Ebru Erdem, Ph.D.,
Director, Research, Policy,
and Practice

Joy Lesnick, Ph.D.,
Deputy Chief,
Research, Evaluation, and
Academic Partnerships

Office of Research and
Evaluation

THE SCHOOL DISTRICT OF PHILADELPHIA

End of Year Analysis of Participation and Performance on the Star Assessments at the School District of Philadelphia: 2021-22

Key Findings

In the 2021-22 school year, the School District of Philadelphia (SDP) adopted 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 the four Star testing windows (Fall, Winter 1, Winter 2, and Spring) in 2021-22, with details on performance of different student groups.

- **Participation:** Although there was a decline in the Spring testing window, participation in Star assessments remained above 80% for grades K-8. Participation was lower for high school grades.
- **Performance:** The percentage of students who scored in the at/above benchmark performance level increased across the four testing windows, and the percentage of students in the intensive intervention level decreased in both reading and math in the first three testing windows. The increase in the percentage of students scoring in the at/above benchmark performance level was observed for all racial/ethnic groups.
- **Growth:** Student growth varied by grade level. Students in grades K-5 registered higher fall-to-spring growth compared to students in grades 6-12 in both reading and math.

Contents

Star Assessment Administration in 2021-22 in SDP

The 2021-22 school year was the first 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. This was a shift from administering both the Star and aimswebPlus assessments during the 2020-21 school year,[1] and took place as students returned to in-person learning after more than a year of virtual and/or hybrid learning due to Covid-19. At the same time, SDP started implementing a systematic process to monitor progress toward the Goals and Guardrails adopted by the Board of Education in 2020-21. As Star test results from each testing window 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 as measured by the four windows of 2021-22 Star assessments, and includes data reviewed by SDP teams throughout the year.

During the 2021-22 school year, the Star suite of tests were administered to all grade levels, K-12, in four testing windows: Fall, Winter 1, Winter 2, 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 that 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]

---

[1] SDP had been using aimsweb Reading as a required early literacy assessment for K-3 since spring 2014-15 and switched to aimswebPlus in the 2018-19 school year. Starting in fall 2019-20, aimswebPlus Reading became required for K-5 and aimswebPlus Math became available but was not a required assessment for grades K-5 until 2020-21. Star Reading and Math were introduced in grades 6-10 during the 2019-20 school year and became required for grades 6-12 in 2020-21. Starting in 2021-22, Star assessments were administered to all grades, as described in Table 2 below.

[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 2021-22 school year

Testing Window	Administration Dates
Fall	September 8 - October 8
Winter 1	December 1 - December 23
Winter 2	March 7 - March 31
Spring	May 16 - June 14

Source: 2021-22 SDP Assessments Calendar.

Note: Some schools were granted extensions to the official window, and tests taken during the extensions are included in this report. Note that the Winter 1 window coincided with a surge in Covid-19 due to the Omicron variant, which led to student absences/quarantine learning and schools reverting to virtual learning due to Covid-induced staffing constraints.

Table 2. Star suite of tests administered at SDP by grade

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		-	-
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 the reference document linked in footnote 2, Table 1.

Methods

Research Questions

Three main questions guided the analyses in this report:

1. What were the participation rates for the Star tests throughout the 2021-22 school year?
   a. Did participation rates differ by grade bands?
   b. Did participation rates differ by race/ethnicity?

2. What were the patterns in distribution of students across performance levels throughout the 2021-22 school year?
   a. How did performance levels on Star tests differ by grade bands?
   b. 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 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 it is fed to the Academic Screeners Qlik application, where District and school leadership can monitor student participation and performance in real time. The information in this application is aggregate but interactively drillable to network, school, and grade levels; in addition, disaggregation and filtering by student and/or school characteristics is possible. 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.

---

[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.

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 the English Learner (EL) and Dual Language Learner (DLL) exceptions do not apply to them.[4] Only results taken within the official testing window are counted.[5]

Performance Level is the level a student places in based on the National Percentile Rank (NPR) of their scaled score.[6] 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.

---

[4] 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.
DLLs are students who receive Spanish and English bilingual instruction in the six dual language schools (https://www.philasd.org/multilingual/dl/). 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.
[5] 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, Star Math CBM participation is used for participation in math tests until students start taking Star Math.
[6] 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 helps us understand relative performance while taking into account expected student growth.

Table 3. Renaissance Star performance levels used in SDP, 2021-22

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

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.[7] Star Unified scale ranges from 200 to 1100 for SEL, and 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.

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.[8]

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.[9]

All data presented below were exported from the Academic Screeners Qlik application **on June 16, 2022**, after the spring window closed.[10]

---

[7] 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

[8] 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

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

[10] Data in the Academic Screeners application was refreshed in mid-July, and figures in the application diverged from what is reported here because of retrospective enrollment adjustments and addition of new records. 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.

Findings

Participation

SDP tracks the number and percentage of students participating in reading and math assessments separately and 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.

The participation rate for students who took both the reading and math assessments fluctuated between 76% and 81.5% in the first three testing windows of 2021-22, and it dipped to 70.6% in the spring (Table 4). When taken separately, reading participation rates and math participation rates were higher than participation in both reading and math, and reading participation was 1-3 percentage points higher than math participation. Spring participation was the lowest among the four testing windows for reading and math.

Table 4. Overall participation in Star Reading and Star Math in the four 2021-22 testing windows

Test	Participation Metric	Fall	Winter 1	Winter 2	Spring
Both Reading and Math	Number Eligible for Participation	117,623	117,725	116,777	116,538
	Percent of Eligible who Participated	81.5%	76.0%	79.6%	70.6%
	Number Participated	94,839	88,036	90,894	80,258
Reading	Number Eligible for Participation	116,353	115,763	114,144	113,747
	Percent of Eligible who Participated	87.2%	83.8%	85.9%	77.4%
	Number Participated	101,448	96,980	98,030	88,038
Math	Number Eligible for Participation	117,623	117,725	116,777	116,538
	Percent of Eligible who Participated	85.4%	80.8%	83.7%	76.4%
	Number Participated	100,475	95,091	97,752	89,091

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 tests for early numeracy skills in addition to literacy for grades K-3 but counts towards reading participation. For Math participation of K-3 students, participation in Curriculum Based Measures is used. 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 5 for business rules related to EL and DLL eligibility.

Participation by Grade Span

We examined the grade spans of K-3, 4-5, 6-8, 9-10, and 11-12 when analyzing 2021-22 Star participation data. Participation in both reading and math assessments together was similar across the K-3, 4-5, and 6-8 grade spans, between 84-92% through the winter 2 window. However, participation of grade 6-8 students in spring was lower (83%) compared to 91% for 4-5 and 88% for K-3 (Figure 1).

Participation in both reading and math assessments together was markedly lower for high school grades 9-12 compared to K-8 participation. In addition, although participation for the 9-10 and 11-12 grade bands followed a similar pattern through the four windows, participation for grades 11-12 was at least 10 percentage points lower than the participation rate for grades 9-10 throughout the year. The winter 2 to spring participation decline for grades 6-8 was observed more starkly for both high school grade spans: participation of students in grades 9-10 declined 21 percentage points (from 64% to 43%), and participation of students in grades 11-12 declined 21 percentage points (from 49% to 28%).

Consistent with overall numbers, participation in reading and participation in math were higher than participation in both reading and math (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 older grade spans than for younger grade spans, and in all grade spans the difference in the percentage who took only one test compared to both tests was largest in the spring testing window.

---

[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 *both* Star Reading and Math assessments throughout 2021-22, by grade bands
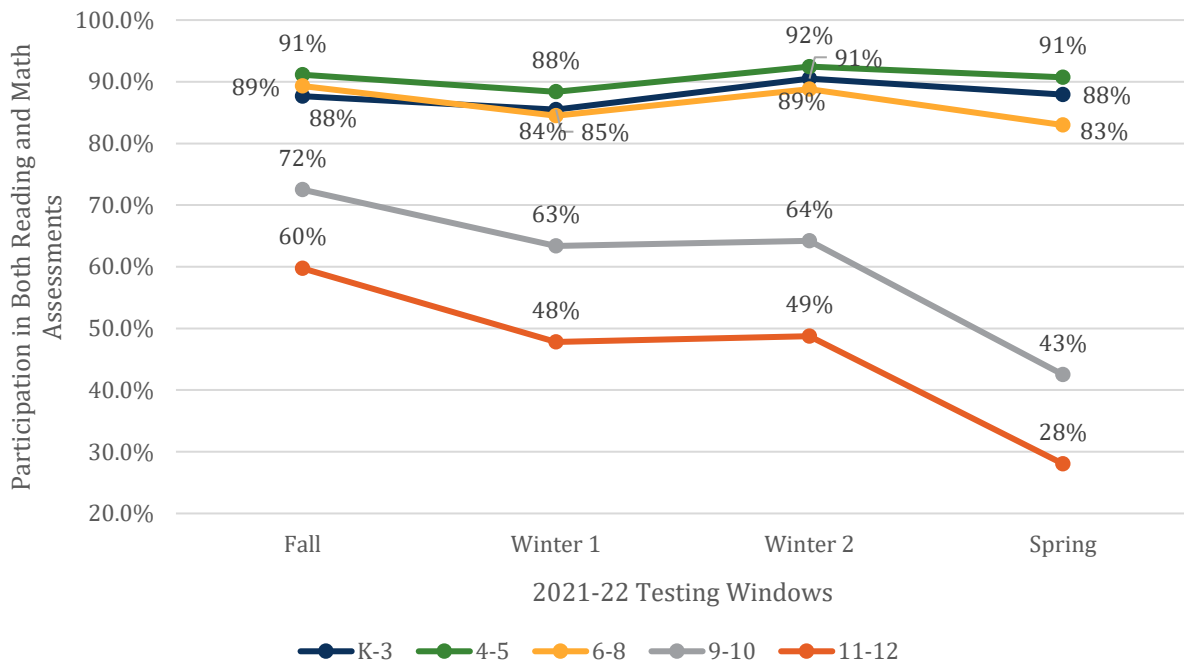
Participation by Race/Ethnicity

Participation rates for different racial/ethnic student groups repeated the overall pattern of fluctuation in the first three windows and a decline in the spring. However, participation rate levels varied by race/ethnicity. Asian students had the highest levels of participation, ranging from 90% (fall) to 79% (spring). White students also had high participation rates, ranging from 88% (fall) to 78% (spring). Participation rates for Hispanic/Latino and Black/African American students were lower than 80% throughout the year, with the lowest being 71% for spring participation of Hispanic/Latino students and 67% for spring participation of Black/African American students.

Figure 2. Participation in *both* Star Reading and Math assessments throughout 2021-22, by race/ethnicity
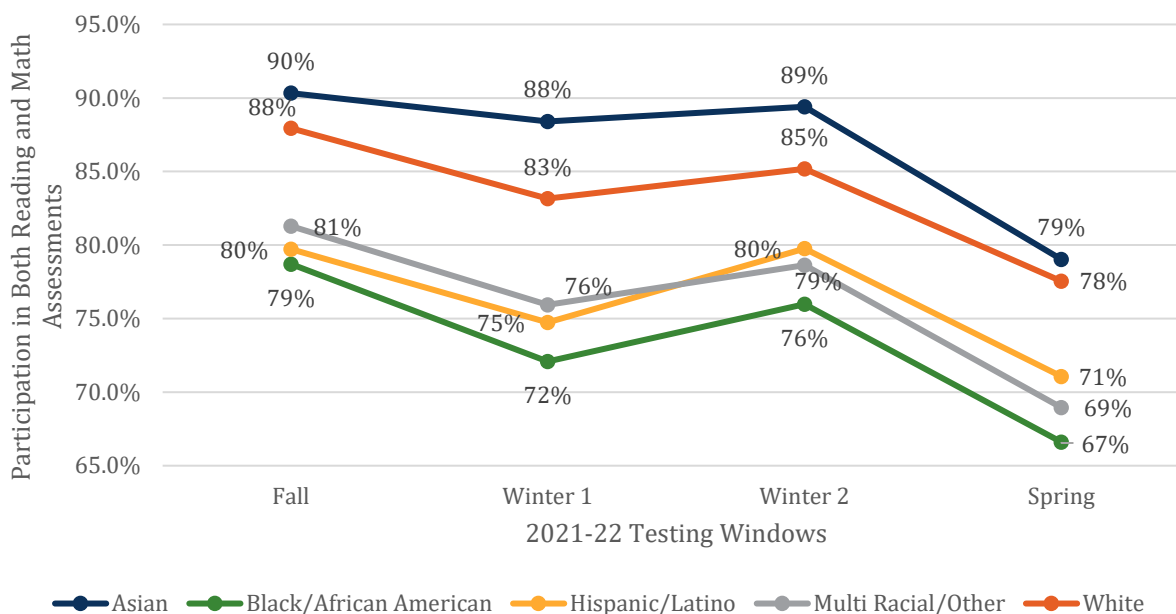
Performance

Performance Levels

Although the share of students that placed in the four performance levels in reading did not change dramatically through the course of the 2021-22 school year, there were small-scale changes. On the positive side, the percentage of students that scored in the at/above benchmark level increased steadily from 26.2% in the fall to 32.7% in the spring. While the highest percentage of students scored in the intensive intervention level, this percentage declined from 42.5% in the fall to 39.3% in the spring.

Table 5. Overall K-12 performance levels in Reading, 2021-22

Performance Level	Reading Assessment Participation	Fall	Winter 1	Winter 2	Spring
Overall Total	Number of Students with Scores	101,362	96,900	97,912	87,804
At/Above Benchmark (40-99th percentile)	Percent of Students with Scores	26.2%	29.2%	31.4%	32.7%
	Number of Students	26,586	28,270	30,725	28,740
On Watch (25-39th percentile)	Percent of Students with Scores	12.4%	12.3%	12.7%	11.7%
	Number of Students	12,617	11,902	12,407	10,282
Strategic Intervention (10-24th percentile)	Percent of Students with Scores	18.9%	18.0%	17.4%	16.2%
	Number of Students	19,112	17,423	17,004	14,248
Intensive Intervention (<10th percentile)	Percent of Students with Scores	42.5%	40.6%	38.6%	39.3%
	Number of Students	43,047	39,305	37,776	34,534

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 14.1% to 20.3% from fall to spring.[12] The percentage of students who placed in intensive intervention level decreased from 36.4% to 32.9% from fall to winter 1, remained at that level in winter 2, and increased to 34.5% in the spring.

Table 6. Overall Grades 2-12* performance level in Math, 2021-22

Performance Level	Grades 2-12 Math Assessment Participation	Fall	Winter 1	Winter 2	Spring
Overall Total	Number of Students with Scores	80,784	76,003	77,951	70,140
At/Above Benchmark** (70-99th percentile)	Percent of Students with Scores	14.1%	17.7%	19.0%	20.3%
	Number of Students	11,393	13,459	14,844	14,248
On Watch (25-69th percentile)	Percent of Students with Scores	30.0%	31.4%	31.3%	29.3%
	Number of Students	24,211	23,846	24,403	20,578
Strategic Intervention (10-24th percentile)	Percent of Students with Scores	19.5%	18.0%	16.8%	15.9%
	Number of Students	15,776	13,659	13,070	11,150
Intensive Intervention (<10th percentile)	Percent of Students with Scores	36.4%	32.9%	32.9%	34.5%
	Number of Students	29,404	25,039	25,634	24,164

* 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. Because there were a significant number of 2nd graders who took Star Math, they were included in the performance analyses in this report although Star Math is not required for this grade level.
** Note that the NPR cut point for the at/above benchmark level for math is 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.

---

[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 towards 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; however, a high number of 2nd grade students have Star Math results. We report Star Math-based math performance for grades 2-12 in this report.

Another way to look at fall-to-spring changes in performance at the student level is a flowchart that shows the fall outcomes for students who placed in the four performance levels or did not get tested in spring. The flowchart brings more nuance to the information reported in Table 5, showing the movements within and between levels from the beginning to the end of the school year.

The flowchart for reading (Figure 3) shows that most of the students who scored 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 2,450 of 11,968 students who scored in the on watch level stayed in this performance level in the spring. It is also notable that, for students not tested in the spring, many were not tested in the fall either (7,709 out of 25,942) or started the fall in intensive intervention (7,892 out of 25,942).

Figure 3. Performance levels in reading in fall and spring 2021-22 for grades K-12
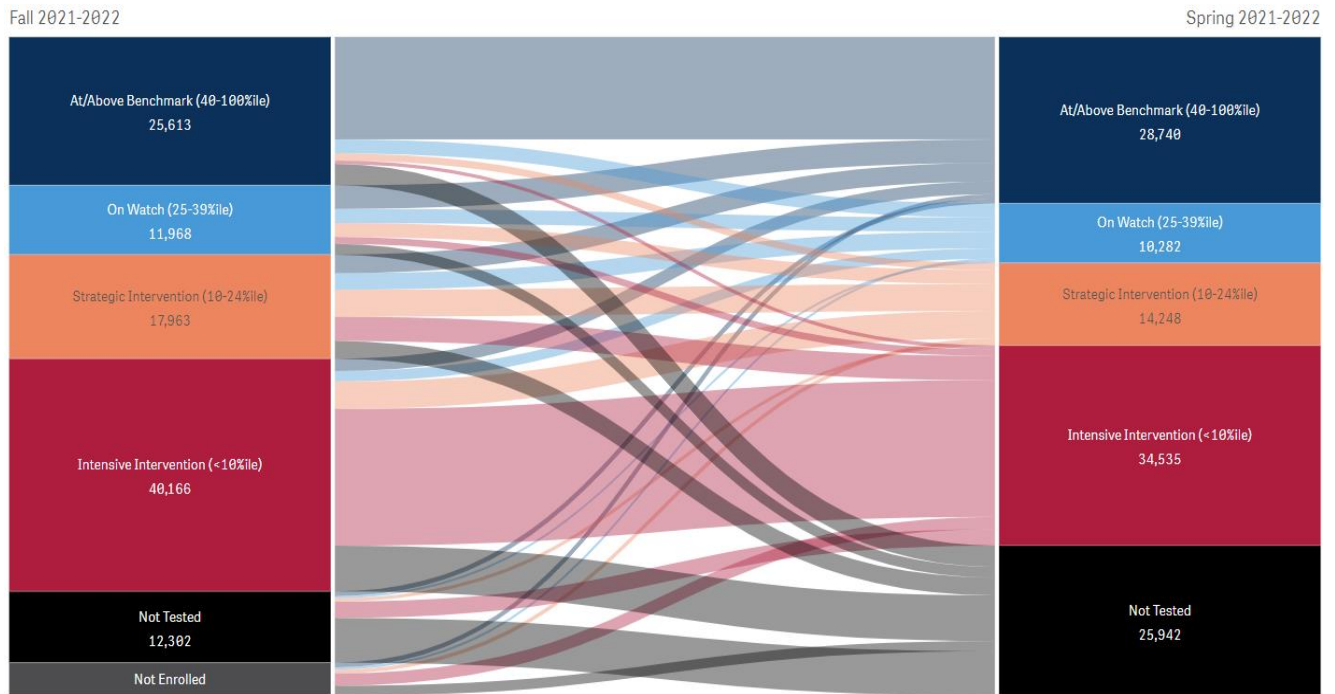
Note: The number of students for the fall window in the flowchart do not match the numbers reported in Table 5 because students who left the district between the fall and spring windows are excluded.

The flowchart for fall-to-spring performance levels in math (Figure 4) 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 (7,706) moved into on watch or intensive intervention than stayed in strategic intervention (3,478). Also notable is that 4,484 out of 23,034 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 4. Performance levels in math in fall and spring 2021-22, for grades 2-12

Note: The number 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.

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 four 2021-22 testing windows for different grade spans and racial/ethnic groups for both reading and math.

---

[13] In the 2021-22 school year, 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 grade-span breakdown of performance level data for reading shows that although all grade spans started the year with 25-29% of students scoring in the at/above benchmark levels, the figures diverged by spring. The share of students in the at/above benchmark level increased to 40% (a 14-percentage point increase) for K-3, while it declined from 29% to 27% for students in grades 11-12. Other grade spans showed increases in the 1-5 percentage point range.

The share of students in the intensive intervention level follows a converse pattern compared to at/above benchmark. Students in grades K-3 that scored in the intensive intervention performance level showed an 11-percentage point decrease from 46% in the fall to 35% in the spring. The decrease for students in grades 4-5 was more gradual, declining 2 percentage points from 43% to 41% between fall and spring, although it was as low as 38% in winter 2. The percentage of 11th and 12th-grade students who scored in intensive intervention increased from 37% to 43% (Figure 5).

Figure 5. Performance levels for 2021-22 reading assessments, by grade span
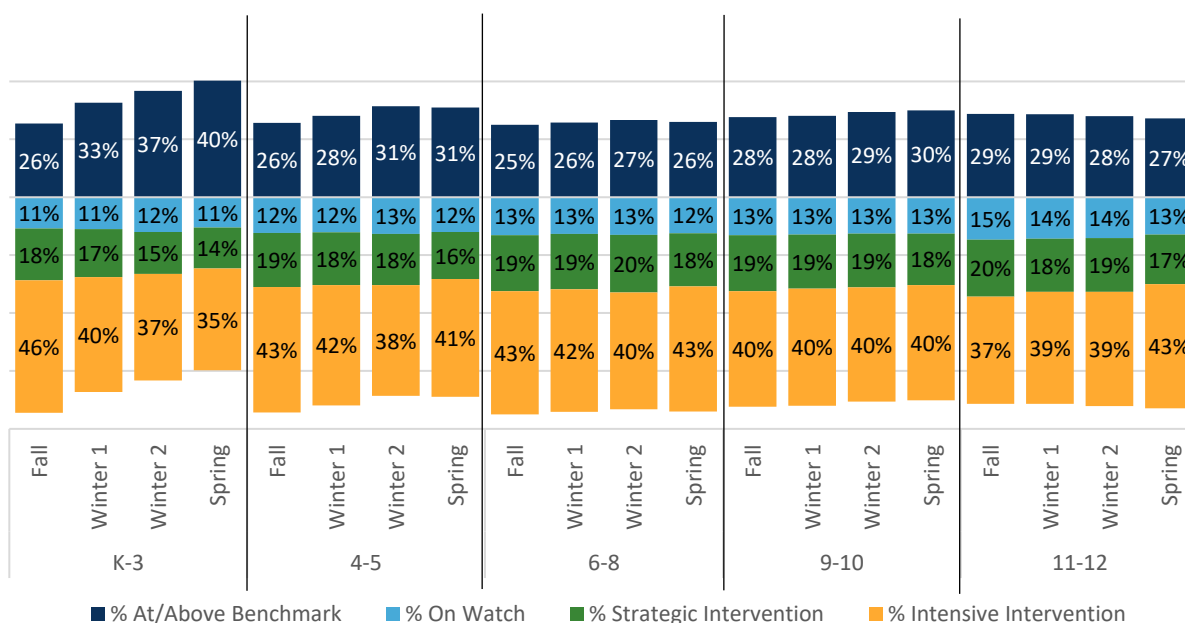
Note: See Table B.1 in Appendix B for the numbers of students that correspond to the reported percentages

Patterns in the share of students who scored in the at/above benchmark level in math throughout the 2021-22 school year 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; 11-25% percent of students for math), largely due to the 70th percentile cut-off for the at/above benchmark category in math compared to 40th percentile in reading. However, all grade spans showed an increase of 3 to 9-percentage points, with higher increases for grades 2-3 and 4-5 (9 percentage points) than for middle and high school grades (Figure 6).

The share of students who scored in the intensive intervention level decreased for the elementary and middle school grade spans but increased by 3 percentage points for high school grade spans. 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 level in both grades 9-10 and 11-12.

Figure 6. Performance levels for 2021-22 math assessments, by grade span
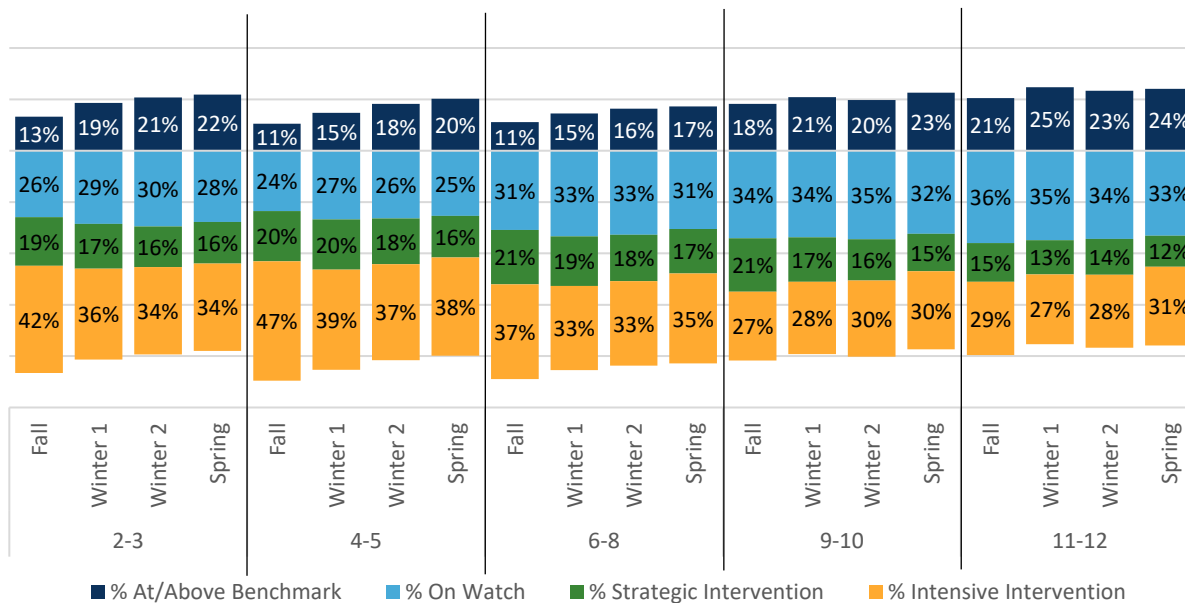
Note: See Table B.2 in Appendix B for the numbers of students that correspond to the reported percentages

Performance Levels by Race/Ethnicity

This section analyzes the percentage of students of different races/ethnicities that scored in the four performance levels in the four 2021-22 testing windows. Keep in mind that the number of test takers varies greatly by race/ethnicity. 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 and B.4, which have the corresponding numbers of students.

The distribution of students across the four performance levels for reading throughout the four windows of the 2021-22 school year shows different patterns for different racial/ethnic groups. Close to half of White and Asian students scored in the at/above benchmark level (46-53%), and the share of students who scored in this performance level in these two groups increased throughout the year. Thirty-five to 39% of students in the Multi Racial/Other category scored in the at/above benchmark performance level, showing a 4-percentage point increase from fall to spring. Black/African American and Hispanic/Latino students who scored in the at/above benchmark level in reading increased by 6 and 7 percentage points respectively from fall to spring; however, the

17

share of students who scored in this level in these two racial/ethnic groups was lower compared to other groups (19-25% for Black/African American and 17-24% for Hispanic/Latino students) (Figure 7).

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 and White students, the share of students scoring in the intensive intervention level decreased by 2 percentage points from fall to spring, moving from 23% to 21% for Asian students and 25% to 23% for White students. Black/African American and Hispanic/Latino student groups also saw decreases in the share of students scoring in the intensive intervention level from fall to spring; however, the shares were 47% to 45% for Black/African American students and 54% to 48% for Hispanic/Latino students in the fall and spring.

Figure 7. Performance levels for 2021-22 reading assessments, by race/ethnicity
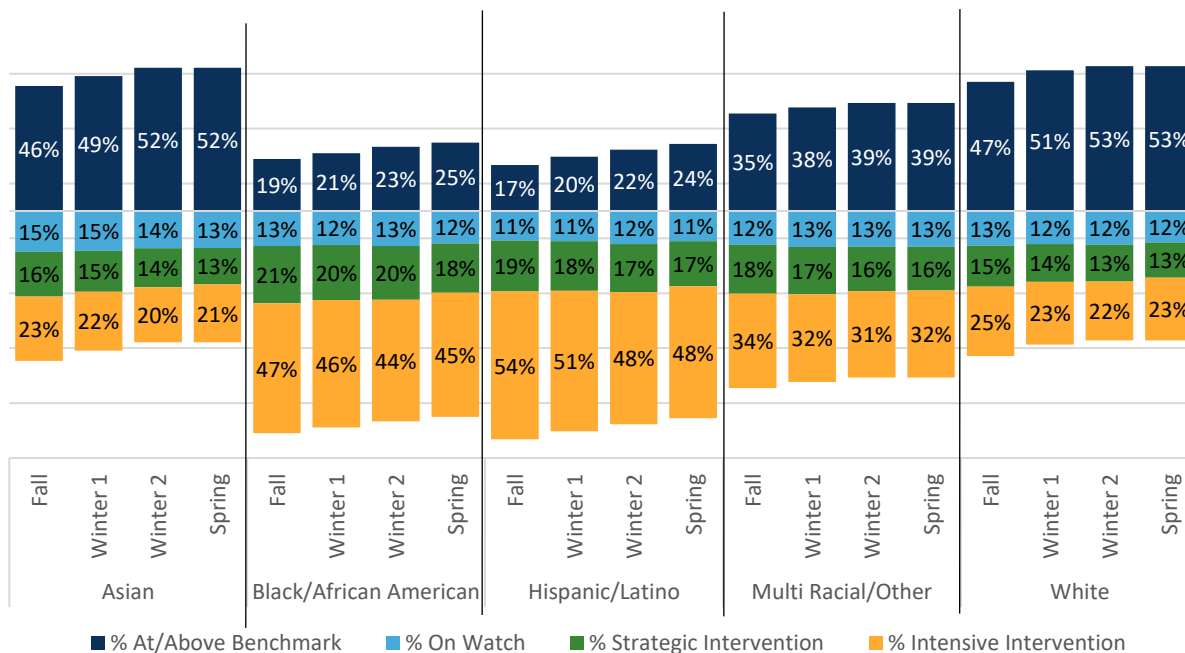
Notes: Native American/American Indian and Native Hawaiian/Pacific Islander students are included in the Multiracial/Other category because their share in SDP student body is low.
See Table B.3 in Appendix B for the numbers of students that correspond to the reported percentages

When looking at the percentage of students who scored in the at/above benchmark performance level in math, Asian students stand out, showing a 9-percentage point increase from 42% in the fall to 51% in the spring. White students, who performed similarly to Asian students in reading, diverged in patterns for math; although they showed a 10-percentage point fall-to-spring increase, the share of students who scored in the at/above benchmark level went from 28% to 38%. The percentage of students that scored in the at/above benchmark level improved by 4 and 5 points for Black/African American and Hispanic/Latino students respectively, but the total share remained below 12%, and the two racial/ethnic groups also had a larger share of students in the intensive intervention level (40-45%). The share of students in the intensive intervention level was 10-11% for Asian students and 17-19% for White students.
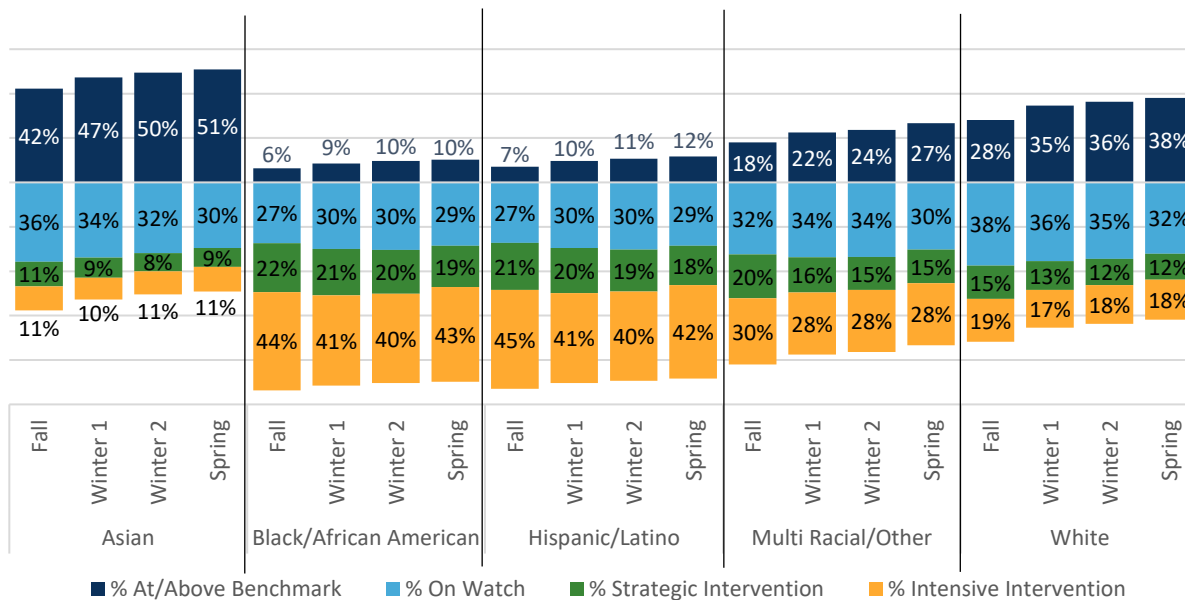
Figure 8. Performance levels for 2021-22 math assessments, by race/ethnicity

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

Growth

In this report, we describe growth throughout the 2021-22 school year 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.

An analysis of fall-to-spring change in average scaled score in reading show kindergarten students and 12th grade students as outliers (Table 7).[14] The scaled score of the average kindergartener was 120.8 units higher in spring than the fall, which is consistent with the expectations of steep growth in early grades. On the other hand, the scaled score for the average 12th grade student was 33.9 scaled score points lower in the spring compared to fall. Elementary grades show positive changes ranging from 24.2 scaled score points in 5th grade to 98 scaled score points in 1st grade, but for 8th grade and above the change in average scaled score is either less than 10 scaled score points or negative.[15]

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. When looking at NPR, kindergarten and 12th grade students stand out in opposite directions again. The average kindergarten student performed better than 19.9% of their peers in the fall and 41.4% of their peers in the spring, a 21.6 percentile increase. The average 12th grade student, on the other hand, performed better than 18.9% of their peers in the fall and 12.4% of their peers in the spring, a decline of 6.5 percentiles. The fall-to-spring increase in average NPR was lower for grades 3-5 than for grades K-2, and grades 6-11 showed no change or a decrease in NPR.

The median kindergarten student registered fall-to-spring growth in reading that was higher than 57% of their peers. For grades 1 to 7, the median fall-to-spring SGP was within 4 percentiles of 50, which is the expectation. However, for 8th grade and above, the SGP was much lower, dipping as low as 32 for 12th graders.

---

[14] Participation for 12th grade students was much lower than other grades, and this likely had an impact on the performance and growth reported in this study.

[15] The timing of the spring testing window occurs after the standardized state assessments (PSSA or Keystone) and college applications are completed. Participation in the spring window decreased across all grades, and anecdotally, school leaders report that 12th grade students in particular are not motivated to participate in or complete the assessment to the best of their ability. Further research is underway to examine the intersection between participation and performance, particularly during the spring window. In addition, efforts are underway to support student and teacher understanding and buy-in for test taking at the end of the school year.

Table 7. Fall-to-spring growth metrics for reading in 2021-22, by grade

Grade Level	Number of Participants in the Fall	Number of Participants in Spring	Fall-to-Spring Change in Average Scaled Score	Fall-to-Spring Change in Average NPR*	Median Fall-to-Spring SGP
K	7,417	7,877	120.8	21.6	57.0
1	7,875	8,038	98.0	12.2	48.0
2	8,288	8,302	71.5	8.6	53.0
3	7,847	8,036	42.2	3.1	46.0
4	8,325	8,186	32.4	2.5	48.0
5	8,211	7,981	24.2	1.4	47.0
6	7,679	7,378	19.2	0.6	49.0
7	7,733	7,147	10.7	-0.2	49.0
8	7,965	7,159	-2.4	-2.5	41.0
9	8,707	5,808	9.0	0.2	41.0
10	7,615	4,793	2.6	0.7	40.0
11	6,840	4,123	1.5	0.0	37.0
12**	6,860	2,976	-33.9**	-6.5**	32.0**

* 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, 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 2-12 because Star Math is not administered to many students below 2nd grade. Consistent with reading outcomes, the fall-to-spring change in average scaled score is positive for all grades except 12th grade. For elementary grades the change in average scaled score ranges from 49.4 for 5th grade to 75.1 for 2nd grade. In terms of fall-to-spring change in average NPR, all grade levels showed some gains; the change in NPR was higher for grades 2-6 compared to 7-11, and it was negative for grade 12. The median students in grades 2, 3, 4, and 8 were within 3 percentiles of the 50th percentile in SGP while the median students in grades 5-7 were in the 55th to 57th SGP range. The median students for grades 9-12 showed growth higher than only 37 to 45% of their peers.

Table 8. Fall-to-spring growth metrics for math in 2021-22, by grade

Grade Level	Number of Participants in the Fall	Number of Participants in Spring	Fall-to-Spring Change in Average Scaled Score	Fall-to-Spring Change in Average NPR*	Median Fall-to-Spring SGP**
2***	4,134	4,922	75.1	14.9	48
3	8,249	8,407	55.2	5.7	46
4	8,480	8,438	57.3	9.7	53
5	8,337	8,234	49.4	7.9	56
6	7,755	7,580	40.5	6.5	57
7	7,828	7,436	26.3	4.3	55
8	8,094	7,588	19.7	2.0	50
9	8,716	6,208	20.6	3.2	41
10	7,329	4,793	17.3	1.4	43
11	6,421	4,131	14.6	4.9	45
12****	5,441	2,403	-14.3****	-5.6****	37****

* 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, 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.

** 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. Because there were a significant number of 2nd graders who took Star Math, they were included in the performance analyses in this report although Star Math is not required for this grade level. Note that the students who take Star Math in 2nd grade may not be representative of all 2nd grade students.

**** 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.

Conclusions

In the first year of implementation of the universal K-12 Star assessment program in SDP, more than 70% of eligible students overall were assessed in *both* reading and math in all four 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 Renaissance's parent reports. This report is one among various end-of-year studies the Office of Research and Evaluation is producing for the 2021-22 school year.

The report showed that, although there was a decline during the Spring administration window, participation remained high throughout the year, especially for grades K-8. Students in grades 9-10 and especially 11-12 had lower participation rates throughout the year, and also had a steeper decline in spring participation (Figure 1). Participation rates differed by race/ethnicity as well, although the patterns in participation rates across the four testing windows did not show divergence (Figure 2).

Overall, the percentage of students who scored in the at/above benchmark performance level in reading increased by 6.5 percentage points from fall to spring, and the percentage of students who scored in the intensive intervention performance level decreased by 3.2 percentage points. Much of the overall average improvements in performance levels can be attributed to the performance of students in elementary grades.

Similarly, the percentage of students who scored in the at/above benchmark level in math increased by 6.2 percentage points from fall to spring, while the percentage of students who scored in the intensive intervention level decreased 3.6 percentage points. The improvements in performance level were observed across all grade spans.

The percentage of students who scored in the at/above benchmark performance level increased for all racial/ethnic groups for both reading and math; 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. 2021-22 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-3	Fall	34,820	87.7%	30,356	34,628	91.0%	31,513	34,820	91.4%	31,823
	Winter 1	35,295	85.5%	29,928	35,013	91.4%	31,990	35,295	88.4%	31,218
	Winter 2	35,478	90.5%	31,769	35,103	94.0%	33,009	35,478	92.5%	32,800
	Spring	35,487	87.9%	30,853	35,092	92.6%	32,487	35,487	90.2%	32,004
4-5	Fall	18,045	91.1%	16,178	17,752	93.2%	16,536	18,045	93.2%	16,817
	Winter 1	18,071	88.4%	15,580	17,632	91.7%	16,164	18,071	91.1%	16,458
	Winter 2	18,008	92.5%	16,119	17,435	94.5%	16,473	18,008	94.1%	16,949
	Spring	17,971	90.7%	15,762	17,372	93.1%	16,167	17,971	92.8%	16,672
6-8	Fall	25,743	89.3%	22,674	25,390	92.1%	23,377	25,743	92.0%	23,677
	Winter 1	25,757	84.5%	21,287	25,202	88.8%	22,385	25,757	89.0%	22,927
	Winter 2	25,668	88.8%	22,117	24,915	91.9%	22,893	25,668	92.0%	23,609
	Spring	25,661	83.0%	20,625	24,858	87.2%	21,684	25,661	88.1%	22,604
9-10	Fall	20,591	72.5%	14,685	20,258	80.6%	16,322	20,591	78.8%	16,219
	Winter 1	20,557	63.4%	12,688	20,017	73.8%	14,775	20,557	71.5%	14,704
	Winter 2	20,209	64.2%	12,502	19,475	73.5%	14,308	20,209	72.8%	14,706
	Spring	20,171	42.5%	8,237	19,380	54.7%	10,601	20,171	55.6%	11,221
11-12	Fall	18,424	59.7%	10,946	18,325	74.8%	13,700	18,424	64.8%	11,939
	Winter 1	18,045	47.8%	8,553	17,899	65.2%	11,666	18,045	54.2%	9,784
	Winter 2	17,414	48.7%	8,387	17,216	65.9%	11,347	17,414	55.6%	9,688
	Spring	17,248	28.0%	4,781	17,045	41.6%	7,099	17,248	38.2%	6,590

Table A.2. 2021-22 participation by race/ethnicity

Race/ Ethnicity	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
Asian	Fall	11,316	90.3%	10,058	11,135	94.4%	10,512	11,316	92.2%	10,439
	Winter 1	11,403	88.4%	9,850	11,141	93.2%	10,385	11,403	90.8%	10,358
	Winter 2	11,534	89.4%	9,949	11,129	93.9%	10,450	11,534	91.2%	10,522
	Spring	11,496	79.0%	8,746	11,067	85.1%	9,413	11,496	84.6%	9,726
Black/ African American	Fall	55,527	78.7%	43,635	55,439	84.9%	47,077	55,527	82.8%	45,993
	Winter 1	55,355	72.1%	39,803	55,223	80.5%	44,471	55,355	77.2%	42,756
	Winter 2	54,346	76.0%	41,162	54,180	82.8%	44,877	54,346	80.6%	43,786
	Spring	54,236	66.6%	36,008	54,060	73.9%	39,930	54,236	72.6%	39,356
Hispanic/ Latino	Fall	28,536	79.7%	22,112	27,738	85.9%	23,818	28,536	84.9%	24,228
	Winter 1	28,800	74.7%	20,604	27,567	83.1%	22,920	28,800	80.3%	23,113
	Winter 2	28,852	79.8%	21,732	27,248	85.8%	23,391	28,852	84.3%	24,311
	Spring	28,846	71.1%	19,304	27,162	77.9%	21,166	28,846	77.0%	22,208
Multiracial/ Other	Fall	5,250	81.3%	4,261	5,242	86.2%	4,520	5,250	84.4%	4,433
	Winter 1	5,214	75.9%	3,947	5,198	82.9%	4,307	5,214	80.2%	4,184
	Winter 2	5,168	78.6%	4,044	5,143	84.8%	4,361	5,168	82.4%	4,258
	Spring	5,148	69.0%	3,529	5,118	75.9%	3,885	5,148	74.8%	3,851
White	Fall	16,994	87.9%	14,773	16,799	92.4%	15,521	16,994	90.5%	15,382
	Winter 1	16,953	83.2%	13,832	16,634	89.6%	14,897	16,953	86.6%	14,680
	Winter 2	16,877	85.2%	14,007	16,444	90.9%	14,951	16,877	88.1%	14,875
	Spring	16,812	77.5%	12,671	16,340	83.5%	13,644	16,812	83.0%	13,950

Appendix B: Performance

Table B.1. 2021-22 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-3	Fall	31,427	25.50%	8,027	10.8%	3,400	17.9%	5,621	45.8%	14,379
	Winter 1	31,910	32.70%	10,446	11.0%	3,523	16.6%	5,286	39.7%	12,655
	Winter 2	32,891	36.70%	12,057	12.0%	3,944	14.5%	4,778	36.8%	12,112
	Spring	32,253	40.30%	12,986	10.5%	3,400	14.1%	4,535	35.1%	11,332
4-5	Fall	16,536	25.70%	4,247	12.3%	2,029	18.7%	3,092	43.3%	7,168
	Winter 1	16,164	28.10%	4,541	12.1%	1,955	18.2%	2,943	41.6%	6,725
	Winter 2	16,473	31.40%	5,175	12.7%	2,097	17.6%	2,893	38.3%	6,308
	Spring	16,167	31.00%	5,015	12.0%	1,946	16.2%	2,626	40.7%	6,580
6-8	Fall	23,377	25.00%	5,849	13.1%	3,058	19.4%	4,546	42.5%	9,924
	Winter 1	22,385	25.80%	5,786	12.7%	2,854	19.1%	4,286	42.3%	9,459
	Winter 2	22,893	26.70%	6,116	13.0%	2,982	19.9%	4,558	40.3%	9,237
	Spring	21,684	26.00%	5,631	12.4%	2,696	18.4%	3,994	43.2%	9,363
9-10	Fall	16,322	27.70%	4,520	13.1%	2,136	19.3%	3,158	39.9%	6,508
	Winter 1	14,775	28.10%	4,145	12.9%	1,905	18.7%	2,761	40.4%	5,964
	Winter 2	14,308	29.40%	4,205	12.5%	1,788	18.6%	2,666	39.5%	5,649
	Spring	10,601	30.00%	3,179	12.5%	1,324	17.8%	1,882	39.8%	4,216
11-12	Fall	13,700	28.80%	3,943	14.6%	1,994	19.7%	2,695	37.0%	5,068
	Winter 1	11,666	28.70%	3,352	14.3%	1,665	18.4%	2,147	38.6%	4,502
	Winter 2	11,347	28.00%	3,172	14.1%	1,596	18.6%	2,109	39.4%	4,470
	Spring	7,099	27.20%	1,929	12.9%	916	17.1%	1,211	42.9%	3,043

Table B.2. 2021-22 performance levels in 2-12 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
K-3	Fall	12,383	13.30%	1,653	25.9%	3,211	18.9%	2,338	41.8%	5,181
	Winter 1	12,461	18.60%	2,315	28.5%	3,556	17.4%	2,172	35.5%	4,418
	Winter 2	13,312	20.70%	2,749	29.5%	3,926	15.8%	2,102	34.1%	4,535
	Spring	13,329	21.90%	2,925	27.8%	3,711	16.1%	2,149	34.1%	4,544
4-5	Fall	16,817	10.50%	1,758	23.5%	3,944	19.6%	3,295	46.5%	7,820
	Winter 1	16,458	14.70%	2,415	26.7%	4,400	19.6%	3,226	39.0%	6,417
	Winter 2	16,949	18.30%	3,110	26.4%	4,481	17.8%	3,023	37.4%	6,335
	Spring	16,672	20.30%	3,378	25.4%	4,235	16.2%	2,696	38.2%	6,363
6-8	Fall	23,677	11.10%	2,621	30.9%	7,312	21.2%	5,024	36.8%	8,720
	Winter 1	22,927	14.50%	3,321	33.3%	7,636	19.4%	4,448	32.8%	7,522
	Winter 2	23,609	16.40%	3,871	32.7%	7,710	18.1%	4,271	32.9%	7,757
	Spring	22,604	17.20%	3,882	30.5%	6,901	17.3%	3,907	35.0%	7,914
9-10	Fall	16,045	18.30%	2,935	34.1%	5,473	20.8%	3,341	26.8%	4,296
	Winter 1	14,452	20.80%	3,013	33.7%	4,875	17.4%	2,509	28.1%	4,055
	Winter 2	14,469	19.80%	2,868	34.5%	4,990	16.1%	2,333	29.6%	4,278
	Spring	11,001	22.60%	2,488	32.4%	3,569	14.6%	1,605	30.4%	3,339
11-12	Fall	11,862	20.50%	2,426	36.0%	4,271	15.0%	1,778	28.6%	3,387
	Winter 1	9,705	24.70%	2,395	34.8%	3,379	13.4%	1,304	27.1%	2,627
	Winter 2	9,612	23.40%	2,246	34.3%	3,296	14.0%	1,341	28.4%	2,729
	Spring	6,534	24.10%	1,575	33.1%	2,162	12.1%	793	30.7%	2,004

Table B.3. 2021-22 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	10,509	45.5%	4,778	14.8%	1,551	16.4%	1,722	23.4%	2,458
	Winter 1	10,379	49.1%	5,093	14.5%	1,505	14.9%	1,547	21.5%	2,234
	Winter 2	10,432	52.2%	5,446	13.6%	1,415	14.2%	1,481	20.0%	2,090
	Spring	8,762	52.2%	4,574	13.4%	1,171	13.4%	1,176	21.0%	1,841
Black/African American	Fall	47,034	18.9%	8,909	12.7%	5,989	20.9%	9,847	47.4%	22,289
	Winter 1	44,442	21.1%	9,390	12.4%	5,519	20.1%	8,941	46.3%	20,592
	Winter 2	44,855	23.4%	10,480	12.8%	5,758	19.5%	8,752	44.3%	19,865
	Spring	37,868	24.9%	9,433	11.8%	4,481	18.0%	6,828	45.2%	17,126
Hispanic/ Latino	Fall	23,785	16.8%	3,996	10.8%	2,565	18.5%	4,405	53.9%	12,819
	Winter 1	22,893	19.8%	4,529	11.0%	2,527	18.1%	4,134	51.1%	11,703
	Winter 2	23,374	22.3%	5,209	12.1%	2,832	17.4%	4,078	48.2%	11,255
	Spring	20,203	24.4%	4,936	11.0%	2,219	16.5%	3,342	48.0%	9,706
Multi-Racial/Other	Fall	4,516	35.5%	1,603	12.3%	555	17.8%	805	34.4%	1,553
	Winter 1	4,303	37.7%	1,623	13.2%	566	17.2%	741	31.9%	1,373
	Winter 2	4,350	39.4%	1,713	13.0%	567	16.1%	702	31.4%	1,368
	Spring	3,857	39.4%	1,518	13.0%	501	15.9%	615	31.7%	1,223
White	Fall	15,516	47.0%	7,300	12.6%	1,956	15.0%	2,332	25.3%	3,928
	Winter 1	14,883	51.3%	7,633	12.0%	1,786	13.8%	2,059	22.9%	3,405
	Winter 2	14,905	52.8%	7,876	12.3%	1,834	13.4%	1,994	21.5%	3,201
	Spring	12,743	52.8%	6,724	11.5%	1,462	12.8%	1,636	22.9%	2,921

Table B.4. 2021-22 performance levels in 2-12 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*	8,622	42%	3,643	36%	3,090	11%	945	11%	944
	Winter 1	8,601	47%	4,071	34%	2,919	9%	772	10%	839
	Winter 2	8,830	50%	4,373	32%	2,807	8%	722	11%	928
	Spring	8,102	51%	4,125	30%	2,391	9%	687	11%	899
Black/African American	*Fall*	38,239	6%	2,440	27%	10,464	22%	8,404	44%	16,931
	Winter 1	35,291	9%	2,992	30%	10,597	21%	7,381	41%	14,321
	Winter 2	35,875	10%	3,443	30%	10,916	20%	7,071	40%	14,445
	Spring	31,828	10%	3,236	29%	9,118	19%	5,879	43%	13,595
Hispanic/ Latino	*Fall*	18,272	7%	1,279	27%	4,972	21%	3,898	45%	8,123
	Winter 1	17,192	10%	1,651	30%	5,091	20%	3,484	41%	6,966
	Winter 2	17,994	11%	1,932	30%	5,455	19%	3,380	40%	7,227
	Spring	16,129	12%	1,883	29%	4,606	18%	2,833	42%	6,807
Multi Racial/Other	*Fall*	3,669	18%	660	32%	1,190	20%	727	30%	1,092
	Winter 1	3,466	22%	779	34%	1,170	16%	550	28%	967
	Winter 2	3,542	24%	837	34%	1,188	15%	529	28%	988
	Spring	3,152	27%	840	30%	955	15%	476	28%	881
White	*Fall*	11,982	28%	3,371	38%	4,495	15%	1,802	19%	2,314
	Winter 1	11,453	35%	3,966	36%	4,069	13%	1,472	17%	1,946
	Winter 2	11,710	36%	4,259	35%	4,037	12%	1,368	18%	2,046
	Spring	10,929	38%	4,164	32%	3,508	12%	1,275	18%	1,982