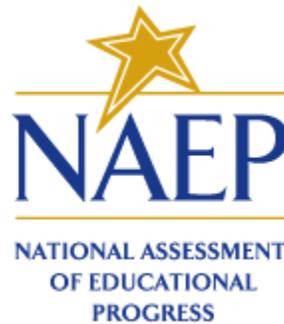


## Introduction to the National Indian Education Study (NIES)

Slide 1 of 39



## Introduction to the National Indian Education Study (NIES)

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### Module Objectives

- Introduce the [National Indian Education Study](#) (NIES) and describe the study's:
  - Two-component design,
  - Target population and sample design, and
  - Data collection years, sources, and methods
- Highlight the topics for which data are available for analysis
- Demonstrate how to use the National Assessment of Educational Progress (NAEP) Data Explorer (NDE) for NIES data

## Introduction to the National Indian Education Study (NIES)

### Slide 3 of 39

#### National Indian Education Study (NIES)

- A NAEP special study
- Conducted by National Center for Education Statistics (NCES) and sponsored by Office of Indian Education (OIE)
- Assesses performance in reading and mathematics at grades 4 and 8 and surveys exposure to American Indian and Alaska Native (AI/AN) culture
- Beginning with 2009, data can be linked with academic achievement data using the NDE

### Slide 4 of 39

#### Importance of NIES

- Assess role of Native language and culture on development of teaching and learning strategies that improve academic performance
- Identify principles and practices that shape curricula and instruction and enhance AI/AN academic achievement

## Introduction to the National Indian Education Study (NIES)

### Slide 5 of 39

#### NIES Development

- Authorized under 2011 Executive Order 13592
- Improving American Indian and Alaska Native Educational Opportunities and Strengthening Tribal Colleges and Universities
- [Technical Review Panel](#) oversees survey development

### Slide 6 of 39

#### NIES Data Collection Years

- First conducted in 2005
- Conducted every two years: 2007, 2009, and 2011
- Shifted to four-year cycle
  - Conducted in 2015

## Introduction to the National Indian Education Study (NIES)

### Slide 7 of 39

#### Component I: Assessment

- Conducted through the National Assessment of Educational Progress (NAEP)
- Reports academic performance in reading and mathematics



### Slide 8 of 39

#### Component II: Survey

- Provides information on educational experiences
  - Focuses on integration of Native language and culture into school and classroom
- Administered to:
  - AI/AN Students
  - Their teachers
  - Their school administrators



## Introduction to the National Indian Education Study (NIES)

### Slide 9 of 39

#### NIES Target Population

All 4<sup>th</sup> and 8<sup>th</sup> grade AI/AN students in the U.S. attending public, Bureau of Indian Education (BIE), Department of Defense (DoD), and private schools

- Most AI/AN students attend public schools



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#### NIES Sample

- Sample selected in conjunction with [NAEP sampling](#)
  - AI/AN students make up 1 percent of all students at grades 4 and 8 nationally
  - Typical NAEP sample of AI/AN students too small for detailed reporting by state, by region, or by variable
- NAEP sample of AI/AN students at grades 4 and 8 augmented for NIES
  - Schools in states with high proportions of AI/AN students oversampled

**Introduction to the National Indian Education Study (NIES)****Slide 11 of 39****NIES Sample (Continued)**

Schools with high proportions of AI/AN students are oversampled to allow comparisons between school types:

- BIE (all BIE schools with 4<sup>th</sup> and/or 8<sup>th</sup> grade selected)
- High-density public (25% or more AI/AN students)
- Low-density public (<25% AI/AN students)

**Slide 12 of 39****NIES Sampling Weights**

- Sampling weights are used to compensate for oversampling of schools with high proportions of AI/AN students
- Students who participate in NAEP at grades 4 and 8 are also selected for NIES survey along with their reading and mathematics teachers and school administrators

**Introduction to the National Indian Education Study (NIES)****Slide 13 of 39****NIES Survey**

- The 2015 NIES survey includes six questionnaires
  - Grade 4 Student Questionnaire
  - Grade 8 Student Questionnaire
  - Grade 4 Teacher Questionnaire
  - Grade 8 Teacher Questionnaire
  - Grade 4 School Questionnaire
  - Grade 8 School Questionnaire
- Questionnaires are administered to participating students, as well as to the teachers and administrators of the schools that they attend
  - Teacher questionnaires are given to reading/language arts and mathematics teachers of the participating students at each grade level
  - School questionnaires are given to the administrators of the schools that the participating students attend
- Each of the questionnaires include mostly multiple-choice questions and space at the end for respondents to write in comments
- Prior to the 2015 NIES, a single version of the school questionnaire was given to administrators of both 4th- and 8th-grade students

**Slide 14 of 39****Student Questionnaire**

- Asks 4<sup>th</sup>- and 8<sup>th</sup>-grade AI/AN students their
  - Perceptions about school and learning
  - Knowledge of AI/AN language and culture
  - Exposure to AI/AN language and culture in school and at home
- Asks 8<sup>th</sup>-grade AI/AN students their plans for the future

Introduction to the National Indian Education Study (NIES)

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Example Grade 4 Student Question

VH153940

14. During 4th grade, have you used books, videos, or other materials (including Internet resources) about American Indian or Alaska Native people **outside of school**?

Ⓐ Yes, once or twice

Ⓑ Yes, three or more times

Ⓒ No

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Example Grade 8 Student Question

VH158490

13. During 8th grade, have you attended any of the following activities **organized by your school**? Fill in **one** oval on each line.

	Yes	No	
a. Presentations by American Indian or Alaska Native people about their traditions and cultures (ways of life, customs)	Ⓐ	Ⓑ	VH158491
b. American Indian or Alaska Native art and craft demonstrations	Ⓐ	Ⓑ	VH158492
c. Traditional American Indian or Alaska Native music and/or dance performances	Ⓐ	Ⓑ	VH158493
d. Field trips to museums, traditional villages, or other places to learn about American Indian or Alaska Native people	Ⓐ	Ⓑ	VH158494

## Introduction to the National Indian Education Study (NIES)

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**Teacher Questionnaire**

- General qualifications
- Experience with AI/AN culture
- Preparation to teach AI/AN students
- Integration of AI/AN culture and language into instruction
- Use of content standards and assessments to promote academic achievement
- Use of different types of resources

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**Example Grade 4 Teacher Question**

9. To what extent do you use your students' American Indian or Alaska Native language(s) when you teach any core subject (reading, mathematics, science, and social studies)?

VE012658

- A Instruction is entirely in English.
- B Instruction is primarily in English, but words or phrases from the students' American Indian or Alaska Native language(s) are included occasionally.
- C Instruction is primarily in English, but words or phrases from the students' American Indian or Alaska Native language(s) are included frequently.
- D Instruction is primarily in the students' American Indian or Alaska Native language(s).

## Introduction to the National Indian Education Study (NIES)

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## Example Grade 8 Teacher Question

VED12780

14. To what extent do you use your students' American Indian or Alaska Native language(s) when you teach **reading/language arts**?
- Instruction is entirely in English.
  - Instruction is primarily in English, but words or phrases from the students' American Indian or Alaska Native language(s) are included occasionally.
  - Instruction is primarily in English, but words or phrases from the students' American Indian or Alaska Native language(s) are included frequently.
  - Instruction is primarily in the students' American Indian or Alaska Native language(s).

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## School Questionnaire

- How schools respond to the distinctive needs of their AI/AN students
  - Presence of AI/AN teachers and staff in the school
  - Areas of instruction in AI/AN culture
  - How schools connect with AI/AN communities
- It is important to note that prior to the 2015 NIES, a single version of the school questionnaire was given to administrators of both 4th- and 8<sup>th</sup>-grade students
- In 2015, the Grade 8 School Questionnaire included several items that were not asked in the Grade 4 School Questionnaire
  - Teen pregnancies
  - Drug or alcohol use by students
  - Student dropout rates
  - The extent to which the curricula emphasize preparing students for high school

Introduction to the National Indian Education Study (NIES)

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**Example School Question**

		VC963001	
14. Do students in your school receive instruction about American Indian or Alaska Native cultures in any of the following areas? Fill in <b>one</b> oval on each line.			
	Yes	No	
a. Oral language	<input type="radio"/>	<input type="radio"/>	VC963005
b. Written language	<input type="radio"/>	<input type="radio"/>	VC963007
c. History of tribes or cultural groups	<input type="radio"/>	<input type="radio"/>	VC963008
d. Traditions and customs	<input type="radio"/>	<input type="radio"/>	VC963009
e. Arts, crafts, music, or dance	<input type="radio"/>	<input type="radio"/>	VC963010
f. Tribal or village government	<input type="radio"/>	<input type="radio"/>	VC963013
g. Current events and issues important to tribes or cultural groups	<input type="radio"/>	<input type="radio"/>	VC963014

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**NIES Survey Data Collection**

Survey component

- NCES administers and proctors the NIES Student Questionnaire in schools in January and February
- Teachers and school administrators complete their questionnaires prior to or during the visit

Introduction to the National Indian Education Study (NIES)

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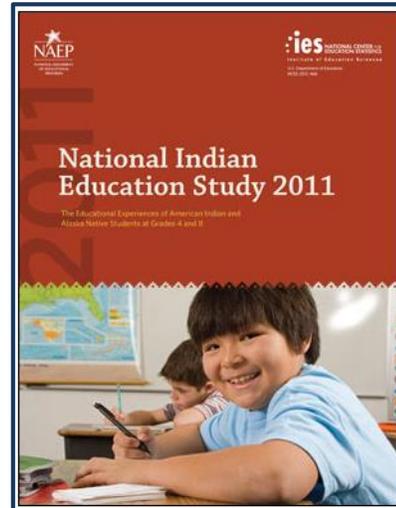
**NIES 2011 Participation: National Samples**

		Grade 4	Grade 8
<b>AI/AN students assessed in NAEP</b>	Reading	5,500	4,100
	Mathematics	5,400	4,200
<b>NIES survey</b>	AI/AN students	10,200	10,300
	Teachers	3,000	4,600
	School administrators	1,900	2,000

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**NIES Results**

- The nation (students in public, BIE, DoD, and private schools)
- Regions
- Selected states (students in public and BIE schools)
- Three types of schools
  - Low-density public
  - High-density public
  - BIE



Introduction to the National Indian Education Study (NIES)

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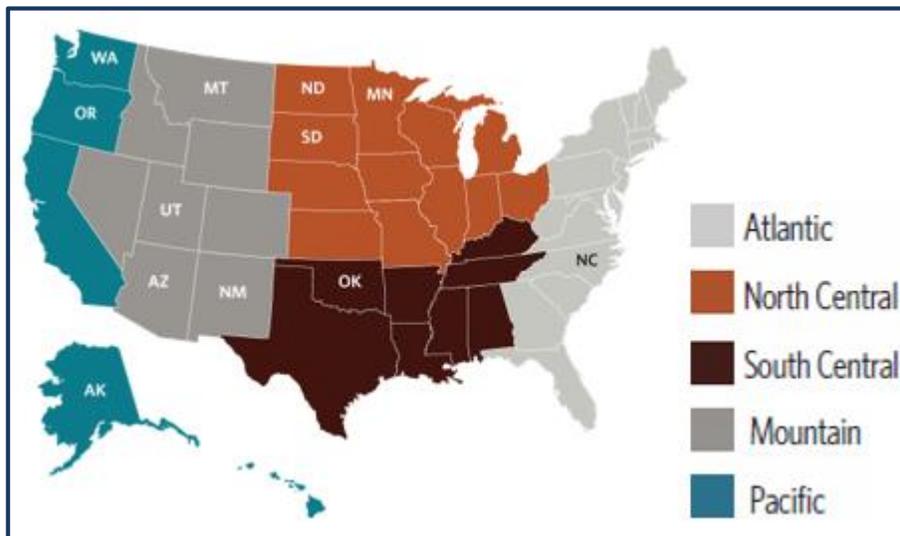
**NAEP Performance Results**

Reading and mathematics performance reported as

- Average scale scores (0-500 scales)
- Achievement levels (*Basic, Proficient, Advanced*)

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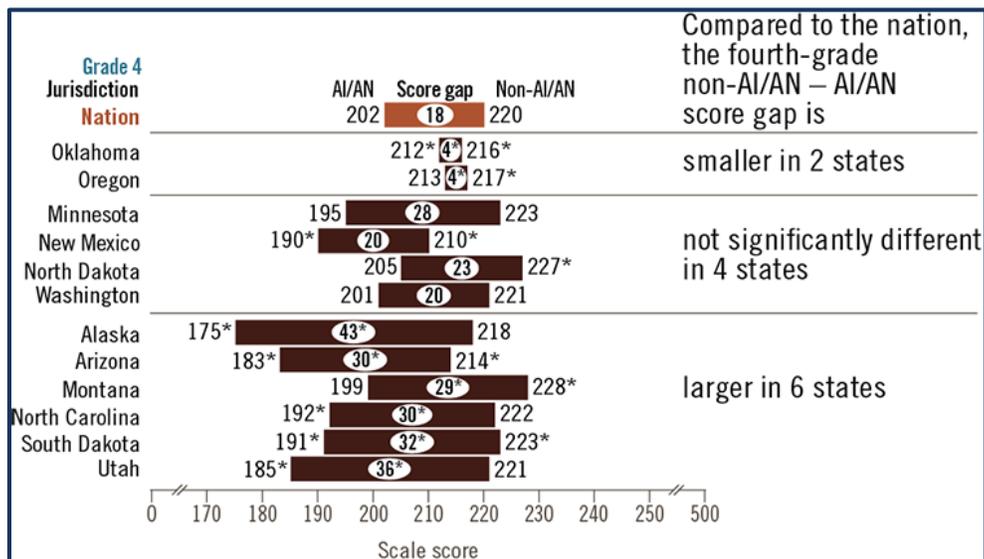
**Regions and States with Results Reported**



Introduction to the National Indian Education Study (NIES)

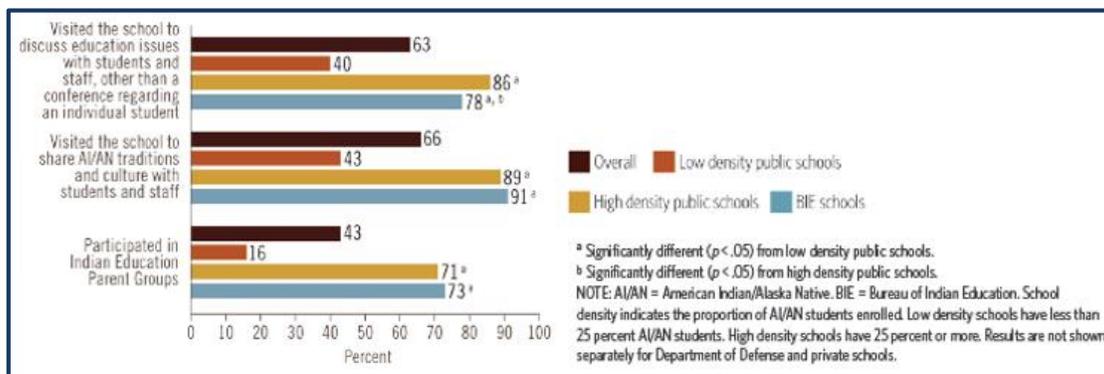
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2011 Results: State-Level Data



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Resources

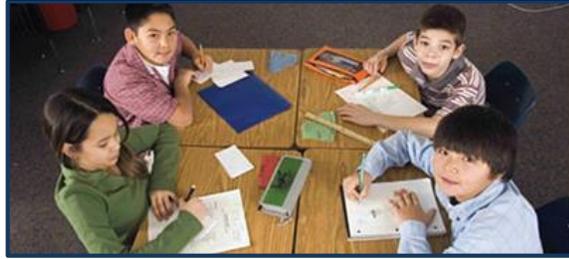


## Introduction to the National Indian Education Study (NIES)

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### Considerations for Analysis of NIES Data

- Results from 2005 and 2007 are not directly comparable to 2009 and 2011
- NIES Technical Review Panel reviewed the survey for potential changes
- Some revisions were made for 2015 but majority of questions are same



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### NIES on NAEP Data Explorer

**NAEP Data Explorer**

[Analyze Data](#) | 
 [Sample Questions](#) | 
 [State Comparisons](#) | 
 [State Profiles](#) | 
 [District Profiles](#)

---

**Do you have questions about what the nation's students know and can do?**

With the **NAEP Data Explorer (NDE)** you can create statistical tables, charts, and maps to help you find answers. Explore the results of decades of assessment of students' academic performance, as well as information about factors that may be related to their learning.

For help using NDE, [view the tutorial](#), visit the [Quick Reference Guide \(609K PDF\)](#) or use the [NDE help](#) button available at the top of every page.

**System Requirements:**

- Target screen resolution is 1024x768.
- Internet Explorer 7 or Higher.
- Firefox 3.0 or higher.
- Google Chrome or Safari.
- Enable JavaScript and pop-ups in your browser.
- Adobe Flash Player 9.0.115 or higher, ([downloads](#)).

**Accessible version:**  ON  OFF

NDE

**MAIN NDE**

.....

**LTT NDE**

.....

**HSTS NDE**

.....

**NIES NDE**

.....

The Data Explorer for **Main NAEP** provides national and state results in 10 subject areas, including mathematics, reading, writing, and science. Results have been produced for the nation and participating states and other jurisdictions since 1990, and for selected urban districts (on a trial basis) since 2002.

The Data Explorer for **Long-Term Trend** provides national mathematics and reading results dating from the 1970s.

The Data Explorer for the **High School Transcript Study** provides data such as course-taking and grade point average for students who graduated high school in 1990, 2000, 2005, and 2009. For 2005 and 2009 graduates, these data are also linked to NAEP grade 12 mathematics and science results.

The Data Explorer for the **National Indian Education Study** provides NAEP grade 4 and 8 results from the mathematics and reading assessments for American Indian and Alaska Native students since 2005. Results are also available for a special survey that explored the educational experiences of the participating students, their teachers, and their schools. Read more about the NIES survey [here](#).

**NOTE:** The [1997 Arts Assessment](#) data are only available in PDF format.

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## Introduction to the National Indian Education Study (NIES)

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### Features of the NIES Data Explorer

- Allows users to create tables, charts and maps
- Facilitates comparisons with non-AI/AN student populations
- Reports at the state level for 12 states with high AI/AN concentrations
- Presents results for the five NIES regions

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### [NAEP Data Explorer](#) for NIES

NAEP Data Explorer

Analyze Data | Sample Questions | State Comparisons | State Profiles | District Profiles

NIES Data Explorer 1. Select Criteria 2. Select Variables 3. Edit Reports 4. Build Reports

STEP 1: Select criteria from each drop-down menu to begin. Additional options related to your selections will appear. Then select measures, jurisdictions, and years based on available data. Help

Subject: Mathematics Grade: Grade 4 Reset

2. Select Variables

About NIES Data Explorer Important Legal Information Accessible Version

# Introduction to the National Indian Education Study (NIES)

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## NIES NDE Step 1

**NAEP Data Explorer**  
 Analyze Data | Sample Questions | State Comparisons | State Profiles | District Profiles

**NIES Data Explorer** 1. Select Criteria → 2. Select Variables → 3. Edit Reports → 4. Build Reports

**STEP 1:** Select criteria from each drop-down menu to begin. Additional options related to your selections will appear. Then select measures, jurisdictions, and years based on available data.

Subject: Mathematics Grade: Grade 4

Category	Sub Category	Measure	All Years	2011	2009	2007	2003
NAEP Scale Scores	Mathematics Scales	<input checked="" type="checkbox"/> Composite scale details	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> Algebra scale details	<input type="checkbox"/>				
		<input type="checkbox"/> Data analysis, statistics, and probability scale details	<input type="checkbox"/>				
		<input type="checkbox"/> Geometry scale details	<input type="checkbox"/>				
		<input type="checkbox"/> Measurement scale details	<input type="checkbox"/>				
		<input type="checkbox"/> Number properties and operations scale details	<input type="checkbox"/>				

Group: National State AI/AN

Group	Jurisdiction	All Years	2011	2009	2007	2003
National	National details	<input type="checkbox"/>				
	National AI/AN details	<input type="checkbox"/>				
State AI/AN	National AI/AN public and BIE details	<input checked="" type="checkbox"/>				
	Alaska AI/AN public (no BIE) details	<input checked="" type="checkbox"/>				
	Arizona AI/AN public and BIE details	<input checked="" type="checkbox"/>				
	Minnesota AI/AN public and BIE details	<input checked="" type="checkbox"/>				
	Montana AI/AN public and BIE details	<input checked="" type="checkbox"/>				
	New Mexico AI/AN public and BIE details	<input checked="" type="checkbox"/>				
	North Carolina AI/AN public (no BIE) details	<input checked="" type="checkbox"/>				

2. Select Variables

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## NIES NDE Step 2

**NAEP Data Explorer**  
 Analyze Data | Sample Questions | State Comparisons | State Profiles | District Profiles

**NIES Data Explorer** 1. Select Criteria → 2. Select Variables → 3. Edit Reports → 4. Build Reports

**STEP 2:** Select at least one variable from the category list below. View the list of all available variables, view by selected variables only, or search variables by keywords. Years selected will override previous selections.

Subject, Grade: Mathematics, Grade 4  
 Jurisdictions: National AI/AN public and BIE, Alaska AI/AN public (no BIE), Arizona AI/AN public and BIE, Minnesota AI/AN public and BIE, Montana AI/AN public and BIE, New Mexico AI/AN public and BIE, North Carolina AI/AN public (no BIE), North Dakota AI/AN public and BIE, Oklahoma AI/AN public (no BIE), Oregon AI/AN public (no BIE), South Dakota AI/AN public and BIE, Utah AI/AN public and BIE, Washington AI/AN public and BIE  
 Measure: Composite scale  
 Variables: Family talks in American Indian or Alaska Native language  
 Year: 2011

View All (943) View Selected (1) Search: Go

Category	Sub Category	Variable	All Years	2011	2009	2007	2003
Major Reporting Groups							
Student Factors							
Instructional Content and Practice							
Teacher Factors							
School Factors							
Community Factors							
Factors Beyond School							
NIES Survey	Students	<input type="checkbox"/> Know about American Indian or Alaska Native tribe or group details	<input type="checkbox"/>				
		<input type="checkbox"/> Attend American Indian or Alaska Native ceremonies and gatherings details	<input type="checkbox"/>				
		<input checked="" type="checkbox"/> Family talks in American Indian or Alaska Native language details	<input checked="" type="checkbox"/>				
		<input type="checkbox"/> People in school talk in American...	<input type="checkbox"/>				

3. Edit Reports

# Introduction to the National Indian Education Study (NIES)

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### NIES NDE Step 3

**NAEP Data Explorer**  
 Analyze Data | Sample Questions | State Comparisons | State Profiles | District Profiles

NIES Data Explorer 1. Select Criteria 2. Select Variables 3. Edit Reports 4. Build Reports

STEP 3: Preview and edit existing reports using the action links next to each report name. Create new reports, set format and statistic options. (New and copied reports will appear at the bottom of the report list.)

**Subject, Grade:** Mathematics, Grade 4  
**Jurisdictions:** National AI/AN public and BIE, Alaska AI/AN public (no BIE), Arizona AI/AN public and BIE, Minnesota AI/AN public and BIE, Montana AI/AN public and BIE, New Mexico AI/AN public and BIE, North Carolina AI/AN public (no BIE), North Dakota AI/AN public and BIE, Oklahoma AI/AN public (no BIE), Oregon AI/AN public (no BIE), South Dakota AI/AN public and BIE, Utah AI/AN public and BIE, Washington AI/AN public and BIE  
**Measures:** Composite scale  
**Variables:** Family talks in American Indian or Alaska Native language, Integrate lessons on American Indian or Alaska Native culture into math curriculum  
**Year:** 2011

Report	Action	Measure	Variable	Year	Jurisdiction	Statistic
Report 1	Preview   Edit   Delete   Copy	Composite scale	Family talks in American Indian or Alaska Native language	2011	National AI/AN public and BIE, Alaska AI/AN public (no BIE), Arizona AI/AN public and BIE, Minnesota AI/AN public and BIE, Montana AI/AN pu...	Average scale scores
Report 2	Preview   Edit   Delete   Copy	Composite scale	Integrate lessons on American Indian or Alaska Native culture into math curriculum	2011	National AI/AN public and BIE, Alaska AI/AN public (no BIE), Arizona AI/AN public and BIE, Minnesota AI/AN public and BIE, Montana AI/AN pu...	Average scale scores
Cross-Tabulated Report 1	Preview   Edit   Delete   Copy	Composite scale	Family talks in American Indian or Alaska Native language, Integrate lessons on American Indian or Alaska Native culture into math curriculum	2011	National AI/AN public and BIE, Alaska AI/AN public (no BIE), Arizona AI/AN public and BIE, Minnesota AI/AN public and BIE, Montana AI/AN pu...	Average scale scores

4. Build Reports

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### NIES NDE Step 4

Select Report: Report 1 Export Reports

Table Chart Significance Test Gap Analysis

Average scale scores for mathematics, grade 4 by family talks in American Indian or Alaska Native language [IB16201], year and jurisdiction: 2011

Year	Jurisdiction	Never or hardly ever		Once or twice a month		Once or twice a week		Every day	
		Average score	Standard Error	Average score	Standard Error	Average score	Standard Error	Average score	Standard Error
2011	National AI/AN public and BIE	231	(1.5)	223	(2.0)	220	(2.4)	218	(1.3)
	Alaska AI/AN public (no BIE)	#	(*)	#	(*)	#	(*)	#	(*)
	Arizona AI/AN public and BIE	218	(3.5)	212	(6.6)	207	(3.6)	216	(2.5)
	Minnesota AI/AN public and BIE	234	(5.1)	#	(*)	#	(*)	#	(*)
	Montana AI/AN public and BIE	223	(3.0)	#	(*)	#	(*)	#	(*)
	New Mexico AI/AN public and BIE	211	(2.8)	211	(4.7)	223	(3.7)	221	(2.1)
	North Carolina AI/AN public (no BIE)	229	(4.4)	#	(*)	#	(*)	#	(*)
	North Dakota AI/AN public and BIE	223	(2.2)	#	(*)	#	(*)	#	(*)
	Oklahoma AI/AN public (no BIE)	236	(1.9)	#	(*)	#	(*)	#	(*)
	Oregon AI/AN public (no BIE)	226	(5.7)	#	(*)	#	(*)	#	(*)
	South Dakota AI/AN public and BIE	221	(2.4)	216	(3.0)	222	(2.9)	212	(2.9)
	Utah AI/AN public and BIE	#	(*)	#	(*)	#	(*)	#	(*)
	Washington AI/AN public and BIE	227	(4.6)	#	(*)	#	(*)	#	(*)

\* Not applicable.  
 # Reporting standards not met.  
 NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.  
 SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), National Indian Education Study (NIES), 2011 Mathematics Assessment.

## Introduction to the National Indian Education Study (NIES)

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### NIES NDE Mathematics and AI/AN Language Significance Test

Select Report: Report 1 Export Reports

Table | Chart 1 | **Sig Test 1**

Chart | **Significance Test** | Gap Analysis

To see how one value compares with the others, read across the row for that value. The displayed symbols indicate whether that value is significantly higher, significantly lower, or not significantly different than the value associated with that column. In some cases the significance test may have not been possible for statistical reasons.

Mathematics, grade 4  
Difference in average scale scores between variables, for family talks in American Indian or Alaska Native language [1B16201]  
New Mexico AI/AN public and BIE, 2011

	Never or hardly ever	Once or twice a month	Once or twice a week
Never or hardly ever		x Diff = 0 P-value = 0.9956 Family size = 3	< Diff = -12 P-value = 0.0138 Family size = 3
Once or twice a month	x Diff = 0 P-value = 0.9956 Family size = 3		x Diff = -12 P-value = 0.0557 Family size = 3
Once or twice a week	> Diff = 12 P-value = 0.0138 Family size = 3	x Diff = 12 P-value = 0.0557 Family size = 3	

LEGEND:  
< Significantly lower.  
> Significantly higher.  
x No significant difference.

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### Module Summary

- Introduction to the [National Indian Education Study \(NIES\)](#) and describe the study's:
  - Two-component design,
  - Target population and sample design, and
  - Data collection years, sources, and methods
- Highlighted the topics for which data are available for analysis
- Demonstrated how to use the National Assessment of Educational Progress (NAEP) Data Explorer (NDE) for NIES data

## Introduction to the National Indian Education Study (NIES)

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### Module Resources

- [National Indian Education Study \(NIES\)](#)
- [Technical Review Panel](#)
- [NAEP Sampling](#)
- [NIES Survey Questionnaires](#)
- [NAEP Data Explorer](#)