



# MONTANA

## AMERICAN INDIAN STUDENT ACHIEVEMENT DATA REPORT

### FALL 2012



Denise Juneau, Superintendent  
Office of Public Instruction

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**Indian Education**  
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# Montana

## American Indian Student Achievement Data Report Fall 2012

*Schools and communities across Montana are working hard to ensure that students receive the best education and graduate ready for college and careers. One of the most important components in this effort involves understanding where students are and how we can best help them achieve at the highest levels. Data is an invaluable tool and its use is necessary in ensuring student success. This report is intended to support that effort and to ensure that the work of closing the achievement gap for American Indian students in Montana continues. Understanding this information can assist us all as we strive to engage students in learning environments that are both rigorous and meaningful to their lives and their futures. Our collaborative efforts will make a difference and only continue the work of quality education in Montana.*

*Mandy Smoker Broaddus, SIG School Transformation Director*

### 2007 MCA 20-9-330

In 2007, the Montana State Legislature passed Montana Code Annotated 20-9-330, appropriating \$200 per American Indian child, totaling over \$3 million dollars per year, to provide funding to school districts for the purpose of closing the educational achievement gap that exists between American Indian students and non-Indian students. According to MCA 20-9-330 (2) (a), funds were to be determined by "...using the number of American Indian students enrolled in the district based on the count of regularly enrolled students on the first Monday in October of the prior school year as reported to the Office of Public Instruction" and deposited into the district's general fund.

This report is provided to track the American Indian achievement gap and provide data on the Montana American Indian student population.

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## 2011-2012 Population Data

- 6.5 percent of Montana’s total population is American Indian (2010 Census), comprised mostly of the twelve tribal nations of Montana: Assiniboine, Blackfeet, Chippewa, Cree, Crow, Gros Ventre, Kootenai, Little Shell Tribe of Chippewa, Northern Cheyenne, Pend d’Oreille, Salish, Sioux
- There are 16,530 American Indian/Alaska Native students in Montana of a total of 142,350 students enrolled in Montana’s K-12 public schools. 11.6 percent of Montana’s students are American Indian.
- Out of 826 Public Schools in Montana:
  - 56 Public Schools report 75 – 100% American Indian students within their school population.
  - 19 Public Schools report 50 – 75% American Indian students within their school population.
  - 36 Public Schools report 25 – 50% American Indian students within their school population.

## Criterion Reference Test (CRT)

Under Title 1 of the Elementary and Secondary Education Act (ESEA) of 1994, P.L. 103-382 and the No Child Left Behind Act (NCLB) of 2001, all states were required to develop statewide assessments for reading, mathematics, and science. Montana received federal funding to develop an assessment. The criterion-

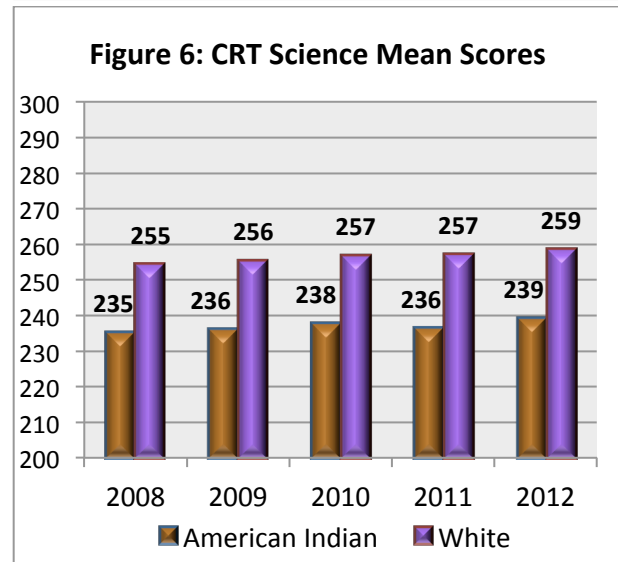
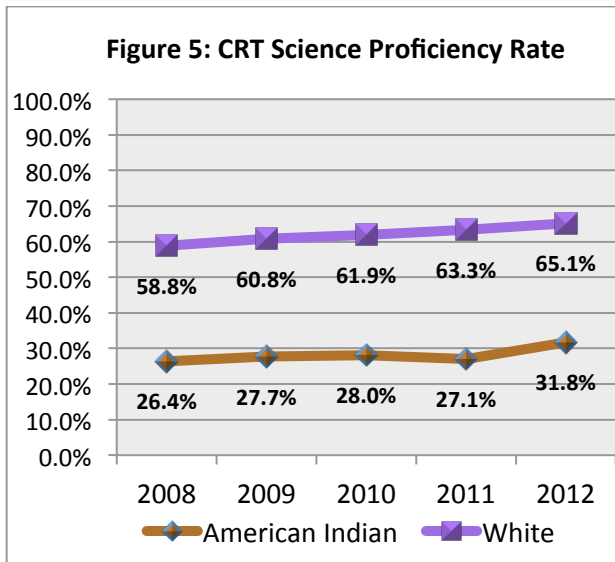
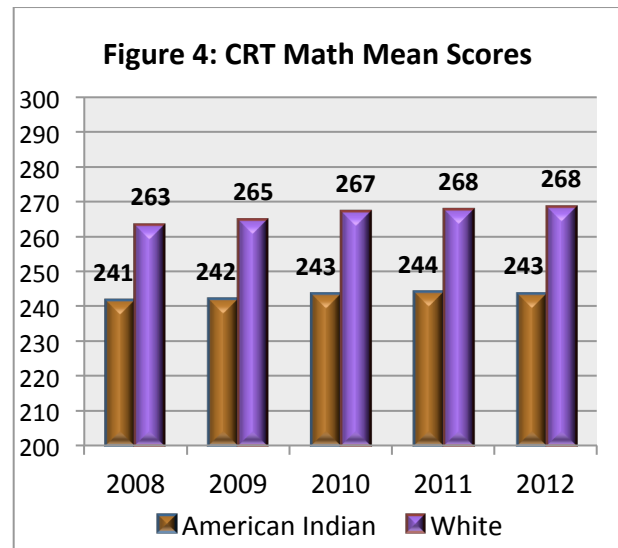
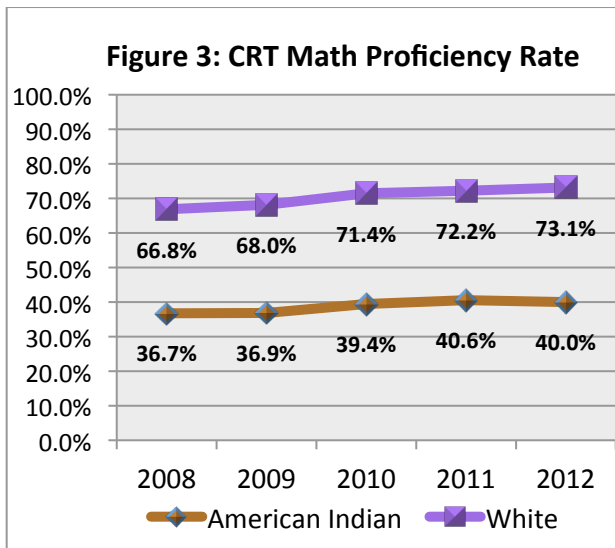
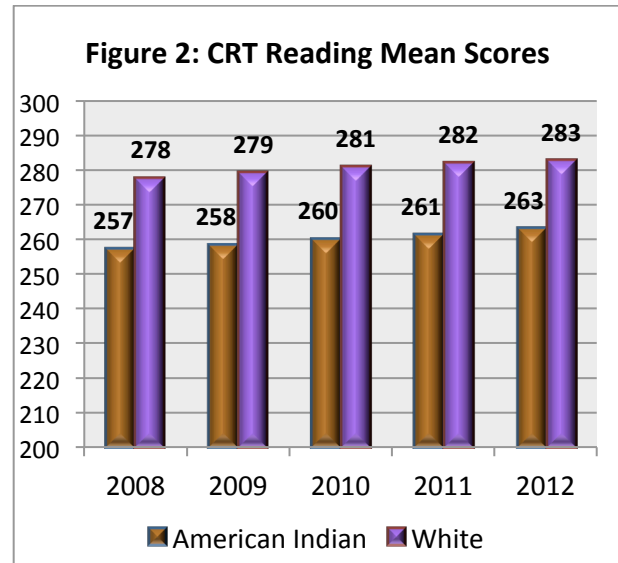
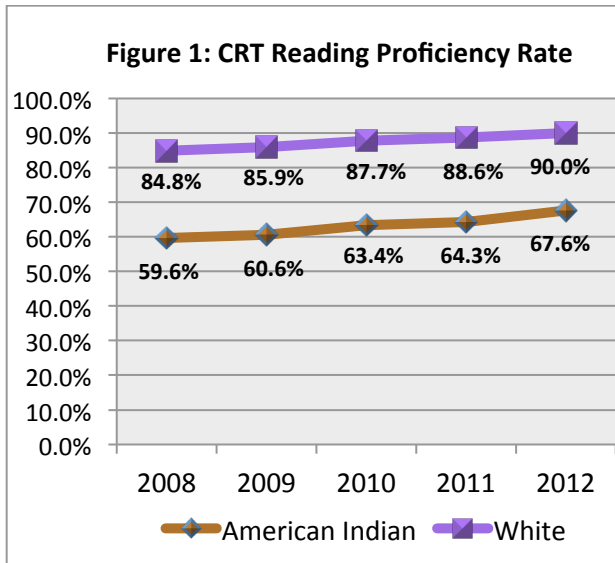
referenced test (CRT) is given every spring in compliance with federal law.

The CRT is based on, and aligned to, Montana’s Content Standards in reading, mathematics and science. Montana educators worked with OPI in the development and review (content and bias) of these tests to assess how well students have learned the Montana content standards for their grade. Since the 2007-2008 school the test has been issued in the content areas of reading, math and science. Only 4<sup>th</sup>, 8<sup>th</sup> and 10<sup>th</sup> grade students take the science portion of the tests while 3-8<sup>th</sup> and 10<sup>th</sup> grade students take the reading and math portions of the test.

Math, science and reading scores on the CRT are scored on a scale from 200 to 300 with 200 being the low score. The proficiency levels are broken down as:

• Novice	200 – 225
• Near Proficient	226 – 250
• Proficient	250 – 275
• Advanced	275 – 300

A student that scores 250 or above in a subject is considered to be proficient in that subject and meets the requirements set forth by the NCLB Act. The CRT results are modeled such that if a student scores 250 in a subject during one school year and makes the appropriate progress in skill level for the next school year, their score for that subject will remain relatively unchanged.



\*Mean scores are "averages" found by adding up all test results and dividing by the number of test takers\*

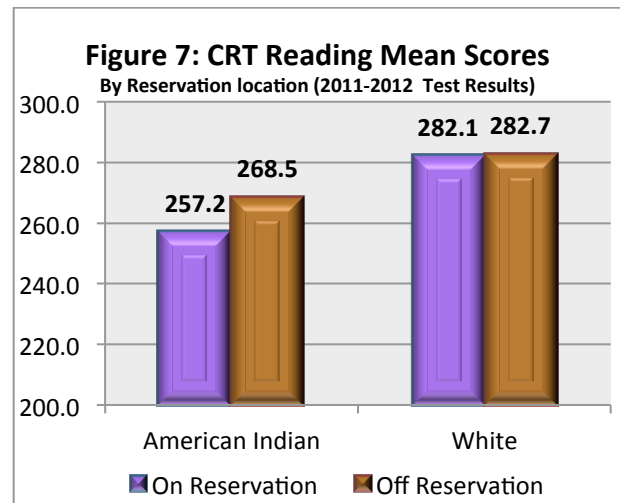
## CRT Results

Figure 1 shows that during the 2012 school year 67.6% of American Indians scored proficient on the reading assessment. While this was a significant improvement over the 64.3% that scored as proficient the previous year, it is still well below the 90.0% of White students that scored as proficient or above.

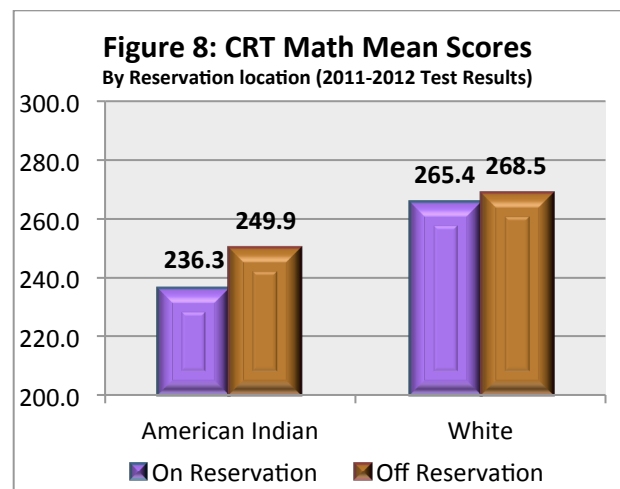
While the American Indian mean reading score shown in Figure 2 has increased every year since 2008, it is still significantly lower than the White mean reading score. However, since 2008, both the mean score and proficiency rates for reading are increasing at a faster rate for American Indian students than for White students.

Figure 3 shows that 40.0% of American Indians students scored as proficient in math during the 2012 school year. While this score is better than the rates from 2008 – 2010 it is a decrease from the percentage of students that scored proficient during the 2011 school year. Figure 4 shows the general trend for the mean math score for both American Indians and White students is increasing over time. However White students mean scores are increasing at a faster rate over time than that of American Indian students.

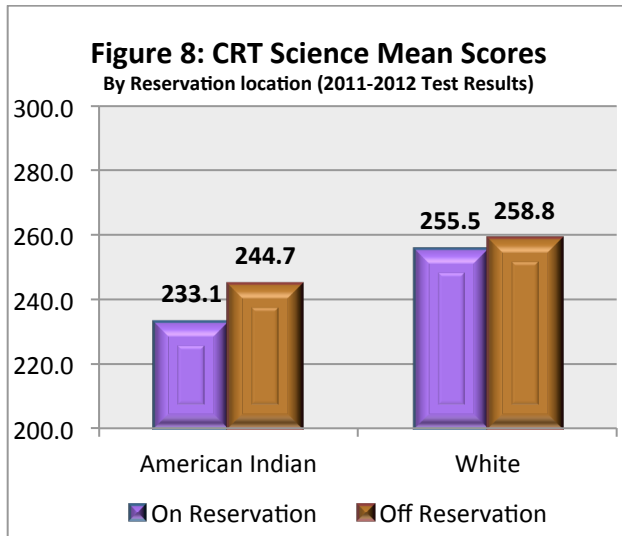
American Indian science scores, shown in Figures 5 and 6 increased significantly for the 2012 school year with 31.8% of students testing proficient. This is still significantly lower than the 65.1% of White students that tested as proficient in science. The general trend since 2008 for science scores is a slight increase, with American Indian students and White students increasing at approximately the same rate.



American Indian students also do not score as well on the reading assessment if their school is physically located within a reservation boundary, as shown in Figure 7. Whether or not the school is within the boundaries of a reservation or not does not have much, if any, effect on reading assessment scores for White students. For American Indian students there is an increase in over 10 points for the CRT reading mean score for a student attending a school outside the reservation boundaries. As Figure 8 shows, the same trend continues for the math assessment. For the math assessment there is a slight difference in White student's mean scores, but not as large of a difference as for American Indian students.







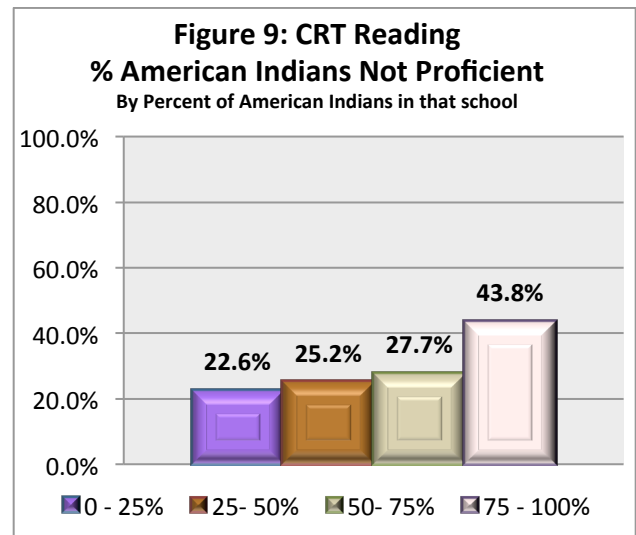
The science assessment reveals a very similar pattern to that of the math assessment. In Figure 8 it is shown that American Indian student off the reservations score significantly better than their counterparts in schools located on the reservation. Meanwhile there is only a slight difference again for the White students.

While only the 2011-2012 school year results are shown here for the difference between schools located on and off of the reservation, the trend is very similar and continues back at least as far as the 2006-2007 school year.

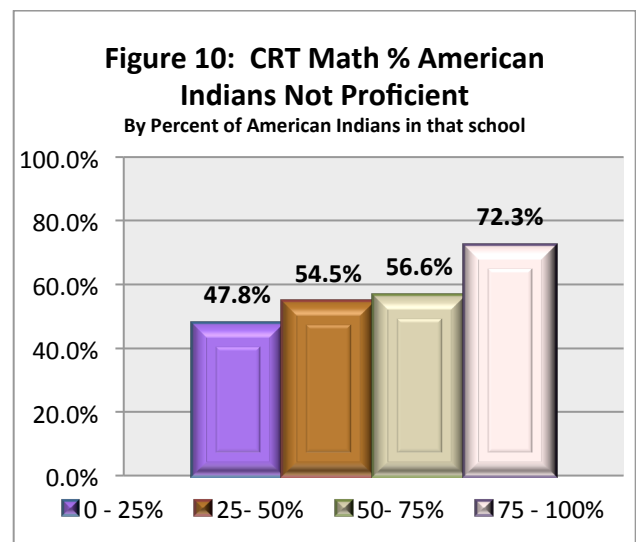
Figures 9-11 show the percentage of American Indian students for 2011-2012 that do not score proficient or higher in the respective subjects. Figures 9-11 are also broken down so that the students are separated into categories based on the percentage of American Indians that make up the demographics of the school they attend.

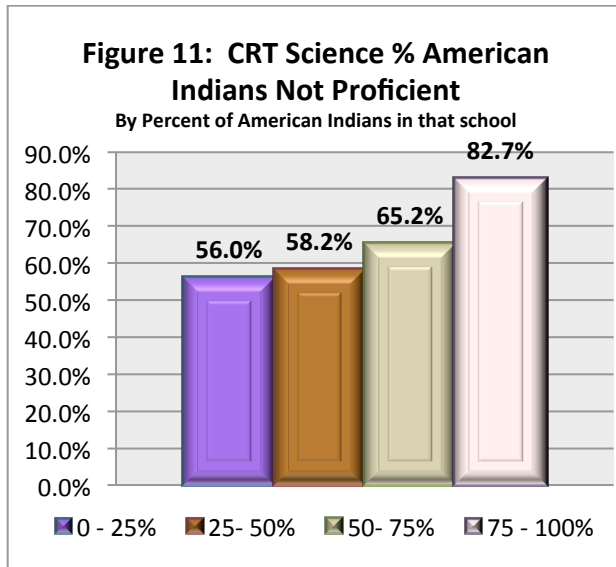
Figure 9 illustrates that for American Indians there is a strong increase in the percentage of students that fail to achieve at least a proficient score in reading when the school they attend has a higher percentage of American Indians.

43.8% of American Indians at schools with 75-100% American Indian student population do not achieve proficient or higher score on the CRT reading assessment. This is a significant increase when compared to schools that are made up of less than 75% American Indian students.



Figures 10 and 11 show the same relationship exists for math and science as it does for reading. The biggest difference for math and science is that the percentages are much higher than for reading for all schools. The significant jump in percentage for students in schools with at least 75% American Indians is also seen here.





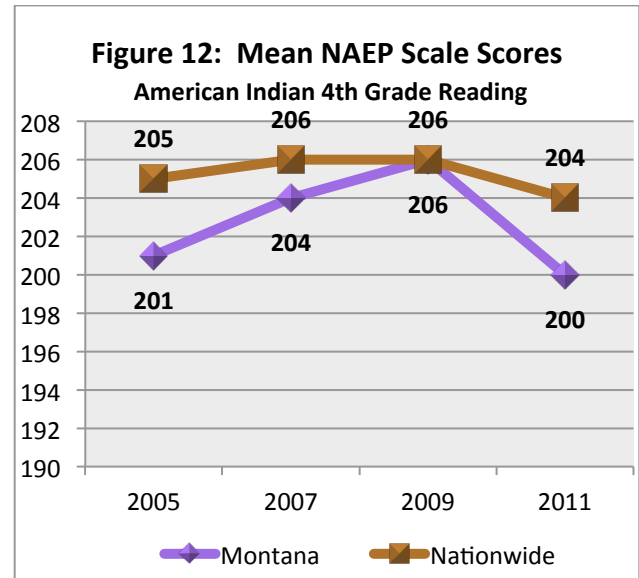
For all subjects the biggest influence is seen at schools with at least 75% American Indian student populations, most of which are located on reservations.

## National Assessment of Educational Progress (NAEP)

The NAEP test is a national assessment that is given every 2 years to randomly selected schools across the nation and Montana. The NAEP test was last given in 2010-2011 and is only given to 4<sup>th</sup> grade and 8<sup>th</sup> grade students in mathematics and reading. The NAEP scores are on a scale of 0 – 500 with 500 being the highest score. Scores across grades or across subjects can't be compared to each other because they are not scaled the same, i.e. a 4<sup>th</sup> grade scale score can't be compared to an 8<sup>th</sup> grade scale score. Also the NAEP scores and results can't be compared to the CRT. The two tests are set up completely different and are essentially testing for different things.

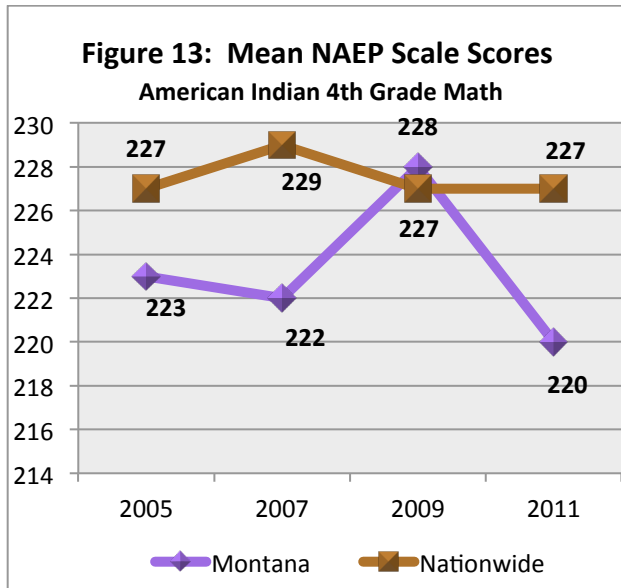
In Figure 12 the 4<sup>th</sup> grade reading scores of American Indians are shown. The graph shows

that while increases in the 4<sup>th</sup> grade reading score for American Indians were showing improvement in past years, the last test in 2011 shows a drop in test scores. It can also be seen that the mean Montana scores are below the national average for American Indian students.



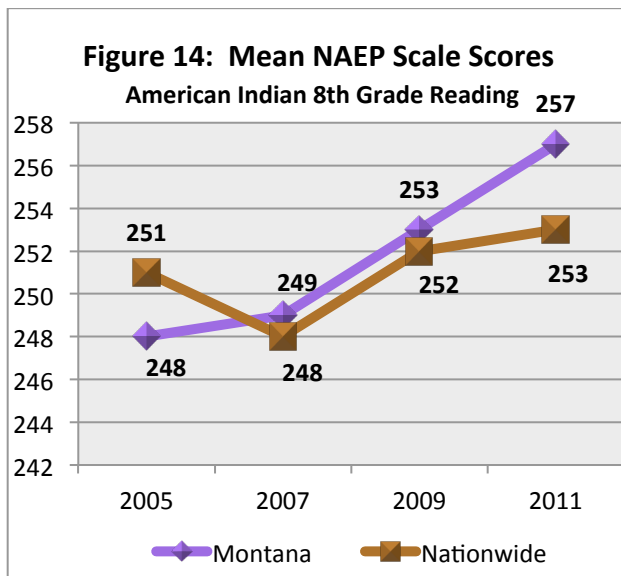
There are 12 states (Alaska, Arizona, Minnesota, Montana, New Mexico, North Carolina, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington) that have a significant enough American Indian population that the sample sizes are large enough to report. In 2011, of those 12 states, Montana is ranked 5<sup>th</sup> in 4<sup>th</sup> grade reading scores for American Indian students.

4<sup>th</sup> grade math scores for American Indians saw a statistically significant drop in the mean score for 2011 when compared to 2009. Most of the significant drop in 2011 is due to the significant increase in the 4<sup>th</sup> grade math scores from 2007 to 2009. Figure 13 shows the mean math scores for the past 4 test periods.

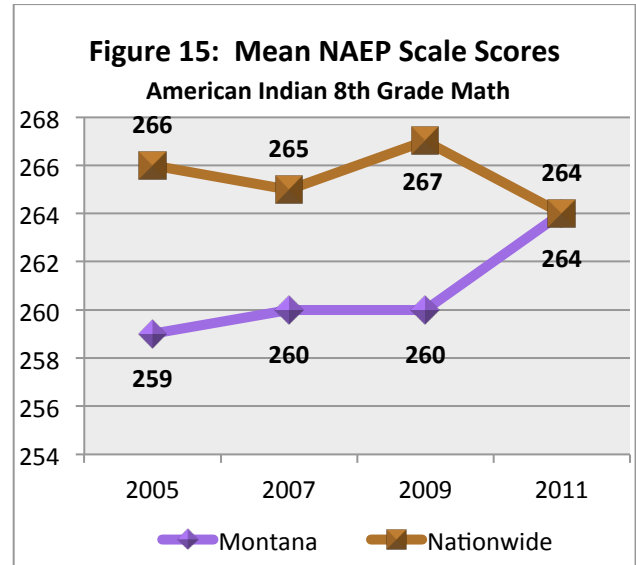


Except for in 2009, the Montana mean scores for American Indians in math have been much lower than the nationwide mean with the 2011 results showing the biggest difference. Of the 12 states with a significant American Indian population, Montana is ranked 7<sup>th</sup> for mean 4<sup>th</sup> grade math score.

While the 4<sup>th</sup> grade scores for the NAEP in 2011 and as a general trend since 2005 have seen decreasing scores, the 8<sup>th</sup> grade scores are much more optimistic.



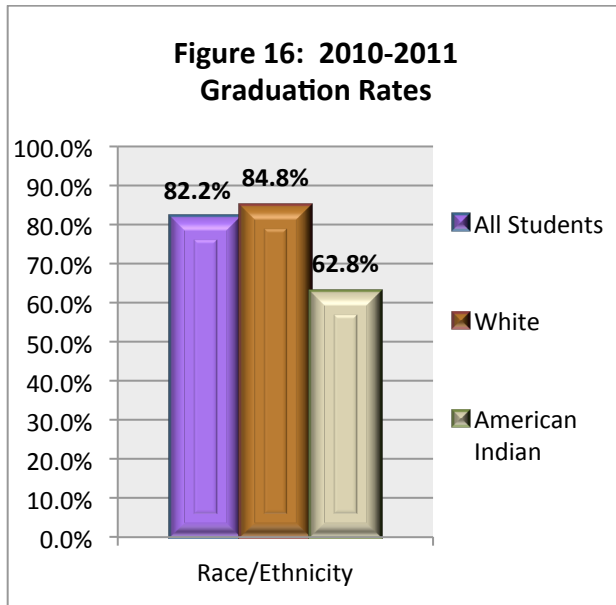
8<sup>th</sup> grade reading scores for Montana American Indians have increased every year since 2005, as shown in Figure 14. The increase from 2005 to 2011 is statistically significant and the scores have also gone from being below the national average to well above it. Montana is 4<sup>th</sup> in 8<sup>th</sup> grade reading of the 12 states with significant American Indian populations.



American Indian 8<sup>th</sup> grade math scores in Montana have also increased since 2005, as shown in Figure 15. In 2011 the Montana mean score in 8<sup>th</sup> grade math was the same as the national mean score, when in the past the national score has always been higher than the Montana score. Of the 12 states with a significant American Indian population, Montana ranks as 3<sup>rd</sup> among 8<sup>th</sup> grade math scores.

## Graduation Rates

The graduation rates discussed in this report are the federal graduation rates that determine the % of students that graduate in 4 years or less. Graduation Rates in Montana have been relatively stable since the 2007 – 2008 school



Year. Since 2007 – 2008 there also has not been much change over this time for any specific Race/Ethnicity. Figure 16 shows the graduation rates by Race/Ethnicity for the 2010 – 2011 school year. The American Indian graduation rate for the 2010 – 2011 school year was 62.8%. This is almost 20 percentage points lower than any other Race/Ethnicity (including Race/Ethnicities not shown in the graph) and is 22.0 percentage points lower than the graduation rate for White students.

## Dropout Rates

The dropout rates presented here are an event rate, which is the percentage of total students that dropped out during that year. The American Indian student dropout rate for the 2010 – 2011 school year was 6.9%. Figure 17 shows the comparison of dropout rates by Race/Ethnicity. American Indian students drop out at a significantly higher rate than other Races/Ethnicities.

The American Indian 7 – 12 student population in Montana makes up 10.2% of the total 7 – 12

student population but American Indians account for 25.8% of the dropouts throughout Montana.

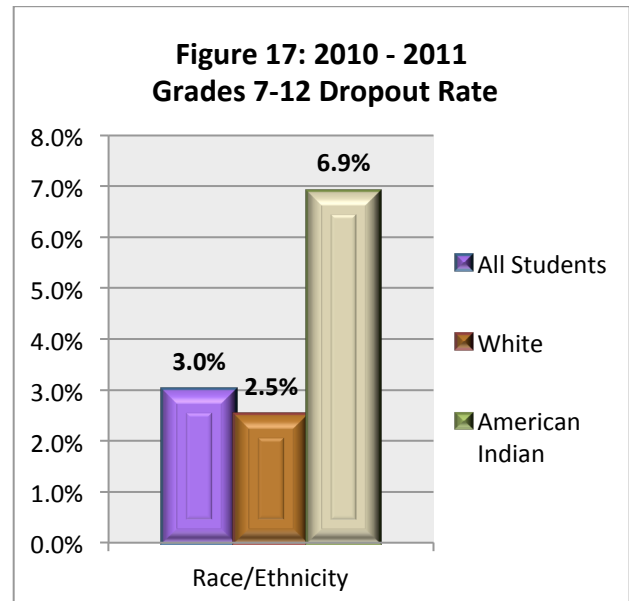
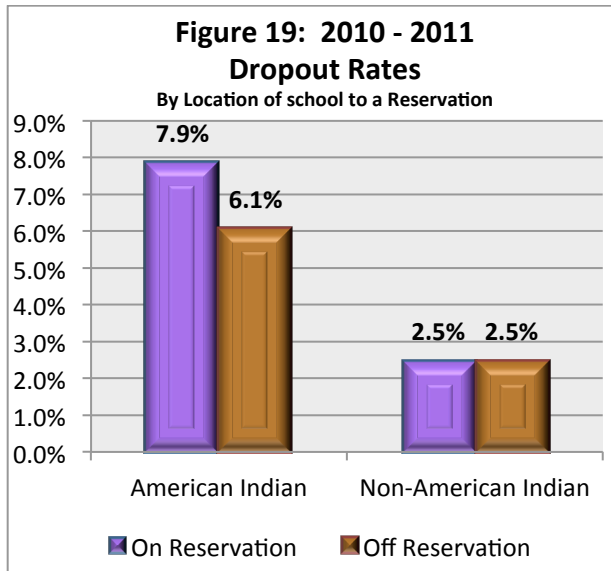


Figure 18 shows the percentage of students that drop out before and during high school. American Indian students drop out in the 7<sup>th</sup> and 8<sup>th</sup> grade levels at a rate that is 12.1 times that of White students (numbers in table are rounded). Even at the high school level, American Indian students tend to drop out at an earlier grade than White students.

**Figure 18: 2010 – 2011 Dropout Rates by Grade**

	Grades 7 – 8	Grades 9 – 12	Total
American Indian	0.8%	10.1%	6.9%
White	0.1%	3.6%	2.5%
Overall	0.2%	4.3%	3.0%

Figure 19 presents the differences in dropout rates of students from schools physically located within a reservation boundary to schools located outside the reservation boundaries. American Indian students drop out at a higher rate in schools on the reservation than in schools outside the reservation boundaries. Non-American Indian students



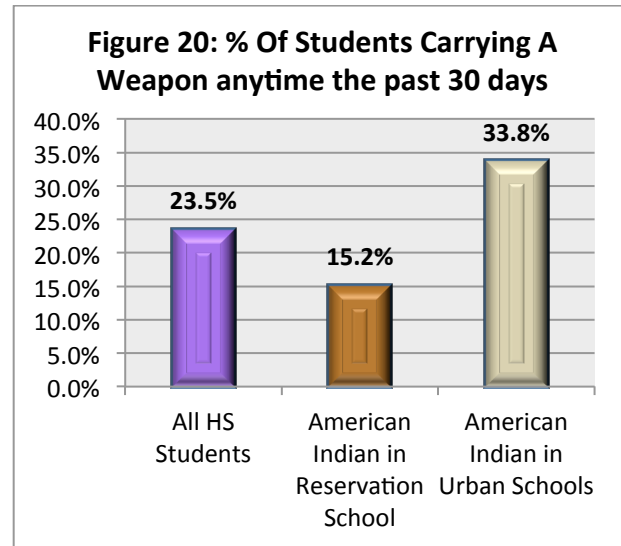
have the same dropout rate regardless of where the school is located.

## Student Surveys

There are two student surveys administered throughout the state of Montana, the Youth Risk Behavior Survey (YRBS) and the My Voice Student Report. Both surveys do not survey every student and use sampling procedures to estimate for the entire population. The YRBS survey has been conducted once every two years since 1993, with the last one being during the 2010-2011 school year. The My Voice survey is conducted on an annual basis since the 2010-2011 school year. Some results are discussed here but you may find the entire YRBS report at <http://www.opi.mt.gov/yrbs>.

There are several ways to break up the YRBS survey. This report focuses on three of them, all High School students, American Indian students on or near reservations, and American Indian students in urban schools. All results from the YRBS are from 2010-2011 unless otherwise stated.

One question that is asked on the YRBS survey asks if a student has carried a weapon such as a gun, knife, or club on one or more of the past 30 days. The results, shown by percentage of “Yes” answers, are shown in Figure 20.



Over twice as many American Indian students that attend urban schools are carrying weapons than American Indians that attend reservation schools. The percentage of American Indian students in urban schools carrying a weapon has increased during every study since 2003 while for Reservation students the percentage is the lowest since the study began tracking this question in 1999. Figure 21 shows some related questions and further demonstrates the differences between American Indian students on or near reservations and in urban schools.

Another area that the YRBS survey focuses on is the use of drugs, alcohol, and tobacco use. Many studies have shown the detrimental effects that drug, alcohol, and tobacco use have on a student’s academic achievements.

Figure 21 also shows the results of some selected survey questions on drugs, alcohol, and tobacco use. American Indian students

## Figure 21: YRBS Results

### Injury and Violence

\*AI denotes American Indian students\*

	High School Students	AI on or near Reservations	AI in Urban schools
Percentage of students who had carried a weapon on school property during the past 30 days.	9.3%	5.6%	17.4%
Percentage of students who were in a physical fight one or more times during the past 12 months.	25.4%	36.2%	41.1%
Percentage of students who had ever been bullied on school property during the past 12 months.	26.0%	20.9%	32.7%
Percentage of students who had been threatened or injured with a weapon such as a gun, knife, or club on school property one or more times during the past 12 months	7.5%	5.3%	14.0%
Percentage of students who felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months	25.2%	32.9%	35.2%
Percentage of students who actually attempted suicide one or more times during the past 12 months	6.5%	16.2%	18.9%

### Drug, Alcohol, and Tobacco Use

	High School Students	AI on or near Reservations	AI in Urban schools
Percentage of students who ever tried cigarette smoking, even one or two puffs.	44.0%	74.1%	59.8%
Percentage of students who have taken a prescription drug (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription.	18.4%	22.3%	31.4%
Percentage of students who used chewing tobacco, snuff, or dip on one or more of the past 30 days.	13.5%	27.5%	17.7%
Percentage of students who had at least one drink of alcohol other than a few sips before age 13 years.	21.4%	24.3%	34.5%
Percentage of students who used marijuana one or more times during their life.	39.2%	68.1%	50.9%
Percentage of students who sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high one or more times during their life.	11.6%	23.7%	21.4%

reflect significantly higher percentages in all of these areas over other students. Most of the survey results also show a higher drug, alcohol, and tobacco use from American Indians located on or near the reservation as compared to those in urban schools.

While cigarette smoking is still high among American Indian students in Montana it has

decreased steadily since 1999. For American Indian students on or near the reservation the percentage of students that had tried cigarette smoking was 86.9% and is down to 74.1% in 2010-2011. For urban American Indian students the percentage is down to 59.8% from 79.5%. All questions regarding smoking cigarettes have seen a steady decrease since 1999.

**Figure 22: Selected My Voice Survey results**

**\*AI denotes American Indian students\***

Percentages are the percentage of students that responded "Yes"	All Students	AI in schools where they are the majority	AI in schools where they are not the majority
I am a valued member of my school community.	44%	39%	38%
I have a teacher who is a positive role model for me.	72%	57%	66%
I am a good decision maker.	68%	56%	56%
I am afraid to try something if I think I may fail.	26%	33%	34%
I feel comfortable asking questions in class.	63%	55%	56%
I put forth my best effort at school.	73%	73%	66%
School Inspires me to learn.	61%	70%	60%
I like challenging assignments.	37%	40%	32%

While the percentages for chewing tobacco have remained relatively constant since 1999 the percentages for alcohol consumption have also decreased significantly since 1999 and especially since 2007. In 2007 the percentage of American Indian students on or near the reservation that had had more than a few sips of alcohol before turning 13 years old was 31.1% and was 24.3% in 2010-2011. For Urban schools in 2007 it was 40.6% and in 2010-2011 it was down to 34.5%.

While most of the percentages in drug, alcohol and tobacco use are seeing a downward trend, there is still room for improvement. Figure 21 shows drug, alcohol, and tobacco use is still much higher for American Indian students than it is the rest of the state.

The My Voice survey asks different types of questions than the YRBS survey. Examples are questions relating to the students belonging in school, sense of accomplishment, curiosity, and leadership. There are also several ways the My Voice survey may be broken up. There are 3

groups that will be focused on this report: All Students, American Indians in schools where the majority of students are American Indian, and American Indians in schools where the majority of students are not American Indian.

The first 5 questions in Figure 22 are questions that differ significantly between the percentage for All Students and the percentage for both sub-categories of American Indians. The last 3 questions differ significantly in one of the two sub-categories of American Indian students when compared to All Students. More questions and results are available in the full MyVoice report.

## Advanced Placement (AP)

1,823 students that graduated in Montana during the 2010 – 2011 school year took at least one AP exam during high school. Out of those 1,823 students, 52 were American Indian. That means only 2.9% of the AP test takers were American Indian, which is significantly lower than the 8.1% of the graduating student

population that are American Indian. While not all schools offer AP courses the percentage of American Indian students taking AP courses is still low.

On an AP test taken for any subject, a passing test is scored as a 3 or higher. From the graduating class of 2011, 13 American Indian students, out of a total of 52, earned a 3 or higher on at least one AP exam during high school.

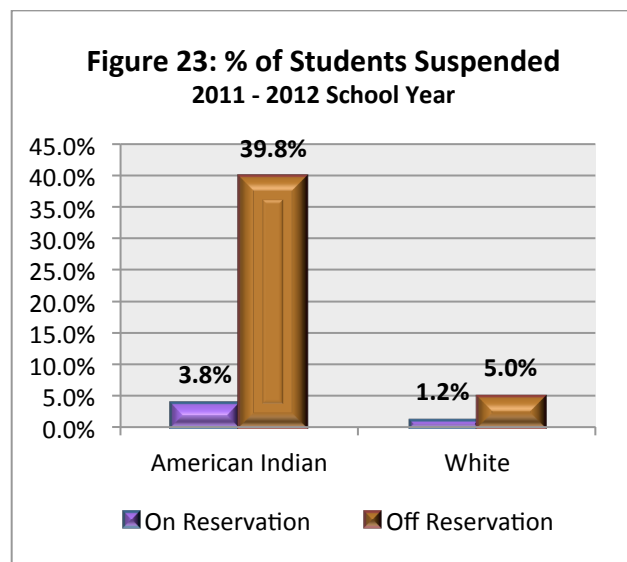
## Suspension/Expulsion Data

Statewide 21.7% of all American Indian students were given out of school suspension during the 2011 – 2012 school year. That compares to 4.9% of White students that were given out of school suspension during the same time frame.

As shown in Figure 23, the real difference in suspension numbers comes from students that are located in schools off the reservation. Almost 40% of American Indian students in schools off the reservation had to serve at least one out of school suspension during the 2011 – 2012 school year. This compares to 5% of White students off the reservation. There are two trends that can be seen here. One trend is that American Indian students receive out of school suspension much more often than White students. The second trend is students off the reservation serve out of school suspensions much more often than their counterparts in schools on the reservations.

Students expelled from school for any time frame also show similar trends to that of suspension. Expulsion numbers for the state are relatively small, which makes them hard to compare. However 34 American Indian

students were expelled last year compared to 30 White students even though the White student population is about 7 times larger than that of the American Indian student population.



## Summary

American Indian students in Montana are not scoring as well on the CRT as other races/ethnicities. However, since 2008 American Indian students have seen improvements in all CRT test scores. There is still room for more improvement in all areas, such as dropout rates, test scores and graduation rates, but vast improvements in these areas will not happen all at once, but over a time of several years.

Most data presented throughout this report, along with other educational and school related data, is also available on the state GEMS data warehouse at <http://gems.opi.mt.gov>. This document may be located electronically on the OPI webpage at <http://www.opi.mt.gov>.





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