THE SCHOOL DISTRICT OF
PHILADELPHIA

# End of Year Analysis of Participation and Performance on the Star Assessments at the School District of Philadelphia: 2022-23

## Key Findings

Since the 2021-22 school year, the School District of Philadelphia (SDP) has administered Star assessments as a universal screener and progress monitoring tool for all grades, K-12. This report summarizes findings on participation, performance, and growth across Fall and Spring Star testing windows in 2022-23, with comparisons to 2021-22 outcomes and details on performance of different student groups.

- **Participation:** Participation in Star assessments was higher than 90% for grades K-8 in the three required 2022-23 windows. Although spring participation was lower than fall and winter and 9-12 participation was lower than other grade bands, K-12 participation in 2022-23 was higher than in 2021-22 for all windows.
- **Performance:** Similar to 2021-22, the percentage of students who scored in the at/above benchmark performance level increased from fall to spring in the 2022-23 school year, and the percentage of students in the intensive intervention level decreased in both reading and math from fall to spring. The increase in the percentage of students scoring in the at/above benchmark performance level was observed for all racial/ethnic student groups.
- **Growth:** Student growth in reading and math varied by grade level.

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# Star Assessment Administration in SDP in 2022-23

The 2022-23 school year was the second year that the School District of Philadelphia (SDP) administered the Renaissance Star assessments as a universal screening tool to all students in grades K-12. As was the case in 2021-22,[1] Star test results from each required testing window were used to monitor progress toward the Goals and Guardrails adopted by the Board of Education in 2020-21. As Star test results from the three required testing windows became available, SDP teams met to analyze, discuss, and plan instructional interventions. This report is an end-of-year summary of the participation, performance, and growth patterns from Fall to Spring of 2022-23 with year-over-year comparisons to 2021-22.

During the 2022-23 school year, Star assessments were administered to all grade levels, K-12, in four testing windows, one of which was optional: Fall, Winter 1, Winter 2 (optional), and Spring (see Table 1 for dates). Grades K-2 were administered both Star Curriculum Based Measures (CBMs) and Star Early Literacy (SEL), a computer adaptive test (CAT) (Table 2). Star CBMs in literacy and math are administered one-on-one by a teacher, who assesses a student's literacy and numeracy skills during a one-minute test. For example, the Letter Naming CBM counts the number of letters a student identifies correctly in a minute. Star Early Literacy (SEL) is administered through a computer and assesses literacy and numeracy skills for students who are not yet independent readers. SEL is a computer adaptive test (CAT); that is, the difficulty of the test items adjusts in response to a student's correct or incorrect answers.

In third grade, students start to transition into Star Reading and Star Math CATs, which are the tests administered to students through 12th grade at SDP (Table 2). Teachers determine whether the independent reading skill of the student is appropriate to take Star Reading and Star Math instead of Star Early Literacy. Typically, students who achieve a scaled score of 852 on the Star Unified Scale can transition from taking the Star Early Literacy module to taking the Star Reading and Star Math tests.[2]

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[1] See our "Participation and Performance on the Star Assessments at the School District of Philadelphia: 2021-22" report, available at https://www.philasd.org/research/2022/08/18/participation-and-performance-on-the-star-assessments-at-the-school-district-of-philadelphia-2021-22/. Figures for the 2021-22 school year in the Academic Screeners Qlik application and in this report diverge in minor ways from what was reported in the 2021-22 end of year report because of retrospective enrollment adjustments and addition of new records, introduced through a data refresh after the data presented in the 2021-22 report was pulled. A total of three hundred spring window records were added because Kindergarten Star Reading performance level information became available, and a set of alternative schools had a Spring window extension through the end of June 2022.

[2] For more information on the different Star tests and the Star Unified Scale, please see "Star Tests in the School District of Philadelphia: A Summary of Metrics that Describe Achievement and Growth," available at: https://www.philasd.org/research/2022/06/09/star-tests-in-the-school-district-of-philadelphia-a-summary-of-metrics-that-describe-achievement-and-growth/

Table 1. Star testing windows in the 2022-23 school year

| Testing Window | Administration Dates |
|---|---|
| Fall | September 6 – September 30, 2022 |
| Winter 1 | January 4 – January 27, 2023 |
| Winter 2 (Optional) | March 6 – March 24, 2023 |
| Spring | May 1 – June 9, 2023 |

**Source:** 2022-23 SDP Assessments Calendar
**Note:** Some schools were granted extensions to the official window, and tests taken during the extensions are included in this report.

Table 2. Star suite of tests administered in SDP by grade, 2022-23 school year

| Grade | Curriculum Based Measures (CBMs) | | Computer Adaptive Tests (CATs) | | |
|---|---|---|---|---|---|
| | ELA | Math | Star Early Literacy | Star Reading | Star Math |
| K | Required | Required | Required | - | - |
| 1 | Required | Required | Required | - | - |
| 2 | Required | Required | | Required | Required |
| 3 | Required | Required | *Teachers may decide to administer Star Early Literacy for students with scaled scores below 852 in addition to Star Reading and Math.* | Required | Required |
| 4 | Required | - | | Required | Required |
| 5 | Required | - | | Required | Required |
| 6-12 | - | - | | Required | Required |

**Note:** For the skills assessed in CBM or CAT tests at different grade levels, see Table 1 in the reference document linked in footnote 2 above.

# Methods

## Research Questions

Three main questions guided the analyses in this report:

1. What were the participation rates for the Star tests in the required testing windows of the 2022-23 school year?
    a. Did participation rates differ by grade bands?
    b. What were year-over-year patterns in participation rates by grade bands?
    c. Did participation rates differ by student race/ethnicity?

2. What were the patterns in distribution of students across performance levels at the beginning (Fall) and at the end (Spring) of the 2022-23 school year?
    a. How did performance levels on Star tests differ by grade bands?
    b. What were year-over-year patterns in performance levels by grade bands?
    c. How did performance levels on Star tests differ by race/ethnicity?

3. Did students at each grade level demonstrate growth from fall to spring in the 2022-23 school year?
    a. How did patterns in fall-to-spring student growth compare to growth in 2021-22 school year?

## Data collection and analysis

SDP receives student test results for all Star tests from Renaissance daily. This raw data file is "cleaned" and business rules are applied[3] before the data is loaded into the Academic Screeners Qlik application, where District and school leaders can monitor student participation and performance daily. The information in the Qlik application is aggregated but interactively drillable to network, school, and grade levels; in addition, disaggregation and filtering by student and/or school characteristics is possible.[4] The data presented in this report is extracted from the Academic Screeners application; therefore, the metric definitions here are consistent with the application's definitions.

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[3] An example of a data cleaning process is deduplication of records if a student takes a Star test multiple times in the same window. An example of a business rule is determining the eligibility of students based on factors such as enrollment and English proficiency levels.

[4] School-based staff have access to student-specific information for their students to help guide their instructional decision-making.

## Metrics

To answer the research questions above, in this report we summarize metrics on participation, performance, and student growth. Participation and performance metrics are presented for the District overall and also analyzed in greater detail to identify variations by grade spans or by racial/ethnic groups. Growth metrics are presented using fall and spring data points and are analyzed at the grade level.

***Participation Rate*** is the number of eligible students who were administered the assessment divided by the number who were eligible to take the assessment. Students are considered eligible to take the assessment if they were enrolled at the school on the last day of the testing window and if the English Learner (EL) and Dual Language Learner (DLL) exceptions do not apply to them.[5] Only results taken within the official testing window are counted.[6]

***Performance Level*** is the level a student places in based on the National Percentile Rank (NPR) of their scaled score.[7] Performance levels are used to tailor instruction and implement interventions for students who need additional supports to meet grade-level learning standards. For example, a student who performs better than 40 percent or more of their national peers in reading is considered "At/Above Benchmark." The other performance levels and corresponding NPR ranges for Star reading and math CATs are shown in Table 3.

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[5] SDP introduced new rules for EL students in 2021-22 to better align our participation standards and monitoring with PDE guidance on who must participate in state standardized testing and the information presented in this report reflects these rules (see: https://www.philasd.org/era/wp-content/uploads/sites/865/2022/04/Guidelines-for-Multilingual-Learners-EL_DLL-Participation-in-Universal-Screeners-–-2021-2022.pdf ). English Learners in grades 3-12 who entered the country less than one year before the projected PSSA/Keystone testing window are exempt from Star Reading assessments (but not Star Math assessments). In Math, students in grades 3-12 who entered the country fewer than three years before the projected PSSA/Keystone testing window are eligible to take either the Spanish- or English-language version of the test.
Dual Language Learners (DLLs) are students who receive Spanish and English bilingual instruction in the six dual language schools (https://www.philasd.org/multilingual/#duallang). They are required to take Star Reading in English in Fall, in Spanish in Winter 1, and in both English and Spanish in Winter 2 and in Spring. DLLs are only counted as participants if they fulfilled the cycle-specific requirement, and are only counted in performance metrics if counted as participants. For example, a DLL who has only taken the Spanish-language exam would not be counted as a participant in Spring, and their Spanish-language would not be included in performance rates even though it is a valid score. In cycles where a DLL must take the exam in both languages, provided the student has met the participation standard, the student's best valid score is displayed regardless of language. A student's best score is determined by comparing percentile ranks between tests.
[6] The Star CAT for grades K-2 is Star Early Literacy (SEL), which assesses both literacy and numeracy for students who are not independent readers, and reading participation for grades K-2 is based on SEL test completion. Because there is not a separate CAT for math until students transition to Star Math, the Academic Screeners Qlik application uses Star Math CBM participation for participation in math tests until students start taking Star Math. **In this report, we include K-2 Star Math CBM participation only in Table 4. In other figures and tables reporting on math participation and performance, we include only the Star Math (CAT) for grades 3-12.**
[7] For more details about the relationship between performance levels, Star scaled scores, and National Percentile Rank, please see the reference document linked in footnote 2. Figure 2 in the reference document shows that the required scaled score for students to maintain their NPR increases throughout the year because they are expected to learn and grow. NPR is normed against a national sample of peers who are also expected to grow over time, and it helps us understand relative performance while taking into account the expected student growth.

Table 3. Renaissance Star performance levels used in SDP, 2022-23

| Performance Level | Description | National Percentile Rank (NPR) Range (Star Reading and Star Early Literacy) | National Percentile Rank (NPR) Range (Star Math) |
|---|---|---|---|
| At/Above Benchmark | Students are meeting or exceeding the benchmark score | ≥ 40 | ≥ 70 |
| On Watch | Students are slightly below the benchmark score | 25-39 | 25-69 |
| Strategic Intervention | Students are below the benchmark score | 10-24 | 10-24 |
| Intensive Intervention | Students are far below the benchmark score | <10 | <10 |

**Source:** SDP Office of Assessments and "Defining Benchmarks in Star Assessments" by Renaissance, available at: https://doc.renlearn.com/KMNet/R62855.pdf
**Note:** NPR benchmarks for both reading and math CBMs are the same as those for Star Reading and Star Early Literacy.

Three separate but related metrics are considered in this report as measures of student growth by grade level: 1) fall-to-spring change in average scaled score, 2) fall-to-spring change in average NPR, and 3) fall-to-spring median student growth percentile (SGP).

***Fall-to-Spring Change in Average Scaled Score***: Star uses a unified scale, which means SEL and Star Reading scores for all grades are on the same, continuous scale.[8] The Star Unified scale ranges from 200 to 1100 for SEL, and from 600 to 1400 for Star Reading and Star Math. Scaled scores are expected to increase throughout the year as students learn and develop their skills, but the expected increase throughout the year is not the same for each grade. We average the scaled scores for the student groups we study and analyze the difference between their spring and fall average scaled scores.

***Fall-to-Spring Change in Average NPR:*** Because NPR is an ordinal scale (ranging from 1 to 99), we average the Normal Curve Equivalent (NCE) and report on the average NPR that corresponds to the average NCE.[9]

***Fall-to-Spring Median Student Growth Percentile (SGP):*** SGP is a normed metric like the NPR; it compares the *change* in a student's scaled scores to their peers in the norm sample. An SGP of 55 suggests that this student's growth was higher than the growth of 55% of their peers who had a similar fall scaled score. Median SGP ranks all SDP test takers' SGPs from 1 to 99 and shows the SGP of the student right in the middle. We choose median because it is a better measure of central

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[8] For more details about the Star Unified scale see the reference document linked in footnote 2 and "The Star Unified Scale" by Renaissance, available at: https://renaissance.widen.net/s/w6p9f5pcpm/r63395
[9] For more technical details on the Normal Curve Equivalent (NCE), see Appendix B in "Assessing Student Performance Through a Year of Virtual Learning: A Cohort Comparison of Student Performance on 2019-20 Winter and 2020-21 Spring Star Assessments and End-of-Year Review," available at: https://www.philasd.org/research/wp-content/uploads/sites/90/2021/09/Star-End-of-Year-Cohort-Study-Report-September-2021.pdf

tendency than the average (where the distribution is skewed) and because it is not as sensitive to outliers as the average.[10]

All data presented below were exported from the Academic Screeners Qlik application, after the 2022-23 spring window closed.

# Findings

## Participation

SDP tracks the number and percentage of eligible students participating in reading and math assessments separately in addition to the number and percentage of eligible students that take both of the required assessments. In each testing window, there are students who take only the reading or only the math assessment. As a result, the number of students who take the reading or the math assessment is always higher than the number of students who take both.

During the 2022-23, school year, the participation rate for students who took both the reading and math assessments was 85.3% in the fall and decreased to 79.3% in the spring in 2022-23 (Table 4). When taken separately, reading participation rates and math participation rates were higher than participation in both reading and math, and the difference between reading and math participation rates was smaller than 2 percentage points. The optional Winter 2 window participation rates were much lower than the participation rates in the required windows. Among the required windows, fall and winter 1 participation rates were close, with winter 1 about one percentage point lower. Spring window participation rates were lowest, about 5 percentage points lower than the fall.

Participation rates for all 2022-23 required windows were higher than they were in 2021-22. Unlike 2021-22, the participation rates were largely sustained throughout the required windows, and the decrease in Spring participation was smaller.

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[10] For more information on SGP, see the reference document linked in footnote 2.

Table 4. Overall participation in Star reading and math assessments in the 2021-22 and 2022-23 testing windows

| Test | Participation Metric | 2021-2022 | | | | 2022-2023 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fall | Winter 1 | Winter 2 | Spring | Fall | Winter 1 | *Winter 2* | Spring |
| **Both Reading and Math** | Number Eligible for Participation | 117,619 | 117,722 | 116,768 | 116,543 | 115,985 | 116,679 | *116,694* | 116,637 |
| | Percentage Who Participated | 81.5% | 76.0% | 79.6% | 70.6% | 85.3% | 84.1% | *20.6%* | 79.3% |
| | Number Participated | 94,810 | 87,999 | 90,852 | 80,265 | 97,612 | 96,095 | *23,497* | 89,963 |
| **Reading** | Number Eligible for Participation | 116,351 | 115,763 | 114,138 | 113,754 | 114,482 | 114,205 | *113,852* | 113,515 |
| | Percentage Who Participated | 87.2% | 83.7% | 85.8% | 77.4% | 89.8% | 88.8% | *27.8%* | 84.8% |
| | Number Participated | 101,418 | 96,943 | 97,987 | 88,045 | 102,808 | 101,402 | *31,662* | 96,216 |
| **Math** | Number Eligible for Participation | 117,619 | 117,722 | 116,768 | 116,543 | 115,985 | 116,679 | *116,694* | 116,637 |
| | Percentage Who Participated | 85.4% | 80.7% | 83.7% | 76.4% | 88.4% | 87.4% | *27.5%* | 83.5% |
| | Number Participated | 100,441 | 95,050 | 97,705 | 89,097 | 102,548 | 101,985 | *32,141* | 97,436 |

**Notes:** Students who have completed Star Early Literacy or Star Reading/Math tests within the testing window are considered to be participants. Star Early Literacy assesses early numeracy skills in addition to literacy for grades K-3 but counts toward reading participation. For Math participation of K-2 students, participation in required Curriculum Based Measures is used in this table. The number eligible for reading participation is lower than the overall number eligible because some EL and DLL students are not eligible for reading, but they are eligible for math; see footnote 4 for business rules related to EL and DLL eligibility.

## Participation by Grade Span

We examined participation in Star reading and math assessments in 2021-22 and 2022-23 by the grade spans of K-2, 3-5, 6-8, and 9-12.

Participation in Star reading assessments for K-2 and 3-5 grade bands has consistently been above 90% in all 2021-22 testing windows and above 95% for all 2022-23 required testing windows (Figure 1). For the 6-8 grade band, reading assessment participation rates in 2022-23 were higher than the corresponding testing windows for the 6-8 grade band in 2021-22. Although the 6-8 grade band saw a decline in participation in the spring, the overall rate remained high at 91%. As was the case in 2021-22, the 9-12 (high school) grade band had the lowest participation rates among all grade bands again in 2022-23. However, participation rates for grades 9-12 were higher for all 2022-23 windows compared to 2021-22, and the winter-to-spring decline in 2022-23 participation was 11 percentage points (from 80% to 69%) instead of the 2021-22 decline of 24 percentage points (from 75% to 51%).

Similar to reading, participation in required Star Math assessments was above 90% in 2021-22 and at or above 95% in 2022-23 for grades 3-5 (Figure 2). Grades 6-8 Star Math participation in 2022-23 was at 95% in fall and winter but decreased to 91% in the spring. Star Math participation for grades 9-12 was much lower than elementary and middle school grades for both years, but the 2022-23 participation was higher than 2021-22 for all required windows. In 2022-23, Star Math participation for grades 9-12 ranged from 79% in the fall to 67% in the spring, and the winter-to-spring dip in participation was 10 percentage points in 2022-23 compared to 19 percentage points in 2021-22.

Consistent with overall numbers, participation in reading and participation in math were higher than participation in *both* reading and math for all grade bands in 2022-23 (Appendix A, Table A.1). The difference in the percentage of students who took only one test compared to students who took both[11] was greater for high school grades, and in all grade spans but K-2, the difference in the percentage who took only one test compared to both tests was largest in the spring testing window.

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[11] For reading, this is the difference between reading participation and participation in *both* tests, and for math it is the difference between math participation and participation in *both* tests.

Figure 1. Participation in required Star reading assessments in 2021-22 and 2022-23, by grade bands
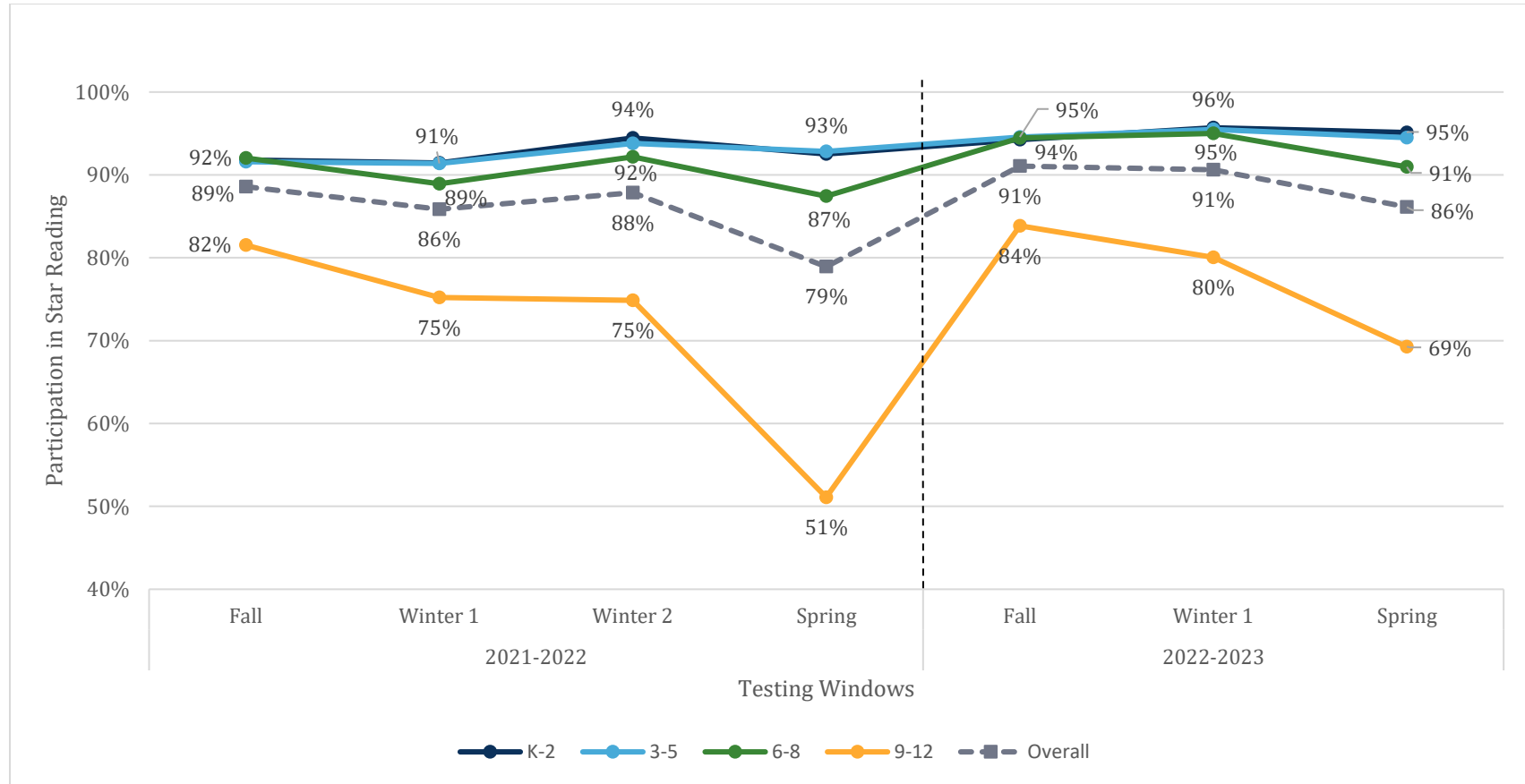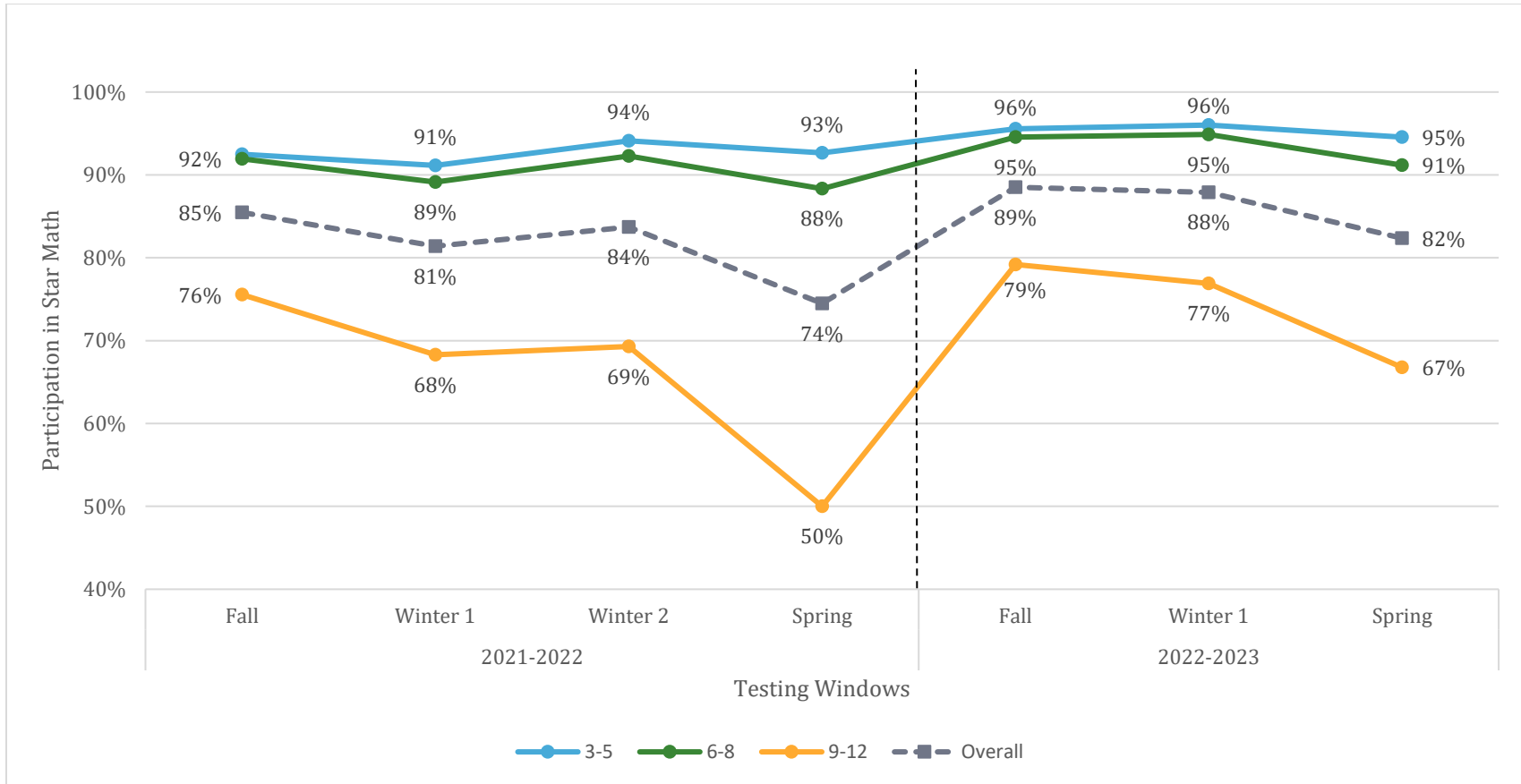
Figure 2. Participation in required Star Math assessments in 2021-22 and 2022-23, by grade bands



**Note:** Grades K-2 do not get Computer Adaptive Tests (CAT) in math; only grades 3-8 CAT outcomes are reported here.

## Participation by Student Race/Ethnicity

Participation in Star reading assessments was high for all racial/ethnic groups, and the biggest difference between the groups with the highest and the lowest participation was 6 percentage points in 2022-23 (Figure 3). However, participation rate levels varied, within 6 percentage points, by race/ethnicity. Asian students had the highest levels of participation, ranging from 95% (fall) to 90% (spring). White students also had high participation rates, ranging from 94% (fall) to 89% (spring). Participation rates for Hispanic/Latino and Black/African American students were higher than they were in 2021-22; Black/African American students had 91% participation in the fall and 85% participation in the spring. While Hispanic/Latino students had the lowest participation in the fall (89%), they ended the year with 86% participation in Star reading assessments.

Similar to grade bands, Star Math participation patterns by race/ethnicity followed the patterns of participation in Star reading assessments (Figure 4). For all racial/ethnic student groups, Star Math participation rates for 2022-23 were higher than they were in the same assessment window in 2021-22. Asian students had the highest level of participation, with 94% in the fall and 88% in the spring. White students were 1-2 percentage points lower than Asian students in Star Math participation, with 92% participation in the fall and 86% participation in the spring. Participation rates for Black/African American, Hispanic/Latino, and Multiracial/Other students were very close to each other, about 87-88% in the fall and 81-82% in the spring.

Figure 3. Participation in Star reading assessments in 2021-22 and 2022-23, by race/ethnicity
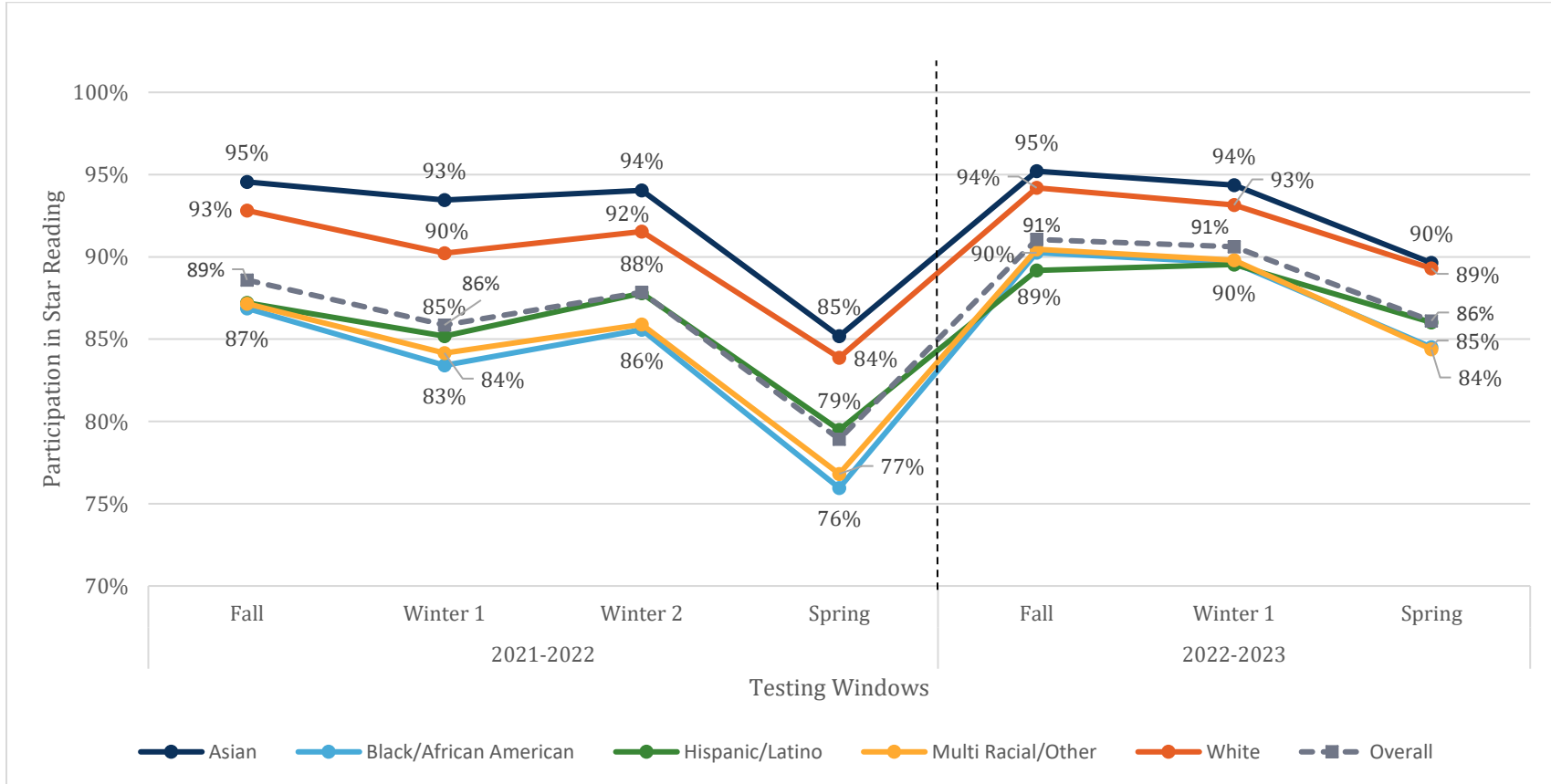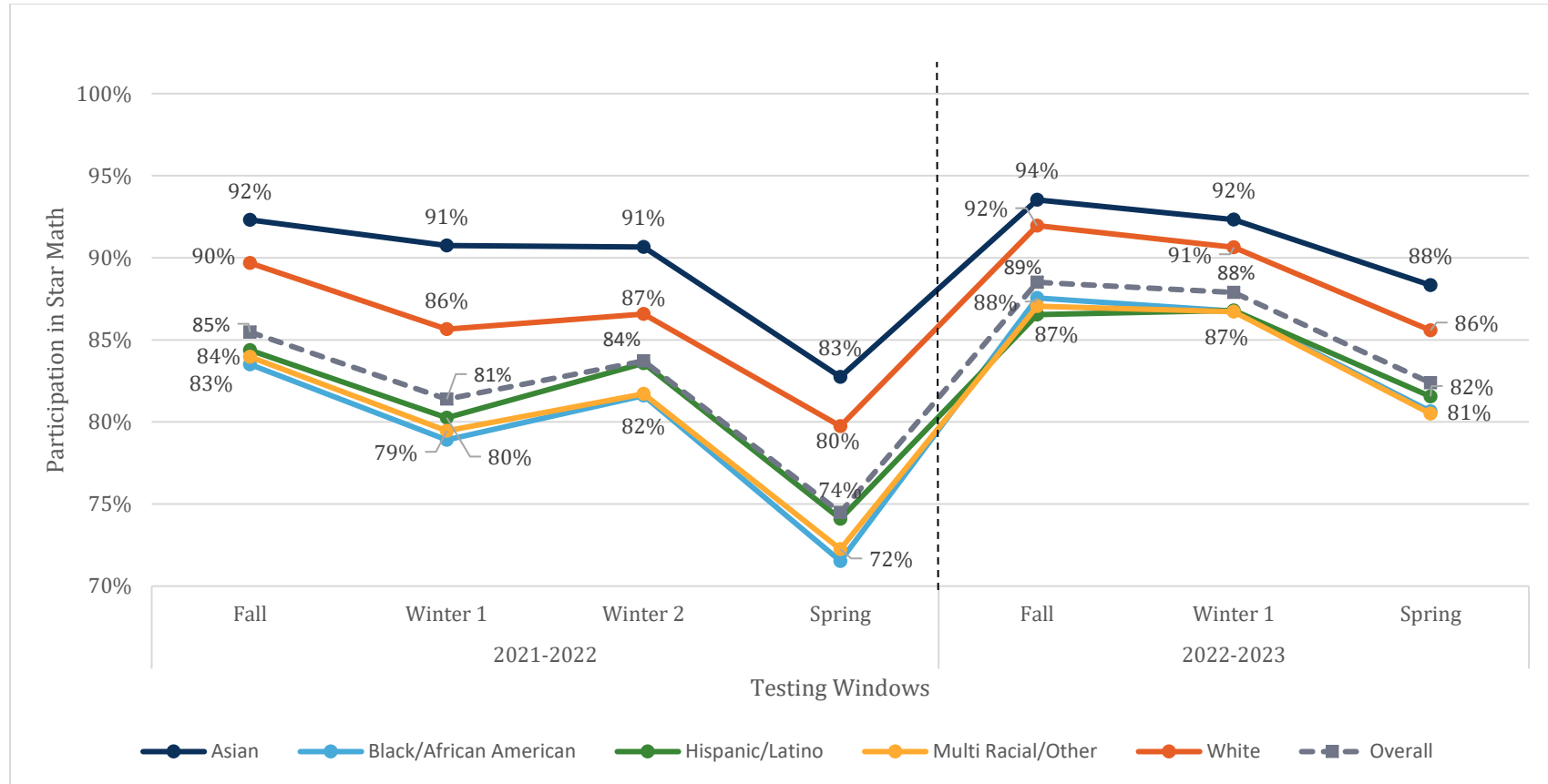
Figure 4. Participation in grades 3-12 Star Math assessments in 2021-22 and 2022-23, by race/ethnicity



**Note:** Grades K-2 do not get Computer Adaptive Tests (CAT) in math; only grades 3-8 CAT outcomes are reported here.

# Performance

## Performance Levels

Although the share of students who placed in the four performance levels in reading did not change dramatically through the course of the 2022-23 school year, there were small-scale changes (Table 5). This is similar to the performance patterns during the 2021-22 school year. While the highest percentage of students scored in the intensive intervention level, this percentage declined from 42.9% in the fall to 38.8% in the spring, and the percentage of students who scored in the at/above benchmark level increased steadily, from 26.8% in the fall to 33.7% in the spring.

Table 5. Overall K-12 performance levels in reading, 2021-22 and 2022-23

| Performance Level | Reading Assessment Participation | 2021-2022 | | | | 2022-2023 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fall | Winter 1 | Winter 2 | Spring | Fall | Winter 1 | *Winter 2* | Spring |
| Overall Total | Number of Students with Scores | 101,418 | 96,943 | 97,987 | 88,045 | 102,808 | 101,402 | 31,662 | 96,216 |
| **At/Above Benchmark** (40-99th percentile) | Percentage of Students with Scores | 26.3% | 29.2% | 31.4% | 32.8% | 26.8% | 31.6% | 32.4% | 33.7% |
| | Number of Students | 26,653 | 28,336 | 30,808 | 28,913 | 27,570 | 32,007 | 10,244 | 32,406 |
| **On Watch** (25-39th percentile) | Percentage of Students with Scores | 12.4% | 12.3% | 12.7% | 11.7% | 12.0% | 12.2% | 12.5% | 11.4% |
| | Number of Students | 12,615 | 11,898 | 12,413 | 10,300 | 12,359 | 12,367 | 3,963 | 10,983 |
| **Strategic Intervention** (10-24th percentile) | Percentage of Students with Scores | 18.8% | 18.0% | 17.3% | 16.2% | 18.3% | 17.1% | 16.5% | 16.1% |
| | Number of Students | 19,107 | 17,418 | 17,000 | 14,285 | 18,779 | 17,373 | 5,212 | 15,510 |
| **Intensive Intervention** (<10th percentile) | Percentage of Students with Scores | 42.4% | 40.5% | 38.5% | 39.2% | 42.9% | 39.1% | 38.7% | 38.8% |
| | Number of Students | 43,042 | 39,290 | 37,762 | 34,546 | 44,100 | 39,651 | 12,241 | 37,315 |

**Note:** Winter 2 window in 2022-23 was optional.

Similar to the reading performance level patterns, the share of students who scored in the at/above benchmark level in math showed a slow but steady increase, from 15.5% to 20.9% from fall to spring (Table 6).[12] The percentage of students who placed in intensive intervention level decreased from 35.6% in the fall to 33.8% in the spring. In spring 2022-23, a higher percentage of students scored in at/above benchmark and a lower percentage scored in intensive intervention compared to spring 2021-22.

Table 6. Overall Grades 3-12* performance level in Math, 2021-22 and 2022-23

| Performance Level | Reading Assessment Participation | 2021-2022 | | | | 2022-2023 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Fall | Winter 1 | Winter 2 | Spring | Fall | Winter 1 | *Winter 2* | Spring |
| Overall Total | Number of Students with Scores | 76,631 | 71,832 | 73,182 | 65,249 | 78,247 | 77,189 | 26,675 | 72,518 |
| At/Above Benchmark (70-99th percentile)** | Percentage of Students with Scores | 14.2% | 17.5% | 18.7% | 19.8% | 15.5% | 18.2% | 20.6% | 20.9% |
| | Number of Students | 10,847 | 12,575 | 13,673 | 12,919 | 12,100 | 14,032 | 5,495 | 15,151 |
| On Watch (25-69th percentile) | Percentage of Students with Scores | 30.1% | 31.5% | 31.2% | 29.1% | 29.9% | 31.0% | 30.5% | 29.3% |
| | Number of Students | 23,070 | 22,593 | 22,831 | 18,961 | 23,402 | 23,901 | 8,139 | 21,270 |
| Strategic Intervention (10-24th percentile) | Percentage of Students with Scores | 19.3% | 17.8% | 16.9% | 16.1% | 19.0% | 17.6% | 16.5% | 16.0% |
| | Number of Students | 14,764 | 12,795 | 12,349 | 10,494 | 14,874 | 13,576 | 4,408 | 11,579 |
| Intensive Intervention (<10th percentile) | Percentage of Students with Scores | 36.5% | 33.2% | 33.2% | 35.1% | 35.6% | 33.3% | 32.4% | 33.8% |
| | Number of Students | 27,950 | 23,869 | 24,329 | 22,875 | 27,871 | 25,680 | 8,633 | 24,518 |

* Performance metrics are based on CAT results. The required CAT for K-3 students is SEL; there is not a separate math CAT for K-3. Students are transitioned to Star Math when they get a scaled score of 852 on the SEL, typically during 3rd grade. We report results from grades 3-12 for math performance in this report.
** Note that the NPR cut point for the at/above benchmark level for math is the 70th percentile (the cut point for reading for the same at/above benchmark level is the 40th percentile). This cut point was determined based on an analysis of the relationship between Star NPR and PSSA performance at proficient or advanced levels.

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[12] Performance metrics and levels tracked by the Qlik application are based on the computer adaptive tests (CAT). The CAT for K-2 is Star Early Literacy (SEL), which assesses for both literacy and numeracy for students who are not independent readers. SEL performance is counted toward K-2 reading for students who do not take Star Reading yet. For math performance, only Star Math outcomes count. Most students transition from SEL to Star Math in 3rd grade; we report results from grades 3-12 for math performance in this report.

A flowchart provides another way to look at fall-to-spring changes in performance at the student level. The flowchart brings more nuance to the information reported in Tables 5 and 6, showing the movements within and between levels from the beginning to the end of the school year.

The flowchart for reading (Figure 5) shows that most of the students who scored in the at/above benchmark and intensive intervention performance levels in the fall scored in the same level in the spring. On the other hand, there was a lot more movement into and out of the on watch and strategic intervention levels; only 2,716 of 11,816 students who scored in the on watch level stayed in this performance level in the spring. On a positive note, many students who did not score in at/above benchmark in the fall, including some who scored in intensive intervention, went on to score in at/above benchmark in the spring. It is also notable that, for students not tested in the spring, many were not tested in the fall either (5,434 out of 17,285) or started the fall in intensive intervention (5,067 out of 17,285).

Figure 5. Performance levels in reading in fall and spring 2022-23 for grades K-12
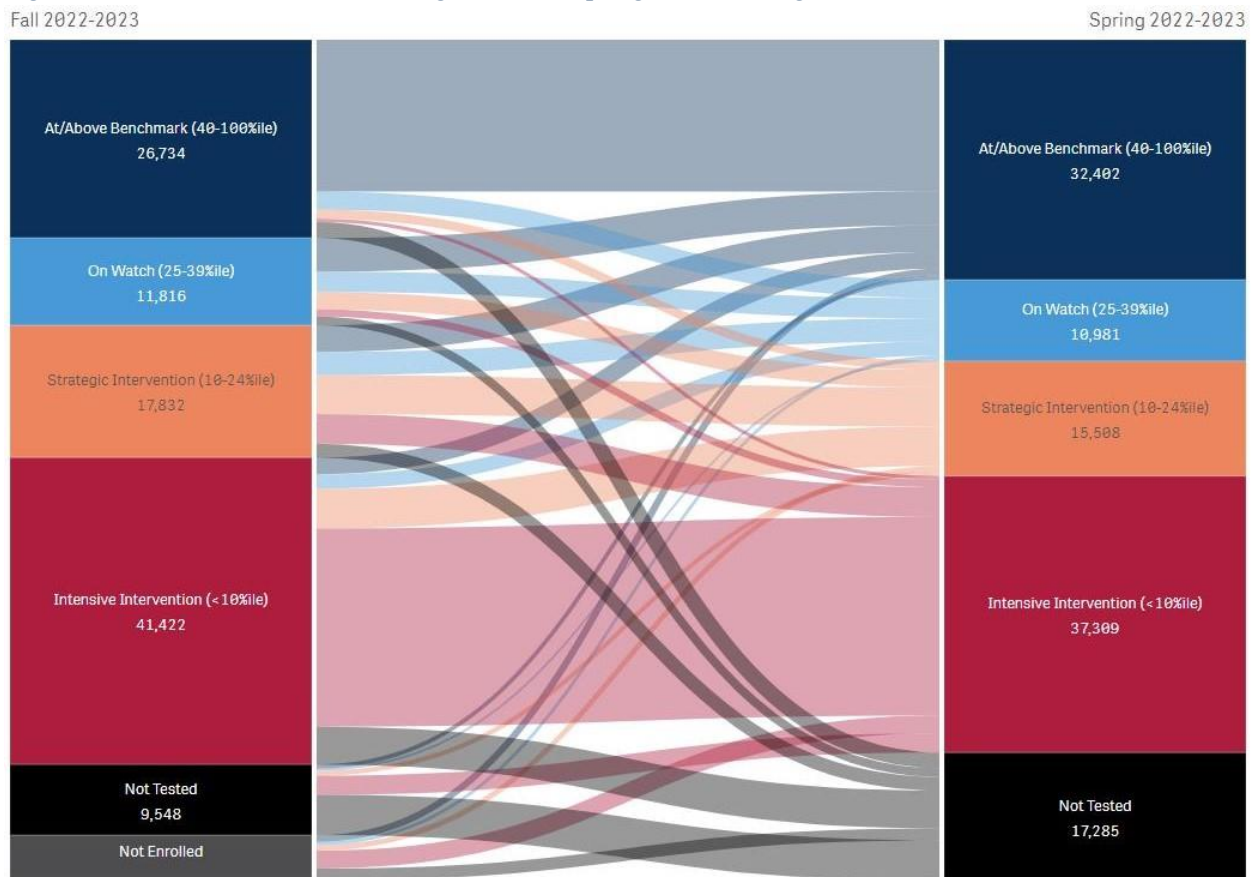


**Note:** The numbers of students for the fall window in the flowchart do not match the numbers reported in Table 5 because students who left the District between the fall and spring windows are excluded.

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The flowchart for fall-to-spring performance levels in math (Figure 6) looks different than reading, largely due to the difference in at/above benchmark performance level NPR cut points and the larger number of non-tested students.[13] For many students who scored in the at/above benchmark, on watch, or intensive intervention performance levels in the fall, the spring outcomes also placed them in the same level. Students who scored in the strategic intervention level showed more change; more of them (7,651) moved into on watch or intensive intervention than stayed in strategic intervention (3,893). Also notable is that 4,993 out of 22,418 students who scored in the on watch level in the fall went on to score in the at/above benchmark level in the spring.
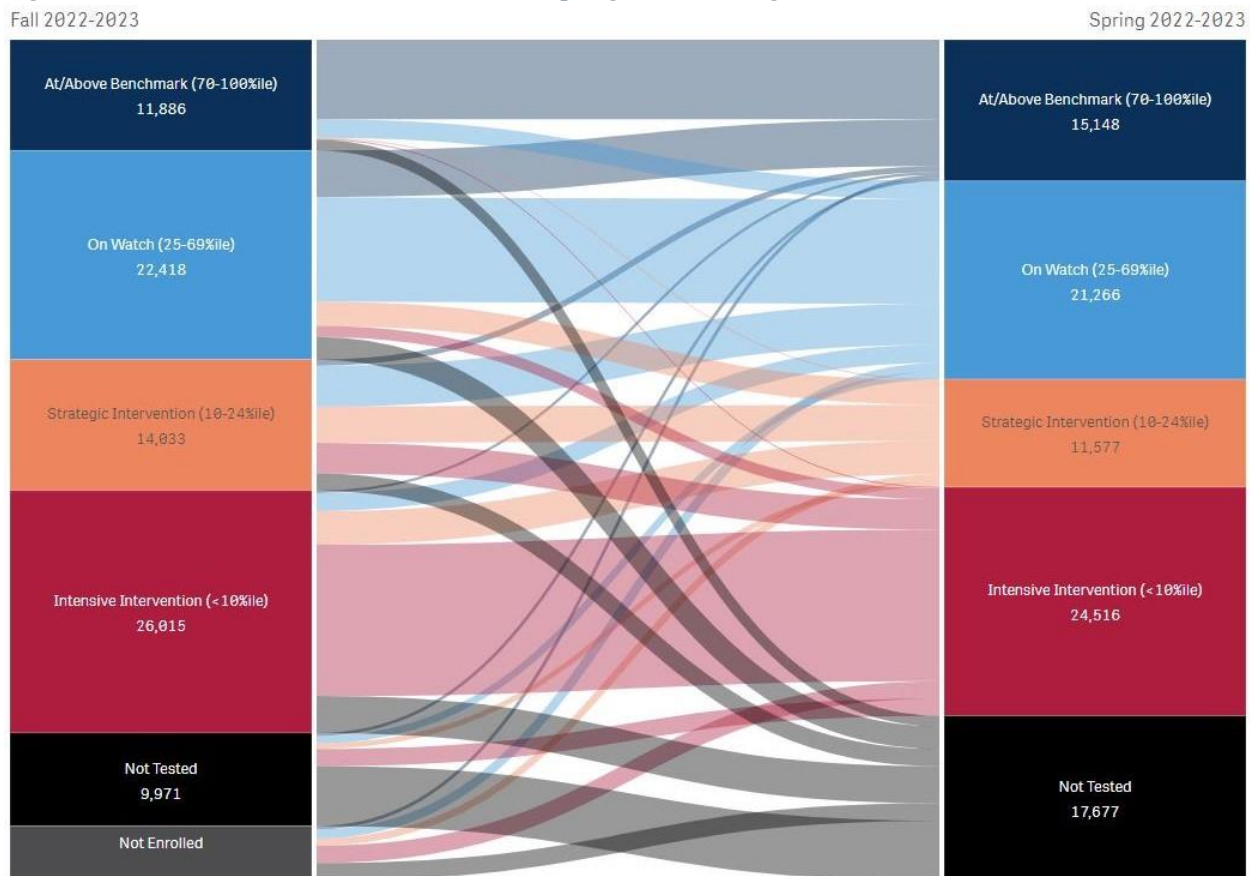
Figure 6. Performance levels in math in fall and spring 2022-23 for grades 3-12



**Note:** The numbers of students for the fall window in the flowchart do not match the numbers reported in Table 6 because students who left the District between the fall and spring windows are excluded. Grades K-2 do not get Computer Adaptive Tests (CAT) in math; only grades 3-8 CAT outcomes are reported here.

The District-wide performance level figures give a good bird's eye view of how students performed throughout the year; however, there are variations in how students are distributed across performance levels within the District. Below, we investigate the variations in performance level distributions for the fall and spring testing windows in 2021-22 and 2022-23 for different grade spans and racial/ethnic groups for both reading and math.

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[13] In the school years analyzed here, the NPR cut point for the at/above benchmark level for math was set to 70th percentile and not 40th as in reading. This cut point was determined based on an analysis of the relationship between Star NPR and PSSA performance at proficient or advanced levels.

*Performance Levels by Grade Spans*

The breakdown by grade span of performance level data for reading shows that although all grade spans started the year with 25-28% of students scoring in the at/above benchmark levels in fall 2021-22 and 2022-23, the figures diverged by spring (Figure 7). For K-2, the share of students in the at/above benchmark level increased from 25% to 43% (an 18-percentage point increase) in 2021-22 and from 28% to 45% (a 17-percentage point increase) in 2022-23 for K-2. On the other hand, grades 6-8 and 9-12 saw only 1-percentage point increases from fall to spring in both years.

The share of students in the intensive intervention level followed a converse pattern compared to the at/above benchmark level. The share of students in grades K-2 who scored in the intensive intervention performance level showed a 13-percentage point fall-to-spring decrease from each year, from 46% in the fall to 33% in the spring of 2021-22 and from 43% to 30% in 2022-23. For grades 9-12, the share of students who placed in intensive intervention increased 2 percentage points from fall to spring each year, from 39% to 41% in 2021-22 and from 40% to 42% in 2022-23.

Figure 7. Performance levels for 2021-22 and 2022-23 reading assessments, by grade span
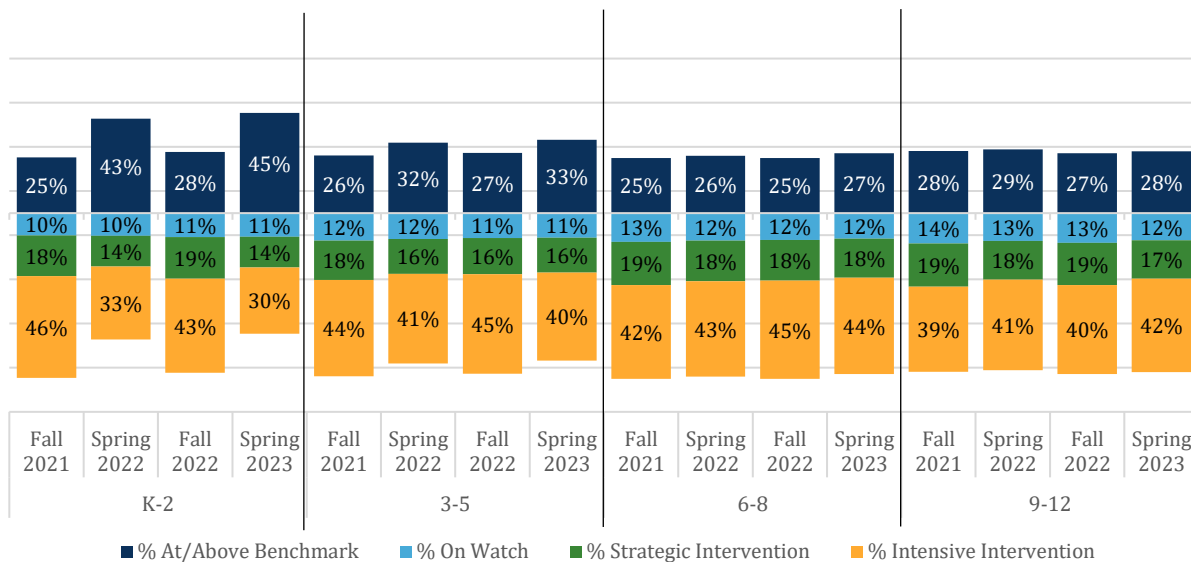


**Note:** See Table B.1 in Appendix B for the numbers of students that correspond to the reported percentages for 2022-23.

The share of students who scored in the at/above benchmark level for math in the fall and spring windows of 2021-22 and 2022-23 school years differ from the student performance patterns in reading. The share of students who scored in the at/above benchmark level was lower in math than reading (25-40% percent of students for reading; 11-23% percent of students for math). However, all grade spans showed an increase of 3-9 percentage points in both years, with higher increases for grades 3-5 (8 percentage points in 2022-23) than for middle and high school grades (Figure 8).

As in 2021-22, the share of students who scored in the intensive intervention level in Star Math decreased from fall to spring for the elementary and middle school grade spans but increased by 3 percentage points for the high school grade span. Additionally, compared to elementary and middle school grades where the largest percentage of students scored in intensive intervention, high school grades showed a different pattern, with the largest percentage of students scoring in the on watch for fall and spring in both years.

Figure 8. Performance levels for 2021-22 and 2022-23 math assessments, by grade span



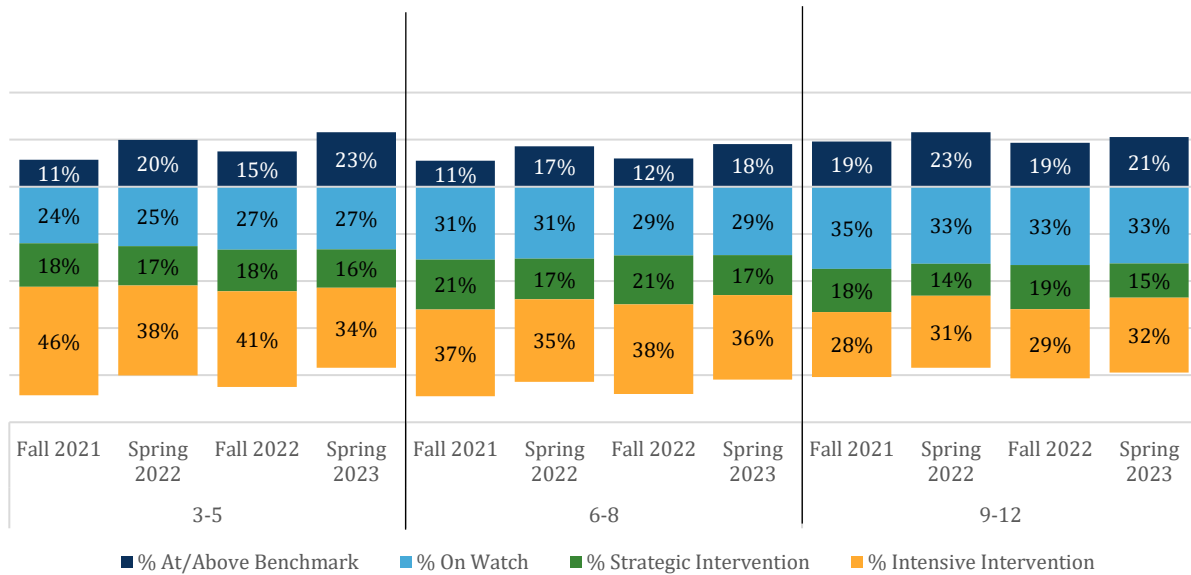**Note:** See Table B.2 in Appendix B for the numbers of students that correspond to the reported percentages for 2022-23.

*Performance Levels by Race/Ethnicity*

This section analyzes the percentage of students of different races/ethnicities who scored in the four performance levels in the fall and spring windows of the 2021-22 and 2022-23 school years. Keep in mind that the number of test takers varies greatly by race/ethnicity. For example, for any window, 1% of Black/African American students will correspond to a higher number of students than 1% of White or Asian students. When reading the analyses, the reader is advised to refer to the tables in Appendix tables B.3 (reading) and B.4 (math), which have the corresponding numbers of students for all windows in 2022-23.

The distribution of students across the four performance levels for reading in the fall and spring windows of the 2021-22 and 2022-23 school years shows different patterns for different racial/ethnic groups but similar fall-to-spring patterns for all groups in both years. Close to half of White and Asian students scored in the at/above benchmark level (45-54%), and the share of students who scored in this performance level in these two groups increased throughout the year in both years. Thirty-six percent of students in the Multi-Racial/Other category scored in the at/above benchmark performance level in the fall for both years; they showed a 4-percentage point increase from fall to spring in 2021-22 and a 7-percentage point increase in 2022-23. Black/African

American students who scored in the at/above benchmark level in reading increased by 6 percentage points from fall to spring in both years, and Hispanic/Latino students who scored in this level increased by 7 percentage points in 2021-22 and 9 percentage points in 2022-23. However, in both years, the share of students who scored in the at/above benchmark level in these two racial/ethnic groups was lower compared to other groups (19-26% for Black/African American and 17-26% for Hispanic/Latino students) (Figure 9).

Patterns for the intensive intervention level by race/ethnicity were the opposite of the patterns for the at/above benchmark level described above. For Asian students, the share of students scoring in the intensive intervention level decreased by 2 percentage points in 2021-22 and by 4 percentage points in 2022-23 from fall to spring, moving from 25% to 21% in 2022-23 and 23% to 21% in the previous year. White students who scored in the intensive intervention category decreased by 3 percentage points from fall to spring in both years, 25% to 22% in 2021-22 and 26% to 23% in 2022-23. For Hispanic/Latino students, the decrease in the share of students scoring in the intensive intervention level from fall to spring was 6 percentage points (54% to 48%) in 2021-22 and 8 percentage points (55% to 47%) in 2022-23. The share of Black/African American students who scored in the intensive intervention category decreased by 1 percentage point (47% to 46%) in 2021-22 and 3 percentage points (47% to 44%) in 2022-23 from fall to spring.

Figure 9. Performance levels for 2021-22 and 2022-23 reading assessments, by race/ethnicity



**Notes:** Native American/American Indian and Native Hawaiian/Pacific Islander students are included in the Multiracial/Other category because their share in SDP student body is low.
 See Table B.3 in Appendix B for the numbers of students that correspond to the reported percentages for 2022-23.
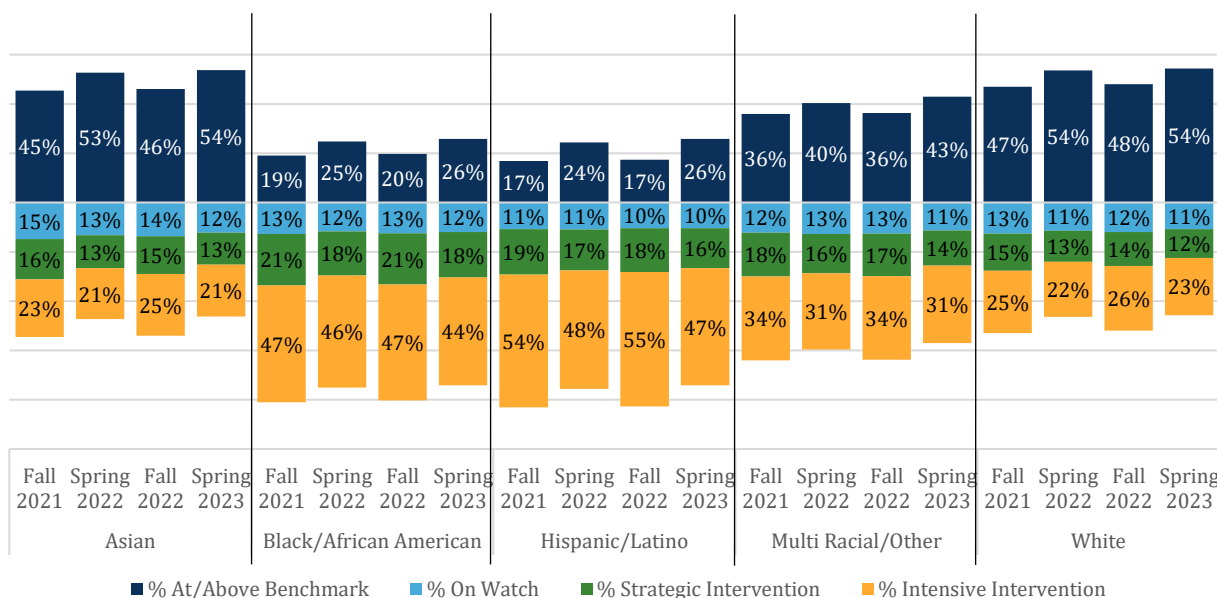
When looking at the percentage of students who scored in the at/above benchmark performance level in math, Asian students had the highest increase for both years, showing a 9-percentage point increase from 43% in the fall to 52% in the spring in 2021-22 and a 7-percentage point increase

from 45% in the fall to 52% in the spring in 2022-23 (Figure 10). White students, who performed similarly to Asian students in reading, had lower proficiency levels than Asian students in math; the percentage of White students who performed at/above benchmark increased from 28% to 37% (9 percentage points) in 2021-22 and from 32% to 39% (7 percentage points) in 2022-23. The percentage of students that scored in the at/above benchmark level improved by 3 to 5 points fall to spring in both years for Black/African American and Hispanic/Latino students, but the total share remained below 13%, and these two racial/ethnic student groups also had a larger share of students in the intensive intervention level (41-45%). The share of students in the intensive intervention level was 11-12% for Asian students and 19-20% for White students in these two years.

Figure 10. Performance levels for 2021-22 and 2022-23 grades 3-12 math assessments, by race/ethnicity
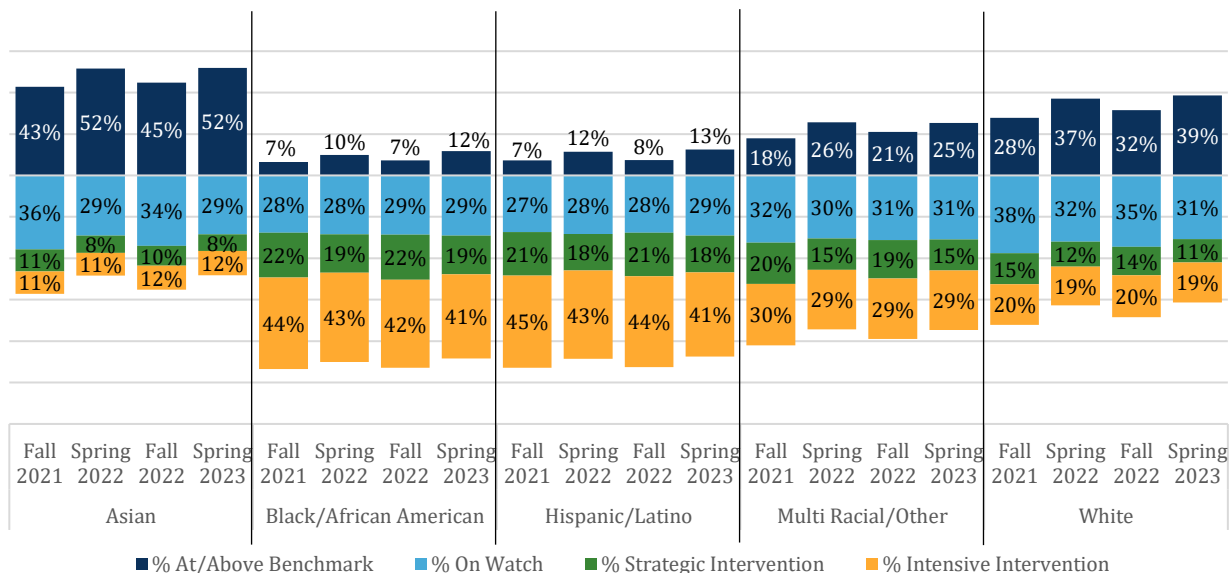


**Notes:** Native American/American Indian and Native Hawaiian/Pacific Islander students are included in the Multiracial/Other category because their share in SDP student body is low.
See Table B.4 in Appendix B for the numbers of students that correspond to the reported percentages for 2022-23.

# Growth

In this report, we describe fall-to-spring growth in the 2021-22 and 2022-23 school years by analyzing the differences in fall and spring average scaled score and average national percentile rank metrics as well as the median student growth percentile (SGP). It is important to look at different growth metrics together because reading and math growth is not linear across the K-12 grade span. If we look at scaled scores only, we observe higher rates of growth in the early elementary grades and lower rates by the end of high school. Analyzing changes in scaled scores in conjunction with normed metrics such as NPR and SGP provides a more complete picture.

Because students in different grades are expected to show different levels of fall-to-spring change in average scaled scores, it is more meaningful to compare the average scaled score change from 2021-22 to 2022-23 for each grade rather than comparing grade levels to each other. All grade levels had a higher fall-to-spring change in their average reading scaled score in 2022-23 compared to 2021-22, with the exception of grades 1, 2, and 9, whose 2022-23 changes in average scaled scores were slightly lower (fewer than 4 units) than in 2021-22 (Table 7). The only grade level that had a negative change in the fall-to-spring change in average scaled score in 2022-23 was grade 12, although the decline was smaller than in 2021-22.[14] The scaled score of the average kindergartener was 120.8 units higher in spring than the fall in 2021-22 and 130 units higher in 2022-23, which are both consistent with the expectations of steep growth in early grades. Among other grade levels who showed an increase in the fall-to-spring change in average scaled score, grades 8 and 10 were notable for improvements around 10 units.

Normed metrics are more useful for understanding growth because the expected progress is built into the metrics that compare the test takers' performance to their grade-level peers nationally. Fall-to-spring changes in average NPR for 2021-22 and 2022-23 cohorts were largely comparable across all grades. In 2021-22, the average kindergarten student performed better in reading than 19.9% of their peers in the fall and 41.5% of their peers in the spring, a 21.6 percentile increase. The average student in the 2022-23 kindergarten cohort performed better than 20.3% of their peers in the fall and 45.6% of their peers in the spring. All grade levels except 7th and 9th grades had a higher than average NPR in spring 2022-23 than spring 2021-22.

Student Growth Percentile (SGP) is a metric that describes a student's *growth* on the Star CAT relative to their academic peers nationwide. In this context, "academic peers" is defined as the group of grade-level students who received similar scaled scores on prior administrations of Star. In practice, an SGP of 50 indicates typical growth with respect to the student's grade-level peers with similar past scaled scores. The median kindergarten student registered fall-to-spring growth in reading that was higher than 57% of their peers in 2021-22 and 58% of their peers in 2022-23. In 2022-23, the median fall-to-spring SGP was lower than 50 for 1st and 3rd grades; these two

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[14] Although participation for 12th grade students was higher in 2022-23 than in 2021-22, it is typically much lower than other grades, and this likely had an impact on the performance and growth reported in this study. The timing of the spring testing window occurs after the standardized state assessments (PSSA or Keystone) and college applications are completed. Anecdotally, school leaders report that 12th grade students are not motivated to participate in or complete the assessment to the best of their ability.

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grades and 2nd grade showed a decline in median SGP compared to 2021-22. Notably, grades 8-12 showed improvements of 6 to 13 percentiles in the year-over-year median SGP comparison.

Table 7. Fall-to-spring growth metrics for reading in 202-22 and 2022-23, by grade

| Reading | Change in Average Scaled Score | | NPR* (NCE-converted NPR) | | | | Median SGP | |
|---|---|---|---|---|---|---|---|---|
| | Fall-to-Spring | | 21-22 | | 22-23 | | Fall-to-Spring | |
| | 21-22 | 22-23 | Fall | Spring | Fall | Spring | 21-22 | 22-23 |
| | | | | | | | | |
| Overall | - | - | 16.8 | 20.2 | 17.0 | 21.4 | 47 | 50 |
| | | | | | | | | |
| K | 120.8 | 130 | 19.9 | 41.5 | 20.3 | 45.6 | 57 | 58 |
| 1 | 97.9 | 95.3 | 17.6 | 29.7 | 23.4 | 34.1 | 48 | 42 |
| 2 | 71.5 | 70.9 | 11.3 | 19.9 | 13.3 | 21.8 | 53 | 50 |
| 3 | 42.2 | 46.6 | 16.3 | 19.4 | 16.1 | 19.6 | 46 | 44 |
| 4 | 32.4 | 36.9 | 15.7 | 18.2 | 15.9 | 19.9 | 48 | 50 |
| 5 | 24.1 | 27.5 | 16.4 | 17.9 | 16.0 | 18.4 | 47 | 54 |
| 6 | 19.2 | 23.2 | 15.2 | 15.8 | 15.1 | 17.1 | 49 | 54 |
| 7 | 10.7 | 13.3 | 16.3 | 16.1 | 14.9 | 15.8 | 49 | 50 |
| 8 | -2.3 | 8.9 | 16.4 | 14.0 | 15.2 | 14.9 | 41 | 47 |
| 9 | 9 | 5.8 | 16.7 | 17.1 | 15.7 | 15.9 | 41 | 50 |
| 10 | 2.6 | 13 | 19.0 | 19.9 | 17.2 | 20.3 | 40 | 53 |
| 11 | 1.5 | 4.1 | 20.4 | 20.6 | 22.7 | 23.1 | 37 | 50 |
| 12** | -33.4 | -22.6 | 19.9 | 13.0 | 18.8 | 14.0 | 32 | 43 |

* The average NPR metric presented here is based on the NCE. We calculated the average NCE for the students at each grade level for fall and spring, we converted those average NCE scores to average NPR scores and then calculated the difference between fall and spring average NPR scores derived from NCE scores.
** Fall-to-spring growth metrics for 12th grade must be interpreted within the context of the timing of the spring testing window and the participation rates for 12th grade students for the spring window. See footnote 15.

Growth in math is reported only for grades 3-12 because Star Math is not administered to many students below 3rd grade. Consistent with reading outcomes, the fall-to-spring change in average scaled score is positive for all grades except 12th grade for both years, and there are not drastic differences between the 2021-22 and 2022-23 cohort outcomes in average scale score changes. For elementary grades 3 to 5, the fall-to-spring change in average scaled score in 2022-23 ranges from 48 for 5th grade to 56.6 for 3rd grade.

In terms of fall-to-spring change in average NPR, as in 2021-22, all grade levels but 12th grade showed some gains in 2022-23; the average NPR in the spring was higher for grade 3-6 cohorts of

2022-23 than the same grades in 2021-22. Except for 7th graders, the median student at each grade level had a higher SGP in 2022-23 compared to 2021-22. In 2022-23 the median SGP was lower than the expected 50th percentile for grades 3, 9, and 12 only.

Table 8. Fall-to-spring growth metrics for grades 3-12 math in 2022-23, by grade

| Math | Change in Average Scaled Score | | NPR* (NCE-converted NPR) | | | | Median SGP** | |
|---|---|---|---|---|---|---|---|---|
| | Fall-to-Spring | | 21-22 | | 22-23 | | Fall-to-Spring | |
| | 21-22 | 22-23 | Fall | Spring | Fall | Spring | 21-22 | 22-23 |
| | | | | | | | | |
| Overall | - | - | 21.9 | 26.1 | 23.2 | 28.0 | 50.0 | 53.0 |
| | | | | | | | | |
| 3*** | 55.2 | 56.6 | 17.3 | 22.9 | 21.9 | 28.2 | 46.0 | 47.0 |
| 4 | 57.3 | 55.4 | 14.5 | 24.2 | 20.0 | 29.8 | 53.0 | 56.0 |
| 5 | 49.4 | 48.0 | 16.2 | 24.1 | 19.3 | 27.6 | 56.0 | 60.0 |
| 6 | 40.5 | 38.8 | 16.2 | 22.7 | 17.9 | 24.4 | 57.0 | 61.0 |
| 7 | 26.3 | 27.9 | 20.4 | 24.8 | 19.8 | 24.8 | 55.0 | 54.0 |
| 8 | 19.7 | 21.8 | 22.7 | 24.8 | 20.6 | 23.8 | 50.0 | 51.0 |
| 9 | 20.5 | 20.9 | 23.8 | 27.4 | 23.4 | 27.2 | 41.0 | 48.0 |
| 10 | 17.2 | 19.7 | 36.3 | 38.2 | 32.0 | 34.6 | 43.0 | 52.0 |
| 11 | 14.4 | 12.1 | 33.7 | 38.9 | 34.6 | 38.1 | 44.0 | 53.0 |
| 12**** | -14.7 | -12.6 | 32.5 | 26.5 | 30.2 | 24.7 | 37.0 | 41.0 |

* The average NPR metric presented here is based on the NCE. We have averaged over the NCE for the students at each grade level for fall and spring, we have converted those average NCE scores to average NPR scores and then calculated the difference between fall and spring.
** Any seeming inconsistencies between *median* SGP and *average* change in scaled score or NPR suggest outliers in the distribution.
*** The required CAT for K-3 students is SEL; students are transitioned to Star Math when they get a scaled score of 852 on the SEL, typically during 3rd grade.
**** Fall-to-spring growth metrics for 12th grade must be interpreted within the context of the timing of the spring testing window and the participation rates for 12th grade students for the spring window. See footnote 14.

# Conclusions

In the second year of implementation of the universal K-12 Star assessment program in SDP, more than 79% of eligible students overall were assessed in *both* reading and math in all three required 2022-23 testing windows (Table 4). Individual and aggregate results were disseminated to stakeholders through teacher instructional portals, leadership convenings and dashboards, Goals and Guardrails progress monitoring reports, and Star Assessments parent reports. This report is an end-of-year summary of Star participation and performance that the Office of Research and Evaluation has produced for the 2022-23 school year.

We found that participation in Star assessments remained high throughout the year, especially for grades K-8. High school students' participation rates were lower throughout the year and had a steeper decline in spring participation (Figures 1 and 2); however, participation rates for all grade bands and testing windows were higher in 2022-23 than 2021-22. Participation rates differed by race/ethnicity as well, although the patterns in participation rates across the four testing windows did not show divergence among groups in either 2021-22 or 2022-23 (Figure 3 and 4).

Overall, the percentage of students who scored in the at/above benchmark performance level in reading increased by 6.9 percentage points from fall to spring in 2022-23, and the percentage of students who scored in the intensive intervention performance level decreased by 4.1 percentage points. As was the case in 2021-22, much of the overall average improvements in performance levels from fall to spring can be attributed to the performance of students in elementary grades.

Similarly, the percentage of grades 3-12 students who scored in the at/above benchmark level in math increased by 5.4 percentage points from fall to spring, while the percentage of students who scored in the intensive intervention level decreased 1.8 percentage points. The improvements in performance were observed across all grade spans.

As in 2021-22, the percentage of students who scored in the at/above benchmark performance level increased for all racial/ethnic groups for both reading and math in 2022-23; however, the actual percentage differed markedly among different groups. A higher percentage of Asian and White students scored in the at/above benchmark level compared to Black/African American or Hispanic/Latino students.

# Appendices

## Appendix A: Participation

Table A.1. 2022-23 Star reading and math CAT participation by grade spans

| Grade Span | Assessment Cycle | Both Reading and Math | | | Reading | | | Math | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Number Eligible | Percent of Eligible who Participated | Number Participated | Number Eligible | Percent of Eligible who Participated | Number Participated | Number Eligible | Percent of Eligible who Participated | Number Participated |
| K-2 | Fall | 25,648 | 91.7% | 23,529 | 25,648 | 94.2% | 24,171 | 25,648 | - | - |
| | Winter 1 | 26,230 | 92.4% | 24,231 | 26,230 | 95.7% | 25,100 | 26,230 | - | - |
| | Winter 2* | 26,405 | 17.5% | 4,619 | 26,405 | 28.6% | 7,546 | 26,405 | - | - |
| | Spring | 26,429 | 91.8% | 24,269 | 26,429 | 95.1% | 25,135 | 26,429 | - | - |
| 3-5 | Fall | 26,356 | 91.6% | 24,155 | 25,837 | 94.6% | 24,436 | 26,356 | 95.6% | 25,185 |
| | Winter 1 | 26,571 | 91.6% | 24,335 | 25,766 | 95.5% | 24,603 | 26,571 | 96.0% | 25,513 |
| | Winter 2* | 26,655 | 26.0% | 6,937 | 25,728 | 30.6% | 7,885 | 26,655 | 38.4% | 10,246 |
| | Spring | 26,694 | 89.5% | 23,889 | 25,657 | 94.5% | 24,246 | 26,694 | 94.6% | 25,241 |
| 6-8 | Fall | 24,959 | 91.2% | 22,760 | 24,550 | 94.5% | 23,189 | 24,959 | 94.6% | 23,599 |
| | Winter 1 | 25,099 | 90.4% | 22,682 | 24,385 | 95.0% | 23,167 | 25,099 | 94.9% | 23,815 |
| | Winter 2* | 25,125 | 28.8% | 7,234 | 24,300 | 38.3% | 9,317 | 25,125 | 36.8% | 9,241 |
| | Spring | 25,136 | 84.6% | 21,267 | 24,236 | 91.0% | 22,046 | 25,136 | 91.2% | 22,920 |
| 9-12 | Fall | 36,106 | 72.3% | 26,092 | 35,531 | 83.9% | 29,795 | 36,106 | 79.2% | 28,592 |
| | Winter 1 | 35,652 | 67.8% | 24,174 | 34,698 | 80.1% | 27,779 | 35,652 | 76.9% | 27,419 |
| | Winter 2* | 35,212 | 12.5% | 4,415 | 34,122 | 19.2% | 6,546 | 35,212 | 19.7% | 6,944 |
| | Spring | 35,044 | 55.3% | 19,381 | 33,859 | 69.3% | 23,453 | 35,044 | 66.8% | 23,404 |
| Overall | Fall | 113,069 | 85.4% | 96,536 | 111,566 | 91.1% | 101,591 | 87,421 | 88.5% | 77,376 |
| | Winter 1 | 113,552 | 84.0% | 95,422 | 111,079 | 90.6% | 100,649 | 87,322 | 87.9% | 76,747 |
| | Winter 2* | 113,397 | 20.5% | 23,205 | 110,555 | 28.3% | 31,294 | 86,992 | 30.4% | 26,431 |
| | Spring | 113,303 | 78.4% | 88,806 | 110,181 | 86.1% | 94,880 | 86,874 | 82.4% | 71,565 |

Table A.2. 2022-23 participation by race/ethnicity

| Race/<br>Ethnicity | Assessment<br>Cycle | Both Reading and Math | | | Reading | | | Math | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Number<br>Eligible | Percent of<br>Eligible who<br>Participated | Number<br>Participated | Number<br>Eligible | Percent of<br>Eligible who<br>Participated | Number<br>Participated | Number<br>Eligible | Percent of<br>Eligible who<br>Participated | Number<br>Participated |
| **Asian** | *Fall* | 11,415 | 92.1% | 10,343 | 11,231 | 95.2% | 10,693 | 8,979 | 93.5% | 8,398 |
| | *Winter 1* | 11,555 | 90.5% | 10,138 | 11,199 | 94.4% | 10,567 | 9,085 | 92.3% | 8,388 |
| | *Winter 2\** | 11,603 | 19.7% | 2,210 | 11,190 | 28.0% | 3,137 | 9,114 | 30.1% | 2,739 |
| | *Spring* | 11,613 | 85.6% | 9,534 | 11,133 | 89.6% | 9,980 | 9,143 | 88.3% | 8,076 |
| **Black/<br>African<br>American** | *Fall* | 50,358 | 85.5% | 42,982 | 50,276 | 90.3% | 45,376 | 40,307 | 87.6% | 35,290 |
| | *Winter 1* | 50,288 | 84.7% | 42,491 | 50,151 | 89.6% | 44,957 | 39,985 | 86.7% | 34,686 |
| | *Winter 2\** | 50,100 | 23.0% | 11,493 | 49,937 | 29.8% | 14,857 | 39,733 | 31.3% | 12,441 |
| | *Spring* | 50,025 | 78.4% | 39,052 | 49,816 | 84.5% | 42,103 | 39,617 | 80.6% | 31,949 |
| **Hispanic/<br>Latino** | *Fall* | 29,652 | 83.9% | 24,218 | 28,873 | 89.2% | 25,748 | 21,982 | 86.5% | 19,023 |
| | *Winter 1* | 29,975 | 84.4% | 24,217 | 28,708 | 89.5% | 25,705 | 22,091 | 86.8% | 19,174 |
| | *Winter 2\** | 29,981 | 18.0% | 5,138 | 28,504 | 25.6% | 7,299 | 22,045 | 27.4% | 6,038 |
| | *Spring* | 30,003 | 80.5% | 22,882 | 28,425 | 86.0% | 24,451 | 22,044 | 81.6% | 17,979 |
| **Multiracial/<br>Other** | *Fall* | 4,905 | 85.7% | 4,205 | 4,886 | 90.5% | 4,420 | 3,861 | 87.0% | 3,361 |
| | *Winter 1* | 4,839 | 84.7% | 4,100 | 4,805 | 89.8% | 4,315 | 3,811 | 86.7% | 3,305 |
| | *Winter 2\** | 4,817 | 19.7% | 949 | 4,779 | 26.3% | 1,258 | 3,785 | 29.2% | 1,104 |
| | *Spring* | 4,811 | 78.5% | 3,776 | 4,769 | 84.4% | 4,024 | 3,776 | 80.5% | 3,040 |
| **White** | *Fall* | 16,739 | 90.7% | 14,788 | 16,300 | 94.2% | 15,354 | 12,292 | 92.0% | 11,304 |
| | *Winter 1* | 16,895 | 89.3% | 14,476 | 16,216 | 93.1% | 15,105 | 12,350 | 90.6% | 11,194 |
| | *Winter 2\** | 16,896 | 21.2% | 3,415 | 16,145 | 29.4% | 4,743 | 12,315 | 33.4% | 4,109 |
| | *Spring* | 16,851 | 84.6% | 13,562 | 16,038 | 89.3% | 14,322 | 12,294 | 85.6% | 10,521 |

# Appendix B: Performance

Table B.1. 2022-23 performance levels in reading, by grade spans

| Grade Span | Assessment Cycle | # With Scores in Required CAT | % At/Above Benchmark | # At/Above Benchmark | % On Watch | # On Watch | % Strategic Intervention | # Strategic Intervention | % Intensive Intervention | # Intensive Intervention |
|---|---|---|---|---|---|---|---|---|---|---|
| **K-2** | *Fall* | 24,171 | 27.8% | 6,713 | 10.8% | 2,606 | 18.9% | 4,575 | 42.5% | 10,277 |
| | *Winter 1* | 25,100 | 39.7% | 9,967 | 11.1% | 2,778 | 16.0% | 4,012 | 33.2% | 8,339 |
| | *Winter 2** | 7,546 | 42.9% | 3,236 | 13.1% | 987 | 13.5% | 1,020 | 30.5% | 2,301 |
| | *Spring* | 25,135 | 45.4% | 11,421 | 10.7% | 2,698 | 13.8% | 3,471 | 30.0% | 7,543 |
| **3-5** | *Fall* | 24,446 | 27.3% | 6,666 | 11.3% | 2,768 | 16.4% | 4,007 | 45.0% | 11,005 |
| | *Winter 1* | 24,630 | 31.8% | 7,826 | 12.4% | 3,050 | 16.4% | 4,029 | 39.5% | 9,725 |
| | *Winter 2** | 7,909 | 33.2% | 2,622 | 11.7% | 927 | 16.5% | 1,307 | 38.6% | 3,053 |
| | *Spring* | 24,279 | 33.1% | 8,047 | 11.1% | 2,693 | 15.8% | 3,843 | 39.9% | 9,696 |
| **6-8** | *Fall* | 23,285 | 24.9% | 5,809 | 12.1% | 2,824 | 18.4% | 4,287 | 44.5% | 10,365 |
| | *Winter 1* | 23,318 | 26.9% | 6,272 | 12.6% | 2,932 | 18.5% | 4,314 | 42.0% | 9,800 |
| | *Winter 2** | 9,356 | 29.7% | 2,778 | 11.9% | 1,114 | 16.4% | 1,534 | 42.0% | 3,930 |
| | *Spring* | 22,237 | 27.2% | 6,045 | 11.5% | 2,567 | 17.7% | 3,932 | 43.6% | 9,693 |
| **9-12** | *Fall* | 30,906 | 27.1% | 8,382 | 13.5% | 4,161 | 19.1% | 5,910 | 40.3% | 12,453 |
| | *Winter 1* | 28,354 | 28.0% | 7,942 | 12.7% | 3,607 | 17.7% | 5,018 | 41.6% | 11,787 |
| | *Winter 2** | 6,851 | 23.5% | 1,608 | 13.6% | 935 | 19.7% | 1,351 | 43.2% | 2,957 |
| | *Spring* | 24,565 | 28.1% | 6,893 | 12.3% | 3,025 | 17.4% | 4,264 | 42.3% | 10,383 |

Table B.2. 2022-23 performance levels in 3-12 math, by grade spans

| Grade Span | Assessment Cycle | # With Scores in Required CAT | % At/Above Benchmark | # At/Above Benchmark | % On Watch | # On Watch | % Strategic Intervention | # Strategic Intervention | % Intensive Intervention | # Intensive Intervention |
|---|---|---|---|---|---|---|---|---|---|---|
| **3-5** | *Fall* | 25,194 | 15.0% | 3,789 | 26.7% | 6,727 | 17.6% | 4,441 | 40.6% | 10,237 |
| | *Winter 1* | 25,539 | 20.1% | 5,146 | 28.6% | 7,307 | 17.1% | 4,361 | 34.2% | 8,725 |
| | *Winter 2\** | 10,270 | 21.7% | 2,225 | 26.4% | 2,712 | 16.4% | 1,683 | 35.5% | 3,650 |
| | *Spring* | 25,272 | 23.1% | 5,844 | 26.5% | 6,703 | 16.3% | 4,131 | 34.0% | 8,594 |
| **6-8** | *Fall* | 23,694 | 12.0% | 2,832 | 29.1% | 6,906 | 20.8% | 4,931 | 38.1% | 9,025 |
| | *Winter 1* | 23,968 | 14.4% | 3,456 | 31.1% | 7,454 | 19.4% | 4,659 | 35.0% | 8,399 |
| | *Winter 2\** | 9,284 | 20.0% | 1,858 | 30.7% | 2,850 | 17.2% | 1,593 | 32.1% | 2,983 |
| | *Spring* | 23,116 | 18.2% | 4,201 | 29.0% | 6,710 | 17.0% | 3,934 | 35.8% | 8,271 |
| **9-12** | *Fall* | 29,359 | 18.7% | 5,479 | 33.3% | 9,769 | 18.7% | 5,502 | 29.3% | 8,609 |
| | *Winter 1* | 27,682 | 19.6% | 5,430 | 33.0% | 9,140 | 16.5% | 4,556 | 30.9% | 8,556 |
| | *Winter 2\** | 7,121 | 19.8% | 1,412 | 36.2% | 2,577 | 15.9% | 1,132 | 28.1% | 2,000 |
| | *Spring* | 24,130 | 21.2% | 5,106 | 32.6% | 7,857 | 14.6% | 3,514 | 31.7% | 7,653 |

Table B.3. 2022-23 performance levels in reading, by race/ethnicity

| Race/Ethnicity | Assessment Cycle | # With Scores in Required CAT | % At/Above Benchmark | # At/Above Benchmark | % On Watch | # On Watch | % Strategic Intervention | # Strategic Intervention | % Intensive Intervention | # Intensive Intervention |
|---|---|---|---|---|---|---|---|---|---|---|
| **Asian** | Fall | 10,697 | 46.0% | 4,923 | 13.7% | 1,466 | 15.3% | 1,639 | 25.0% | 2,669 |
| | Winter 1 | 10,579 | 51.9% | 5,489 | 12.9% | 1,368 | 13.6% | 1,442 | 21.6% | 2,280 |
| | Winter 2* | 3,142 | 52.1% | 1,638 | 12.1% | 381 | 12.8% | 403 | 22.9% | 720 |
| | Spring | 9,991 | 53.7% | 5,361 | 12.3% | 1,231 | 12.9% | 1,289 | 21.1% | 2,110 |
| **Black/African American** | Fall | 46,235 | 19.7% | 9,110 | 12.5% | 5,787 | 20.8% | 9,621 | 47.0% | 21,717 |
| | Winter 1 | 45,526 | 24.2% | 10,995 | 12.8% | 5,809 | 19.6% | 8,930 | 43.5% | 19,792 |
| | Winter 2* | 15,115 | 24.5% | 3,707 | 13.3% | 2,010 | 19.0% | 2,868 | 43.2% | 6,530 |
| | Spring | 43,069 | 25.8% | 11,121 | 12.0% | 5,162 | 18.4% | 7,918 | 43.8% | 18,868 |
| **Hispanic/ Latino** | Fall | 26,017 | 17.4% | 4,533 | 10.4% | 2,693 | 17.8% | 4,620 | 54.5% | 14,171 |
| | Winter 1 | 25,824 | 22.1% | 5,720 | 11.4% | 2,948 | 17.2% | 4,438 | 49.2% | 12,714 |
| | Winter 2* | 7,380 | 25.3% | 1,865 | 12.1% | 892 | 15.8% | 1,164 | 46.8% | 3,457 |
| | Spring | 24,724 | 25.8% | 6,375 | 10.4% | 2,582 | 16.3% | 4,040 | 47.4% | 11,725 |
| **Multi-Racial/Other** | Fall | 4,448 | 36.3% | 1,613 | 12.6% | 561 | 17.3% | 768 | 33.9% | 1,506 |
| | Winter 1 | 4,344 | 40.7% | 1,767 | 12.3% | 536 | 15.7% | 681 | 31.3% | 1,360 |
| | Winter 2* | 1,266 | 41.4% | 524 | 10.7% | 135 | 15.0% | 190 | 32.9% | 417 |
| | Spring | 4,055 | 43.0% | 1,742 | 11.3% | 457 | 14.3% | 579 | 31.5% | 1,277 |
| **White** | Fall | 15,411 | 48.0% | 7,391 | 12.0% | 1,852 | 13.8% | 2,131 | 26.2% | 4,037 |
| | Winter 1 | 15,129 | 53.1% | 8,036 | 11.3% | 1,706 | 12.4% | 1,882 | 23.2% | 3,505 |
| | Winter 2* | 4,759 | 52.7% | 2,510 | 11.5% | 545 | 12.3% | 587 | 23.5% | 1,117 |
| | Spring | 14,377 | 54.3% | 7,807 | 10.8% | 1,551 | 11.7% | 1,684 | 23.2% | 3,335 |

Table B.4. 2022-23 performance levels in 3-12 math, by race/ethnicity

| Race/Ethnicity | Assessment Cycle | # With Scores in Required CAT | % At/Above Benchmark | # At/Above Benchmark | % On Watch | # On Watch | % Strategic Intervention | # Strategic Intervention | % Intensive Intervention | # Intensive Intervention |
|---|---|---|---|---|---|---|---|---|---|---|
| **Asian** | Fall | 8,402 | 44.8% | 3,767 | 34.0% | 2,855 | 9.6% | 807 | 11.6% | 973 |
| | Winter 1 | 8,396 | 49.3% | 4,139 | 31.6% | 2,651 | 8.2% | 692 | 10.9% | 914 |
| | Winter 2* | 2,743 | 48.0% | 1,318 | 30.1% | 827 | 8.9% | 243 | 12.9% | 355 |
| | Spring | 8,087 | 51.9% | 4,195 | 28.5% | 2,301 | 8.0% | 646 | 11.7% | 945 |
| **Black/African American** | Fall | 36,098 | 7.2% | 2,615 | 28.6% | 10,322 | 21.8% | 7,869 | 42.4% | 15,292 |
| | Winter 1 | 35,242 | 9.2% | 3,237 | 30.6% | 10,781 | 20.6% | 7,249 | 39.7% | 13,975 |
| | Winter 2* | 12,709 | 11.9% | 1,508 | 31.4% | 3,986 | 18.8% | 2,384 | 38.0% | 4,831 |
| | Spring | 32,884 | 11.7% | 3,844 | 29.1% | 9,567 | 18.6% | 6,102 | 40.7% | 13,371 |
| **Hispanic/ Latino** | Fall | 19,002 | 7.5% | 1,427 | 27.6% | 5,246 | 21.1% | 4,013 | 43.8% | 8,316 |
| | Winter 1 | 19,006 | 9.8% | 1,858 | 29.8% | 5,673 | 19.4% | 3,694 | 40.9% | 7,781 |
| | Winter 2* | 5,989 | 12.3% | 736 | 28.6% | 1,711 | 19.0% | 1,136 | 40.2% | 2,406 |
| | Spring | 17,918 | 12.6% | 2,249 | 29.0% | 5,204 | 17.8% | 3,181 | 40.7% | 7,284 |
| **Multi Racial/Other** | Fall | 3,390 | 21.1% | 714 | 31.2% | 1,056 | 18.6% | 632 | 29.1% | 988 |
| | Winter 1 | 3,332 | 23.9% | 797 | 32.8% | 1,093 | 15.6% | 520 | 27.7% | 922 |
| | Winter 2* | 1,113 | 28.8% | 320 | 30.3% | 337 | 17.1% | 190 | 23.9% | 266 |
| | Spring | 3,062 | 25.3% | 775 | 30.8% | 944 | 15.1% | 463 | 28.7% | 880 |
| **White** | Fall | 11,355 | 31.5% | 3,577 | 34.5% | 3,923 | 13.7% | 1,553 | 20.3% | 2,302 |
| | Winter 1 | 11,213 | 35.7% | 4,001 | 33.0% | 3,703 | 12.7% | 1,421 | 18.6% | 2,088 |
| | Winter 2* | 4,121 | 39.1% | 1,613 | 31.0% | 1,278 | 11.0% | 455 | 18.8% | 775 |
| | Spring | 10,567 | 38.7% | 4,088 | 30.8% | 3,254 | 11.2% | 1,187 | 19.3% | 2,038 |