

# 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

<b>Subject</b>	<b>2000 Rank (out of 26)</b>	<b>2003 Rank (out of 26)</b>	<b>2006 Rank (out of 26)</b>	<b>2009 Rank (out of 26)</b>	<b>2012 Rank (out of 26)</b>	<b>2015 Rank (out of 26)</b>
Reading	13 <sup>th</sup>	14 <sup>th</sup>	n/a	Tied 10 <sup>th</sup>	14 <sup>th</sup>	16 <sup>th</sup>
Mathematics	17 <sup>th</sup>	22 <sup>nd</sup>	22 <sup>nd</sup>	Tied 20 <sup>th</sup>	22 <sup>nd</sup>	24 <sup>th</sup>
Science	13 <sup>th</sup>	Tied 17 <sup>th</sup>	19 <sup>th</sup>	13 <sup>th</sup>	16 <sup>th</sup>	15 <sup>th</sup>

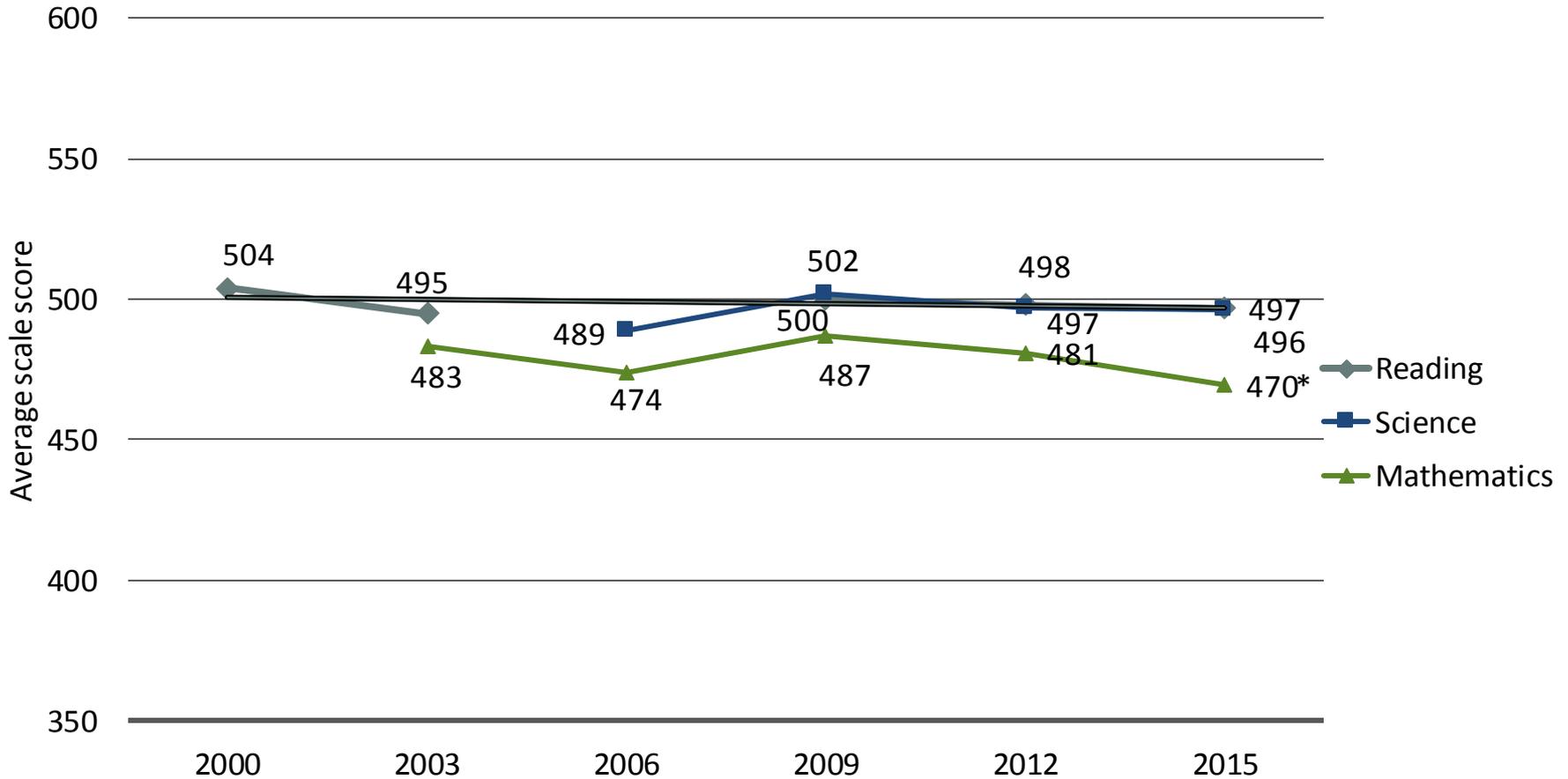
Note: Rankings are for the 26 countries that were members of the OECD and participated in PISA in 2000, 2003, 2006, 2009, 2012, and 2015 and include Luxembourg despite changes to assessment conditions beginning in 2003. 2006 results for U.S. reading performance are not available.

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

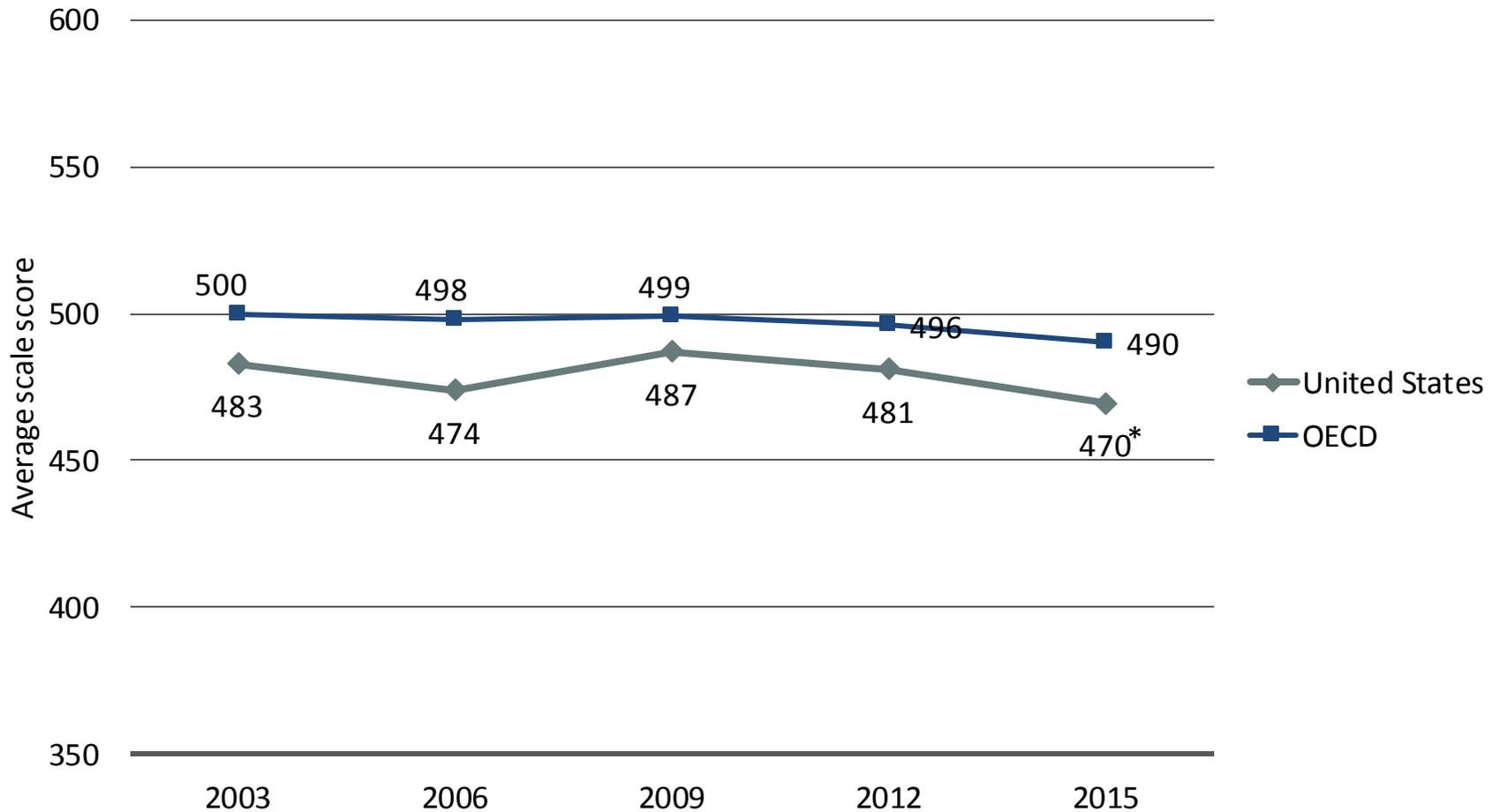
## U.S. Performance on PISA over time – All subjects



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.  
Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

# Math scores have fallen significantly since 2009

U.S. Performance on PISA over time – Math

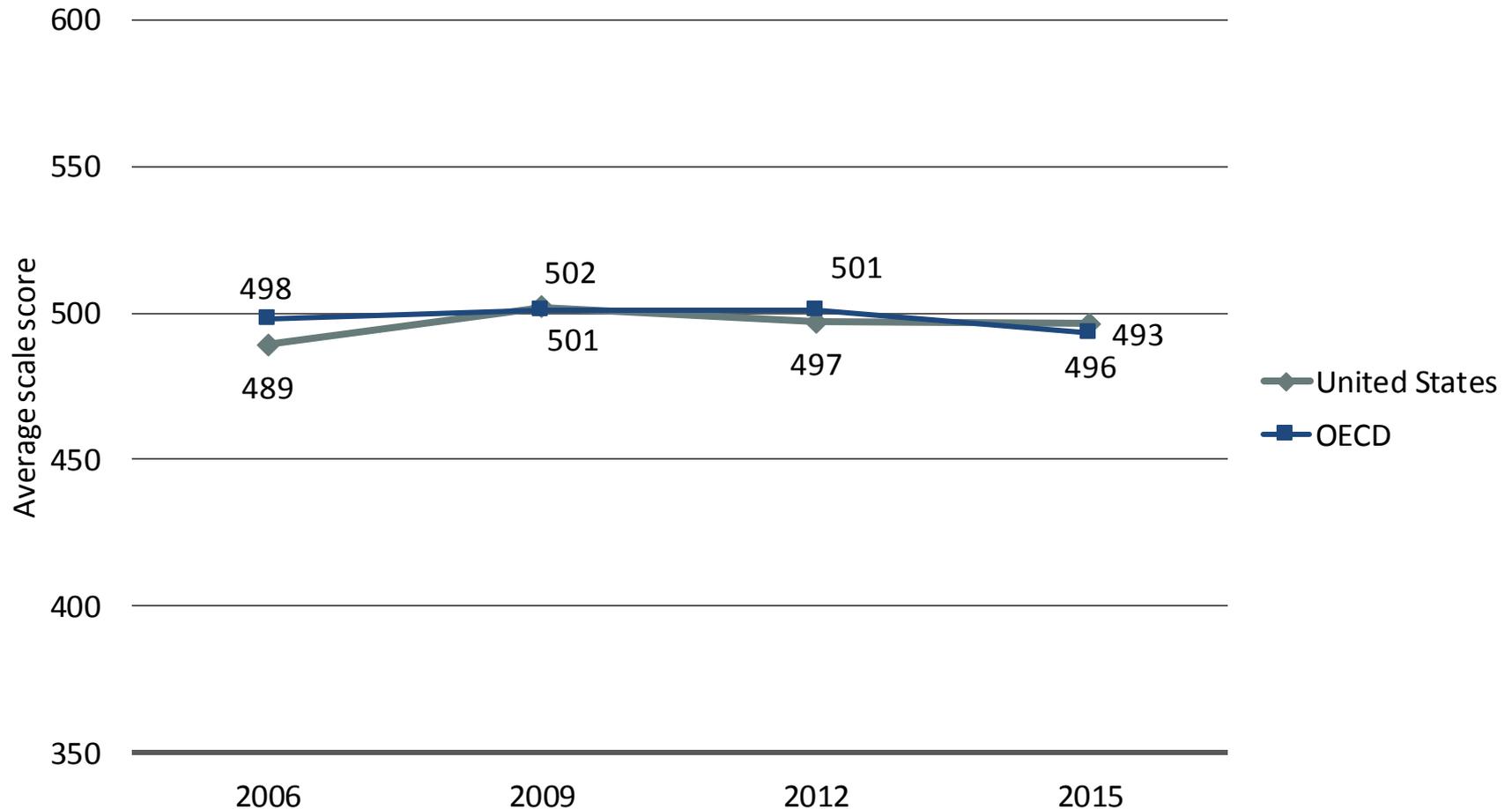


Note: Possible scores range from 0 to 1,000. \* indicates score is significantly different from the 2012 score at the  $p < .05$  level

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

# U.S. Science scores have followed similar trends to the OECD average

U.S. Performance on PISA over time – Science

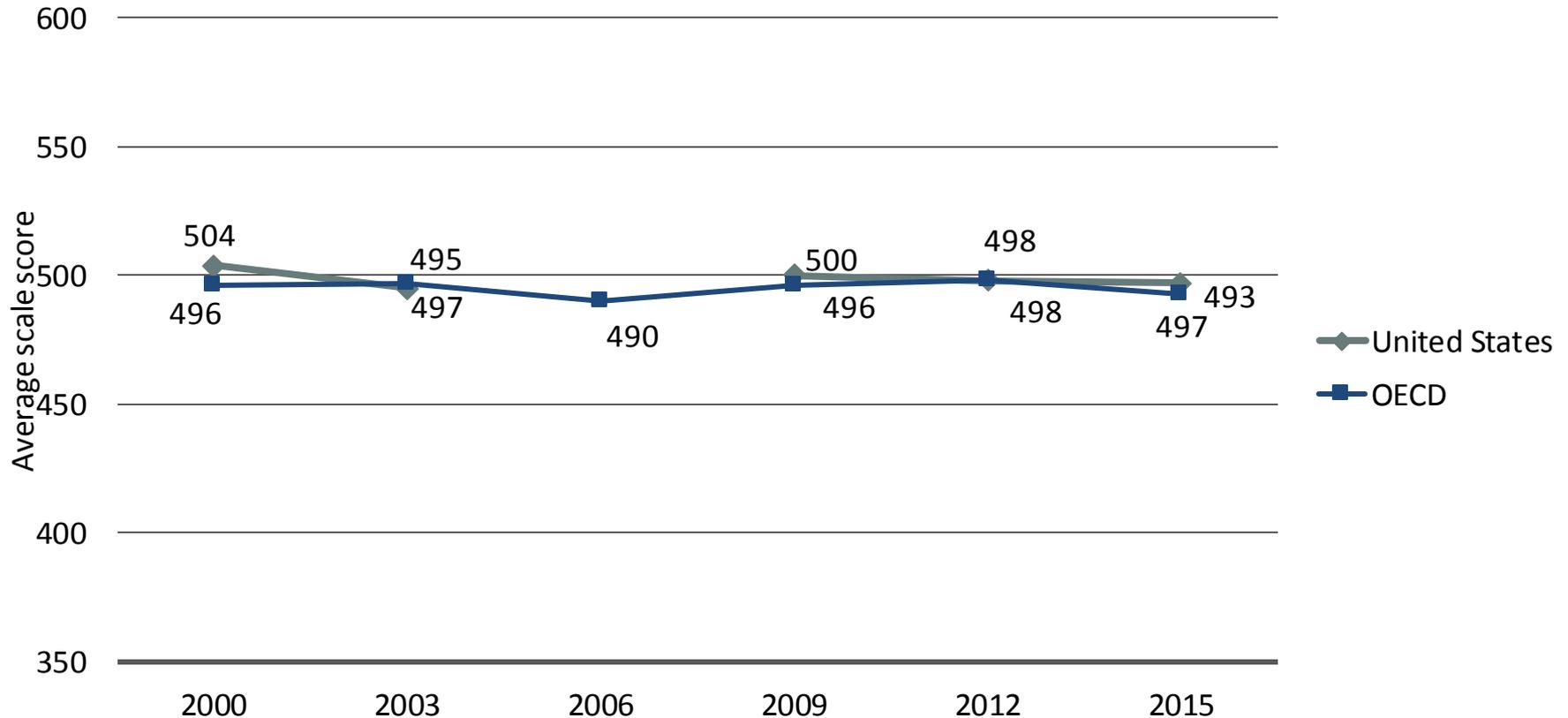


Note: Possible scores range from 0 to 1,000. \* indicates score is significantly different from the 2012 score at the  $p < .05$  level

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

# U.S. performance on reading has been consistent

U.S. Performance on PISA over time – Reading

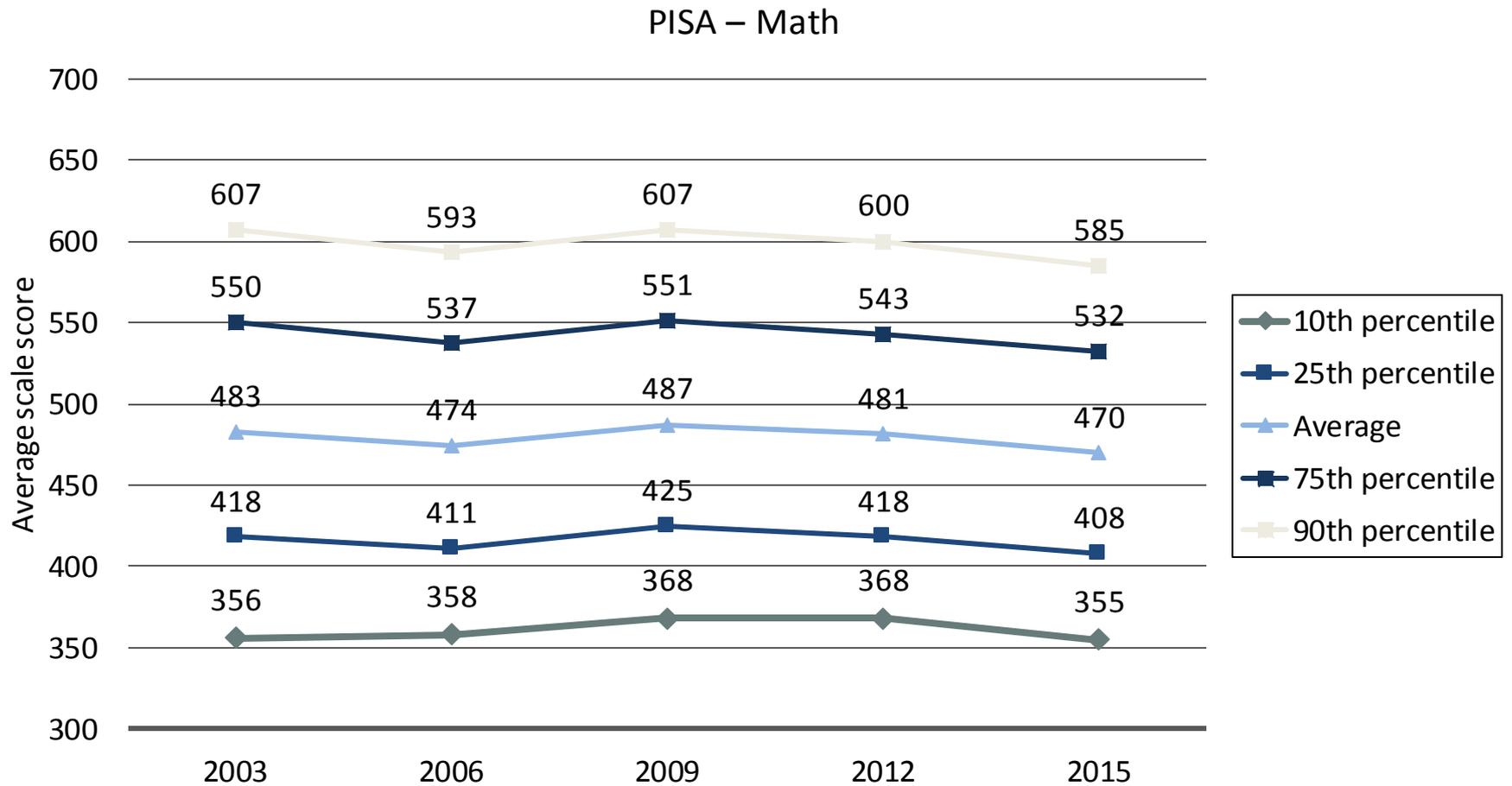


Note: Possible scores range from 0 to 1,000. \* indicates score is significantly different from the 2012 score at the  $p < .05$  level. 2006 results for U.S. reading performance are not available.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

How have results of the highest and lowest achieving students in the U.S. changed over time?

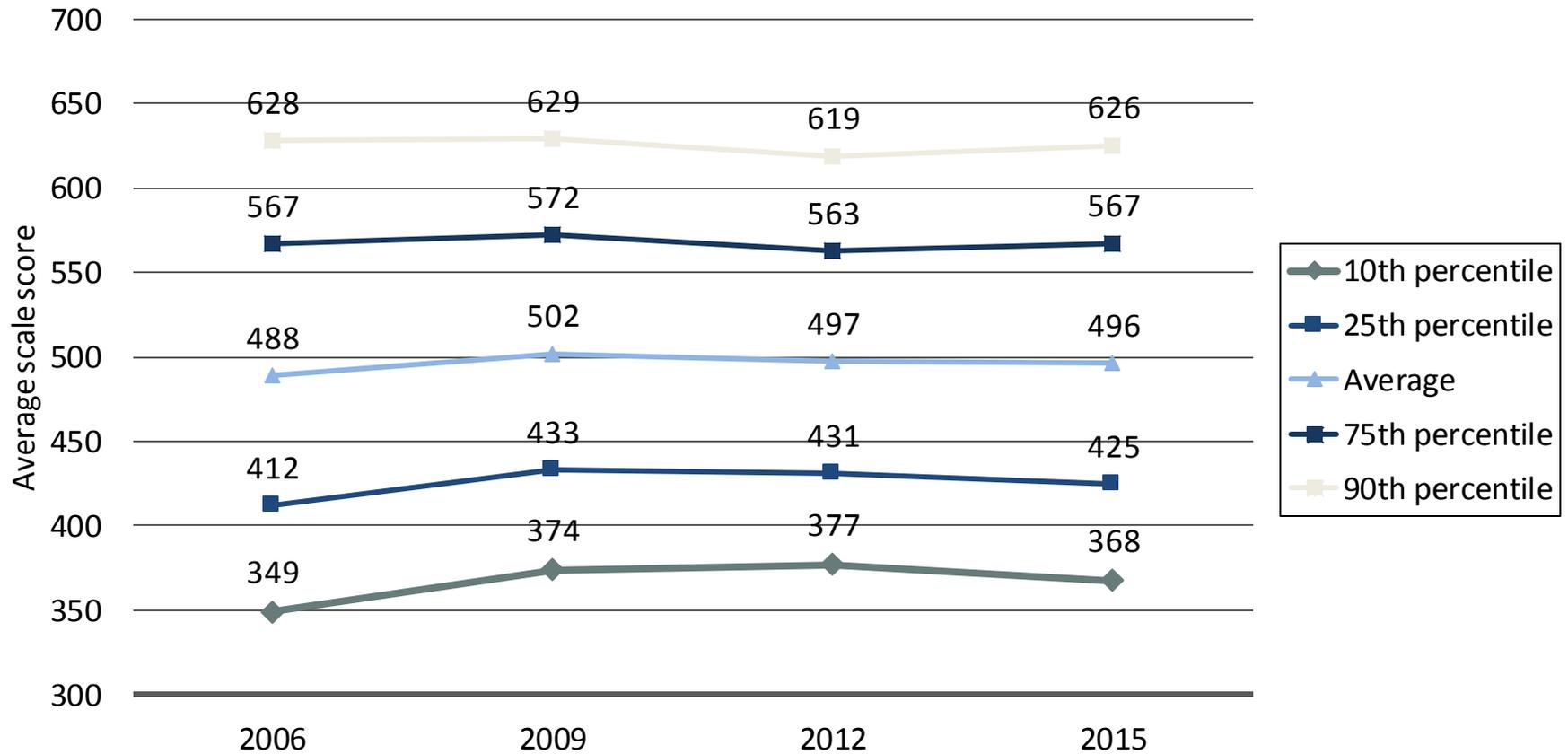
# Scores fell in 2015 for all levels of performers in math



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

# Since 2006, Improvement among Lower Performing Students

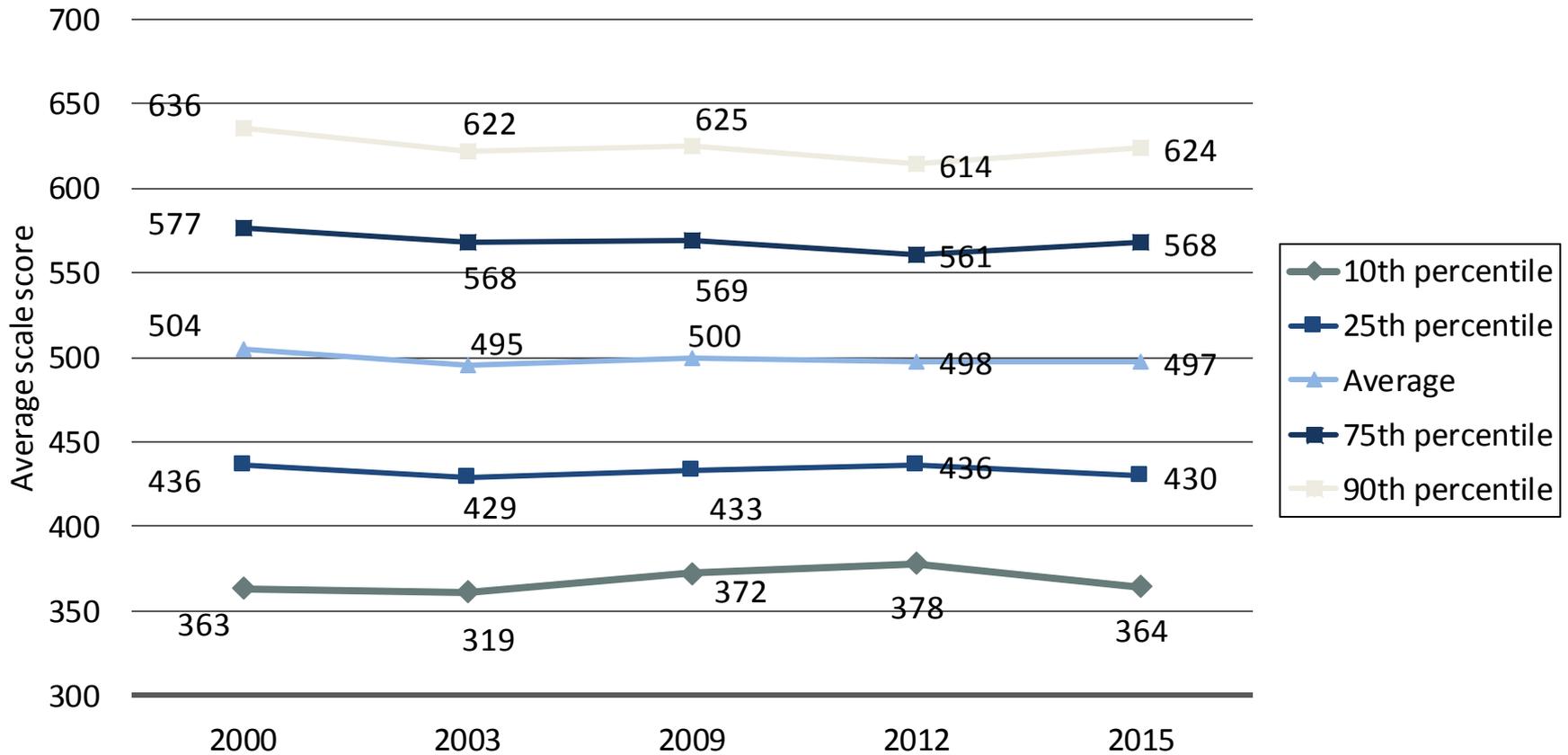
PISA – Science



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

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

PISA – Reading



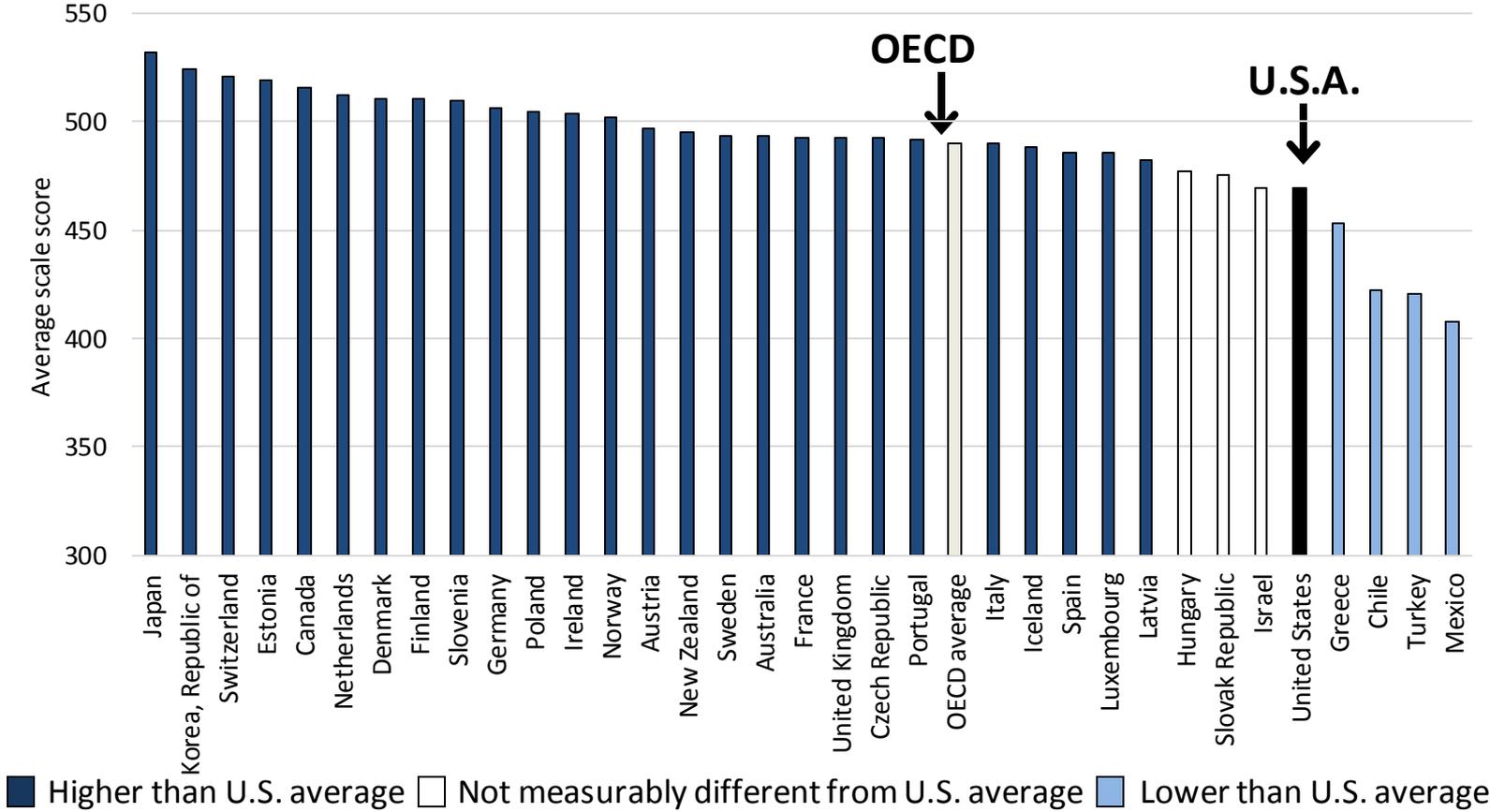
Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_6.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_6.asp)

# **The most recent results by subject**

# 2015 Math

# Of 35 OECD Countries, U.S.A. Ranks 31<sup>st</sup> in Math Literacy

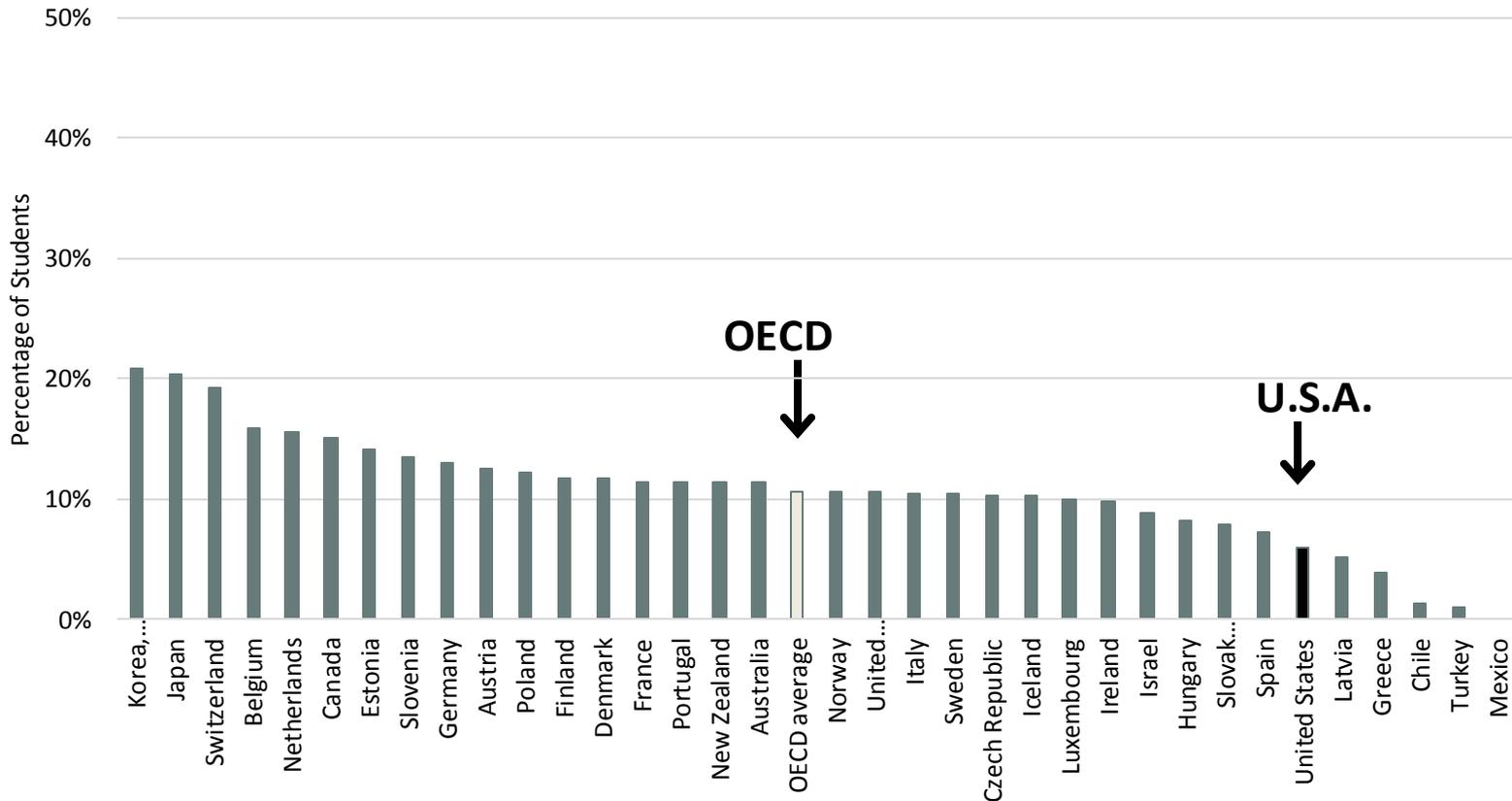
Math, 2015 – All Students



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

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

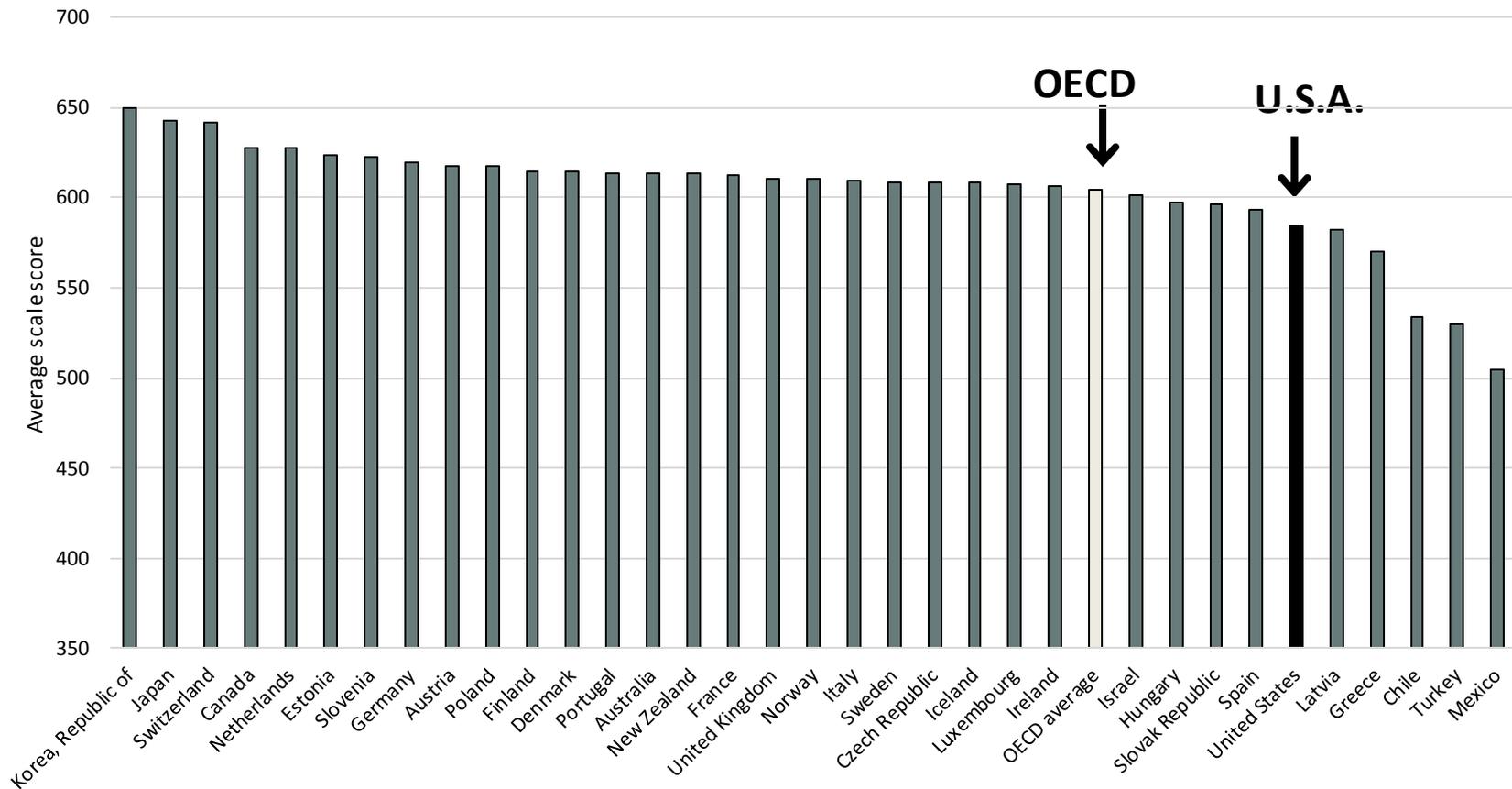
Math, 2015 – Percent of students scoring at highest levels



Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.  
Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

# U.S.A. Ranks 30<sup>th</sup> out of 35 OECD Countries in the Math Achievement of the Highest-Performing Students

Math, 2015 – 90th Percentile Score

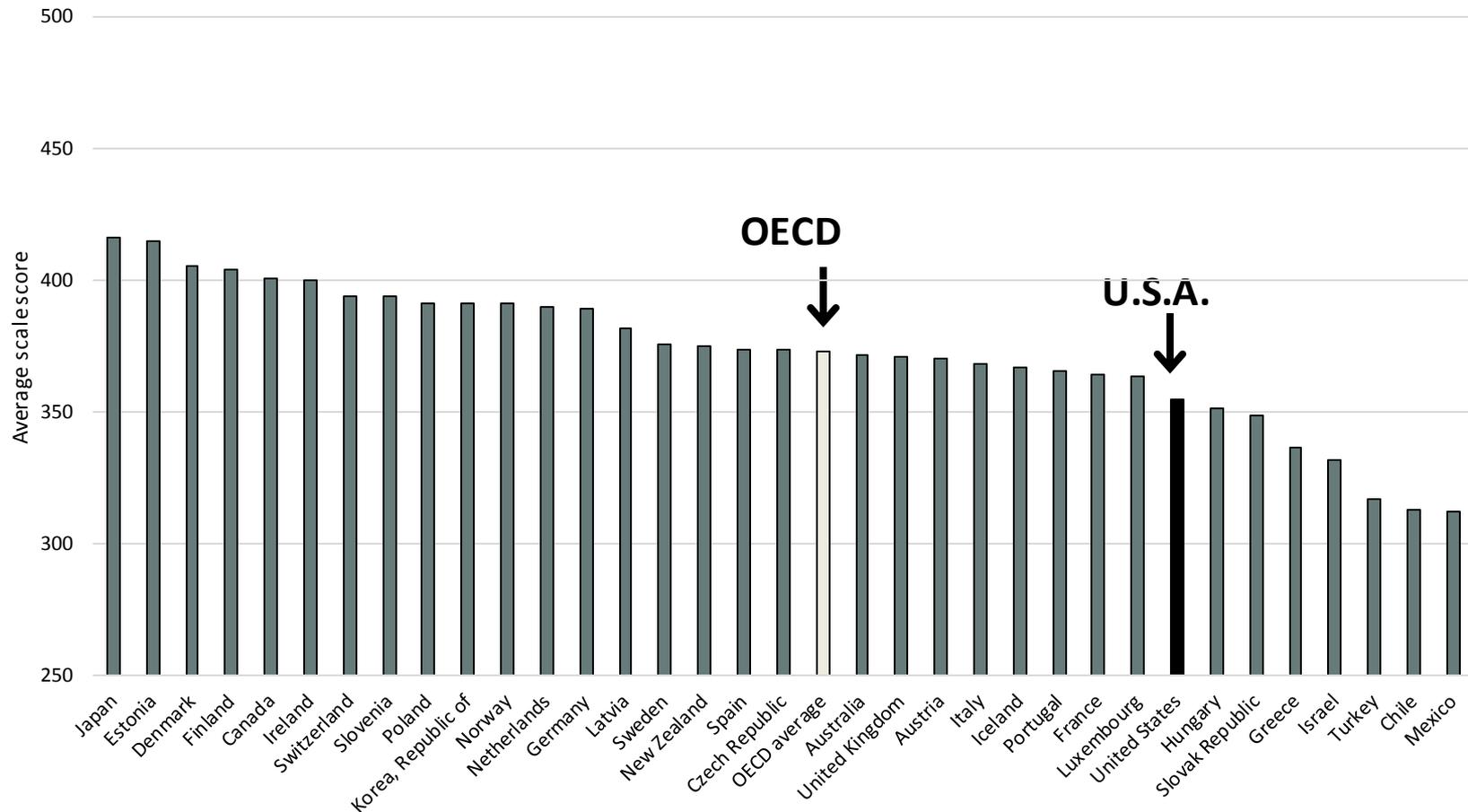


Note: Highest-performing students are those at the 90<sup>th</sup> Percentile.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

# U.S.A. Ranks 28<sup>th</sup> out of 35 OECD Countries in the Math Achievement of the Lowest-Performing Students

Math, 2015 – 10th Percentile Score



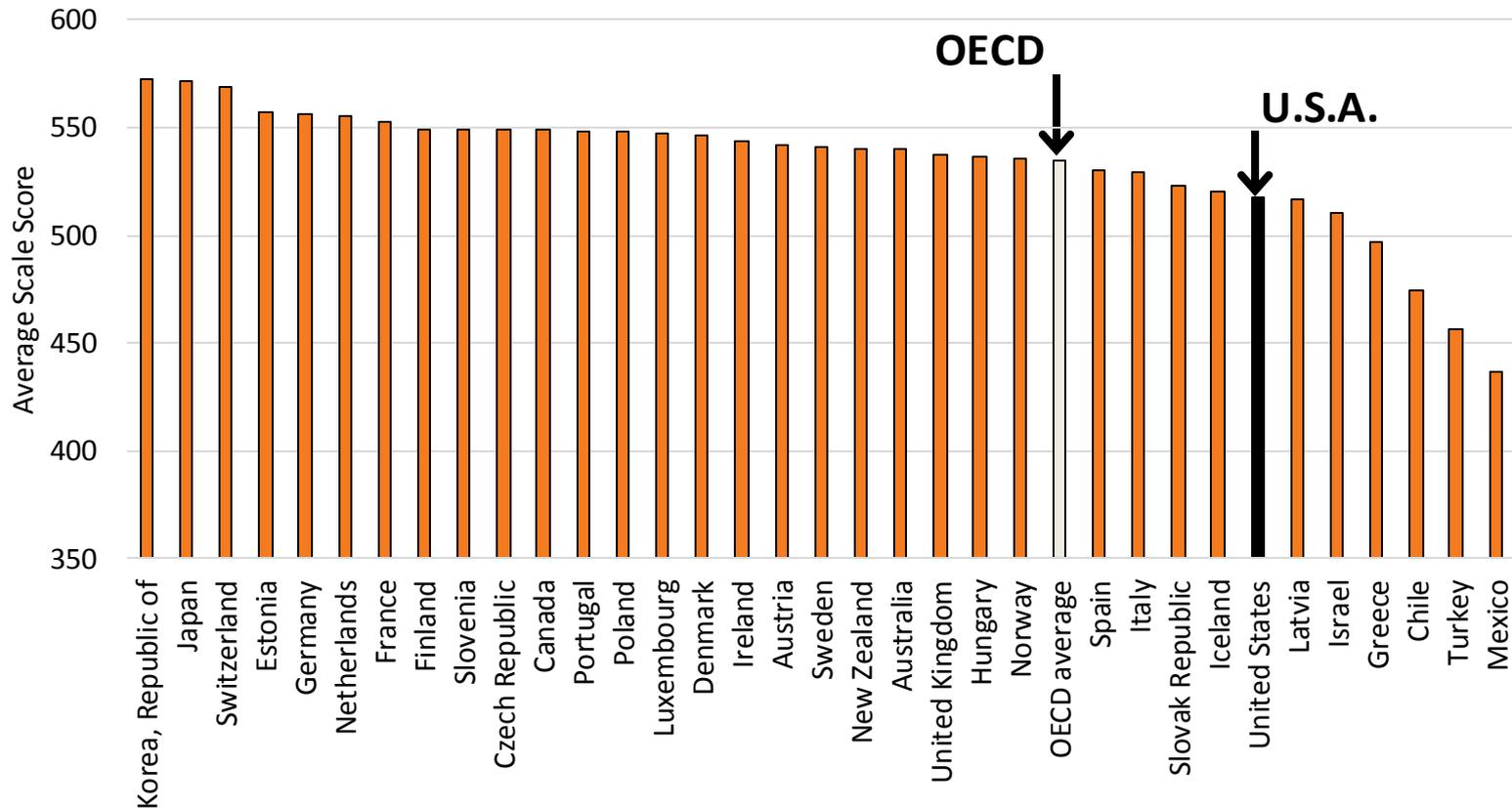
Note: Lowest-performing students are those at the 10<sup>th</sup> Percentile.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

Neither low-SES students nor  
high-SES students compare  
well to their international  
counterparts . . .

# U.S.A. Ranks 29<sup>th</sup> out of 35 OECD Countries in the Math Achievement of High-SES Students

Math, 2015 – High-SES Students

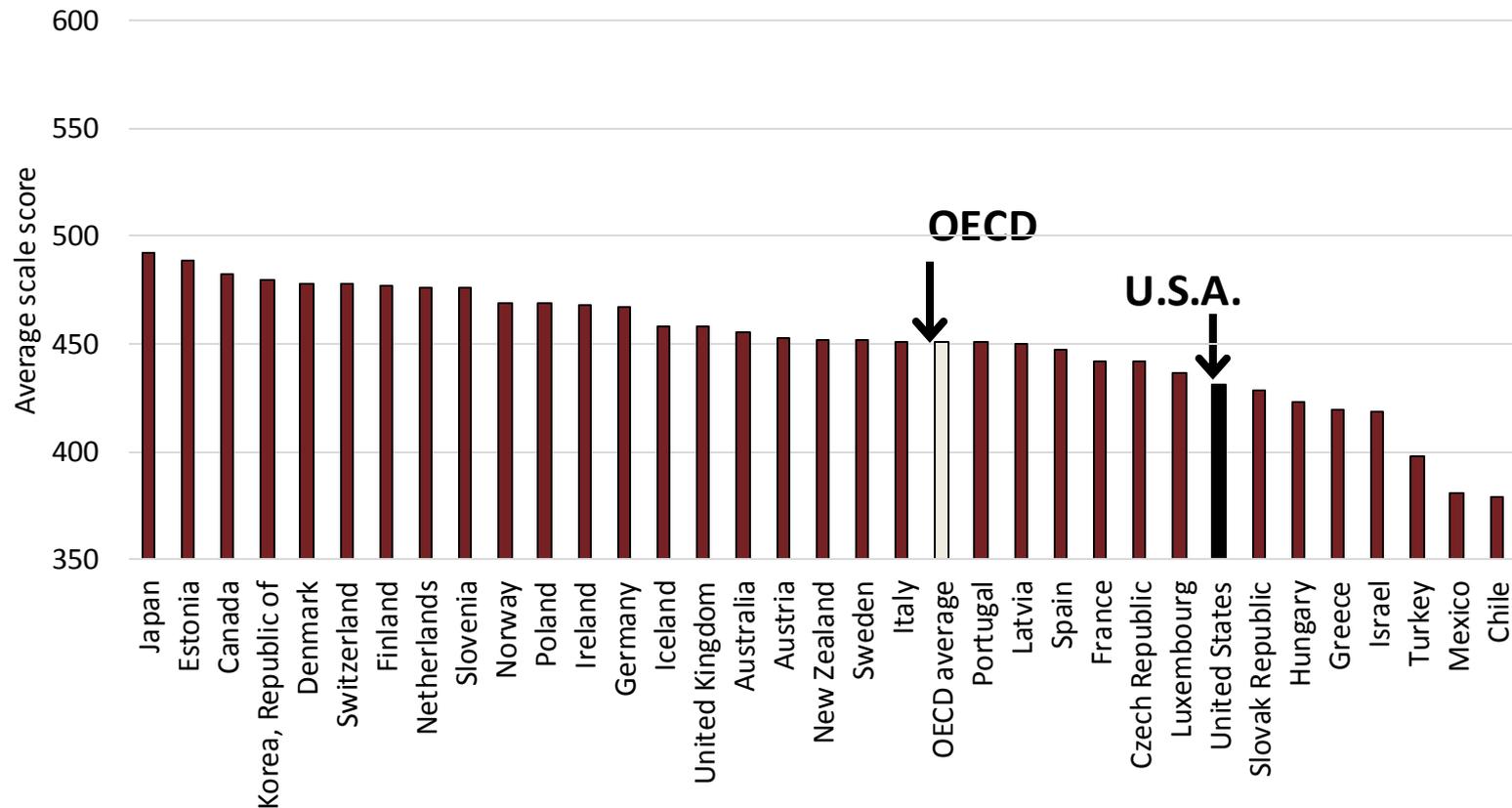


Note: High SES students are those in the top quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment, family wealth, home educational resources, and possessions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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

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

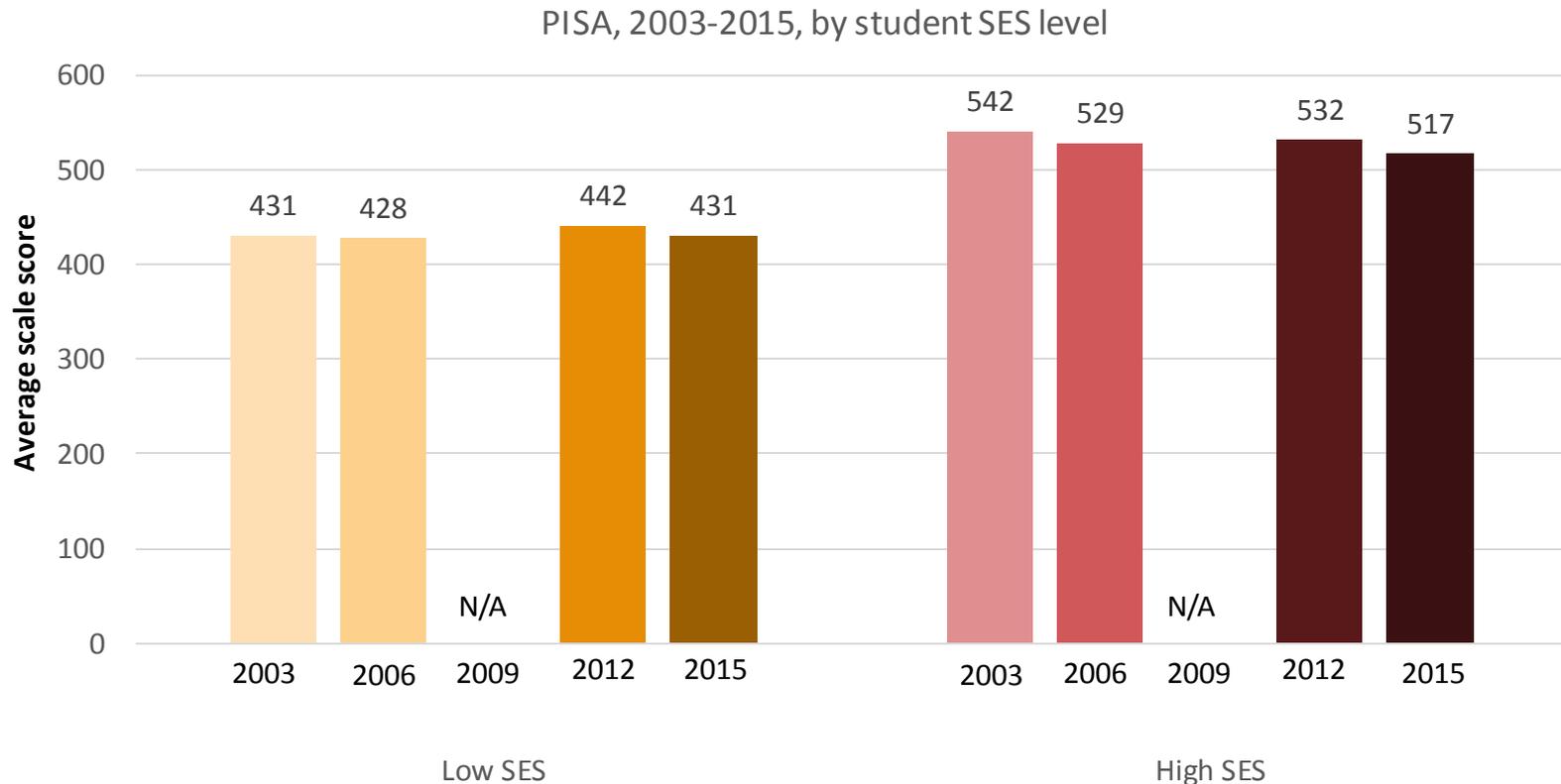
Math, 2015 – Low-SES Students



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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

**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.**

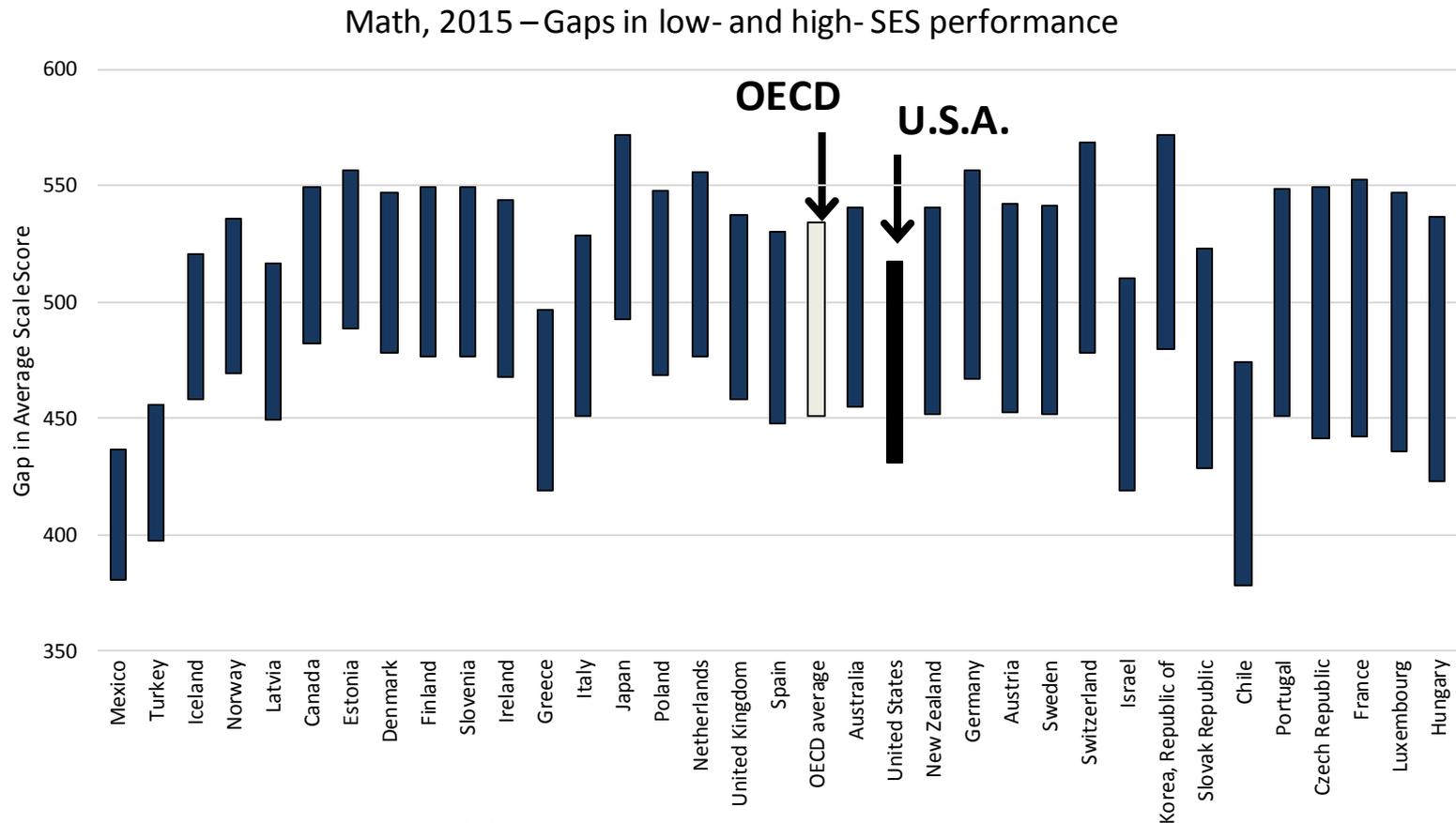


Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment, 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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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



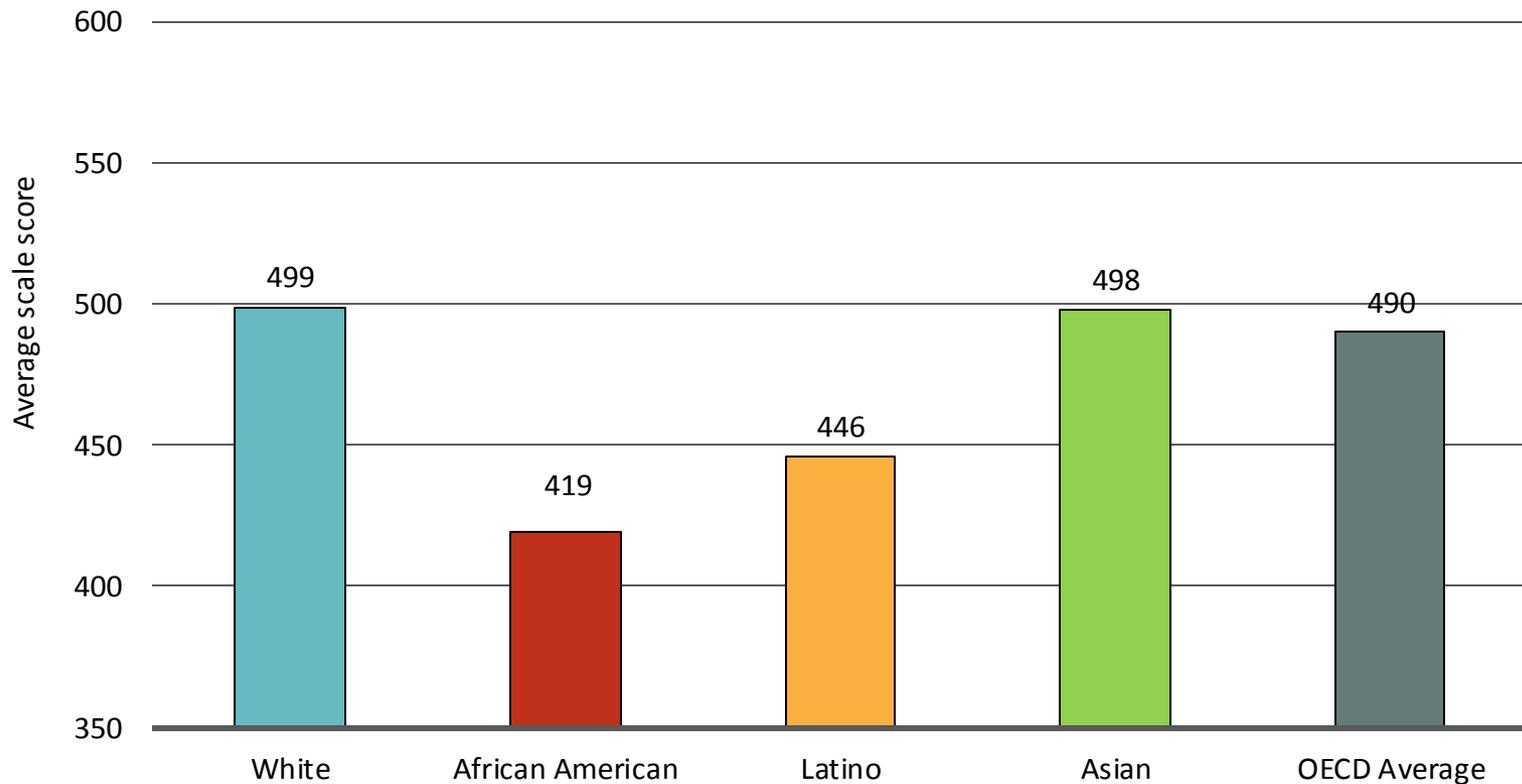
Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment,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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

Within the United States,  
performance varies widely  
across groups of students . . .

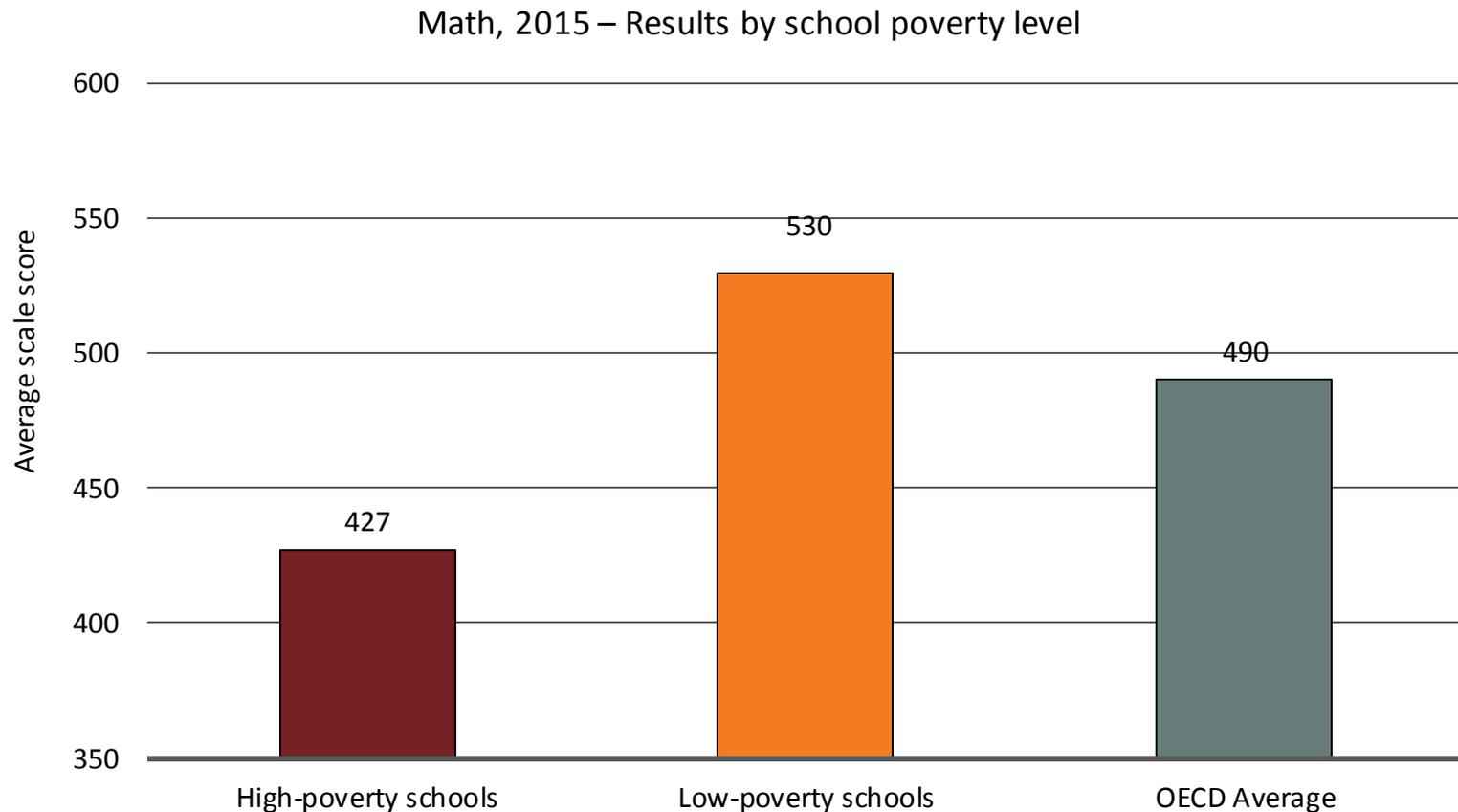
# PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in Math.

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



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

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



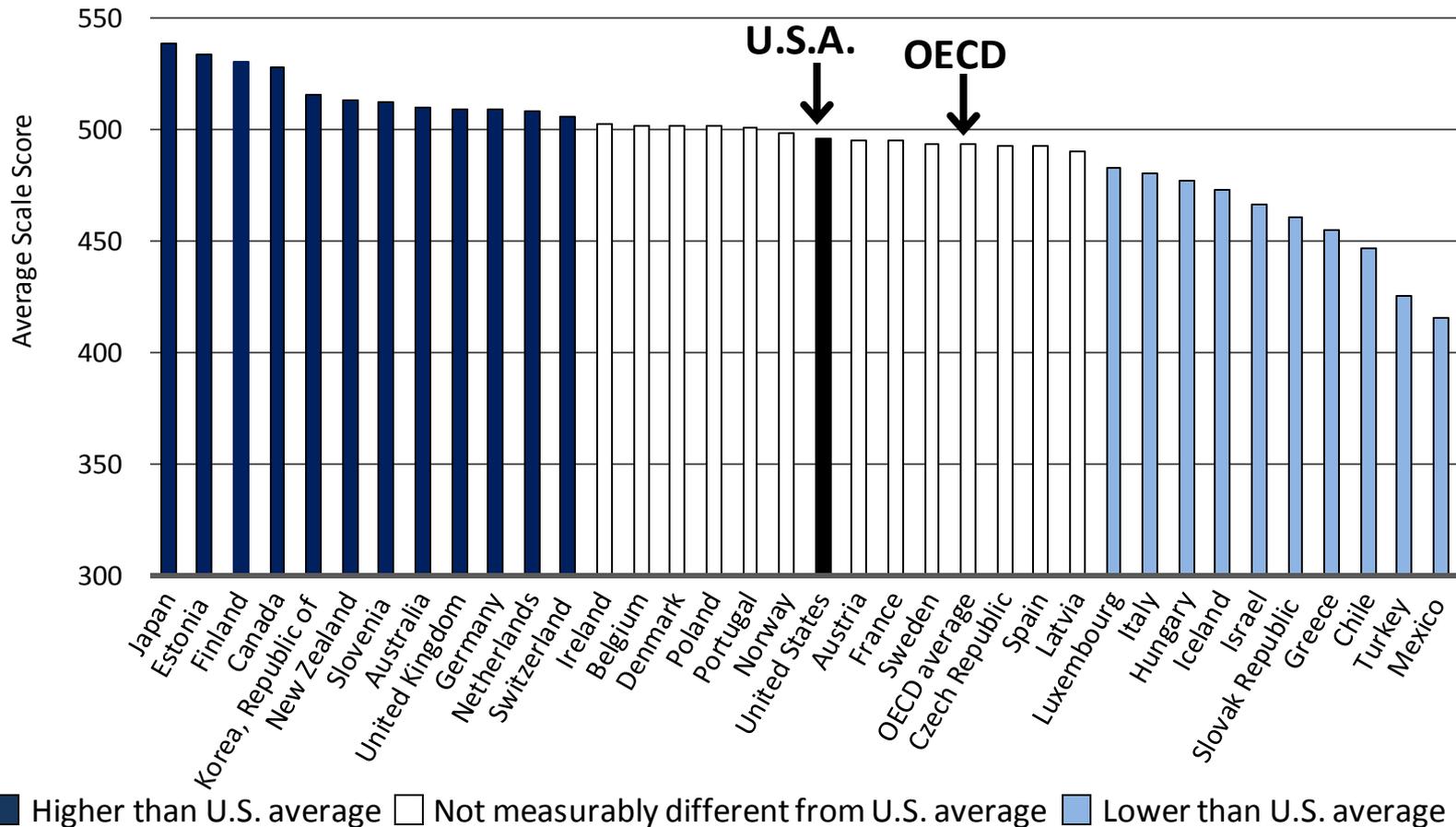
Note: Low income schools are those in which 75% or more of students are eligible for free or reduced price lunch; high income schools are those in which less than 10% are eligible

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_5.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_5.asp)

# 2015 Science

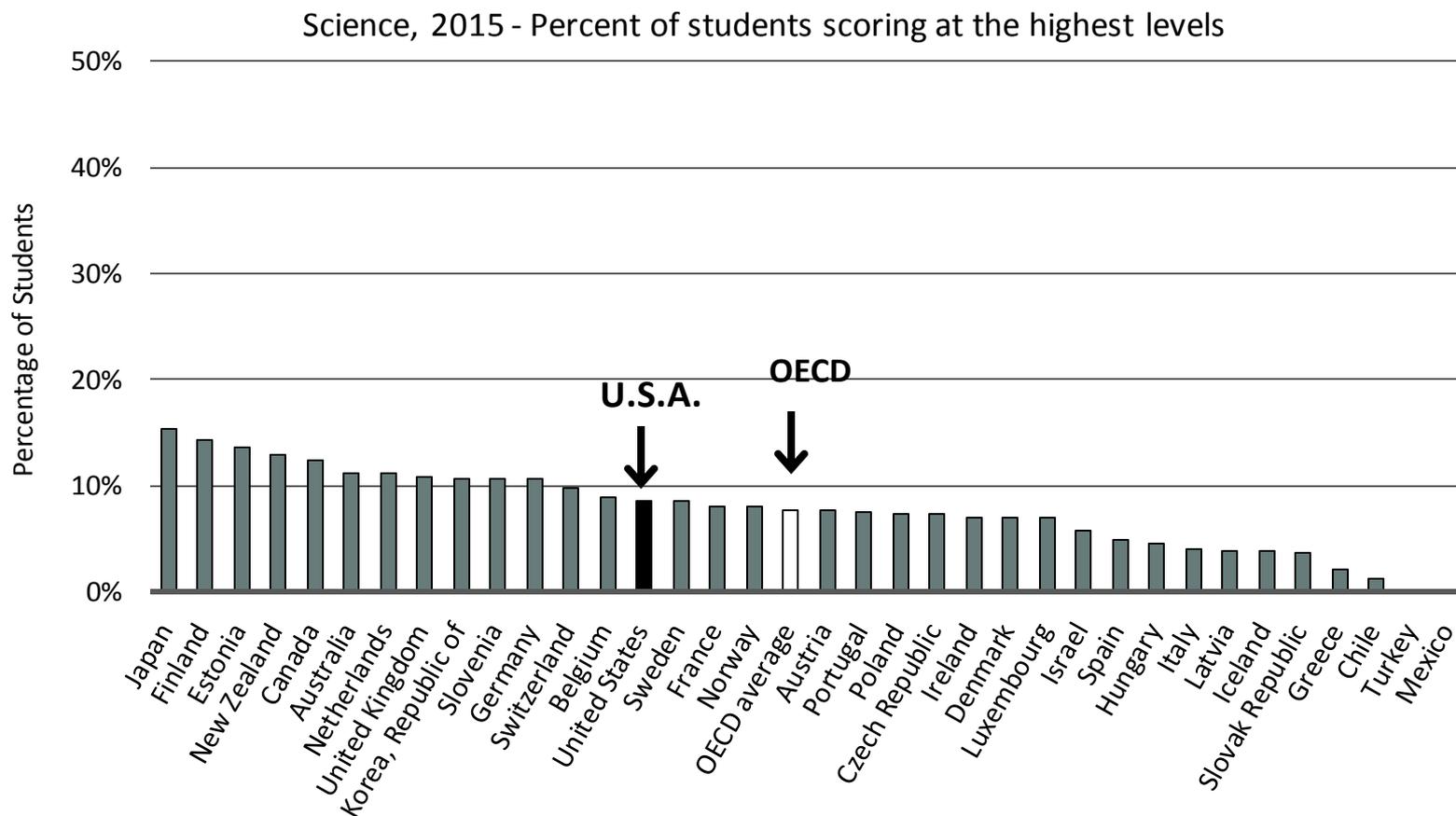
# Of 35 OECD Countries, U.S.A. Ranks 19<sup>th</sup> in Science Literacy

PISA Science, 2015 – All Students



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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

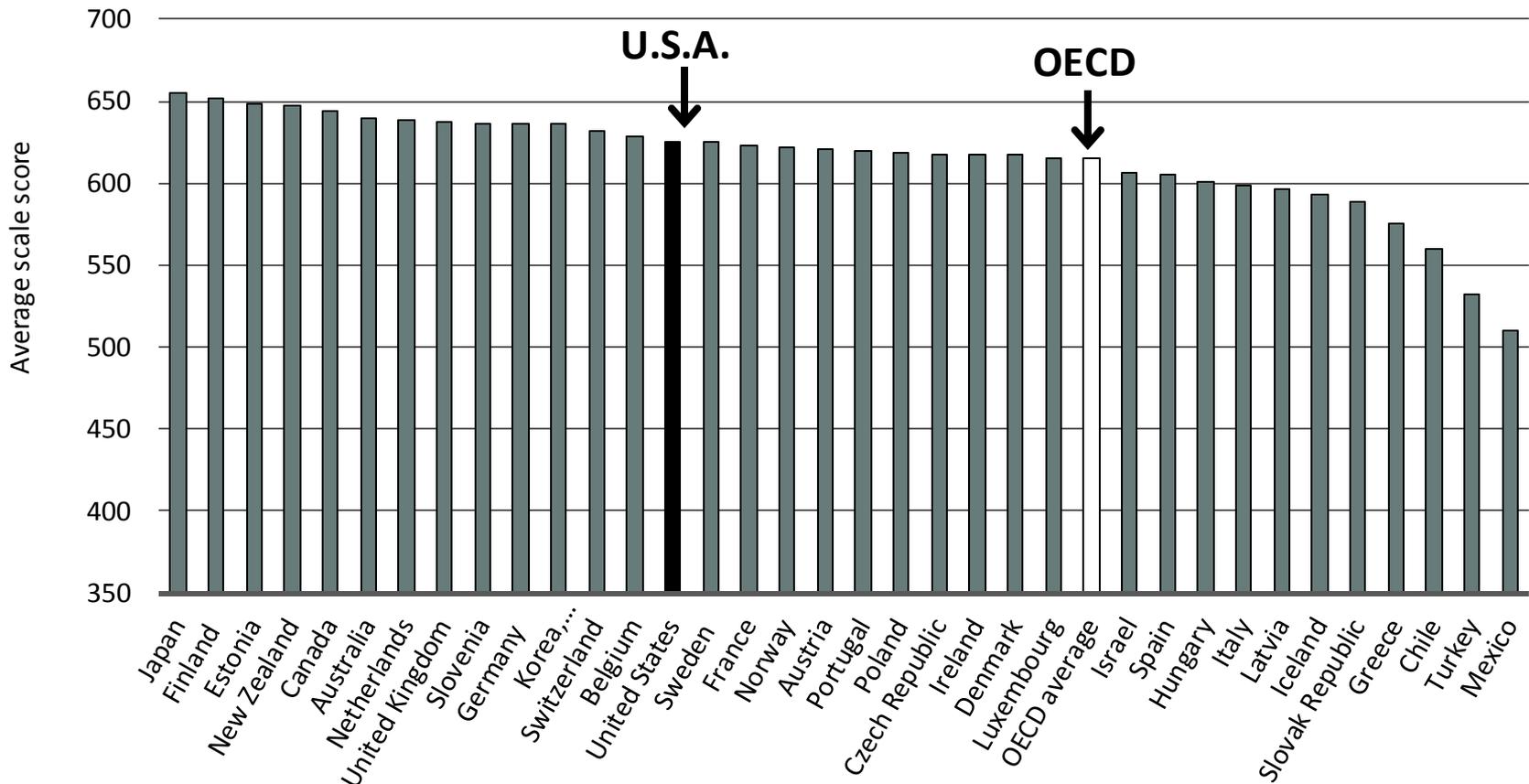


Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

# U.S.A. Ranks 14<sup>th</sup> out of 35 OECD Countries in the Science Achievement of the Highest-Performing Students

Science, 2015 – 90th Percentile score

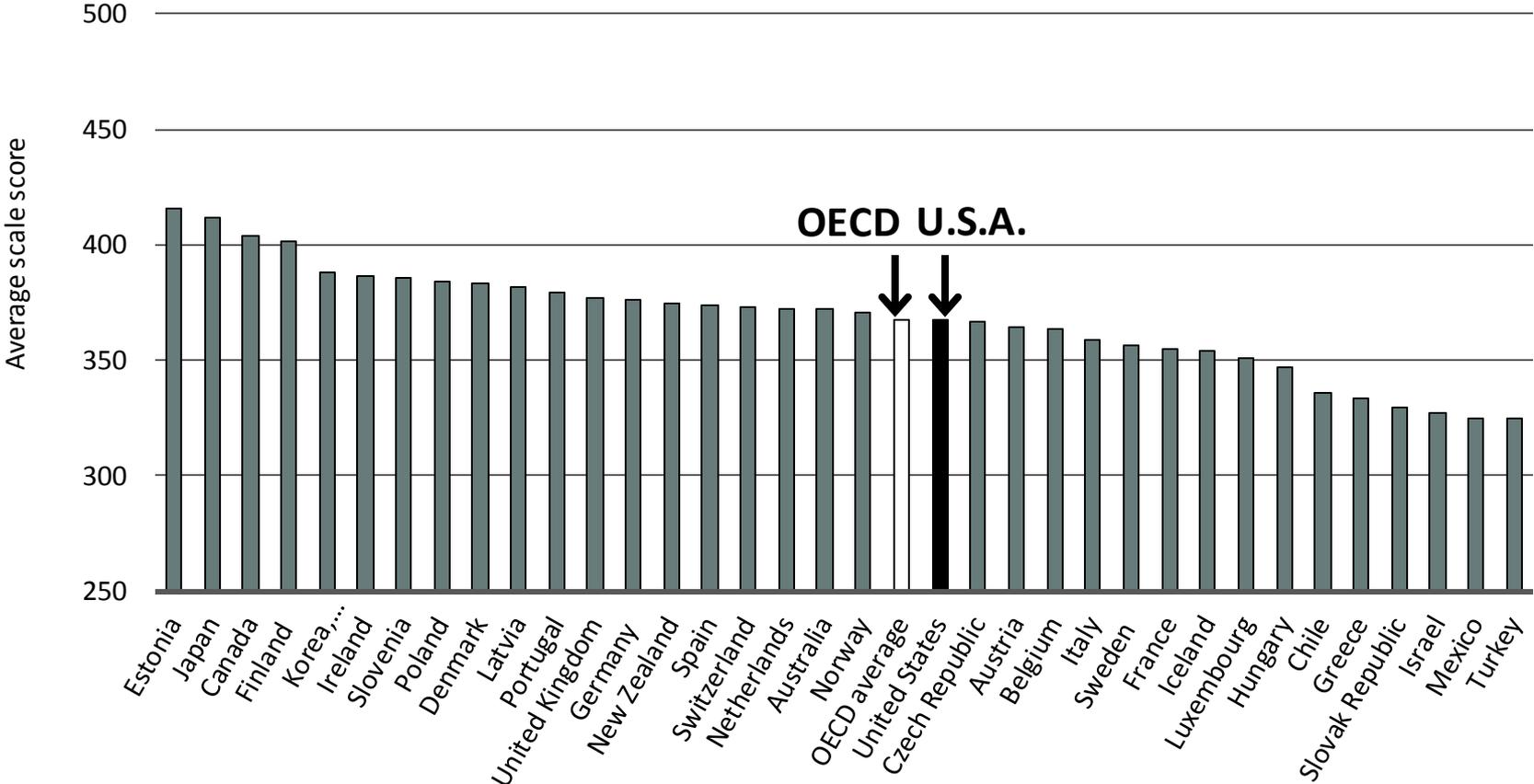


Note: Highest-performing students are those at the 90<sup>th</sup> Percentile

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

# U.S.A. Ranks 21st out of 35 OECD Countries in the Science Achievement of the Lowest-Performing Students

Science, 2015 – 10th Percentile Score

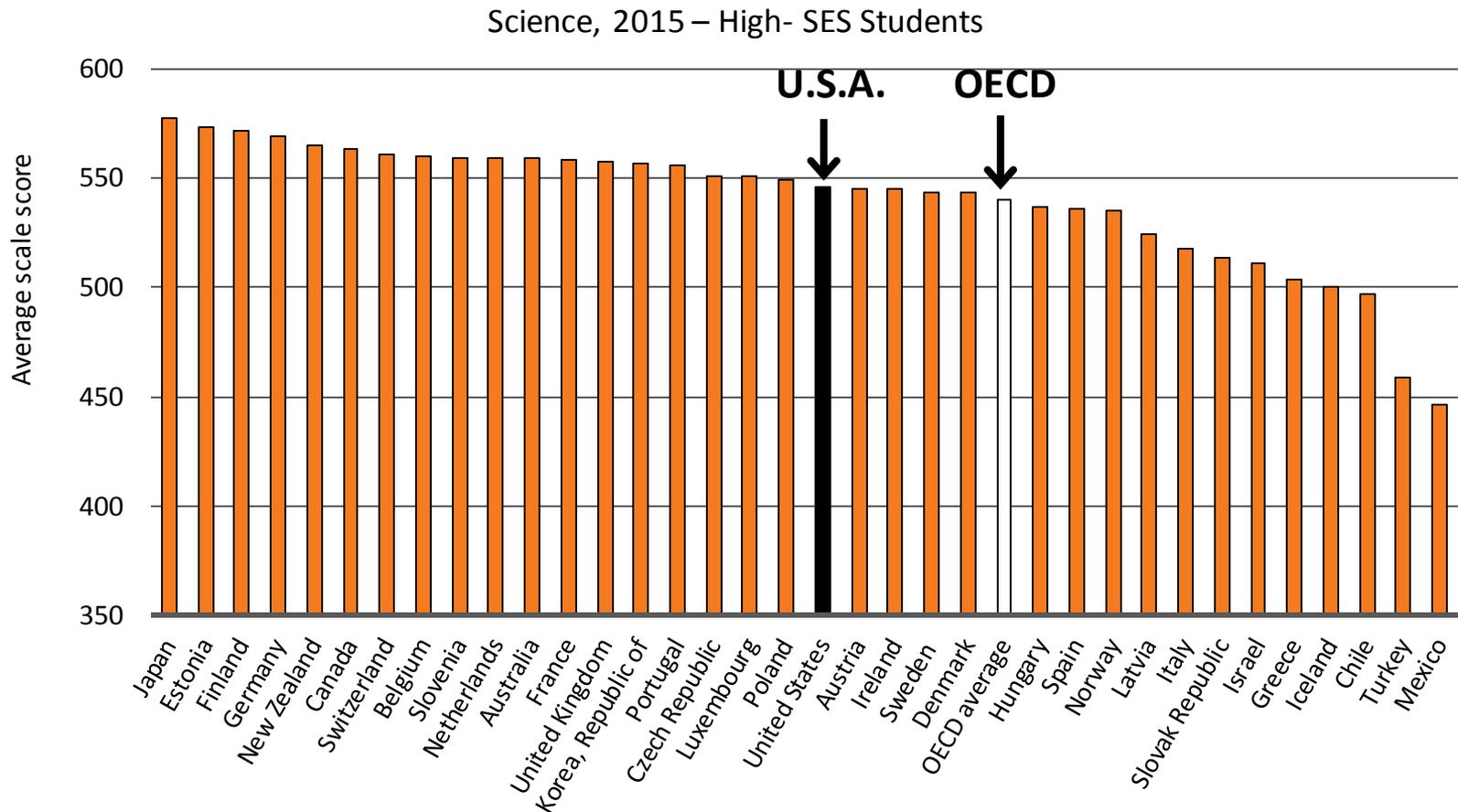


Note: Lowest-performing students are those at the 10<sup>th</sup> Percentile.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

The United States' results for low and high-SES students are similar to OECD averages for their counterparts.

# U.S.A. Ranks 19<sup>th</sup> out of 35 OECD Countries in the Science Achievement of High-SES Students

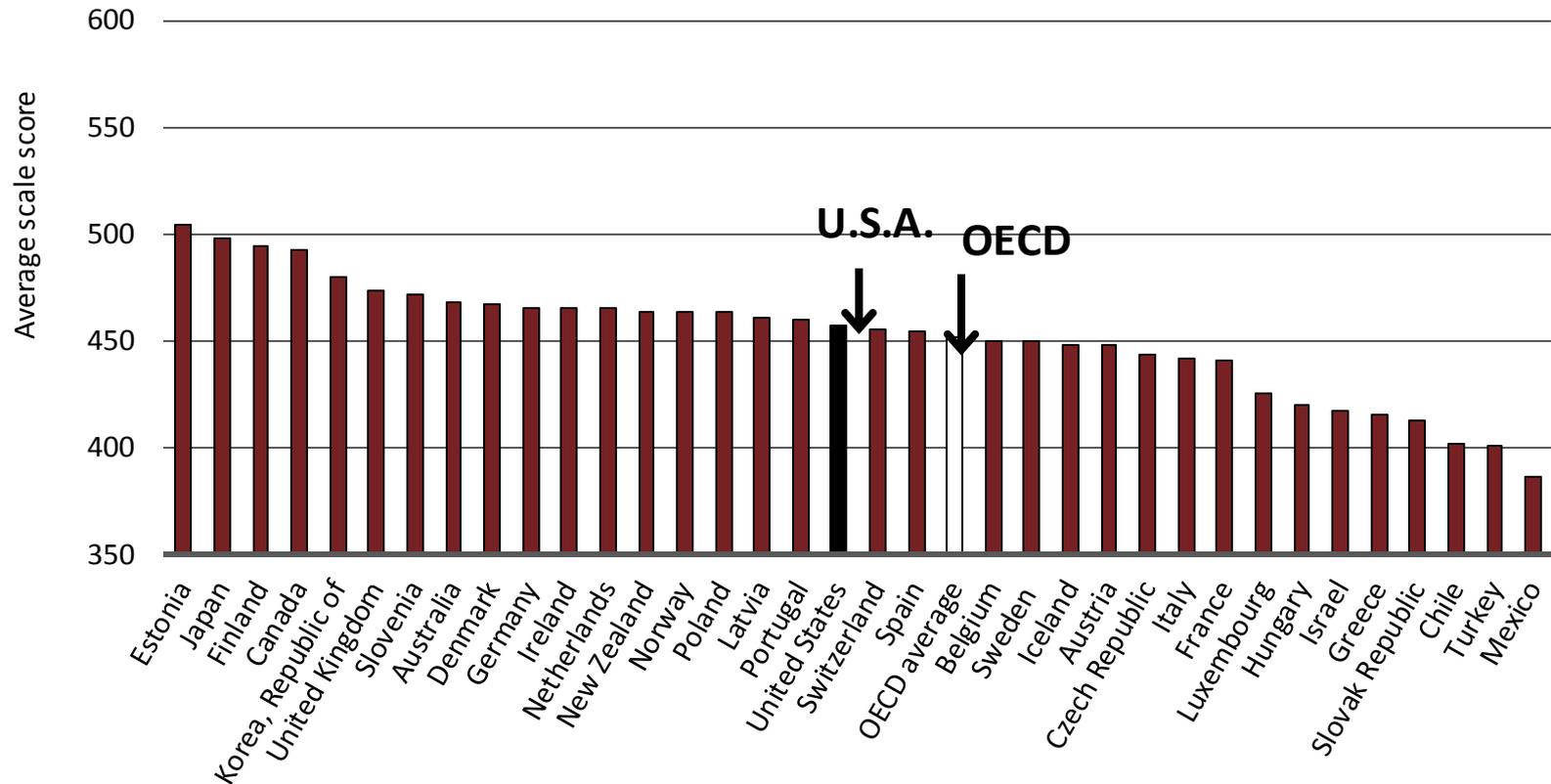


Note: High SES students are those in the top quartile of the ESCS index in their country. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment, family wealth, home educational resources, and possessions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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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

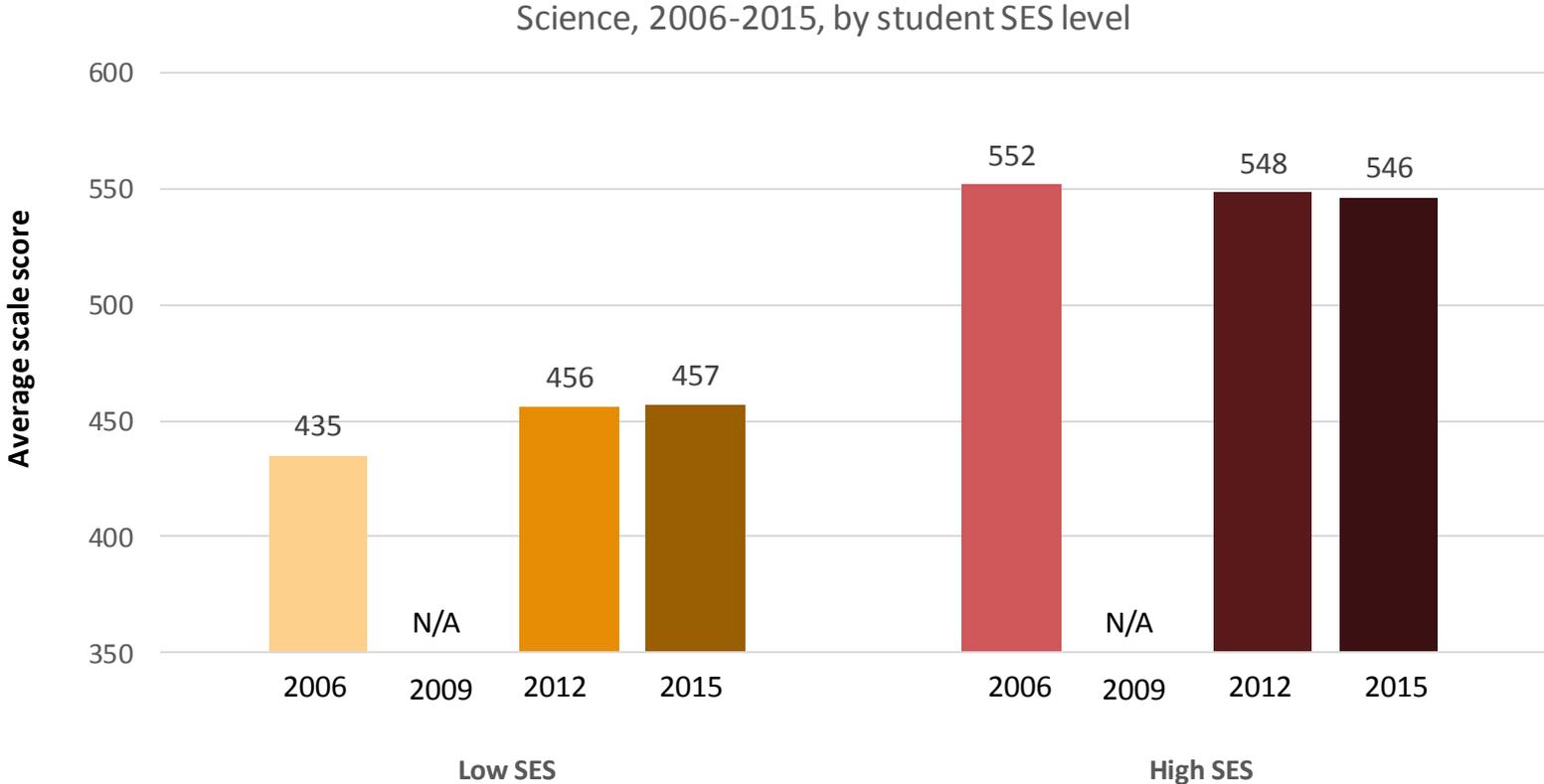
Science, 2015 – Low-SES Students



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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

**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.**



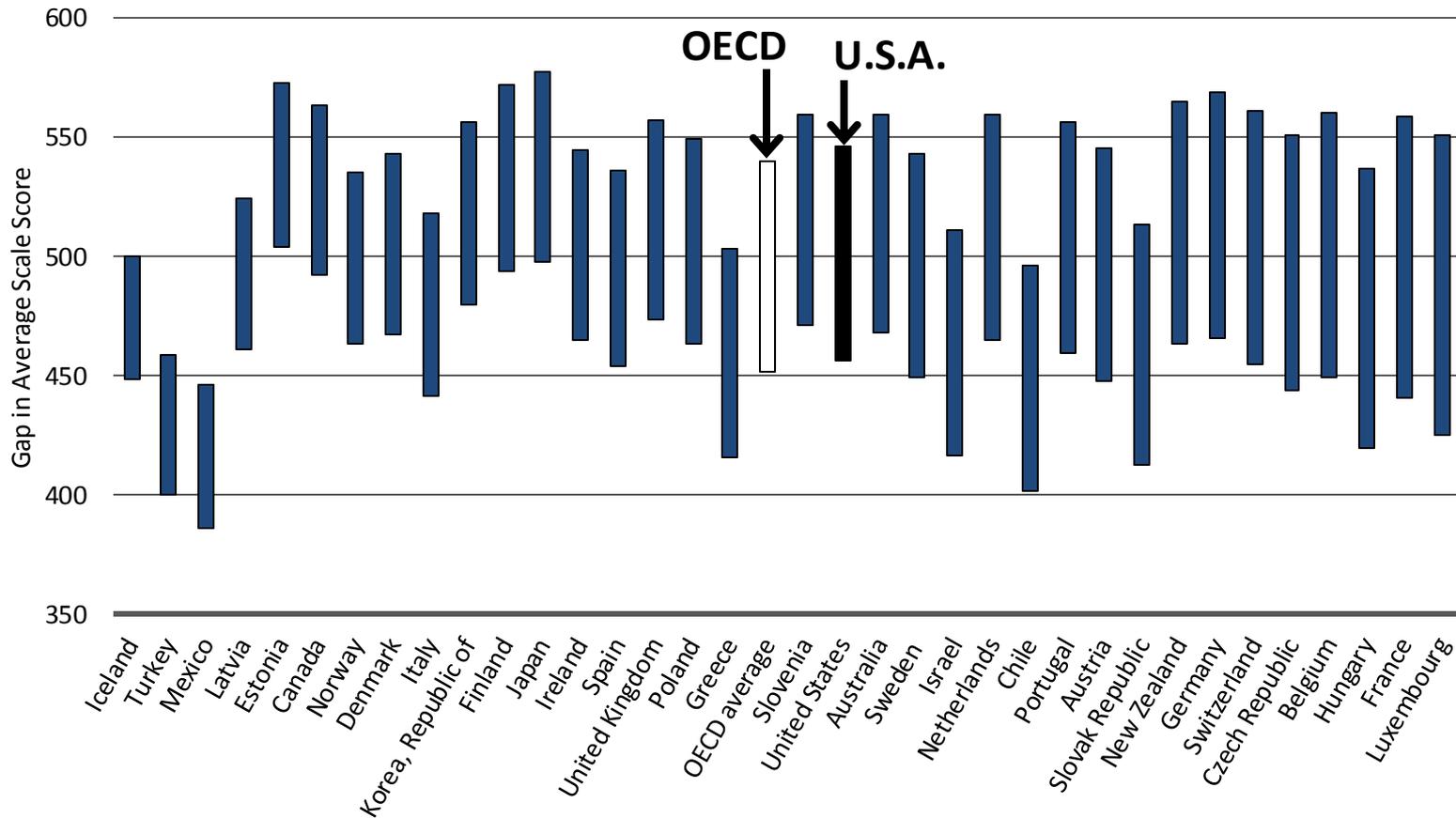
Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents’ occupational status, parents’ educational attainment,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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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



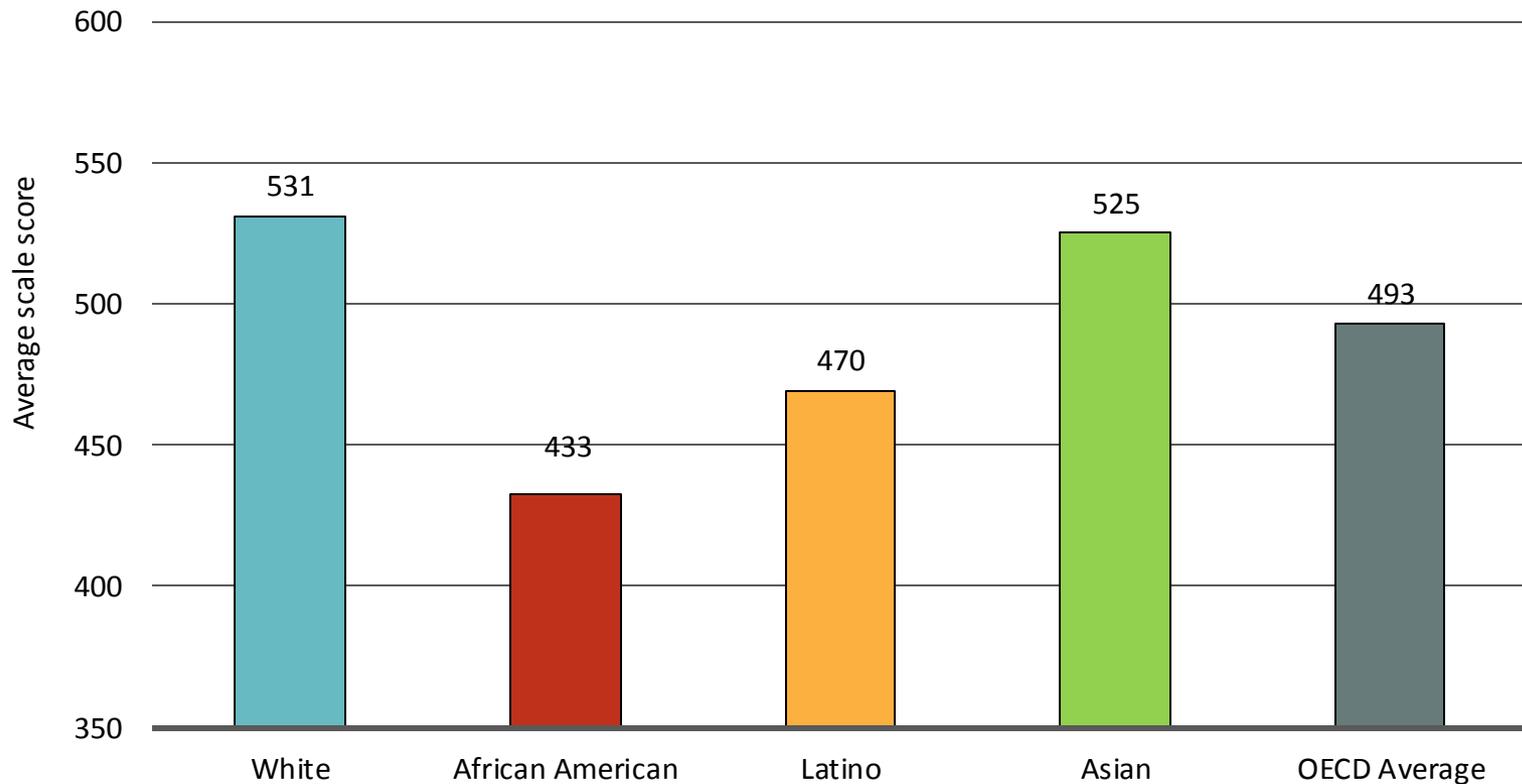
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Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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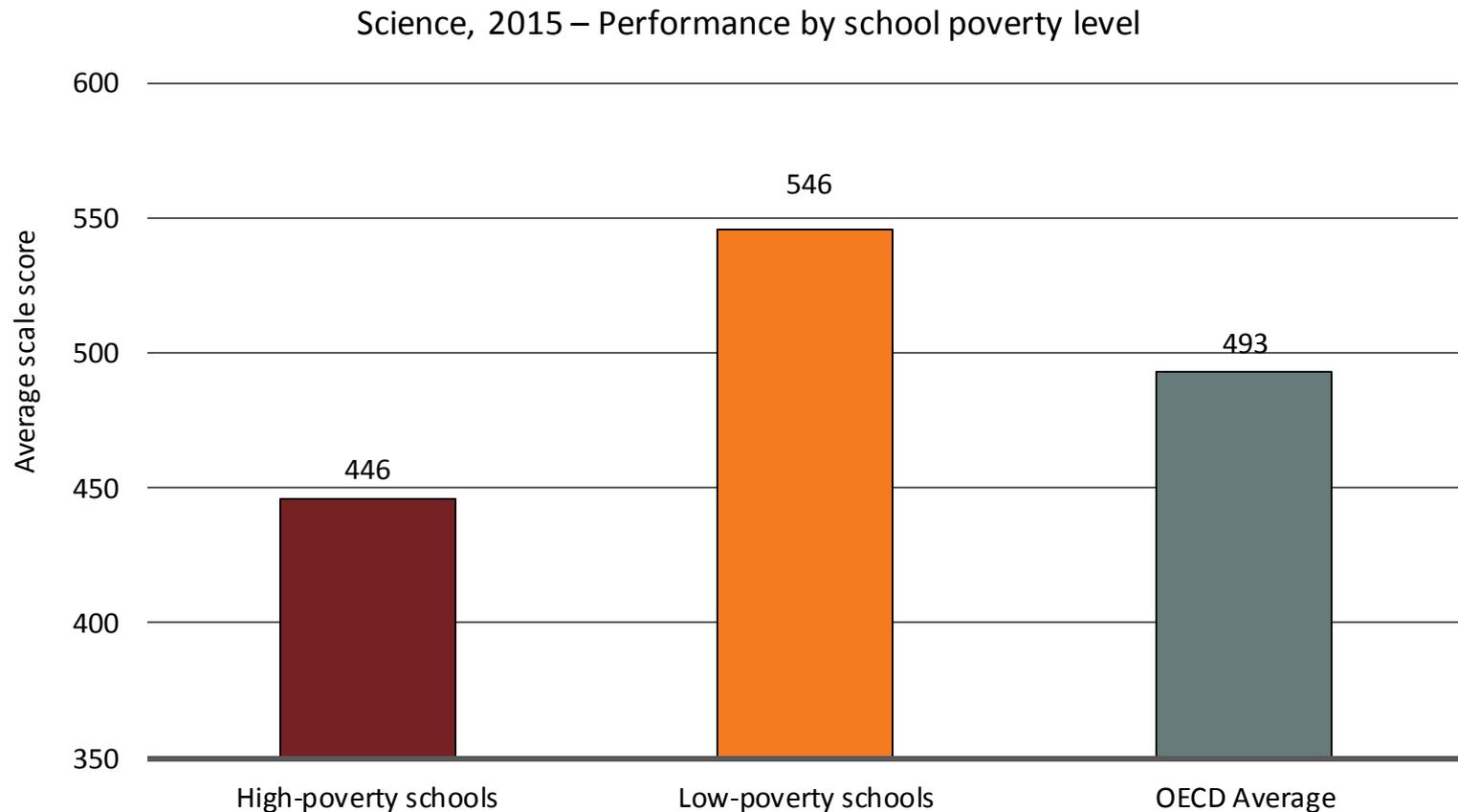
# PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in science.

Science, 2015 – Performance by race/ ethnic group



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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



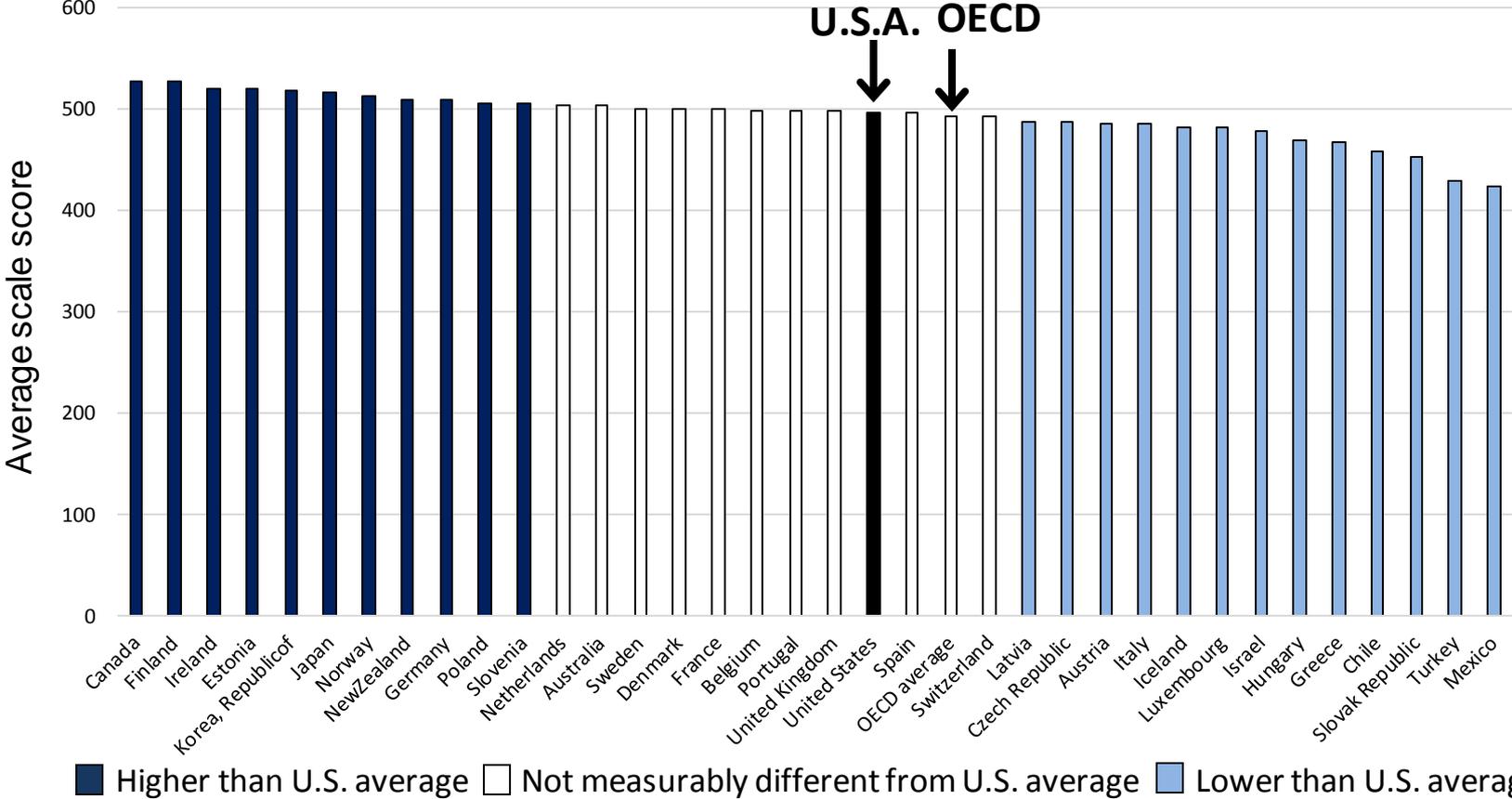
Note: High poverty schools are those in which 75% or more of students are eligible for free or reduced price lunch; low poverty schools are those in which less than 10% are eligible

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

# 2015 Reading

# Of 35 OECD Countries, U.S.A. Ranks 20th<sup>th</sup> in Reading Literacy

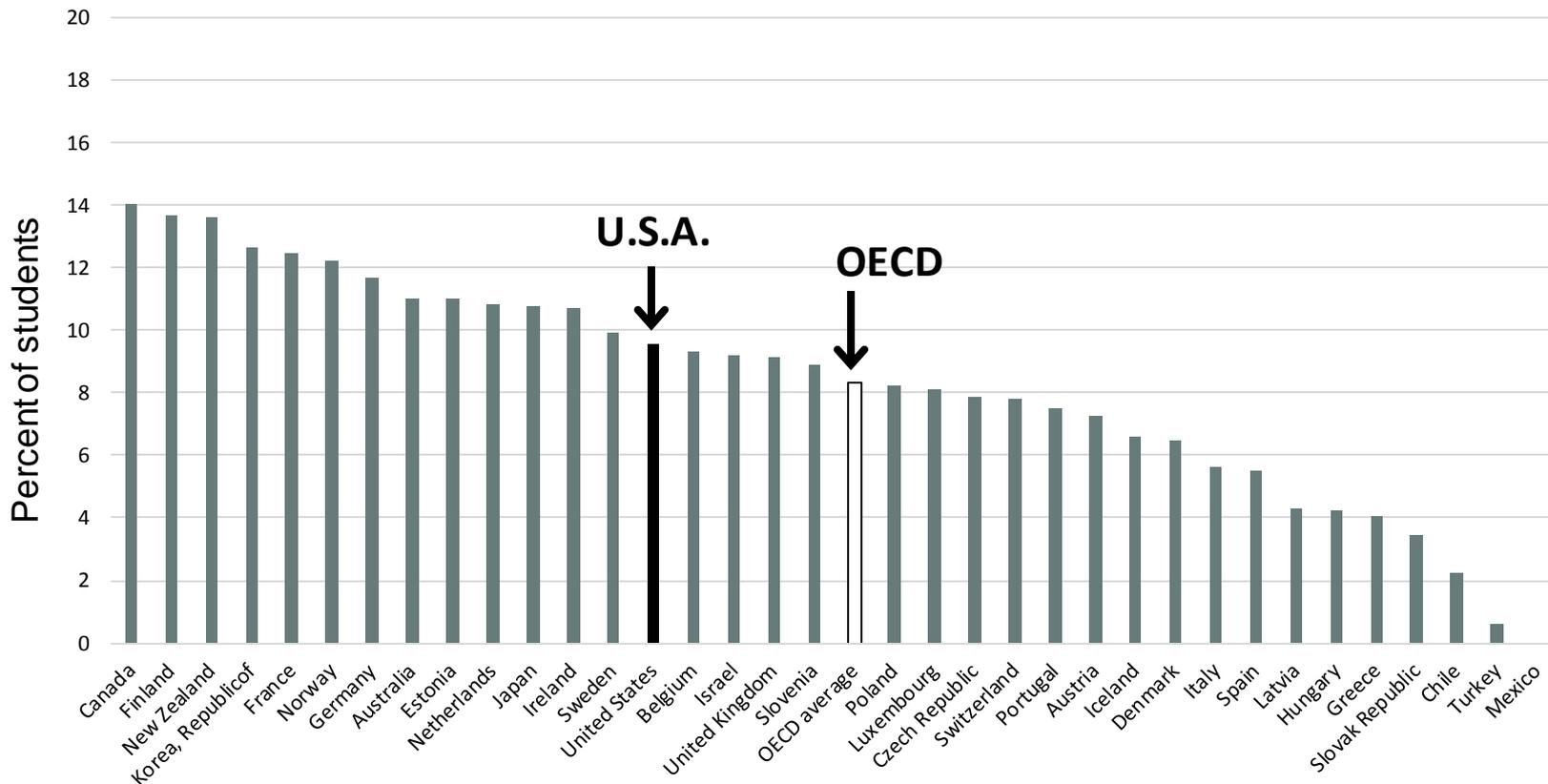
Reading, 2015 - All Students



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

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

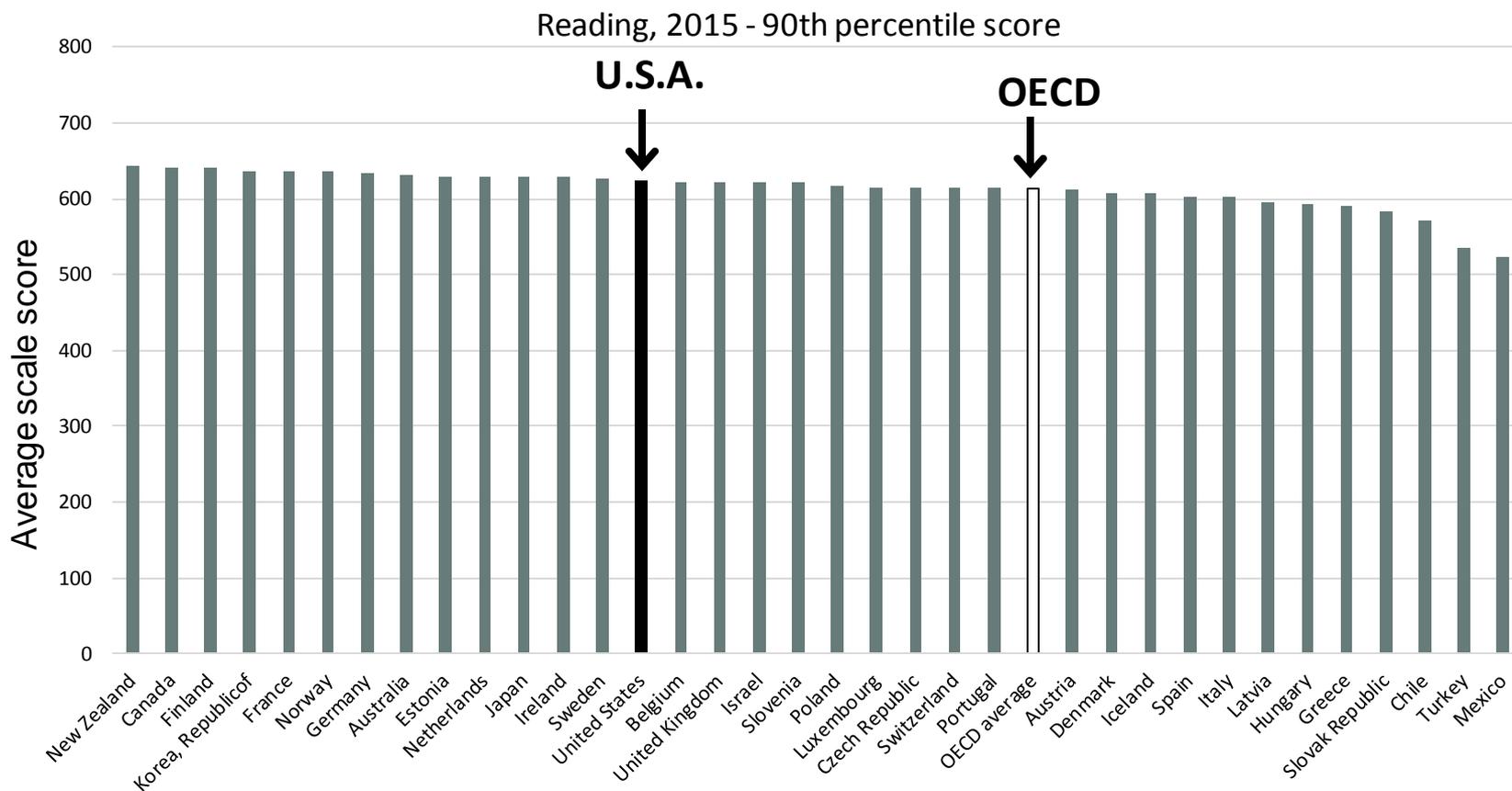
Reading, 2015 - Percent of students scoring at the highest levels



Note: Highest achievement levels are Levels 5 and above. Countries with values that round to zero are listed as zero.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

# U.S.A. Ranks 14<sup>th</sup> out of 35 OECD Countries in the Reading Achievement of the Highest-Performing Students

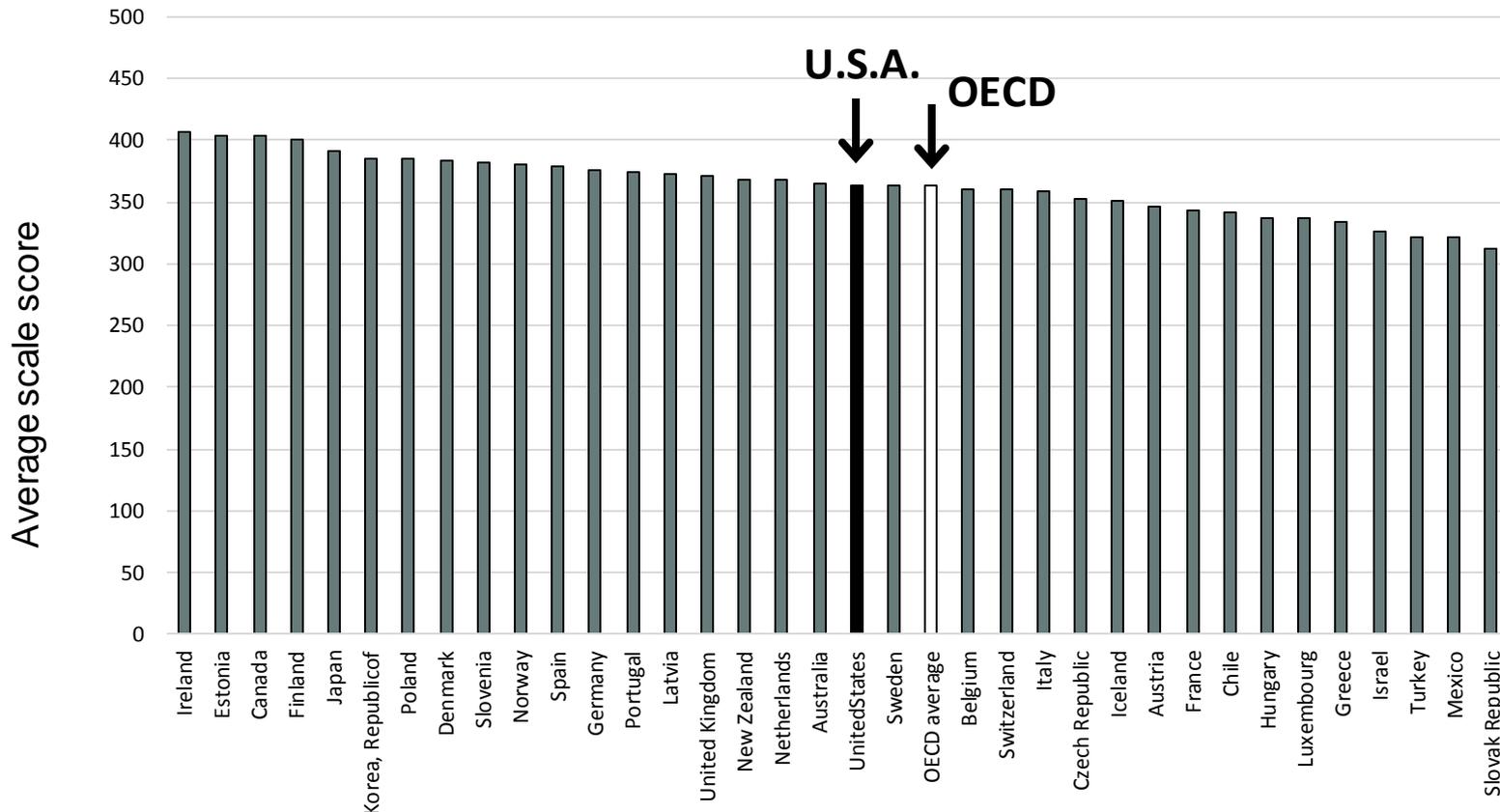


Note: Highest-performing students are those at the 90<sup>th</sup> Percentile.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

# U.S.A. Ranks 19<sup>th</sup> out of 35 OECD Countries in the Reading Achievement of the Lowest-Performing Students

Reading, 2015 - 10th percentile score

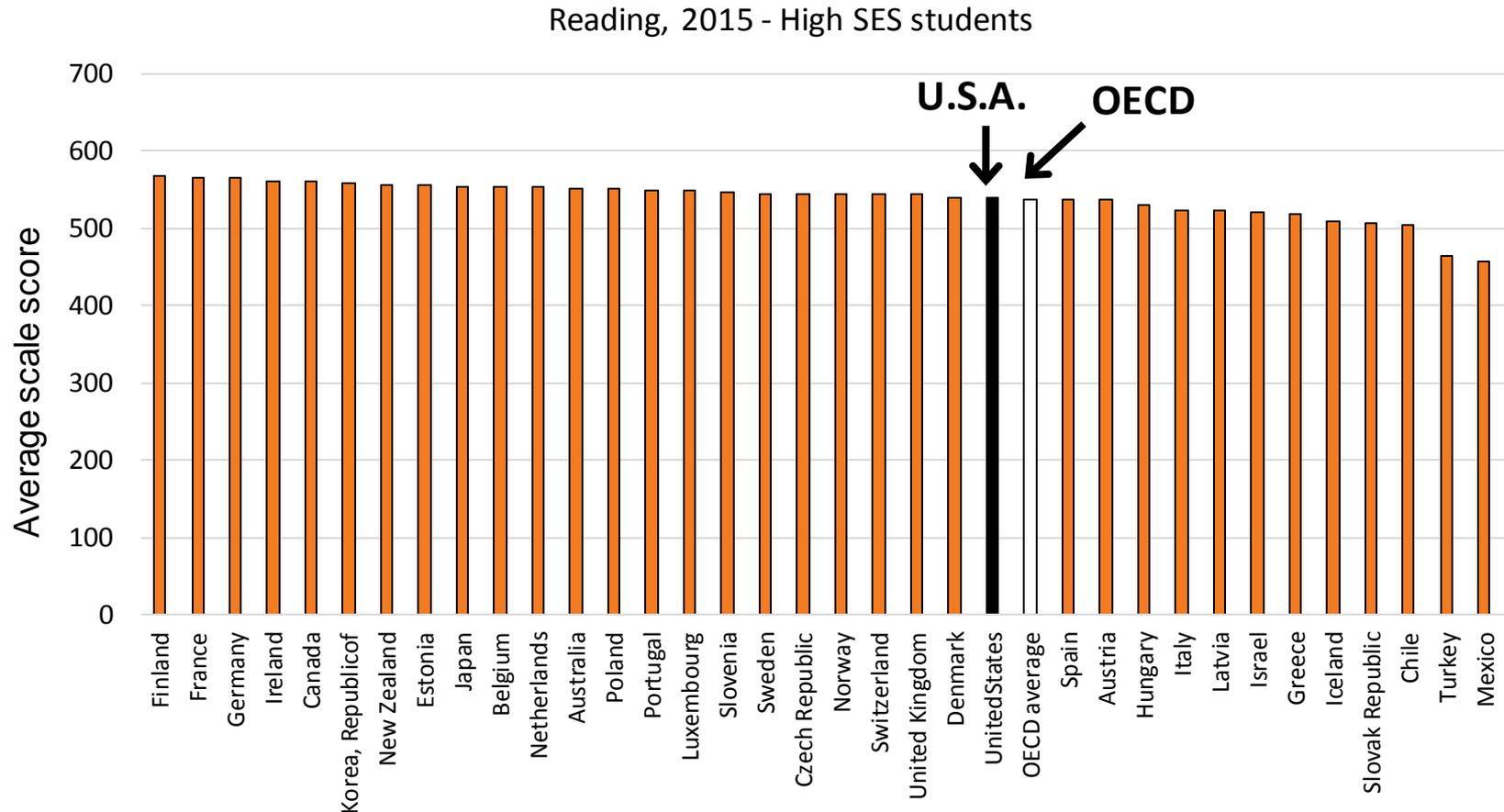


Note: Lowest-performing students are those at the 10<sup>th</sup> Percentile.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

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.

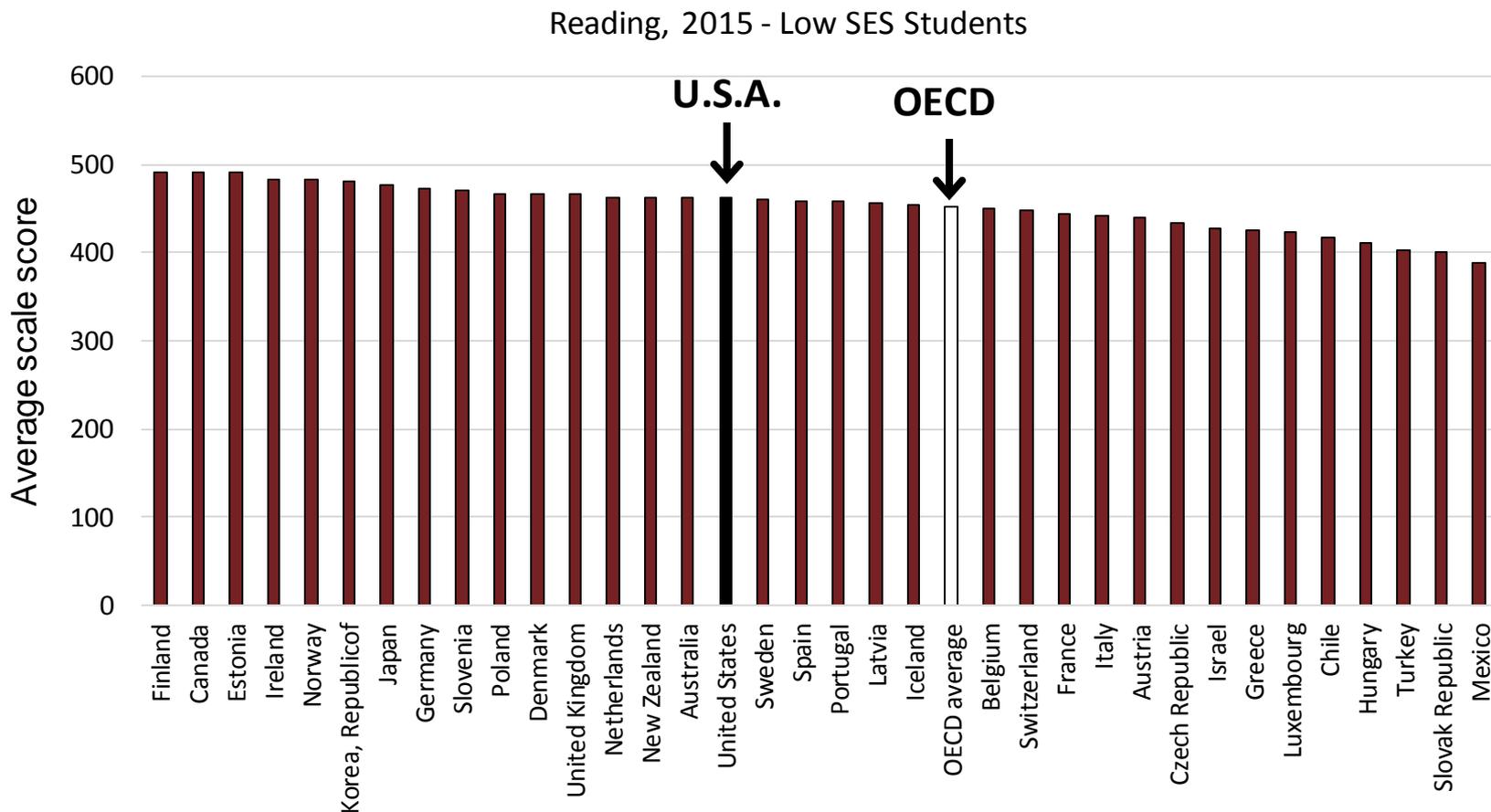
# U.S.A. Ranks 23rd out of 35 OECD Countries in the Reading Achievement of High-SES Students



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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

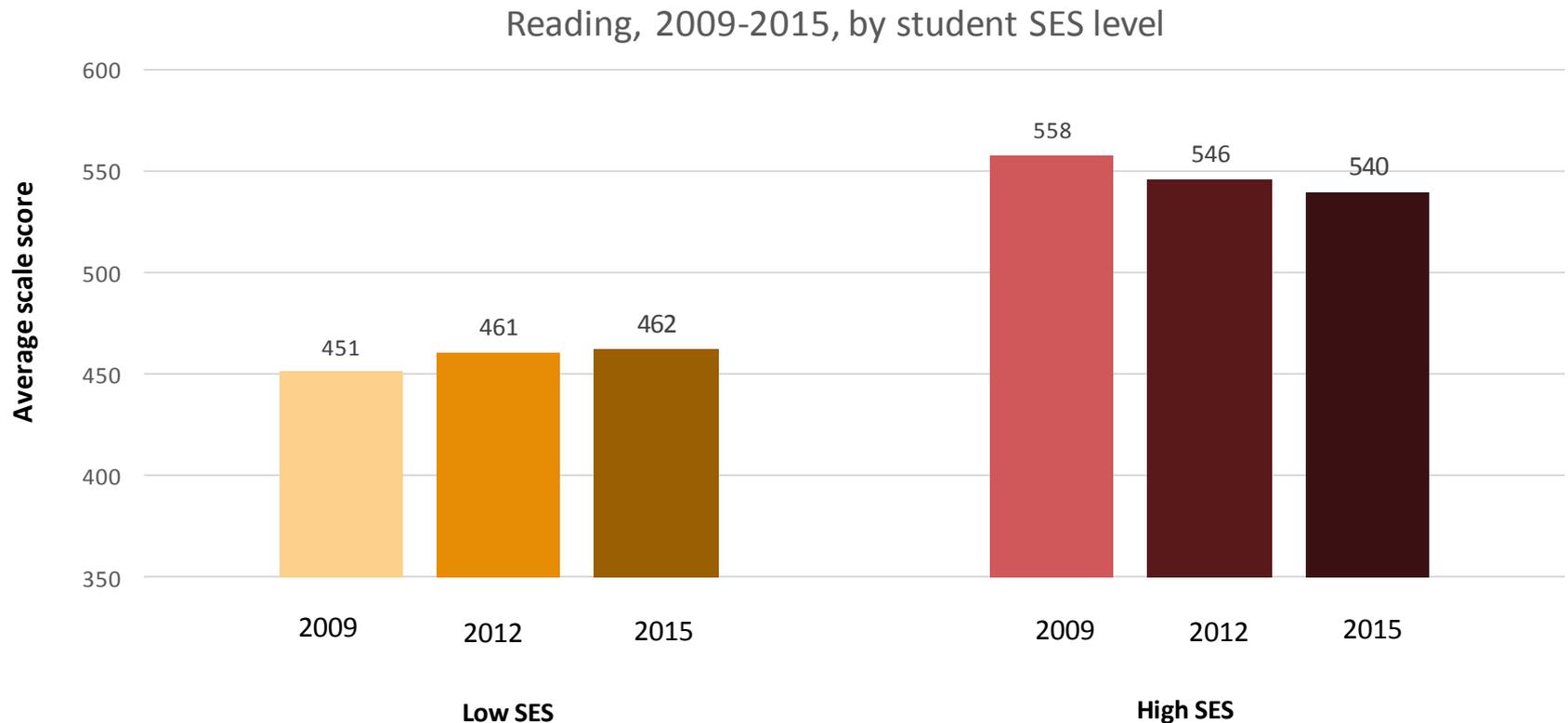
# U.S.A. Ranks 16th out of 35 OECD Countries in the Reading Achievement of Low-SES Students



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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

**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.**

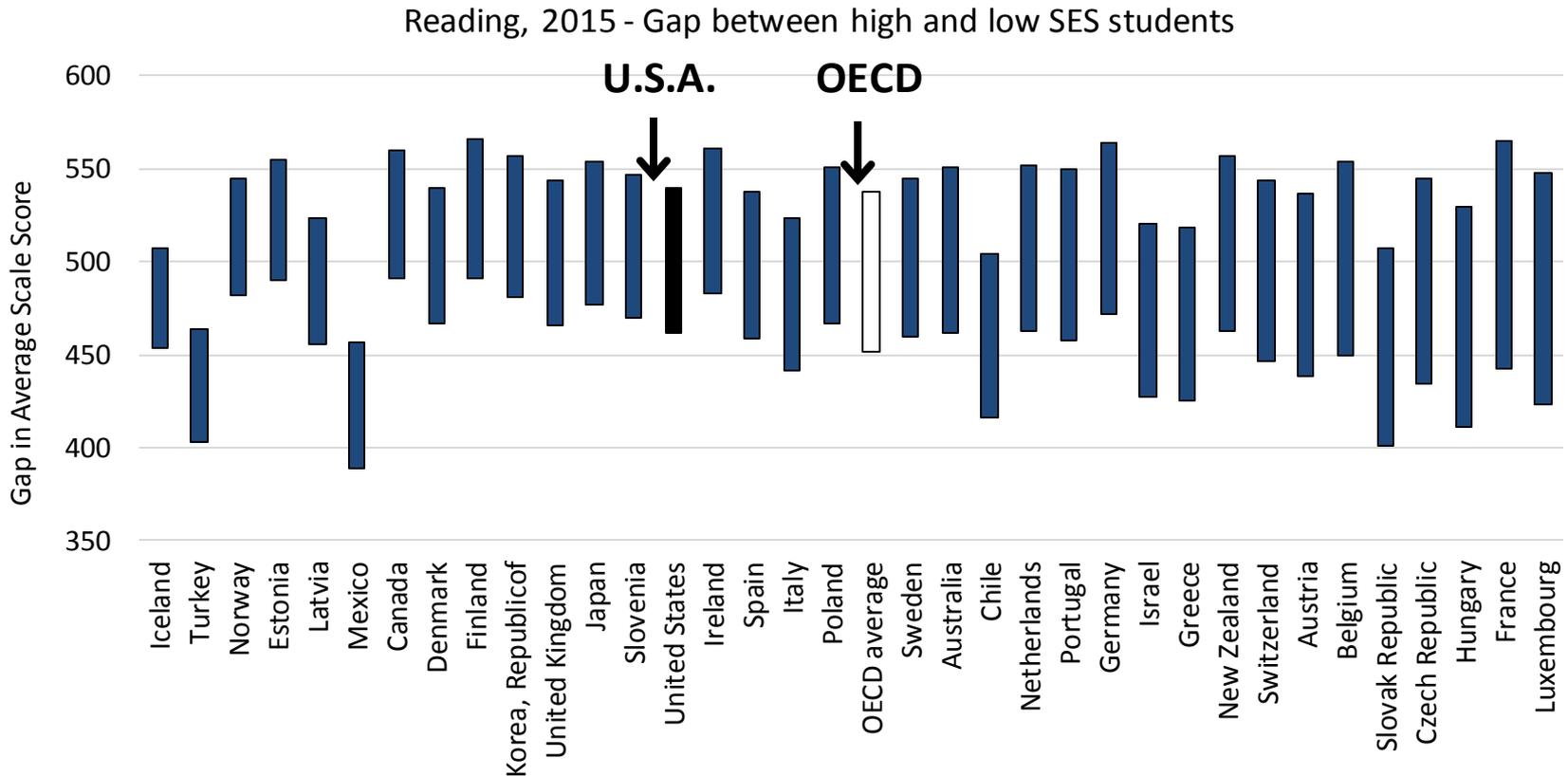


Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment, 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.

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_3.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_3.asp)

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.



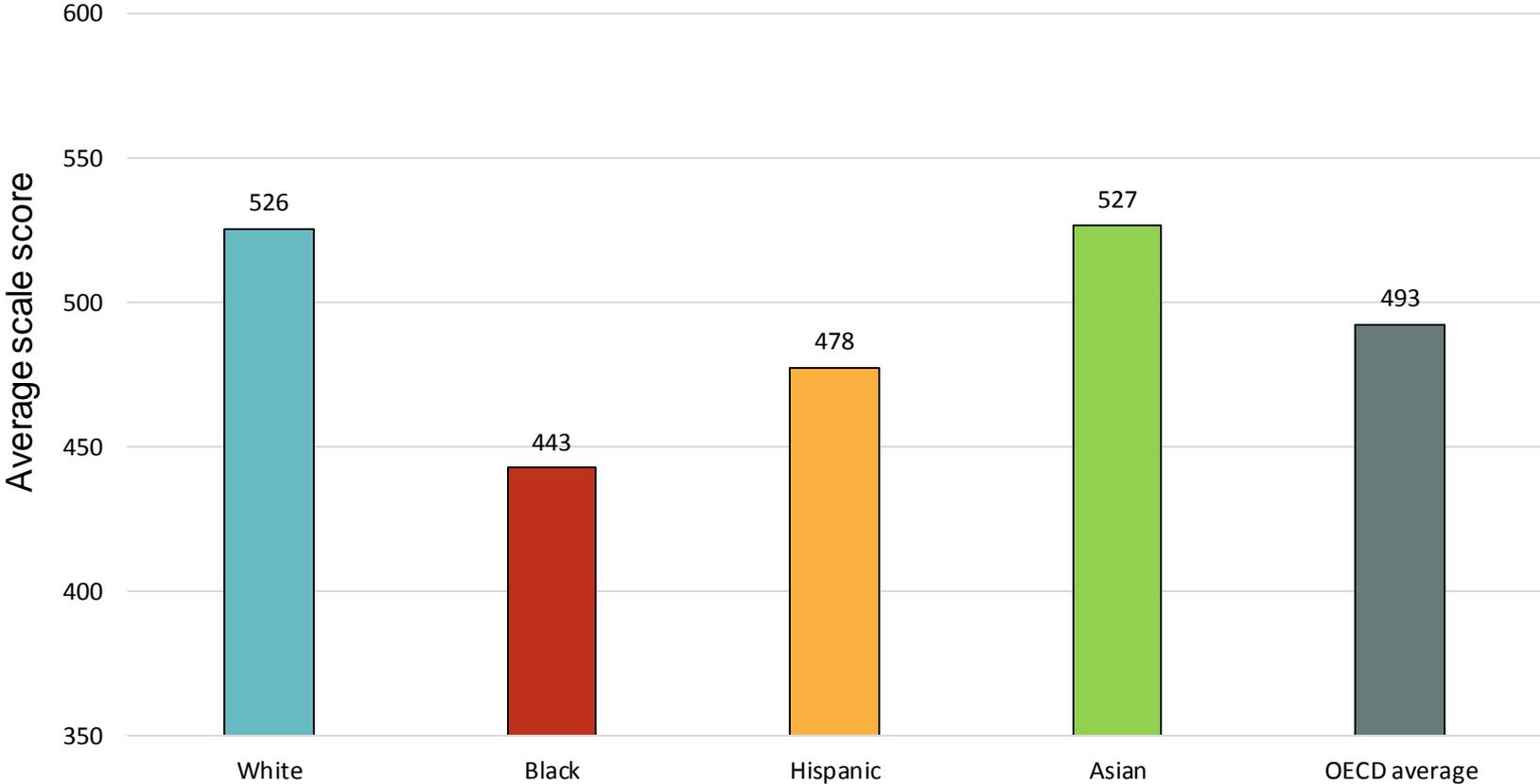
Note: High SES students are those in the top quartile of the ESCS index in their country. Low SES students are those in the bottom quartile. The ESCS (Index of Economic, Social, and Cultural Status) is comprised of information related to parents' occupational status, parents' educational attainment,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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

Within the United States,  
performance varies widely  
across groups of students . . .

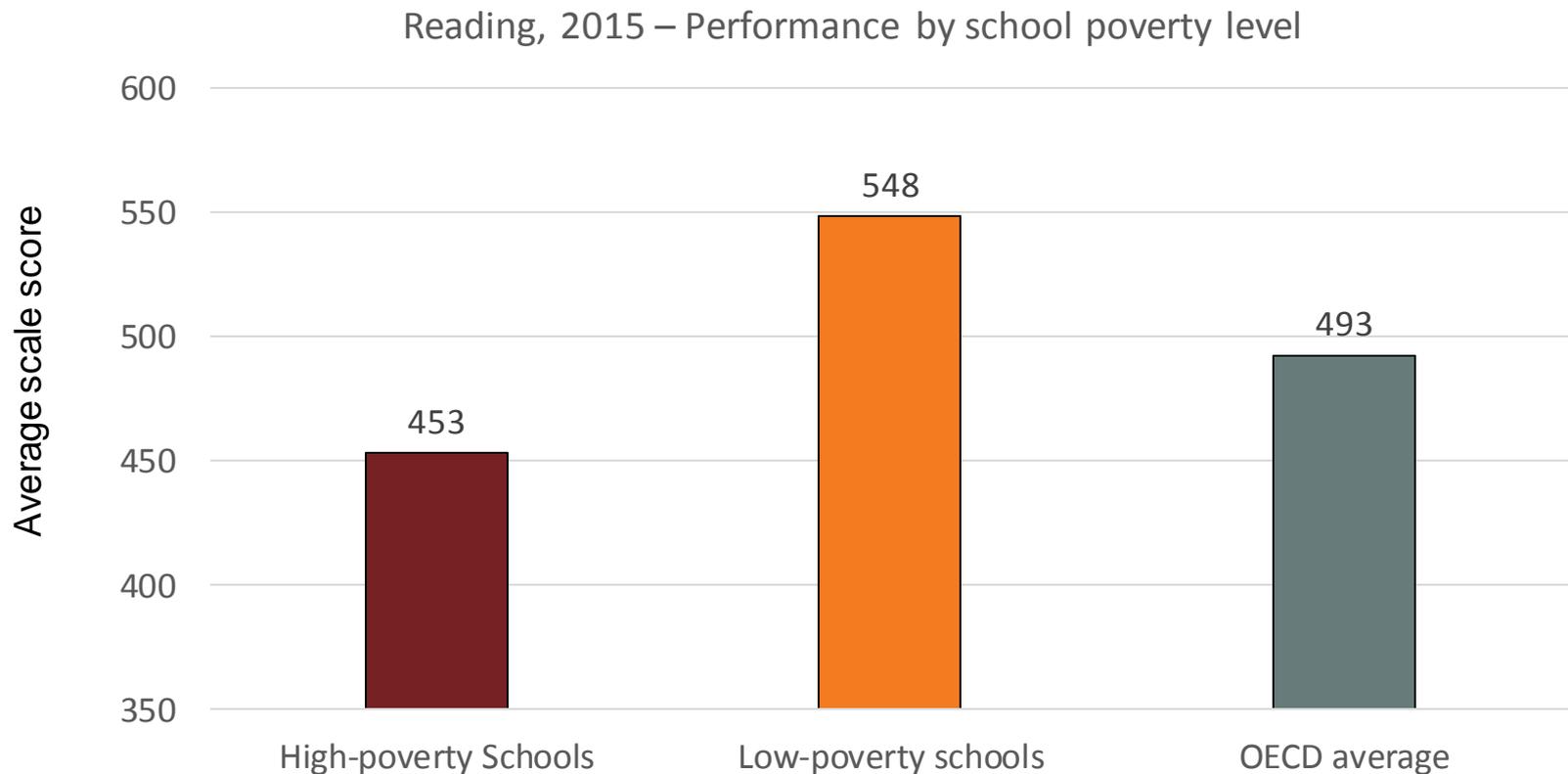
# PISA results indicate that U.S. schools are equipping white and Asian students with higher levels of preparation in reading.

Reading, 2015 – Performance by race/ ethnic group



Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)

# 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

Source: National Center for Education Statistics, 2016 [https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights\\_4.asp](https://nces.ed.gov/surveys/pisa/pisa2015/pisa2015highlights_4.asp)