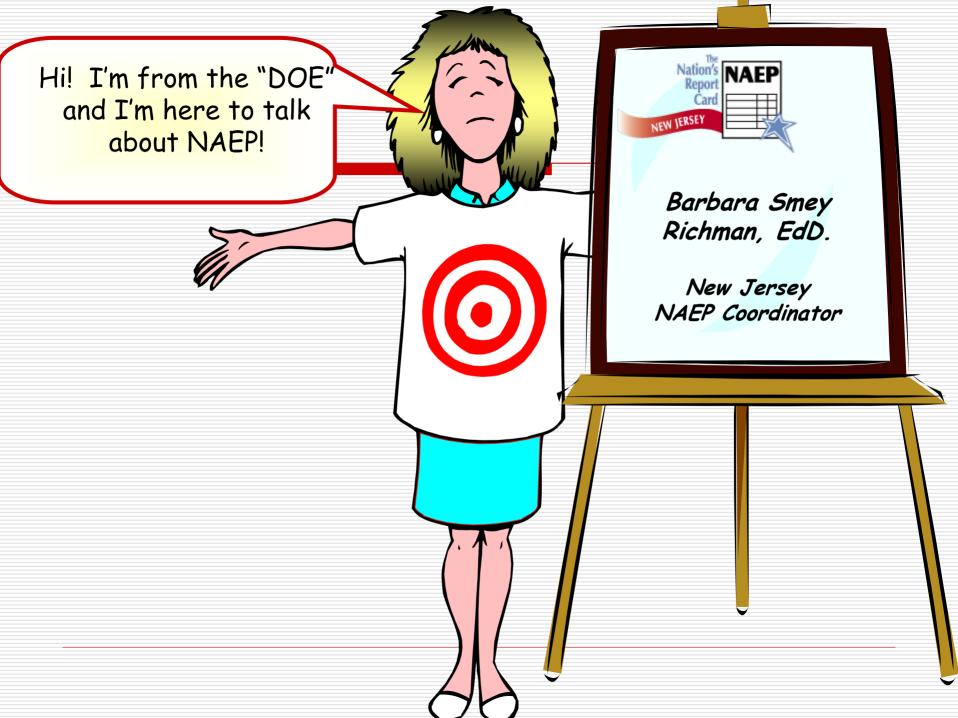
#### NAEP'S READING FRAMEWORK, DATA, TEST QUESTIONS, AND MUCH MORE

#### National Assessment of Educational Progress (NAEP)

NJDOE Literacy Conference and Standards Institute August 10, 2005

Barbara Smey-Richman, EdD.

New Jersey NAEP Coordinator



# Agenda Highlights



- What is NAEP?
- > NAEP/NJ Assessments
- NAEP Reading/Writing Frameworks
- > NAEP Data and Results
- > NAEP Questions Tool
- Questions and Answers



### What is NAEP?

NAEP is a congressionally mandated <u>survey</u> designed to evaluate student achievement in various subject areas

NAEP began tracking national student performance in 1971 and individual state performance in 1992

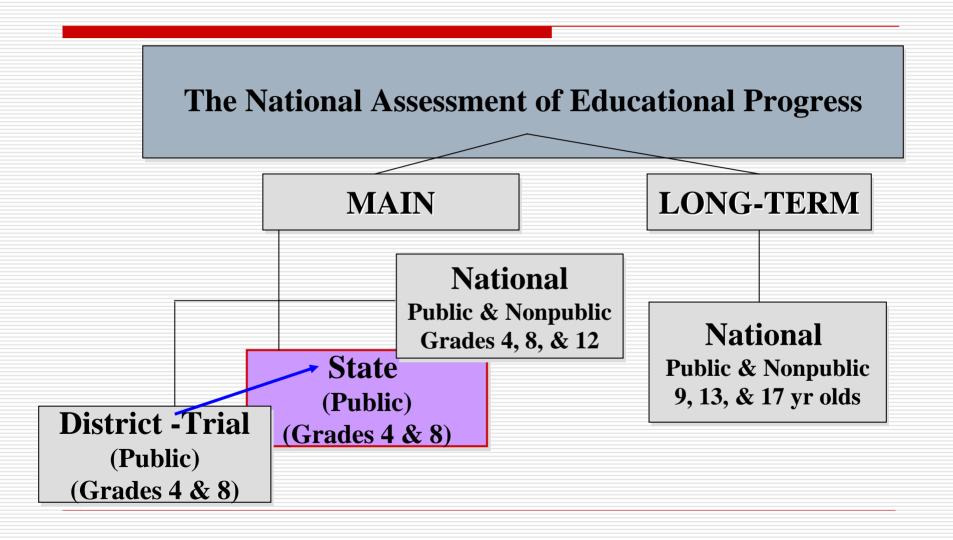


### What is NAEP?

NAEP's goal is to produce national and state-level results for student populations

NAEP is **not** a program to test individual students or schools. It does not report student, school or district results

# NAEP Has Many Components





### What is State NAEP?

Is a biennial assessment that provides estimates of student performance for the 50 states, Washington, DC, and Puerto Rico

Starting in 2003, NCLB requires school participation at grades 4 and 8 if the district receives Title 1 funds

### NAEP 2005: Recent Assessment

Reading, Math & Science tests in grades 4, 8 and 12.

National Assessment of Educational Progress

#### THE NATION'S REPORT CARD



# Thank You to NAEP 2005 Participants!

NAEP staff is grateful to the thousands of schools selected from across the nation that participated in NAEP 2005.

Now that all the data are in, <u>preparations for</u> reporting results this fall are underway.

#### **NJ Participation**

Over a six-week period, students in more than 300 NJ schools participated in NAEP 2005.

## FAQ: How are Students Selected?

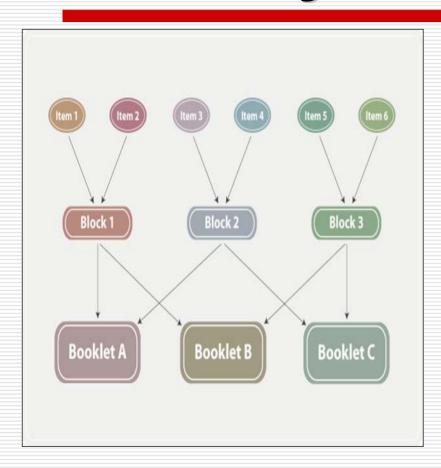
#### Multi-Stage Stratified Random Sampling

- > Selection of schools
- > Selection of students within schools

#### Sample Size for State NAEP years

- Approximately equal sample sizes for each state
- About 100 schools for each grade and subject
- About 3,000 assessed students for each grade and subject (i.e., about 9,000 NJ students in 2005)

### Booklet Design: Matrix Sampling



- Ea. student gets a small part of the test
- Booklets differ in difficulty; are not comparable
- Booklets are too short to yield a student result

The NAEP tests have <u>multiple choice</u> and <u>open-ended questions</u> and ask <u>background</u> <u>questions</u> to help put student achievement in context!!







#### NAEP TESTS 2003-2012

Year	National	State
2003	Reading, Mathematics	Reading, Mathematics
2004	Foreign Language, Long-term Trend (Cancelled)	
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	





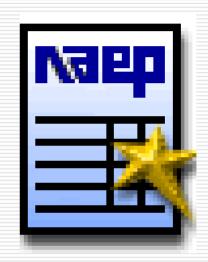
NAEP and New Jersey Assessments

## Comparing NAEP & New Jersey



#### Language Arts Literacy

- Combined Tests
- > Combined Scores only



#### Reading and Writing

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

## NAEP & New Jersey Differences

# Test differences yield different results:

- Test length (<u>NAEP</u>: 50 mins. per student; 7 hours complete test)
- Content and skills assessed (NAEP: wider domain of knowledge tested; a longer test and thus more items than a state test)
- Alignment with NJ's instruction & content coverage (NAEP: national view, not aligned with state standards, and does not respond to curriculum changes)

## NAEP & New Jersey Differences

#### Test differences include (continued):

- ➤ Item difficulty and formats (NAEP: different content specifications & proportion of multiple choice items; shorter reading passages)
- Methods for setting achievement levels (NAEP's process of setting cut points is more complex than that of most states)
- > Student motivation (NAEP: does not have any consequences associated with student results)

## Cautionary Note

## Consequently:

- Proficient performance is defined uniquely for each large scale assessment
- The definitions of "proficient" set by states and by NAEP have no observable agreement\*

## Cautionary Note

# Difficult to compare results across tests and grade levels

- Because each assessment (including the grade-level tests -- grades 4 and 8) is created as a separate test, not as a group
- Without understanding this, the general public may reach invalid conclusions when interpreting data from large-scale assessments

## Test Primer: Equating

### Horizontal Equating

Test developers use anchor items to allow comparisons of results for

- > one subject area and
- > at one grade level across years

Correct: To examine trends for 4<sup>th</sup> graders across years (NAEP 1998, 2003, and NAEP 2005)

Incorrect: To compare NAEP grade 4 and 8 reading scores with each other

## Test Primer: Equating

### Vertical Equating

Test developers use anchor items to allow comparisons of results for

- > one subject area and
- > at two (or more) grade levels across years

NAEP and NJ tests are <u>not</u> vertically equated

# What Is The Relationship Between NAEP & State Tests?

#### **QUESTION:**

Can NAEP
be used
to confirm
state
tests? \*

#### ANSWER:

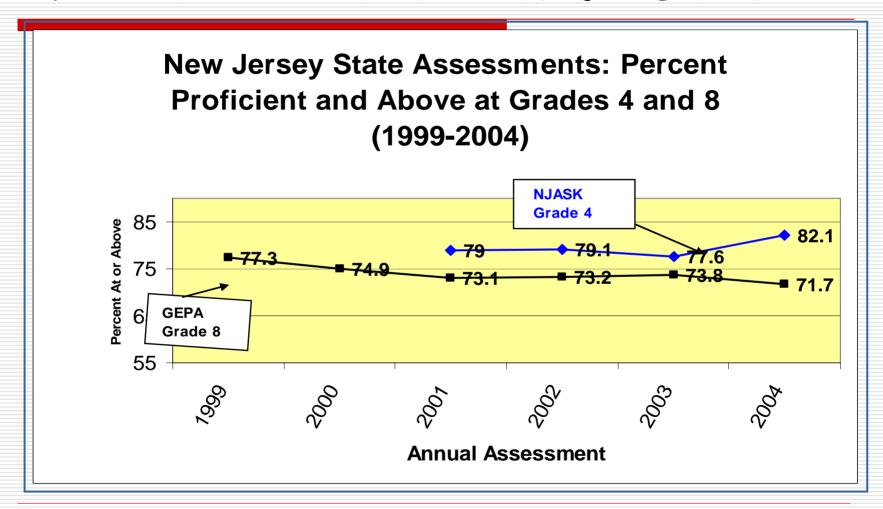
No, because NAEP and state tests differ greatly

NAEP is an <u>independent</u> measure and not aligned with state tests

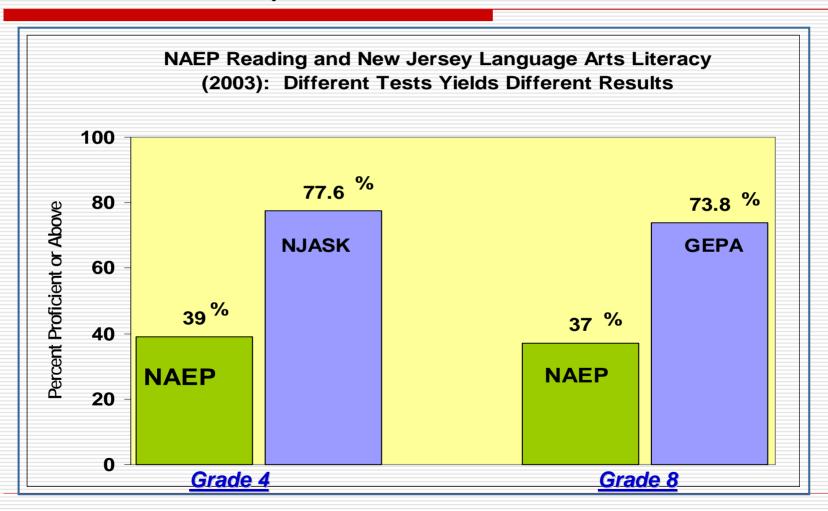
NAEP should be used to confirm "trends found in state data"

<sup>\*</sup> Sharif Shakrani, National Assessment Governing Board (NAGB), Large Scale Assessment Conference (June 2005)

#### What are the Trends in NJ's Data?



## New Jersey NAEP & State Tests



# What Is The Relationship Between NAEP & State Tests?

#### **QUESTION**

Does <u>NAEP</u>'s reading assessment measure the same "common core of comprehension" as NJ's LAL tests?

#### **ANSWER**

#### Maybe!!

Special analyses show that in 2003, NJ LAL and NAEP reading scores for schools in the NAEP sample were highly correlated

\* Unpublished document sponsored by the National Center for Educational Statistics (NCES), 2005

# What Is The Relationship Between NAEP & State Tests?

- NAEP is the only common yardstick for measuring student performance across states
- NAEP can be used as a "serious discussion tool" for state accountability\*\*
- NAEP may be used as a measure of academic growth and the closing of achievement gaps. States attaining achievement gains may qualify for additional flexibility with NCLB and AYP (Education Secretary Margaret Spelling)+

<sup>\*\*</sup> No Child Left Behind legislation

<sup>+</sup> For example, Spelling's speech, "New Path for No Child Left Behind," April 18, 2005



# NAEP Reading And Writing Frameworks

### NAEP Frameworks

#### NAEP <u>assessment frameworks</u> provide:

- 1. A theoretical basis for the test, and
- 2. Directions for item development, specifically
  - what kind of exercises should be included
  - how exercises should be designed, and
  - how student responses should be scored

### NAEP Frameworks

#### NAEP frameworks

- Do not include content standards (e.g., NJ CCCS) to guide instruction
- Result from a comprehensive <u>national</u> <u>process</u> and represent a <u>national view</u>
- Tend to be less sensitive to curricular reforms than state tests that are aligned to content standards

### NAEP Frameworks

Whatever you want to know about NAEP, start with the NAEP web sites:

NCES: [Can download copies of frameworks]

http://nces.ed.gov/nationsreportcard/

### The New Jersey NAEP:

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

## NAEP Reading Framework

# Framework's theoretical basis specifies

- Three <u>contexts</u> or purposes for reading
- Four <u>aspects</u> of reading that characterize the way that students respond to text

## NAEP's Context For Reading\*

CONTEXT:		
READING FOR	DESCRIPTION	TYPES OF TEXT
Literary Experience (Understanding)	Readers explore events, characters, themes, settings, plots, actions and the language of literary works by reading continuous narrative text	Novels, short stories, poems, plays, legends, biographies, myths, and folklore
Information (Retrieving Information)	Readers gain information to understand the world by reading continuous expository text	Magazines, newspapers, textbooks, essays and speeches
Perform a Task (Following Instructions)	Readers apply what they learn from forms of non-continuous text	Bus or train schedules, directions for games and repairs, classroom procedures, maps etc.

\*Source: 2003 Reading Framework, p. 2

# Proportion of NAEP Items By <u>Context</u> and Grade\*

GRADE	For Literary Experience	For Information	To Perform a Task
4	55%	45%	No Scale
8	40%	40%	20%
12	35%	45%	20%

\*Source: 2003 NAEP Reading Framework, p. 10.

## ASPECTS OF READING\*

ASPECT (Processes)	QUESTIONS INCLUDE:
Forming a General Understanding (Literal understanding though consideration of the text in its entirety)	Write a paragraph telling what the story is about. Which of the following is the best statement of the theme?
<u>Developing Interpretation</u> (Linking specifics within the text to each other)	What event marked a change in the plot? What caused the event? Why did the character do?
Making Reader/Text Connections (a (Applying something in the text to real world situations)	Colonists lived in different ways than we do today. Explain two differences. Would you have liked living in colonial times.
Examining Content & Structure (Evaluating the effect of the content, organization, and form)  * Source: 2003 NAEP Reading Framework, pp. 11-14.	Compare this article to that one. How useful would this be for? Why? Does the author use (irony, humor, personification) effectively? Explain. What other information would you need to find out about?

# Proportion of Time Students Spend on NAEP Items By Aspects of Reading and Grade\*

GRADE	Forming a General Understanding/ Developing Interpretations	Marking Reader/Text Connections	Examining Content and Structure
4	60%	15%	25%
8 55%		15%	30%
12	50%	15%	35%

<sup>\*</sup>Source: 2003 NAEP Reading Framework, p. 14.

# Sample NAEP Reading Questions By Context and Aspects

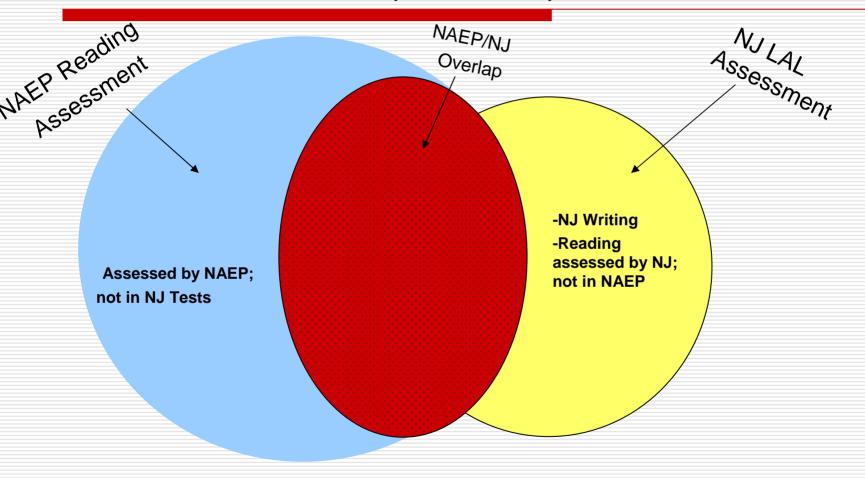
<u>Context</u> Reading for:	Aspect: Forming a General Understanding	Aspect:  Developing Interpretation	Aspect: Making Reader/Text Connection	Aspect: Examining Content and Structure
Literary Experience	What is the story/plot about?	How did this character change?	What other character had a problem similar to Bill's?	What is the mood?
Information	What is the author's viewpoint?	What caused this change?	What historical event is similar to this one?	Is this author biased? Explain.
To Perform a Task	What time can you get a nonstop flight to Boston?	What must you do before step 3?	Describe when you would omit step 5?	Is the information in the brochure easy to use?

#### New Jersey's Matrix\* of Reading Clusters and Skills

LAL Clusters	Reading Skills Descriptions
Working with Text (NJASK) Interpreting Text (GEPA & HSPA) (Formulating meaning)  Analyzing/ Critiquing Text	Recognition of central idea or theme Recognition of details that support the main idea  Extrapolation of information following directions Paraphrase, retell, or interpret meanings of words, phrases, or sentences from the text Recognition of organizational structure of text Recognition of a purpose for reading  Questioning Make tentative predictions of meaning (text) Forming of opinions Make judgments and draw conclusions from the text Interpretation of conventions of print and literary forms; use of figurative language/literacy devices
Extending Understanding of Text	Some extensions of understanding will include actions such as:  Problem solving, decision making, and creation of original work

<sup>\*</sup> Directory of Test Specifications, Language Arts Literacy (1998), pp. 6-7.

#### NAEP/NJ Overlap: Conceptual Model



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.

#### NAEP WRITING FRAMEWORK

NAEP Purposes for Writing:			
<u>Narrative</u> <u>Writing</u> :	Telling a story; fosters imagination and creativity		
Informative Writing: (Not in NJ tests, but may be incorporated in persuasive writing)	Informing the reader; may involve reporting on events or analyzing concepts		
Persuasive Writing:	Persuading the reader to take action or bring about change		

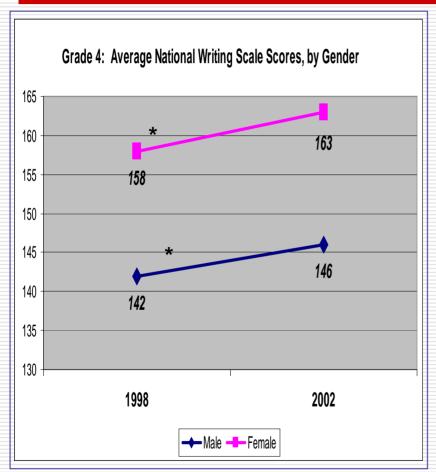
#### Writing Assessment Schedule:

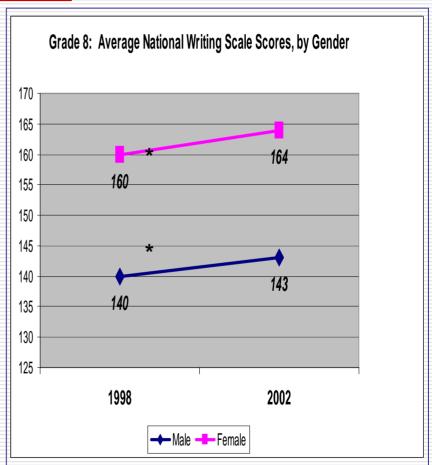
1998	National and state  NJ did not participate
2002	National and state  NJ did not participate
2006	Pilot assessment, grades 8 and 12
2007	State and national
2011	State and national

#### Does NAEP Detect a Gender Gap in Writing?

Grade 4: 1998 (16 pts difference) 2002 (17 pts)

Grade 8: 1998 (20 pts difference) 2002 (21 pts)





Source: The Nation's Report Card Writing 2002, p. 41.

<sup>\*</sup> Significantly different from 2002.



# NAEP DATA AND RESULTS

#### Ways of Reporting Results

Scale Scores\*

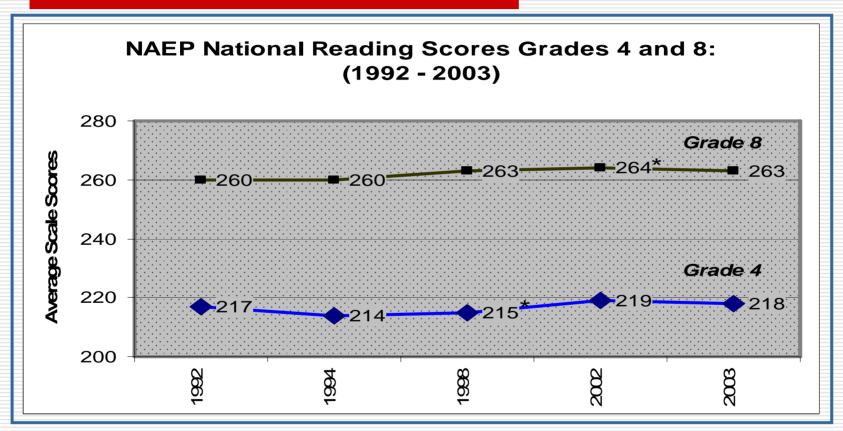
Achievement Levels

Data Disaggregated by

- Sub groups (<u>e.g.</u>, race, gender, school lunch, SD, LEP)
- > State and regional comparisons
- Background factors (<u>i.e.</u>, school, teacher, and student factors)

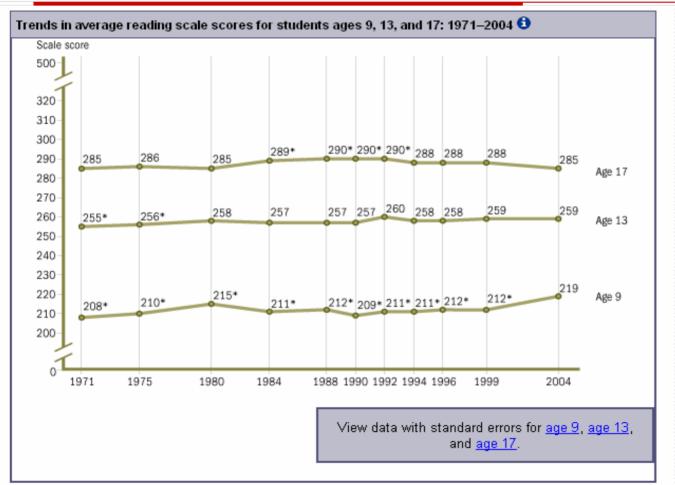
<sup>\*</sup> NAEP average reading scale scores are reported on a 0-500 scale; NJ average LAL scale scores are reported on a 100-300 scale.

# Are the Nation's Reading Scores Improving? (Main NAEP)



<sup>\*</sup> Significant different from 2003

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



<sup>\*</sup> 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:

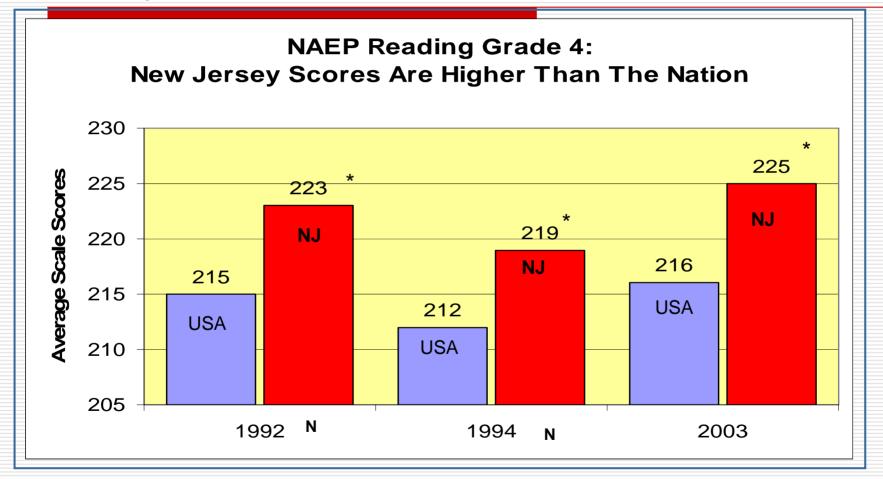
9-yr olds: The scale score is higher in 2004 than any previous test

13-yr olds: The scale score in 2004 is higher than in 1971, but no different from the 1990 test score

We Have Reason To

Cheer!!

#### How Do New Jersey 4th Graders Compare to the Nation on NAEP?



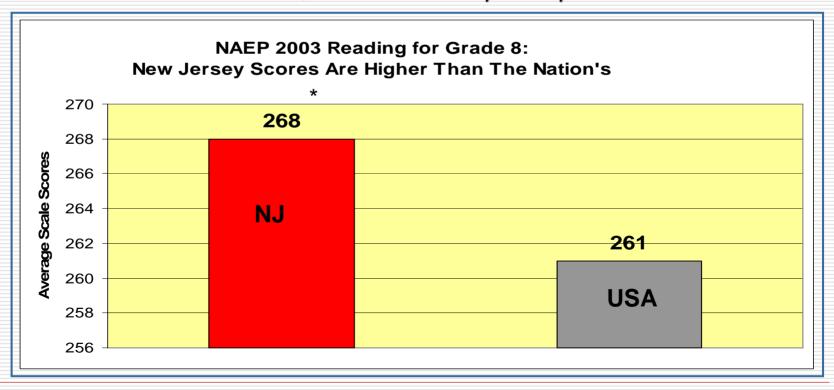
Note: Average reading scores are reported on a 0-500 scale.

Significantly different from the nation.

<sup>•</sup>N – accommodations not permitted..

## How Do NJ 8<sup>th</sup> Graders Compare to the Nation on NAEP?

No NAEP data are available for the N J eighth-grade students prior to the 2003 assessment, because of low participation rates.



Note: Average reading scores are reported on a 0-500 scale.

<sup>\*</sup> Significantly different from the nation.

#### NAEP DATA

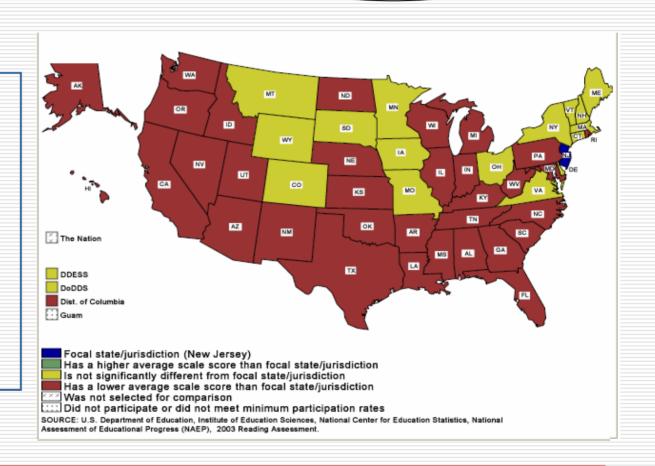
#### NJ scale scores were:

- ✓ Equal to 18 jurisdictions, and
- ✓ Higher than 34 jurisdictions.

<u>Note</u>: The scale scores for the Northeast and Midwest census groups were significantly higher than those of the West and South census groups.

#### NAEP 2003:

Comparison
of
4th-grade
Reading Scale
Scores

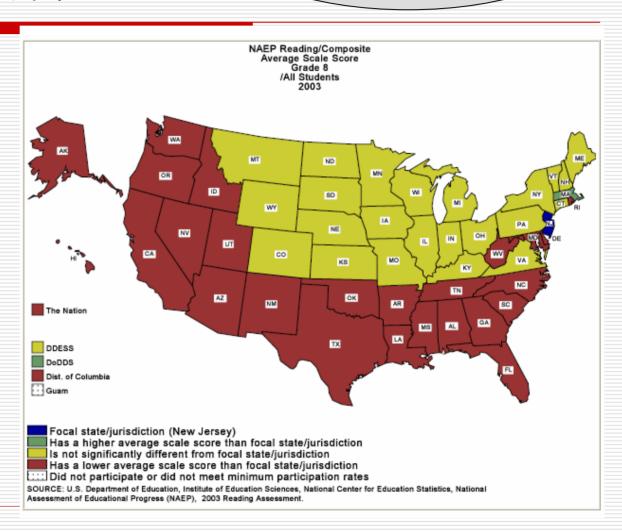


#### NAEP DATA

#### NJ scale scores were:

- ✓ Lower than 1 jurisdiction
- ✓ Equal to 24 jurisdictions, and
- ✓ Higher than 26 jurisdictions

# NAEP 2003: Comparison of 8th-grade Reading Scale Scores



#### A Close-Up Look at Average Scale Scores

NAEP uses average scale scores (measure of central tendency) for comparisons and trends

But, what do scale scores tell us about students?

- ➤ Is NJ's 225 scale score for 4<sup>th</sup> grade reading good or bad?
- What did the NJ students need to do to get this score?

# Achievement Level is a Way to Give Scores Meaning

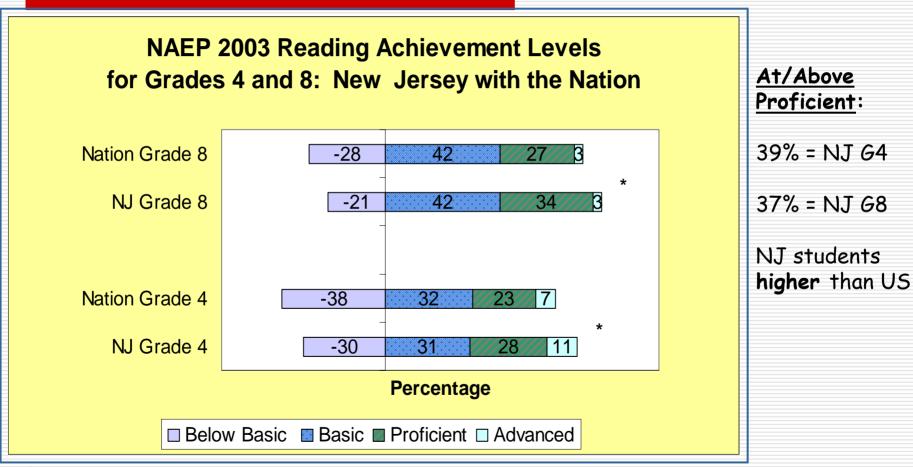
#### Achievement Levels

Reported in terms of percentages of students reaching levels of achievement

#### Level Descriptors

- Basic: Partial mastery of prerequisite knowledge and skills that are fundamental for proficient work
- Proficient: Solid academic performance -demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge, and analytical skills.
- > Advanced: Superior performance.

## What Percent of NJ Students Are At or Above Proficient?



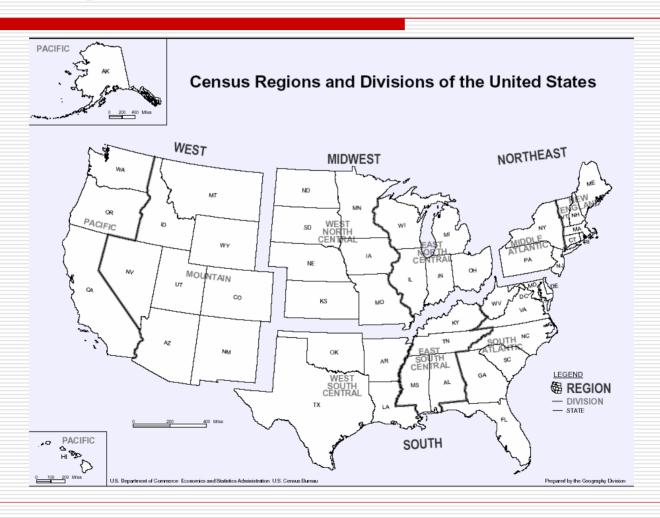
<sup>\*</sup> Significantly different from the nation.

NAEP Achievement levels correspond to the following points: Below, 207, Basic 208-237; Proficient, 238-267, and Advanced 268 or above **Note**: Average reading scores are reported on a 0-500 scale.

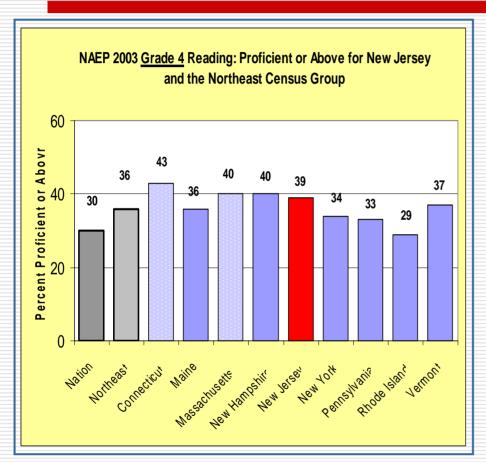
# Comparing Jurisdictions With Similar Demographics

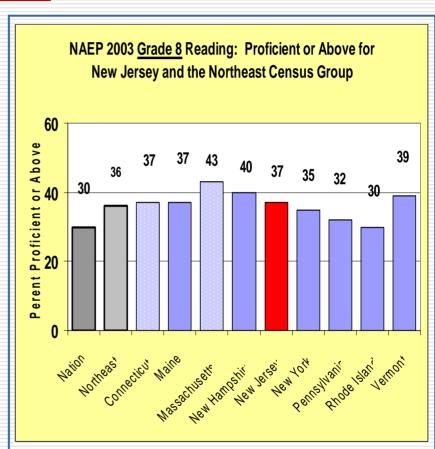


#### NJ Is Like States in Northeast



### How Does New Jersey Compare with the Northeast?





#### State Pubic School Facts 2003\*

		NJ	<u>CT</u>	<u>MA</u>	<u>Nation</u>
Student	White	58.6	69.0	75.1	58.7
	Black	17.8	13.6	8.8	17.0
	Hispanic	16.6	14.1	11.2	18.8
	Poverty (NSLP)	27.2	25.4	26.2	38.5
School	Teacher Salary	53,872	53,962	51,942	N/A
	Operating Expend.	12,568	11,057	10,460	7,995
Community	Median Family \$\$	59,774	58,438	54,359	46,128
	Adults w/ Bachelor's	29.8	31.4	33.2	24.4
					_

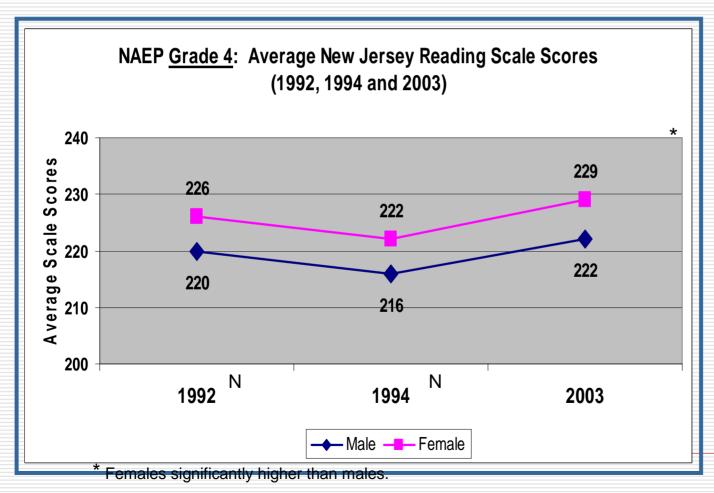
<sup>\*</sup>Source: Information from wwwSchoolmatters.com

#### Achievement Gaps

#### Subgroup Analyses:

- > Gender
- > Students with a Disability (SD)
- Race/ethnicity (R/E)
- > Limited English Proficient (LEP)
- National School Lunch Program (NSLP) [i.e., Economically Disadvantaged]
- School location [i.e., central city, urban fringe/large towns and rural)

#### Achievement Gaps -- Gender

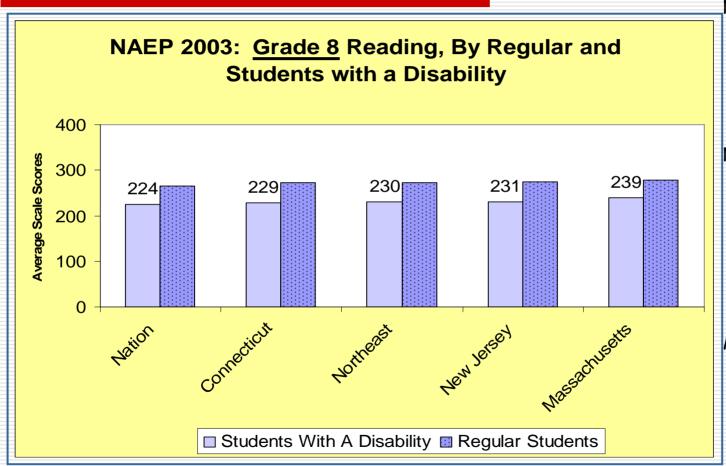


NJ boys scored lower than NJ girls (7 pts) in 2003

The gender
gap remains
stable (6 to 7
pts) for the
decade

N -- Accommodations not permitted in 1992 and 1994,

# Achievement Gaps -- Students with a Disability



NJ's SD scored
higher than
their
counterparts
in the Nation

NJ's SD scored
the same as
their
counterparts
in the
Northeast,
CT and MA

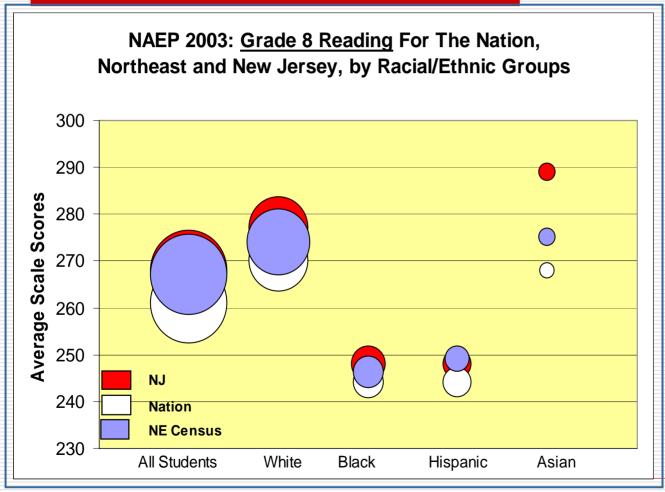
MA's SD scored
higher than
their
counterparts
in CT, the
Northeast
and the
Nation

#### Question:

Can NAEP Provide
Data About
Students In the
Abbott Districts?



#### Achievement Gaps -- Race/Ethnicity



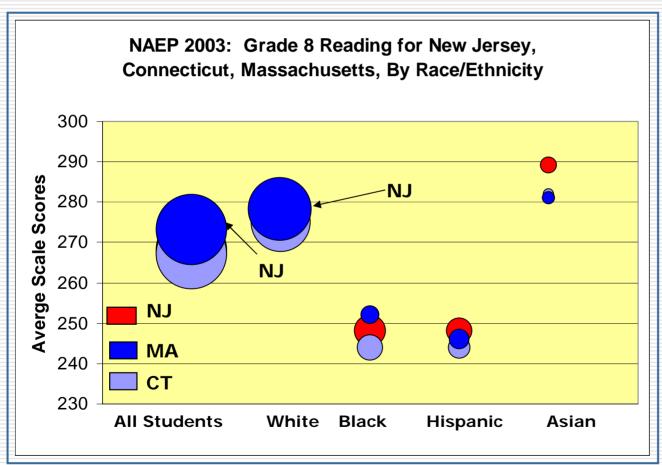
NJ <u>White</u> and <u>Asian</u> students scored **higher** than their peers in the Nation and NF

NJ <u>Black</u> and
<u>Hispanic</u>
students scored
the **same as**their peers in
Nation & NF

NE <u>White</u> and
<u>Hispanic</u>
students scored **higher** than
their peers in
the Nation

Source: NAEP 2003 Reading Assessment

#### Achievement Gaps -- Race/Ethnicity



For all states, <u>White</u> students scored **higher** than <u>Black</u> and <u>Hispanic</u> students

In NJ only, <u>Asian</u>
students scored
higher than White
students

There is no difference in how NJ racial groups scored as compared to their counterparts in the other states

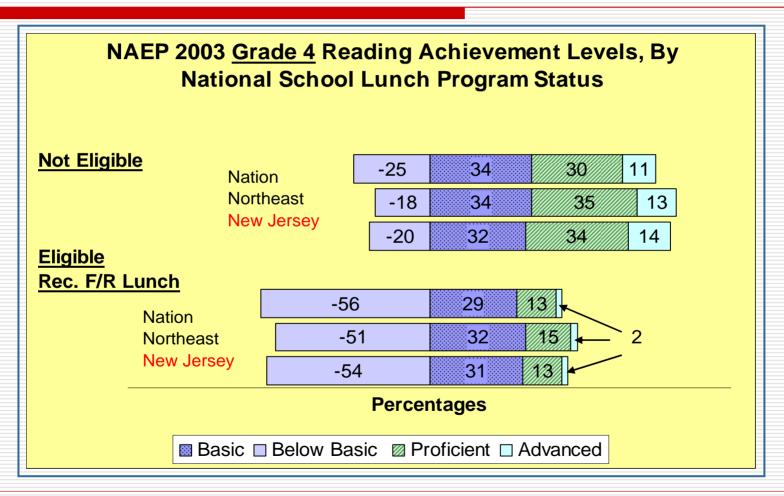
# Achievement Gaps -- Limited English Proficient (LEP)

Grade 4					
Reading 2003					
	LEP Scale Scores	Row Percent	Not LEP Scale Scores	Row Percen t	
NJ	186 (4.7)! SE (Small sample)	2%	226	98%	
NE	188 (2.1) SE	3%	224	97%	
Nation	186 (.8) SE	8%	219	92%	

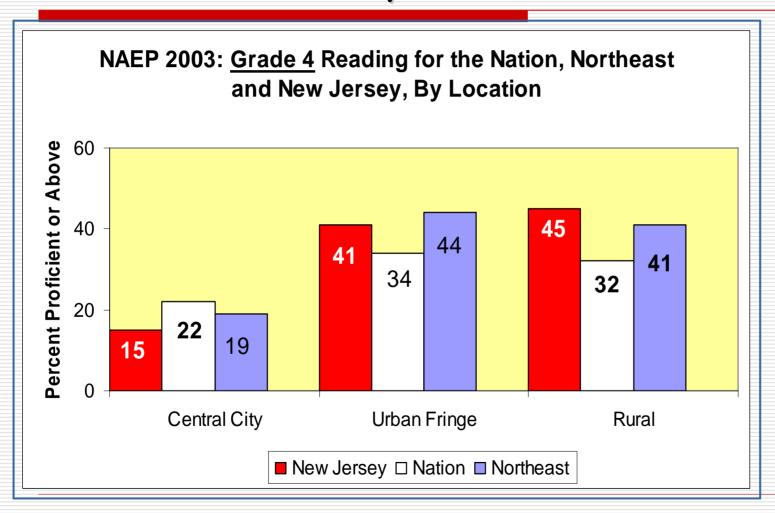
Grade 8				
Reading 2003				
	LEP Scale Score s	Row Percent	Not LEP Scale Scores	Row Percent
NJ	++	2%	269	98%
NE	22 1	2%	268	98%
	22 2	5%	263	95%

<sup>++</sup> Sample size is insufficient to permit a reliable estimate.

#### Achievement Gaps -- National School Lunch Program (NSLP)



#### Achievement Gaps -- School Location

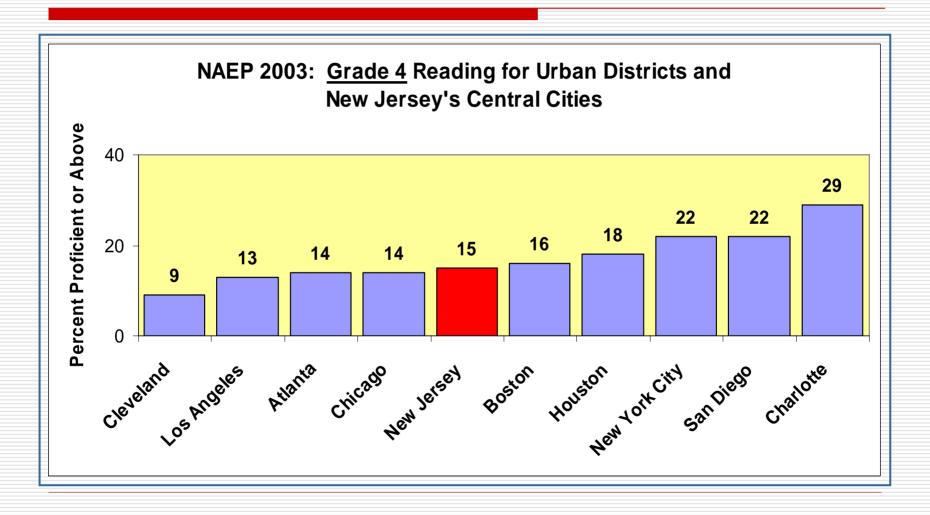


NJ CC - No difference when compared to the Nation or NE

#### Fringe & Rural—

NJ and NE higher than the Nation

#### Achievement GAPS -- School Location



## Coming Soon NAEP Data Explorer\*



- > Anticipated release: October 2005
- > Provides on-line access to NAEP results
- Allow users to create tables and graphs to analyze and report NAEP results
- > (URL: <a href="http://nces.ed.gov/nationsreportcard/">http://nces.ed.gov/nationsreportcard/</a>)

\* Will replace the NAEP Data Tool

# 



#### NAEP

#### QUESTIONS

TOOL

#### NAEP Questions Tool

Located under "Useful Links" on the New Jersey NAEP web site:



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

#### Assessment & Evaluation

#### NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS (NAEP)

NAEP: Overview | NAEP: New Jersey | Useful Links | NAEP 2005

- Assessment Schedule
- Historical Context
- Statewide

Assessments

- »Elementary School
- »Middle School
- »High School
- >Special Review Assessment

New Jersey NAEP

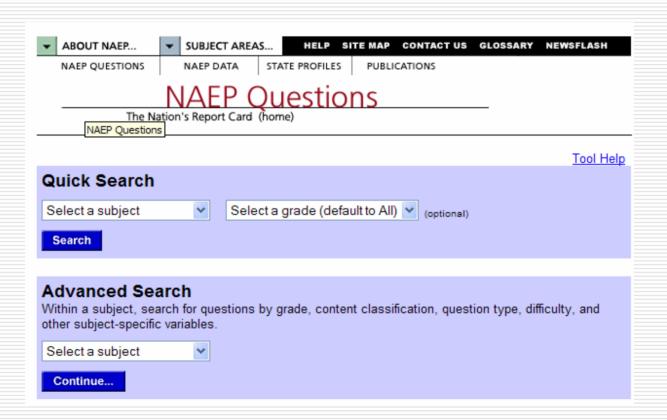
Barbara Smey-Richman Tel
NAEP State Coordinator Fax

Tel: (609) 984-1540 Fax: (609) 984-6032



Welcome to the New Jersey Department of Education's web page for the National Assessment of Educational Progress (NAFP). This web page provides an overview of the NAFP.

#### NAEP QUESTIONS TOOL



#### GROUP INSTRUCTION

Let's Work
Though Some
Examples
Together!!





#### CONTACT INFORMATION

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Fax: (609) 599-6732

Email: Barbara. Smey-Richman@doe.state.nj.us

#### NAEP Web Sites

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#### NCES:

http://nces.ed.gov/nationsreportcard/

#### The New Jersey NAEP:

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



Thank You For Your Interest in NAEP, the Nation's Report Card