Achievement Gaps in Oregon's Results on the 2017 National Assessment of Educational Progress

NAEP OREGON
NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

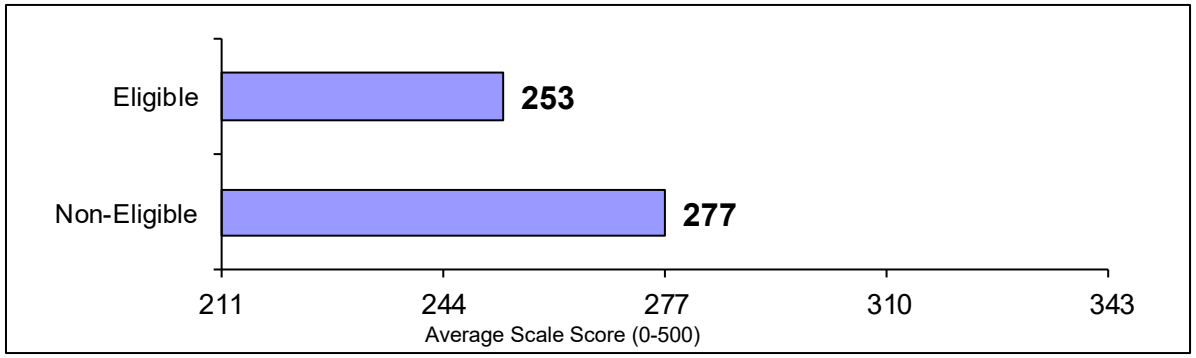
What is an achievement gap?

An achievement gap is a difference in what distinct groups of students know and can do in important subjects including math and reading.

How can we find and describe achievement gaps?

One way we find achievement gaps is by comparing test scores for groups of students. One way we describe gaps is by subtracting the average of a lower scoring group from the average of a higher scoring group.

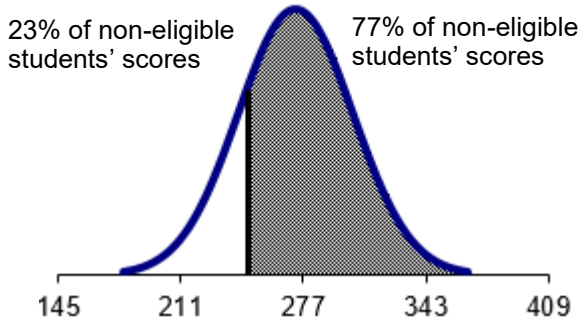
Example
Reading, Grade 8, U.S. Public Schools, NAEP 2017



Eligibility for free or reduced price meal benefits through the National School Lunch Program is the most commonly used indicator of economic disadvantage for public school students. It is the indicator used by the National Assessment of Educational Progress (NAEP). In U.S. public schools, students not eligible for a free or reduced price lunch tend to score higher than eligible students on reading tests. On the 2017 8th grade NAEP reading test, the average score for non-eligible students was 277. The average score for eligible students was 253. The achievement gap was 24 points.[1]

How large is this achievement gap?

Is this 24-point gap a concern for teachers and parents? Yes! The average score for students eligible for a free or reduced price lunch falls at the 23rd percentile of scores for non-eligible students. This is a large gap.[3]



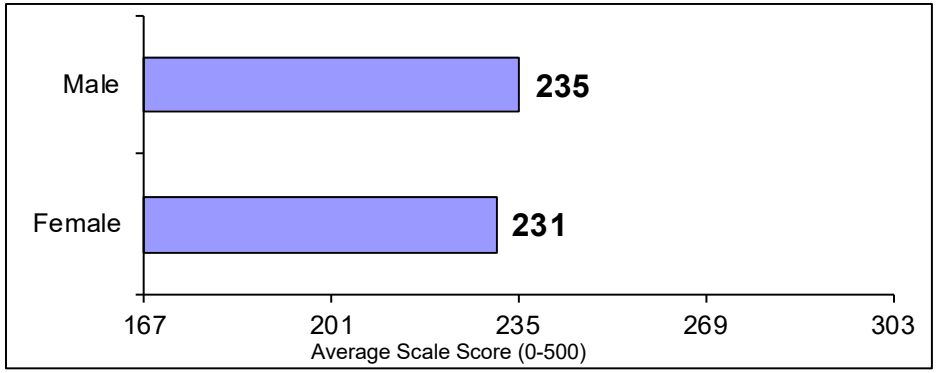
The black line marks the average score for eligible students. If there were no gap, this line would divide the graph in half. Instead, the line falls in the lower part of the graph, showing that 77% of non-eligible students scored higher than the average for eligible students.

Do achievement gaps exist in Oregon?

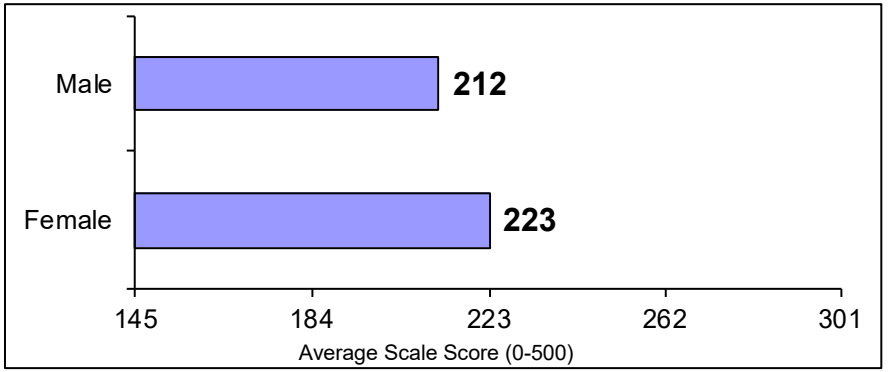
Yes. The 2017 NAEP results for Oregon's 4th and 8th graders revealed achievement gaps between student groups, but not in all subject/grade combinations. For example, in math there was no statistically significant[4] gap between female and male students in 8th grade. In reading, no statistically significant gaps existed at either 4th or 8th grade between Asian students and students of two or more races or between Asian and White students.

Achievement Gaps Between Female and Male Students

Math, Grade 4
Oregon, NAEP 2017

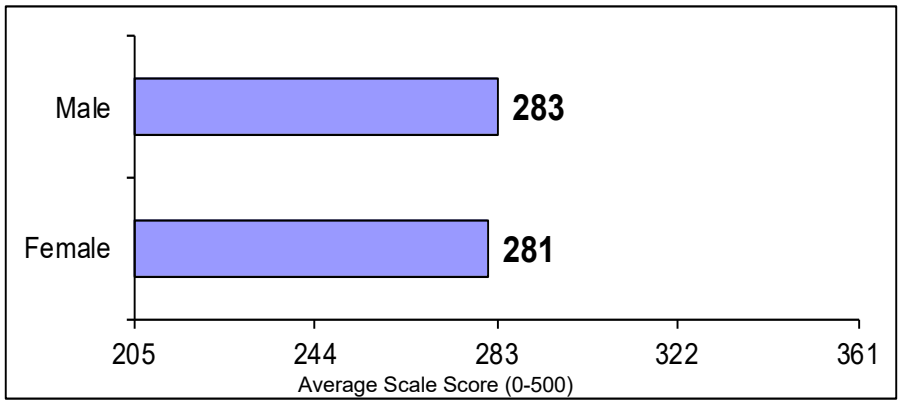


Reading, Grade 4
Oregon, NAEP 2017

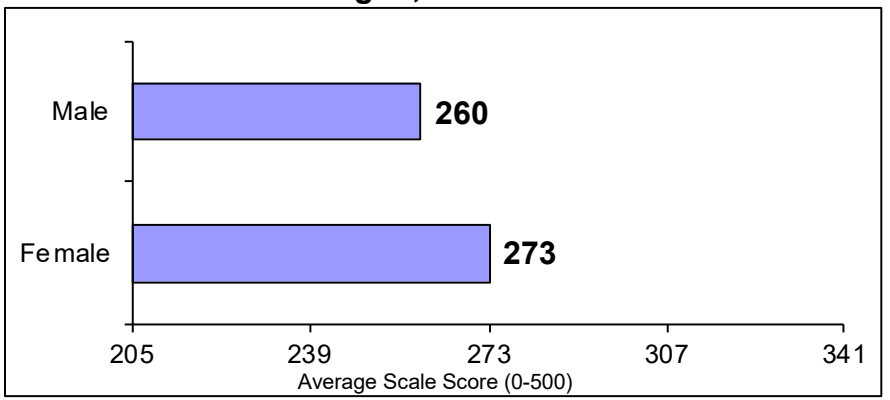


On the 2017 4th grade NAEP math test, the average score for female students was 231. The average score for male students was 235. The achievement gap between females and males was 4 points. The average score for males fell at the 45th percentile of female students' scores. This is a small gap. On the 2017 4th grade NAEP reading test, the average score for female students was 223. The average score for male students was 212. The achievement gap between females and males was 10 points.[2] The average score for males fell at the 39th percentile of female students' scores. This is a medium gap.

Math, Grade 8
Oregon, NAEP 2017



Reading, Grade 8
Oregon, NAEP 2017

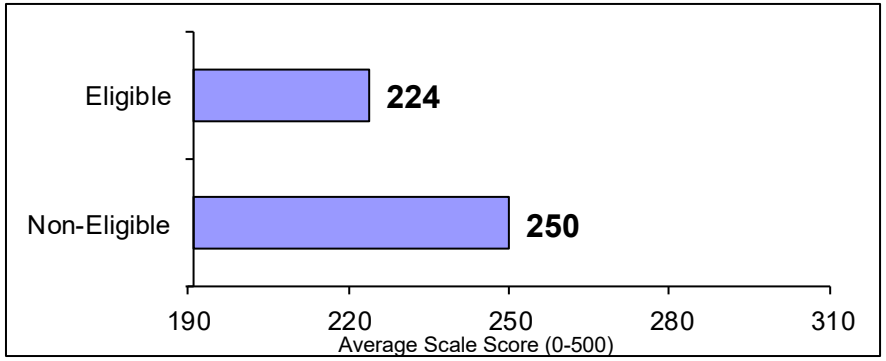


On the 2017 8th grade NAEP math test, the average score for female students was 283. The average score for male students was 281. The difference in scores between male and female students was not statistically significant. On the 2017 8th grade NAEP reading test, the average score for female students was 273. The average score for male students was 260. The achievement gap between females and males was 13 points. The average score for males fell at the 35th percentile of female students' scores. This is a medium gap.

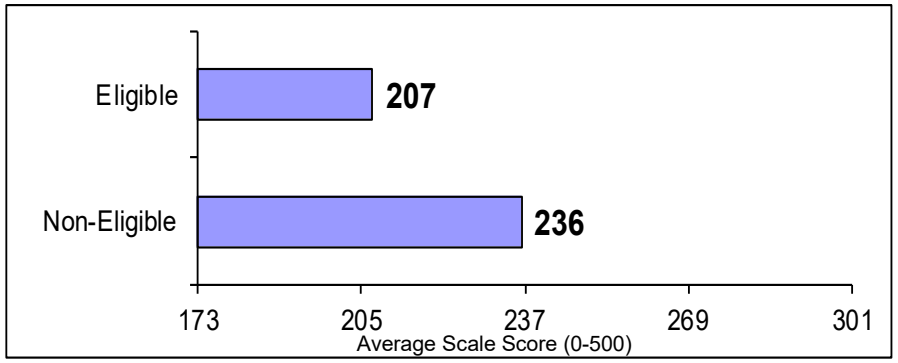
Achievement Gaps Between Economically Advantaged and Disadvantaged Students

Eligibility for free or reduced price meal benefits through the National School Lunch Program is the most commonly used indicator of economic disadvantage for public school students. It is the indicator used in NAEP.

Math, Grade 4
Oregon, NAEP 2017

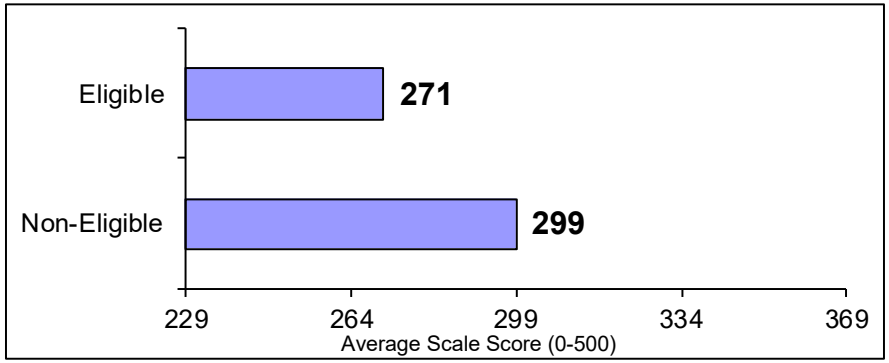


Reading, Grade 4
Oregon, NAEP 2017

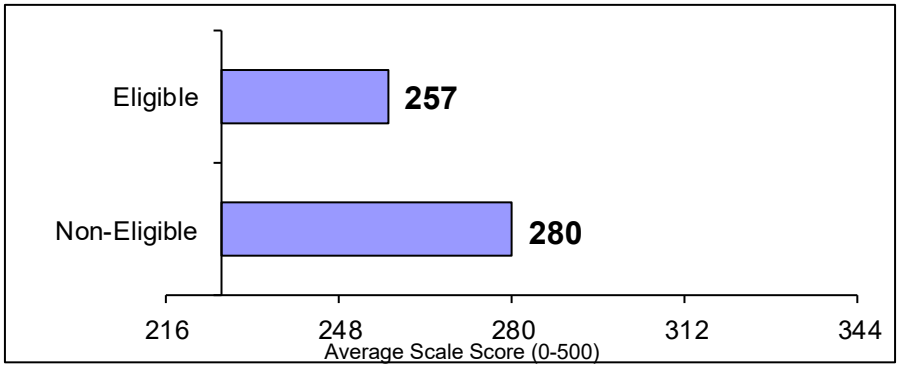


On the 2017 4th grade NAEP math test, the average score for non-eligible students was 250. The average score for eligible students was 224. The achievement gap between non-eligible and eligible students was 26 points. The average score for eligible students fell at the 20th percentile of non-eligible students' scores. This is a large gap. On the 2017 4th grade NAEP reading test, the average score for non-eligible students was 236. The average score for eligible students was 207. The achievement gap was 29 points. The average score for eligible students fell at the 21st percentile of non-eligible students' scores. This is a large gap.

Math, Grade 8
Oregon, NAEP 2017



Reading, Grade 8
Oregon, NAEP 2017



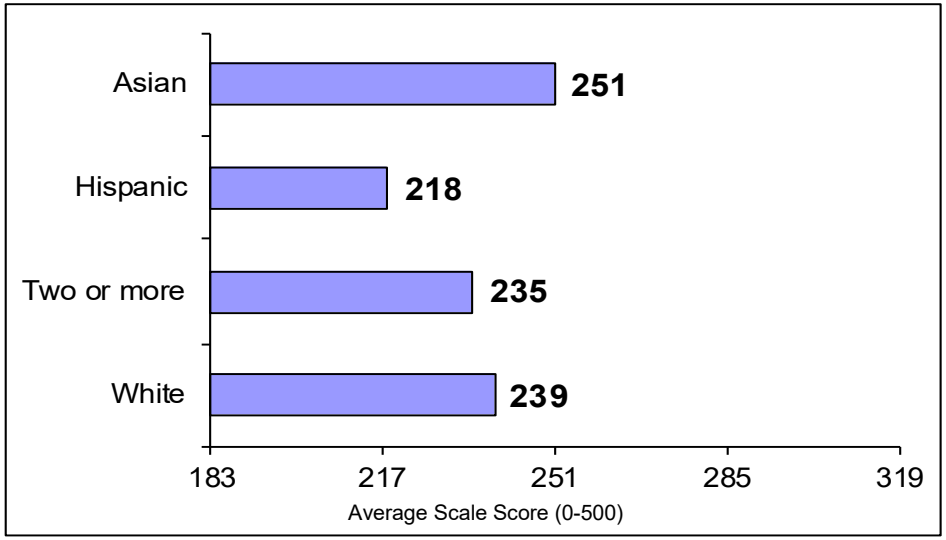
On the 2017 8th grade NAEP math test, the average score for non-eligible students was 297. The average score for eligible students was 271. The achievement gap between non-eligible and eligible students was 27 points.[2] The average score for eligible students fell at the 22nd percentile of non-eligible students' scores. This is a large gap. On the 2017 8th grade NAEP reading test, the average score for non-eligible students was 280. The average score for eligible students was 257. The achievement gap was 23 points. The average score for eligible students fell at the 25th percentile of non-eligible students' scores. This is a large gap.

Achievement Gaps Between Student Racial/Ethnic Groups

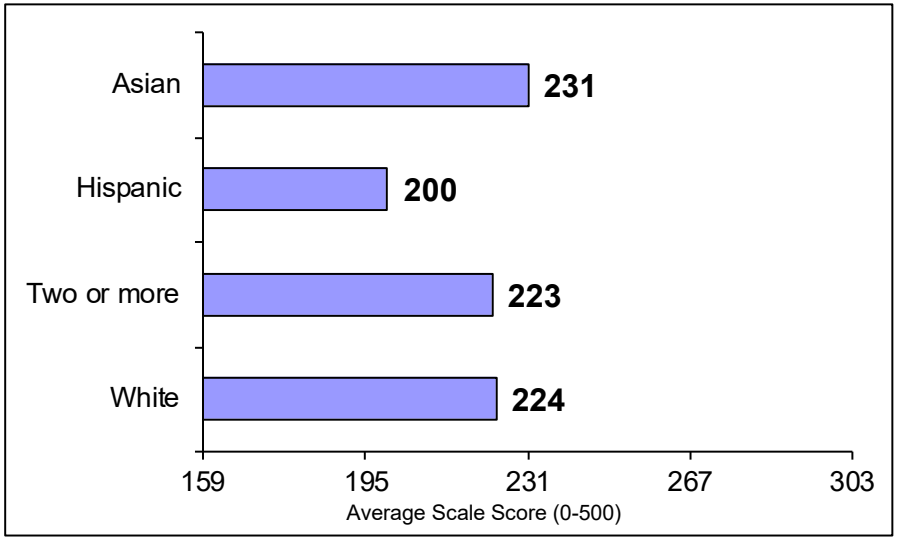
NAEP uses seven racial/ethnic categories. The percentage of Oregon 4th and 8th graders in each category is presented in the table to the right. NAEP does not provide enough information about students classified as American Indian/Alaska Native, Black, or Native Hawaiian/Other Pacific Islander to conduct the analyses used in this report.

Racial/Ethnic Group	Percent of 4th Grade Population[5]	Percent of 8th Grade Population[5]
American Indian/ Alaska Native (AI/AN)	1%	2%
Asian	4%	4%
Black	2%	2%
Hispanic	25%	24%
Native Hawaiian/Other Pacific Islander	1%	1%
Two or more races	6%	6%
White	61%	61%

Math, Grade 4
Oregon, NAEP 2017



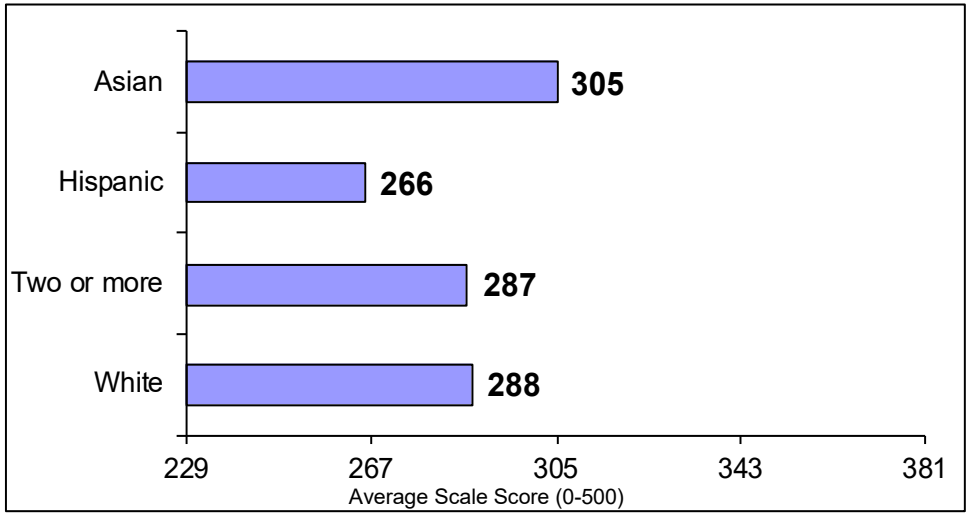
Reading, Grade 4
Oregon, NAEP 2017



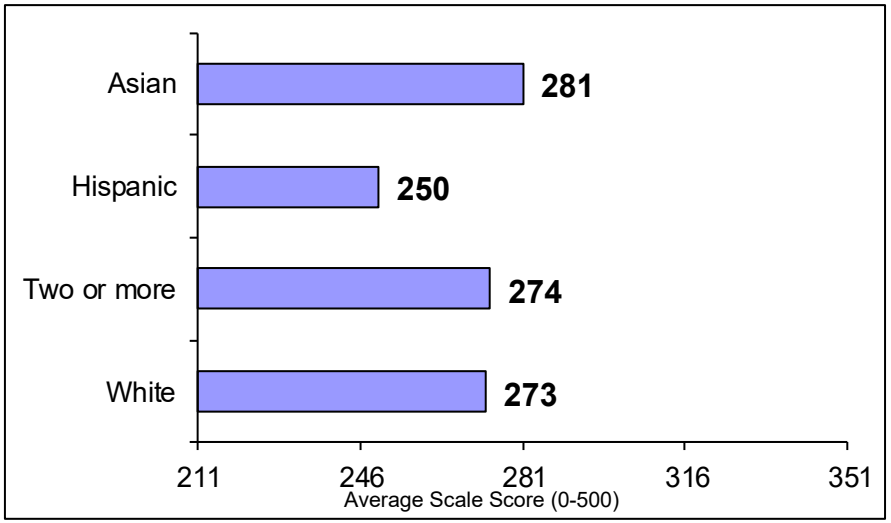
On the 2017 4th grade NAEP math test, the average score for Asian students was 251; for Hispanic students, 218; for students of two or more races, 235; and for White students, 239. The achievement gap between Asian students and Hispanic students was 32 points.[2] The average score for Hispanic students fell at the 17th percentile of Asian students' scores. This is a large gap. The achievement gap between Asian students and students or two or more races was 16 points. The average score for students of two or more races fell at the 31st percentile of Asian students' scores. This is a medium gap. The achievement gap between Asian students and White students was 12 points. The average score for White students fell at the 35th percentile of Asian students' scores. This is a medium gap.

On the 2017 4th grade NAEP reading test, the average score for Asian students was 231; for Hispanic students, 200; for students of two or more races, 223; and for White students, 224. An achievement gap existed between Asian students and Hispanic students. The differences between scores for Asian students and scores for both students of two or more races and White students were not statistically significant. The achievement gap between Asian students and Hispanic students was 31 points. The average score for Hispanic students fell at the 20th percentile of Asian students' scores. This is a large gap.

Math, Grade 8
Oregon, NAEP 2017



Reading, Grade 8
Oregon, NAEP 2017



On the 2017 8th grade NAEP math test, the average score for Asian students was 305; for Hispanic students, 266; for students of two or more races, 287; and for White students, 288. The achievement gap between Asian students and Hispanic students was 39 points. The average score for Hispanic students fell at the 12th percentile of Asian students' scores. This is a large gap. The achievement gap between Asian students and students of two or more races students was 18 points. The average score for students of two or more races fell at the 33rd percentile of Asian students' scores. This is a medium gap. The achievement gap between Asian students and White students was 17 points. The average score for White students fell at the 32th percentile of Asian students' scores. This is a medium gap.

On the 2017 8th grade NAEP reading test, the average score for Asian students was 281; for Hispanic students, 250; for students of two or more races, 274; and for White students, 273. An achievement gap existed between Asian students and Hispanic students. The differences between scores for Asian students and scores for both students of two or more races and White students were not statistically significant. The achievement gap between Asian students and Hispanic students was 31 points. The average score for Hispanic students fell at the 19th percentile of Asian students' scores. This is a large gap.

How do we explain achievement gaps?

There is no final answer to this question. Research has focused on both out-of-school and in-school factors associated with gaps. Some out-of-school factors identified in the research are child health, out-of-school learning, and student mobility. Examples of in-school factors are teacher quality and school climate.

Additional Information

Results from the National Assessment of Educational Progress can be viewed on the NAEP Data Explorer web site at http://nces.ed.gov/nationsreportcard/naepdata/. For more information about NAEP in Oregon, contact Beth LaDuca, NAEP State Coordinator with the Oregon Department of Education, at beth.laduca@state.or.us.

Notes

[1] All NAEP data are estimates based on samples and have associated standard errors. The standard errors can be viewed on the NAEP Data Explorer, http://nces.ed.gov/nationsreportcard/naepdata/.

[2] Due to rounding.

[3] If the average score of the lower scoring group falls between the 49th and 40th percentiles of the distribution of the higher scoring group, the gap is classified as small; between the 39th and 30thpercentiles, as medium; and at the 29th percentile or below, as large. However, as in any classification system, values falling immediately above and below the dividing value may not be meaningfully different.

[4] In NAEP, tests are conducted to determine if a difference in scores is likely due to sampling and measurement uncertainty. If so, the score difference is classified as not statistically significant.

[5]Population estimates are from the NAEP samples of Oregon's 4th and 8th graders for the 2017 math assessment.

Summary of Oregon Achievement Gaps on NAEP 2017 by Gap Size

No Statistically Significant Gap

Female and male students, 8th grade math
Asian and students of two or more races, 4th grade reading
Asian and students of two or more races, 8th grade reading
Asian and White students, 4th grade reading
Asian and White students, 8th grade reading

Small Gaps

Female and male students, 4th grade math

Medium Gaps

Female and male students, 4th grade reading
Female and male students, 8th grade reading
Asian and students of two or more races, 4th grade math
Asian and students of two or more races, 8th grade math
Asian and White students, 4th grade math
Asian and White students, 8th grade math

Large Gaps

Eligible and non-eligible students, 4th grade math
Eligible and non-eligible students, 8th grade math
Eligible and non-eligible students, 4th grade reading
Eligible and non-eligible students, 8th grade reading
Asian and Hispanic students, 4th grade math
Asian and Hispanic students, 8th grade math
Asian and Hispanic students, 4th grade reading
Asian and Hispanic students, 8th grade reading