New York
Equity Coalition

PANDEMIC PROFICIENCY

Analysis of 2022 assessment data underscores the need to urgently address the impact of interrupted instruction

Recently released assessment results from the National Assessment of Educational Progress (**NAEP**) and the New York State Department of Education confirm what many suspected about the impact of the Covid-19 pandemic on student learning.

Even before the pandemic, communities of color and those with low-income residents were suffering from deep inequities and opportunity gaps both in and out of school. We also know that remote learning lasted longer in schools and districts serving students of color and that these same communities were hit harder with illness and death from the pandemic.

New York State, the epicenter of the pandemic tragedy, suffered across all sectors — business, child care, and education. New York will feel the impact of the pandemic for decades to come — in our homes, our communities, and our workforce. And that is exactly why we must act with urgency to use this new assessment data as was always

intended — to drive resources to the students and schools who suffered the greatest impact.

Schools have been through major changes since 2019, the last year that New York State released comparable statewide assessment data. Even with declining enrollment and teacher shortages, comparing 2018-2019 assessment results to 2021-2022 provides the public with an important snapshot of the impact of the pandemic on student literacy and numeracy skills. While the pandemic has impacted students in multiple ways, including many that are difficult to track, standardized test scores remain one of the most effective ways to measure student proficiency comparatively at scale.

Since the 2018-19 school year New York State public schools have seen a significant decrease in the number of students enrolled in public schools. Accordingly, the number of students who took the state tests also decreased. However, the percent of students tested has remained relatively consistent.

Comparing 3-8 State Exam Participation						
	SY18-19			SY21-22		
	Number tested	Number enrolled	Pct tested	Number tested	Number enrolled	Pct tested
ELA	987,398	1,188,798	83%	927,317	1,114,083	83%
Math	948,606	1,188,798	80%	929,886	1,114,083	83%

It is only with strong public data that disaggregates race, income, and geographic regions that we can design intentional and impactful solutions that will move all children toward greater proficiency and better life outcomes.

Even as districts across the state face ongoing challenges from the pandemic, it is time to move forward and use assessment data and other indicators to support local decision making to help drive evidence-based resources toward the students who need them most.
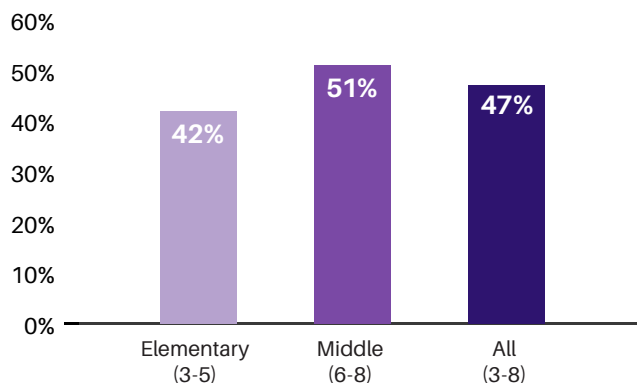
THE FINDINGS:

1 Less than half of all tested students in grades three through eight are proficient in ELA and math.

2 Year-over-year comparison reveals a 6 percentage point decline in 3rd and 4th grade ELA proficiency, a key indicator of future student success, since 2019.

3 Across all racial groups, there are higher ELA proficiency rates than math.

4 Across all racial groups, middle school students performed better than elementary students in ELA. The inverse is true for math.

5 Proficiency rates for students from low-income backgrounds continue to lag behind the rates of their more affluent peers in both math and ELA.

6 Across all racial groups, there were gains in ELA and losses in math proficiency; however, the proficiency gaps between racial groups are alarmingly wide.

7 Across school types and geographic differences, math proficiency decreased relative to ELA and math proficiency varies widely.

8 Math proficiency declined between the 2018-19 and 2021-22 school years.

These findings underscore the critical need for districts to drive resources to the students most in need of additional support to master the skills appropriate for their grade level.

Deep Dive on the Data

FINDING 1: Less than half of all tested students in grades three through eight were proficient in ELA and math.

NYS ELA Assessment Proficiency Rate for All Students, SY 2021-22

Elementary (3-5): 42%
Middle (6-8): 51%
All (3-8): 47%

NYS Math Assessment Proficiency Rate for All Students, SY 2021-22

Elementary (3-5): 43%
Middle (6-8): 34%
All (3-8): 39%

Grade level data shows there is less proficiency in ELA for grades three through five and more proficiency in grades six through eight. In mathematics, there is less proficiency in grades six through eight and more proficiency in grades three through five. Of note is a 24 point gap between
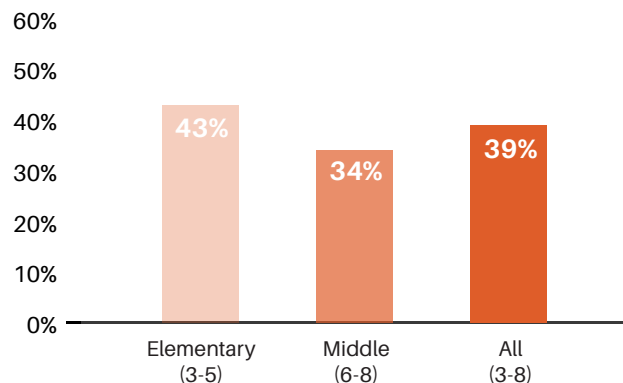
3rd and 8th grade math proficiency. Potential reasons for the variance by grade include fewer opportunities to practice math skills while schools were closed and older students already possessing foundational literacy skills that allowed them to practice reading.

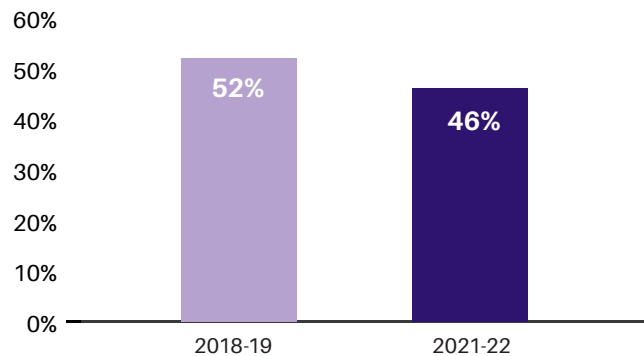### NYS ELA Assessment Proficiency Rate for All Students, SY 2021-22

3: 46%
4: 42%
5: 38%
6: 57%
7: 48%
8: 50%

NYS Math Assessment Proficiency Rate for All Students, SY 2021-22

3: 48%
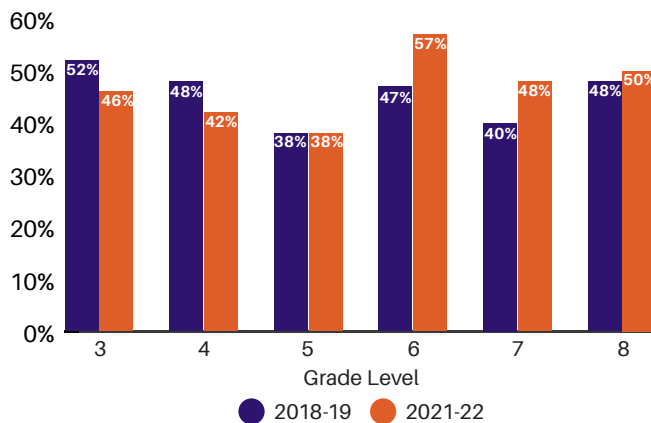4: 43%
5: 37%
6: 38%
7: 35%
8: 24%
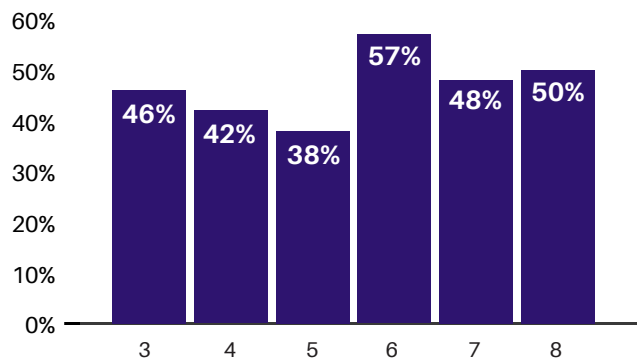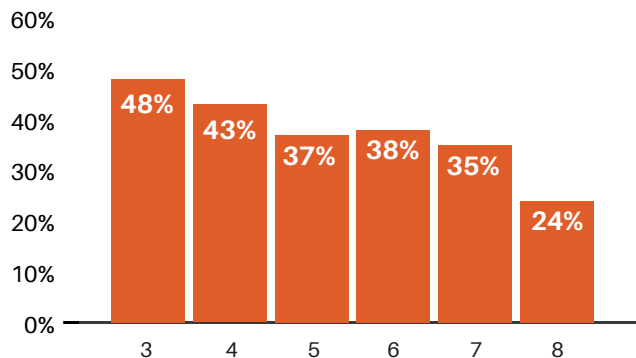
FINDING 2: Year-over-year comparison reveals a 6 percentage point decline in 3rd and 4th grade ELA proficiency, a key indicator of future student success, since 2019.

Third grade reading proficiency is the most important indicator of high school graduation and career success. Without a strong foundation in reading, other efforts to improve outcomes in schools and communities across New York State are unlikely to succeed at scale, making this finding deeply concerning. Since the first three years of school (K-2) are critical to building foundational literacy skills, it is not surprising that 3rd and 4th graders that missed instruction during these years are struggling.

NYS 3rd Grade ELA Assessment Proficiency Rates for All Students

	2018-19	2021-22
	52%	46%

NYS ELA Assessment Proficiency Rates, SY 2018-19 and 2021-22

Grade Level	2018-19	2021-22
3	52%	46%
4	48%	42%
5	38%	38%
6	47%	57%
7	40%	48%
8	48%	50%

NYS 3rd Grade ELA Assessment Proficiency Rates, SY 2018-19 and 2021-22

	2018-19	2021-22
American Indian / Native Alaskan	48%	43%
Asian / Pacific Islander	71%	67%
Black	45%	37%
Hispanic / Latinx	43%	36%
Multiracial	53%	49%
White	58%	51%
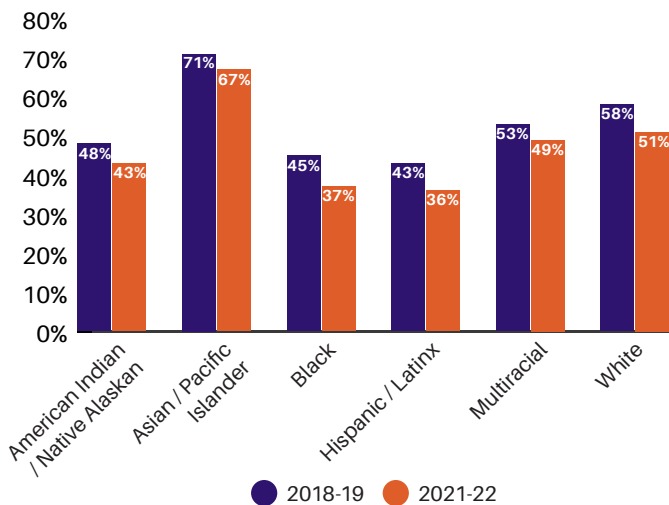
FINDING 3: Across all racial groups, there are higher ELA proficiency rates than math.

While ELA proficiency rates are higher for all tested students, Black and Latinx student proficiency in math and ELA is lower than all other student groups. Some of this trend can be attributed to opportunity gaps across our state, especially in schools and districts that mostly serve students from these subgroups.

NYS ELA & Math Assessment Proficiency Rate by Race/Ethnicity, SY 2021-22
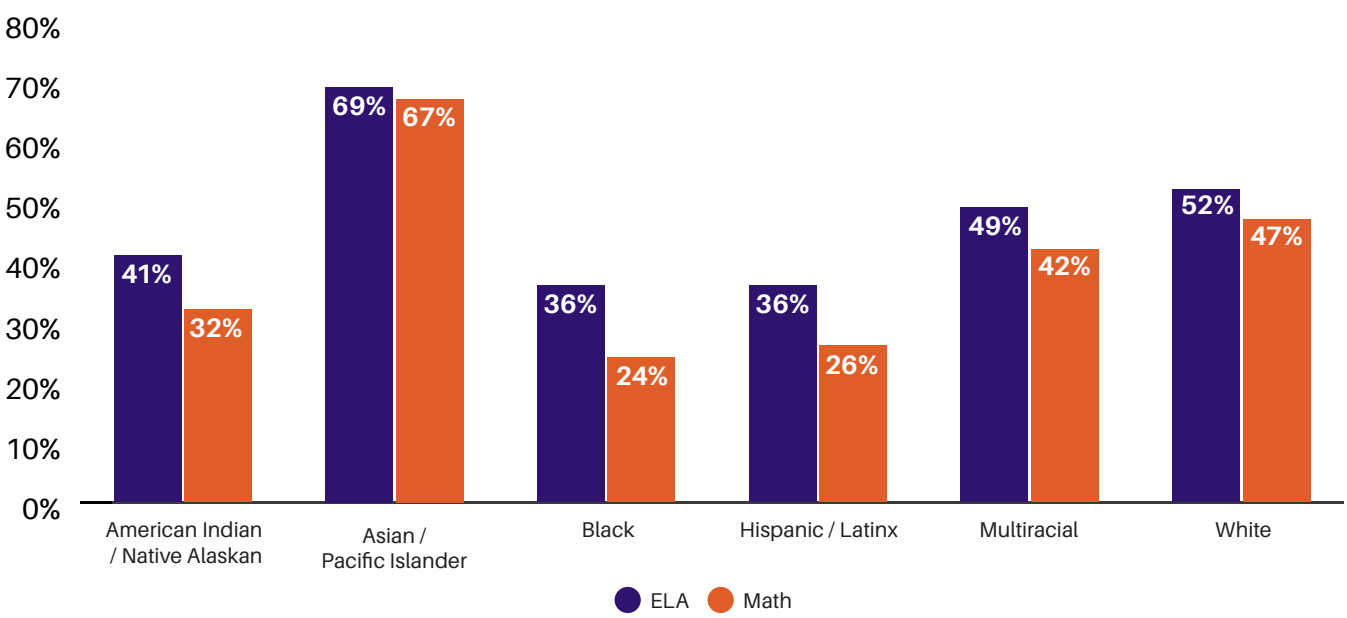
Race/Ethnicity	ELA	Math
American Indian / Native Alaskan	41%	32%
Asian / Pacific Islander	69%	67%
Black	36%	24%
Hispanic / Latinx	36%	26%
Multiracial	49%	42%
White	52%	47%

NYS ELA Assessment Proficiency Rate by Race/Ethnicity, SY 2021-22

American Indian / Native Alaskan: Elementary 37%, Middle 45%
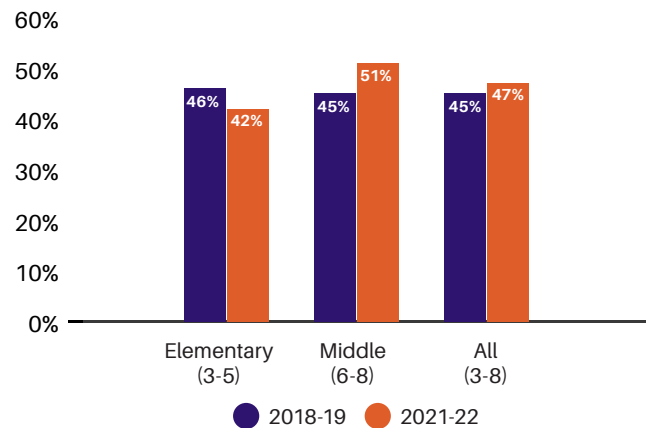Asian / Pacific Islander: Elementary 64%, Middle 75%
Black: Elementary 31%, Middle 41%
Hispanic / Latinx: Elementary 31%, Middle 42%
Multiracial: Elementary 44%, Middle 54%
White: Elementary 48%, Middle 57%

Legend: Elementary, Middle

NYS ELA Assessment Proficiency Rates, SY 2018-19 and 2021-22

Elementary (3-5): 2018-19 46%, 2021-22 42%
Middle (6-8): 2018-19 45%, 2021-22 51%
All (3-8): 2018-19 45%, 2021-22 47%
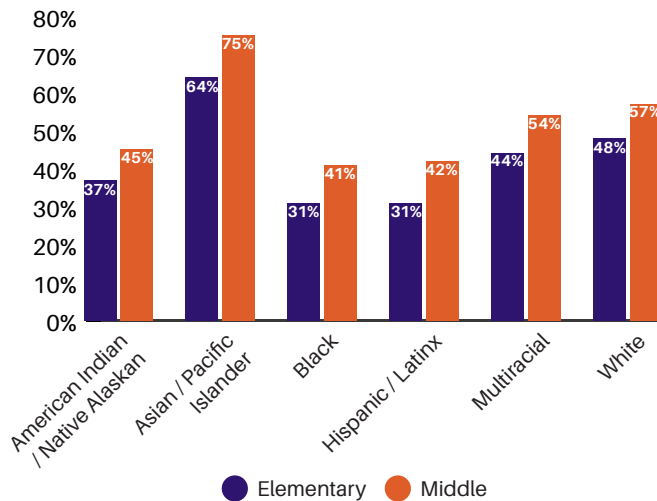
Legend: 2018-19, 2021-22

NYS ELA Assessment Proficiency, SY 2018-19 and 2021-22

Grade 3: 2018-19 52%, 2021-22 46%
Grade 4: 2018-19 48%, 2021-22 42%
Grade 5: 2018-19 38%, 2021-22 38%
Grade 6: 2018-19 47%, 2021-22 57%
Grade 7: 2018-19 40%, 2021-22 48%
Grade 8: 2018-19 48%, 2021-22 50%

Grade Level

Legend: 2018-19, 2021-22

NYS Math Assessment Proficiency Rate by Race/Ethnicity, SY 2021-22

American Indian / Native Alaskan: Elementary 37%, Middle 25%
Asian / Pacific Islander: Elementary 70%, Middle 63%
Black: Elementary 29%, Middle 19%
Hispanic / Latinx: Elementary 29%, Middle 21%
Multiracial: Elementary 45%, Middle 37%
White: Elementary 50%, Middle 42%
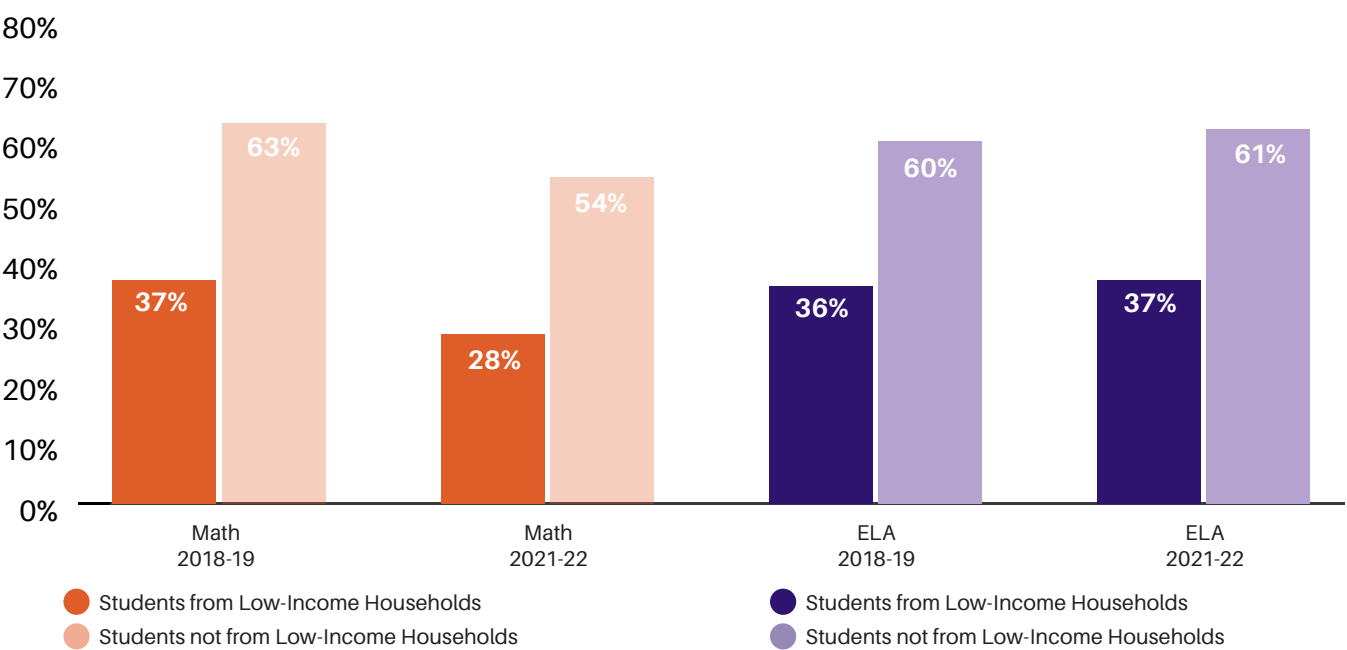
Legend: Elementary, Middle

We attribute these differences in performance by grade level, subject, and student subgroups to a variety of factors, including interrupted instruction and access to equitable resources in and out of school. For example, middle school reading rates may have seen a smaller decline since many students were able to practice reading skills while getting support from parents during the pandemic. Conversely, math skills in the middle grades are more dependent on what is taught in school and students, particularly those without access to computers and quiet places to work, were often unable to practice math during the pandemic.

Year over year assessment data show that there is a consistent gap between the proficiency of students from low-income backgrounds and their more affluent peers. This signals that students from low-income backgrounds continue to lack access to the resources and opportunities to help them achieve at the same levels as their not-low-income peers.

NYS ELA and Math Proficiency Rates by Income Group, SY 2018-19 and 2021-22

- Students from Low-Income Households (Math)
- Students not from Low-Income Households (Math)
- Students from Low-Income Households (ELA)
- Students not from Low-Income Households (ELA)

Math 2018-19: 37%, 63%
Math 2021-22: 28%, 54%
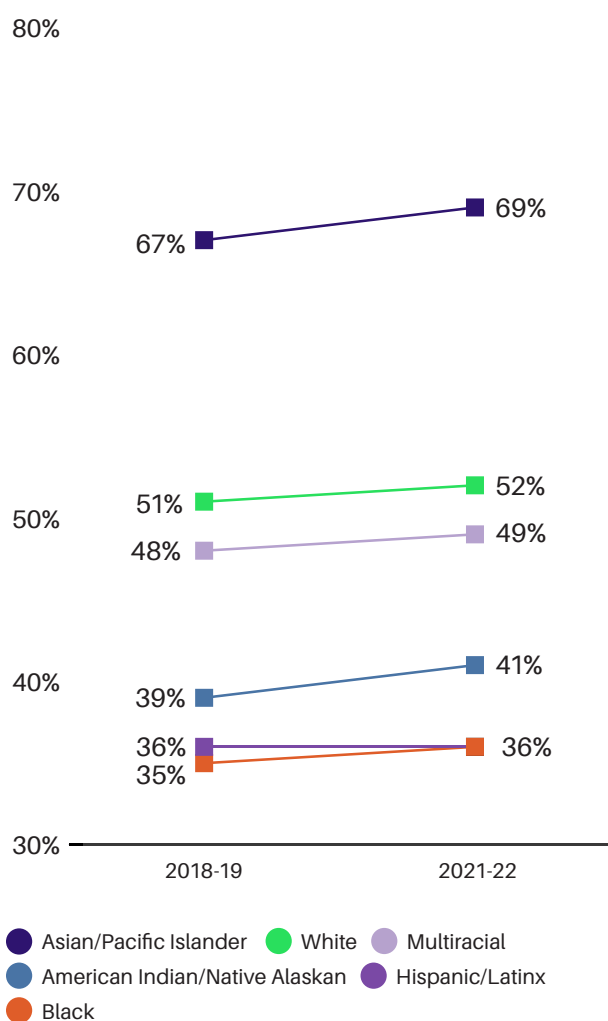ELA 2018-19: 36%, 60%
ELA 2021-22: 37%, 61%

FINDING 6: Across all racial groups, there were gains in ELA and losses in math proficiency; however, the proficiency gaps between racial groups are alarmingly wide.
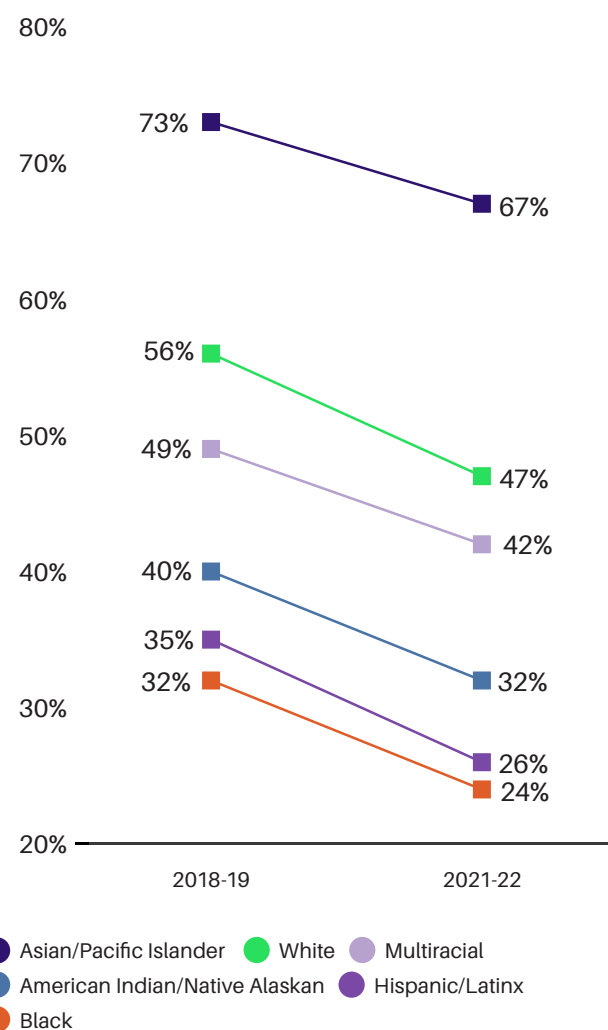
Even before the pandemic, opportunity gaps and educational inequities contributed to gaps in performance between racial groups. Math and ELA proficiency rates for students of color lagged behind those of their White peers before the pandemic. The recent assessment results show that there are significant and widening gaps between Black and Latinx students and their peers. These data show that there are widening gaps between Asian/Pacific Islander students and all other racial subgroups. Even where there are increases in proficiency, gaps between Black and Latinx students and their peers continue to widen.

NYS ELA Assessment Proficiency Rates by Race/Ethnicity, from SY 2018-19 and 2021-22
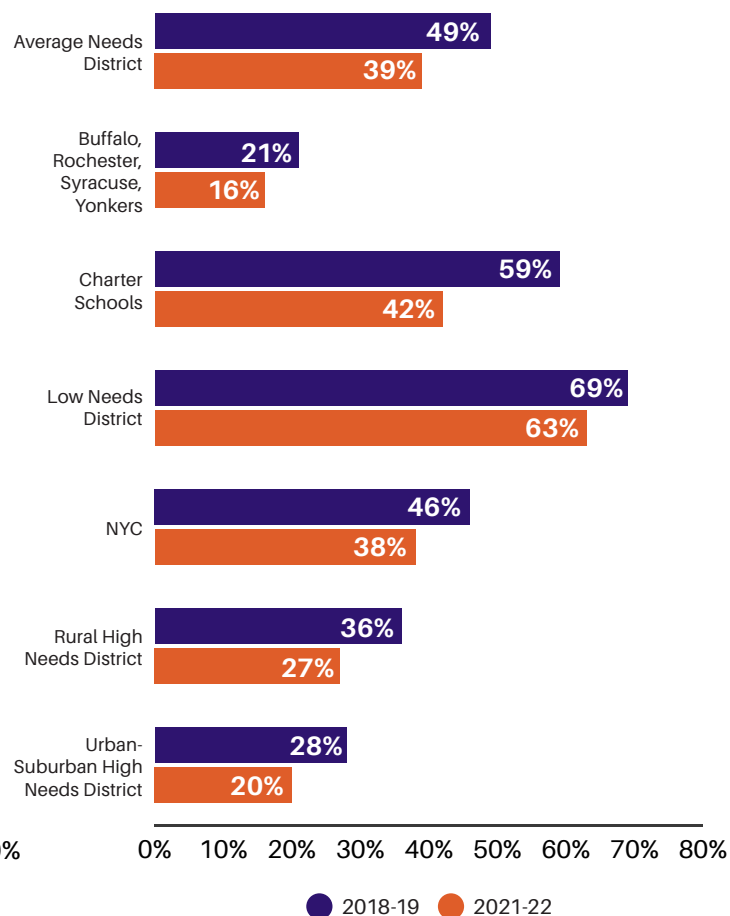

- Asian/Pacific Islander: 67% (2018-19) → 69% (2021-22)
- White: 51% (2018-19) → 52% (2021-22)
- Multiracial: 48% (2018-19) → 49% (2021-22)
- American Indian/Native Alaskan: 39% (2018-19) → 41% (2021-22)
- Hispanic/Latinx: 36% (2018-19) → 36% (2021-22)
- Black: 35% (2018-19)

Legend: ● Asian/Pacific Islander ● White ● Multiracial ● American Indian/Native Alaskan ● Hispanic/Latinx ● Black

NYS Math Assessment Proficiency Rates by Race/Ethnicity, from SY 2018-19 and 2021-22

- Asian/Pacific Islander: 73% (2018-19) → 67% (2021-22)
- White: 56% (2018-19) → 47% (2021-22)
- Multiracial: 49% (2018-19) → 42% (2021-22)
- American Indian/Native Alaskan: 40% (2018-19) → 32% (2021-22)
- Hispanic/Latinx: 35% (2018-19) → 26% (2021-22)
- Black: 32% (2018-19) → 24% (2021-22)

Legend: ● Asian/Pacific Islander ● White ● Multiracial ● American Indian/Native Alaskan ● Hispanic/Latinx ● Black

FINDING 7: Across school types and geographic differences, math proficiency decreased relative to ELA and math proficiency varies widely.

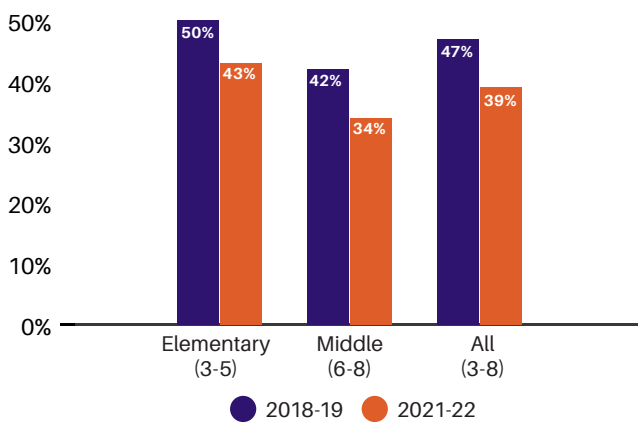## NYS ELA Assessment Proficiency Rates for All Students, from SY 2018-19 and 2021-22

District	2018-19	2021-22
Average Needs District	44%	45%
Buffalo, Rochester, Syracuse, Yonkers	22%	24%
Charter Schools	54%	52%
Low Needs District	65%	65%
NYC	47%	49%
Rural High Needs District	32%	34%
Urban-Suburban High Needs District	28%	29%

● 2018-19 ● 2021-22

NYS Math Assessment Proficiency Rates for All Students, from SY 2018-19 and 2021-22

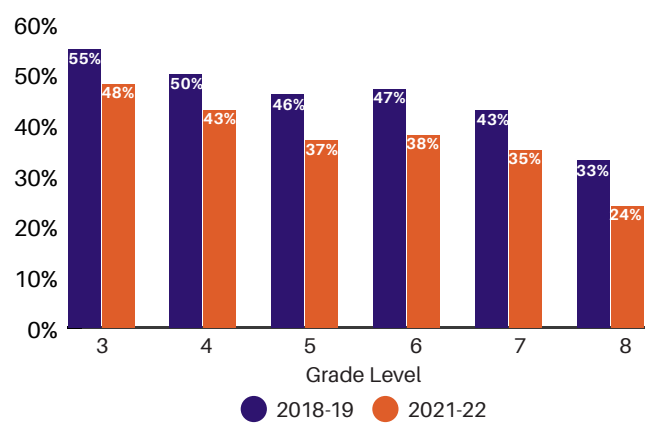| District	2018-19	2021-22
Average Needs District	49%	39%
Buffalo, Rochester, Syracuse, Yonkers	21%	16%
Charter Schools	59%	42%
Low Needs District	69%	63%
NYC	46%	38%
Rural High Needs District	36%	27%
Urban-Suburban High Needs District	28%	20%
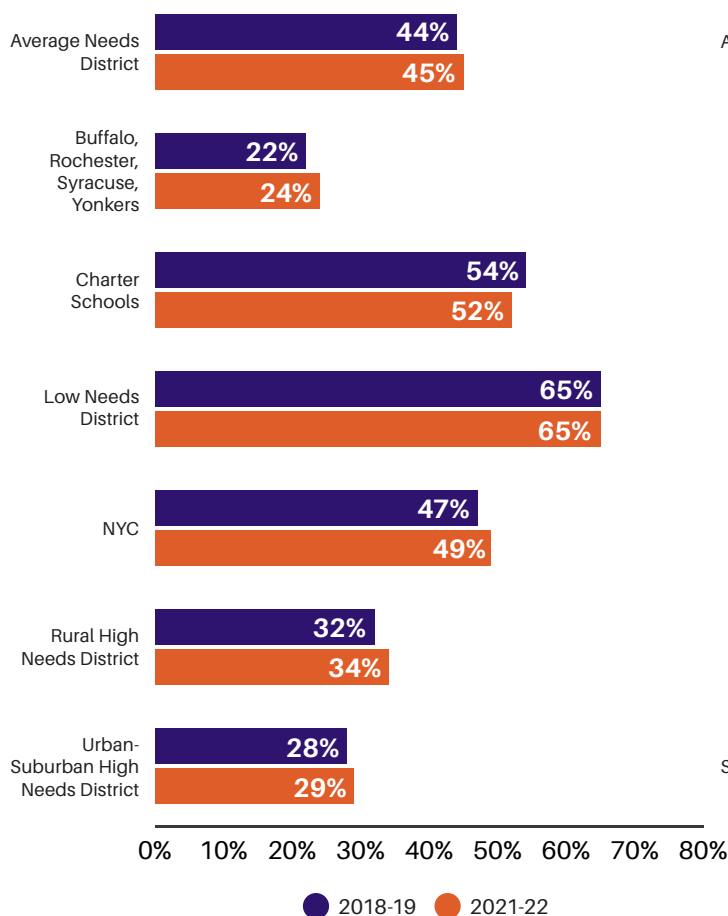
● 2018-19 ● 2021-22

> " A STUDENT'S DEMOGRAPHY SHOULD NOT DETERMINE THEIR DESTINY. HOWEVER, THESE DATA SHOW THAT THE EDUCATION SYSTEMS ACROSS NEW YORK STATE ARE FALLING SHORT OF THAT PROMISE.

FINDING 8: Math proficiency declined between the 2018-19 and 2021-22 school years.

NYS Math Assessment Proficiency Rates from SY 2018-19 to 2021-22

	2018-19	2021-22
Elementary (3-5)	50%	43%
Middle (6-8)	42%	34%
All (3-8)	47%	39%

NYS Math Assessment Proficiency Rates, SY 2018-19 and 2021-22

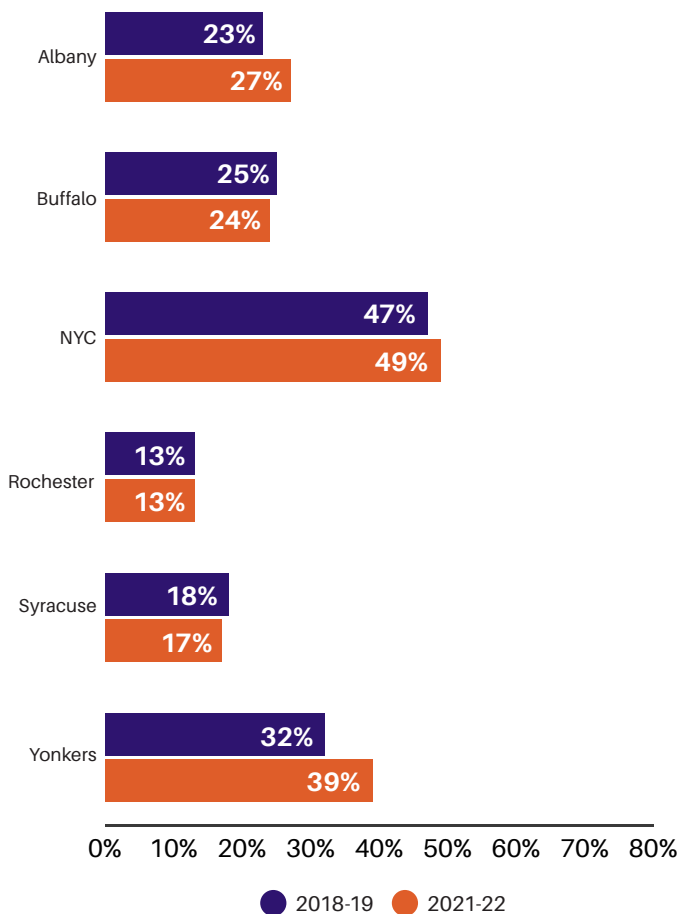| Grade Level	2018-19	2021-22
3	55%	48%
4	50%	43%
5	46%	37%
6	47%	38%
7	43%	35%
8	33%	24%

The decline in year over year math performance is concerning and mirrors trends seen across the nation. The lower 8th grade proficiency rate of 24% is especially troubling since skills in that grade often determine access to future advanced math coursework and test outcomes are closely correlated with future success indicators such as high school graduation, college enrollment, and job earnings, particularly in STEM careers.
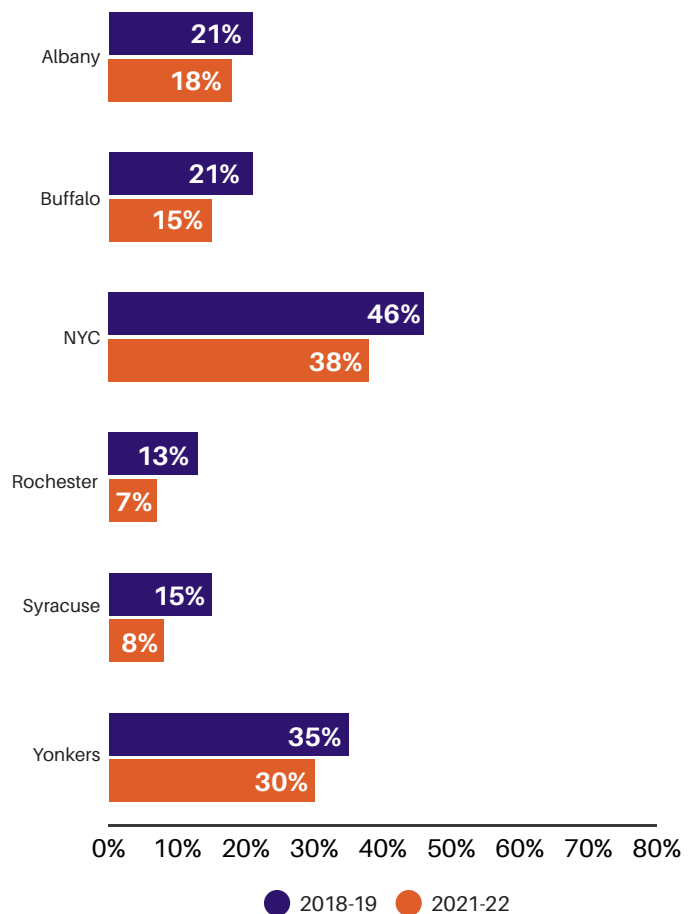
A Close Up on Proficiency Rates Across the State

The impacts of the pandemic vary across the state. Just as there was not a single approach to school closures, hybrid, or remote learning from one district to another, there is not uniform impact across geographic regions. Some districts leveraged remote learning longer than others and many were challenged to make the decision to return to buildings sooner. There was no simple solution or response. As a result, there are geographic differences in math and ELA proficiency. In some regions like Albany, 2021-2022 ELA proficiency results are higher than 2018-2019 results. In others, like Rochester and Syracuse, math proficiency declines are cause for alarm.

NYS ELA Assessment Proficiency Rates for All Students, from SY 2018-19 and 2021-22

District	2018-19	2021-22
Albany	23%	27%
Buffalo	25%	24%
NYC	47%	49%
Rochester	13%	13%
Syracuse	18%	17%
Yonkers	32%	39%

NYS Math Assessment Proficiency Rates for All Students, from SY 2018-19 and 2021-22

District	2018-19	2021-22
Albany	21%	18%
Buffalo	21%	15%
NYC	46%	38%
Rochester	13%	7%
Syracuse	15%	8%
Yonkers	35%	30%

Bridging The Gaps – Policy Recommendations

A deep look at recent assessment data begets urgency and action from state and local education leaders.

The state of New York received $14 billion in federal pandemic relief aid since 2020 and as of August 2022, had spent only 19% of available funding. Additional funding combined with concerning assessment data provides districts with an unprecedented opportunity to invest in evidence-based materials to accelerate academic recovery. In this moment, state and local education leaders should be focused on:

1   **Advancing efforts in early literacy through evidence-based instruction aligned to the science of reading.** Investments in literacy support can take many forms, including high-quality curriculum, professional learning for educators and use of instructional resources that emphasize phonics and reading comprehension. Districts can also train current educators to be reading coaches and hire reading specialists to support classroom teachers and provide Tier II and Tier III interventions.

2   **Spending federal relief dollars with urgency in alignment with student needs.** Districts across New York still have ample funding available to address unfinished learning and student mental health. They must use this data to adjust spending plans as needed to ensure they have the most impact on student outcomes.

3   **Providing targeted academic and social-emotional support to student subgroups that are performing below proficiency.** Even before the pandemic, Black and Latinx students, students with disabilities, and students from low-income backgrounds were less proficient in math and ELA than their peers. The data suggests that the pandemic exacerbated these long-standing inequities. District and school leaders should leverage new assessment data to design classroom experiences that meet the needs of all learners. Districts should commit to implementing a multi-tiered system of support (MTSS) that addresses the needs of students as described in state level instructional reports and is aligned with Tier I instruction.

4   **Investing in high-quality, evidence-based instructional materials and other resources to accelerate learning in math.** Math performance across the state, particularly in eighth grade, is down significantly and requires an increased focus on math instruction and additional coaching and support for struggling students. District leaders should focus on providing students with math experiences that build number sense, algebraic thinking, problem solving and confidence. State education leaders should provide professional learning resources to in-service teachers with a focus on developing conceptual understandings and differentiating in a classroom of diverse learners.

5 **Collecting academic data often and using it to target instruction throughout the school year.** Yearly assessment data is useful, but is not timely enough to inform current year instruction or adjust support as needed. While the state should work to design a statewide cradle to career longitudinal data system, districts should be assessing students' knowledge of grade level content regularly using interim assessments. Districts should leverage increased fiscal resources to implement standards-aligned interim assessments every six to eight weeks. Data from the assessments can be used to improve instructional interventions and scale promising practices.

6 **Launching a statewide tutoring corps.** High dosage tutoring can increase learning outcomes for a wide variety of students. Specifically, high dosage tutoring has been proven to increase academic achievement among low-income populations. Like many other states, New York should consider creating a statewide tutoring corps that can provide high-quality, curriculum aligned tutoring to students and accelerate learning in reading and math. Tutoring efforts should incorporate community providers, college students, and retirees to extend capacity and support overburdened teachers.

A student's demography should not determine their destiny. However, these data show that the education systems across New York are falling short of that promise. State and local education leaders must use this data to bring a greater sense of urgency to our collective recovery efforts, while focusing on evidence-based practices that can help students recover from the pandemic.

Data Note

All data in this report are from the 2018-19 and 2021-22 school years. NYS ELA and math assessments were not administered during 2019-20. The assessment results during the 2020-21 school year were not comparable because the tests were administered differently that year due to remote and hybrid learning policies, and substantially fewer students took the test.

Data on assessments from the 2018-19 and 2021-22 school years are from the 3-8 Assessment databases and Report Card databases, which can be found at **https://data.nysed.gov/downloads.php.** The file used for the 2018-19 school year is the "3-8 ELA and Math Researcher File" contained in the 3-8 Assessment Database. The file used for school year 2021-22 was released on October 24th, 2022 in the Report Card database as "SRC 2022" which contains ELA and math assessment data separately.

All charts include all students in grades 3-8 unless they specify a grade level or subgroup. Similarly, all charts include all the tested students across the state, unless they specify a Need/Resource Category or school district. Proficiency on any assessment is defined as the percent of students who obtained a Level 3 or Level 4. The "Elementary" category includes data for grades 3-5, the "Middle" category includes data for grades 6-8 and the "All 3-8" category includes data for grades 3-8. We calculated each of these categories by summing up the students from each grade level in the category. Charter schools are included in all statewide analyses.

Data on the percent of students tested was calculated using school-level enrollment data for grades 3-8 from the 2018-19 and 2021-22 school years. Enrollment data can be found at **http://www.nysed.gov/information-reporting-services**.