

# National Indian Education Study 2015

American Indian and Alaska Native Students at Grades 4 and 8



# Contents

About This Report . . . . .	1
Introduction . . . . .	3
Survey Questionnaires . . . . .	7
Students and Native Culture . . . . .	8
Teacher Characteristics . . . . .	12
Schools and Community Engagement . . . . .	20
Performance Results . . . . .	22
Appendix Tables . . . . .	24
Acknowledgments . . . . .	27

## Photo Credits

© Alejandro Rivera/iStockphoto #22190566;  
© Thomas Gordon/iStockphoto #2687838;  
© Darla Hallmark/Shutterstock #1272783;  
© Kevin Smith/Alaska Stock; © Masterfile  
Royalty-Free/Masterfile; © Alejandro  
Rivera/iStockphoto #2248536; © Winslow  
Productions/Tetra Images/Getty Images  
#136599152; © Jeff Shultz/Alaskastock.  
com #352GR AA0028D001; © Jose Gil/  
Shutterstock #2860784.

The National Indian Education Study (NIES) is designed to describe the condition of education for American Indian and Alaska Native students in the United States. NIES is authorized under Executive Order 13592, Improving American Indian and Alaska Native Educational Opportunities and Strengthening Tribal Colleges and Universities, which was issued in 2011. Executive Order 13592 is the most recent authorization of Executive Order 13336, American Indian and Alaska Native Education, issued in 2004. NIES is conducted under the direction of the National Center for Education Statistics on behalf of the U.S. Department of Education's Office of Indian Education.

NIES is conducted through the National Assessment of Educational Progress (NAEP) and provides information on the academic performance of fourth- and eighth-grade American Indian/Alaska Native students in reading and mathematics, and on their educational experiences. From 2005 to 2011, NIES results were reported every 2 years. After 2011, the NIES reporting cycle was changed to every 4 years.

---

NAEP is a congressionally authorized project of the National Center for Education Statistics within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP.

NAEP is an integral part of our nation's evaluation of the condition and progress of education. Only information related to academic achievement and relevant variables is collected. The privacy of individual students and their families is protected, and the identities of participating schools are not released.

# About This Report

The National Indian Education Study (NIES) is administered as part of the National Assessment of Educational Progress (NAEP) to allow more in-depth reporting on the achievement and experiences of American Indian/Alaska Native (AI/AN)<sup>1</sup> students in grades 4 and 8.

This report focuses primarily on two themes identified during the development of the NIES survey questionnaires.

- To what extent are AI/AN culture and language part of the curricula?
- To what extent are school resources available for improving AI/AN student achievement?

The student survey questions selected for this report asked AI/AN students about the knowledge they had of their Native culture and language and their opportunities to learn more. Teacher survey questions asked teachers how they acquired and integrated culturally responsive materials, activities, and instruction into their lessons to enhance student learning. Questions from the school administrator survey asked school officials about how often members of the Native community participated in school events with students, parents, and teachers.

## Organization of the Report

- The Introduction section includes information on sampling, participation, reporting, the NIES 2015 states, and the school types reported on in the survey question tables throughout this report.
- The Survey Questionnaire section describes the purpose of the survey questions and the development process used to create them.



<sup>1</sup> This reporting group does not include Native Hawaiian students.

- The Students and Native Culture section includes information about students' exposure to and participation in their Native culture and their experiences with Native language at home and in school.
- The Teacher Characteristics section examines the ways in which teachers acquired the knowledge and skills they need to teach AI/AN students, teachers' self-identified race/ethnicity, and the culturally specific instructional practices used in reading and mathematics lessons.
- The Schools and Community Engagement section examines AI/AN community member events that take place at school and the availability of good quality AI/AN books and other materials in school libraries or media centers.
- The Performance Results section provides information about the performance of AI/AN students at grades 4 and 8 in the nation and in the NIES states on NAEP reading and mathematics assessments from 2005 to 2015.

### ***Explore Additional Results***

*This report presents selected results from the NIES 2015 survey questionnaires. It also includes performance results for AI/AN students in reading and mathematics at grades 4 and 8 that were published as part of the NAEP 2015 assessment and can be found at <http://www.nationsreportcard.gov>. Complete 2015 NIES survey results and performance results for AI/AN students in the nation and the 14 NIES states are available in the NAEP Data Explorer at <https://nces.ed.gov/nationsreportcard/naepdata>.*

# Introduction

Since 2005, the National Indian Education Study (NIES) has provided educators, policymakers, and the public with information about the educational experiences and the academic performance of fourth- and eighth-grade American Indian and Alaska Native (AI/AN) students in the United States.

## Participation in NIES 2015

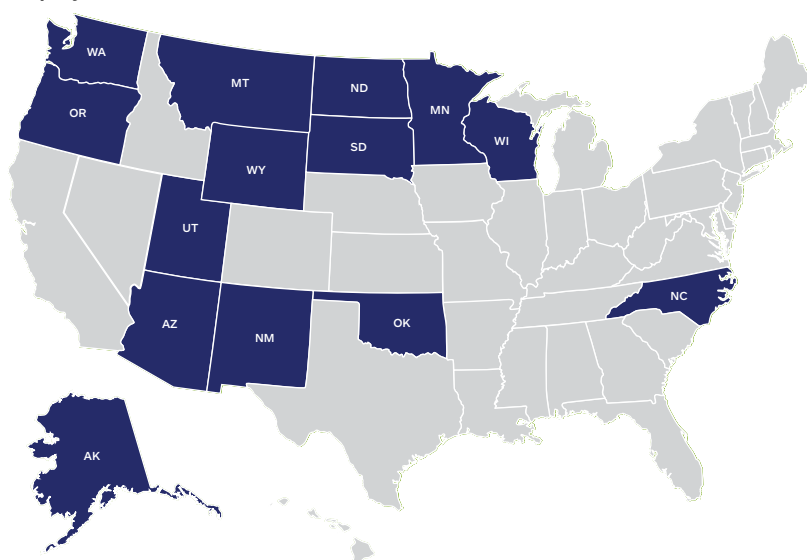
AI/AN students make up about 1 percent of students in elementary and secondary schools nationally (see table A-3 on page 26). Students were identified as AI/AN based on school records and were sampled along with other students participating in the NAEP 2015 subject-area assessments.

To obtain large enough samples to report reliable results for AI/AN students, schools with higher proportions of AI/AN students in selected states were “oversampled.” That is, the AI/AN students were selected for the NAEP assessments at a higher rate than they would be otherwise. All Bureau of Indian Education (BIE) schools having grades 4 and/or 8 were also selected.

NAEP reports NIES results for 14 states, with state-level results for Wisconsin and Wyoming reported for the first time in 2015 (see exhibit 1 below). State-level NIES results are not available for the other states because their populations of AI/AN students were too widely dispersed. NAEP sampling procedures were therefore unable to obtain sufficiently large enough samples for reporting separate results for these states.

In 2015, samples of AI/AN students were large enough to report results for students in 14 states. However, not all states report results for both reading and mathematics at grades 4 and 8. (See appendix tables A-1 and A-2.)

**Exhibit 1. Map of NIES 2015 states**





## Reporting Results

The results shown in all tables in the student, teacher, and school sections of the report are based on NIES survey question responses from AI/AN students, their teachers, and school administrators. However, these survey question results are always reported as the percentages of students (e.g., the percentage of students whose teachers reported on a particular characteristic). Note that because Alaska, Montana, and Utah did not participate in all components of the 2015 NIES and NAEP surveys, they did not contribute to all the survey results in this report.<sup>2</sup>

To provide more detail in contrasting numerical differences between BIE schools and public schools throughout the nation, public schools were divided into two categories based on the proportion of AI/AN students attending those schools. The new public school categories—low density public and high density public—were defined by the Office of Indian Education (OIE).

Because AI/AN students' experiences may vary depending on the types of schools they attend, results for survey questions are reported for three mutually exclusive categories of schools as well as for an overall category:

- low density public schools (where less than 25 percent of all the students in the school were AI/AN),
- high density public schools (where 25 percent or more of all the students in the school were AI/AN),
- BIE schools, and
- all AI/AN students (includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense (DoD) schools).

Fifty-nine percent of AI/AN fourth-graders who participated in the 2015 NAEP assessment attended low density public schools, 33 percent attended high density public schools, and 8 percent attended BIE schools. Similarly, 57 percent of AI/AN eighth-graders attended low density public schools, 36 percent attended high density public schools, and 7 percent attended BIE schools. An additional 2 to 3 percent at each grade attended private or DoD schools.

In summarizing survey results by school type, response categories were sometimes collapsed to create a new response category that would better reveal student response patterns across the three school types. Results highlighted in call-out text associated with the tables throughout this report were selected for illustrative purposes only and do not indicate statistically significant differences in the percentages.

<sup>2</sup>Alaska participated in NIES and NAEP school and teacher surveys, but not in NIES or NAEP student surveys. Montana participated in NAEP student, teacher, and school surveys, but not in NIES student, teacher, or school surveys. Utah participated in NIES student, teacher, and school surveys as well as NAEP teacher and school surveys, but not in the NAEP student survey.

Students completed the student questionnaire voluntarily, and their responses were kept confidential. The privacy of individual students and their families is protected. Similarly, NAEP performance results are not reported at the student level.

## Making Comparisons

Three tables and four figures in this report provide comparisons in the results they show. NAEP uses widely accepted statistical standards when making such comparisons. Findings are reported based on a statistical significance level of .05; that is, no more than a 5 percent probability that differences could be attributed to chance. Only those differences found to be statistically significant are identified as such.

Table 1 (on the following page) uses “a” to indicate a statistically significant difference from low AI/AN density public schools, while “b” indicates a statistically significant difference from high AI/AN density public schools. Tables A-1 and A-2 at the back of this report use an asterisk (\*) to indicate statistically significant differences. Of the four figures at the back of the report, figures 2 and 4 also use an asterisk (\*) to indicate the significant score differences shown in these figures. The other tables in this report simply present percentages within categories without indicating statistical significance. The results included in the call-out text associated with these tables were not selected to suggest statistically significant differences and are for illustration only.

## Characteristics of AI/AN Students

Information about how AI/AN student characteristics differ across school types helps to provide some context for the survey results presented in later sections of this report. Table 1 reports selected student characteristics across low density public schools, high density public schools, and BIE schools. Results are also provided for all AI/AN students. This information was obtained from schools during the 2015 NAEP assessment, as well as from responses of students and school staff to questions in the NAEP student and school survey questionnaires. For more information about survey questionnaires, see page 7.

For instance, the percentage of AI/AN fourth-graders in BIE schools who reported having a computer in their home (56 percent) was lower than the percentages of AI/AN fourth-graders in high density public schools (63 percent) and low density public schools (74 percent) who reported having a computer in their home. Among AI/AN eighth-graders, the percentages of students who reported no days absent from school did not differ significantly across the three school types.

*In low density public schools, AI/AN students represented 1 percent of the students at grades 4 and 8, while AI/AN students were 53 percent of the fourth-graders and 54 percent of the eighth-graders in high density public schools. In BIE schools, 97 percent of fourth-graders and 99 percent of eighth-graders were AI/AN students. For each group, the percentage represents the average within-school percentage across participating schools.*

**Table 1. Percentage of fourth- and eighth-grade AI/AN students, by grade and student characteristic: 2015**

Grade and student characteristic	All AI/AN students	School type/density		
		Low density public schools	High density public schools	BIE schools
Grade 4				
Attend rural schools	45	27	64 <sup>a</sup>	88 <sup>a,b</sup>
English language learners	11	6	12 <sup>a</sup>	49 <sup>a,b</sup>
Students with disabilities	15	14	16	16
Eligible for National School Lunch Program	73	64	87 <sup>a</sup>	94 <sup>a,b</sup>
More than 100 books in home	20	24	14 <sup>a</sup>	15 <sup>a</sup>
Computer in home	69	74	63 <sup>a</sup>	56 <sup>a,b</sup>
No days absent from school	42	44	40	38
Grade 8				
Attend rural schools	38	21	57 <sup>a</sup>	79 <sup>a,b</sup>
English language learners	7	3	9 <sup>a</sup>	39 <sup>a,b</sup>
Students with disabilities	16	16	17	17
Eligible for National School Lunch Program	66	56	80 <sup>a</sup>	96 <sup>a,b</sup>
Parent(s) graduated from college	40	43	35	27 <sup>a,b</sup>
More than 100 books in home	17	21	11 <sup>a</sup>	7 <sup>a,b</sup>
Computer in home	75	82	68 <sup>a</sup>	55 <sup>a,b</sup>
No days absent from school	35	37	32	34

<sup>a</sup> Significantly different ( $p < .05$ ) from low density public schools.

<sup>b</sup> Significantly different ( $p < .05$ ) from high density public schools.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Results are not shown for Department of Defense and private schools. Information on parental education was not collected at grade 4.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.



# Survey Questionnaires

In addition to assessing student achievement in NAEP subjects such as reading and mathematics, NAEP also collects information from students, teachers, and school administrators through survey questionnaires they complete as part of the NAEP assessment. Student survey questions ask them about their experiences inside and outside of school. Teachers complete a survey that asks them about their training and their reading and mathematics classroom practices. School administrators complete a survey that asks them about staffing, resources, and school activities. This additional information helps put student achievement results into context.

Because NAEP samples were designed to be representative of students but not of teachers or school administrators, survey results are always reported in terms of the percentages of students (e.g., students whose teachers had them write about their experiences).

The NIES survey questions selected for this report reflect questionnaire topics of interest to researchers in the field of AI/AN education: AI/AN students' exposure to and knowledge of Native culture and language, teachers' acquisition of cultural knowledge and skills to teach AI/AN students, and school efforts to provide a supportive and welcoming environment for AI/AN students.

## Development

- All NAEP survey questions (including NIES survey questions) undergo a multistep, research-based development process.
- Multiple groups review the NAEP survey questions and provide input at each stage of the process, including survey experts, subject-area experts, educational researchers, and statisticians.
- The NIES Technical Review Panel, whose members included AI/AN educators and researchers from across the country, oversaw the development of the 2015 NIES survey questionnaires. See a list of the individuals serving on the panel in 2015 on page 27.



*Complete copies of the NIES student, teacher, and school questionnaires are available online at <http://nces.ed.gov/nationsreportcard/nies/questionnaire.aspx>.*

# Students and Native Culture

The NIES 2015 student survey questionnaires included questions about the knowledge AI/AN students had of their family's Native culture, the role AI/AN languages played in their lives, and their involvement in Native cultural ceremonies and gatherings in the community. The students' responses to these questions provide some insight into their sense of identity as citizens of their AI/AN tribe.

## Knowledge of Native Culture

**Table 2. Percentage distribution of fourth- and eighth-grade AI/AN students who reported on their knowledge of their AI/AN heritage, by grade and school type/density: 2015**

Grade and school type/density	How much do you know about the following?			
	Nothing	A little	Some	A lot
<b>Grade 4: Your AI/AN tribe or group (e.g., history, traditions, or arts and crafts)</b>				
<b>All AI/AN students</b>	<b>16</b>	<b>32</b>	<b>32</b>	<b>20</b>
Low density public schools	17	33	32	18
High density public schools	14	34	31	22
BIE schools	11	28	33	28
<b>Grade 8: Your AI/AN history</b>				
<b>All AI/AN students</b>	<b>10</b>	<b>26</b>	<b>40</b>	<b>24</b>
Low density public schools	13	29	39	19
High density public schools	7	25	40	28
BIE schools	3	14	40	43

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. Percentage results at each grade are based on student responses to separate but closely related survey questions.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**In high density public schools, 53% of students at grade 4 reported that they knew "some" to "a lot" about their tribe. Sixty-eight percent of students at grade 8 knew "some" to "a lot" about their tribe's history.**



**Table 3. Percentage distribution of fourth- and eighth-grade AI/AN students who reported on learning about AI/AN traditions, by grade and school type/density: 2015**

Grade and school type/density	Who taught you most of what you know about AI/AN traditions (ways of life, customs)?					
	No one	Family members	Friends	Teachers	Tribal representatives or elders	Someone else
<b>Grade 4</b>						
<b>All AI/AN students</b>	<b>17</b>	<b>55</b>	<b>2</b>	<b>16</b>	<b>8</b>	<b>4</b>
Low density public schools	16	55	1	16	7	3
High density public schools	17	55	2	15	8	4
BIE schools	13	53	4	15	9	6
<b>Grade 8</b>						
<b>All AI/AN students</b>	<b>17</b>	<b>59</b>	<b>1</b>	<b>11</b>	<b>10</b>	<b>2</b>
Low density public schools	21	57	1	11	9	2
High density public schools	14	61	2	11	11	2
BIE schools	3	65	2	14	12	3

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

Across all school types, AI/AN students in grades 4 and 8 most frequently reported that family members taught them the most about Native traditions.

**Table 4. Percentage distribution of fourth- and eighth-grade AI/AN students who reported on their participation in AI/AN-related activities, by grade and school type/density: 2015**

Grade and school type/density	How often have you done the following?			
	Never	Every few years	At least once a year	Several times a year
<b>Grade 4: Attended AI/AN ceremonies and gatherings</b>				
<b>All AI/AN students</b>	<b>42</b>	<b>20</b>	<b>18</b>	<b>21</b>
Low density public schools	45	20	17	18
High density public schools	38	21	19	23
BIE schools	28	21	18	34
<b>Grade 8: Participated in ceremonies and gatherings of your AI/AN tribe or group</b>				
<b>All AI/AN students</b>	<b>37</b>	<b>16</b>	<b>22</b>	<b>25</b>
Low density public schools	43	16	21	20
High density public schools	33	17	22	28
BIE schools	13	13	22	52

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. Percentage results at each grade are based on student responses to separate but closely related survey questions.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

In BIE schools, 34% of students at grade 4 reported that they attended AI/AN ceremonies and gatherings several times a year. Fifty-two percent of BIE students at grade 8 participated in these events several times a year.

## Native Language Use

The NIES 2015 student survey asked students about their families' use of their tribe's Native language and about opportunities that students had to attend classes taught in a Native language in school.

**Table 5. Percentage distribution of fourth- and eighth-grade AI/AN students who reported on AI/AN language usage at home, by grade and school type/density: 2015**

Grade and school type/density	How often do members of your family talk to each other in your AI/AN language?			
	Never or hardly ever	Once or twice a month	Once or twice a week	Every day or almost every day
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>56</b>	<b>13</b>	<b>9</b>	<b>22</b>
Low density public schools	63	13	7	17
High density public schools	51	12	12	25
BIE schools	25	14	13	48
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>59</b>	<b>12</b>	<b>9</b>	<b>20</b>
Low density public schools	69	12	7	11
High density public schools	49	12	13	27
BIE schools	14	10	15	60

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**In low density public schools, 24% of students at grade 4 and 18% at grade 8 reported that their family members speak to each other in their Native language once a week or more.**





Students were also asked how frequently they attended classes taught in a Native language in school.

**Table 6. Percentage distribution of fourth- and eighth-grade AI/AN students who reported on AI/AN language usage in class, by grade and school type/density: 2015**

Grade and school type/density	How often do you attend classes in school that are taught in an AI/AN language?			
	School does not offer classes taught in AI/AN language	Never or hardly ever	Once or twice a month	Once a week or more
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>53</b>	<b>25</b>	<b>5</b>	<b>17</b>
Low density public schools	63	25	4	8
High density public schools	42	27	5	26
BIE schools	13	17	10	60
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>63</b>	<b>20</b>	<b>5</b>	<b>13</b>
Low density public schools	75	16	3	6
High density public schools	49	28	8	16
BIE schools	11	20	13	56

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. Response categories for this question included the following: My school does not offer classes taught in an AI/AN language, never or hardly ever, once or twice a month, once or twice a week, and every day or almost every day. Percentages for once or twice a week and every day or almost every day were combined to create the "once a week or more" response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

*In high density public schools, 26% of AI/AN students at grade 4 and 16% at grade 8 reported that they attended classes taught in a Native language at school "once a week or more."*

# Teacher Characteristics

Results for all the response categories of each survey question are available in the NAEP Data Explorer at <https://nces.ed.gov/nationsreportcard/naepdata>.

**77% of students in BIE schools at grade 4 and 64% at grade 8** had teachers who reported that their personal backgrounds or experiences had helped them to a moderate extent or more to acquire the skills needed to teach AI/AN students.

The NIES teacher survey questions were designed to examine the ways in which teachers develop an understanding of their AI/AN students' Native culture. Such understanding may allow teachers to "fine-tune their teaching to the students' learning needs."<sup>3</sup>

## Knowledge and Skill Development

In the NIES teacher surveys, teachers were asked about the sources they used to acquire the knowledge and skills they needed to teach AI/AN students and the extent to which they implemented culturally appropriate instructional practices in the classroom in order to more effectively teach AI/AN students.

To more easily show results from several questions related to this topic, percentages from two response categories—"moderate extent" and "large extent"—were combined to create the new response category "moderate extent or more" in table 7. The percentages for the new combined response category reveal the sources that were more important to teachers in acquiring the skills they needed to effectively teach AI/AN students.

**Table 7. Percentage of fourth- and eighth-grade AI/AN students whose teachers reported acquiring knowledge and skills specific to teaching AI/AN students from the following sources to a moderate extent or more, by grade and school type/density: 2015**

Grade and school type/density	Sources			
	Independent reading and study	Personal or family background and experiences	Living and working in an AI/AN community	Courses with a focus on teaching AI/AN students
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>37</b>	<b>38</b>	<b>38</b>	<b>22</b>
Low density public schools	22	21	16	12
High density public schools	50	56	60	31
BIE schools	84	77	92	52
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>21</b>	<b>29</b>	<b>33</b>	<b>18</b>
Low density public schools	11	16	12	9
High density public schools	29	42	54	26
BIE schools	59	64	86	52

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. The percentages shown in the table are based on the responses of mathematics teachers. Responses of reading teachers were very similar. Response categories for the questions included the following: Not at all, small extent, moderate extent, and large extent. Percentages for moderate extent and large extent were combined to create the "moderate extent or more" response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

<sup>3</sup> Pewewardy, C., and Hammer, P.C. (2003). *Culturally Responsive Teaching for American Indian Students* (page 2), ERIC Clearinghouse on Rural Education and Small Schools, Charleston, WV. Retrieved from <http://files.eric.ed.gov/fulltext/ED482325.pdf>.



**Table 8. Percentage distribution of fourth- and eighth-grade AI/AN students whose teachers reported on their professional or community development activities, by grade and school type/density: 2015**

Grade and school type/density	During the last 2 years, how many times have you attended professional or community-based development programs aimed at developing culturally specific instructional practices for AI/AN students?			
	Never	1 or 2 times	3 or 4 times	5 or more times
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>71</b>	<b>18</b>	<b>5</b>	<b>5</b>
Low density public schools	86	11	2	1
High density public schools	59	26	10	5
BIE schools	19	32	14	35
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>75</b>	<b>18</b>	<b>5</b>	<b>2</b>
Low density public schools	89	9	1	#
High density public schools	61	30	7	2
BIE schools	37	20	23	20

# Rounds to zero.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. The percentages shown in the table are based on the responses of mathematics teachers. Responses of reading teachers were very similar.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**11% of fourth-graders in low density public schools and 26% in high density public schools** had teachers who reported that in the past 2 years they had attended 1 or 2 professional or community-based programs for help in developing culturally specific instructional practices to teach AI/AN students.

**Table 9. Percentage distribution of fourth- and eighth-grade AI/AN students whose teachers reported on resources they consulted, by grade and school type/density: 2015**

Grade and school type/density	During the last 2 years, how many times have you consulted other teachers in your school to help you improve the academic performance of your AI/AN students?			
	Never	1 or 2 times	3 or 4 times	5 or more times
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>33</b>	<b>26</b>	<b>17</b>	<b>25</b>
Low density public schools	49	29	11	11
High density public schools	13	26	23	38
BIE schools	2	2	26	70
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>38</b>	<b>27</b>	<b>14</b>	<b>21</b>
Low density public schools	54	28	11	7
High density public schools	20	28	18	33
BIE schools	9	18	8	65

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. The percentages shown in the table are based on the responses of mathematics teachers. Responses of reading teachers were very similar.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**33% of eighth-graders in high density public schools and 65% in BIE schools** had teachers who reported that in the past 2 years they had consulted other teachers in their school 5 times or more for help in improving the academic performance of their AI/AN students.

## Culturally Specific Instruction

Some researchers studying American Indian education are concerned that schools do not engage and motivate AI/AN students.<sup>4</sup> A more supportive environment includes Native culture, history, and language in the curricula. The NIES teacher survey questionnaire asked teachers about specific instructional practices they had implemented in their classrooms in the past 2 years to recognize and engage their AI/AN students.

**Table 10. Percentage distribution of fourth- and eighth-grade AI/AN students whose teachers reported on their classroom practices, by grade and school type/density: 2015**

Grade and school type/density	During the last 2 years, to what extent have you implemented culturally specific instructional practices for AI/AN students in your classroom?			
	Not at all	Small extent	Moderate extent	Large extent
<b>Grade 4</b>				
<b>All AI/AN students</b>	32	41	19	8
Low density public schools	45	42	11	2
High density public schools	18	43	26	13
BIE schools	4	29	47	20
<b>Grade 8</b>				
<b>All AI/AN students</b>	59	27	11	4
Low density public schools	75	21	3	#
High density public schools	45	33	16	6
BIE schools	4	31	39	26

# Rounds to zero.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. The percentages shown in the table are based on the responses of mathematics teachers. Responses of reading teachers were very similar.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.



<sup>4</sup>Van Ryzin, M., Vincent, C., and Hoover, J. (2016). *Initial Exploration of a Construct Representing Native Language and Culture (NLC) in Elementary and Middle School Instruction*. *Journal of American Indian Education*, Vol. 55, No. 1, Spring 2016. Retrieved from [http://jstor.org/stable/10.5749/jamerindeduc.55.1.0074?seq=1#page\\_scan\\_tab\\_contents](http://jstor.org/stable/10.5749/jamerindeduc.55.1.0074?seq=1#page_scan_tab_contents).

**In high density public schools, 26% of students at grade 4 and 16% at grade 8** had teachers who reported that in the past 2 years they implemented to a moderate extent culturally specific instructional practices to teach AI/AN students.

Some studies have shown that where students and teachers share the same culture, learning is enhanced.<sup>5</sup> Table 11 shows the demographic make-up of fourth- and eighth-grade teachers across school types. The percentages in table 11 are based on survey questions that permitted teachers to select all racial/ethnic groups that contributed to their heritage. For this reason, individual teachers (and thus their students) may be contributing to the percentages for more than one racial/ethnic group in the table.

**Table 11. Percentage of fourth- and eighth-grade AI/AN students taught by teachers of specific racial/ethnic groups, by grade and school type/density: 2015**

Grade and school type/density	Teachers' reported race/ethnicity				
	White	Black or African American	Hispanic or Latino	Asian	American Indian or Alaska Native
<b>Grade 4</b>					
<b>All AI/AN students</b>	80	3	5	2	16
Low density public schools	92	3	6	3	4
High density public schools	68	3	5	2	29
BIE schools	50	#	8	2	51
<b>Grade 8</b>					
<b>All AI/AN students</b>	80	3	7	3	14
Low density public schools	89	4	8	2	3
High density public schools	73	3	4	6	23
BIE schools	44	#	16	5	48

# Rounds to zero.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. The percentages shown in the table are based on the responses of mathematics teachers. Percentages for Native Hawaiian/Other Pacific Islander fourth- and eighth-grade teachers are not included in the table; the percentages ranged between 0 and 1. Percentages may sum to more than 100 because they are based on questions that permitted respondents to check all categories that applied. In 2015 at fourth grade, 6 percent of all AI/AN students, 5 percent of those in low density public schools, 6 percent of those in high density public schools, and 10 percent of those in BIE schools had teachers who self-identified as being of two or more racial/ethnic groups. At eighth grade, 6 percent of all AI/AN students, 6 percent of those in low density public schools, 7 percent of those in high density public schools, and 12 percent of those in BIE schools had teachers who self-identified as being of two or more racial/ethnic groups.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**In low density public schools, 4% of fourth-grade AI/AN students had teachers who self-identified as being of AI or AN heritage, while in high density public schools, 29% of fourth-graders had teachers who did so.**

<sup>5</sup> Pewewardy, C., and Hammer, P.C. (2003). *Culturally Responsive Teaching for American Indian Students*, ERIC Clearinghouse on Rural Education and Small Schools, Charleston, WV. Retrieved from <http://files.eric.ed.gov/fulltext/ED482325.pdf>.

## Reading/Language Arts Classes

Reading teachers were asked about specific activities in their classes that recognize and engage their AI/AN students with culturally responsive activities. Results for several related reading class activities are combined and presented in table 12 as the percentages occurring “once a month or more.” The new response category “once a month or more” was created by combining the small percentages for the response categories “at least once a month,” “at least once a week,” and “every day or almost every day.” The “once a month or more” category provides a common frequency for examining the use of several culturally responsive instructional activities by reading teachers in low density public, high density public, and BIE schools.

**Table 12. Percentage of fourth- and eighth-grade AI/AN students whose reading teachers reported having them do the following reading activities *once a month or more*, by grade and school type/density: 2015**

Grade and school type/density	Activities		
	Write about their own experiences as an AI/AN person	Write about experiences or issues affecting AI/AN people	Read about or discuss current issues of concern to AI/AN community
<b>Grade 4</b>			
<b>All AI/AN students</b>	<b>22</b>	<b>15</b>	<b>25</b>
Low density public schools	8	6	10
High density public schools	35	24	40
BIE schools	69	47	67
<b>Grade 8</b>			
<b>All AI/AN students</b>	<b>17</b>	<b>15</b>	<b>19</b>
Low density public schools	8	4	7
High density public schools	22	22	31
BIE schools	69	62	69

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. The percentages shown in the table are based on the responses of reading/language arts teachers. Response categories for the question included the following: Never, at least once a year, at least once a month, at least once a week, and every day or almost every day. Percentages for at least once a month, at least once a week, and every day or almost every day were combined to create the “once a month or more” response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**In high density public schools, 35% of students at grade 4 and 22% at grade 8** had reading teachers who reported that they had their students write about their own experiences as an AI/AN person once a month or more.





The response category “once a week or more” was created by combining the small percentages obtained in the “at least once a week” and “every day or almost every day” response categories.

**Table 13. Percentage distribution of fourth- and eighth-grade AI/AN students whose reading teachers reported on integrating AI/AN materials into their lessons, by grade and school type/density: 2015**

Grade and school type/density	How often do you integrate materials about AI/AN culture or history into your reading/language arts lessons?			
	Never	At least once a year	At least once a month	Once a week or more
<b>Grade 4</b>				
<b>All AI/AN students</b>	<b>5</b>	<b>51</b>	<b>29</b>	<b>15</b>
Low density public schools	6	63	26	5
High density public schools	4	39	30	26
BIE schools	3	12	44	41
<b>Grade 8</b>				
<b>All AI/AN students</b>	<b>13</b>	<b>58</b>	<b>19</b>	<b>9</b>
Low density public schools	22	62	11	5
High density public schools	2	59	29	9
BIE schools	4	10	30	56

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Detail may not sum to totals because of rounding. The percentages shown in the table are based on the responses of reading/language arts teachers. Response categories for the question included the following: Never, at least once a year, at least once a month, at least once a week, and every day or almost every day. Percentages for at least once a week and every day or almost every day were combined to create the “once a week or more” response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**5% of students at grade 4 in low density public schools and 26% in high density public schools** had reading teachers who reported that they integrated material about AI/AN culture or history into their lessons once a week or more.

**11% of students at grade 8 in low density public schools and 29% in high density public schools** had reading teachers who reported that they integrated materials about AI/AN culture or history into their lessons at least once a month.



## Mathematics Classes

Mathematics teachers also responded to questions about the ways in which they brought culturally responsive teaching methods to their classrooms through such activities as integrating situations found in AI/AN communities into their lessons and teaching traditional methods of calculating or estimating.

Results for the selected AI/AN topics are presented as the percentages integrated into mathematics lessons “once a month or more.” The new response category combines the small percentages of the response categories “at least once a month,” “at least once a week,” and “every day or almost every day.” “Once a month or more” provides a common frequency for examining the selected AI/AN topics integrated into mathematics lessons by mathematics teachers in low density public, high density public, and BIE schools.

**Table 14. Percentage of fourth- and eighth-grade AI/AN students whose mathematics teachers reported integrating selected AI/AN topics into their lessons *once a month or more*, by grade and school type/density: 2015**

Grade and school type/density	Topics	
	AI/AN culture or history	Current issues affecting AI/AN people or communities
<b>Grade 4</b>		
<b>All AI/AN students</b>	<b>15</b>	<b>11</b>
Low density public schools	3	2
High density public schools	22	15
BIE schools	63	56
<b>Grade 8</b>		
<b>All AI/AN students</b>	<b>8</b>	<b>10</b>
Low density public schools	1	1
High density public schools	12	15
BIE schools	48	58

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. The percentages shown in the table are based on the responses of mathematics teachers. Response categories for the question included the following: Never, at least once a year, at least once a month, at least once a week, and every day or almost every day. Percentages for at least once a month, at least once a week, and every day or almost every day were combined to create the “once a month or more” response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**In high density public schools, 22% of students at grade 4 and 12% at grade 8** had mathematics teachers who reported that they integrated materials about AI/AN culture or history into their lessons once a month or more.



Results for the selected mathematics classroom activities described below are presented as the percentages of activities engaged in “once a month or more.” The response category “once a month or more” was created by combining the small percentages for the response categories “at least once a month,” “at least once a week,” and “every day or almost every day.” “Once a month or more” is a common measure to show selected AI/AN mathematics activities and their use during mathematics lessons by teachers in low density public, high density public, and BIE schools.

**Table 15. Percentage of fourth- and eighth-grade AI/AN students whose mathematics teachers reported having them do the following activities in class *once a month or more*, by grade and school type/density: 2015**

Grade and school type/density	Activities		
	Solve mathematics problems that reflect situations found in AI/AN communities	Participate in activities that integrate mathematics with AI/AN themes	Study traditional AI/AN mathematics
<b>Grade 4</b>			
<b>All AI/AN students</b>	<b>14</b>	<b>9</b>	<b>6</b>
Low density public schools	3	2	1
High density public schools	23	13	9
BIE schools	52	38	31
<b>Grade 8</b>			
<b>All AI/AN students</b>	<b>12</b>	<b>7</b>	<b>3</b>
Low density public schools	3	1	1
High density public schools	22	10	2
BIE schools	38	36	32

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. The percentages shown in the table are based on the responses of mathematics teachers. Response categories for the question included the following: Never, at least once a year, at least once a month, at least once a week, and every day or almost every day. Percentages for at least once a month, at least once a week, and every day or almost every day were combined to create the “once a month or more” response category.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**52% of BIE students at grade 4 and 38% at grade 8 had mathematics teachers who reported that they had their students solve mathematics problems reflecting situations found in AI/AN communities once a month or more.**

# Schools and Community Engagement

As part of the 2015 NAEP administration, school administrators completed the NIES 2015 survey questionnaire for their school.<sup>6</sup> Their responses to the survey questions provided information about how often in a typical school year members of an American Indian or Alaska Native community contributed to special school events.

To show results for several related questions about school visits by AI/AN community members in a simpler format, percentages for only one of the response categories—“three or more times”—are presented in table 16. The frequency “three or more” was selected as it suggests a more active school engagement with the AI/AN community.

**Table 16. Percentage of fourth- and eighth-grade AI/AN students whose school administrators reported on the involvement of an AI/AN community member in school events *three or more times* in a typical school year, by grade and school type/density: 2015**

Grade and school type/density	Events		
	Visited the school to discuss education issues with students and staff	Visited the school to share AI/AN traditions and culture with students and staff	Participated in Indian Education Parent Groups
<b>Grade 4</b>			
<b>All AI/AN students</b>	<b>30</b>	<b>18</b>	<b>21</b>
Low density public schools	16	8	8
High density public schools	50	30	41
BIE schools	51	42	28
<b>Grade 8</b>			
<b>All AI/AN students</b>	<b>28</b>	<b>22</b>	<b>23</b>
Low density public schools	16	8	17
High density public schools	41	37	30
BIE schools	71	68	38

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. Response categories for the question included the following: Never, 1–2 times, 3 or more times, and I don't know.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**50% of students in high density public schools at grade 4 and 41% at grade 8 had school officials who reported that AI/AN community members visited the school three or more times in a year to discuss education issues with students and staff.**

<sup>6</sup> The 2015 NAEP assessment included 7,810 schools at grade 4. Of these, 74 percent were low density public; 1.1 percent were high density public; 0.2 percent were BIE; and 24.7 percent were private and Department of Defense schools. In contrast, 6,150 schools participated at grade 8 in 2015. Of these, 60.4 percent were low density public schools; 1.7 percent were high density public schools; 0.3 percent were BIE schools; and 37.6 percent were private and Department of Defense schools.

The movement within AI/AN education to include culturally responsive teaching and learning in the classroom extends to the school environment. Schools can provide a more supportive and engaging experience for their AI/AN students not only through their activities and special events involving the community, but also through their library holdings about AI/AN topics. In the NIES 2015 teacher questionnaire, teachers were asked to respond to questions about the sufficiency and the quality of such holdings in their school library, media center, or resource center.

Percentages for the response categories “agree” and “strongly agree” were combined to create the percentages reported in table 17. Results for the other response categories (“strongly disagree” and “disagree”) are not shown.

**Table 17. Percentage of fourth- and eighth-grade AI/AN students whose teachers *agreed or strongly agreed* with statements about AI/AN materials available to students in school, by grade and school type/density: 2015**

Grade and school type/density	Statements	
	The number of books and materials specific to AI/AN culture is sufficient	The quality of books and materials specific to AI/AN culture is satisfactory
<b>Grade 4</b>		
<b>All AI/AN students</b>	<b>44</b>	<b>47</b>
Low density public schools	47	49
High density public schools	41	45
BIE schools	38	38
<b>Grade 8</b>		
<b>All AI/AN students</b>	<b>55</b>	<b>55</b>
Low density public schools	55	55
High density public schools	56	57
BIE schools	38	38

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students includes all AI/AN students sampled throughout the nation in public, private, BIE, and Department of Defense schools. The percentages shown in the table are based on the responses of mathematics teachers. Responses of reading teachers were very similar.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

**38% of BIE students at grades 4 and 8** had teachers who reported that they agreed or strongly agreed that their school library had a sufficient number of grade-level AI/AN books and materials of satisfactory quality.

# Performance Results

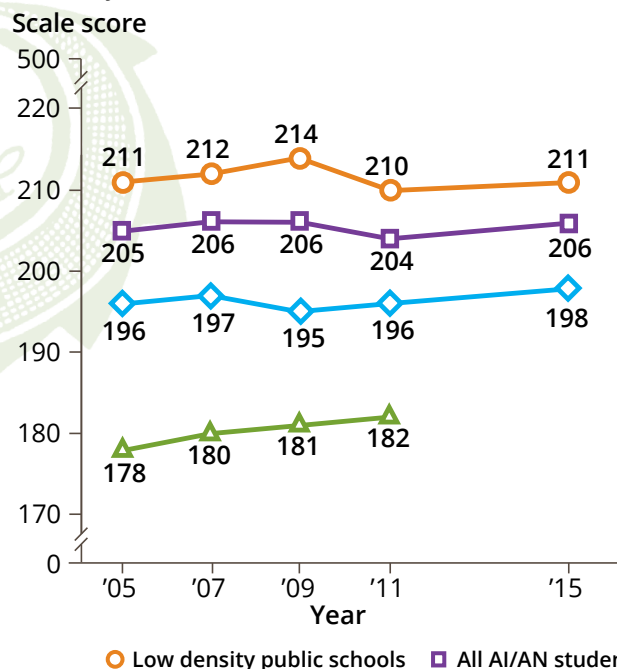
The figures that follow show whether NAEP reading and mathematics scores are changing for AI/AN students in the three school types and for all AI/AN students in public schools in the nation. The figures use asterisks to identify prior assessment years for which average scores are statistically different from average scores in 2015. While not noted in the figures, scores for students in low density public schools in 2015 were higher than those in high density public or BIE schools (when reportable), and scores for students in high density public schools were higher than for those in BIE schools.

## Reading

At grade 4, average reading scores in 2015 for AI/AN students in low density and high density public schools and for all AI/AN students (public) were not significantly different from the scores in previous assessment years (figure 1). Results in 2015 for fourth-graders in reading cannot be reported for BIE schools because school participation rates did not meet reporting criteria.

At grade 8, average reading scores in 2015 for students in BIE schools were higher than scores in 2009 and 2007, but were not significantly different from scores in 2011 and 2005 (figure 2). For students in high density public schools and for all AI/AN students (public), average reading scores at grade 8 in 2015 were higher than in 2007, but were not significantly different from scores in other assessment years. In low density public schools, average reading scores for eighth-graders in 2015 were not significantly different from their average scores in previous assessment years.

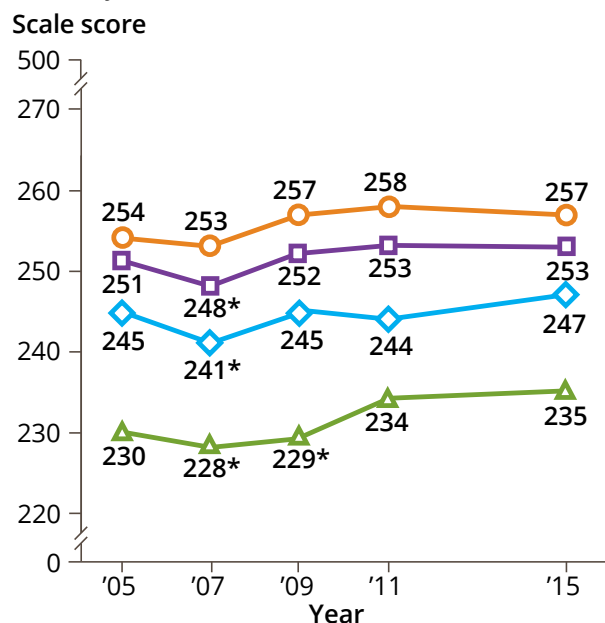
**Figure 1. Trend in NAEP reading average scores for fourth-grade AI/AN students, by school type/density: Selected years, 2005–2015**



NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students (public) includes only students in public and BIE schools. Performance results are not available for BIE schools at fourth grade in 2015 because school participation rates did not meet the 70 percent criteria.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.

**Figure 2. Trend in NAEP reading average scores for eighth-grade AI/AN students, by school type/density: Selected years, 2005–2015**



\* Significantly different ( $p < .05$ ) from 2015.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students (public) includes only students in public and BIE schools.

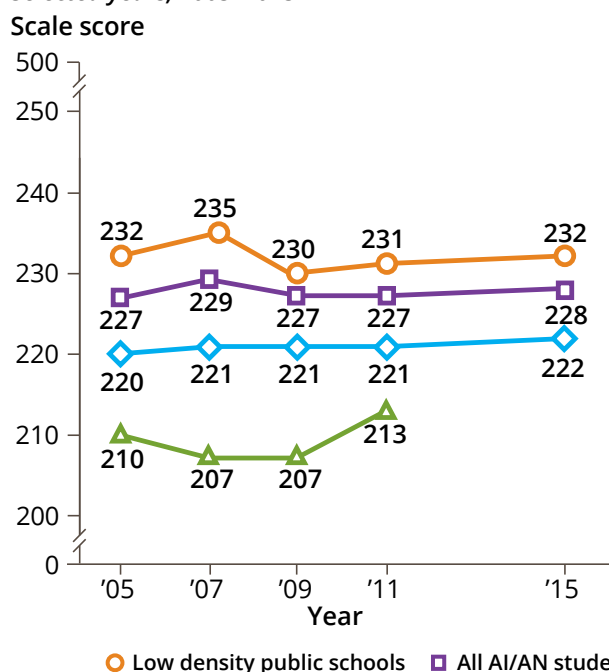
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.

## Mathematics

At grade 4, average mathematics scores in 2015 for AI/AN students in low density and high density public schools and for all AI/AN students (public) were not significantly different from the scores in previous assessment years (figure 3). Results in 2015 for fourth-graders in mathematics cannot be reported for BIE schools because school participation rates did not meet reporting criteria.

At grade 8, average mathematics scores in 2015 for students in BIE schools were higher than scores in 2009 and 2007, but were not significantly different from scores in 2011 and 2005 (figure 4). For students in low density and high density public schools and for all AI/AN students (public), average mathematics scores for eighth-graders in 2015 were not significantly different from their scores in previous assessment years.

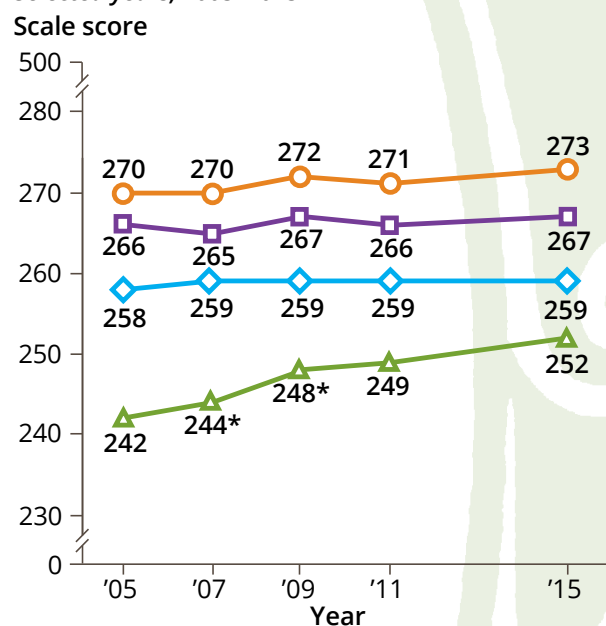
**Figure 3. Trend in NAEP mathematics average scores for fourth-grade AI/AN students, by school type/density: Selected years, 2005–2015**



NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students (public) includes only students in public and BIE schools. Performance results are not available for BIE schools at fourth grade in 2015 because school participation rates did not meet the 70 percent criteria.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.

**Figure 4. Trend in NAEP mathematics average scores for eighth-grade AI/AN students, by school type/density: Selected years, 2005–2015**



\* Significantly different ( $p < .05$ ) from 2015.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. School density indicates the proportion of AI/AN students enrolled. Low density public schools have less than 25 percent AI/AN students. High density public schools have 25 percent or more. All AI/AN students (public) includes only students in public and BIE schools.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.

# Appendix Tables

**Table A-1. Average scores in NAEP reading for fourth- and eighth-grade AI/AN students, by grade and jurisdiction: Various years, 2005–15**

Grade and jurisdiction	2005	2007	2009	2011	2015
<b>Grade 4</b>					
<b>Nation</b>	<b>203</b>	<b>204</b>	<b>204</b>	<b>202</b>	<b>204</b>
Alaska	183	188	179	175*	184
Arizona	184	184	188	183	189
Minnesota	—	205	199	195	197
Montana	201	204	206	199	199
New Mexico	186	193	188	190	184
North Carolina	—	202	202	192	198
North Dakota	198	201	202	205	202
Oklahoma	211*	213*	215*	212*	223
Oregon	—	206	210	213*	192
South Dakota	194	192	190	191	190
Utah	—	—	194	185	‡
Washington	—	204	212	201	196
Wisconsin	—	—	—	—	207
Wyoming	—	—	—	—	203
<b>Grade 8</b>					
<b>Nation</b>	<b>249</b>	<b>247*</b>	<b>251</b>	<b>252</b>	<b>252</b>
Alaska	240*	236	239*	234	231
Arizona	238	232*	241	240	242
Minnesota	—	246	257	258	250
Montana	247	249	253	256	249
New Mexico	236	233*	236	240	241
North Carolina	—	236	235	245	250
North Dakota	248	246	242	244	245
Oklahoma	254*	256	258	256	260
Oregon	—	260	259	256	‡
South Dakota	238*	241	242	240	245
Utah	—	—	235	244	247
Washington	—	251	253	253	251
Wisconsin	—	—	—	—	253
Wyoming	—	—	—	—	‡

— Not available. State was not sampled for NIES reporting of separate state results.

‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

\* Significantly different ( $p < .05$ ) from 2015.

NOTE: AI/AN = American Indian/Alaska Native. The national and state results reported here include only public and Bureau of Indian Education (BIE) schools. Results for Alaska include public schools only.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.



**Table A-2. Average scores in NAEP mathematics for fourth- and eighth-grade AI/AN students, by grade and jurisdiction: Various years, 2005–15**

Grade and jurisdiction	2005	2007	2009	2011	2015
<b>Grade 4</b>					
<b>Nation</b>	<b>226</b>	<b>228</b>	<b>225</b>	<b>226</b>	<b>227</b>
Alaska	220	218	216	213*	219
Arizona	215	213	213	215	218
Minnesota	—	234*	232	232	223
Montana	223*	222*	227*	220	216
New Mexico	215	217	214	218	218
North Carolina	—	229	232	225	229
North Dakota	221	223	223	220	224
Oklahoma	229*	234	234	234	235
Oregon	—	220	223	220	‡
South Dakota	217	215	217	218	215
Utah	—	—	218	214	‡
Washington	—	226*	225*	222	216
Wisconsin	—	—	—	—	231
Wyoming	—	—	—	—	220
<b>Grade 8</b>					
<b>Nation</b>	<b>264</b>	<b>264</b>	<b>266</b>	<b>265</b>	<b>266</b>
Alaska	264*	260	262	258	257
Arizona	256	255	254	253	258
Minnesota	—	266	275*	263	261
Montana	259	260	260	263	256
New Mexico	251*	250*	252*	256	258
North Carolina	—	261	256	265	261
North Dakota	260	260	260	262	259
Oklahoma	267	269	269	272	269
Oregon	—	264	273	260	‡
South Dakota	250	254	260	257	257
Utah	—	—	263*	244	240
Washington	—	264	268	256	263
Wisconsin	—	—	—	—	273
Wyoming	—	—	—	—	252

— Not available. State was not sampled for NIES reporting of separate state results.

‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

\* Significantly different ( $p < .05$ ) from 2015.

NOTE: AI/AN = American Indian/Alaska Native. The national and state results reported here include only public and Bureau of Indian Education (BIE) schools. Results for Alaska include public schools only.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 2005–15 National Indian Education Studies.

**Table A-3. Total enrollment, AI/AN enrollment, and AI/AN students as a percentage of total enrollment in public elementary and secondary schools, and number of AI/AN students assessed at grades 4 and 8 in NAEP reading or mathematics, by jurisdiction: 2013–14 and 2015**

Jurisdiction	Total enrollment (all students) <sup>1</sup>	AI/AN enrollment <sup>1</sup>	AI/AN as percent of total	Number of AI/AN students assessed in NAEP reading or mathematics <sup>2</sup>	
				Grade 4	Grade 8
<b>Nation</b>	<b>50,044,522</b>	<b>522,813</b>	<b>1.0</b>	<b>7,800</b>	<b>7,200</b>
<b>Total for selected states</b>	<b>8,259,820</b>	<b>341,477</b>	<b>4.1</b>	<b>6,700</b>	<b>6,200</b>
Alaska	130,944	31,311	23.9	900	800
Arizona	1,102,445	52,618	4.8	1,000	900
Minnesota	850,973	14,722	1.7	300	300
Montana	144,129	16,297	11.3	500	500
New Mexico	339,244	34,185	10.1	900	900
North Carolina	1,530,857	20,556	1.3	300	200
North Dakota	103,947	9,078	8.7	500	400
Oklahoma	681,848	102,186	15.0	700	800
Oregon	593,000	9,586	1.6	100	100
South Dakota	130,890	15,040	11.5	700	700
Utah	625,461	7,179	1.1	100	100
Washington	1,058,936	14,700	1.4	300	300
Wisconsin	874,414	10,912	1.2	200	200
Wyoming	92,732	3,107	3.4	200	100

NOTE: AI/AN = American Indian/Alaska Native. The numbers of students assessed in NAEP reading or mathematics are rounded to the nearest hundred. The national results include public, private, Bureau of Indian Education (BIE), and Department of Defense schools. The state results include public and BIE schools only. Results in 2015 for Alaska include public schools only. Total enrollment includes pre-kindergarten through twelfth grade.

SOURCE: <sup>1</sup> U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "State Nonfiscal Survey of Public Elementary/Secondary Education," 2013–14, Version 1a.

SOURCE: <sup>2</sup> U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Reading and Mathematics Assessments.

**Table A-4. Number of participating schools with AI/AN students and number of participating AI/AN students, by grade and type of school: 2015**

Type of school	Grade 4				Grade 8			
	Schools in NIES survey	Students			Schools in NIES survey	Students		
		NIES survey <sup>1</sup>	Reading assessment	Mathematics assessment		NIES survey <sup>1</sup>	Reading assessment	Mathematics assessment
<b>Overall</b>	<b>1,600</b>	<b>8,500</b>	<b>3,900</b>	<b>3,900</b>	<b>1,500</b>	<b>8,200</b>	<b>3,600</b>	<b>3,600</b>
Public	1,500	6,800	3,000	3,100	1,400	6,600	2,900	2,900
BIE	100	1,700	800	800	100	1,500	700	700
Private	10	‡	‡	‡	10	‡	‡	‡
DoDEA	30	‡	‡	‡	20	‡	‡	‡

‡ Reporting standards not met. Sample size insufficient to permit a reliable estimate.

<sup>1</sup> Some fourth- and eighth-grade AI/AN students assessed in science in 2015 completed the NIES student survey questionnaires.

NOTE: AI/AN = American Indian/Alaska Native. BIE = Bureau of Indian Education. DoDEA = Department of Defense Education Activity (overseas and domestic schools). For public and BIE schools, the number of schools and the number of students are rounded to the nearest hundred. The number of private and Department of Defense schools are rounded to the nearest 10. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 National Indian Education Study.

# Acknowledgments

The National Center for Education Statistics (NCES) conducted the National Indian Education Study (NIES) for the U.S. Department of Education, Office of Indian Education (OIE). The study was designed in consultation with a Technical Review Panel composed of American Indian and Alaska Native educators and researchers from across the country.

NIES is directed by NCES and carried out by Educational Testing Service (ETS), Pearson Educational Measurement, American Institutes for Research, Westat, and Fulcrum. Additional support in the development of this report was provided by Hager Sharp.

Many thanks are due to the numerous people who reviewed this report at various stages, including those from OIE, Kauffman & Associates, Inc., Tribal Tech, LLC, the White House Initiative on AI/AN Native Education, and members of the NIES Technical Review Panel. Special thanks go to Karen Francis-Begay, Assistant Vice President of Tribal Relations at the University of Arizona, who provided guidance during the development of this report.

This report would not have been possible without the participation of thousands of students, teachers, and principals across the country, and the support of various education agencies, communities, and parents.

## 2015 National Indian Education Study Technical Review Panel

**Doreen E. Brown**

Yup'ik  
Anchorage School District

**Robert B. Cook**

Oglala Sioux Tribe (Lakota)  
Native Alliance Teach for America

**Steven Andrew Culpepper**

University of Illinois at Urbana-Champaign

**Susan C. Faircloth, Chair**

Coharie Tribe  
University of North Carolina Wilmington

**Rebecca Izzo-Manymules**

Navajo Nation  
University of New Mexico

**Jeremy MacDonald**

Chippewa-Cree/Blackfeet  
Box Elder School

**Jeanette Muskett-Miller**

Navajo  
Central Consolidated School District

**Debora Norris**

Navajo  
Salt-River Schools

**Martin J. Reinhardt**

Anishinaabe Ojibway (Sault Ste. Marie Tribe of Chippewa Indians)  
Center for Native American Studies  
Northern Michigan University

**Tarajeau Yazzie-Mintz**

Navajo  
American Indian College Fund



This page intentionally left blank.



# U.S. Department of Education

The National Assessment of Educational Progress (NAEP) is a congressionally authorized project sponsored by the U.S. Department of Education. The National Center for Education Statistics, a department within the Institute of Education Sciences, administers NAEP. The Commissioner of Education Statistics is responsible by law for carrying out the NAEP project.

**Betsy DeVos**  
Secretary  
U.S. Department of Education

**Thomas W. Brock**  
Delegated Duties of the Director  
Institute of Education Sciences

**Peggy G. Carr**  
Acting Commissioner  
National Center for Education Statistics

**March 2017**

## MORE INFORMATION

The report release site is  
<http://nces.ed.gov/nationsreportcard/nies>.  
The NCES Publications and Products address is  
<http://nces.ed.gov/pubsearch>.

For ordering information, write to  
ED Pubs  
U.S. Department of Education  
P.O. Box 22207  
Alexandria, VA 22304

or call toll free 1-877-4-ED-Pubs

or order online at <http://www.edpubs.gov>.

## SUGGESTED CITATION

Ninneman, A.M., Deaton, J., and Francis-Begay, K. (2017).  
*National Indian Education Study 2015* (NCES 2017-161).  
Institute of Education Sciences, U.S. Department of Education,  
Washington, DC

## CONTENT CONTACT

James Deaton  
202-245-7140  
[James.Deaton@ed.gov](mailto:James.Deaton@ed.gov)

This report was prepared for the National Center for Education Statistics under Contract No. ED-IES-13-C-0017 with Educational Testing Service. Mention of trade names, commercial products, or organizations does not imply endorsement by the U.S. Government.



**"The Department of Education's mission is to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access."**