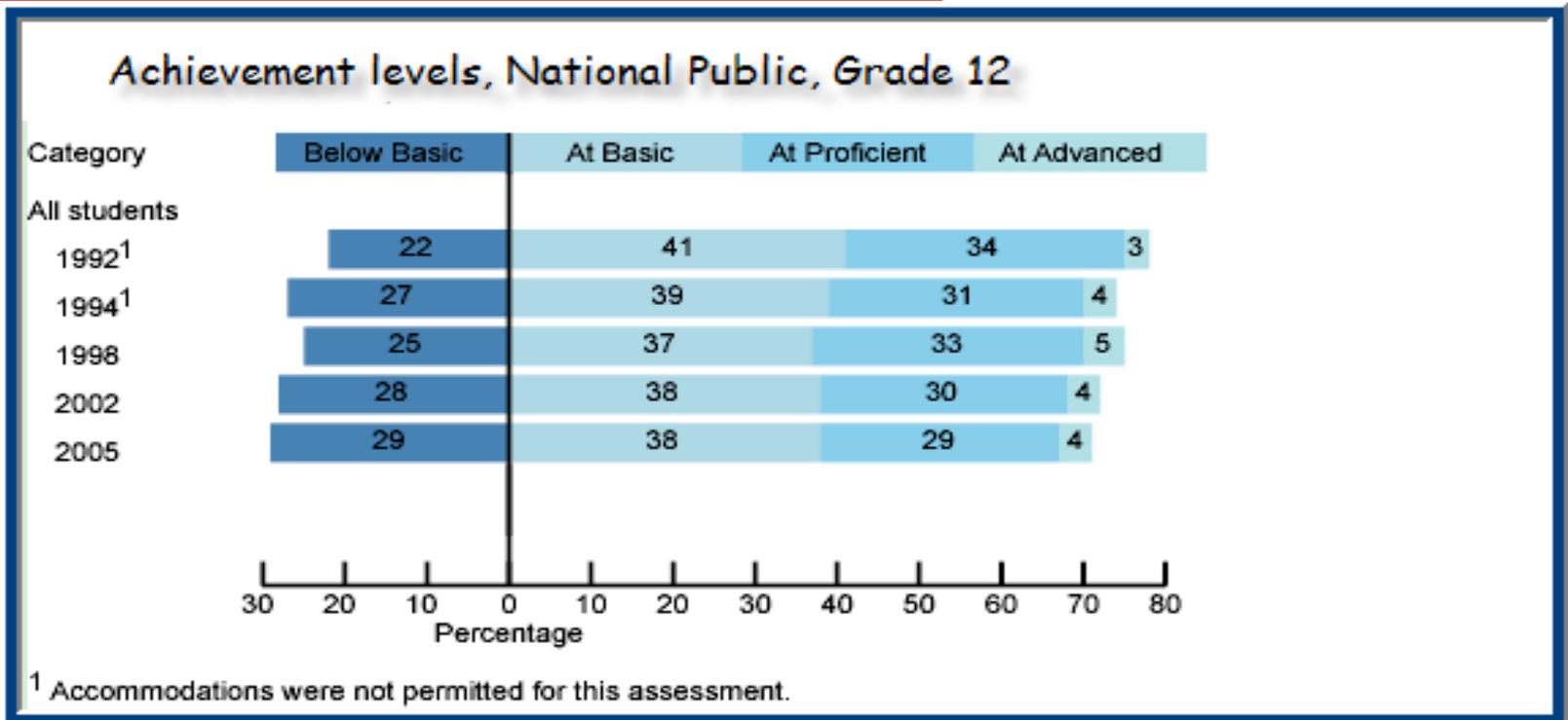
# Pop Quiz # 2

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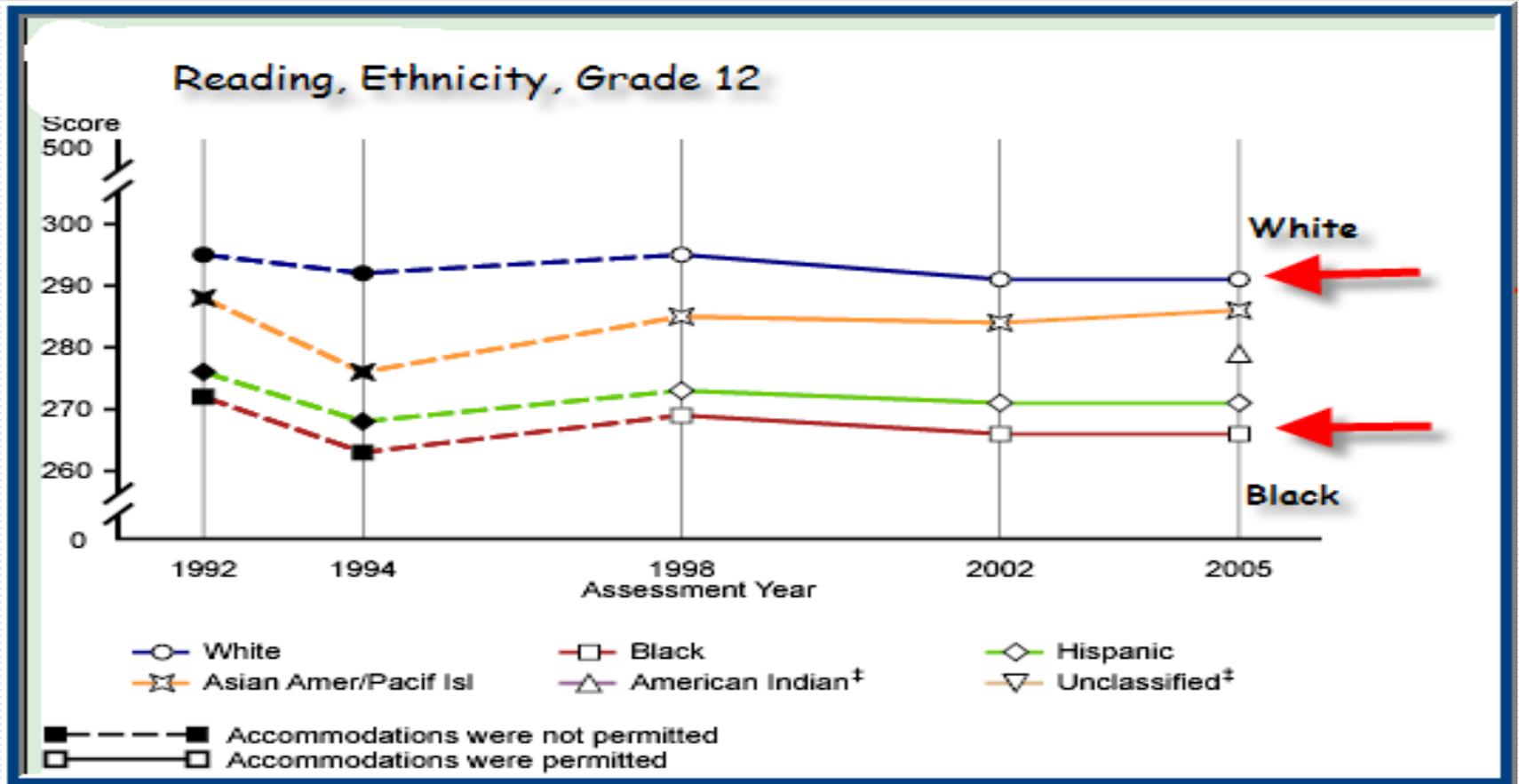


Does tougher  
curricula and  
higher GPA  
result in  
higher NAEP  
scores?

# Reading: Achievement Levels Lower in 2005 than in 1992



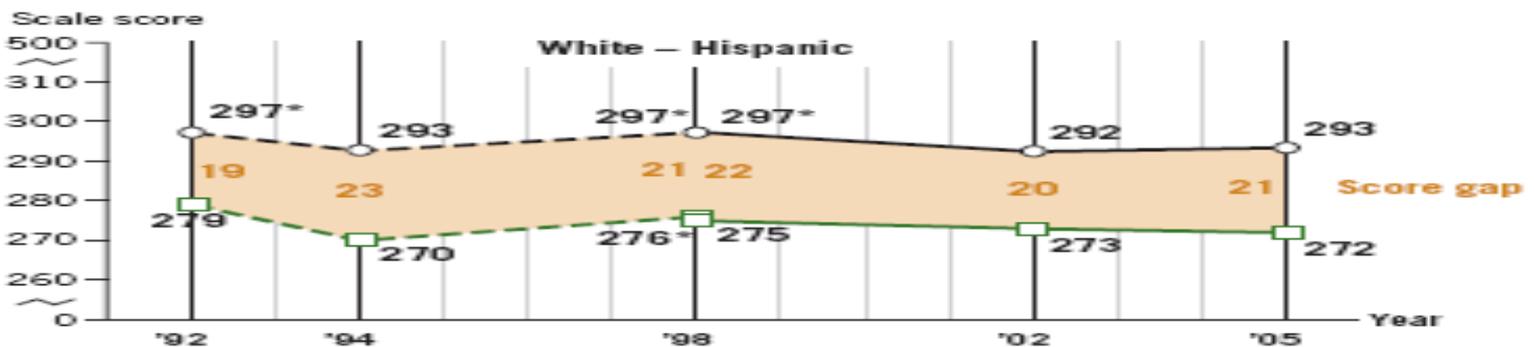
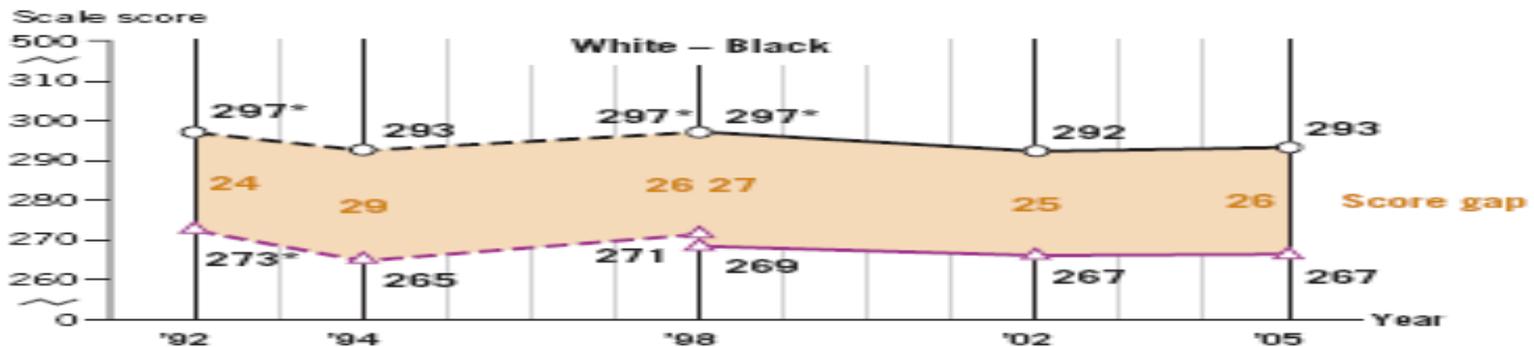
# Reading: Scores for Whites & Blacks Lower in 2005 than in 1992, Grade 12



# Reading Gaps: Unchanged Since 1992, Grade 12 (Scale Scores)

## Gaps remain unchanged

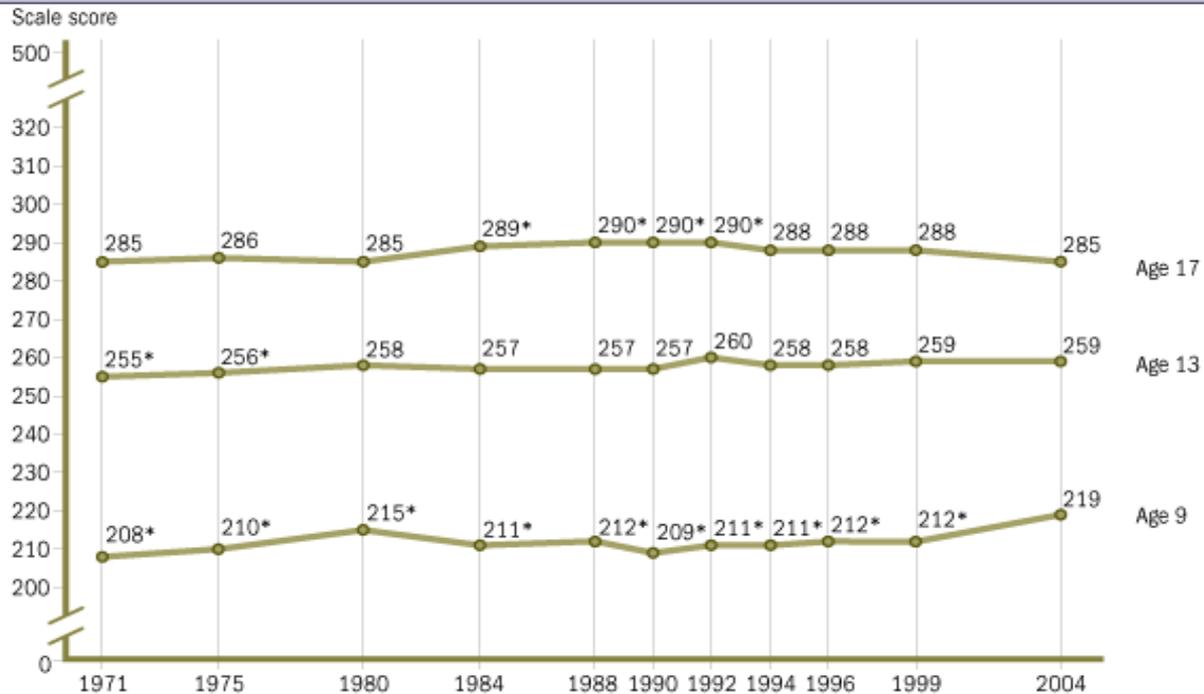
Trend in 12th-grade NAEP reading score gaps for White – Black and for White – Hispanic students



- White
- △ Black
- Hispanic

# Are the Nation's Reading Scores Improving? (Long-term Trend) (2004)

Trends in average reading scale scores for students ages 9, 13, and 17: 1971–2004 



View data with standard errors for [age 9](#), [age 13](#), and [age 17](#).

\* Significantly different from 2004.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), selected years, 1971–2004 Long-Term Trend Reading Assessments.

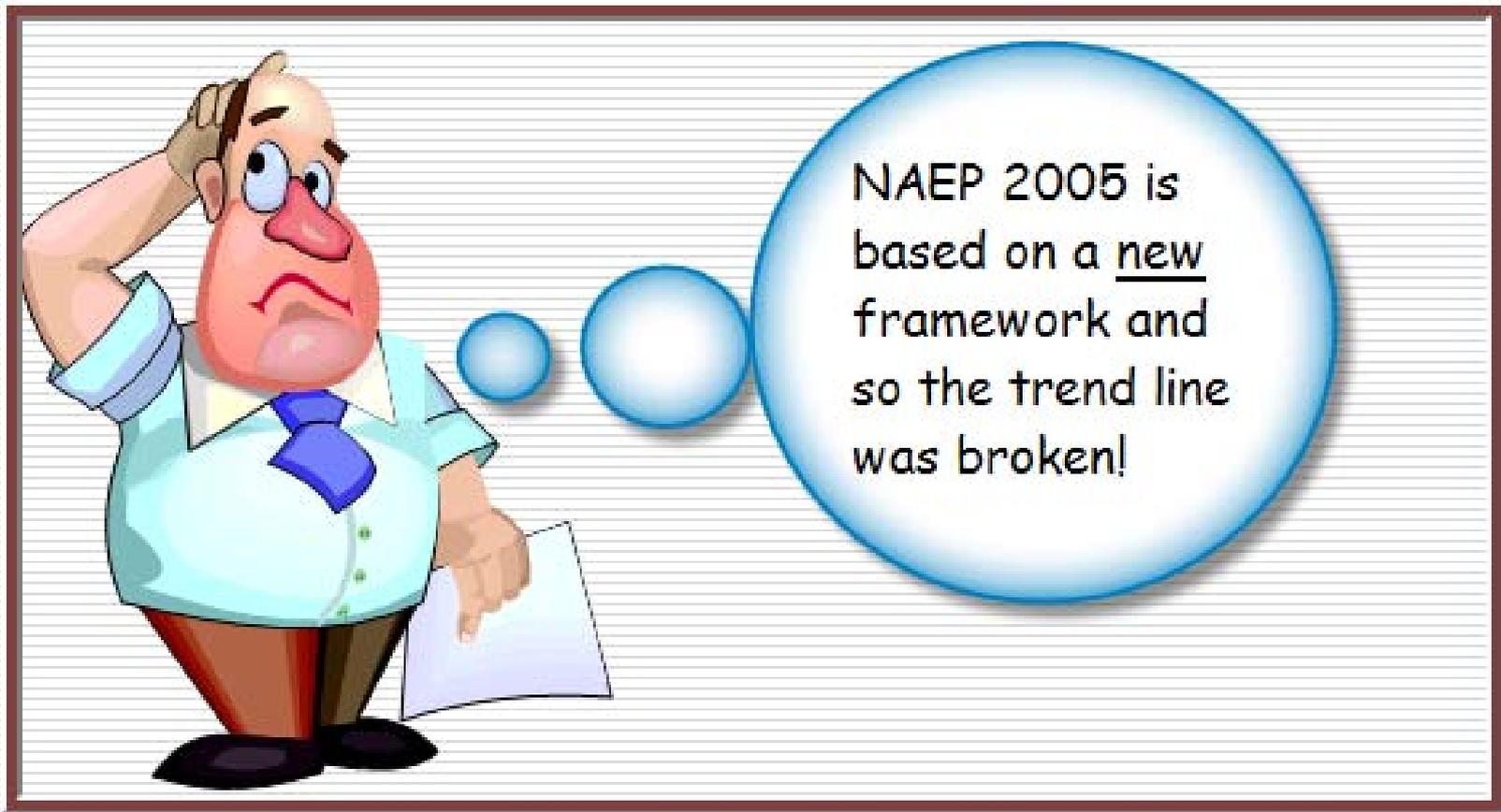
## Key Findings:

**9-yr olds:** The 2004 score is higher than previous years

**13-yr olds:** The scale score in 2004 is **higher than** in 1971 and in 1975, no different for subsequent years.

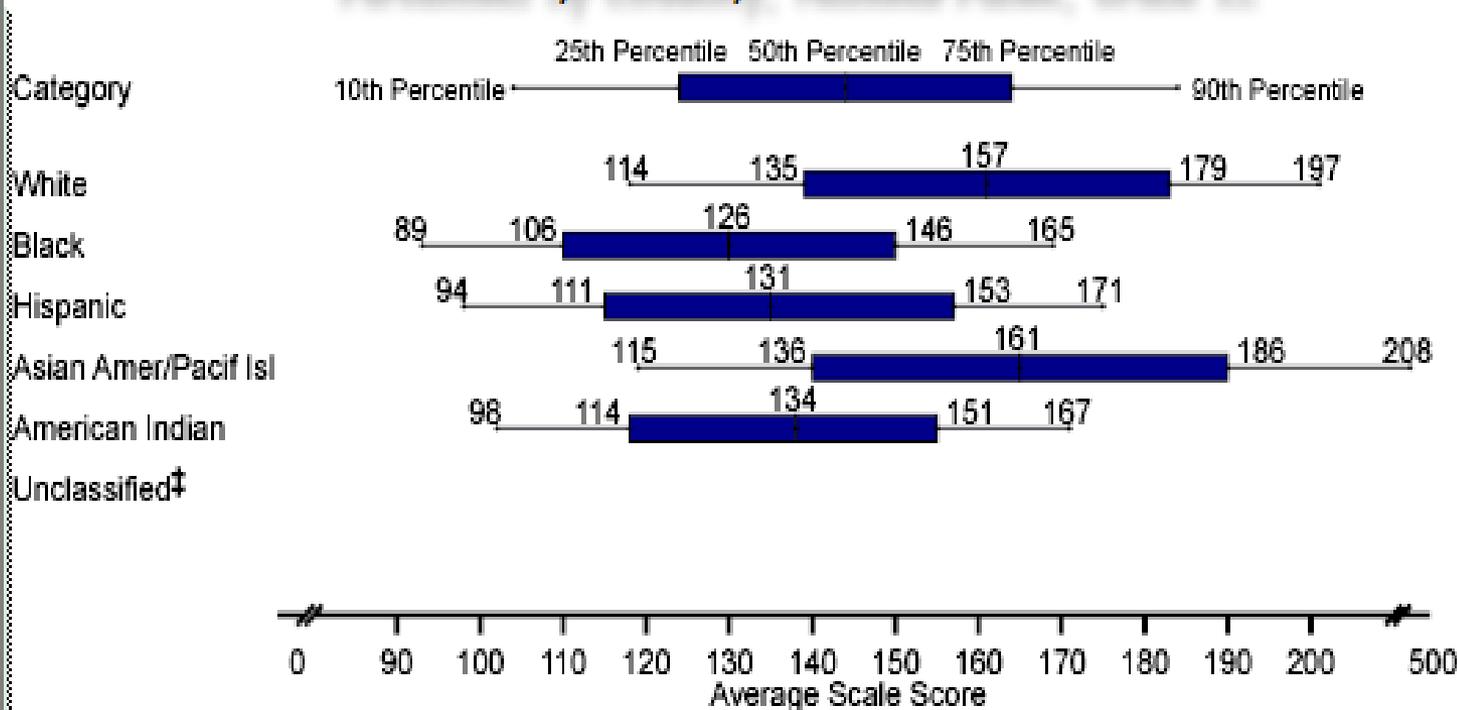
# Math: Why Can't Results Be Compared to Previous Years, Grade 12

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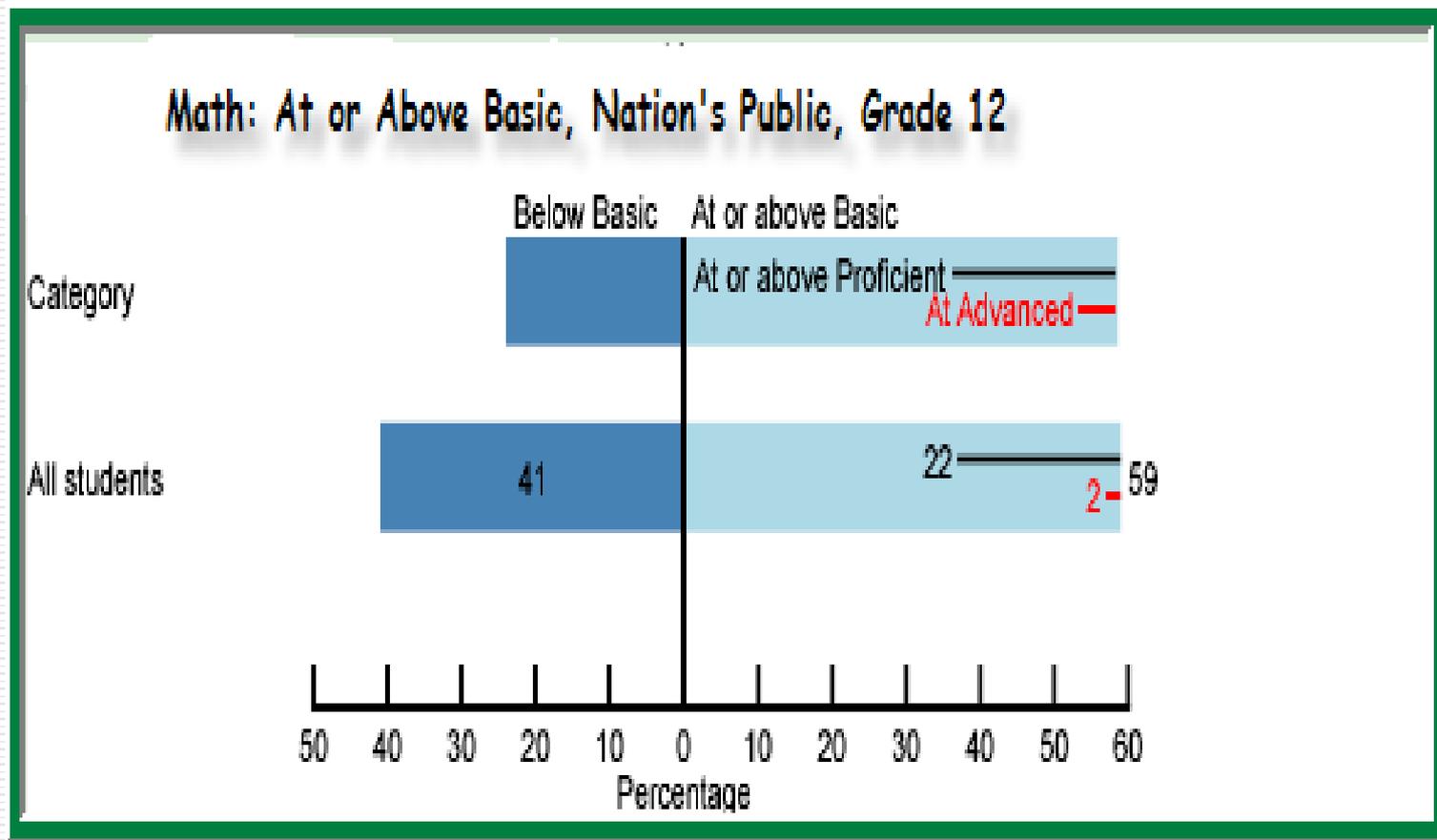


# Math: White and Asians Outperform Others, Grade 12

Percentiles by Ethnicity, National Public, Grade 12



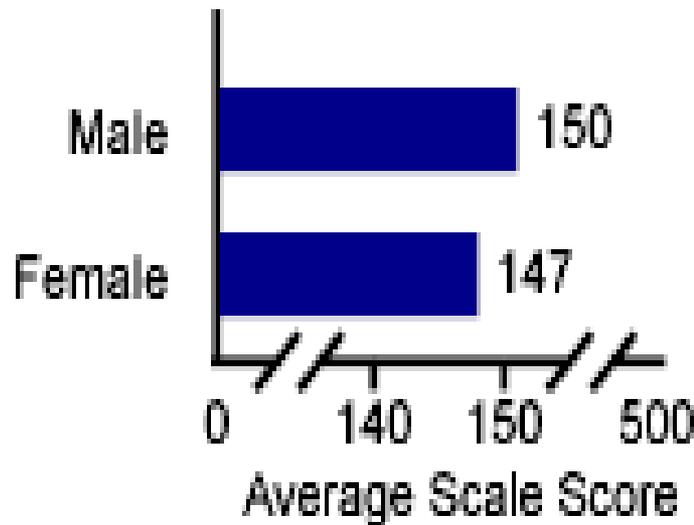
# Math 2005: Just 59% At or Above Basic Basic, Grade 12



# Math: Results by Gender, Males Higher Overall, Grade 12

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Scale Scores, Nation's Public, Grade 12,

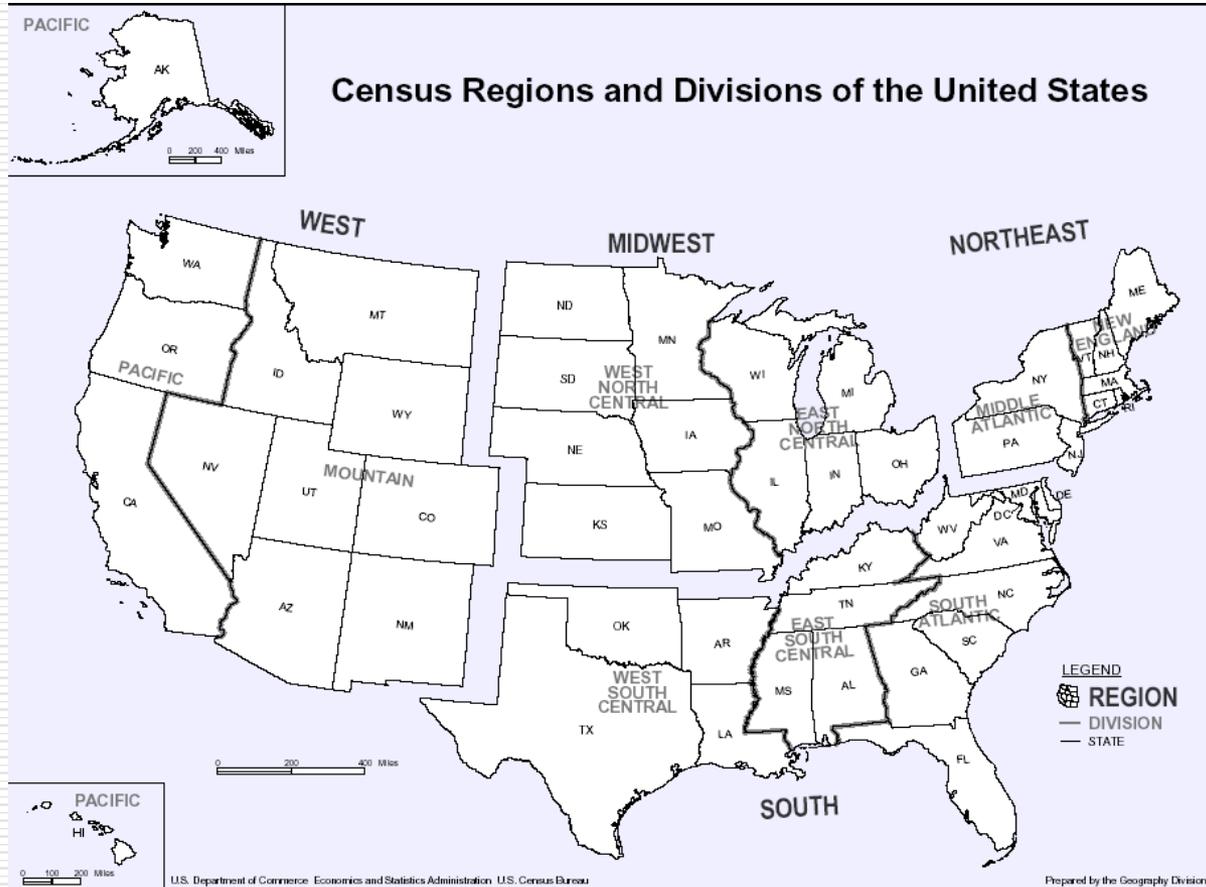


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# Comparing Jurisdictions With Similar Demographics

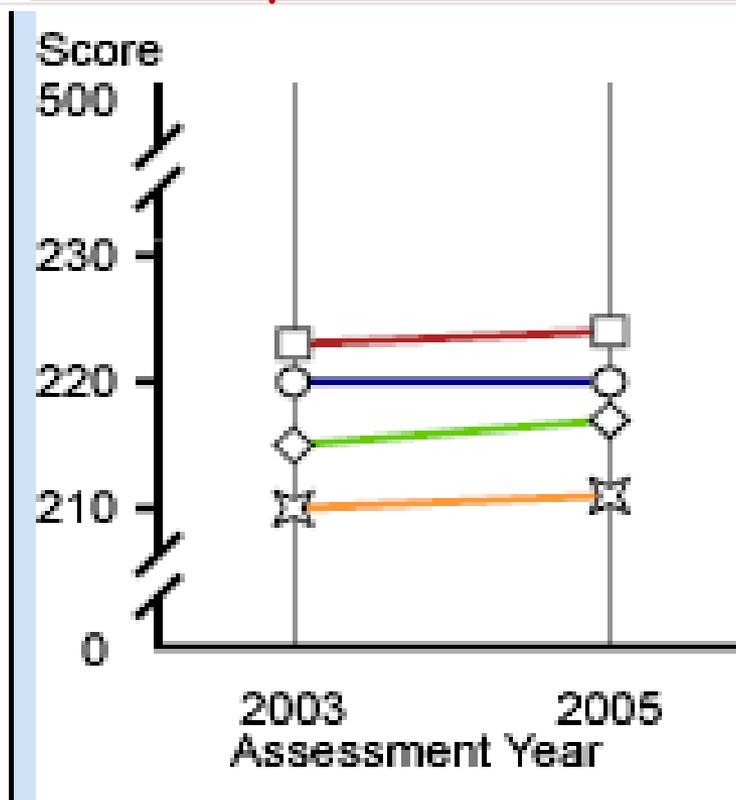


# NJ Is Like States in Northeast



# How Do the Nation's Census Regions Compare? Reading, Grade 4

## NE Compared to Other Regions



## NAEP 2003 & 2005

	MW	NE	S	W
Midwest (MW)		<	>	>
Northeast (NE)	>		>	>
South (S)	<	<		>
West (W)	<	<	<	



# Pictures at An Exposition

## Overall Results

### Grades 4 & 8

# Pop Quiz #3:

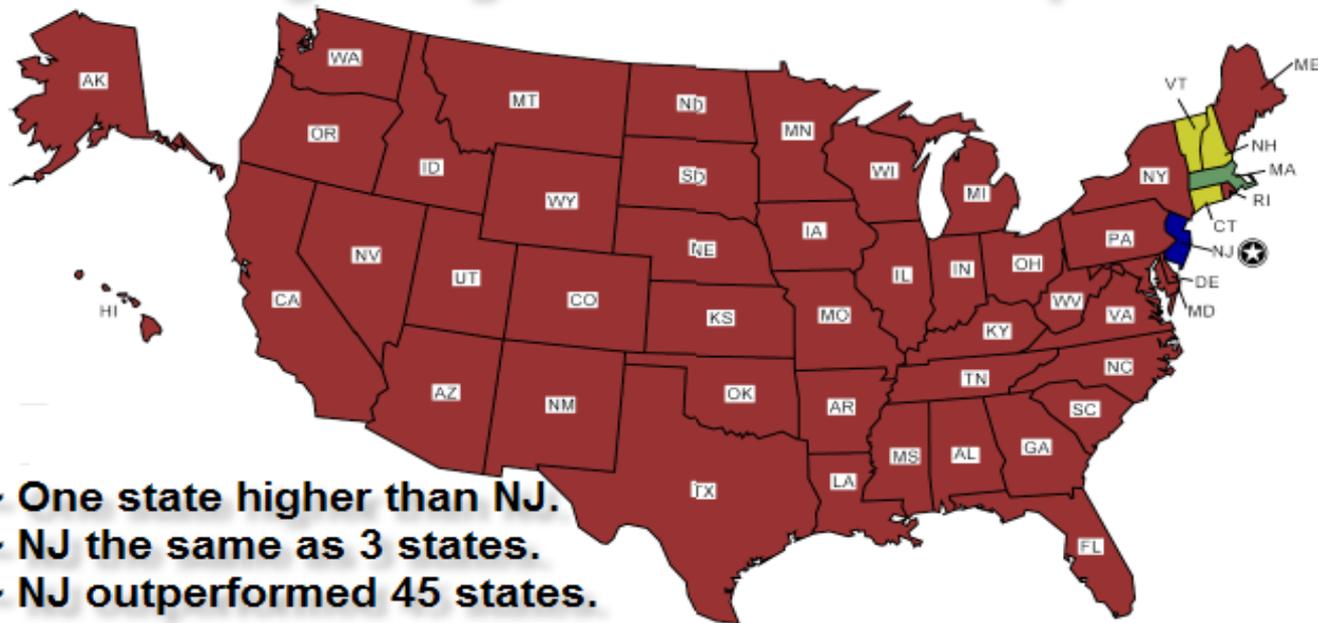
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What state consistently scores highest on NAEP?

# Grade 4 Reading, 2007 (Scale Scores)

## Using Average Scale Scores to Compare States



-  Focal state/jurisdiction (New Jersey)
-  Higher average scale score than New Jersey (1 jurisdiction)
-  Not significantly different from New Jersey (4 jurisdictions)
-  Lower average scale score than New Jersey (nation and 46 jurisdictions)

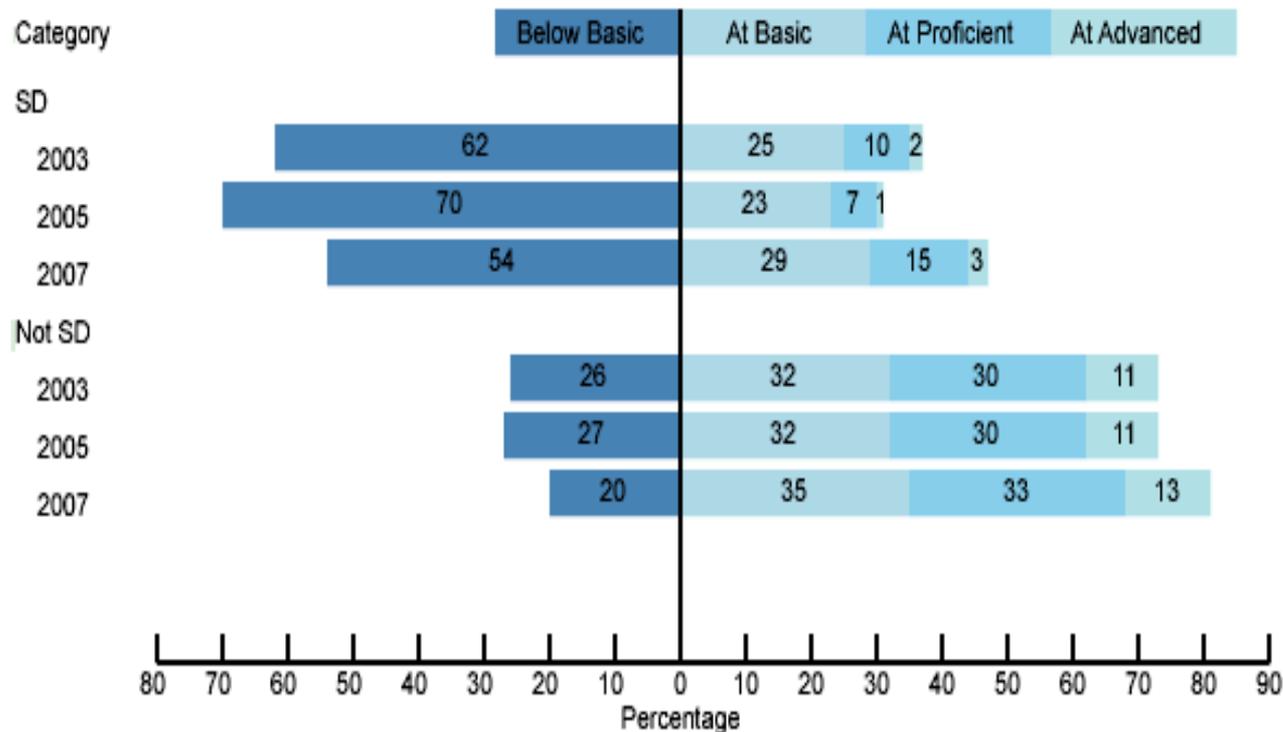


We Have  
Reason  
To  
Cheer!!

# Reading 2007 Up for Key Subgroups, Grade 4 (Scale Scores)

GRADE 4 READING Average Scale Score	New Jersey		
	2007	2005	Change
Overall	231	223	↑
Males	228	221	↑
Females	234	226	↑
White	238	232	↑
Black	212	199	↑
Hispanic	214	206	↑
Eligible for Free-Reduced Lunch	210	203	↑
Not Eligible for Free-Reduced Lunch	238	232	↑
Students with Disabilities	202	188	↑
Students without Disabilities	233	228	↑
English language learners	188	N/A	
Not English language learners	232	224	↑

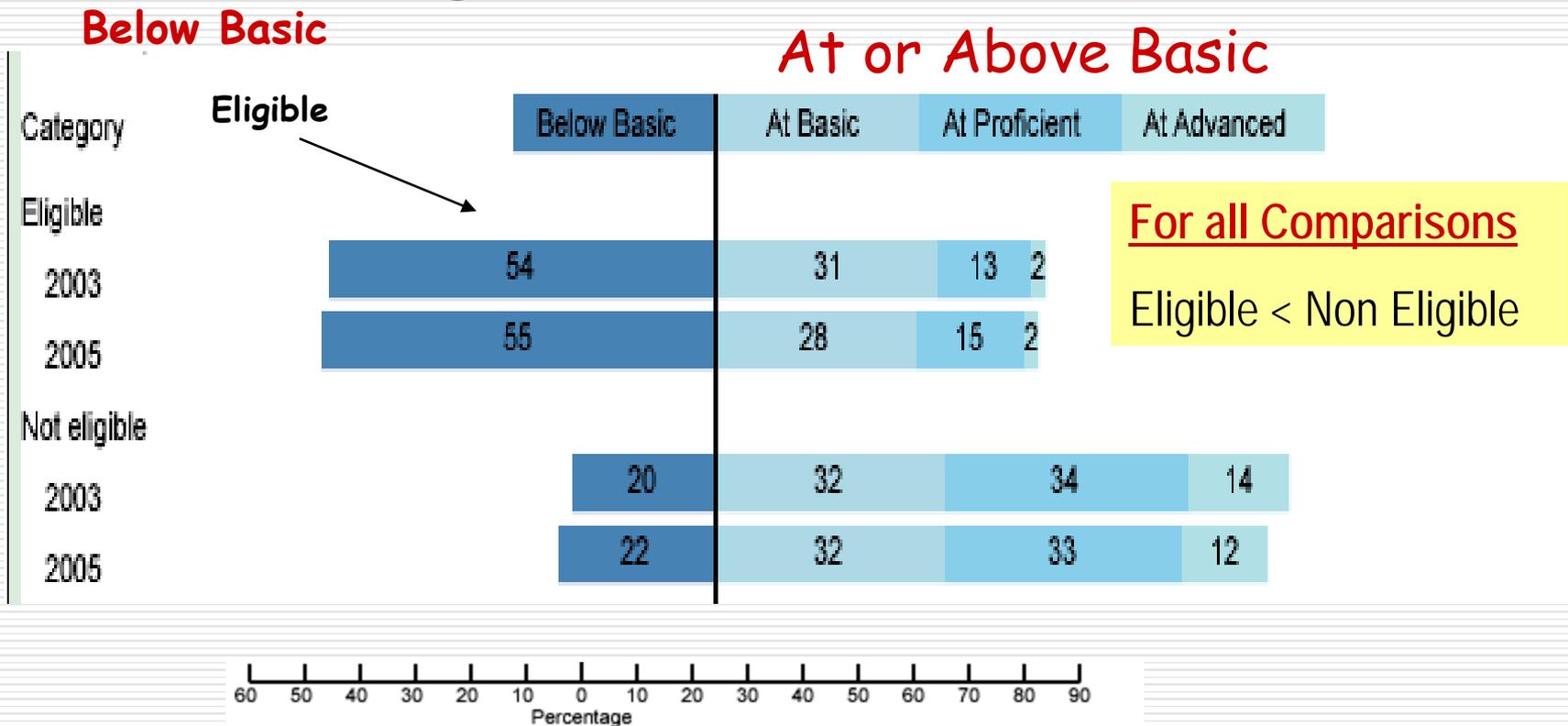
# SD: Reduction in "Below Basic," Reading 2007, Grade 4



New Jersey:  
Significantly greater percentage of SD in the "Basic" and "Proficient" levels in 2007 as compared with 2005.

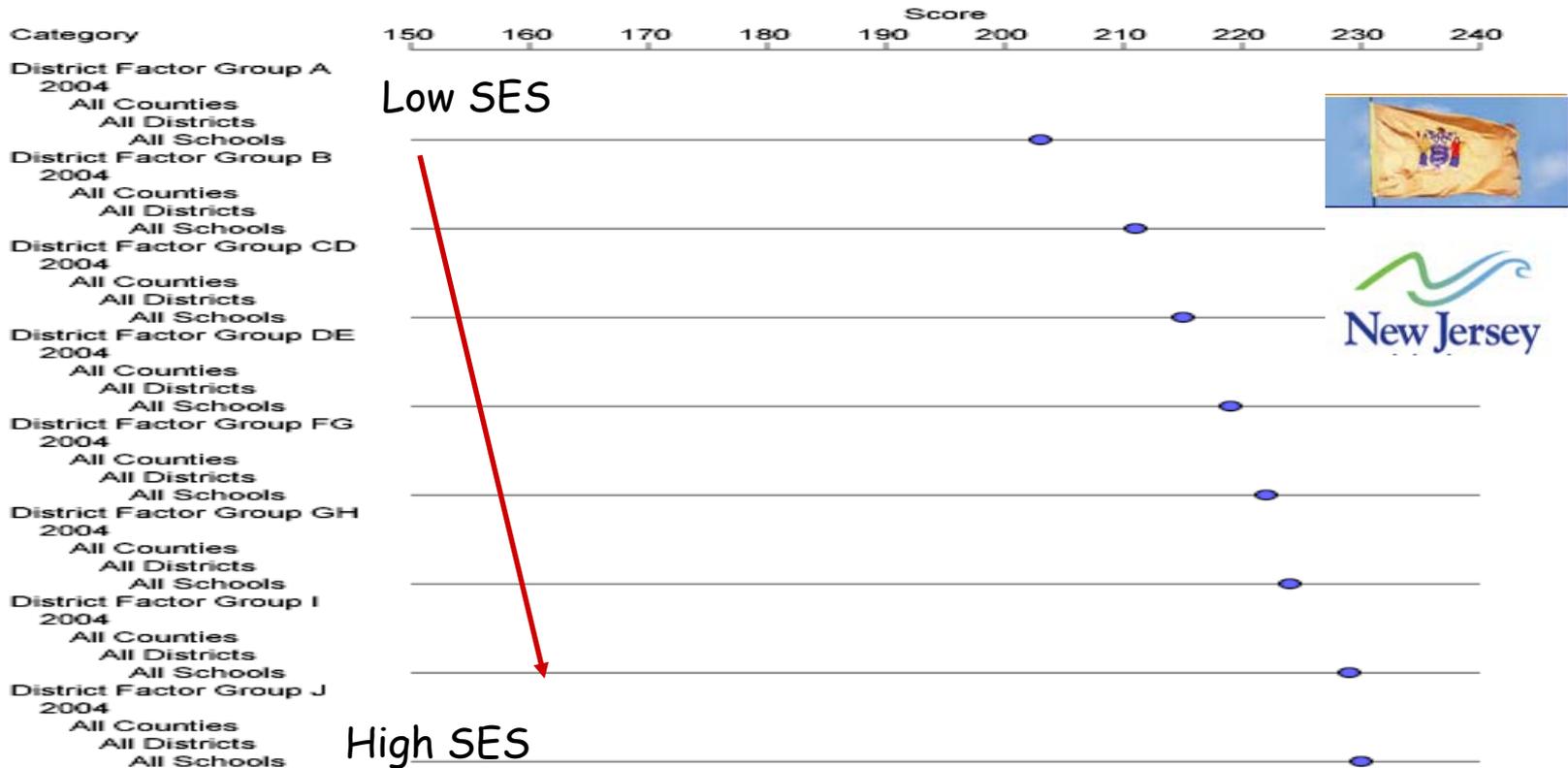
# Low-Income Gap in NJ NAEP, At/Above Basic, Grade 4 (2003 and 2005)

## NJ Eligible for Free or Reduced Lunch



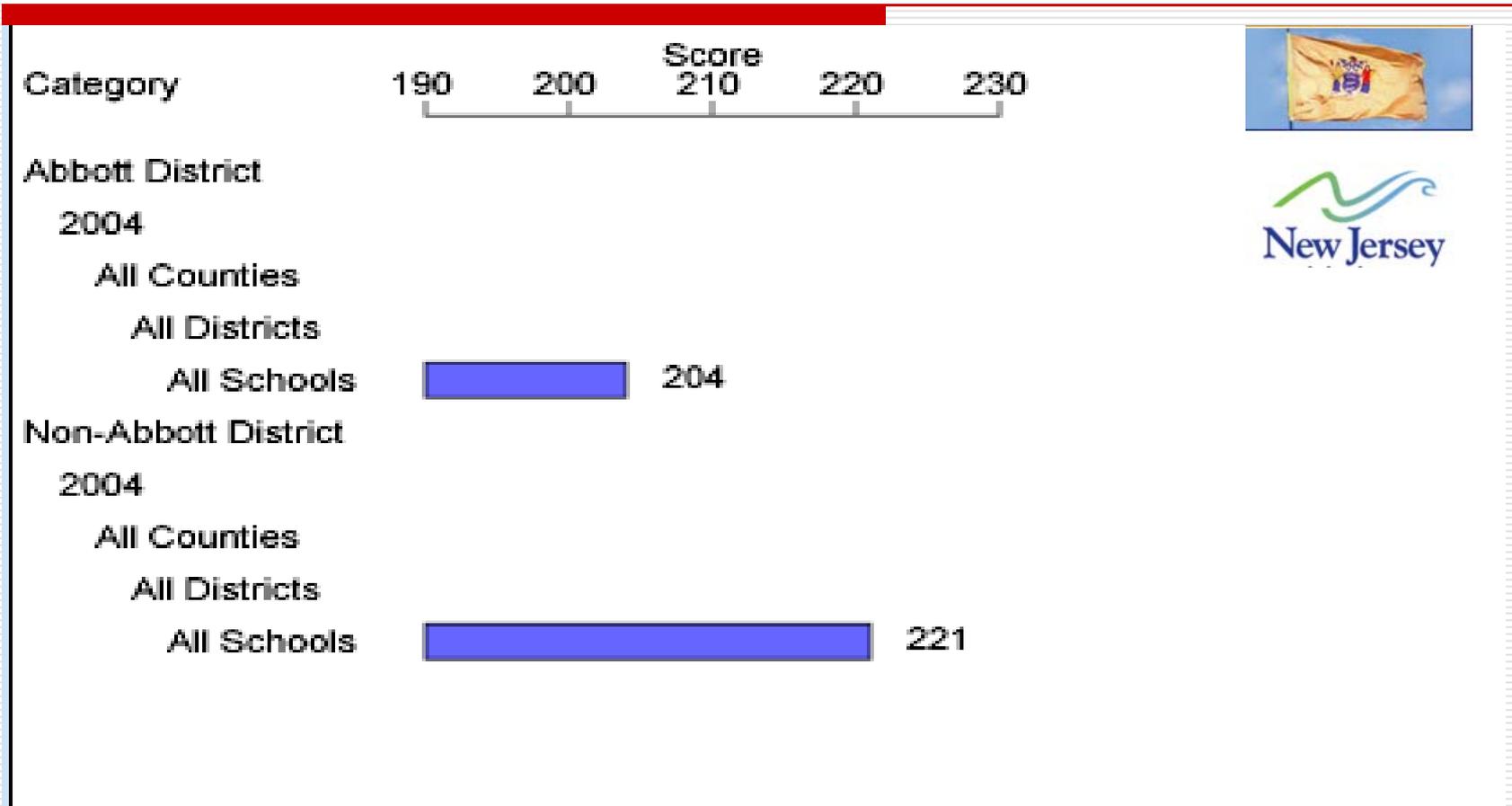
# NJASK 4 & the District Factor Groups

NJASK Grade 4 LA 2004  
Scale Score  
District Factor Group

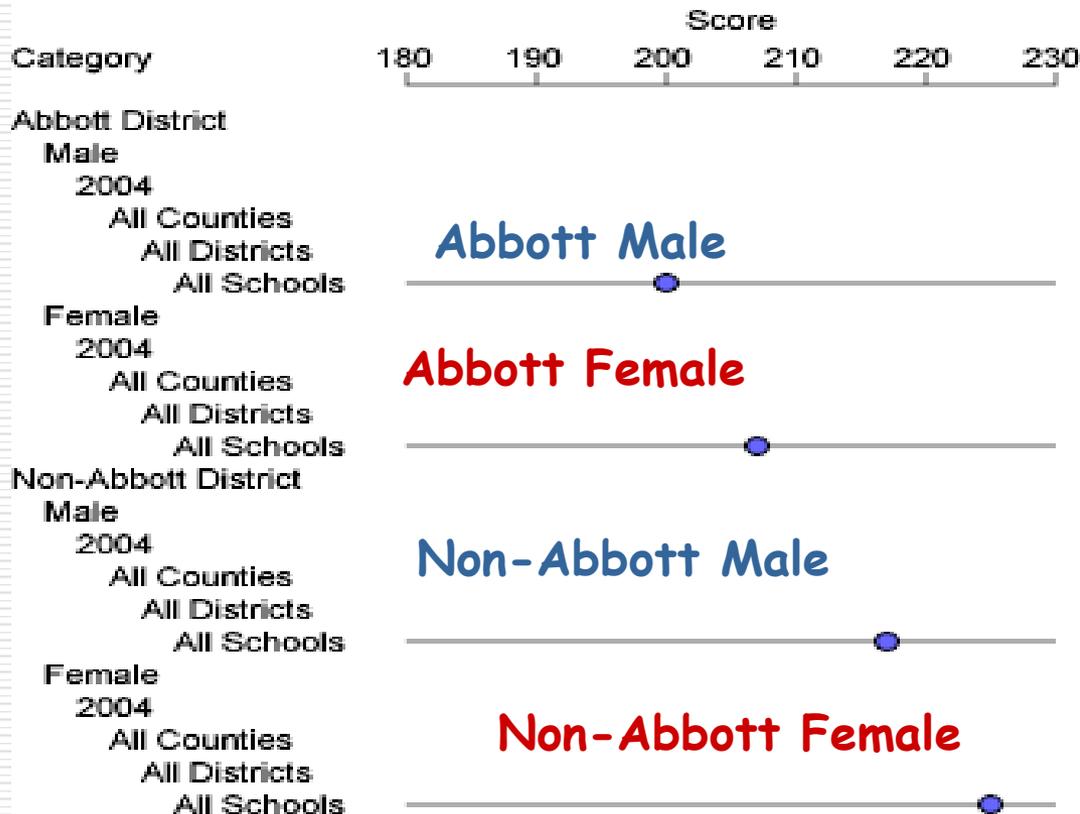


SOURCE: N.J Department of Education, NJASK, 2004 LA Assessments

# Low-Income's Impact on NJASK 4 Abbott/Non-Abbott Districts (2004)



# Gender Gap: NJASK 4 - Abbott/Non-Abbott (2004)



SOURCE: N.J. Department of Education, NJASK, 2003 and 2004 LA Assessments

# Grade 4 Reading Gaps, 2007 (Scale Scores)

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- The White/Black gap narrowed by 7 scale score points: (26 pts in 2007 from 33 pts in 2005)
- The White/Hispanic gap narrowed by 2 scale score points: (24 pts in 2007 from 26 pts in 2005)
- The male/female achievement gap continued unchanged (6 scale score points in 2007 from 5 scale score points in 2005)

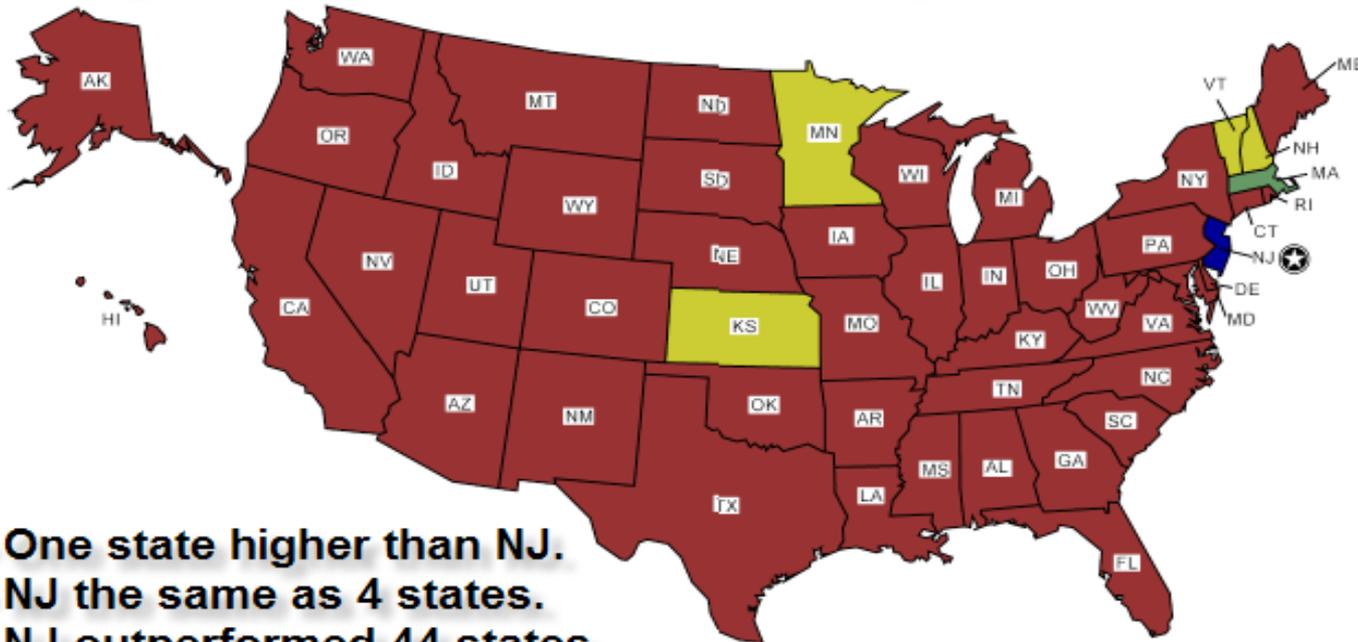
# These 2007 Reading Gains Did Not Happen by Chance

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- High Quality Preschool Education
- Early Literacy Task Force begun in 2002
- Reading Coaches and Professional Development for Teachers, K-3, through the
  - Abbott Intensive Early Literacy Program
  - Reading First Grant, and
  - Governor's Literacy Initiative
- Collaboration between the Offices of Special Education and Literacy
- New Jersey's Standards and Assessments

# Grade 4 Mathematics, 2007 (Scale Scores)

## Using Average Scale Scores to Compare States



- Focal state/jurisdiction (New Jersey)
- Higher average scale score than New Jersey (1 jurisdiction)
- Not significantly different from New Jersey (4 jurisdictions)
- Lower average scale score than New Jersey (nation and 46 jurisdictions)

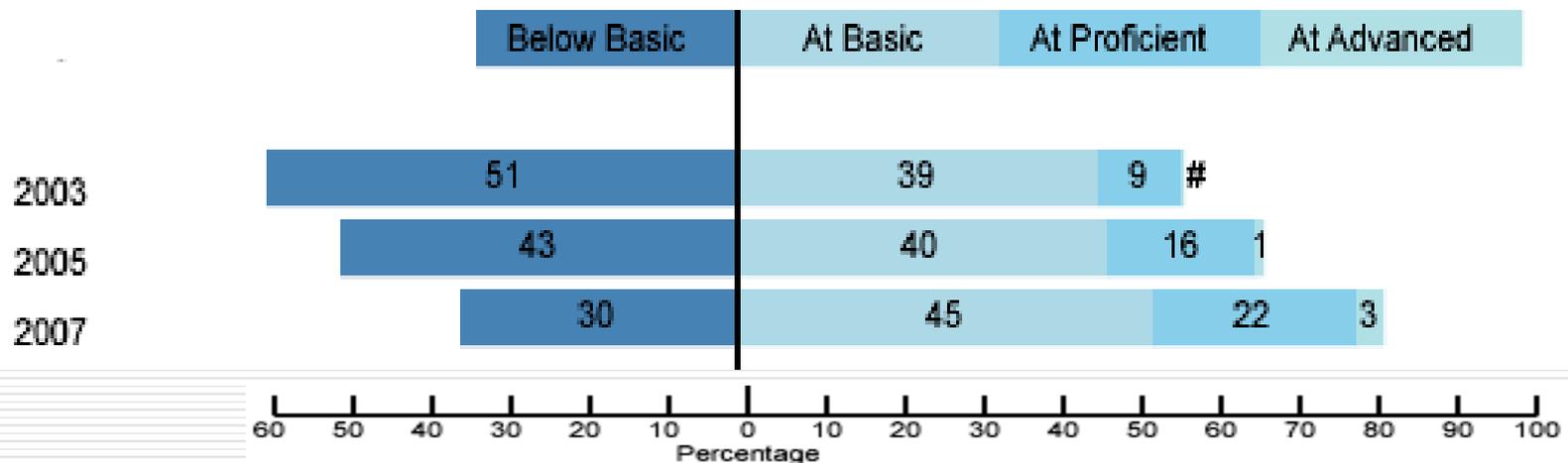
# Math Up for Most Subgroups, 2007

<b>GRADE 4 MATHEMATICS</b>		<b>New Jersey</b>		
<b>Average Scale Score</b>	<b>2007</b>	<b>2005</b>	<b>Change</b>	
Overall	249	244	↑	
Males	250	246	↑	
Females	247	242	↑	
White	255	251	↑	
Black	232	224	↑	
Hispanic	234	230	↔	
Eligible for Free-Reduced Lunch	233	227	↔	
Not Eligible for Free-Reduced Lunch	255	252	↔	
Students with Disabilities	229	218	↑	
Students without Disabilities	251	248	↑	
English Language Learner	218	222	↔	
Not English Language Learner	250	245	↑	

# SD: Reduction in "Below Basic," 2007, Mathematics, Grade 4

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## New Jersey Students with Disabilities, Math, Grade 4



In 2007, 70% of New Jersey SD students were at or above *Basic* (i.e. defined as "grade-level" performance for NAEP), compared with 49% of the SD students in 2005

# Grade 4 Mathematics Gaps, 2007

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- The White/Black gap narrowed by **15** scale score points: (23 scale score points in 2007 from 38 scale score points in 1992)
  - The White/Hispanic gap narrowed by **10** scale score points: (21 scale score points in 2007 from 32 scale score points in 1992)
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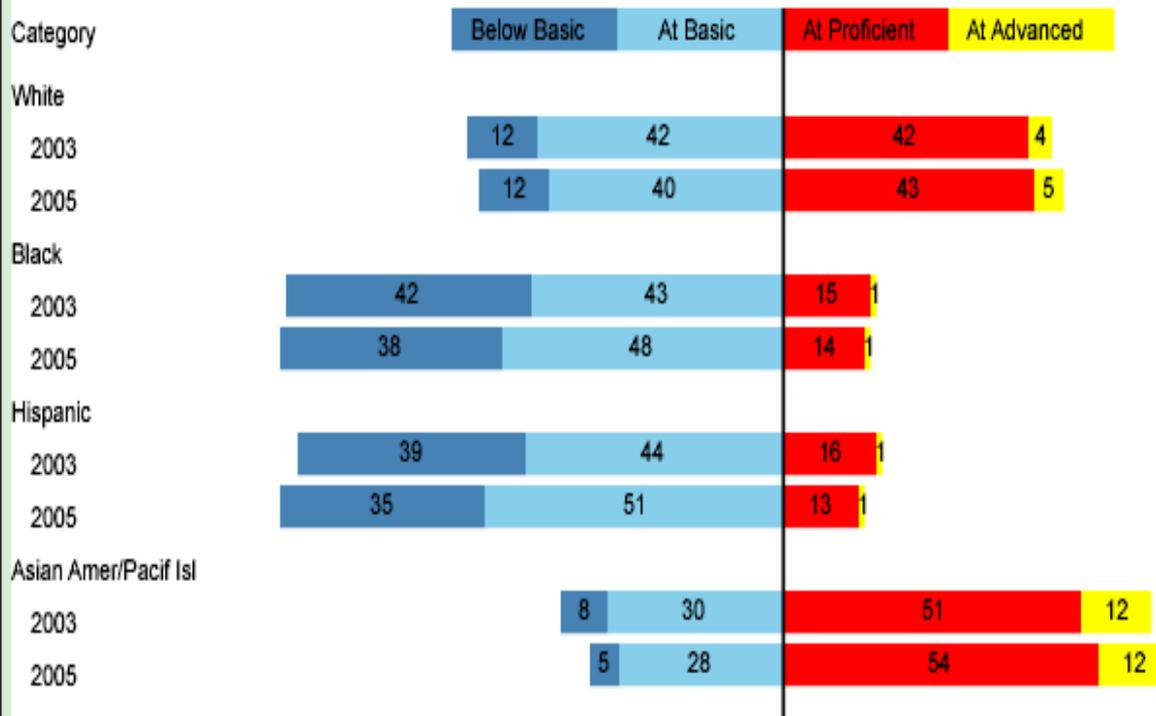
# Grade 8 Reading, 2007

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- New Jersey's reading results were flat since 2003 as were the results from the nation's public schools
- There were no changes in the New Jersey racial/ethnic gaps since 2003

# Race Gap: NAEP Achievement Levels Grade 8 (2003 and 2005)

Percentages of students at each achievement level for reading, grade 8  
 Race/ethnicity used in NAEP reports after 2001 [SDRACE]  
 New Jersey, 2003 and 2005



NAEP 2005 --Significance				
Percent At or Above Proficient				
	W	B	H	A
White (48%)		>	>	<
Black (15%)	<		=	<
Hispanic (14%)	<	=		<
Asian (66%)	>	>	>	>

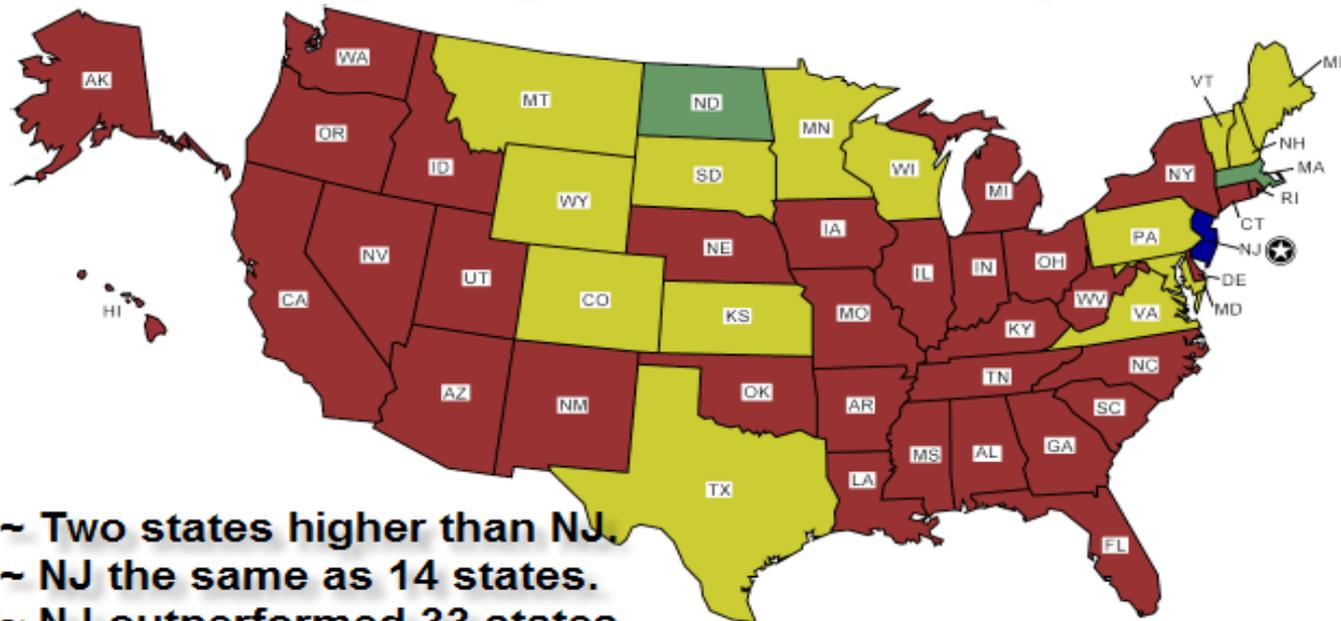
# Gender Gap: NJ, US, NE, Grade 8

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<b>Scale Scores, Grade 8 Reading, 2005</b>				
	Females	Males	Scale Score Difference	Male/Female Gap
<b>New Jersey</b>	273	266	<b>-8</b>	<b>Significant</b>
<b>National Public</b>	266	255	<b>-11</b>	<b>Significant</b>
<b>Northeast Census Region</b>	272	263	<b>-9</b>	<b>Significant</b>

# Grade 8 Mathematics, 2007 (Scale Scores)

Using Average Scale Scores to Compare States



- ~ Two states higher than NJ.
- ~ NJ the same as 14 states.
- ~ NJ outperformed 33 states.

- Focal state/jurisdiction (New Jersey)
- Higher average scale score than New Jersey (2 jurisdictions)
- Not significantly different from New Jersey (14 jurisdictions)
- Lower average scale score than New Jersey (nation and 35 jurisdictions)

# Grade 8 Mathematics, 2007

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- New Jersey's average scale scores were higher in 2007 (289) as compared with all previous tests
- "Female" was the only demographic group that scores higher in 2007 than in 2005
- The White/Hispanic gap *narrowed* by 10 scale score points since 1990: (27 scale score points in 2007 from 37 scale score points in 1990)

# NAEP 2007 Summary

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- New Jersey 4<sup>th</sup> grade students made significant progress especially in reading and also in mathematics since 2005
- New Jersey's 8<sup>th</sup> grade students improved in mathematics from 2005 to 2007, but were unchanged in reading

# CONTACT INFORMATION

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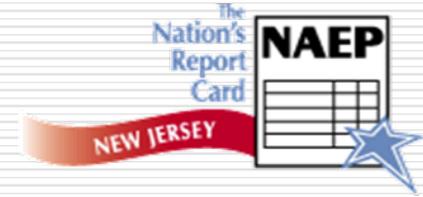


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# NAEP on the Web

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NJ NAEP:

<http://www.nj.gov/njded/assessment/naep>

National Center for Education Statistics:

<http://nationsreportcard.gov>



Do you Have  
Any Questions?