

# NAEP 2015 Science Results Idaho

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# Background

- **What is NAEP?**
  - **“The National Assessment of Educational Progress (NAEP) is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas.”** Source: <http://nces.ed.gov/nationsreportcard/about/>
- **NAEP is a “common yardstick” that allows for comparisons of academic performance and progress across states and select urban districts**

# Background

- NAEP assessments are conducted periodically in subject areas such as mathematics, reading, writing, civics, U.S. history, the arts, and **science**
- NAEP's current science framework includes three content areas and four science practices...
  - Content areas:
    - Physical science
    - Life science
    - Earth and space science
  - Science practices:
    - Identifying science principles
    - Using science principles
    - Using scientific inquiry
    - Using technological design

# Background

- **NAEP first administered science assessments using this framework in 2009**
  - 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grade students in 2009
  - 8<sup>th</sup> grade students in a special assessment in 2011
- **The NAEP 2015 science assessment included:**
  - 115,400 4<sup>th</sup> grade students from 7,650 schools
  - 110,900 8<sup>th</sup> grade students from 6,050 schools
  - 11,000 12<sup>th</sup> grade students from 730 schools

# Background

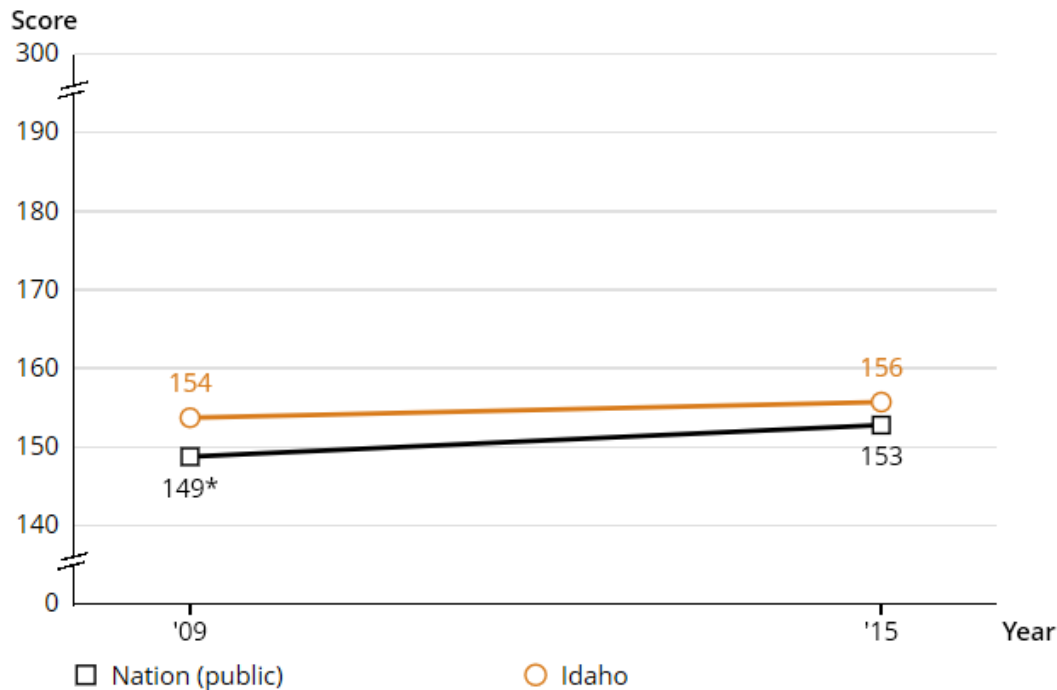
- **NAEP 2015 science results**
  - National-level and state-level results are available for 4<sup>th</sup> grade and 8<sup>th</sup> grade
  - Only national-level results for 12<sup>th</sup> grade
- **This presentation focuses on Idaho's 4<sup>th</sup> and 8<sup>th</sup> grade results**
  - All graphs from the The Nation's Report Card (<http://nces.ed.gov/nationsreportcard/>)
  - Reported figures may not sum due to rounding
  - Any differences noted as being higher/lower, increase/decrease, etc are based on statistical significance testing at  $p < .05$

# Grade 4 Science Results

# Grade 4 Science Results

- Idaho's average scale score = **156**

**Grade 4 Science  
Average Scores for Idaho and Nation (public)**



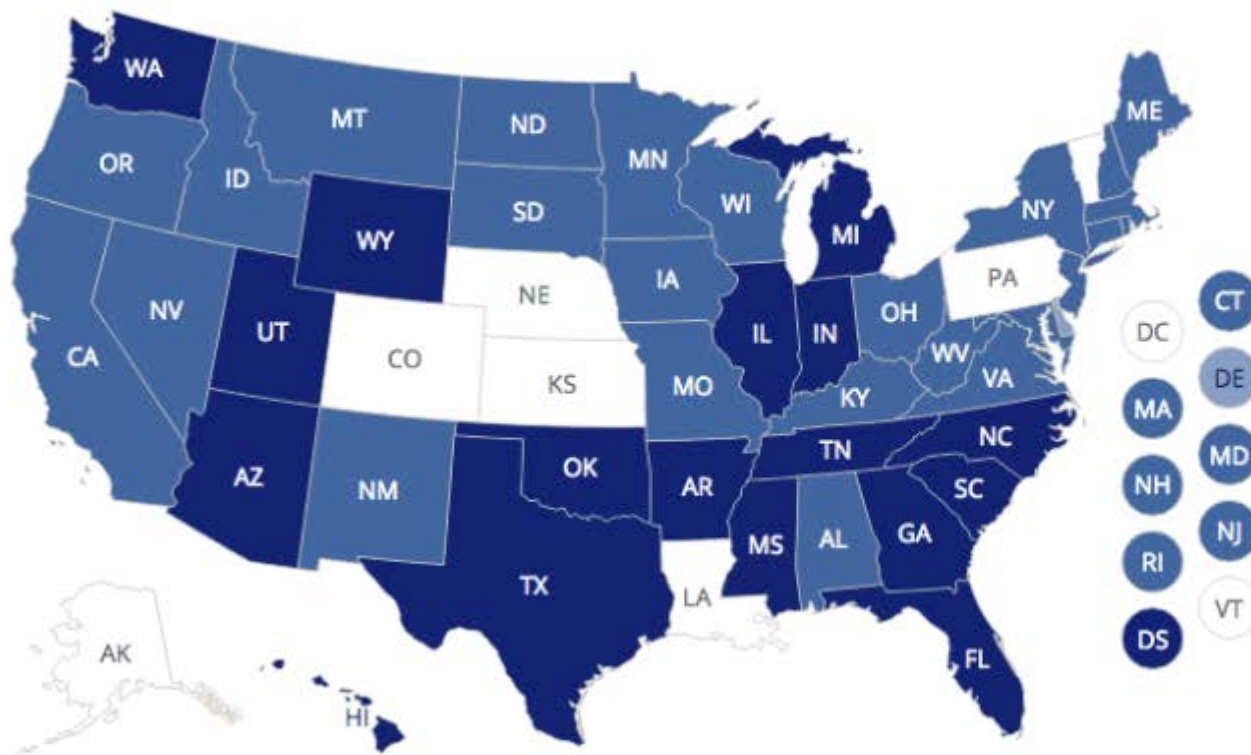
- **Higher** than the average scale score for the nation's public schools (153)
- **Higher** than the average scale score for 14 other states/jurisdictions
- **Not significantly different** from the average scale score for Idaho in 2009 (154)

\* Significantly different ( $p < .05$ ) from 2015. Significance tests were performed using unrounded numbers.

# Grade 4 Science Results

- Scores **increased** from 2009 in 18 states/jurisdictions
- Scores **did not change significantly** from 2009 in 25 states/jurisdictions, including **Idaho**
- Scores **decreased** from 2009 in 1 state/jurisdiction

## Grade 4 Science - Change in Average Scores from 2009 to 2015

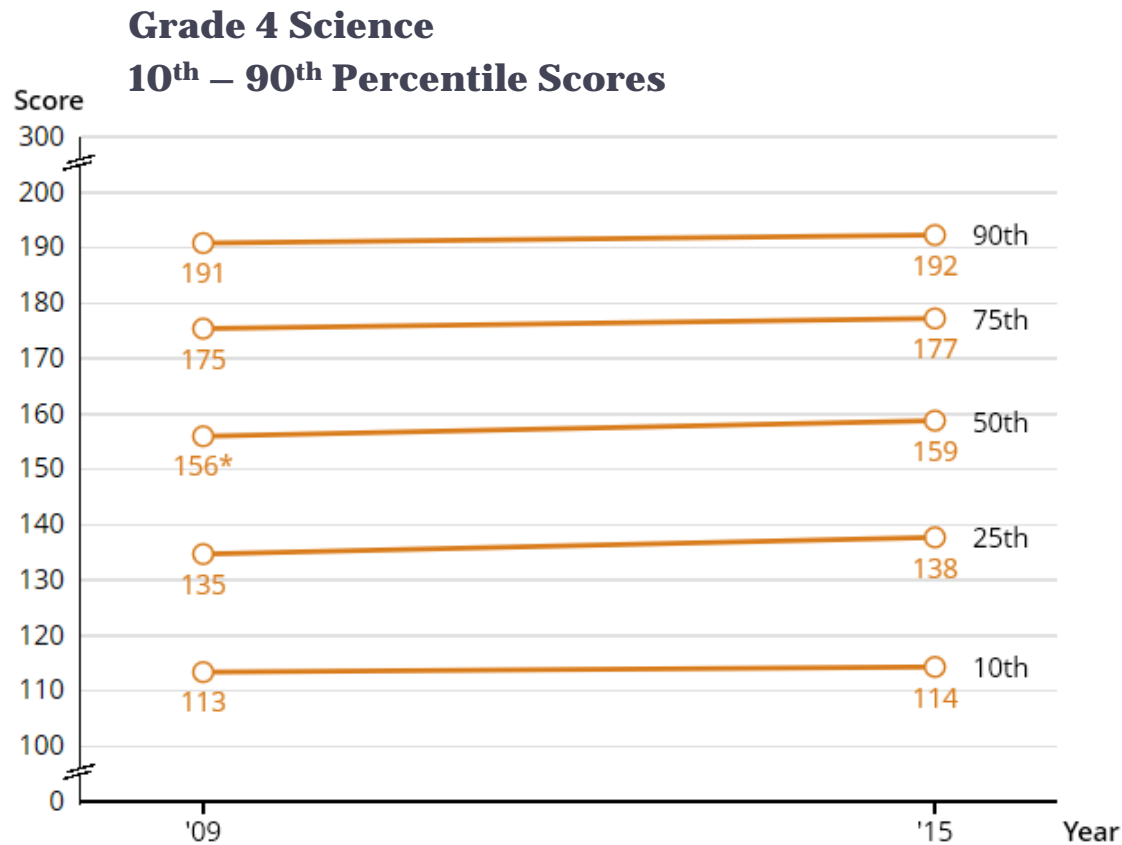


NOTE: DS = Department of Defense Education Activity (DoDEA), a federally-operated nonpublic school system responsible for educating children of military families. See more about [DoDEA](#). Results are not available for Alaska, the District of Columbia, Kansas, Nebraska, and Vermont for the 2009 NAEP science assessment, and results are not available for Alaska, Colorado, the District of Columbia, Louisiana, and Pennsylvania for the 2015 NAEP science assessment.



# Grade 4 Science Results

- Across the distribution, Idaho's scores in 2015 either were **not significantly different** or **increased** from 2009

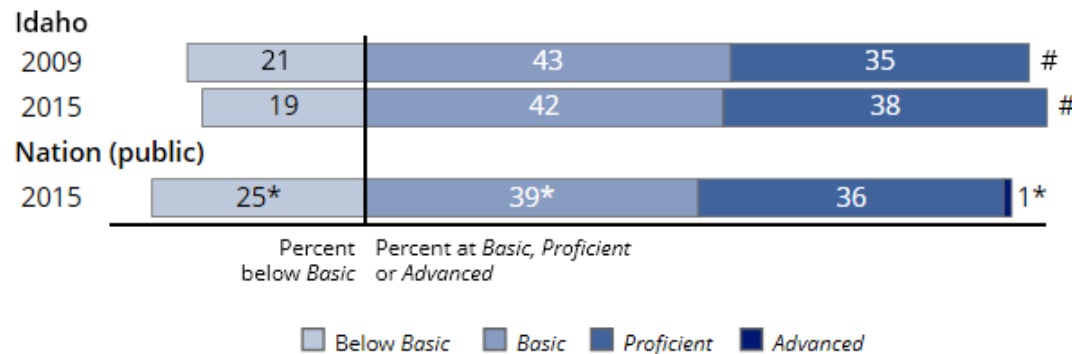


\* Significantly different ( $p < .05$ ) from 2015. Significance tests were performed using unrounded numbers.

# Grade 4 Science Results

- **81%** of students in Idaho scored at or above the *Basic* achievement level

## Grade 4 Science Achievement-level percentages



- Higher than the percentage for the nation's public schools (75%)
- Higher than the percentage for 20 other states/jurisdictions
- Not significantly different from the percentage for Idaho in 2009 (79%)

# Rounds to zero.

\* Significantly different ( $p < .05$ ) from state's results in 2015. Significance tests were performed using unrounded numbers.

NOTE: Detail may not sum to totals because of rounding.

# Grade 4 Science Results

- Average scores and performance level percentages on the Grade 4 Science assessment varied by student group

| Reporting Groups                     | Percentage of students | Avg. score | Percentage at or above |            | Percentage at Advanced |
|--------------------------------------|------------------------|------------|------------------------|------------|------------------------|
|                                      |                        |            | Basic                  | Proficient |                        |
| <b>Race/Ethnicity</b>                |                        |            |                        |            |                        |
| White                                | 77                     | 161        | 87                     | 45         | #                      |
| Black                                | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| Hispanic                             | 17                     | 133        | 56                     | 14         | #                      |
| Asian                                | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| American Indian/Alaska Native        | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| Native Hawaiian/Pacific Islander     | #                      | ‡          | ‡                      | ‡          | ‡                      |
| Two or more races                    | 2                      | ‡          | ‡                      | ‡          | ‡                      |
| <b>Gender</b>                        |                        |            |                        |            |                        |
| Male                                 | 52                     | 157        | 81                     | 41         | #                      |
| Female                               | 48                     | 155        | 80                     | 36         | #                      |
| <b>National School Lunch Program</b> |                        |            |                        |            |                        |
| Eligible                             | 52                     | 147        | 71                     | 28         | #                      |
| Not eligible                         | 47                     | 166        | 91                     | 51         | 1                      |

# Rounds to zero.

‡ Reporting standards not met.

NOTE: Detail may not sum to totals because of rounding, and because the "Information not available" category for the National School Lunch Program, which provides free/reduced-price lunches, is not displayed. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin.

# Grade 4 Science Results

## White and Hispanic students in Idaho:

- The average scale score for White students was 28 points higher than that for Hispanic students
  - In 2009, this difference was 31 points
    - There was **not a significant change** in the score gap in Idaho
  - At the national (public) level in 2015, the difference was 27 points
    - Idaho's score gap was **not significantly different**

# Grade 4 Science Results

## NSLP eligible students in Idaho:

- The average scale score among NSLP eligible students was 19 points lower than that for students who were not eligible
  - In 2009, this difference was 15 points
    - There was **not a significant change** in the score gap in Idaho
  - At the national (public) level in 2015, the difference was 28 points
    - Idaho's score gap was **significantly smaller**

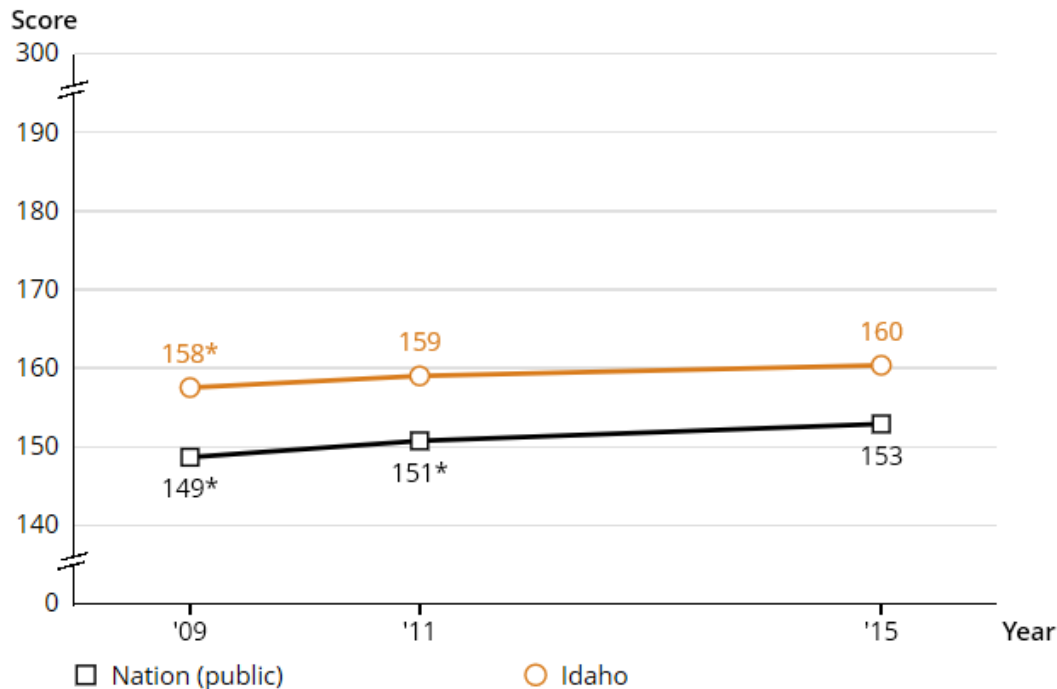


# Grade 8 Science Results

# Grade 8 Science Results

- Idaho's average scale score = **160**

**Grade 8 Science  
Average Scores for Idaho and Nation (public)**



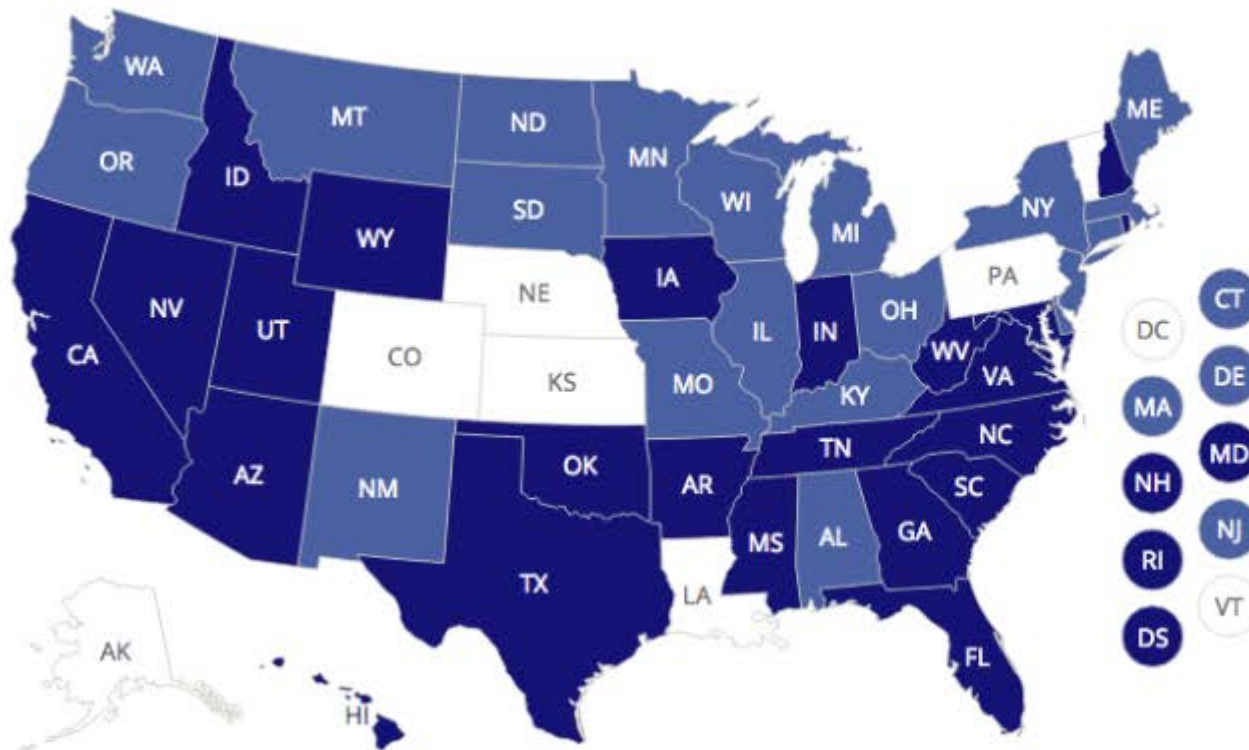
- Higher than the average scale score for the nation's public schools (153)
- Higher than the average scale score for 29 other states/jurisdictions
- Not significantly different from the average scale score for Idaho in 2011 (159)
- Higher than the average scale score for Idaho in 2009 (158)

\* Significantly different ( $p < .05$ ) from 2015. Significance tests were performed using unrounded numbers.

# Grade 8 Science Results

- Scores **increased** from 2009 in 24 states/jurisdictions, including **Idaho**
- Scores **did not change significantly** from 2009 in 20 states/jurisdictions
- Scores **decreased** from 2009 in 0 states/jurisdictions

## Grade 8 Science - Change in Average Scores from 2009 to 2015

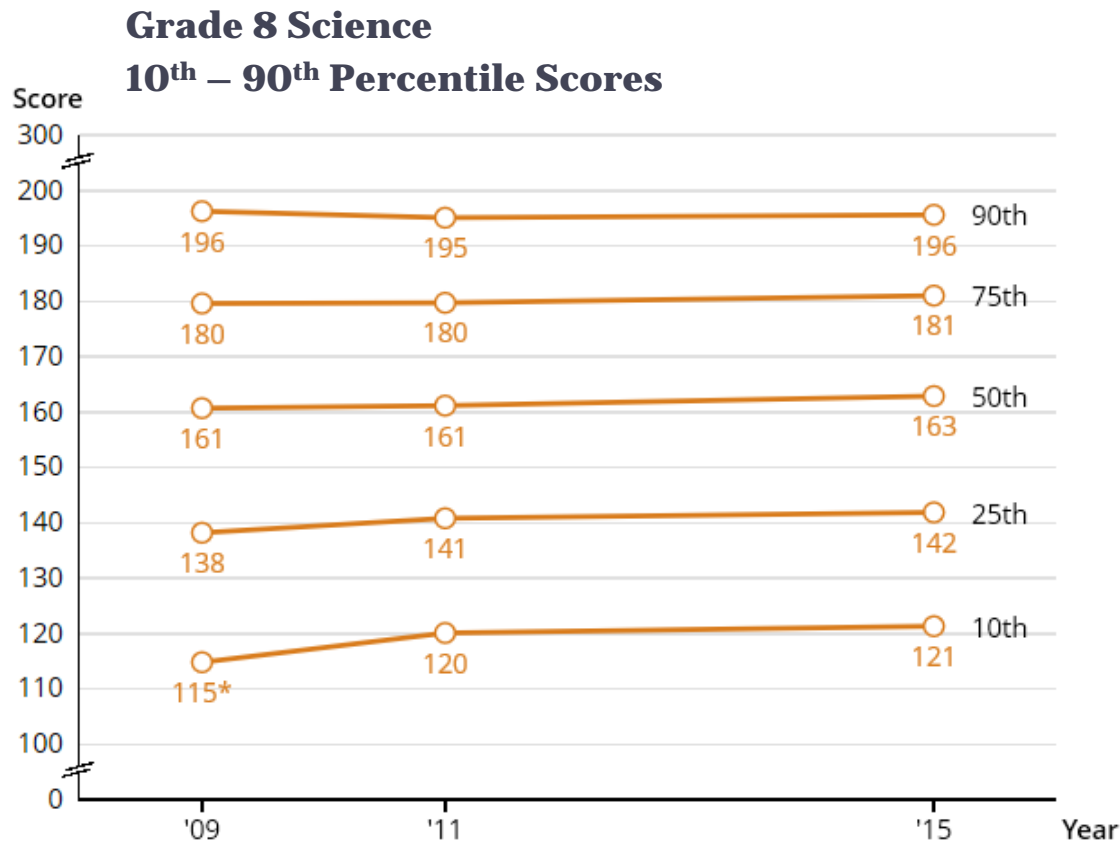


NOTE: DS = Department of Defense Education Activity (DoDEA), a federally-operated nonpublic school system responsible for educating children of military families. See more about [DoDEA](#). Results are not available for Alaska, the District of Columbia, Kansas, Nebraska, and Vermont for the 2009 NAEP science assessment, and results are not available for Alaska, Colorado, the District of Columbia, Louisiana, and Pennsylvania for the 2015 NAEP science assessment.



# Grade 8 Science Results

- Across the distribution, Idaho's scores in 2015 either were **not significantly different** or **increased** from 2009 and 2011

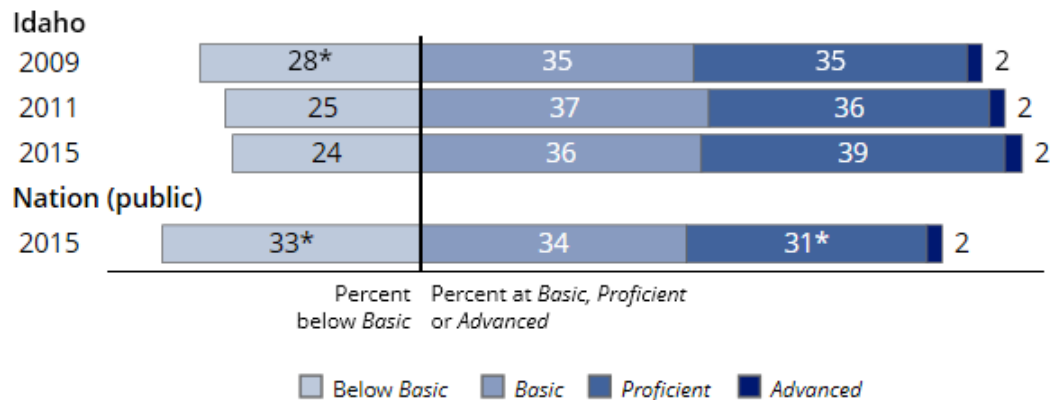


\* Significantly different ( $p < .05$ ) from 2015. Significance tests were performed using unrounded numbers.

# Grade 8 Science Results

- **76%** of students in Idaho scored at or above the *Basic* achievement level

## Grade 8 Science Achievement-level percentages



- **Higher** than the percentage for the nation's public schools (67%)
- **Higher** than the percentage for 28 other states/jurisdictions
- **Not significantly different** from the percentage for Idaho in 2011 (75%)
- **Higher** than the percentage for Idaho in 2009 (72%)

\* Significantly different ( $p < .05$ ) from state's results in 2015. Significance tests were performed using unrounded numbers.  
NOTE: Detail may not sum to totals because of rounding.

# Grade 8 Science Results

- Average scores and performance level percentages on the Grade 8 Science assessment varied by student group

| Reporting Groups                     | Percentage of students | Avg. score | Percentage at or above |            | Percentage at Advanced |
|--------------------------------------|------------------------|------------|------------------------|------------|------------------------|
|                                      |                        |            | Basic                  | Proficient |                        |
| <b>Race/Ethnicity</b>                |                        |            |                        |            |                        |
| White                                | 77                     | 165        | 81                     | 46         | 2                      |
| Black                                | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| Hispanic                             | 17                     | 141        | 54                     | 17         | #                      |
| Asian                                | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| American Indian/Alaska Native        | 1                      | ‡          | ‡                      | ‡          | ‡                      |
| Native Hawaiian/Pacific Islander     | #                      | ‡          | ‡                      | ‡          | ‡                      |
| Two or more races                    | 2                      | ‡          | ‡                      | ‡          | ‡                      |
| <b>Gender</b>                        |                        |            |                        |            |                        |
| Male                                 | 51                     | 162        | 77                     | 44         | 2                      |
| Female                               | 49                     | 158        | 74                     | 36         | 1                      |
| <b>National School Lunch Program</b> |                        |            |                        |            |                        |
| Eligible                             | 45                     | 152        | 66                     | 29         | 1                      |
| Not eligible                         | 55                     | 167        | 84                     | 50         | 2                      |

# Rounds to zero.

‡ Reporting standards not met.

NOTE: Detail may not sum to totals because of rounding, and because the "Information not available" category for the National School Lunch Program, which provides free/reduced-price lunches, is not displayed. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin.

# Grade 8 Science Results

## White and Hispanic students in Idaho:

- The average scale score for White students was 23 points higher than that for Hispanic students
  - In 2009, this difference was 25 points
    - There was **not a significant change** in the score gap in Idaho
  - At the national (public) level in 2015, the difference was 26 points
    - Idaho's score gap was **not significantly different**

# Grade 8 Science Results

## NSLP eligible students in Idaho:

- The average scale score among NSLP eligible students was 16 points lower than that for students who were not eligible
  - In 2009, this difference was 19 points
    - There was **not a significant change** in the score gap in Idaho
  - At the national (public) level in 2015, the difference was 27 points
    - Idaho's score gap was **significantly smaller**

# Questions?

## Contact

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## Visit

<http://sde.idaho.gov/assessment/naep/>