Results from the 2015 Programme for International Student Assessment (PISA):

How does the United States compare to other nations?
How has U.S. performance on PISA changed over time?
## Performance Among the 26 OECD Countries Continuously Participating in PISA Since 2000

### U.S. Stagnant or Falling Relative to Other Countries

<table>
<thead>
<tr>
<th>Subject</th>
<th>2000 Rank (out of 26)</th>
<th>2003 Rank (out of 26)</th>
<th>2006 Rank (out of 26)</th>
<th>2009 Rank (out of 26)</th>
<th>2012 Rank (out of 26)</th>
<th>2015 Rank (out of 26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading</td>
<td>13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>14&lt;sup&gt;th&lt;/sup&gt;</td>
<td>n/a</td>
<td>Tied 10&lt;sup&gt;th&lt;/sup&gt;</td>
<td>14&lt;sup&gt;th&lt;/sup&gt;</td>
<td>16&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Mathematics</td>
<td>17&lt;sup&gt;th&lt;/sup&gt;</td>
<td>22&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>22&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>Tied 20&lt;sup&gt;th&lt;/sup&gt;</td>
<td>22&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>24&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
<tr>
<td>Science</td>
<td>13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Tied 17&lt;sup&gt;th&lt;/sup&gt;</td>
<td>19&lt;sup&gt;th&lt;/sup&gt;</td>
<td>13&lt;sup&gt;th&lt;/sup&gt;</td>
<td>16&lt;sup&gt;th&lt;/sup&gt;</td>
<td>15&lt;sup&gt;th&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Note: Rankings are for the 26 countries that were members of the OECD and participated in PISA in 2000, 2003, 2006, 2009, 2012, and 2015 and include Luxembourg despite changes to assessment conditions beginning in 2003. 2006 results for U.S. reading performance are not available. Rankings for this chart only are based on rounded scale scores.

Source: National Center for Education Statistics, 2016
Performance in all subjects has remained stagnant, or dropped since the beginning of the assessments

U.S. Performance on PISA over time – All subjects

Note: Possible scores range from 0 to 1,000. Trends are not available from 2000 for all subjects due to revised assessment frameworks; 2006 results for U.S. reading performance are not available. * indicates score is significantly different from 2012 score at the p<.05 level.
Math scores have fallen significantly since 2009

U.S. Performance on PISA over time – Math

Note: Possible scores range from 0 to 1,000. * indicates score is significantly different from the 2012 score at the p<.05 level
U.S. Science scores have followed similar trends to the OECD average

U.S. Performance on PISA over time – Science

Note: Possible scores range from 0 to 1,000. * indicates score is significantly different from the 2012 score at the p<.05 level

U.S. performance on reading has been consistent

U.S. Performance on PISA over time – Reading

Note: Possible scores range from 0 to 1,000. * indicates score is significantly different from the 2012 score at the p<.05 level. 2006 results for U.S. reading performance are not available.
How have results of the highest and lowest achieving students in the U.S. changed over time?
Scores fell in 2015 for all levels of performers in math.
Since 2006, Improvement among Lower Performing Students

PISA – Science

Performance in reading has been stagnant in reading for 15 year olds

PISA – Reading

The most recent results by subject
2015 Math
Of 35 OECD Countries, U.S.A. Ranks 31st in Math Literacy

Math, 2015 – All Students

U.S.A. Ranks 30th out of 35 OECD Countries on Students Scoring at the Highest Achievement Levels

Math, 2015 – Percent of students scoring at highest levels

Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.
U.S.A. Ranks 30th out of 35 OECD Countries in the Math Achievement of the Highest-Performing Students

Note: Highest-performing students are those at the 90th Percentile.
U.S.A. Ranks 28th out of 35 OECD Countries in the Math Achievement of the Lowest-Performing Students

Math, 2015 – 10th Percentile Score

Note: Lowest-performing students are those at the 10th Percentile.
Neither low-SES students nor high-SES students compare well to their international counterparts . . .
U.S.A. Ranks 29th out of 35 OECD Countries in the Math Achievement of High-SES Students

Note: High SES students are those in the top quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

U.S.A. Ranks 28th out of 35 OECD Countries in the Math Achievement of Low-SES Students

Note: Low SES students are those in the bottom quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Math results declined for both low and high-SES students between 2012 and 2015. Today, results for low-SES students are the same as they were in 2003, while for high-SES students, math scores are lower than they were 12 years ago.

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home. N/A = Scores by ESCS level are not publicly available for this year.

Gaps between low-SES and high-SES students are large . . .
The U.S. Gap Between High-SES and Low-SES Students is Equivalent to Over Two Years of Schooling

Math, 2015 – Gaps in low- and high- SES performance

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Within the United States, performance varies widely across groups of students . . .
PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in Math.

Math, 2015 – U.S. results by race/ethnicity

Students in high-poverty schools score far below students in low-poverty schools

Math, 2015 – Results by school poverty level

Note: Low income schools are those in which 75% or more of students are eligible for free or reduced price lunch; high income schools are those in which less than 10% are eligible
2015 Science
Of 35 OECD Countries, U.S.A. Ranks 19th in Science Literacy

PISA Science, 2015 – All Students

U.S.A. Ranks 14\textsuperscript{th} out of 35 OECD Countries on Students Scoring at the Highest Achievement Levels

Science, 2015 - Percent of students scoring at the highest levels

Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.
U.S.A. Ranks 14th out of 35 OECD Countries in the Science Achievement of the Highest-Performing Students

Science, 2015 – 90th Percentile score

Note: Highest-performing students are those at the 90th Percentile
U.S.A. Ranks 21st out of 35 OECD Countries in the Science Achievement of the Lowest-Performing Students

Science, 2015 – 10th Percentile Score

Note: Lowest-performing students are those at the 10th Percentile.
The United States’ results for low and high-SES students are similar to OECD averages for their counterparts.

Source:
U.S.A. Ranks 19\textsuperscript{th} out of 35 OECD Countries in the Science Achievement of High-SES Students

Science, 2015 – High-SES Students

Note: High SES students are those in the top quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

U.S.A. Ranks 18th out of 35 OECD Countries in the Science Achievement of Low-SES Students

Science, 2015 – Low-SES Students

Note: Low SES students are those in the bottom quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Scores for low-SES students in the U.S. improved between 2006 and 2015, but most of this improvement happened prior to 2012. Between 2006 and 2015, scores for high-SES students declined.

![Bar chart showing science scores for low and high SES students](chart.png)

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home. N/A = Scores by ESCS level are not publicly available for this year.

Gaps between low-SES and high-SES students are large . . .
The U.S. Gap Between High-SES and Low-SES Students is Equivalent to Over Two Years of Schooling

Science, 2015 – Gaps between low- and high- SES performance

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Within the United States, performance varies widely across groups of students . . .
PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in science.

Students in high-poverty schools score far below students in low-poverty schools

Science, 2015 – Performance by school poverty level

Note: High poverty schools are those in which 75% or more of students are eligible for free or reduced price lunch; low poverty schools are those in which less than 10% are eligible.
2015 Reading
Of 35 OECD Countries, U.S.A. Ranks 20th in Reading Literacy

Reading, 2015 - All Students

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Scale Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>530</td>
</tr>
<tr>
<td>Finland</td>
<td>520</td>
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<tr>
<td>Ireland</td>
<td>510</td>
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<tr>
<td>Estonia</td>
<td>500</td>
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<tr>
<td>Japan</td>
<td>490</td>
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<tr>
<td>Norway</td>
<td>480</td>
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<tr>
<td>New Zealand</td>
<td>470</td>
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<tr>
<td>Germany</td>
<td>460</td>
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<tr>
<td>Poland</td>
<td>450</td>
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<tr>
<td>Slovenia</td>
<td>440</td>
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<tr>
<td>Netherlands</td>
<td>430</td>
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<tr>
<td>Sweden</td>
<td>420</td>
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<tr>
<td>Denmark</td>
<td>410</td>
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<tr>
<td>France</td>
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<tr>
<td>Belgium</td>
<td>390</td>
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<tr>
<td>Portugal</td>
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<tr>
<td>United Kingdom</td>
<td>370</td>
</tr>
<tr>
<td>United States</td>
<td>360</td>
</tr>
<tr>
<td>Spain</td>
<td>350</td>
</tr>
<tr>
<td>OECD Average</td>
<td>340</td>
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<tr>
<td>Switzerland</td>
<td>330</td>
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<tr>
<td>Latvia</td>
<td>320</td>
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<tr>
<td>Czech Republic</td>
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<tr>
<td>Austria</td>
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<tr>
<td>Italy</td>
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<td>Iceland</td>
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<td>Luxembourg</td>
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<td>Israel</td>
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<tr>
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<td>Greece</td>
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<td>Chile</td>
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<tr>
<td>Slovak Republic</td>
<td>220</td>
</tr>
<tr>
<td>Turkey</td>
<td>210</td>
</tr>
<tr>
<td>Mexico</td>
<td>200</td>
</tr>
</tbody>
</table>

U.S.A. Ranks 14th out of 35 OECD Countries on Students Scoring at the Highest Achievement Levels

Reading, 2015 - Percent of students scoring at the highest levels

Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.
U.S.A. Ranks 14th out of 35 OECD Countries in the Reading Achievement of the Highest-Performing Students

Note: Highest-performing students are those at the 90th Percentile.
U.S.A. Ranks 19th out of 35 OECD Countries in the Reading Achievement of the Lowest-Performing Students

Note: Lowest-performing students are those at the 10th Percentile.
The United States’ results for high-SES students are similar to OECD averages for their counterparts, while results for low-SES students are somewhat higher.
U.S.A. Ranks 23rd out of 35 OECD Countries in the Reading Achievement of High-SES Students

Reading, 2015 - High SES students

Note: High SES students are those in the top quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainments, family wealth, home educational resources, and possessions related to “classical” culture in the home.

U.S.A. Ranks 16th out of 35 OECD Countries in the Reading Achievement of Low-SES Students

Reading, 2015 - Low SES Students

Note: Low SES students are those in the bottom quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Scores for low-SES students in the U.S. improved between 2009 and 2015, but most of this improvement happened between 2009 and 2012. Between 2009 and 2015, scores for high-SES students declined.

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home. Reading scores by ESCS quartile are not available for years prior to 2009.

Gaps between low-SES and high-SES students are large . . .
The gap between high and low-SES students in the United States is slightly smaller than the OECD average.

Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment, family wealth, home educational resources, and possessions related to “classical” culture in the home.

Within the United States, performance varies widely across groups of students . . .
PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in reading.

Results of students in the highest-poverty schools were lower than those of students in the lowest-poverty schools.

Note: High poverty schools are those in which 75% or more of students are eligible for free or reduced price lunch; low poverty schools are those in which less than 10% are eligible.