



THE SCHOOL DISTRICT OF  
PHILADELPHIA

# Grades 6-12 Math Assessment Data Snapshot

End of Year (EOY) 2020-2021

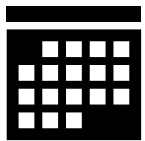
**September 2021**

**Office of Research and Evaluation**

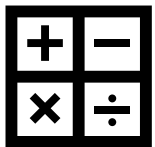
# This slide deck provides a District-level overview of 6<sup>th</sup> – 12<sup>th</sup> grade student performance on the Star **Math** Assessments from fall to spring.



Star is a suite of computer-adaptive universal screening, progress monitoring, and formative assessment products from Renaissance.



During the 2020-21 school year, Star was administered four times in grades 6-8 and three times in grades 9-12.\*



The Star math assessment assesses students' skills in numbers and operations, algebra, geometry and measurement, and data analysis, statistics, and probability.

\*Results presented in this slide deck use the time periods Fall, Winter, and Spring for all grades. For Grades 6-8, this means the first, second, and fourth test administrations.

# The District tracks student progress toward Board Goals by using *Leading Indicators*

The **Leading Indicator** toward Goal 3 for the 2020-2021 school year is that by Spring 2021, 54.7% of students in grades 3-8 will test at target on their within-year math assessment.

**Board Goal #3**  
The percentage of students in grades 3-8 who are proficient on the state math assessment will grow from 21.6% in August 2019 to 52.0% by August 2026.

The **Leading Indicator** toward Goal 4 for the 2020-2021 school year is that by Spring 2021, 47.4% of students in grades 9-11 will test at target on their within-year math and literacy assessments.

**Board Goal #4**  
The percentage of students who are proficient on all three state high school assessments (Algebra, Literature, and Biology) by the end of their 11th grade year will grow from 26.1% in August 2019 to 52.0% by August 2026.



For more information, please visit the District's [Office of Evaluation, Research, and Accountability's Goals and Guardrails page](#).

# The following sections present student performance for all 6<sup>th</sup> -12<sup>th</sup> grade students who took the Star **Math** assessments in 2020-21

- Student performance and growth on the key metrics outlined on the previous slide is presented as follows:
  - Overall and by grade
  - By racial/ethnic subgroup (separately for 6-8 and 9-12)
  - By other student subgroups (economically disadvantaged status, receiving special education services, English Learner)
- Tier levels are presented first, followed by Average National Percentile Rank.

# We measure **student performance** using the following metrics:

Metric	Description	Analytic Purpose
<b>Average National Percentile</b>	A student's National Percentile; a norm-referenced performance measure that compares a student's scaled score to her grade-level peers nationwide.	The Percentile Rank is useful for understanding a student's reading ability compared to other students in the same grade nationally.
<b>Tier Level</b>	<p>Based on a student's Percentile Rank, Tiers are used to identify the level of intervention students need in order to reach proficiency. There are four tier levels:</p> <ul style="list-style-type: none"> <li>• <b>Intensive Intervention</b> (Below the 10<sup>th</sup> percentile)</li> <li>• <b>Strategic Intervention</b> (Between and including the 10<sup>th</sup> percentile and the 24<sup>th</sup> percentile)</li> <li>• <b>On Watch</b> (between and including the 25<sup>th</sup> percentile and the 39<sup>th</sup> percentile)</li> <li>• <b>At/Above Benchmark</b> (the 40<sup>th</sup> percentile or above)</li> </ul>	Tier Levels are useful for understanding District-wide performance trends, as well as for identifying students who need additional supports in the classroom.

## **Student Participation in Assessments, grades 6-12**

**How many students participated in 2020-21 within-year assessments?**

# Participation rates decreased between fall and spring for 6<sup>th</sup>-8<sup>th</sup> grade students.

Grade Level	Term	Number of students eligible to participate in assessment	Number of students who were assessed	Participation rate (percentage of students who were assessed)
6-8 Overall	Fall	27,808	23,577	84.8%
	Winter	27,725	23,329	84.1%
	Spring	27,736	20,273	73.1%
6th Grade	Fall	9,154	7,795	85.2%
	Winter	9,115	7,794	85.5%
	Spring	9,081	6,872	75.7%
7th Grade	Fall	9,295	7,801	83.9%
	Winter	9,267	7,777	83.9%
	Spring	9,287	6,658	71.7%
8th Grade	Fall	9,359	7,981	85.3%
	Winter	9,343	7,758	83.0%
	Spring	9,368	6,743	72.0%

## Participation steeply dropped from fall to spring for 9<sup>th</sup>-12<sup>th</sup> grade students, and participation was lower in higher grades.

Grade Level	Term	Number of students eligible to participate in assessment	Number of students who were assessed	Participation rate (percentage of students who were assessed)
9-12 Overall	Fall	38,739	26,607	68.7%
	Winter	38,751	24,445	63.1%
	Spring	38,528	18,993	49.3%
9th Grade	Fall	10,150	7,975	78.6%
	Winter	10,257	7,596	74.1%
	Spring	10,342	6,144	59.4%
10th Grade	Fall	10,264	7,329	71.4%
	Winter	10,298	6,828	66.3%
	Spring	10,299	5,225	50.7%
11th Grade	Fall	9,108	6,359	69.8%
	Winter	9,104	5,726	62.9%
	Spring	9,033	4,371	48.4%
12th Grade	Fall	9,217	4,944	53.6%
	Winter	9,092	4,295	47.2%
	Spring	8,854	3,253	36.7%



# Participation dropped from fall to spring for 9<sup>th</sup>-12<sup>th</sup> grade students of all races/ethnicities, more so than the drop from fall to winter.

Race/Ethnicity	Term	Number of students eligible to participate in assessment	Number of students who were assessed	Participation rate (percentage of students who were assessed)
Asian	Fall	6,477	5,752	88.8%
	Winter	6,469	5,600	86.6%
	Spring	6,448	4,902	76.0%
Black/African American	Fall	33,471	24,157	72.2%
	Winter	33,538	22,938	68.4%
	Spring	33,387	18,513	55.4%
Hispanic/Latinx	Fall	14,321	10,225	71.4%
	Winter	14,285	9,679	67.8%
	Spring	14,314	7,864	54.9%
Multi-racial/Other	Fall	3,175	2,430	76.5%
	Winter	3,153	2,285	72.5%
	Spring	3,129	1,891	60.4%
White	Fall	8,864	7,433	83.9%
	Winter	8,797	7,086	80.6%
	Spring	8,752	5,940	67.9%

# Participation dropped from fall to spring for 9<sup>th</sup>-12<sup>th</sup> grade students who were Economically Disadvantaged, were ELs, or had IEPs, more so than the drop from fall to winter.

Subgroup	Term	Number of students eligible to participate in assessment	Number of students who were assessed	Participation rate (percentage of students who were assessed)
Economically Disadvantaged	Fall	43,174	32,462	75.2%
	Winter	44,176	31,829	72.1%
	Spring	45,359	26,610	58.7%
ELs (English Learners)	Fall	8,067	5,864	72.7%
	Winter	8,057	5,730	71.1%
	Spring	8,065	4,944	61.3%
Has IEP (Individualized Education Plan*)	Fall	11,627	7,232	62.2%
	Winter	11,612	6,901	59.4%
	Spring	11,563	5,615	48.6%

\* All students are required to participate except for students who are exempted based on their Individualized Education Plan (IEP). For the Special Education student group, participation rate includes all students, including those who are exempted, in the denominator.

Source: Qlik Aimsweb-Star App. Accessed 07/28/2021.

# Grades 6-8 Performance

The percentage of 6<sup>th</sup>-8<sup>th</sup> grade students scoring At or Above Benchmark increased very slightly or remained consistent from fall to spring. The percentage of students scoring in the Intensive Intervention category increased.

Grade Level	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
6th Grade	Fall	35.0%	14.0%	19.2%	31.8%
	Winter	36.5%	12.9%	15.9%	34.6%
	Spring	37.2%	10.3%	14.0%	38.6%
7th Grade	Fall	38.8%	13.0%	20.3%	27.8%
	Winter	41.2%	11.7%	16.6%	30.5%
	Spring	41.0%	12.0%	13.5%	33.5%
8th Grade	Fall	39.1%	13.7%	20.4%	26.8%
	Winter	41.8%	13.3%	17.5%	27.5%
	Spring	42.7%	11.8%	15.5%	30.0%

**Among 6<sup>th</sup>-8<sup>th</sup> grade students who were ELs, had IEPs, or were Economically Disadvantaged, the percentage of students scoring At or Above benchmark increased slightly or remained consistent. The percentage of students scoring in the Intensive Intervention category increased.**

Subgroup	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
ELs (English Learners)	Fall	28.0%	13.5%	22.6%	35.9%
	Winter	30.4%	12.5%	18.2%	38.9%
	Spring	30.2%	11.7%	15.8%	42.3%
Economically Disadvantaged	Fall	31.3%	13.9%	21.7%	33.1%
	Winter	33.5%	13.2%	18.3%	35.0%
	Spring	34.3%	11.5%	15.4%	38.8%
Has IEP (Individualized Education Plan*)	Fall	8.2%	7.2%	19.2%	65.4%
	Winter	9.2%	7.6%	15.5%	67.7%
	Spring	9.4%	6.6%	13.6%	70.4%

\* All students are required to participate except for students who are exempted based on their Individualized Education Plan (IEP). For the Special Education student group, participation rate includes all students, including those who are exempted, in the denominator.

# The percentage of 6<sup>th</sup>-8<sup>th</sup> students who scored At or Above Benchmark increased for all racial/ethnic groups, as did the percentage who scored in the Intensive Intervention category.

Race/Ethnicity	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
Asian	Fall	72.8%	9.4%	9.1%	8.7%
	Winter	74.6%	8.7%	7.6%	9.0%
	Spring	76.3%	7.6%	6.7%	9.4%
Black / African American	Fall	26.2%	14.4%	23.7%	35.7%
	Winter	27.9%	13.4%	20.4%	38.3%
	Spring	27.8%	12.3%	16.8%	43.1%
Hispanic / Latinx	Fall	30.3%	14.9%	21.6%	33.2%
	Winter	33.5%	14.2%	17.0%	35.3%
	Spring	33.4%	11.6%	15.8%	39.3%
Multi-racial / Other	Fall	41.4%	13.0%	18.9%	26.8%
	Winter	45.1%	11.9%	14.8%	28.2%
	Spring	44.6%	10.9%	14.7%	29.7%
White	Fall	57.1%	12.5%	14.3%	16.2%
	Winter	59.7%	10.9%	11.5%	17.8%
	Spring	58.8%	10.8%	10.5%	19.8%

# Grades 9-12 Performance

The percentage of 9<sup>th</sup>-12<sup>th</sup> grade students scoring At or Above benchmark decreased from fall to spring administrations, and the percentage of students scoring in the Intensive Intervention category increased.

Grade Level	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
9th Grade	Fall	47.5%	11.2%	17.4%	23.9%
	Winter	48.4%	8.8%	16.3%	26.5%
	Spring	46.6%	9.6%	14.4%	29.4%
10th Grade	Fall	53.2%	10.8%	17.2%	18.8%
	Winter	54.3%	8.9%	15.3%	21.4%
	Spring	51.5%	10.9%	13.9%	23.7%
11th Grade	Fall	53.6%	11.4%	13.4%	21.7%
	Winter	55.9%	9.6%	11.1%	23.4%
	Spring	53.0%	9.9%	12.5%	24.6%
12th Grade	Fall	52.5%	11.5%	13.5%	22.5%
	Winter	53.4%	11.5%	11.2%	24.0%
	Spring	46.0%	11.1%	13.0%	30.0%



**Among 9<sup>th</sup>-12<sup>th</sup> grade students who were ELs, had IEPs, or were Economically Disadvantaged, the percentage scoring At or Above Benchmark increased slightly or remained consistent from fall to spring administrations. The percentage of students scoring in the Intensive Intervention category increased.**

Subgroup	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
ELs (English Learners)	Fall	30.6%	11.0%	22.0%	36.4%
	Winter	30.8%	9.6%	18.1%	41.6%
	Spring	31.3%	10.6%	15.7%	42.4%
Economically Disadvantaged	Fall	44.6%	12.0%	18.1%	25.4%
	Winter	46.0%	10.1%	15.8%	28.2%
	Spring	43.5%	10.9%	14.9%	30.7%
Has IEP (Individualized Education Plan*)	Fall	11.9%	7.4%	19.6%	61.1%
	Winter	11.6%	7.2%	16.5%	64.7%
	Spring	11.9%	5.7%	15.0%	67.4%

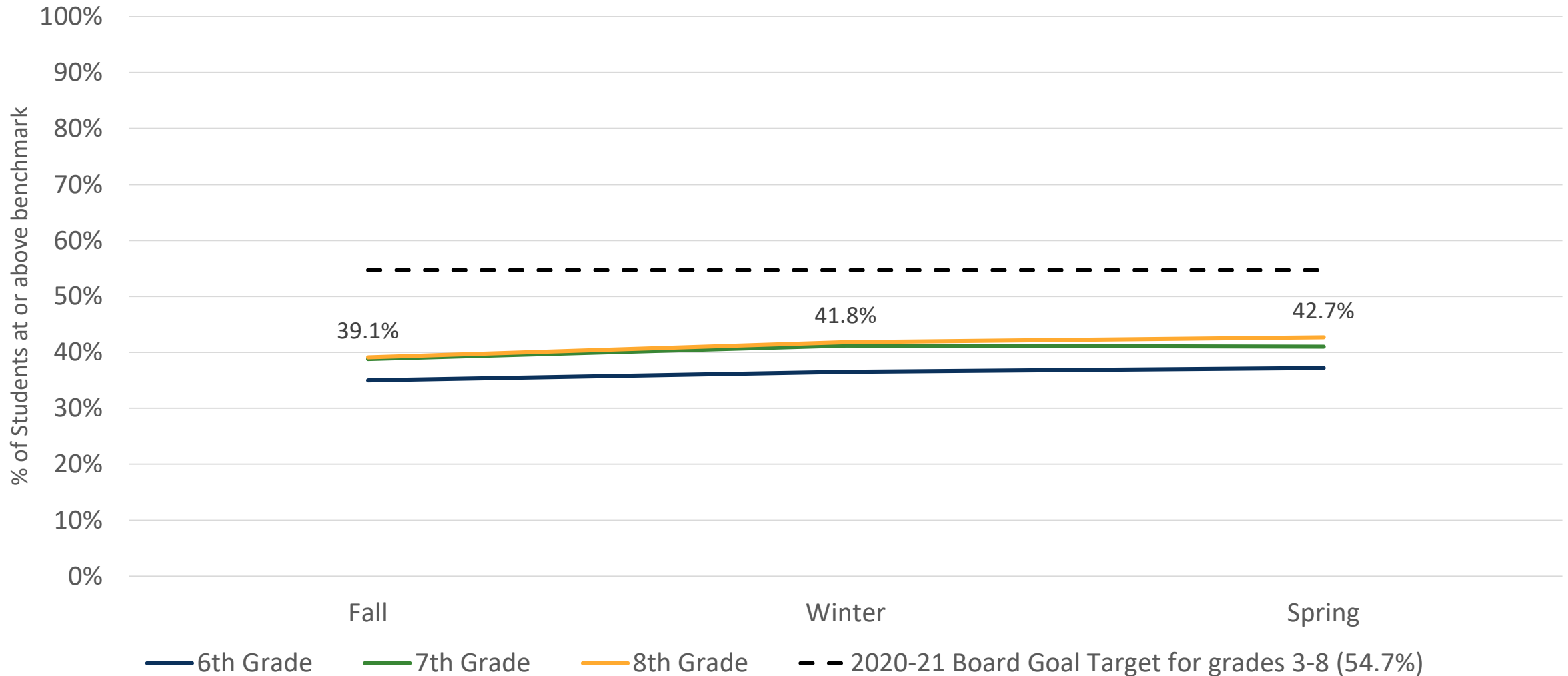
\* All students are required to participate except for students who are exempted based on their Individualized Education Plan (IEP). For the Special Education student group, participation rate includes all students, including those who are exempted, in the denominator.

# The percentage of 9<sup>th</sup>-12<sup>th</sup> grade students who scored At or Above Benchmark decreased for all racial/ethnic groups, and the percentage who scored in the Intensive Intervention category increased.

Race/Ethnicity	Term	At or Above Benchmark	On Watch	Strategic Intervention	Intensive Intervention
Asian	Fall	82.6%	4.7%	6.8%	5.8%
	Winter	84.4%	3.9%	5.3%	6.4%
	Spring	81.2%	5.7%	5.1%	7.9%
Black / African American	Fall	41.7%	13.0%	18.4%	26.8%
	Winter	43.0%	11.0%	16.5%	29.5%
	Spring	39.0%	11.5%	15.9%	33.6%
Hispanic / Latinx	Fall	41.0%	13.4%	18.8%	26.8%
	Winter	40.9%	11.4%	17.3%	30.4%
	Spring	38.8%	11.9%	16.0%	33.3%
Multi-racial / Other	Fall	56.4%	8.2%	13.3%	22.0%
	Winter	57.1%	8.0%	10.9%	24.1%
	Spring	52.8%	7.3%	13.2%	26.8%
White	Fall	70.2%	8.5%	10.4%	10.9%
	Winter	70.5%	7.6%	9.6%	12.2%
	Spring	64.9%	9.6%	11.4%	14.1%

## **Tier 1 Performance, Grades 6-8 and 9-12**

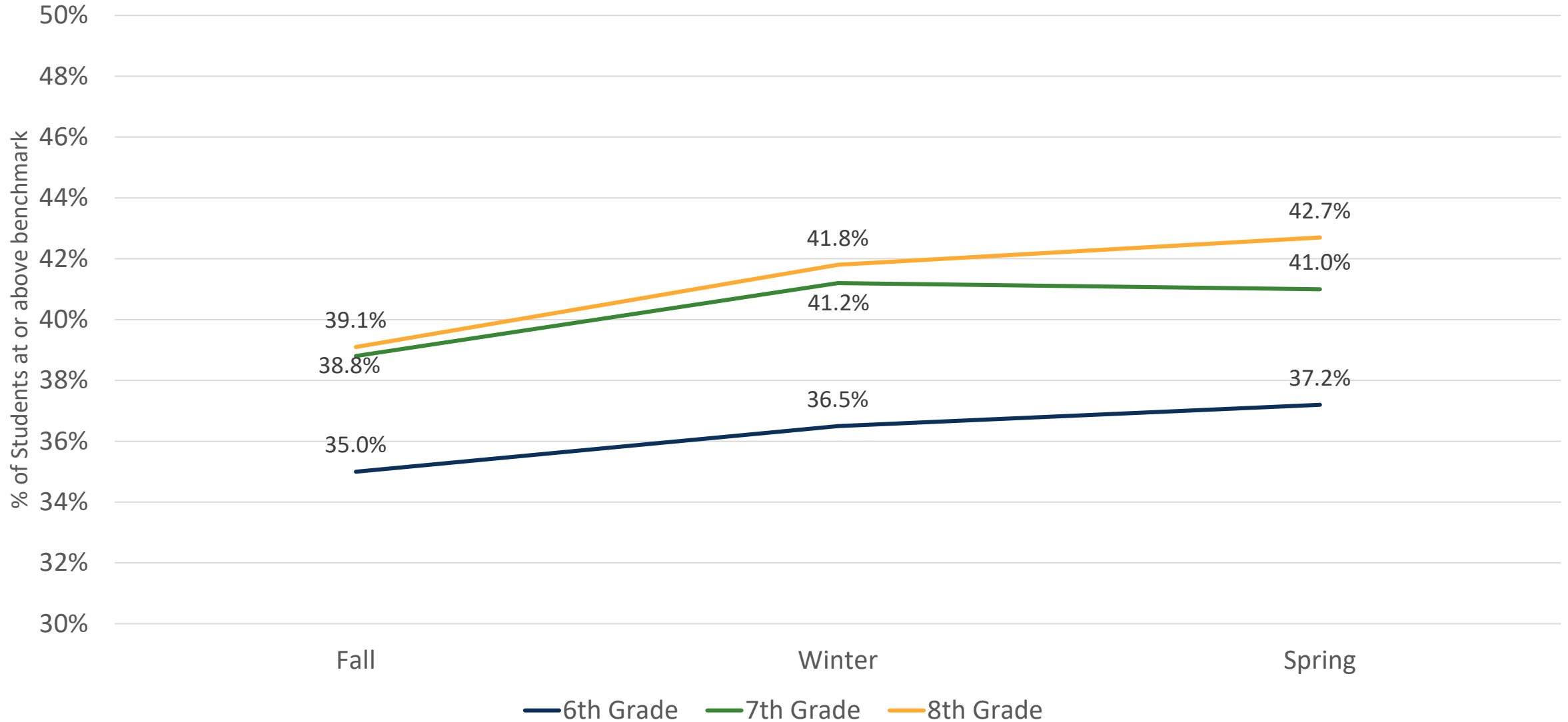
# On average, 6<sup>th</sup>–8<sup>th</sup> grade students scored below the Goal 3 leading indicator target.



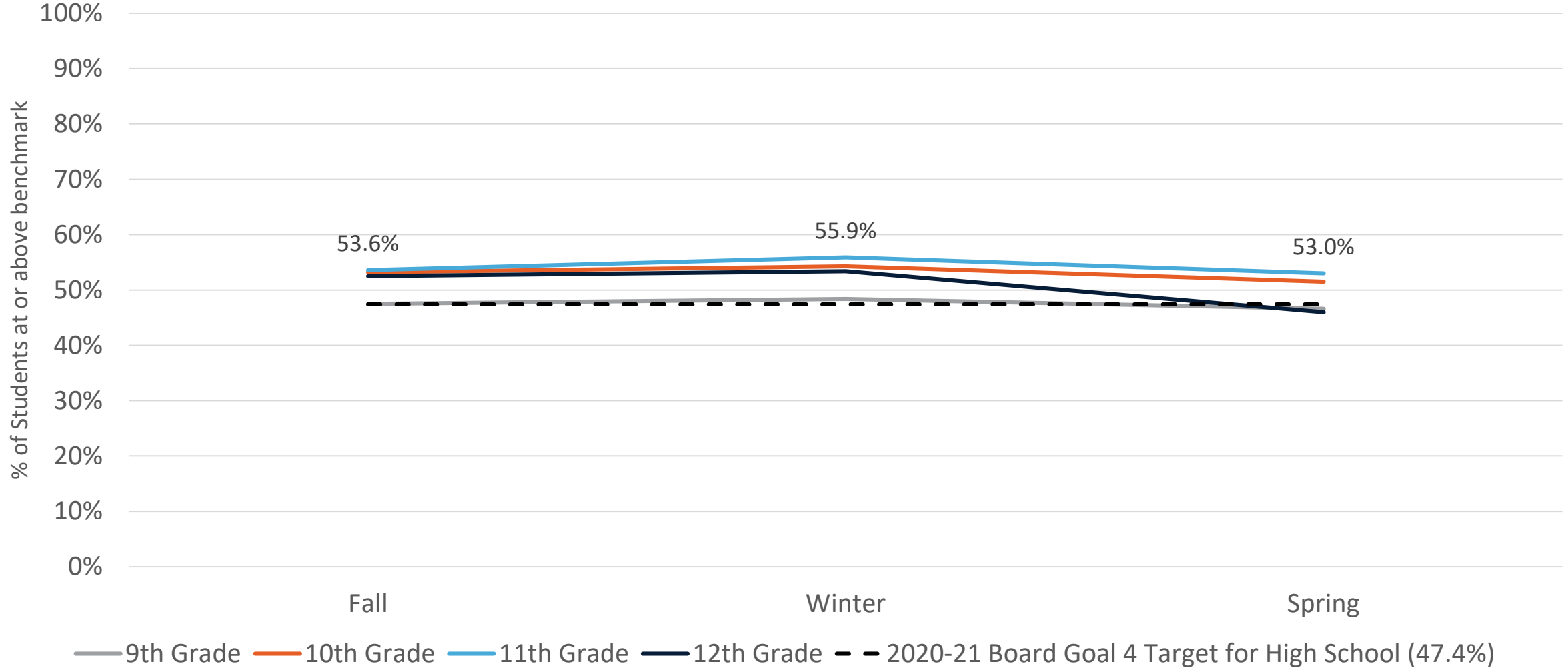
Data labels refer to 8<sup>th</sup> grade. See next slide for detailed information about all groups. For more information about annual targets and the Board of Education's Goals and Guardrails, please visit [philasd.org/era/goals-and-guardrails](https://philasd.org/era/goals-and-guardrails) and click on the "Progress Monitoring Data".

Source: Qlik Aimsweb-Star App. Accessed 07/28/2021.

# On average, the percentage of 6<sup>th</sup> – 8<sup>th</sup> grade students scoring in Tier 1 increased from fall to spring.



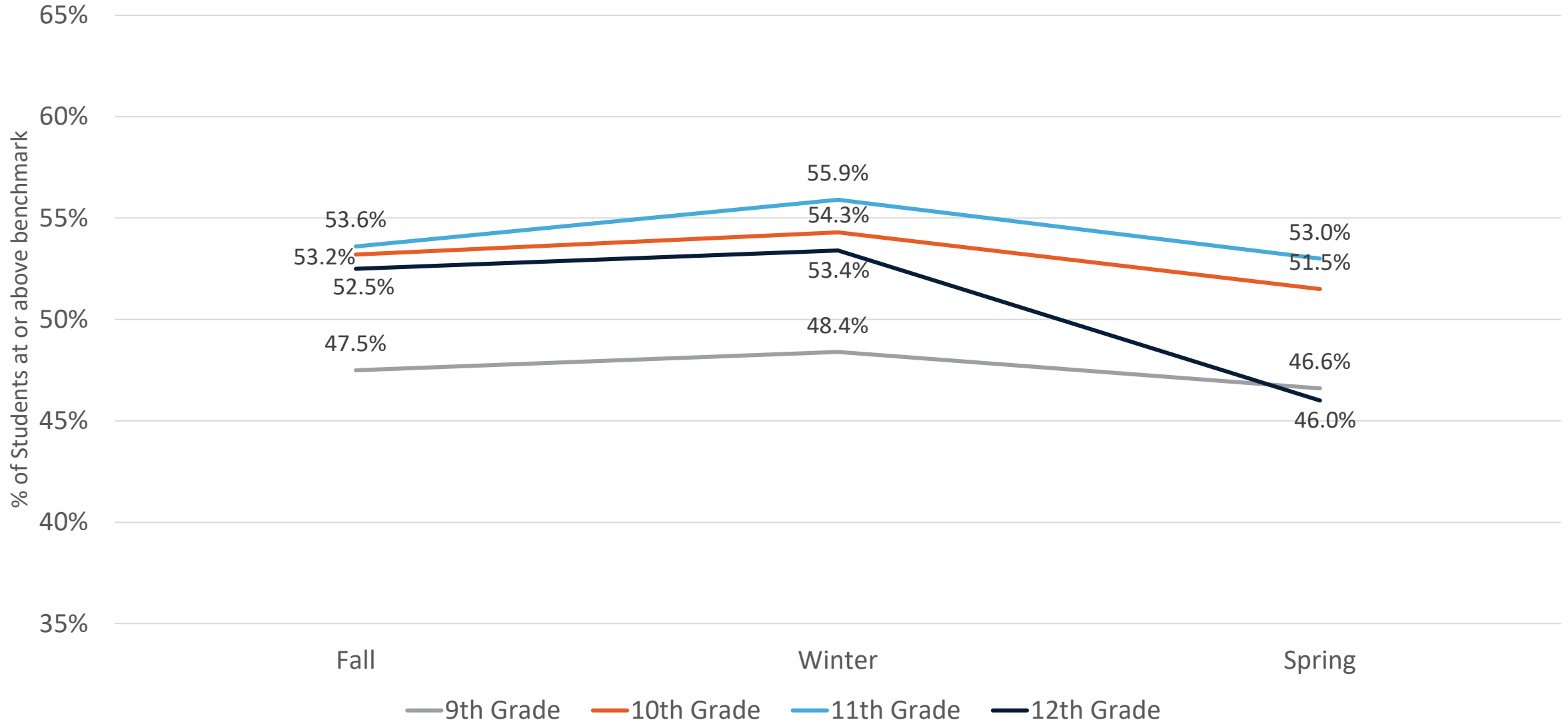
# On average, 10<sup>th</sup> and 11<sup>th</sup> grade students scored above the Goal 4 leading indicator target, whereas 9<sup>th</sup> and 12<sup>th</sup> grade student performance dipped slightly below target between fall and spring.



Data labels refer to 11<sup>th</sup> grade. See next slide for detailed information about all groups. For more information about annual targets and the Board of Education's Goals and Guardrails, please visit [philasd.org/era/goals-and-guardrails](https://philasd.org/era/goals-and-guardrails) and click on the "Progress Monitoring Data".

Source: Qlik Aimsweb-Star App. Accessed 07/28/2021.

# The percentage of 9<sup>th</sup>-12<sup>th</sup> grade students scoring at Tier 1 decreased from fall to spring, especially for 12<sup>th</sup> grade students.



# **Average National Percentile Rank, Grades 6-8 and 9-12**

## **How are students performing compared to the national sample?**



## Average NPR (National Percentile Rank) increased from fall to spring administrations for 7<sup>th</sup>-8<sup>th</sup> grade students and decreased for other students.

Grade Level	Average National Percentile Rank		
	Fall	Winter	Spring
6th Grade	32.2	32.8	32.1
7th Grade	34.7	36.0	35.9
8th Grade	34.8	36.3	37.1
9th Grade	39.7	39.7	38.3
10th Grade	44.8	45.0	43.2
11th Grade	45.0	46.1	44.4
12th Grade	44.5	44.9	39.1

**Average NPR (National Percentile Rank) increased from fall to spring administrations for 6<sup>th</sup>-8<sup>th</sup> grade Asian, Hispanic / Latinx, Multi-racial / Other, and white students, whereas NPR showed little change between Black / African American students' fall and spring results.**

Subgroup	Average National Percentile Rank		
	Fall	Winter	Spring
Asian	59.7	61.8	63.8
Black / African American	25.8	26.4	25.7
Hispanic / Latinx	28.3	29.6	29.1
Multi-racial / Other	36.5	38.9	38.2
White	47.5	49.5	48.6

# Average NPR (National Percentile Rank) increased from fall to spring administrations for 6<sup>th</sup>-8<sup>th</sup> grade ELs and students who were Economically Disadvantaged, but showed little change for students with IEPs.

Subgroup	Average National Percentile Rank		
	Fall	Winter	Spring
ELs (English Learners)	26.0	26.8	27.2
Economically Disadvantaged	29.4	30.5	30.6
Has IEP (Individualized Education Plan*)	12.1	12.3	11.6

\* All students are required to participate except for students who are exempted based on their Individualized Education Plan (IEP). For the Special Education student group, participation rate includes all students, including those who are exempted, in the denominator.

# Average NPR (National Percentile Rank) decreased from fall to spring administrations for 9<sup>th</sup>-12<sup>th</sup> grade students of all races/ethnicities.

Race / Ethnicity	Average National Percentile Rank		
	Fall	Winter	Spring
Asian	69.7	70.6	67.9
Black / African American	35.2	35.4	32.8
Hispanic Latinx	35.3	34.8	33.1
Multi-racial / Other	46.3	46.2	42.7
White	57.7	57.3	53.2

**Average NPR (National Percentile Rank) decreased from fall to spring administrations for 9<sup>th</sup>-12<sup>th</sup> grade students who were Economically Disadvantaged and who have IEPs, and NPR for 9<sup>th</sup>-12<sup>th</sup> grade ELs showed little change.**

Subgroup	Average National Percentile Rank		
	Fall	Winter	Spring
ELs (English Learners)	28.1	27.7	28.4
Economically Disadvantaged	38.1	38.5	37.1
Has IEP (Individualized Education Plan*)	14.5	14.1	13.6

\* All students are required to participate except for students who are exempted based on their Individualized Education Plan (IEP). For the Special Education student group, participation rate includes all students, including those who are exempted, in the denominator.

Source: Qlik Aimsweb-Star App. Accessed 07/28/2021.

# Summary – Star Math Grades 6-12

- Grade 6-12 students' Star math participation rates decreased between fall and spring, and the decrease was larger for students in grades 9-12.
- The percentage of students in grades 6-8 who scored At or Above Benchmark increased (at least slightly) for all racial/ethnic groups, as did the percentage who scored in the Intensive Intervention category.
- The percentage of 9<sup>th</sup>-12<sup>th</sup> grade students who scored At or Above Benchmark decreased for all racial/ethnic groups, and the percentage who scored in the Intensive Intervention category increased.
- On average, 10<sup>th</sup> and 11<sup>th</sup> grade students met the leading indicator targets (47.4% of students performing at or above grade level). 9<sup>th</sup> and 12<sup>th</sup> graders were very close to meeting leading indicator targets. 6<sup>th</sup>-8<sup>th</sup> graders did not meet leading indicator targets.
- On average, students in grades 6-12 performed lower than their peers nationwide.