

## Examining the Nation’s Report Card: An Educator’s Guide to 2022 Reading and Math Scores in the U.S. and the Four REL Appalachia States

### What is the NAEP?

By congressional mandate, the National Assessment of Educational Progress (NAEP, pronounced “nape”) is administered every two years<sup>1</sup> by the National Center for Education Statistics (NCES), which is a part of the U.S. Department of Education and the Institute of Education Sciences. **Also known as the Nation’s Report Card, the NAEP provides important information about student performance and learning experiences.** It creates a “common yardstick,”<sup>2</sup> whereas state assessments vary based on individual states’ standards, and provides a snapshot of achievement in reading, math, and other subjects. NCES tests a nationally representative sample of grade 4 and grade 8 students in public and private schools, and makes data available for the nation, by state, by urban districts, and by demographic groups. Results across testing years depict changes in student achievement over time.

Learn  
more about  
the NAEP



### National NAEP results show sharp declines in reading and math

There is no downplaying the 2022 results, which show [declines in reading and math](#) for students in grades 4 and 8 across the nation compared to 2019 pre-pandemic scores. **Only about a third or fewer of our nation’s public school grade 4 and 8 students are performing at or above proficiency in reading or math.**

Looking at trends over time, we have lost over a decade of progress for America’s students. The amount of loss varies by grade level and subject. Proficiency levels have not been this low since:

- 2005, for grade 4 math
- 2000, for grade 8 math
- 2011, for grade 4 reading, and
- 2007, for grade 8 reading.


When addressing these declines, we must remember **educational equity is achieved when each student receives the supports, resources, and instruction they need to learn and thrive.** Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves. Indeed, results from the [NAEP long-term trend assessment](#), a different but related test administered to 9-year-old students, underscore this point. When compared with students who scored the lowest on the NAEP assessment (below the 25<sup>th</sup> percentile), **students who performed particularly well** on the assessment (at or above the 75<sup>th</sup> percentile) **tended to have greater access to resources** to support their learning: a computer all the time, a quiet place to work that was available at least some of the time, and a teacher who was available to help them with reading and math schoolwork every day or nearly every day.

<sup>1</sup> The 2021 NAEP was delayed to 2022 because of the COVID-19 pandemic.

<sup>2</sup> Learn about how NAEP establishes a common measure at <https://nces.ed.gov/nationsreportcard/about/>

This fact sheet presents 2019 and 2022 [NAEP](#) results from a representative sample of public schools<sup>3</sup> across the country in [reading](#) and [math](#). It presents results for the full sample of students in grades 4 and 8, as well as for Black, Hispanic, White, multilingual learner (MLL) students, and students eligible for the National School Lunch Program (NSLP).<sup>4,5</sup> Percentages include students who performed at or above the *NAEP Proficient* level, which describes students who demonstrate solid subject matter competency, including being able to apply subject matter knowledge to real-world situations.<sup>6</sup> Asterisks (\*) in the exhibits indicate statistically significant changes from 2019 to 2022.<sup>7</sup>

Interested in looking at the NAEP data in different ways? The NAEP website offers an [interactive data tool](#) to answer your queries.



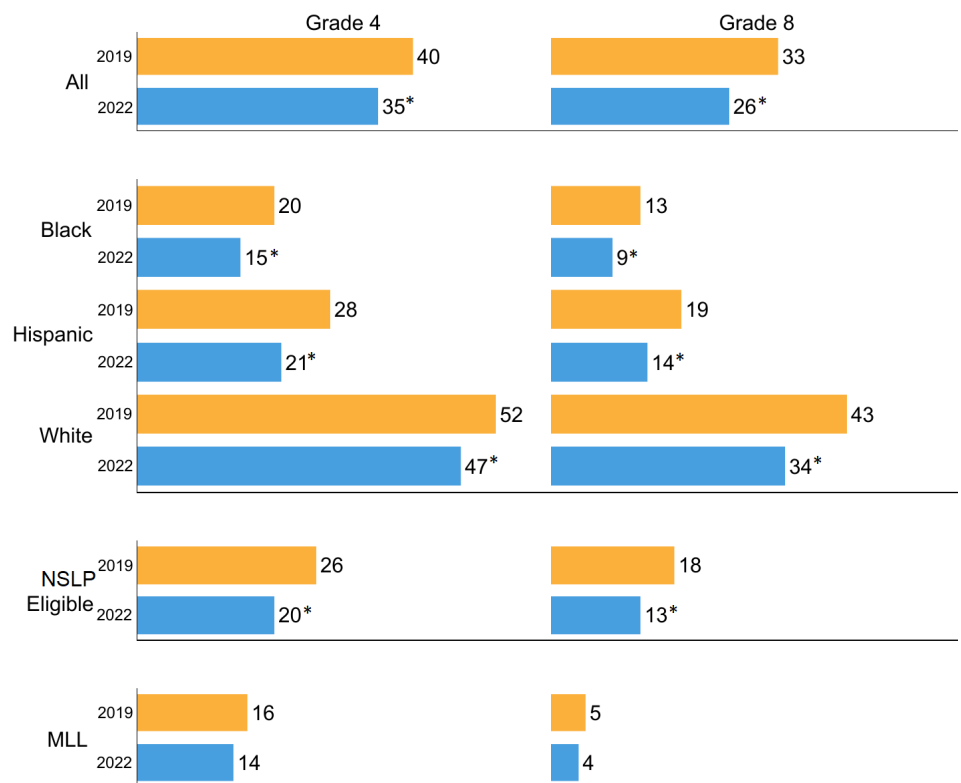
Next, we present the same reading and math data for the sampled students in grades 4 and 8 for **the four states that REL Appalachia serves: Kentucky, Tennessee, Virginia, and West Virginia**. Overall, students in [Kentucky](#), [Tennessee](#), [Virginia](#), and [West Virginia](#), as well as students across the nation, exhibited significant<sup>8</sup> declines in proficiency in 2022 compared to 2019 scores before the pandemic, with especially large declines for some groups of students.

## NAEP proficiency of public school students, nationwide

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.

- Math proficiency of all students in grade 4 and grade 8 declined significantly.
- Math proficiency in both grades declined significantly for Black, Hispanic, and White students, as well as for students eligible for NSLP, but not for MLL students.

**Figure 1. Percentages of Public School Students Nationwide At or Above Proficiency in Math, by Grade**



*Note:* NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

<sup>3</sup> This is a subset of the overall NAEP sample, which includes a sampling of public and private schools.

<sup>4</sup> National Student Lunch Program (NSLP) is being used as an indicator of students facing socioeconomic barriers.

<sup>5</sup> In some cases, states did not meet the reporting threshold criteria for certain segments of the student population. Based on participation rate criteria, results are reported for subpopulations only when sufficient numbers of students and adequate school representation are present. The minimum requirement is 62 students in a particular group from at least five [primary sampling units](#) (PSUs).



<sup>6</sup> See the section “How Results are Reported: Scale Scores and NAEP Achievement Levels,” found at <https://nces.ed.gov/nationsreportcard/guides/>

<sup>7</sup> Learn more about the use of statistical significance in NAEP data at <https://nces.ed.gov/nationsreportcard/guides/statsig.aspx>

<sup>8</sup> The standard for determining significance is defined and explained on the [NAEP website](#). The NAEP Data Explorer tool (<https://www.nationsreportcard.gov/ndecore/xplore/NDE>) includes optional significance tests, which is how REL Appalachia obtained these values.

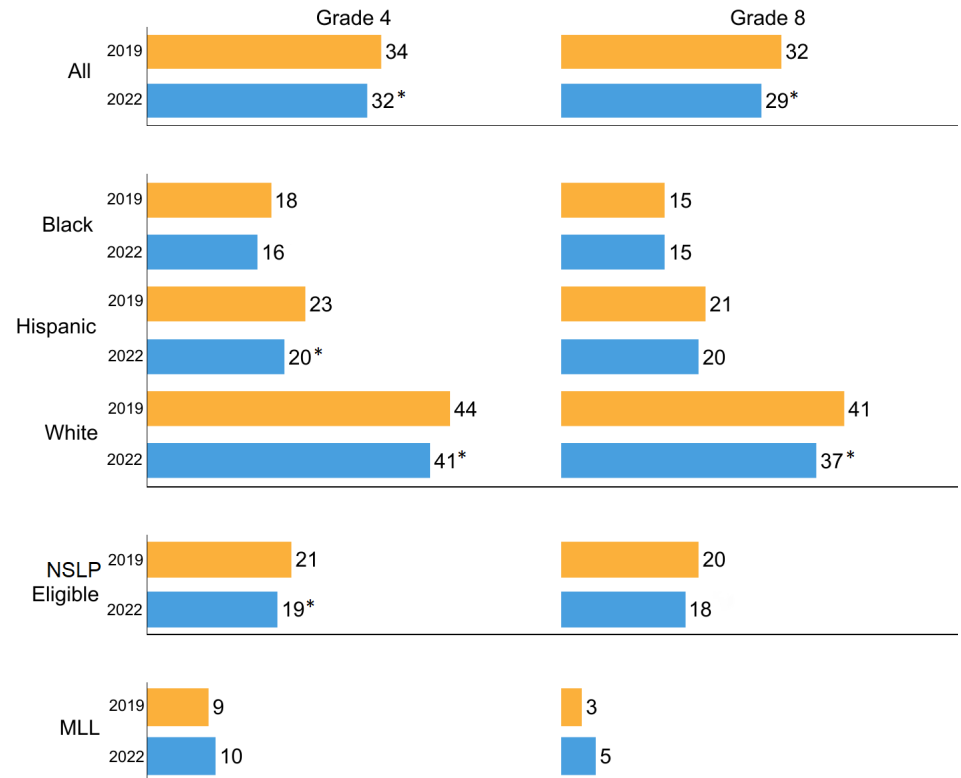
Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.

- Reading proficiency of all students in grade 4 and grade 8 declined significantly.
- In grade 4 reading, proficiency declined significantly for Hispanic and White students as well as for students eligible for NSLP, but not for Black and MLL students.
- In grade 8 reading, proficiency declined significantly for White students, but not for Black, Hispanic, or MLL students, or for students eligible for NSLP.

Check out the [evidence-based resources](#) in  literacy and  math available from across the REL program!



**Figure 2. Percentages of Public School Students Nationwide At or Above Proficiency in Reading, by Grade**



*Note:* NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

## Calling all educators! Evidence-based resources in literacy and math

While this news is dismal, **educators are powerful difference-makers in the lives of their students.** REL Appalachia believes that providing educators with resources and support, backed by evidence about what works, is how we can best help teachers offer intentional, targeted support to help all students succeed and accelerate their learning in reading and math. **Explore these [evidence-based resources](#)** from the REL program and the What Works Clearinghouse focused on literacy and numeracy.



## Kentucky NAEP Proficiency

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



Revisit exhibits of national data for [math](#).

### How do 2022 math proficiency rates in Kentucky compare to national proficiency rates?

Groups of Kentucky students with significantly lower proficiency rates than national rates (figures 1 and 3):

- White (grades 4 and 8)
- Black (grade 4)
- Multilingual learners (grade 4)

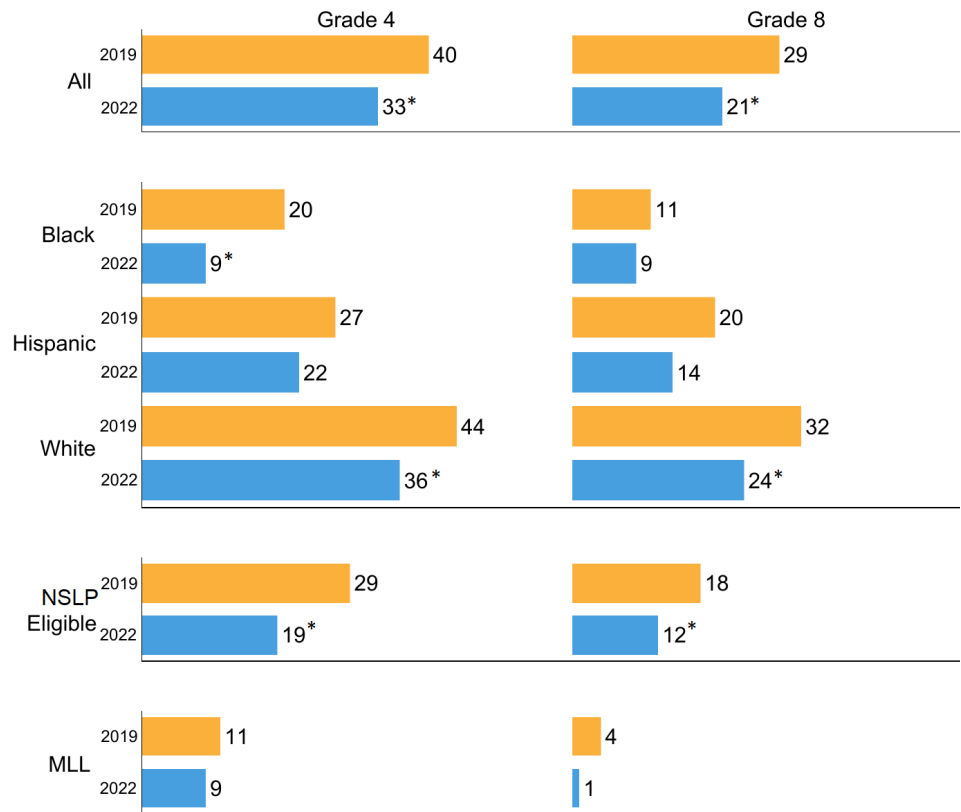
### For which groups did math proficiency rates drop significantly in Kentucky between 2019 and 2022?

- All students (grades 4 and 8)
- Black students (grade 4)
- White students (grades 4 and 8)
- Students eligible for the National School Lunch Program (grades 4 and 8)

### How large were the declines in math proficiency, and how do declines in proficiency rates in Kentucky compare to declines in proficiency rates nationally?

- Grade 4 proficiency rates declined by 7 percentage points overall, by 11 points for Black students, by 8 points for White students, and by 10 points for students eligible for the National School Lunch Program. Overall grade 4 proficiency rates have not been this low since 2003. The decline of 7 points effectively wiped out the gains made over those 19 years.
- Grade 8 proficiency rates declined by 8 percentage points overall, by 8 points for White students, and by 6 points for students eligible for the National School Lunch Program. Overall grade 8 proficiency rates have not been this low since 2000. The decline of 8 points effectively wiped out the gains made over those 22 years.
- Declines in proficiency for all Kentucky students and all demographic groups reported in figure 3 were not significantly different than declines in proficiency nationwide (grades 4 and 8).

**Figure 3. Percentages of Kentucky Students At or Above Proficiency in Math, by Grade**



Note: NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment.

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



Revisit exhibits of national data for [reading](#).

### How do 2022 reading proficiency rates in Kentucky compare to national proficiency rates?

Groups of Kentucky students with significantly lower proficiency rates than national rates (figures 2 and 4):

- White (grades 4 and 8)

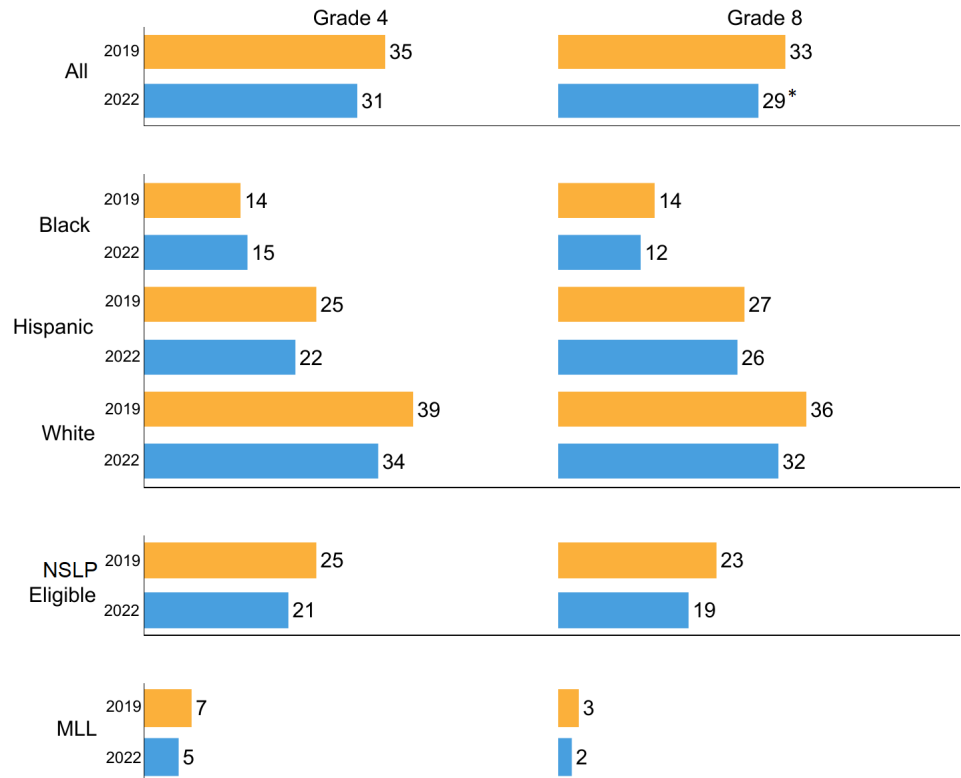
### For which groups did reading proficiency rates drop significantly in Kentucky between 2019 and 2022?

- All students (grade 8)

### How large were the declines in reading proficiency, and how do declines in proficiency rates in Kentucky compare to declines in proficiency rates nationally?

- Grade 4 proficiency rates declined by 4 percentage points overall. Although not statistically significant, grade 4 proficiency rates have not been this low since 2005. The decline of 4 points effectively wiped out the gains made over those 17 years.
- Grade 8 proficiency rates declined by 4 percentage points overall. Grade 8 proficiency rates have not been this low since 2007. The decline of 4 points effectively wiped out the gains made over those 15 years.
- Declines in proficiency for all Kentucky students and all demographic groups reported in figure 4 were not significantly different than declines in proficiency nationwide (grades 4 and 8).

**Figure 4. Percentages of Kentucky Students At or Above Proficiency in Reading, by Grade**



Note: NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

Source: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment.

Check out the [evidence-based resources](#) in literacy and math available from across the REL program!



## Tennessee NAEP Proficiency

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



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### How do 2022 math proficiency rates in Tennessee compare to national proficiency rates?

Groups of Tennessee students with significantly lower proficiency rates than national rates (figures 1 and 5):

- Students eligible for the National School Lunch Program (grade 8)

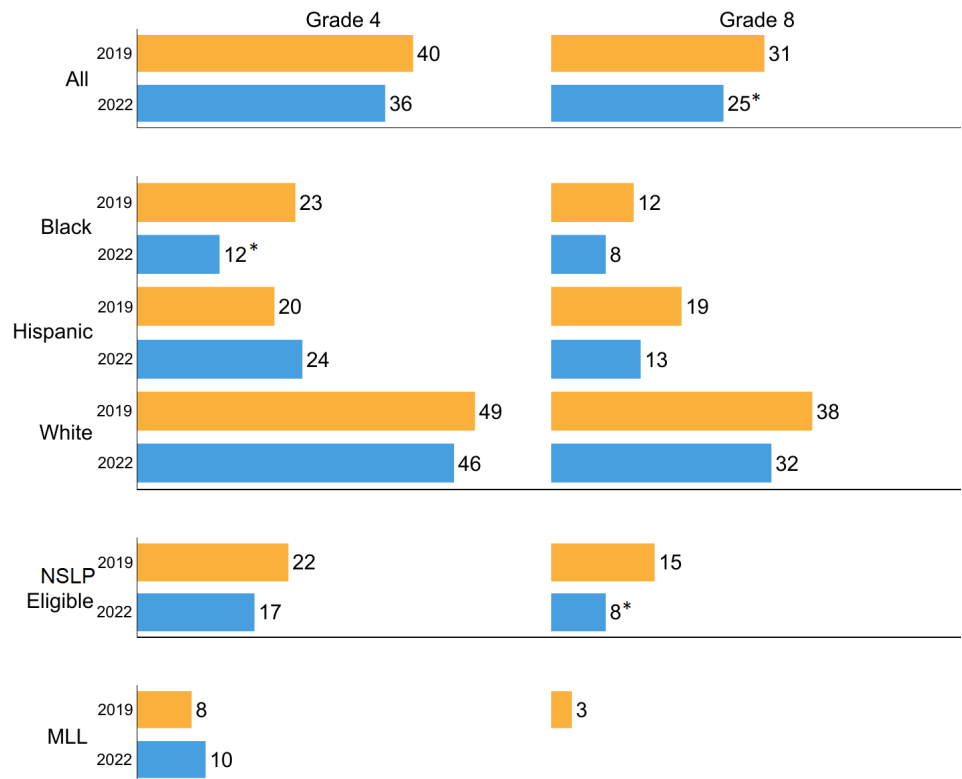
### For which groups did math proficiency rates drop significantly in Tennessee between 2019 and 2022?

- All students (grade 8)
- Black students (grade 4)
- Students eligible for the National School Lunch Program (grade 8)

### How large were the declines in math proficiency, and how do declines in proficiency rates in Tennessee compare to declines in proficiency rates nationally?

- Grade 4 proficiency rates declined by 4 percentage points overall. Although not statistically significant, overall grade 4 proficiency rates have not been this low since 2017. The decline of 4 points effectively wiped out the gains made over those 5 years.
- Grade 8 proficiency rates declined by 6 percentage points overall and by 7 points for students eligible for the National School Lunch Program. Overall, grade 8 proficiency rates have not been this low since 2009. The decline of 6 points effectively wiped out the gains made over those 13 years.
- Declines in proficiency for all students reported in figure 5 were not significantly different than declines in proficiency nationwide (grades 4 and 8).
- Grade 4 proficiency rates declined by 11 percentage points for Black students in all public schools. This decline was significantly greater than for Black students in all public schools nationwide.

**Figure 5. Percentages of Tennessee Students At or Above Proficiency in Math, by Grade**



*Note:* NSLP = National School Lunch Program. MLL = multilingual learner. Tennessee did not have enough grade 8 students classified as multilingual learners to report data for those students in 2022. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.



Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



Revisit exhibits of national data for [reading](#).

### How do 2022 reading proficiency rates in Tennessee compare to national proficiency rates?

Groups of Tennessee students with significantly lower proficiency rates than national rates (figures 2 and 6):

- MLL students (grade 4)
- Students eligible for the National School Lunch Program (grade 8)

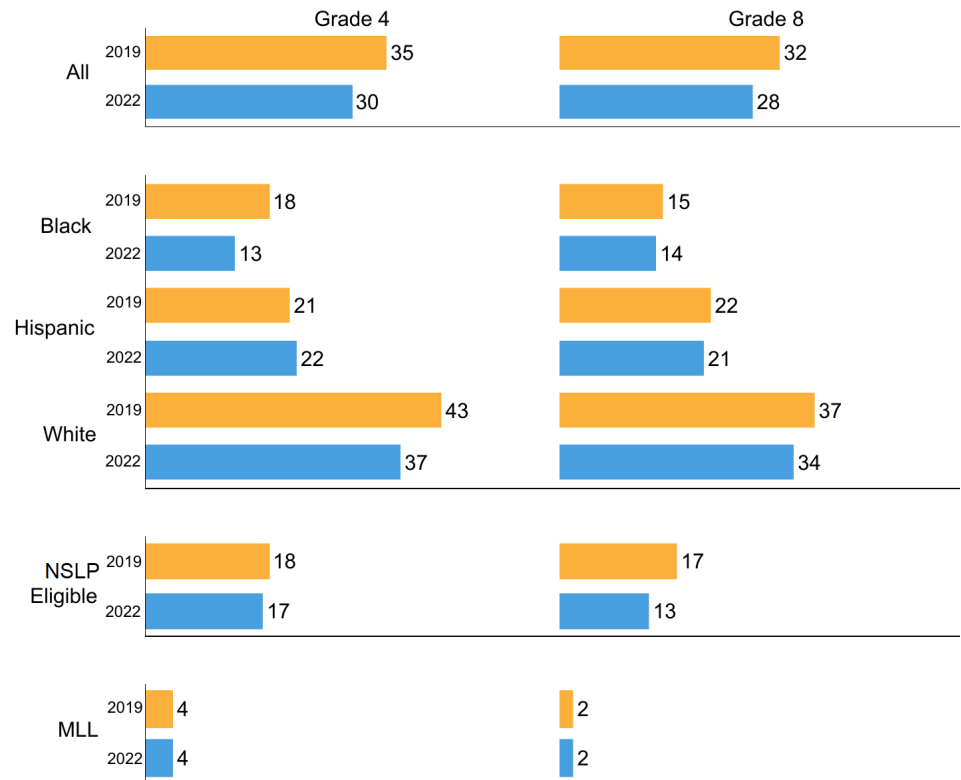
### For which groups did reading proficiency rates drop significantly in Tennessee between 2019 and 2022?

Neither grade 4 nor grade 8 reading scores dropped significantly between 2019 and 2022 for all students or any reported segments of the student population in Tennessee.

### How large were the declines in reading proficiency, and how do declines in proficiency rates in Tennessee compare to declines in proficiency rates nationally?



- Grade 4 proficiency rates declined by 5 percentage points overall.
- Grade 8 proficiency rates declined by 4 percentage points overall.
- Grade 4 and grade 8 proficiency rates have not been this low since 2011. The decline of 5 percentage points in grade 4 reading and the decline of 4 points in grade 8 reading effectively wiped out the gains made over those 11 years.
- Declines in proficiency for all Tennessee students and all demographic groups reported in figure 6 were not significantly different than declines in proficiency nationwide (grades 4 and 8).

**Figure 6. Percentages of Tennessee Students At or Above Proficiency in Reading, by Grade**



Note: NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

Source: National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

Check out the [evidence-based resources](#) in  literacy and  math available from across the REL program!





## Virginia NAEP Proficiency

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.

### How do 2022 math proficiency rates in Virginia compare to national proficiency rates?

Groups of Virginia students with significantly lower proficiency rates than national rates (figures 1 and 7):

- Students eligible for the National School Lunch Program (grade 4)

Groups of Virginia students with significantly higher proficiency rates than national rates (figures 1 and 7):

- Hispanic students (grade 8)

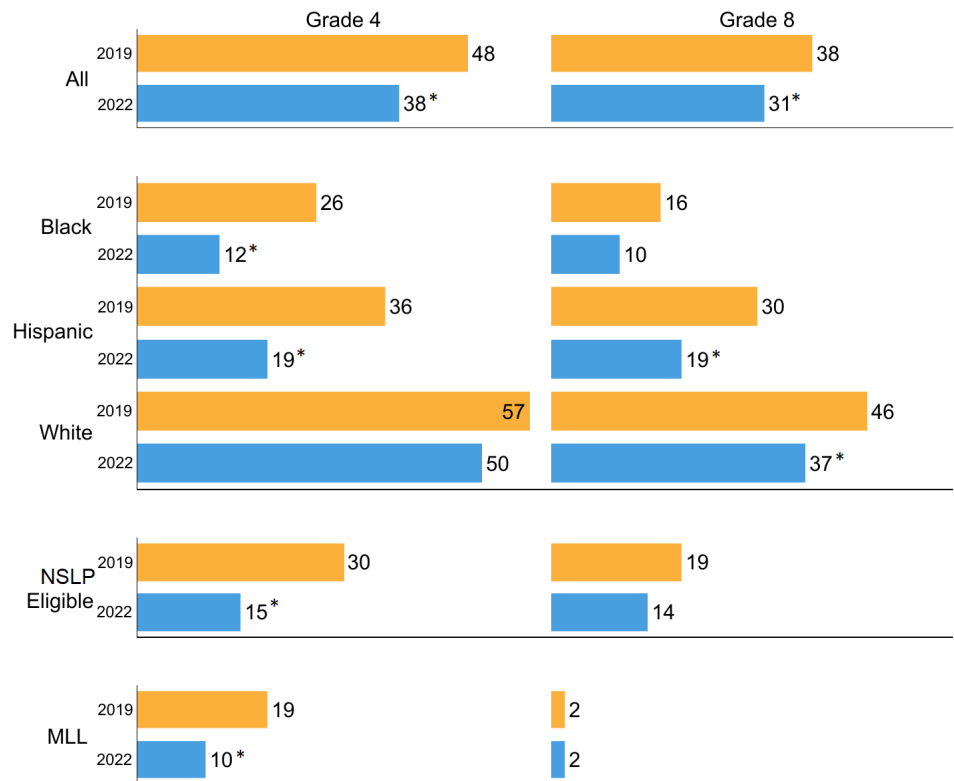
### For which groups did math proficiency rates drop significantly in Virginia between 2019 and 2022?

- All students (grades 4 and 8)
- Black students (grade 4)
- Hispanic students (grades 4 and 8)
- White students (grade 8)
- Students eligible for the National School Lunch Program (grade 4)
- MLL students (grade 4)

### How large were the declines in math proficiency, and how do declines in proficiency rates in Virginia compare to declines in proficiency rates nationally?

- Grade 4 proficiency rates declined by 10 percentage points overall and by 14 points for Black students, 17 points for Hispanic students, 15 points for students eligible for the National School Lunch Program, and 9 points for MLL students.
- Grade 8 proficiency rates declined by 7 percentage points overall, by 11 points for Hispanic students, and by 9 points for White students.
- Grade 4 and 8 proficiency rates have not been this low since 2003. The decline of 10 percentage points in grade 4 math and of 7 points in grade 8 math effectively wiped out the gains made over those 19 years.
- Declines in overall proficiency rates for Virginia students were not significantly different than declines in proficiency rates nationwide (grades 4 and 8).
- However, declines in proficiency rates for grade 4 Black and Hispanic students were significantly greater than declines for these groups nationwide.

**Figure 7. Percentages of Virginia Students At or Above Proficiency in Math, by Grade**



Note: NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

Source: National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.



Revisit exhibits of national data for [math](#).



Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



Revisit exhibits of national data for [reading](#).

### How do 2022 reading proficiency rates in Virginia compare to national proficiency rates?

Groups of Virginia students with significantly lower proficiency rates than national rates (figures 2 and 8):

- Students eligible for the National School Lunch Program (grades 4 and 8)
- MLL students (grade 4)

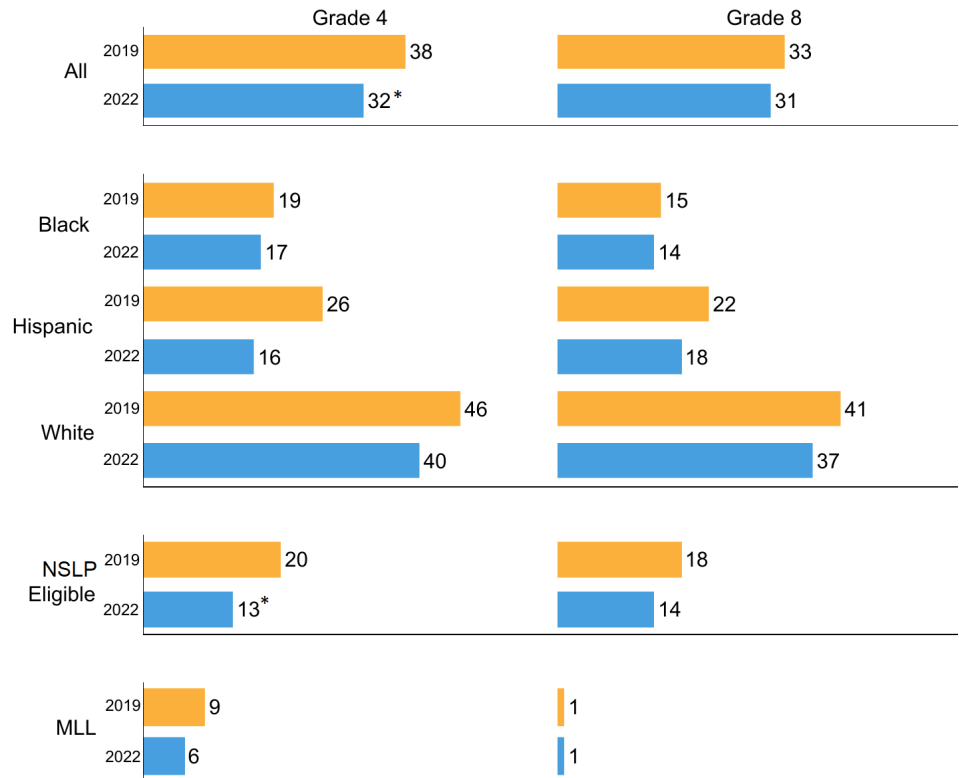
### For which groups did reading proficiency rates drop significantly in Virginia between 2019 and 2022?

- All students (grade 4)
- Students eligible for the National School Lunch Program (grade 4)

### How large were the declines in reading proficiency, and how do declines in proficiency rates in Virginia compare to declines in proficiency rates nationally?



- Grade 4 proficiency rates declined by 6 percentage points overall and by 7 points for students eligible for the National School Lunch Program.
- Grade 4 proficiency rates have not been this low since 1998. The decline of 6 percentage points effectively wiped out the gains made over those 24 years.
- Declines in proficiency for all Virginia students and all demographic groups reported in figure 8 were not significantly different than declines in proficiency nationwide (grades 4 and 8).

**Figure 8. Percentages of Virginia Students At or Above Proficiency in Reading, by Grade**



*Note:* NSLP = National School Lunch Program. MLL = multilingual learner. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

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## West Virginia NAEP Proficiency

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



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### How do 2022 math proficiency rates in West Virginia compare to national proficiency rates?

Groups of West Virginia students with significantly lower proficiency rates than national rates (figures 1 and 9):

- White students (grades 4 and 8)
- Students eligible for the National School Lunch Program (grade 4 and 8)

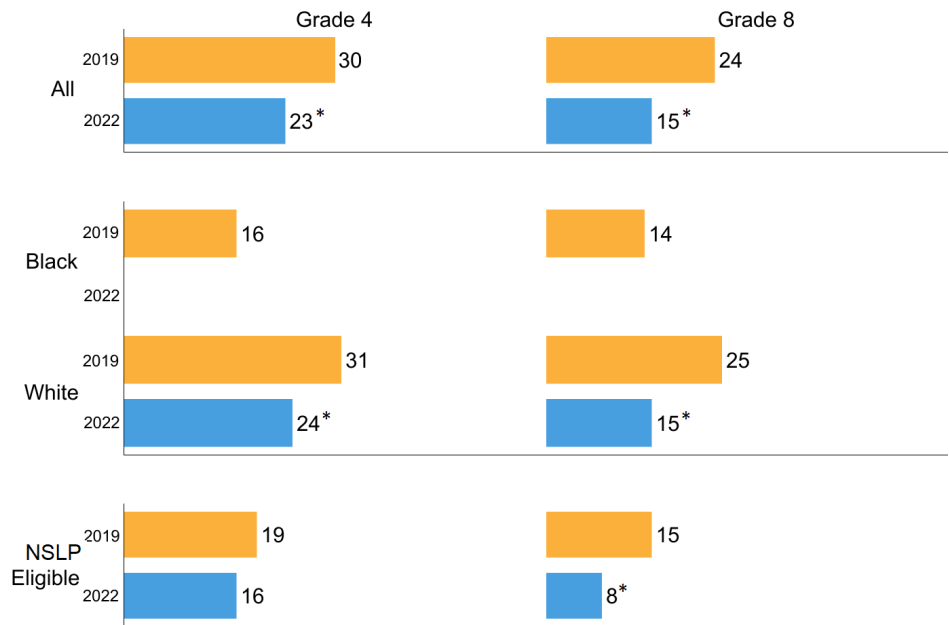
### For which groups did math proficiency rates drop significantly in West Virginia between 2019 and 2022?

- All students (grades 4 and 8)
- White students (grades 4 and 8)
- Students eligible for the National School Lunch Program (grade 8)

### How large were the declines in math proficiency, and how do declines in proficiency rates in West Virginia compare to declines in proficiency rates nationally?

- Grade 4 proficiency rates declined by 7 percentage points overall and by 7 points for White students.
- Grade 8 proficiency rates declined by 9 percentage points overall, by 10 points for White students, and by 7 points for students eligible for the National School Lunch Program.
- Grade 4 proficiency rates have not been this low since 2000. The decline of 7 percentage points effectively wiped out the gains made over those 22 years.
- Grade 8 proficiency rates have not been this low since 1996. The decline of 9 percentage points effectively wiped out the gains made over those 26 years.
- Declines in proficiency for all West Virginia students and all demographic groups reported in figure 9 were not significantly different than declines in proficiency nationwide (grades 4 and 8).

**Figure 9. Percentages of West Virginia Students At or Above Proficiency in Math, by Grade**



*Note:* NSLP = National School Lunch Program. West Virginia did not have enough students classified as Black to report data for these students in 2022, and did not have enough students classified as Hispanic or multilingual learners in either 2019 or 2022. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

Remember that disparities in student outcomes result from systemic inequities in supports, resources, and instruction, not deficits in students themselves.



Revisit exhibits of national data for [reading](#).

### How do 2022 reading proficiency rates in West Virginia compare to national proficiency rates?

Groups of West Virginia students with significantly lower proficiency rates than national rates (figures 2 and 10):

- White students (grades 4 and 8)
- Students eligible for the National School Lunch Program (grades 4 and 8)

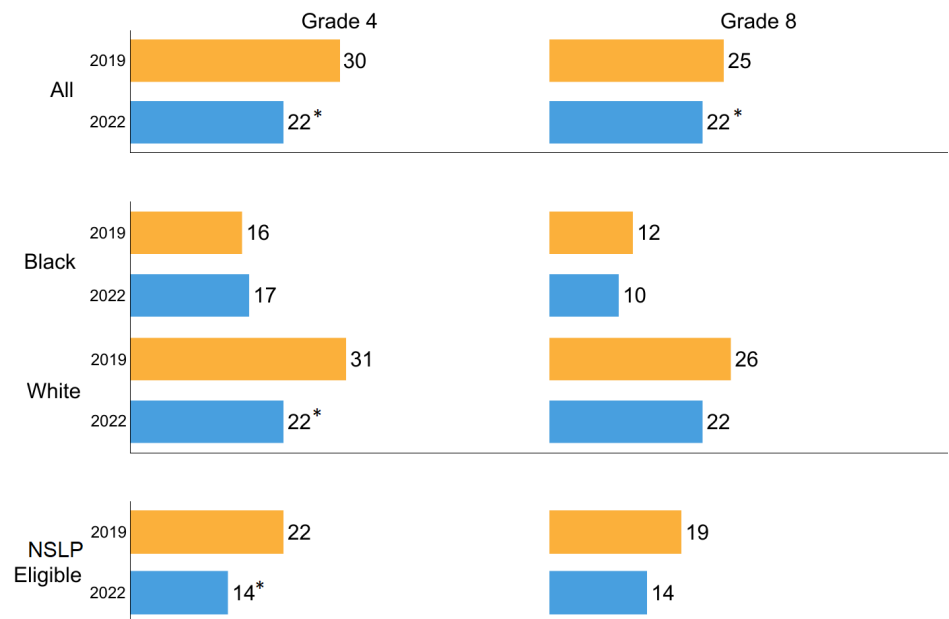
### For which groups did reading proficiency rates drop significantly in West Virginia between 2019 and 2022?

- All students (grades 4 and 8)
- White students (grade 4)
- Students eligible for the National School Lunch Program (grade 4)

### How large were the declines in reading proficiency, and how do declines in proficiency rates in West Virginia compare to declines in proficiency rates nationally?



- Grade 4 proficiency rates declined by 8 percentage points overall, by 9 points for White students, and by 8 points for students eligible for the National School Lunch Program.
- Grade 8 proficiency rates declined by 3 percentage points overall.
- Grade 4 proficiency rates are the lowest they have ever been since 1998, when [NAEP began allowing accommodations for students who need them](#).
- Grade 8 proficiency rates have not been this low since 2009. The decline of 3 percentage points effectively wiped out the gains made over those 13 years.
- Declines in proficiency rates for grade 4 White students and students eligible for the National School Lunch Program were significantly larger than declines in proficiency rates for these groups nationwide.

**Figure 10. Percentages of West Virginia Students At or Above Proficiency in Reading, by Grade**



*Note:* NSLP = National School Lunch Program. West Virginia did not have enough students classified as Black to report data for these students in 2022 and did not have enough students classified as Hispanic or multilingual learners in either 2019 or 2022. Asterisks indicate statistically significant declines in performance between 2019 and 2022.

*Source:* National Assessment of Educational Progress (NAEP), 2019 and 2022 Reading Assessment and 2019 and 2022 Mathematics Assessment. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

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