



THE SCHOOL DISTRICT OF
PHILADELPHIA

Addendum: Fall 2021 Performance on the Star Assessments for Students who Attended 2021 Summer Programs offered by SDP

This is an addendum to a [report](#) examining fall 2021-22 Star Reading and Star Math performance that looked at differences in performance between students who attended SDP 2021 summer programming and those who did not. The original report examined the Star performance outcomes after matching summer program attendees to non-attendees of similar demographics. We recommend reading the report prior to reading this addendum, as the report provides a more in-depth analysis and background into the different summer programs and student sample. However, the report does not account for differences in spring 2020-21 assessment performance. In this addendum to the report, we examine differences in fall Star performance between summer program attendees and non-attendees while also accounting for students' spring performance.

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Key Findings

- Overall, although there were differences in the percentage of students in fall performance groups by spring performance group, there were rather small differences between summer program attendees and non-attendees.
- Fewer than 2% of students who performed in the Below Average group, about 12%-15% of students who performed in the Low Average group, about 48%-54% of students who performed in the High Average group, and about 75%-85% of students who performed in the Above Average group on the spring 2020-21 reading and math assessments scored in the High Average or Above Average fall 2021-22 Star Reading or Math performance groups, regardless of summer program attendee status.
- With few exceptions, the percentage of students in each spring 2020-21 reading and math assessment group who later performed in the High Average or Above Average fall 2021-22 Star Reading or Math performance groups was similar by summer program attendee status as well as by student gender, economic disadvantaged status, special education status, and English Learner status.
- Overall, regardless of spring performance, a higher percentage of summer attendees were in the Below Average fall Star performance group than non-attendees.

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Assessment Data Used for this Analysis

Star

SDP began using Star Assessments, a suite of tests by Renaissance Learning, to assess K-12 students' reading and math skills in 2021-22. For students in grades 6-12, SDP initially used Star in 2019-20 to assess student skill development aligned to state and Common Core standards. SDP switched to using Star District-wide in 2021-22 for all K-12 students to assess student progress toward the School District of Philadelphia School Board Performance Goals.¹

Since the beginning of 2021-22 school year, the District has been administering various Star tests to students across all grade levels (K-12) four times a year. For reading, students are assessed using either Star Early Literacy (grades K-2) or Star Reading (grades 3-12).² Both are computer adaptive tests that include items that become more or less difficult depending on whether students answer the previous question correctly. These tests are designed to broadly assess students' skills across a number of literacy domains. For math, students are administered either the Star Math Curriculum-Based Measures (grades K-2) or Star Math (grades 3-12). Star Math Curriculum-Based Measures (CBMs) are a series of short, 60-second subtests designed to measure students' foundational math skills. Star Math, like Star Early Literacy and Star Reading, is a computer adaptive test designed to measure students' math skills across several math-related domains.

The domains that make up the Star Early Literacy/Star Reading assessments for each grade level are as follows:³

- Grades K-2: The Star Early Literacy assessment domains include **Word Knowledge and Skills, Comprehension Strategies and Constructing Meaning, and Number and Operations**
- Grades 3-12: The Star Reading assessment domains include **Word Knowledge and Skills, Comprehension Strategies and Constructing Meaning, Analyzing Literary Text, Understanding Author's Craft, and Analyzing Argument and Evaluating Text**

The subtests/domains that make up the Star Math CBMs/Star Math assessment for each grade level are as follows:

- Kindergarten: The Star Math CBMs include **Number Recognition (NR) and Quantity Comparison (QC)**
- Grade 1: The Star Math CBMs include **NR, QC, and Addition to 10 (A10)**
- Grade 2: The Star Math CBMs include **A10, Addition to 20 (A20), and Subtraction from 10 (S10)**

¹ For more about SDP's Goals and Guardrails see: <https://www.philasd.org/schoolboard/goals-and-guardrails/> and <https://www.philasd.org/era/goals-and-guardrails/>

² Students in grades K-5 are also administered Star Reading Curriculum-Based Measures, which are 60 second one-to-one assessments of basic literacy skills, but these tests are not used in this analysis.

³ For more information see: <https://www.philasd.org/era/star-information/#1618402180282-71187e13-0e42>

- Grade 3: The Star Math assessment domains include **Number and Operations, Algebra, Geometry and Measurements, and Data Analysis, Statistics, and Probability**

The assessment outcome used in this analysis is the normal curve equivalent (NCE) score in fall 2021-22. Scores on Star Early Literacy, Star Reading, and Star Math summarize students' overall proficiency across the different domains assessed on each test.

aimswebPlus

SDP used aimswebPlus, a universal early literacy screening, benchmarking, and progress-monitoring tool from Pearson, to assess literacy proficiency in SDP for all K-5 students from the 2014-15 to the 2020-21 school year (aimsweb prior to 2017-18).

The District administered multiple aimswebPlus subtests to students in each grade level three times a year. Students received a score based on the number of cues they correctly identify in a 60-second period. In the 2020-21 school year, subtest scores were combined into a “composite score” that provided teachers with a holistic measure of student literacy performance.

At each grade level, the composite score was made up of multiple subtests taken during each testing period—that is, the required subtests taken each fall, winter, and spring. Composite scores allow teachers, school leaders, and District staff to track student performance and growth over time.

The subtests that make up the aimswebPlus literacy composites for each grade level are as follows:⁴

- Kindergarten: The aimswebPlus literacy subtests include **Letter Naming Fluency (LNF), Letter Word Sounds Fluency (LWSF), Phonemic Segmentation (PS), Nonsense Word Fluency (NWF), Word Reading Fluency (WRF), and Auditory Vocabulary (AV)**⁵
- Grade 1: The aimswebPlus literacy subtests include **Word Reading Fluency (WRF), Nonsense Word Fluency (NWF), Oral Reading Fluency (ORF)**
- Grades 2-3: The aimswebPlus literacy subtests include **Oral Reading Fluency (ORF), Reading Comprehension (RC), and Vocabulary (VOC)**
- Grades 4-5: The aimswebPlus literacy subtests include **Oral Reading Fluency (ORF), Reading Comprehension (RC), Vocabulary (VOC), and Silent Reading Fluency (SRF)**

The subtests that make up the aimswebPlus math composites for each grade level are as follows:

- Kindergarten: The aimswebPlus math subtests include **Number Naming Fluency (NNF), Quantity Total Fluency (QTF), and Concepts and Applications (CA)**
- Grade 1: The aimswebPlus math subtests include **Concepts and Applications (CA), Number Comparison Fluency – Pairs (NCF), and Math Facts Fluency – 1 Digit (MFF-1D)**
- Grades 2-5: The aimswebPlus math subtests include **Concepts and Applications (CA), Number Comparison Fluency – Triads (NCF-T), and Mental Computation Fluency (MCF)**

⁴ For more information about aimswebPlus see: <https://www.philasd.org/era/2021/05/07/unpacking-assessments-part-1-aimswebplus/>

⁵ Auditory Vocabulary (AV) was not administered during the 2020-21 year due to high rates of virtual and hybrid instruction.

Key Outcome Data Points

For these assessments we use a data point called the normal curve equivalent (NCE) score to analyze student performance. NCE is closely related to another common performance metric called national percentile rank. However, unlike national percentile rank, which is ordinal, NCE scores can be used in arithmetic operations, such as calculating an average, because it is an interval variable. This section provides more details on the similarities and differences between each score type.

National Percentile Rank

National percentile rank is a norm referenced performance measure that compares students' scaled scores to a nationally representative sample of their grade-level peers. The national percentile rank is useful for understanding student skill development in comparison to students of the same grade nationally. Based on the number of correct responses, each student is assigned a national percentile rank. Percentiles range from 1-99. For example, a percentile rank of the 23rd percentile indicates that the student is performing better than 23% of the nationally-normed sample based on their number of correct responses. While percentile ranks are a familiar metric for most readers, they should not be used in arithmetic operations, such as averaging percentile ranks across multiple students in the same student group, because the intervals between percentile ranks are not the same across the percentile range.⁶

Normal Curve Equivalent

Normal curve equivalent (NCE) scores are another type of norm-referenced performance measure, and are one way to address the limitations of percentile ranks. Like percentile rank, NCEs describe students' performance among a nationally normed sample. Like percentile ranks, NCEs are a type of norm-referenced performance measure that describes students' performance among a nationally normed sample. However, unlike percentile ranks, NCEs are interval-scaled so that the intervals between test scores that correspond to each NCE score are the same.⁷ Therefore, NCEs can be used to calculate an average or to calculate differences between groups. NCEs are scaled with a mean of 50, a standard deviation of 21.06, and range from 1-99.⁸

An NCE score of 50 indicates performance at the average of the national norming sample while scores higher or lower than 50 indicate performance above or below the average of the national norming sample, respectively.⁹ For example, a student who has an NCE score of 50 or above performed the same or better than 50% of students nationally; in comparison, a student with an NCE score below 50 performed worse than 50% of students nationally. For the purposes of this analysis, percentile ranks were converted to NCE scores. It is important to note that despite their

⁶ For example, test score interval between the 23rd percentile and 24th percentile versus the interval between the 50th percentile and 51st percentile are not equivalent to each other. These unequal intervals make it so that arithmetic results based on percentile ranks will be difficult to interpret.

⁷ For example, the interval between NCE scores of 23 and 24 is the same as the interval between NCE scores 50 and 51.

⁸ In this report addendum, they are derived from the percentile ranks using the equation $NCE = 21.06 * z\text{-score} + 50$ (Lipsey et al., 2012), where the z-score comes from the percentile rank value.

⁹ For more information see Lipsey, M. W., Puzio, K., Yun, C., Hebert, M. A., Steinka-Fry, K., Cole, M. W., Roberts, W., Anthony, K. S., Busick, M. D. (2012). *Translating the statistical representation of the effects of education interventions into more readily interpretable forms*. <https://ies.ed.gov/ncser/pubs/20133000/>

similarities, NCE scores and percentile ranks do not align.¹⁰ Therefore, NCE scores should not be interpreted in the same way as percentile ranks.

Performance Groups

Based on their NCE data, students fall into one of four performance groupings (Table 1). These performance groups provide a better representation of the normal distribution underlying the NCE scores. If our students had similar performance to the national sample, about 50% would have performed in the High Average or Above Average NCE performance groups and the other 50% of our students would have performed in the Below Average or Low Average NCE performance groups. While there are other ways of grouping students (by Tier level, for example), performance groups are useful for analyzing how students at various levels of proficiency are performing and improving over time.¹¹

Table 1. Star and aimswebPlus assessment Normal Curve Equivalent (NCE) group names and NCE range

Grouping Name	NCE Score Range
Above Average	75-99
High Average	50-74
Low Average	25-49
Below Average	1-24

Student Sample

Identifying the Student Sample

About one-third of students who attended summer programs took spring 2020-21 assessments and fall 2021-22 assessments and could be matched with similar students who did not attend summer programs.

In summer 2021, 16,453 students were enrolled across eight SDP summer programs (Figure 1). Of that population 12,840 students attended at least one program for at least one day, or attended between 1%-100% of days their program was offered. Of those students, 6,074 attended their program (or at least one of their courses) for 75%-100% of days the program was offered. 6,663 students took both Early Literacy/Reading and Math Star assessments in fall 2021. Only students who took the Star assessments in fall 2021 are included in this analysis.

Of the summer program students who attended summer programming and took the fall Star assessments, 4,472 students took the spring 2020-21 reading assessments and 4,352 took the spring 2020-21 math assessments. Students had to have taken the spring 2020-21 reading assessments in order to be included in the reading analyses in this addendum, and students had to

¹⁰ For example, the relationship between NCE scores and percentile ranks does not hold at values other than 1, 50, and 99 because they are on different scales. For more information see Pennsylvania Department of Education. (2021). Making sense of NCEs and standard errors.

<https://www.education.pa.gov/Documents/K-12/Assessment%20and%20Accountability/PVAAS/Methodology/MakingSenseOfNCEsAndStandardErrors.pdf>

¹¹ aimswebPlus NCE scores were converted from National Percentile Ranks (NPR).

have taken the spring 2020-21 math assessments in order to be included in the math analyses in this addendum, thus resulting in a smaller sample of students than in the accompanying report.¹²

Figure 1. The number of students who were enrolled in summer programs, attended 1%-100% of summer program days, took fall 2021 Star assessments, and took either the spring 2020-21 reading or math assessments



Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed on August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed on October 6, 2021; Qlik Academic Screeners, data accessed on October 21, 2021.

The matched sample of students who did not attend summer programming

Propensity score matching (PSM)¹³ was used to match the sample of summer students with a similar group of students who did not receive summer programming. This latter group is referred to as the matched sample. PSM is a statistical approach that aims to make the two groups similar on the basis of selected characteristics. Our matching model used several demographic characteristics including gender, race/ethnicity, English Learner status, and economic disadvantage status to identify the matched sample. Students in the matched sample were also required to have attended the same grade and school in spring 2020-21 as the students who attended summer programming. After the matching process was complete, we evaluated the quality of the matches to determine that the two groups, students who attended summer programming and students who did not, were sufficiently balanced with respect to the demographic characteristics included in the matching model.¹⁹ See Appendix A for details on propensity score matching and determining the ideal matched sample.

Of the matched sample, 5,154 students took the spring 2020-21 reading assessments and 5,091 took the spring 2020-21 math assessments. Students had to have taken the spring 2020-21 reading assessments in order to be included in the reading analyses in this addendum, and students had to have taken the spring 2020-21 math assessments in order to be included in the math analyses in this addendum, thus resulting in a smaller sample of students than in the accompanying report.

¹² See the original report examining fall 2021 Star assessment performance outcomes for students who attended 2021 summer programs offered by SDP: <https://www.philasd.org/research/wp-content/uploads/sites/90/2022/09/Report-Fall-2021-Star-Assessment-Performance-2021-Summer-Program-Students-September-2022.pdf>

¹³ Austin, 2011; Rosenbaum & Rubin, 1983; Stuart, 2010

Spring 2020-21 reading and math assessment performance groups

District-wide reading and math assessments were administered during three (for aimswebPlus) or four (for Star) testing windows per year from 2019-20 through 2020-21 to measure K-12 students' reading and math progress. For the purposes of this analysis, we have included data from the spring 2020-21 testing window because it was the closest testing window prior to the start of summer programming.

Data from the District-wide spring 2020-21 assessment window is organized into reading and math performance groups. There are four performance groups representing four Normal Curve Equivalent (NCE) performance quartiles ranging from 1-99: Below Average, Low Average, High Average, and Above Average performance (Table 2). In order to make comparisons between spring 2020-21 and fall 2021-22 performance, national percentile ranks from aimswebPlus and Star spring 2020-21 reading and math assessments were converted to NCE scores and then to NCE performance groups.

Performance patterns on the spring reading and math assessments differed somewhat for summer attendees compared to their matched non-attendees. A larger proportion of summer attendees (8%-11% more) scored in the Below Average groups in both reading and math than non-attendees, and conversely, a larger proportion of non-attendees scored in the Low Average groups (4% more), High Average groups (3%-6% more), and Above Average groups (1% more) than summer attendees. Thus, overall, students who attended summer programming had lower spring 2020-21 assessment scores than the matched sample of non-attending students.

Table 2. The number and percentage of students in the analytic sample of summer attendees and matched non-attendees in each District-wide spring 2020-21 assessment performance group

District-Wide Assessment Performance Normal Curve Equivalent (NCE)		Sample of Summer Attendees with Spring 2021 and Fall 2021 Star Data		Summer Non-Attendee (matched sample) with Spring 2021 and Fall 2021 Star Data	
Ranges	Groups	Number of Students	Percent of Students	Number of Students	Percent of Students
District-Wide Spring 2020-21 Reading Assessment Performance Groups					
1-25	Below Average	2,511	56%	2,455	48%
26-50	Low Average	1,189	27%	1,609	31%
51-75	High Average	635	14%	880	17%
76-99	Above Average	137	3%	210	4%
1-99	All Students	4,472	100%	5,154	100%
District-Wide Spring 2020-21 Math Assessment Performance Groups					
1-25	Below Average	2,301	53%	2,151	42%
26-50	Low Average	1,233	28%	1,599	32%
51-75	High Average	652	15%	1,088	21%
76-99	Above Average	166	4%	253	5%
1-99	All Students	4,352	100%	5,091	100%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: This includes performance on aimswebPlus for grades K-5 and Star for grades 6-12.

How to read this table: This table presents the number and percentage of students in the analytic sample in each District-wide spring 2020-21 assessment performance group. The normal curve equivalent (NCE) ranges represent the range of NCE scores within each performance group. For example, a student with an NCE of 78 falls into Above Average group because their NCE is between the 76 and 99 range.

Demographic characteristics of the District-wide spring 2020-21 reading assessment performance groups by summer attendees and non-attendees

Black/African American students made up over 50% of the analytic sample who scored in the spring Below Average, Low Average, and High Average reading groups, but made up less than 50% of the Above Average reading group for both summer attendees and non-attendees (Table 3).

Economically disadvantaged students made up over 60% of the analytic sample who scored in the spring Below Average, Low Average, and High Average reading groups, but made up less than 60% of the Above Average reading group for both summer attendees and non-attendees.

Students with IEPs made up less than 30% of the analytic sample who scored in the spring Low Average, High Average, and Above Average reading groups, but made up 45%-49% of the Below Average reading group for both summer attendees and non-attendees.

Table 3. The demographic characteristics of the District-wide spring 2020-21 reading assessment performance groups by summer attendees and non-attendees

Demographics	Percentage of Each Spring 2020-21 Reading Assessment Performance Group Represented by Each Demographic Group							
	Summer Attendee				Summer Non-Attendee			
	Below Average	Low Average	High Average	Above Average	Below Average	Low Average	High Average	Above Average
Grade Level (includes entire analytic sample – attendees and non-attendees)								
1	10%	13%	11%	9%	8%	12%	9%	4%
2	12%	10%	11%	12%	11%	9%	10%	12%
3	9%	10%	16%	17%	8%	9%	13%	18%
4	10%	11%	11%	9%	9%	9%	10%	10%
5	9%	10%	14%	21%	8%	8%	16%	18%
6	7%	11%	14%	26%	6%	8%	12%	24%
7	10%	6%	5%	0%	9%	5%	5%	1%
8	7%	5%	3%	2%	6%	6%	3%	1%
9	5%	3%	3%	1%	4%	4%	3%	1%
10	10%	9%	6%	2%	13%	13%	8%	3%
11	7%	7%	4%	0%	9%	11%	8%	4%
12	5%	4%	2%	1%	6%	7%	4%	4%
Race/Ethnicity								
Asian	5%	11%	17%	22%	5%	10%	15%	13%
Black/African American	60%	61%	52%	47%	61%	59%	52%	41%
Hispanic/Latinx	22%	14%	12%	5%	23%	18%	14%	11%
Multi-Racial/Other	4%	5%	3%	6%	4%	4%	5%	4%
White	9%	10%	16%	20%	7%	10%	15%	31%
Gender								
Female	40%	46%	49%	55%	42%	46%	46%	45%
Male	60%	54%	51%	45%	58%	54%	54%	55%
Economic Disadvantage Status								
Econ. Disadvantaged	79%	72%	65%	47%	83%	79%	72%	54%
Non-Econ. Disadvantaged	21%	28%	35%	53%	17%	21%	28%	46%
Special Education Status								
Has IEP	49%	20%	13%	7%	45%	21%	16%	14%
Does not have IEP	51%	80%	87%	93%	55%	79%	84%	86%
English Learner Status								
EL	16%	12%	10%	6%	17%	12%	9%	5%
Non-EL	84%	88%	90%	94%	83%	88%	91%	95%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: See Table B2 for numbers of students in each cell.

How to read this table: The percentages in each column under each demographic header sum to 100%. For example, 49% of *Summer Attendees* who scored in the *Below Average* group on Spring 2020-21 Assessments had an IEP while 51% did not have an IEP.

Black/African American students made up over 60% of the analytic sample who scored in the spring Below Average and Low Average math groups, but made up less than 40% of the Above Average reading group for both summer attendees and non-attendees (Table 4).

Students with IEPs made up less than 30% of the analytic sample who scored in the spring Low Average, High Average, and Above Average math groups, but made up 50%-51% of the Below Average reading group for both summer attendees and non-attendees.

Table 4. The demographic characteristics of the District-wide spring 2020-21 math assessment performance groups by summer attendees and non-attendees

Demographics	Percentage of Each Spring 2020-21 Math Assessment Performance Group Represented by Each Demographic Group							
	Summer Attendee				Summer Non-Attendee			
	Below Average	Low Average	High Average	Above Average	Below Average	Low Average	High Average	Above Average
Grade Level (includes entire analytic sample – attendees and non-attendees)								
1	7%	13%	15%	21%	6%	11%	12%	15%
2	11%	10%	14%	11%	10%	9%	11%	9%
3	10%	12%	12%	14%	7%	12%	10%	13%
4	12%	10%	7%	8%	13%	8%	6%	6%
5	13%	10%	8%	5%	13%	9%	5%	8%
6	9%	12%	7%	12%	9%	11%	6%	11%
7	9%	7%	6%	7%	9%	6%	5%	4%
8	6%	4%	5%	5%	6%	5%	5%	4%
9	4%	3%	4%	5%	4%	4%	4%	3%
10	9%	8%	12%	5%	10%	12%	16%	8%
11	5%	6%	7%	4%	8%	8%	13%	13%
12	3%	4%	5%	2%	4%	6%	7%	6%
Race/Ethnicity								
Asian	4%	9%	20%	39%	3%	8%	15%	30%
Black/African American	64%	58%	47%	31%	66%	60%	49%	33%
Hispanic/Latinx	20%	16%	13%	10%	22%	18%	17%	10%
Multi-Racial/Other	4%	4%	5%	5%	3%	4%	5%	6%
White	7%	13%	15%	16%	6%	10%	15%	21%
Gender								
Female	41%	45%	43%	42%	43%	44%	46%	43%
Male	59%	55%	57%	58%	57%	56%	54%	57%
Economic Disadvantage Status								
Econ. Disadvantaged	80%	71%	63%	61%	84%	78%	70%	62%
Non-Econ. Disadvantaged	20%	29%	37%	39%	16%	22%	30%	38%
Special Education Status								
Has IEP	51%	22%	10%	8%	50%	23%	14%	9%
Does not have IEP	49%	78%	90%	92%	50%	77%	86%	91%
English Learner Status								
EL	14%	14%	15%	11%	14%	14%	12%	10%
Non-EL	86%	86%	85%	89%	86%	86%	88%	90%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: See Table B3 for numbers of students in each cell.

Results

A similar percentage of summer program attendees and non-attendees performed in the High Average and Above Average fall Star Reading and Math groups by spring 2020-21 reading assessment or math assessment performance

For students who performed in the Below Average group on the spring 2020-21 reading assessment, 1% of summer program attendees and fewer than 1% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star Reading (Table 5). In comparison, for students who performed in the Low Average group on the spring 2020-21 reading assessment, 13% of summer program attendees and 12% of students who did not attend summer programming scored in the High Average or Above Average NCE performance groups on fall Star Reading. Further, for students who performed in the High Average group on the spring 2020-21 reading assessment, 51% of summer program attendees and 48% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star Reading. Finally, for students who performed in the Above Average group on the spring 2020-21 reading assessment, 75% of summer program attendees and 78% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star.

Overall, although there were differences in the percentage of students in fall performance groups by spring performance group, the differences between summer program attendees and non-attendees were rather small.

Table 5. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group

Spring 2020-21 Performance Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
		Below Average	Low Average	High Average	Above Average
Below Average	Summer Attendee (n = 2511)	86%	13%	1%	0%
	Non-Attendee (n = 2455)	81%	18%	0%	0%
Low Average	Summer Attendee (n = 1189)	33%	54%	12%	1%
	Non-Attendee (n = 1609)	28%	60%	11%	1%
High Average	Summer Attendee (n = 635)	14%	34%	44%	7%
	Non-Attendee (n = 880)	11%	42%	42%	6%
Above Average	Summer Attendee (n = 137)	6%	20%	45%	30%
	Non-Attendee (n = 210)	5%	17%	45%	33%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: Generally, adding rows of cells should sum to 100%; due to rounding, cells may add to 99% or 101%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students should not be considered for interpretation due to extremely small sample size. See Appendix C, Table C1 for average NCE scores for each group.

For students who performed in the Below Average group on the spring 2020-21 math assessment, 1% of summer program attendees and 2% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star Math (Table 6). Additionally, for students who performed in the Low Average group on the spring 2020-21 math assessment, 15% of summer program attendees scored and 12% of non-attendees in the High Average or Above Average NCE performance groups on fall Star Math. Moreover, of all for students who performed in the High Average group on the spring 2020-21 math assessment, 52% of summer program attendees and 54% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star Math. Finally, of all for students who performed in the Above Average group on the spring 2020-21 math assessment, 78% of summer program attendees and 85% of non-attendees scored in the High Average or Above Average NCE performance groups on fall Star Math.

Overall, although there were differences in the percentage of students in fall performance groups by spring performance group, the differences between summer program attendees and non-attendees were rather small. The largest difference was in the population of students who performed in the Above Average group on the spring 2020-21 math assessment; however, this difference of seven percentage points between students who attended summer programming and the matched sample of students who did not attend summer programming should be interpreted with caution due to the small sample size.

Table 6. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group

Spring 2020-21 Performance Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
		Below Average	Low Average	High Average	Above Average
Below Average	Summer Attendee (n = 2301)	83%	16%	1%	0%
	Non-Attendee (n = 2151)	79%	19%	2%	0%
Low Average	Summer Attendee (n = 1233)	37%	48%	14%	1%
	Non-Attendee (n = 1599)	33%	55%	12%	0%
High Average	Summer Attendee (n = 652)	12%	37%	46%	6%
	Non-Attendee (n = 1088)	10%	36%	50%	4%
Above Average	Summer Attendee (n = 166)	7%	15%	45%	33%
	Non-Attendee (n = 253)	5%	10%	50%	35%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: Generally, adding rows of cells should sum to 100%; due to rounding, cells may add to 99% or 101%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students should not be considered for interpretation due to extremely small sample size. See Appendix C, Table C1 for average NCE scores for each group.

There was quite a bit of variation in the percentage of students who scored in the High Average and Above Average fall Star performance groups by summer program attendee status and student race/ethnicity.

The percentage of students within each racial/ethnic student group who performed in the Below Average performance group on the spring 2020-21 reading assessment and later scored in the High Average or Above Average fall Star Reading NCE performance groups differed by zero to three points by whether they attended summer programming or not (Table 7).

For students who performed in the Low Average group on the spring 2020-21 reading assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. There was a 12-percentage point difference for Multi-Racial/Other students, with a higher percentage of summer program attendees scoring in the High Average or Above Average fall Star Reading NCE performance groups than non-attendees. The difference by summer program attendee status was smaller for Black/African American students, Hispanic/Latinx students, White students, and Asian students.

Additionally, for students who performed in the High Average group on the spring 2020-21 reading assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. The percentage of Asian students and Hispanic/Latinx students who scored in the High Average or Above Average fall Star Reading NCE performance groups was 10 to 12 points higher for summer program attendees than non-attendees. In comparison, the percentage of Multi-Racial/Other students scoring in the High Average or Above Average fall Star Reading NCE performance groups was 12 points lower for summer program attendees than non-attendees. The difference by summer program attendee status was smaller for Black/African American students and White students.

Finally, for students who performed in the Above Average group on the spring 2020-21 reading assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. The percentage of White students who scored in the High Average or Above Average fall Star Reading NCE performance groups was three points lower for summer program attendees than non-attendees, and the percentage of Black/African American students who scored in the High Average or Above Average fall Star Reading NCE performance groups was 12 points lower for summer program attendees than non-attendees.

Table 7. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and student race/ethnicity

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Asian	Summer Attendee (n = 135)	79%	19%	2%	N/A
		Non-Attendee (n = 133)	69%	31%	N/A	N/A
	Black/African American	Summer Attendee (n = 1512)	86%	13%	1%	N/A
		Non-Attendee (n = 1497)	81%	18%	N/A	0%
	Hispanic/Latinx	Summer Attendee (n = 542)	89%	11%	1%	N/A
		Non-Attendee (n = 567)	85%	14%	0%	N/A
	Multi-Racial/Other	Summer Attendee (n = 102)	85%	14%	1%	N/A
		Non-Attendee (n = 90)	79%	19%	2%	N/A
Low Average	Asian	Summer Attendee (n = 220)	82%	14%	5%	N/A
		Non-Attendee (n = 168)	78%	20%	1%	1%
	Black/African American	Summer Attendee (n = 129)	29%	55%	15%	1%
		Non-Attendee (n = 156)	24%	60%	13%	3%
	Black/African American	Summer Attendee (n = 723)	34%	54%	11%	1%
		Non-Attendee (n = 955)	29%	61%	10%	0%
	Hispanic/Latinx	Summer Attendee (n = 161)	34%	59%	6%	1%
		Non-Attendee (n = 287)	30%	58%	11%	N/A
High Average	Multi-Racial/Other	Summer Attendee (n = 54)	31%	44%	22%	2%
		Non-Attendee (n = 57)	23%	65%	12%	N/A
	White	Summer Attendee (n = 122)	30%	51%	17%	2%
		Non-Attendee (n = 154)	26%	56%	16%	2%
	Asian	Summer Attendee (n = 106)	6%	30%	52%	12%
		Non-Attendee (n = 128)	4%	44%	45%	8%
	Black/African American	Summer Attendee (n = 333)	18%	37%	41%	4%
		Non-Attendee (n = 458)	14%	44%	38%	5%
Above Average	Hispanic/Latinx	Summer Attendee (n = 74)	16%	30%	51%	3%
		Non-Attendee (n = 122)	11%	45%	40%	4%
	Multi-Racial/Other	Summer Attendee (n = 22)	14%	41%	36%	9%
		Non-Attendee (n = 40)	8%	35%	50%	8%
	White	Summer Attendee (n = 100)	11%	32%	43%	14%
		Non-Attendee (n = 132)	7%	32%	52%	10%
	Asian	Summer Attendee (n = 30)	N/A	17%	37%	47%
		Non-Attendee (n = 28)	N/A	18%	54%	29%
	Black/African American	Summer Attendee (n = 65)	9%	26%	45%	20%
		Non-Attendee (n = 86)	3%	20%	47%	30%
	White	Summer Attendee (n = 27)	4%	11%	41%	44%
		Non-Attendee (n = 65)	5%	8%	45%	43%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C2 for average NCE scores.

For students who performed in the Below Average group on the spring 2020-21 math assessment, the percentage of students who scored in the High Average or Above Average fall 2021-22 Star Math NCE performance groups differed by zero to one point within all race/ethnicity student groups between summer program attendees and non-attendees (Table 8).

For students who performed in the Low Average group on the spring 2020-21 math assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. The percentage of Asian students, Hispanic/Latinx, and Multi-Racial/Other students who scored in the High Average or Above Average fall Star Math NCE performance groups was four to eight points higher for summer program attendees than non-attendees. In comparison, the percentage of Black/African American students and White students who scored the High Average or Above Average fall Star Math NCE performance groups differed one point by summer program attendance status.

Additionally, for students who performed in the High Average group on the spring 2020-21 math assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. The percentage of Multi-Racial/Other students who scored in the High Average or Above Average fall Star Math NCE performance groups was 19 points higher for summer program attendees than non-attendees, although the findings should be interpreted with caution due to the small sample size. In comparison, the percentage of Black/African American students and White students who scored in the High Average or Above Average fall Star Math NCE performance groups was five to eight points lower for summer program attendees than non-attendees.

Furthermore, for students who performed in the Above Average group on the spring 2020-21 math assessment, there were different performance patterns by summer program attendance status within each racial/ethnic student group. The percentage of Black/African American students who scored in the High Average or Above Average fall Star Math NCE performance groups was seven points lower for summer program attendees scoring than non-attendees, and the percentage of White students who scored in the High Average or Above Average fall Star Math NCE performance groups was 12 points lower for summer program attendees scoring than non-attendees.

Table 8. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and student race/ethnicity

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Asian	Summer Attendee (n = 91)	63%	29%	9%	N/A
		Non-Attendee (n = 63)	60%	30%	10%	N/A
	Black/African American	Summer Attendee (n = 1483)	84%	15%	N/A	0%
		Non-Attendee (n = 1427)	80%	18%	1%	N/A
	Hispanic/ Latinx	Summer Attendee (n = 464)	87%	12%	1%	N/A
		Non-Attendee (n = 464)	81%	18%	1%	N/A
	Multi- Racial/Other	Summer Attendee (n = 92)	78%	20%	2%	N/A
		Non-Attendee (n = 64)	73%	23%	3%	N/A
	White	Summer Attendee (n = 171)	73%	25%	1%	1%
		Non-Attendee (n = 133)	74%	23%	2%	1%
Low Average	Asian	Summer Attendee (n = 107)	18%	55%	24%	3%
		Non-Attendee (n = 129)	15%	63%	21%	2%
	Black/African American	Summer Attendee (n = 711)	41%	48%	11%	0%
		Non-Attendee (n = 958)	36%	54%	10%	0%
	Hispanic/ Latinx	Summer Attendee (n = 202)	41%	45%	15%	N/A
		Non-Attendee (n = 286)	37%	54%	9%	0%
	Multi- Racial/Other	Summer Attendee (n = 54)	28%	56%	17%	N/A
		Non-Attendee (n = 66)	26%	65%	9%	N/A
	White	Summer Attendee (n = 159)	35%	48%	16%	1%
		Non-Attendee (n = 160)	30%	52%	18%	N/A
High Average	Asian	Summer Attendee (n = 131)	6%	23%	57%	14%
		Non-Attendee (n = 166)	2%	30%	55%	13%
	Black/African American	Summer Attendee (n = 306)	15%	42%	39%	4%
		Non-Attendee (n = 530)	12%	37%	49%	2%
	Hispanic/ Latinx	Summer Attendee (n = 85)	9%	40%	51%	N/A
		Non-Attendee (n = 180)	10%	40%	49%	1%
	Multi- Racial/Other	Summer Attendee (n = 33)	6%	27%	58%	9%
		Non-Attendee (n = 50)	16%	36%	44%	4%
	White	Summer Attendee (n = 97)	11%	40%	41%	7%
		Non-Attendee (n = 162)	10%	36%	50%	4%
Above Average	Asian	Summer Attendee (n = 64)	N/A	9%	44%	47%
		Non-Attendee (n = 76)	N/A	9%	47%	43%
	Black/African American	Summer Attendee (n = 51)	12%	20%	53%	16%
		Non-Attendee (n = 83)	8%	16%	54%	22%
	White	Summer Attendee (n = 26)	8%	15%	38%	38%
		Non-Attendee (n = 54)	6%	6%	43%	46%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C3 for average NCE scores.

A similar percentage of summer program attendees and non-attendees performed in the High Average and Above Average fall Star performance groups by spring 2020-21 reading assessment or math assessment performance and by gender group. An exception was male summer program attendees in the High Average group on the spring 2020-21 reading and math assessments; a higher percentage scored in the High Average and Above Average fall Star Reading and Math performance groups than non-attendees.

Of all students who performed in the Below Average group or the Low Average group on the spring 2020-21 reading assessment, the percentage of male and female students who scored in the High Average or Above Average fall Star Reading NCE performance groups differed by one to two points depending on summer program attendance status (Table 9).

The percentage of female students who performed in the High Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups did not differ by summer program attendance status. In comparison, the percentage of male students who scored in the High Average or Above Average fall Star Reading NCE performance groups was seven points higher for summer program attendees than non-attendees.

Additionally, the percentage of female students who performed in the Above Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups was seven points lower for summer program attendees than non-attendees. In comparison, the percentage of male students who scored in the High Average or Above Average fall Star Reading NCE performance groups was two points higher for summer program attendees than non-attendees.

Table 9. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and student gender

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Female	Summer Attendee (n = 996)	85%	15%	1%	N/A
		Non-Attendee (n = 1027)	79%	20%	0%	0%
	Male	Summer Attendee (n = 1515)	87%	12%	2%	0%
		Non-Attendee (n = 1428)	83%	17%	0%	0%
Low Average	Female	Summer Attendee (n = 549)	30%	57%	13%	0%
		Non-Attendee (n = 744)	25%	64%	11%	1%
	Male	Summer Attendee (n = 640)	35%	52%	12%	2%
		Non-Attendee (n = 865)	32%	56%	12%	0%
High Average	Female	Summer Attendee (n = 309)	13%	35%	47%	6%
		Non-Attendee (n = 409)	7%	40%	47%	6%
	Male	Summer Attendee (n = 326)	16%	34%	42%	8%
		Non-Attendee (n = 471)	14%	43%	37%	6%
Above Average	Female	Summer Attendee (n = 76)	7%	20%	38%	36%
		Non-Attendee (n = 94)	3%	16%	48%	33%
	Male	Summer Attendee (n = 61)	5%	20%	52%	23%
		Non-Attendee (n = 116)	6%	17%	43%	34%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C4 for average NCE scores.

The percentage of female and male students who performed in the Below Average group and the Low Average group on the spring 2020-21 math assessment and then scored in the High Average or Above Average fall Star Math NCE performance groups differed by zero to one point by summer program attendance status (Table 10).

The percentage of female students who performed in the High Average group or the Above Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups was nine to 11 points lower for summer program attendees than non-attendees. In comparison, the percentage of male students who scored in the High Average or Above Average fall Star Math NCE performance groups was three to four points higher for summer program attendees than non-attendees.

Table 10. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and student gender

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Female	Summer Attendee (n = 939)	85%	14%	1%	0%
		Non-Attendee (n = 927)	82%	17%	1%	N/A
	Male	Summer Attendee (n = 1362)	82%	17%	1%	0%
		Non-Attendee (n = 1224)	78%	20%	2%	0%
Low Average	Female	Summer Attendee (n = 554)	38%	47%	13%	1%
		Non-Attendee (n = 709)	35%	55%	10%	0%
	Male	Summer Attendee (n = 679)	37%	49%	14%	0%
		Non-Attendee (n = 890)	32%	54%	13%	1%
High Average	Female	Summer Attendee (n = 283)	13%	42%	42%	2%
		Non-Attendee (n = 499)	9%	38%	50%	3%
	Male	Summer Attendee (n = 369)	11%	33%	48%	9%
		Non-Attendee (n = 589)	11%	34%	49%	5%
Above Average	Female	Summer Attendee (n = 70)	7%	19%	43%	31%
		Non-Attendee (n = 109)	5%	11%	57%	28%
	Male	Summer Attendee (n = 96)	6%	13%	47%	34%
		Non-Attendee (n = 144)	6%	9%	45%	40%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C5 for average NCE scores.

A similar percentage of summer program attendees and non-attendees performed in the High Average and Above Average fall Star performance groups by spring 2020-21 reading assessment or math assessment performance and by economic disadvantaged status. An exception was summer program attendees in the Above Average group on the spring 2020-21 reading and math assessments; a lower percentage scored in the High Average and Above Average fall Star Reading and Math performance groups than non-attendees.

The percentage of economically disadvantaged students who performed in the Below Average group, the Low Average group, or the High Average group on the spring 2020-21 reading assessment and later scored in the High Average or Above Average fall Star Reading NCE performance groups differed by one point by summer program attendee status (Table 11).

The percentage of economically disadvantaged and non-economically disadvantaged students who performed in the Above Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups was five points lower for summer program attendees than non-attendees (Figure 50).

Table 11. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and economically disadvantaged status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Econ. Disadvantaged	Summer Attendee (n = 1974)	87%	12%	1%	N/A
		Non-Attendee (n = 2032)	82%	17%	N/A	0%
	Non-Econ. Disadvantaged	Summer Attendee (n = 537)	83%	15%	2%	0%
		Non-Attendee (n = 423)	78%	22%	1%	0%
Low Average	Econ. Disadvantaged	Summer Attendee (n = 854)	35%	54%	10%	1%
		Non-Attendee (n = 1264)	30%	60%	10%	0%
	Non-Econ. Disadvantaged	Summer Attendee (n = 335)	27%	55%	17%	1%
		Non-Attendee (n = 345)	21%	60%	16%	2%
High Average	Econ. Disadvantaged	Summer Attendee (n = 414)	19%	36%	40%	5%
		Non-Attendee (n = 631)	12%	43%	41%	3%
	Non-Econ. Disadvantaged	Summer Attendee (n = 221)	7%	31%	52%	10%
		Non-Attendee (n = 249)	6%	38%	43%	12%
Above Average	Econ. Disadvantaged	Summer Attendee (n = 64)	9%	22%	42%	27%
		Non-Attendee (n = 114)	8%	18%	49%	25%
	Non-Econ. Disadvantaged	Summer Attendee (n = 73)	3%	18%	47%	33%
		Non-Attendee (n = 96)	1%	15%	41%	44%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C6 for average NCE scores.

The percentage of economically disadvantaged students who performed in the Below Average group, the Low Average group, or the High Average group on the spring 2020-21 math assessment and later scored in the High Average or Above Average fall Star Math NCE performance groups differed by less than one to three points by summer program attendance status (Table 12).

The percentage of economically disadvantaged and non-economically disadvantaged students who performed in the Above Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups was seven points lower for summer program attendees than non-attendees.

Table 12. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and economically disadvantaged status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Econ. Disadvantaged	Summer Attendee (n = 1849)	84%	15%	1%	0%
		Non-Attendee (n = 1797)	81%	18%	1%	N/A
	Non-Econ. Disadvantaged	Summer Attendee (n = 452)	78%	20%	2%	0%
		Non-Attendee (n = 354)	72%	25%	3%	0%
Low Average	Econ. Disadvantaged	Summer Attendee (n = 872)	39%	48%	12%	1%
		Non-Attendee (n = 1254)	35%	53%	11%	1%
	Non-Econ. Disadvantaged	Summer Attendee (n = 361)	32%	50%	17%	1%
		Non-Attendee (n = 345)	26%	61%	13%	N/A
High Average	Econ. Disadvantaged	Summer Attendee (n = 413)	13%	37%	43%	6%
		Non-Attendee (n = 763)	11%	37%	49%	3%
	Non-Econ. Disadvantaged	Summer Attendee (n = 239)	9%	36%	49%	5%
		Non-Attendee (n = 325)	8%	33%	52%	6%
Above Average	Econ. Disadvantaged	Summer Attendee (n = 101)	9%	16%	47%	29%
		Non-Attendee (n = 157)	4%	13%	54%	29%
	Non-Econ. Disadvantaged	Summer Attendee (n = 65)	3%	14%	43%	40%
		Non-Attendee (n = 96)	6%	4%	45%	45%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C7 for average NCE scores.

A similar percentage of summer program attendees and non-attendees performed in the High Average and Above Average fall Star performance groups by spring 2020-21 reading assessment or math assessment performance and by Special Education status. An exception was summer program attendees in the High Average group on the spring 2020-21 reading and math assessments; a lower percentage scored in the High Average and Above Average fall Star Reading and Math performance groups than non-attendees.

The percentage of students with an IEP who performed in the Below Average group on the spring 2020-21 reading assessment and later scored in the High Average or Above Average fall Star Reading NCE performance groups differed by one or less than one point by summer program attendance status (Table 13).

The percentage of students with an IEP who performed in the High Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups was 10 points lower for summer program attendees than non-attendees. This difference was not found for students without an IEP.

Table 13. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and special education status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Has IEP	Summer Attendee (n = 1221)	93%	6%	0%	0%
		Non-Attendee (n = 1098)	90%	10%	N/A	0%
	Does not have IEP	Summer Attendee (n = 1290)	79%	19%	2%	N/A
		Non-Attendee (n = 1357)	75%	25%	1%	0%
Low Average	Has IEP	Summer Attendee (n = 234)	48%	47%	5%	0%
		Non-Attendee (n = 335)	49%	45%	6%	0%
	Does not have IEP	Summer Attendee (n = 955)	29%	56%	14%	1%
		Non-Attendee (n = 1274)	23%	64%	13%	1%
High Average	Has IEP	Summer Attendee (n = 85)	41%	40%	14%	5%
		Non-Attendee (n = 140)	32%	39%	24%	5%
	Does not have IEP	Summer Attendee (n = 550)	10%	33%	49%	7%
		Non-Attendee (n = 740)	6%	42%	45%	6%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C8 for average NCE scores.

The percentage of students with an IEP who performed in the Below Average group, the Low Average group, or the High Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance differed by one or less than one point by summer program attendance status (Table 14).

Table 14. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and special education status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	Has IEP	Summer Attendee (n = 1171)	92%	7%	0%	N/A
		Non-Attendee (n = 1067)	87%	12%	0%	0%
	Does not have IEP	Summer Attendee (n = 1130)	73%	25%	2%	0%
		Non-Attendee (n = 1084)	71%	26%	3%	0%
Low Average	Has IEP	Summer Attendee (n = 274)	50%	39%	9%	1%
		Non-Attendee (n = 365)	43%	47%	9%	1%
	Does not have IEP	Summer Attendee (n = 959)	34%	51%	15%	1%
		Non-Attendee (n = 1234)	30%	57%	12%	0%
High Average	Has IEP	Summer Attendee (n = 66)	23%	41%	35%	2%
		Non-Attendee (n = 149)	22%	42%	32%	4%
	Does not have IEP	Summer Attendee (n = 586)	10%	36%	47%	6%
		Non-Attendee (n = 939)	8%	35%	53%	4%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C9 for average NCE scores.

A similar percentage of summer program attendees and non-attendees performed in the High Average and Above Average fall Star performance groups by spring 2020-21 reading assessment or math assessment performance and by EL status. An exception was summer program attendees in the High Average group on the spring 2020-21 reading assessment; a lower percentage scored in the High Average and Above Average fall Star Reading performance group than non-attendees.

The percentage of ELs who performed in the Below Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups differed by one or fewer points by summer program attendance status (Table 15).

The percentage of ELs who performed in the High Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups was five points lower for summer program attendees than non-attendees.

Table 15. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and English Learner (EL) status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	EL	Summer Attendee (n = 411)	91%	9%	0%	N/A
		Non-Attendee (n = 427)	84%	16%	N/A	0%
	Non-EL	Summer Attendee (n = 2100)	85%	14%	1%	0%
		Non-Attendee (n = 2028)	81%	19%	1%	0%
Low Average	EL	Summer Attendee (n = 137)	39%	53%	8%	N/A
		Non-Attendee (n = 196)	35%	57%	8%	1%
	Non-EL	Summer Attendee (n = 1052)	32%	54%	13%	1%
		Non-Attendee (n = 1413)	28%	60%	12%	1%
High Average	EL	Summer Attendee (n = 62)	19%	45%	32%	3%
		Non-Attendee (n = 77)	10%	49%	39%	1%
	Non-EL	Summer Attendee (n = 573)	14%	33%	46%	7%
		Non-Attendee (n = 803)	11%	41%	42%	6%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C10 for average NCE scores.

The percentage of ELs who performed in the Below Average group, the Low Average group. Or the High Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups differed by three or fewer points favoring summer program attendees (Table 16).

Table 16. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and English Learner (EL) status

Spring 2020-21 Performance Group	Student Group	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	EL	Summer Attendee (n = 332)	79%	19%	2%	N/A
		Non-Attendee (n = 305)	77%	21%	2%	N/A
	Non-EL	Summer Attendee (n = 1969)	84%	15%	1%	0%
		Non-Attendee (n = 1846)	80%	19%	2%	0%
Low Average	EL	Summer Attendee (n = 173)	32%	49%	17%	1%
		Non-Attendee (n = 229)	32%	59%	14%	1%
	Non-EL	Summer Attendee (n = 1060)	38%	48%	13%	0%
		Non-Attendee (n = 1370)	35%	54%	11%	0%
High Average	EL	Summer Attendee (n = 96)	13%	33%	46%	8%
		Non-Attendee (n = 132)	8%	36%	50%	5%
	Non-EL	Summer Attendee (n = 556)	12%	37%	46%	6%
		Non-Attendee (n = 956)	10%	36%	50%	4%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C11 for average NCE scores.

There was quite a bit of variation in the percentage of students who scored in the High Average and Above Average fall Star performance groups by summer program attendee status and grade level.

The percentage of students who performed in the Below Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups differed by two or fewer points by summer program attendance status (Table 17).

The percentage of students who performed in the Low Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups differed by four or fewer points by summer program attendance status, except for 3rd grade, 8th grade, and 12th grade, as in those grades seven to eight percentage points more summer program attendees scored in the High Average or Above Average fall Star Reading NCE performance groups than non-attendees.

The percentage of students who performed in the High Average group on the spring 2020-21 reading assessment and scored in the High Average or Above Average fall Star Reading NCE performance groups differed by four or fewer points by summer program attendance status, except for 4th grade, 5th grade, 9th grade and 10th grade. In 4th grade, 9th grade and 10th grade 10 to 40 percentage points more summer program attendees scored in the High Average or Above Average fall Star Reading NCE performance groups than non-attendees. In comparison, in 5th grade five percentage points fewer summer program attendees scored in the High Average or Above Average fall Star Reading NCE performance groups than non-attendees.

Table 17. The percentage of students who performed in the NCE groups on fall 2021-22 Star Reading by spring 2020-21 performance group and grade level

Spring 2020-21 Performance Group	Grade Level	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	1	Summer Attendee (n = 247)	66%	28%	5%	0%
		Non-Attendee (n = 207)	61%	36%	3%	0%
	2	Summer Attendee (n = 311)	88%	10%	2%	N/A
		Non-Attendee (n = 278)	85%	14%	0%	0%
	3	Summer Attendee (n = 235)	87%	12%	0%	N/A
		Non-Attendee (n = 190)	82%	17%	1%	N/A
	4	Summer Attendee (n = 255)	88%	12%	N/A	N/A
		Non-Attendee (n = 232)	85%	15%	N/A	N/A
	5	Summer Attendee (n = 225)	89%	10%	1%	N/A
		Non-Attendee (n = 206)	88%	12%	N/A	N/A
	6	Summer Attendee (n = 168)	97%	3%	N/A	N/A
		Non-Attendee (n = 157)	96%	4%	N/A	N/A
	7	Summer Attendee (n = 243)	83%	15%	2%	N/A
		Non-Attendee (n = 223)	78%	22%	0%	N/A
	8	Summer Attendee (n = 164)	88%	11%	1%	N/A
		Non-Attendee (n = 154)	82%	18%	N/A	N/A
	9	Summer Attendee (n = 117)	90%	9%	1%	N/A
		Non-Attendee (n = 108)	83%	17%	N/A	N/A
	10	Summer Attendee (n = 249)	86%	14%	0%	N/A
		Non-Attendee (n = 321)	80%	20%	0%	N/A
	11	Summer Attendee (n = 184)	88%	11%	1%	N/A
		Non-Attendee (n = 232)	79%	21%	N/A	N/A
	12	Summer Attendee (n = 113)	88%	12%	N/A	N/A
		Non-Attendee (n = 147)	81%	19%	N/A	N/A
Low Average	1	Summer Attendee (n = 149)	28%	45%	21%	6%
		Non-Attendee (n = 189)	22%	49%	24%	5%
	2	Summer Attendee (n = 122)	35%	56%	8%	1%
		Non-Attendee (n = 142)	33%	58%	9%	N/A
	3	Summer Attendee (n = 122)	39%	48%	13%	N/A
		Non-Attendee (n = 143)	35%	59%	6%	N/A
	4	Summer Attendee (n = 131)	23%	57%	20%	N/A
		Non-Attendee (n = 149)	30%	54%	17%	N/A
	5	Summer Attendee (n = 123)	48%	49%	3%	N/A
		Non-Attendee (n = 121)	44%	53%	3%	N/A
	6	Summer Attendee (n = 127)	55%	43%	2%	N/A
		Non-Attendee (n = 127)	57%	39%	4%	N/A
	7	Summer Attendee (n = 77)	29%	60%	10%	1%
		Non-Attendee (n = 88)	17%	69%	14%	N/A

Spring 2020-21 Performance Group	Grade Level	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
	8	Summer Attendee (n = 59)	20%	63%	17%	N/A
		Non-Attendee (n = 98)	28%	63%	9%	N/A
	9	Summer Attendee (n = 34)	15%	79%	6%	N/A
		Non-Attendee (n = 63)	24%	68%	8%	N/A
	10	Summer Attendee (n = 110)	30%	53%	17%	N/A
		Non-Attendee (n = 212)	19%	66%	15%	N/A
	11	Summer Attendee (n = 83)	18%	72%	10%	N/A
		Non-Attendee (n = 172)	18%	76%	6%	N/A
	12	Summer Attendee (n = 52)	23%	60%	17%	N/A
		Non-Attendee (n = 105)	20%	70%	10%	N/A
High Average	1	Summer Attendee (n = 73)	5%	30%	48%	16%
		Non-Attendee (n = 79)	9%	29%	49%	13%
	2	Summer Attendee (n = 73)	12%	40%	40%	8%
		Non-Attendee (n = 89)	11%	40%	31%	17%
	3	Summer Attendee (n = 101)	18%	32%	44%	7%
		Non-Attendee (n = 118)	16%	36%	39%	9%
	4	Summer Attendee (n = 69)	17%	26%	45%	12%
		Non-Attendee (n = 84)	15%	42%	37%	6%
	5	Summer Attendee (n = 87)	26%	48%	23%	2%
		Non-Attendee (n = 144)	16%	53%	30%	1%
	6	Summer Attendee (n = 86)	28%	47%	23%	2%
		Non-Attendee (n = 106)	18%	54%	28%	N/A
	7	Summer Attendee (n = 29)	3%	28%	66%	3%
		Non-Attendee (n = 43)	N/A	28%	67%	5%
	9	Summer Attendee (n = 22)	N/A	18%	82%	N/A
		Non-Attendee (n = 24)	N/A	58%	42%	N/A
	10	Summer Attendee (n = 41)	N/A	22%	68%	10%
		Non-Attendee (n = 69)	1%	30%	62%	6%
	11	Summer Attendee (n = 24)	N/A	38%	63%	N/A
		Non-Attendee (n = 66)	2%	39%	56%	3%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C12 for average NCE scores.

The percentage of students who performed in the Below Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups differed by two or fewer points by summer program attendance status (Table 18).

The percentage of students who performed in the Low Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups differed by four or fewer points by summer program attendance status, except for 5th grade, 10th grade, and 11th grade, as in those grades five to six points more summer program attendees scored in the High Average or Above Average fall Star Math NCE performance groups than non-attendees.

The percentage of 2nd graders, 4th graders, 5th graders, and 6th graders who performed in the High Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups was seven to 10 points higher for summer program attendees compared to non-attendees. In comparison, the percentage of 1st graders, 10th graders, and 12th graders who performed in the High Average group on the spring 2020-21 math assessment and scored in the High Average or Above Average fall Star Math NCE performance groups was six to 14 points lower for summer program attendees compared to non-attendees.

Table 18. The percentage of students who performed in the NCE groups on fall 2021-22 Star Math by spring 2020-21 performance group and grade level

Spring 2020-21 Performance Group	Grade Level	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
Below Average	1	Summer Attendee (n = 172)	89%	10%	1%	1%
		Non-Attendee (n = 133)	90%	7%	3%	N/A
	2	Summer Attendee (n = 252)	88%	12%	0%	0%
		Non-Attendee (n = 221)	90%	9%	1%	N/A
	3	Summer Attendee (n = 239)	85%	14%	1%	N/A
		Non-Attendee (n = 160)	79%	19%	1%	N/A
	4	Summer Attendee (n = 268)	82%	16%	2%	0%
		Non-Attendee (n = 278)	76%	22%	3%	N/A
	5	Summer Attendee (n = 302)	84%	15%	0%	N/A
		Non-Attendee (n = 285)	83%	17%	0%	N/A
	6	Summer Attendee (n = 210)	85%	15%	0%	N/A
		Non-Attendee (n = 188)	88%	11%	1%	N/A
	7	Summer Attendee (n = 205)	81%	18%	N/A	0%
		Non-Attendee (n = 183)	75%	23%	2%	N/A
	8	Summer Attendee (n = 149)	83%	15%	1%	N/A
		Non-Attendee (n = 131)	76%	22%	2%	N/A
	9	Summer Attendee (n = 93)	89%	11%	N/A	N/A
		Non-Attendee (n = 93)	85%	15%	N/A	N/A
	10	Summer Attendee (n = 214)	66%	31%	3%	N/A
		Non-Attendee (n = 221)	65%	32%	3%	N/A
	11	Summer Attendee (n = 117)	85%	14%	2%	N/A
		Non-Attendee (n = 164)	71%	24%	4%	1%
	12	Summer Attendee (n = 80)	81%	19%	N/A	N/A
		Non-Attendee (n = 94)	78%	22%	N/A	N/A
Low Average	1	Summer Attendee (n = 162)	54%	35%	11%	1%
		Non-Attendee (n = 171)	57%	33%	9%	1%
	2	Summer Attendee (n = 127)	52%	41%	6%	1%
		Non-Attendee (n = 145)	47%	48%	5%	1%
	3	Summer Attendee (n = 149)	35%	45%	17%	3%
		Non-Attendee (n = 185)	33%	48%	18%	2%
	4	Summer Attendee (n = 126)	29%	50%	21%	N/A
		Non-Attendee (n = 127)	31%	51%	16%	2%
	5	Summer Attendee (n = 125)	42%	44%	14%	N/A
		Non-Attendee (n = 145)	30%	63%	8%	N/A
	6	Summer Attendee (n = 154)	47%	47%	6%	N/A
		Non-Attendee (n = 171)	41%	52%	7%	N/A
	7	Summer Attendee (n = 84)	20%	62%	18%	N/A
		Non-Attendee (n = 101)	23%	64%	13%	N/A

Spring 2020-21 Performance Group	Grade Level	Number of Students by Summer Program Status (n-count)	Percentage of Students Scoring in Each Fall 2021-22 Performance Group			
			Below Average	Low Average	High Average	Above Average
	8	Summer Attendee (n = 50)	24%	66%	10%	N/A
		Non-Attendee (n = 80)	24%	68%	9%	N/A
	9	Summer Attendee (n = 38)	24%	68%	8%	N/A
		Non-Attendee (n = 61)	33%	56%	11%	N/A
	10	Summer Attendee (n = 96)	18%	61%	21%	N/A
		Non-Attendee (n = 195)	16%	68%	15%	N/A
	11	Summer Attendee (n = 76)	38%	43%	18%	N/A
		Non-Attendee (n = 123)	28%	59%	13%	N/A
	12	Summer Attendee (n = 46)	24%	65%	11%	N/A
		Non-Attendee (n = 95)	24%	61%	15%	N/A
High Average	1	Summer Attendee (n = 96)	24%	48%	21%	7%
		Non-Attendee (n = 128)	20%	46%	30%	4%
	2	Summer Attendee (n = 90)	20%	47%	26%	8%
		Non-Attendee (n = 120)	23%	50%	24%	3%
	3	Summer Attendee (n = 75)	19%	24%	49%	8%
		Non-Attendee (n = 104)	14%	30%	50%	6%
	4	Summer Attendee (n = 46)	7%	24%	57%	13%
		Non-Attendee (n = 69)	9%	32%	48%	12%
	5	Summer Attendee (n = 52)	12%	23%	56%	10%
		Non-Attendee (n = 57)	12%	37%	47%	4%
	6	Summer Attendee (n = 43)	2%	44%	53%	N/A
		Non-Attendee (n = 69)	6%	49%	42%	3%
	7	Summer Attendee (n = 42)	7%	38%	52%	2%
		Non-Attendee (n = 58)	5%	38%	48%	9%
	8	Summer Attendee (n = 32)	6%	38%	53%	3%
		Non-Attendee (n = 50)	4%	40%	54%	2%
	9	Summer Attendee (n = 26)	4%	42%	50%	4%
		Non-Attendee (n = 44)	7%	39%	52%	2%
	10	Summer Attendee (n = 76)	1%	32%	61%	7%
		Non-Attendee (n = 173)	4%	22%	68%	6%
	11	Summer Attendee (n = 43)	9%	28%	63%	N/A
		Non-Attendee (n = 138)	4%	30%	66%	N/A
	12	Summer Attendee (n = 31)	N/A	55%	45%	N/A
		Non-Attendee (n = 78)	5%	36%	58%	1%

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A indicates that there are no students in a group. Due to rounding, cells with 0% can include as many as 24 students, and cells may add to 99% or 101% instead of 100%. Groups with fewer than 100 students should be interpreted with caution due to the smaller sample sizes. Groups with fewer than 20 students are excluded from the table due to extremely small sample size. See Appendix C, Table C13 for average NCE scores.

Appendix A: Propensity Score Matching

This addendum used propensity score matching (PSM; Austin, 2011; Rosenbaum & Rubin, 1983; Stuart, 2010) to study the effect of summer programming on 2021-22 fall academic screener performance. PSM is a method for examining the effect of a treatment (e.g., summer programming) on an outcome (e.g., fall academic performance) when random assignment is not feasible. PSM employs a statistical approach to form treatment and control groups that are balanced on measured characteristics (e.g., gender, race/ethnicity, socioeconomic status, etc.). After the groups are balanced, the average effect of the treatment can be estimated by comparing average performance on the outcomes between the two groups. By applying the PSM method, the influence of baseline differences between the treatment and control groups are reduced when estimating the treatment effect, although these differences may not necessarily be eliminated.¹⁴ In this analysis, the treatment refers to summer programming and the outcomes are fall academic screener reading and math performance. The term treatment group is used to describe students who were enrolled in summer programming, and control group is used to describe students who were enrolled in the 2020-21 and 2021-22 school years but did not attend summer programming.¹⁵

The PSM procedure operates as follows. First, a sample of students is obtained that includes both students who attended summer programming (the treatment group) and students who did not attend summer programming (pool of control students). A statistical model is applied in order to estimate a *propensity score* for each student: The propensity score indicates the probability that a given student would have been assigned to the treatment group and it is based on a set of variables that are included in the propensity score model; variables in the model should be related to either the treatment, the outcome(s), or both (Austin, 2011; Rosenbaum & Rubin, 1983; Stuart, 2010). After propensity scores are estimated, students from the pool of control students are matched to students in the treatment group using a matching algorithm; we employed nearest neighbor matching. This approach matches students who have the smallest difference in their propensity scores, where a good match would be a pair of students, one in the treatment and one in the pool of controls, who have equal propensity scores (Austin, 2011; Stuart, 2010). In the matching phase, the researcher can also apply various matching restrictions in order to obtain the desired match quality (Jacovidis et al., 2017). For example, a caliper can be applied which only allows matches that are within a certain range of propensity scores, or exact matching can be required on a subset of variables. The matching process concludes when all students in the treatment group are matched to a student from the pool of controls, the latter henceforth termed the control group.¹⁶ By matching on the propensity score, the students in the treatment and control groups are balanced on the

¹⁴ A randomized controlled trial (RCT), where District students are randomly assigned into a treatment (attending summer programming) and a control group (not attending summer programming) could potentially account for all differences in baseline characteristics, on average (Ho et al., 2007). However, an RCT may not always be feasible, and PSM is one approach for approximating the RCT design when the option of randomization is not available (Austin, 2011; Ho et al., 2007; Stuart, 2011).

¹⁵ Based on District data pulled from the Qlik Total Student Enrollment Yearly Report, accessed 10-xx-2021.

¹⁶ Depending on the matching requirements, not all students in the treatment group may have an acceptable match. This will result in students from the treatment group being removed from the sample.

characteristics included in the statistical model (Rosenbaum & Rubin, 1983; Stuart, 2010). After matching, match quality is evaluated using numerical and graphical summaries (Ho et al., 2011; Stuart, 2010).

The PSM approach assumes that all variables affecting enrollment in summer programming (treatment) and all variables related to fall academic screener scores (the outcomes) are included in the model used to estimate the propensity score (Austin 2011; Ho et al., 2007; Stuart, 2010). Key variables that are not included in the model will not be subject to the PSM procedure, therefore, the treatment and control groups may remain unbalanced with respect to those variables. As a result, existing baseline differences will persist when estimating the treatment effect.

In this study, the full sample was comprised of all students enrolled in the 2020-21 school year.¹⁷ To be eligible for the final analytical sample (i.e., matched group of students), we required that 1) students had to have both Star Reading and Math scores within the 2021-22 fall screening window (if a student had multiple scores for a subject, the best score was used), and 2) students in the treatment group had to have attended summer programming for at least one day. Table A1 presents the demographic characteristics for both full sample and the group of eligible students.

The group of eligible students well-represents the full population of students who did and did not attend summer programming (Table A1). This means that these students did not generally differ from students who were excluded from the sample due to not having taken District-wide assessments. For example, in both the full sample of students who attended summer programming and the group of eligible students who attended summer programming 60% of the sample was Black/African American, 75%-76% of the sample was economically disadvantaged, 13% were English Learners, and 37%-40% of the sample had an IEP.

¹⁷ Based on District data pulled from the Qlik Total Student Enrollment Yearly Report, data accessed on October 2021.

Table A1. Demographic characteristics for the full sample and sample of eligible students

Student Group	Full sample		Eligible students	
	Summer = 0	Summer = 1	Summer = 0	Summer = 1
Number of students	203,562	15,442	75,327	6,663
Gender				
Female	49%	40%	50%	42%
Male	51%	60%	50%	57%
Race/Ethnicity				
Asian/Pacific Islander	7%	6%	11%	8%
Black/African American	52%	60%	45%	60%
Hispanic/Latinx	21%	21%	23%	19%
Multi-Racial/Other	14%	5%	5%	4%
White	6%	9%	16%	10%
Socio-Economic Status				
Econ. Disadvantaged	40%	76%	69%	75%
Non-Econ. Disadvantaged	60%	24%	31%	25%
English Learner Status				
EL	10%	13%	14%	13%
Non-EL	90%	87%	86%	87%
Special Education Status				
Has IEP	16%	40%	12%	37%
Does not have IEP	84%	60%	88%	63%

The sample of eligible students was submitted to propensity score matching using the MatchIt package (Ho et al., 2011) in the statistical program R (R Core Team, 2020). Propensity scores were estimated using a logistic regression model that included student demographic characteristics. The model was:

$$\text{logit}(P(Y_i = 1|X_i)) = \beta_0 + \beta_1 \text{Gender}_i + \beta_2 \text{Race/Ethnicity}_i + \beta_3 \text{SES Status}_i + \beta_4 \text{English Learner}_i + \beta_5 \text{Special Education Status}_i \quad (1)$$

In Equation 1, i indexes an individual student in the sample. The variables gender, race/ethnicity, Economically Disadvantaged status, English Learner status, and Special Education status are each categorical variables. The dependent variable, Y_i , is a binary treatment variable where 1 indicates student i attended summer programming for at least one day and 0 means the student was not enrolled in summer programming. The value, $P(Y_i = 1|X_i)$, is the estimated propensity score indicating the probability that student i would have been assigned to the treatment group based on that student's characteristics (Arpino & Cannas, 2017). In the matching process, the logit of the propensity score, $\text{logit}(P(Y_i = 1|X_i))$, was used (Austin, 2011; Stuart, 2010).

Next, the nearest neighbor method with 1:1 matching was applied to match the pool of control students with treatment students (Ho et al., 2011). We restricted matches to be exact on school and grade level. We did not apply a caliper (require matches to be within a specific propensity score range) in order to retain the maximum number of students possible in the treatment group (Jacovidis et al., 2017). Based on the matching specifications, a total of 76 students in the treatment

group were dropped from the resulting analytical sample due to the school by grade level restriction.

Table A2 shows the composition of the treatment and control groups before and after matching. To evaluate match quality, we examined the column labeled “Standardized Mean Difference” (SMD). The SMD is a measure of how different the treatment and control groups are on each variable (Ho et al., 2011; Stuart, 2010; Zhang et al., 2019). The SMD can be examined before and after matching, and variables with SMD values less than $|\cdot 10|$ after matching are considered balanced (Ho et al., 2011; Zhang et al., 2019). Results met this criterion.

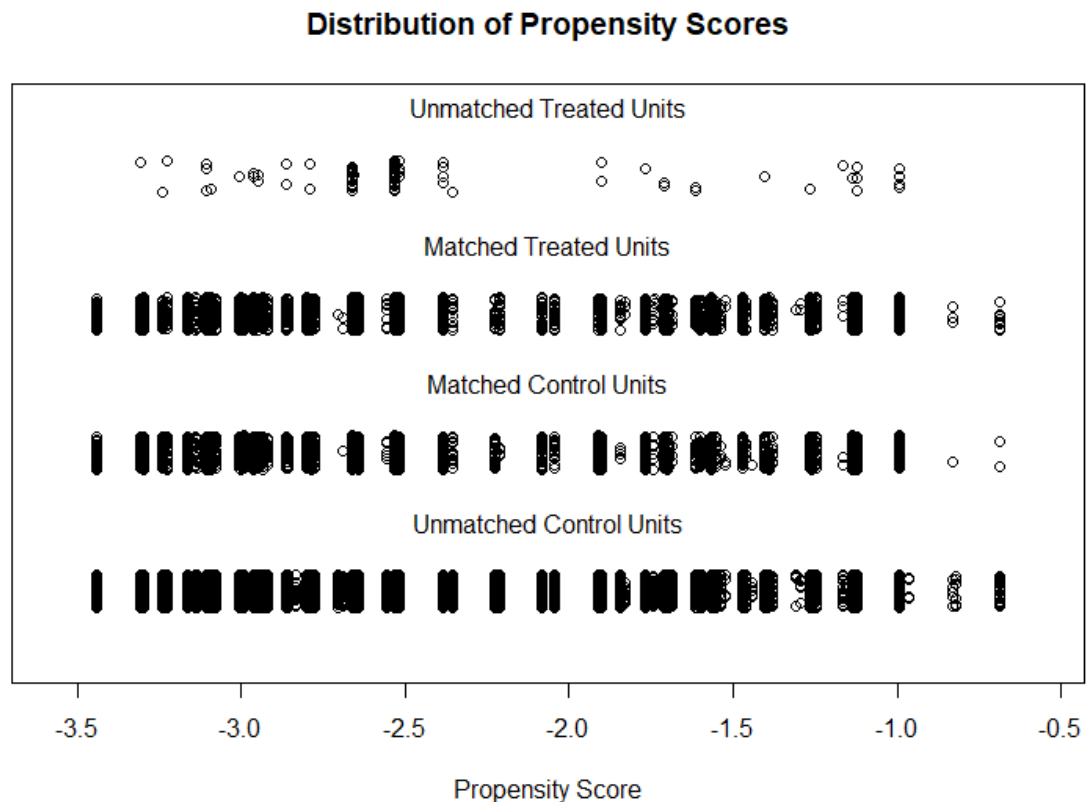
Table A2. Standardized mean difference for the student samples

Student Group	<u>Eligible students</u>			<u>Analytical sample</u>		
	Summer = 0	Summer = 1	Standardized Mean Difference	Summer = 0	Summer = 1	Standardized Mean Difference
Number of students	75,327	6,663		6,587	6,587	
Gender						
Female	50%	42%	-0.16	43%	42%	-0.01
Male	50%	57%	0.16	57%	58%	0.01
Race/Ethnicity						
Asian/Pacific Islander	11%	8%	-0.14	8%	8%	0.00
Black/African American	45%	60%	0.31	60%	60%	0.01
Hispanic/Latinx	23%	19%	-0.11	19%	19%	-0.02
Multi-Racial/Other	5%	4%	-0.02	4%	4%	0.03
White	16%	10%	-0.23	10%	10%	0.00
Socio-Economic Status						
Econ. Disadvantaged	69%	75%	0.14	78%	75%	-0.06
Non-Econ. Disadvantaged	31%	25%	-0.14	22%	25%	0.06
English Learner Status						
EL	14%	13%	-0.02	13%	13%	0.00
Non-EL	86%	87%	0.02	87%	87%	0.00
Special Education Status						
Has IEP	12%	37%	0.51	33%	37%	0.08
Does not have IEP	88%	63%	-0.51	67%	63%	-0.08

Note. Standardized mean difference indicates the proportion difference for each variable. Values less than $|\cdot|0.10|$ suggest the variables are balanced (Ho et al., 2011; Zhang et al., 2019).

In addition to the SMD, we also inspected the degree that the estimated propensity scores overlapped in the analytical sample (Stuart, 2010). Figure A1 presents a jitter plot that plots each student's estimated propensity score along the distribution of those scores. The two rows labeled "Matched Treated Units" and "Matched Control Units" are of primary interest. Using Figure A1 and concentrating on these two rows, the distribution of propensity scores across the two groups should overlap (Stuart, 2010). Results showed that scores displayed sufficient overlap.

Figure A1. Jitter plot displaying overlap between the treatment and control groups



Several limitations should be noted. The first pertains to the variables used in our propensity score model. Specifically, we used demographic characteristics (gender, race/ethnicity, Economically Disadvantaged status, English Learner status, and Special Education status) in the model. As noted previously, PSM assumes that all variables related to either the treatment (summer programming) or the outcomes (fall academic screener scores) are in the model, and those not included will remain unbalanced in the estimation of the treatment effect. As such, preexisting differences between the two groups will persist when estimating the treatment effect; thus, the resulting treatment effect estimates should be interpreted in light of variables omitted from the model. Second, our approach for selecting the sample of eligible students resulted in a large reduction in the treatment group (among the full sample of summer programming students, ~20.5% did not attend at least one day and ~47.3% did not have both fall reading and math scores). As such, the effect should also be interpreted in light of this change in sample size.

Appendix B: The Student Sample

Table B1. The demographic characteristics of analytic sample of students who attended summer school and a matched sample of students who did not attend

Student Characteristic	Summer Attendee	Non-Attendee (matched sample)	Total Number of Students
Grade Level			
1	527	527	1054
2	584	584	1168
3	552	552	1104
4	582	582	1164
5	625	625	1250
6	565	565	1130
7	487	487	974
8	378	378	756
9	270	270	540
10	852	852	1704
11	689	689	1378
12	454	454	908
Race/Ethnicity			
Asian	494	495	989
Black/African American	3944	3928	7872
Hispanic/Latinx	1223	1269	2492
Multi-racial/Other	281	244	525
White	623	629	1252
Gender			
Female	2780	2806	5586
Male	3785	3759	7544
Socio-Economic Status			
Econ. Disadvantaged	4950	5140	10090
Non-Econ. Disadvantaged	1615	1425	3040
Special Education Status			
Has IEP	2409	2164	4573
Does not have IEP	4156	4401	8557
English Learner Status			
EL	854	848	1702
Non-EL	5711	5717	11428

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed on August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed on October 6, 2021.

Table B2. The demographic characteristics of analytic sample of students by how they scored in the District-wide spring 2020-21 reading assessment performance groups

Demographics	Number of Students in Each of the Spring 2020-21 Reading Assessment Performance Groups							
	Summer Attendee				Summer Non-Attendee			
	Below Average	Low Average	High Average	Above Average	Below Average	Low Average	High Average	Above Average
Grade Level (includes entire analytic sample – attendees and non-attendees)								
1	247	149	73	12	207	189	79	8
2	311	122	73	16	278	142	89	25
3	235	122	101	23	190	143	118	38
4	255	131	69	13	232	149	84	20
5	225	123	87	29	206	121	144	38
6	168	127	86	35	157	127	106	50
7	243	77	29	0	223	88	43	3
8	164	59	18	3	154	98	25	2
9	117	34	22	2	108	63	24	2
10	249	110	41	3	321	212	69	7
11	184	83	24	0	232	172	66	8
12	113	52	12	1	147	105	33	9
Race/Ethnicity								
Asian	135	129	106	30	133	156	128	28
Black/African American	1512	723	333	65	1497	955	458	86
Hispanic/Latinx	542	161	74	7	567	287	122	23
Multi-Racial/Other	102	54	22	8	90	57	40	8
White	220	122	100	27	168	154	132	65
Gender								
Female	996	549	309	76	1027	744	409	94
Male	1515	640	326	61	1428	865	471	116
Economic Disadvantage Status								
Econ. Disadvantaged	1974	854	414	64	2032	1264	631	114
Non-Econ. Disadvantaged	537	335	221	73	423	345	249	96
Special Education Status								
Has IEP	1221	234	85	10	1098	335	140	30
Does not have IEP	1290	955	550	127	1357	1274	740	180
English Learner Status								
EL	411	137	62	8	427	196	77	11
Non-EL	2100	1052	573	129	2028	1413	803	199

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Table B3. The demographic characteristics of analytic sample of students by how they scored in the District-wide spring 2020-21 math assessment performance groups

Demographics	Number of Students in Each of the Spring 2020-21 Math Assessment Performance Groups							
	Summer Attendee				Summer Non-Attendee			
	Below Average	Low Average	High Average	Above Average	Below Average	Low Average	High Average	Above Average
Grade Level (includes entire analytic sample – attendees and non-attendees)								
1	172	162	96	35	133	171	128	39
2	252	127	90	19	221	145	120	23
3	239	149	75	23	160	185	104	32
4	268	126	46	14	278	127	69	14
5	302	125	52	8	285	145	57	21
6	210	154	43	20	188	171	69	28
7	205	84	42	11	183	101	58	11
8	149	50	32	9	131	80	50	9
9	93	38	26	8	93	61	44	8
10	214	96	76	9	221	195	173	21
11	117	76	43	6	164	123	138	33
12	80	46	31	4	94	95	78	14
Race/Ethnicity								
Asian	91	107	131	64	63	129	166	76
Black/African American	1483	711	306	51	1427	958	530	83
Hispanic/Latinx	464	202	85	16	464	286	180	26
Multi-Racial/Other	92	54	33	9	64	66	50	14
White	171	159	97	26	133	160	162	54
Gender								
Female	939	554	283	70	927	709	499	109
Male	1362	679	369	96	1224	890	589	144
Economic Disadvantage Status								
Econ. Disadvantaged	1849	872	413	101	1797	1254	763	157
Non-Econ. Disadvantaged	452	361	239	65	354	345	325	96
Special Education Status								
Has IEP	1171	274	66	14	1067	365	149	22
Does not have IEP	1130	959	586	152	1084	1234	939	231
English Learner Status								
EL	332	173	96	19	305	229	132	26
Non-EL	1969	1060	556	147	1846	1370	956	227

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Appendix C: Average NCE Scores

Table C1. Average NCE scores on the fall Star Reading and Math assessments by their District-wide spring 2020-21 NCE performance group and by fall 2021-22 NCE Star performance groups

Star Assessment	District-wide Spring 2020-21 Performance Group	Group	Below Average	Low Average	High Average	Above Average
Reading	Below Average	Summer Attendee	6.6	33.1	56.0	79.6
		Non-Attendee	7.8	32.6	55.6	76.4
	Low Average	Summer Attendee	13.9	36.2	56.3	82.9
		Non-Attendee	14.4	36.2	56.5	84.9
	High Average	Summer Attendee	12.6	39.6	59.7	81.1
		Non-Attendee	11.4	40.0	58.5	80.9
	Above Average	Summer Attendee	14.0	41.7	62.5	83.5
		Non-Attendee	16.9	39.3	62.6	84.6
Math	Below Average	Summer Attendee	7.2	33.7	56.3	86.6
		Non-Attendee	8.8	32.7	57.8	81.1
	Low Average	Summer Attendee	13.4	36.2	58.1	81.8
		Non-Attendee	13.7	36.6	57.1	81.0
	High Average	Summer Attendee	13.3	39.6	60.8	80.1
		Non-Attendee	14.0	40.1	59.6	79.9
	Above Average	Summer Attendee	14.3	41.5	63.4	84.8
		Non-Attendee	16.3	40.8	63.0	86.3

Source: Data from Qlik Summer Program Enrollment and Attendance, data accessed 8/16/21; Qlik Total Student Enrollment Yearly, data accessed 10/6/21; Qlik Academic Screeners, data accessed on 10/27/21.

Note: N/A = no data available to include in the cell

Table C2. Average NCE scores on the fall Star Reading assessments by their District-wide spring 2020-21 NCE performance group and by fall 2021-22 NCE Star performance groups and race/ethnicity

Spring 2020-21 Group	Race/ Ethnicity	Group	Below Average	Low Average	High Average	Above Average
Below Average	Asian	Summer Attendee	6.0	32.3	52.3	N/A
		Non-Attendee	9.0	32.2	N/A	N/A
	Black/ African American	Summer Attendee	6.6	33.0	53.6	79.6
		Non-Attendee	7.9	32.8	57.6	75.8
	Hispanic/Latinx	Summer Attendee	6.1	33.6	59.5	N/A
		Non-Attendee	7.0	32.5	54.5	N/A
	Multi-Racial/ Other	Summer Attendee	6.1	32.8	62.9	N/A
		Non-Attendee	8.3	32.1	52.9	N/A
	White	Summer Attendee	7.7	33.6	57.5	N/A
		Non-Attendee	8.8	32.0	54.5	77.0
Low Average	Asian	Summer Attendee	15.3	36.2	55.0	75.8
		Non-Attendee	16.2	37.7	56.4	85.9
	Black/ African American	Summer Attendee	14.9	36.1	55.4	79.7
		Non-Attendee	14.3	35.9	56.1	84.5
	Hispanic/Latinx	Summer Attendee	11.0	36.8	56.7	93.3
		Non-Attendee	14.3	36.4	55.2	N/A
	Multi-Racial/ Other	Summer Attendee	10.3	36.2	56.9	99.0
		Non-Attendee	12.1	35.7	58.3	N/A
	White	Summer Attendee	11.6	36.4	60.5	81.9
		Non-Attendee	13.8	36.3	59.5	83.8
High Average	Asian	Summer Attendee	19.6	39.4	60.4	83.2
		Non-Attendee	17.2	40.1	58.1	81.9
	Black/ African American	Summer Attendee	12.1	39.6	59.2	80.3
		Non-Attendee	11.4	40.0	58.0	79.0
	Hispanic/Latinx	Summer Attendee	11.1	39.1	60.8	86.4
		Non-Attendee	8.4	39.9	58.7	81.9
	Multi-Racial/ Other	Summer Attendee	11.1	45.2	58.4	80.5
		Non-Attendee	11.5	41.1	60.9	89.7
	White	Summer Attendee	13.0	38.9	59.6	79.3
		Non-Attendee	12.1	39.1	59.4	80.5
Above Average	Asian	Summer Attendee	N/A	43.7	65.4	81.4
		Non-Attendee	N/A	39.0	61.6	84.3
	Black/ African American	Summer Attendee	11.5	41.0	59.7	83.9
		Non-Attendee	23.4	39.6	61.5	83.9
	White	Summer Attendee	18.9	40.1	63.1	85.5
		Non-Attendee	18.9	37.4	64.0	86.1

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell. Rows are excluded from the table if the student group is smaller than 20 students to correspond to the table in body of the report addendum.

Table C3. Average NCE scores on the fall Star Math assessments by their District-wide spring 2020-21 NCE performance group and by fall 2021-22 NCE Star performance groups and race/ethnicity

Spring 2020-21 Group	Race/ Ethnicity	Group	Below Average	Low Average	High Average	Above Average
Below Average	Asian	Summer Attendee	8.9	36.9	54.7	N/A
		Non-Attendee	7.9	36.3	60.9	N/A
	Black/ African American	Summer Attendee	7.2	33.6	57.3	89.3
		Non-Attendee	8.8	32.5	55.2	N/A
	Hispanic/Latinx	Summer Attendee	6.8	32.9	56.7	N/A
		Non-Attendee	8.7	32.6	60.6	N/A
	Multi-Racial/ Other	Summer Attendee	8.2	30.1	59.0	N/A
		Non-Attendee	8.9	33.8	61.8	N/A
	White	Summer Attendee	8.1	35.0	56.0	84.0
		Non-Attendee	9.7	32.2	61.4	81.1
Low Average	Asian	Summer Attendee	13.8	37.8	59.5	86.6
		Non-Attendee	15.0	38.0	59.1	81.9
	Black/ African American	Summer Attendee	13.0	36.3	57.4	78.9
		Non-Attendee	13.2	36.6	56.2	81.8
	Hispanic/Latinx	Summer Attendee	14.4	35.5	58.2	N/A
		Non-Attendee	14.1	36.1	58.0	75.8
	Multi-Racial/ Other	Summer Attendee	13.4	33.3	59.7	N/A
		Non-Attendee	12.9	35.3	59.3	N/A
	White	Summer Attendee	13.5	36.2	58.1	75.8
		Non-Attendee	16.2	36.7	57.2	N/A
High Average	Asian	Summer Attendee	11.2	40.9	62.0	82.7
		Non-Attendee	19.5	41.2	60.9	78.6
	Black/ African American	Summer Attendee	12.9	39.9	60.1	77.2
		Non-Attendee	13.9	40.1	59.0	79.6
	Hispanic/Latinx	Summer Attendee	16.7	37.5	59.7	N/A
		Non-Attendee	13.2	39.1	60.2	80.2
	Multi-Racial/ Other	Summer Attendee	20.1	44.6	62.0	79.3
		Non-Attendee	9.3	40.0	59.8	85.3
	White	Summer Attendee	12.7	38.5	61.5	78.2
		Non-Attendee	15.8	40.4	59.5	83.4
Above Average	Asian	Summer Attendee	N/A	41.7	65.6	87.5
		Non-Attendee	N/A	43.6	64.6	89.1
	Black/ African American	Summer Attendee	14.3	39.9	61.5	80.0
		Non-Attendee	19.5	39.2	61.3	81.9
	White	Summer Attendee	15.4	41.1	62.0	82.9
		Non-Attendee	9.6	41.3	62.8	87.1

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell. Rows are excluded from the table if the student group is smaller than 20 students to correspond to the table in body of the report addendum.

Table C4. Average NCE scores on the fall Star Reading assessments by their District-wide spring 2020-21 NCE performance group and by fall 2021-22 NCE Star performance groups and gender

Spring 2020-21 Group	Gender	Group	Below Average	Low Average	High Average	Above Average
Below Average	Female	Summer Attendee	7.1	32.5	57.9	N/A
		Non-Attendee	8.8	32.1	55.0	75.8
	Male	Summer Attendee	6.2	33.6	55.5	79.6
		Non-Attendee	7.1	33.0	56.2	77.0
Low Average	Female	Summer Attendee	15.6	36.7	56.5	99.0
		Non-Attendee	15.0	36.4	56.6	87.3
	Male	Summer Attendee	12.6	35.8	56.1	81.3
		Non-Attendee	13.9	36.0	56.5	81.8
High Average	Female	Summer Attendee	13.9	38.8	59.8	83.7
		Non-Attendee	10.4	39.5	58.1	82.5
	Male	Summer Attendee	11.5	40.4	59.6	79.5
		Non-Attendee	11.8	40.3	59.0	79.5
Above Average	Female	Summer Attendee	15.8	41.4	62.6	83.2
		Non-Attendee	20.1	39.8	62.2	84.4
	Male	Summer Attendee	11.0	42.1	62.5	84.0
		Non-Attendee	15.6	38.9	63.0	84.7

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell

Table C5. Average NCE scores on the fall Star Math assessments by their District-wide spring 2020-21 NCE performance group and by fall 2021-22 NCE Star performance groups and gender

Spring 2020-21 Group	Gender	Group	Below Average	Low Average	High Average	Above Average
Below Average	Female	Summer Attendee	7.6	32.6	53.9	99.0
		Non-Attendee	8.5	32.7	56.8	N/A
	Male	Summer Attendee	7.0	34.3	57.2	82.5
		Non-Attendee	9.0	32.7	58.2	81.1
Low Average	Female	Summer Attendee	13.9	36.4	58.7	80.1
		Non-Attendee	13.5	36.4	57.4	83.9
	Male	Summer Attendee	12.9	36.0	57.6	83.9
		Non-Attendee	13.8	36.8	56.9	79.8
High Average	Female	Summer Attendee	15.4	40.4	60.4	78.7
		Non-Attendee	14.4	40.4	59.1	79.9
	Male	Summer Attendee	11.3	38.8	61.1	80.4
		Non-Attendee	13.7	39.8	60.0	79.9
Above Average	Female	Summer Attendee	13.2	41.7	64.5	84.9
		Non-Attendee	19.3	42.4	62.6	85.6
	Male	Summer Attendee	15.1	41.2	62.7	84.7
		Non-Attendee	14.4	39.2	63.4	86.7

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell

Table C6. Average NCE scores on the fall Star Reading assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and economically disadvantaged status

Spring 2020-21 Group	Econ. Dis Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	Econ. Dis.	Summer Attendee	6.3	32.9	55.0	N/A
		Non-Attendee	7.7	32.2	56.7	75.8
	Non-Econ. Dis.	Summer Attendee	7.5	33.8	58.0	79.6
		Non-Attendee	8.0	34.1	52.8	77.0
Low Average	Econ. Dis.	Summer Attendee	13.8	36.1	55.4	82.6
		Non-Attendee	14.3	36.1	55.7	78.5
	Non-Econ. Dis.	Summer Attendee	14.3	36.6	57.7	83.2
		Non-Attendee	14.8	36.6	58.3	86.7
High Average	Econ. Dis.	Summer Attendee	12.0	38.9	59.7	80.7
		Non-Attendee	11.2	39.7	58.1	79.6
	Non-Econ. Dis.	Summer Attendee	15.2	41.2	59.7	81.5
		Non-Attendee	12.7	40.7	59.5	81.7
Above Average	Econ. Dis.	Summer Attendee	11.9	43.1	63.2	80.8
		Non-Attendee	16.4	38.0	61.2	83.6
	Non-Econ. Dis.	Summer Attendee	20.3	40.2	62.0	85.4
		Non-Attendee	21.8	41.2	64.6	85.2

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell

Table C7. Average NCE scores on the fall Star Math assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and economically disadvantaged status

Spring 2020-21 Group	Econ. Dis Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	Econ. Dis.	Summer Attendee	7.1	33.9	55.9	88.5
		Non-Attendee	8.6	32.4	57.4	N/A
	Non-Econ. Dis.	Summer Attendee	7.9	33.2	56.9	81.1
		Non-Attendee	9.8	33.8	58.6	81.1
Low Average	Econ. Dis.	Summer Attendee	12.9	36.3	58.0	83.9
		Non-Attendee	13.6	36.2	56.8	81.0
	Non-Econ. Dis.	Summer Attendee	15.0	35.9	58.3	76.4
		Non-Attendee	14.3	37.9	58.2	N/A
High Average	Econ. Dis.	Summer Attendee	13.0	39.3	60.8	80.2
		Non-Attendee	13.2	40.4	59.2	79.3
	Non-Econ. Dis.	Summer Attendee	14.2	40.1	60.9	79.9
		Non-Attendee	16.3	39.4	60.5	80.6
Above Average	Econ. Dis.	Summer Attendee	14.6	42.9	63.0	86.1
		Non-Attendee	13.4	40.6	63.1	86.5
	Non-Econ. Dis.	Summer Attendee	12.9	38.9	64.1	83.3
		Non-Attendee	19.7	41.7	62.8	86.1

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell

Table C8. Average NCE scores on the fall Star Reading assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and special education status

Spring 2020-21 Group	Special Education Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	Has IEP	Summer Attendee	4.5	33.1	54.6	79.6
		Non-Attendee	5.9	32.1	54.7	N/A
	Does not have IEP	Summer Attendee	8.9	33.1	56.3	N/A
		Non-Attendee	9.6	32.8	56.2	76.4
Low Average	Has IEP	Summer Attendee	10.1	33.8	57.2	82.7
		Non-Attendee	12.1	35.4	56.4	93.3
	Does not have IEP	Summer Attendee	15.4	36.7	56.2	82.9
		Non-Attendee	15.6	36.4	56.5	83.8
High Average	Has IEP	Summer Attendee	8.6	37.7	56.3	81.4
		Non-Attendee	9.0	37.3	57.4	80.8
	Does not have IEP	Summer Attendee	15.0	40.0	59.9	81.1
		Non-Attendee	13.6	40.4	58.6	80.9

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

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Table C9. Average NCE scores on the fall Star Math assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and special education status

Spring 2020-21 Group	Special Education Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	Has IEP	Summer Attendee	5.4	32.1	61.3	81.1
		Non-Attendee	7.6	31.2	53.9	N/A
	Does not have IEP	Summer Attendee	9.6	34.2	55.1	88.5
		Non-Attendee	10.2	33.4	58.4	81.1
Low Average	Has IEP	Summer Attendee	11.3	33.5	58.7	84.5
		Non-Attendee	12.4	35.1	56.7	81.6
	Does not have IEP	Summer Attendee	14.3	36.8	58.0	80.6
		Non-Attendee	14.2	37.0	57.2	80.5
High Average	Has IEP	Summer Attendee	8.5	39.4	62.8	81.1
		Non-Attendee	10.9	38.7	58.1	85.2
	Does not have IEP	Summer Attendee	14.5	39.6	60.7	80.0
		Non-Attendee	15.3	40.4	59.8	79.1

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

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Table C10. Average NCE scores on the fall Star Reading assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and English Learner (EL) status

Spring 2020-21 Group	English Learner (EL) Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	EL	Summer Attendee	5.6	31.8	52.4	N/A
		Non-Attendee	6.6	31.7	N/A	N/A
	Non-EL	Summer Attendee	6.8	33.3	56.2	79.6
		Non-Attendee	8.1	32.8	55.6	76.4
Low Average	EL	Summer Attendee	12.4	34.8	58.7	N/A
		Non-Attendee	15.2	36.4	54.0	75.8
	Non-EL	Summer Attendee	14.1	36.4	56.1	82.9
		Non-Attendee	14.2	36.2	56.7	86.0
High Average	EL	Summer Attendee	11.7	39.6	57.3	81.9
		Non-Attendee	13.4	37.8	59.2	99.0
	Non-EL	Summer Attendee	12.7	39.7	59.9	81.1
		Non-Attendee	11.2	40.2	58.5	80.5

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

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Table C11. Average NCE scores on the fall Star Math assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and English Learner (EL) status

Spring 2020-21 Group	English Learner (EL) Status	Group	Below Average	Low Average	High Average	Above Average
Below Average	EL	Summer Attendee	7.3	35.5	53.0	N/A
		Non-Attendee	9.0	33.0	58.9	N/A
	Non-EL	Summer Attendee	7.2	33.3	57.3	86.6
		Non-Attendee	8.7	32.6	57.5	81.1
Low Average	EL	Summer Attendee	14.2	36.0	60.3	90.1
		Non-Attendee	14.2	36.8	57.7	79.0
	Non-EL	Summer Attendee	13.3	36.2	57.6	78.4
		Non-Attendee	13.6	36.6	57.0	81.8
High Average	EL	Summer Attendee	14.8	41.3	62.1	83.8
		Non-Attendee	15.4	38.9	59.4	78.5
	Non-EL	Summer Attendee	13.0	39.4	60.6	79.1
		Non-Attendee	13.8	40.2	59.6	80.2

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

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Table C12. Average NCE scores on the fall Star Reading assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and grade level

Spring 2020-21 Group	Grade Level	Group	Below Average	Low Average	High Average	Above Average
Below Average	1	Summer Attendee	3.70	24.20	62.17	92.00
		Non-Attendee	3.69	22.38	59.50	89.00
	2	Summer Attendee	2.28	19.77	54.80	N/A
		Non-Attendee	2.39	18.90	59.00	90.00
	3	Summer Attendee	2.40	24.14	50.00	N/A
		Non-Attendee	2.99	20.47	60.50	N/A
	4	Summer Attendee	2.52	18.65	N/A	N/A
		Non-Attendee	2.49	20.26	N/A	N/A
	5	Summer Attendee	2.03	20.87	68.00	N/A
		Non-Attendee	2.87	17.40	N/A	N/A
	6	Summer Attendee	2.13	20.60	N/A	N/A
		Non-Attendee	2.83	25.83	N/A	N/A
	7	Summer Attendee	2.82	23.35	61.80	N/A
		Non-Attendee	3.14	22.92	61.00	N/A
	8	Summer Attendee	2.80	25.83	53.00	N/A
		Non-Attendee	3.53	21.89	N/A	N/A
	9	Summer Attendee	2.64	19.82	51.00	N/A
		Non-Attendee	2.62	21.00	N/A	N/A
	10	Summer Attendee	3.06	21.46	50.00	N/A
		Non-Attendee	3.31	22.69	67.00	N/A
	11	Summer Attendee	2.85	19.14	87.00	N/A
		Non-Attendee	3.41	22.06	N/A	N/A
	12	Summer Attendee	2.75	22.29	N/A	N/A
		Non-Attendee	3.68	19.25	N/A	N/A
Low Average	1	Summer Attendee	5.33	26.93	66.19	92.44
		Non-Attendee	5.39	26.41	65.15	94.00
	2	Summer Attendee	5.88	25.40	61.70	99.00
		Non-Attendee	4.72	25.24	63.08	N/A
	3	Summer Attendee	5.28	25.85	58.88	N/A
		Non-Attendee	5.06	28.69	60.78	N/A
	4	Summer Attendee	5.10	28.32	61.69	N/A
		Non-Attendee	5.16	28.45	61.32	N/A
	5	Summer Attendee	5.27	25.15	56.50	N/A
		Non-Attendee	5.15	23.50	57.50	N/A
	6	Summer Attendee	4.17	22.45	65.50	N/A
		Non-Attendee	4.90	22.34	59.60	N/A
	7	Summer Attendee	6.36	27.07	59.38	92.00
		Non-Attendee	6.27	26.66	61.00	N/A

Spring 2020-21 Group	Grade Level	Group	Below Average	Low Average	High Average	Above Average
	8	Summer Attendee	5.92	26.54	61.40	N/A
		Non-Attendee	6.44	26.15	57.67	N/A
	9	Summer Attendee	4.60	28.00	53.00	N/A
		Non-Attendee	4.93	29.58	65.00	N/A
	10	Summer Attendee	6.58	27.38	59.84	N/A
		Non-Attendee	6.56	27.94	58.42	N/A
	11	Summer Attendee	6.00	30.13	58.88	N/A
		Non-Attendee	6.97	26.87	59.82	N/A
	12	Summer Attendee	7.92	27.81	56.11	N/A
		Non-Attendee	6.05	26.29	61.00	N/A
High Average	1	Summer Attendee	5.00	31.50	68.29	93.42
		Non-Attendee	5.57	30.04	68.41	92.50
	2	Summer Attendee	8.44	26.41	67.52	92.00
		Non-Attendee	6.80	34.00	64.32	94.33
	3	Summer Attendee	3.11	36.84	65.32	90.57
		Non-Attendee	4.00	31.17	66.57	90.55
	4	Summer Attendee	3.08	33.28	67.77	92.50
		Non-Attendee	3.54	32.46	66.45	90.40
	5	Summer Attendee	4.83	32.24	61.60	90.50
		Non-Attendee	4.35	30.68	63.81	90.00
	6	Summer Attendee	5.75	27.53	62.45	90.00
		Non-Attendee	4.16	29.60	61.47	N/A
	7	Summer Attendee	9.00	36.63	71.74	97.00
		Non-Attendee	N/A	36.83	67.90	93.00
	8	Summer Attendee	N/A	33.60	64.82	91.00
		Non-Attendee	N/A	34.33	64.77	N/A
	9	Summer Attendee	N/A	39.75	69.83	N/A
		Non-Attendee	N/A	34.64	66.10	N/A
	10	Summer Attendee	N/A	40.56	65.93	92.50
		Non-Attendee	1.00	38.05	64.23	89.25
	11	Summer Attendee	N/A	37.00	69.73	N/A
		Non-Attendee	2.00	38.73	62.54	92.50
	12	Summer Attendee	11.00	N/A	71.18	N/A
		Non-Attendee	N/A	33.85	62.47	94.00

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

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Table C13. Average NCE scores on the fall Star Math assessments by District-wide spring 2020-21 performance group and by fall 2021-22 NCE Star performance groups and grade level

Spring 2020-21 Group	Grade Level	Group	Below Average	Low Average	High Average	Above Average
Below Average	1	Summer Attendee	2.49	25.06	57.00	96.00
		Non-Attendee	3.04	19.78	60.00	N/A
	2	Summer Attendee	2.14	24.24	54.00	99.00
		Non-Attendee	2.53	24.45	61.33	N/A
	3	Summer Attendee	2.77	22.42	79.50	N/A
		Non-Attendee	3.17	20.55	61.00	N/A
	4	Summer Attendee	3.05	24.60	55.80	92.00
		Non-Attendee	3.29	23.33	61.00	N/A
	5	Summer Attendee	2.72	21.91	68.00	N/A
		Non-Attendee	3.13	21.73	73.00	N/A
	6	Summer Attendee	2.63	23.94	70.00	N/A
		Non-Attendee	3.05	18.71	62.00	N/A
	7	Summer Attendee	3.19	22.84	N/A	93.00
		Non-Attendee	3.41	22.70	76.00	N/A
	8	Summer Attendee	3.31	24.26	63.50	N/A
		Non-Attendee	4.01	18.38	74.00	N/A
	9	Summer Attendee	2.72	21.80	N/A	N/A
		Non-Attendee	3.52	23.86	N/A	N/A
	10	Summer Attendee	4.29	21.45	60.33	N/A
		Non-Attendee	5.06	20.14	65.50	N/A
	11	Summer Attendee	2.93	20.19	56.00	N/A
		Non-Attendee	3.87	20.60	58.67	93.00
	12	Summer Attendee	2.98	23.27	N/A	N/A
		Non-Attendee	4.19	25.19	N/A	N/A
Low Average	1	Summer Attendee	4.68	25.88	69.78	89.00
		Non-Attendee	4.13	23.88	66.69	93.00
	2	Summer Attendee	5.11	21.56	61.00	96.00
		Non-Attendee	4.56	23.90	64.29	96.00
	3	Summer Attendee	4.67	29.15	66.04	92.80
		Non-Attendee	5.67	28.24	65.15	90.67
	4	Summer Attendee	4.78	27.46	63.74	N/A
		Non-Attendee	4.30	28.74	61.65	93.00
	5	Summer Attendee	5.54	26.64	63.17	N/A
		Non-Attendee	6.12	27.86	59.27	N/A
	6	Summer Attendee	4.63	25.81	62.00	N/A
		Non-Attendee	5.11	25.83	66.17	N/A
	7	Summer Attendee	5.47	25.92	64.33	N/A
		Non-Attendee	5.00	26.65	65.08	N/A

Spring 2020-21 Group	Grade Level	Group	Below Average	Low Average	High Average	Above Average
	8	Summer Attendee	6.25	29.42	57.80	N/A
		Non-Attendee	5.68	27.28	65.71	N/A
	9	Summer Attendee	3.44	25.19	57.00	N/A
		Non-Attendee	6.55	28.97	56.71	N/A
	10	Summer Attendee	6.24	26.44	63.80	N/A
		Non-Attendee	7.19	27.23	61.90	N/A
	11	Summer Attendee	6.07	29.85	62.43	N/A
		Non-Attendee	7.18	28.95	57.56	N/A
	12	Summer Attendee	7.55	27.17	68.80	N/A
		Non-Attendee	5.96	30.52	59.79	N/A
High Average	1	Summer Attendee	5.35	31.24	67.40	92.86
		Non-Attendee	4.84	31.47	67.18	93.00
	2	Summer Attendee	5.72	29.14	68.43	92.00
		Non-Attendee	5.75	27.83	64.90	90.33
	3	Summer Attendee	3.79	31.33	72.16	91.83
		Non-Attendee	5.00	32.45	72.37	91.33
	4	Summer Attendee	7.00	31.09	72.88	93.17
		Non-Attendee	6.50	32.09	67.82	92.75
	5	Summer Attendee	3.83	36.50	68.34	90.60
		Non-Attendee	2.14	32.90	62.19	89.00
	6	Summer Attendee	5.00	28.26	66.96	N/A
		Non-Attendee	5.25	35.79	64.21	88.50
	7	Summer Attendee	3.00	31.88	66.64	89.00
		Non-Attendee	6.67	35.68	67.29	93.40
	8	Summer Attendee	7.50	33.67	69.59	92.00
		Non-Attendee	6.00	33.25	64.11	90.00
	9	Summer Attendee	1.00	35.00	71.00	88.00
		Non-Attendee	6.33	36.12	66.87	91.00
	10	Summer Attendee	6.00	35.46	68.59	89.80
		Non-Attendee	5.86	34.45	67.78	91.20
	11	Summer Attendee	8.75	31.25	64.63	N/A
		Non-Attendee	8.33	36.12	66.57	N/A
	12	Summer Attendee	N/A	35.76	69.57	N/A
		Non-Attendee	5.00	31.18	63.42	91.00

Source: Qlik Summer Program Enrollment and Attendance, data accessed August 16, 2021; Qlik Total Student Enrollment Yearly, data accessed October 6, 2021; Qlik Academic Screeners, data accessed October 27, 2021.

Note: N/A = no data available to include in the cell. Rows are excluded from the table if the student group is smaller than 20 students to correspond to the table in body of the report addendum.

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