

# **MCAS:** An Indicator of Student Achievement An Overview of 2023 State Assessment Results

by Amy Clouter Assistant Superintendent for Curriculum, Instruction & Assessment

#### I. Introduction

The Massachusetts Comprehensive Assessment System –the test we know as MCAS – came into being with the passage of the Education Reform Act in 1993<sup>1</sup>. This legislation was instrumental in raising academic expectations for students across the state. The effort to highlight the importance of equitable opportunities was particularly important for student groups that had been historically low performing and/or underserved. In the years since, the sustained attention on student growth as well as academic outcomes resulted in a renewed focus on achievement opportunity gaps. The continued use of common metrics across districts continues to guide our actions as we examine academic performance gaps between student groups in Shrewsbury.

In addition, while a single assessment is but one data point, the Department of Elementary and Secondary Education continues to affirm the importance of using MCAS results as a useful snapshot of the district as a whole. In Shrewsbury we use state testing results to determine where additional student support may be warranted. As we contemplate the extent to which our students have recovered from the academic impact of the pandemic, MCAS performance is one indicator to consider. In particular, the analysis of student subgroup scores gives us a full picture of current strengths and future needs.

#### II. Overview

As we review the latest MCAS results, it's important to note that, due to adjustments made by the Department of Elementary and Secondary Education (DESE) during the pandemic, 2023 results are best compared with 2022 and 2019, not 2021. This is because the 2020 exam was canceled and the

2021 exam was shortened and administered differently, with some students taking it remotely from home.

It's also important to recall that due to the COVID-19 pandemic, most districts did not receive an accountability determination in 2022. However, full accountability measures resumed this year.

More information about the components of accountability used by the state can be found in the <u>District and School</u>



<sup>&</sup>lt;sup>1</sup> Building on 20 Years of Massachusetts Education Reform Massachusetts Board of Elementary and Secondary Education Report M. D. Chester, Ed. D. Commissioner November 2014

<u>Accountability</u> section of the DESE website.

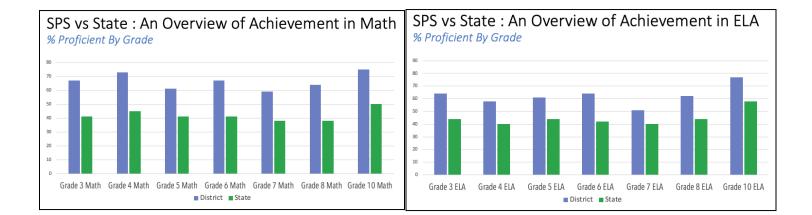
The section that follows will provide an overview of student achievement by grade and subject area. A link to Shrewsbury's district profile, including detailed information about student performance reports, can be found here: <u>MCAS Tests of Spring 2023 Percent of Students at Each Achievement</u> <u>Level - Shrewsbury</u>

Test results prompt us to tell a "data story". The story of the 2023 MCAS results is a book with different chapters. From the start, we can see that it will take time to fully regain the progress the district achieved in previous years. However, we also see from signs of recovery that the ending is a hopeful one. Moreover, it's evident that academic achievement in some areas is rebounding faster than others. This makes sense, because cohorts of students experienced the impact of the disruption differently. For example, this year's fourth graders were impacted more than our current third graders. For this reason it's helpful to look at achievement testing by grade span.

#### III. Achievement Data Analysis

This part of the report details achievement scores by subject area and grade level.

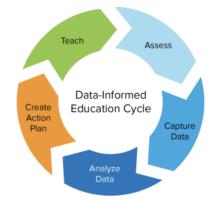
A student is considered "Proficient" having earned a score of "Meeting" or "Exceeding". The graphs below depict 2023 student proficiency scores by subject area compared to the state average. A quick glance at the charts below makes it plain that student scores were higher in Math than in English Language Arts for most students in Grades 3-8. This is the second year in a row we've noted that trend.



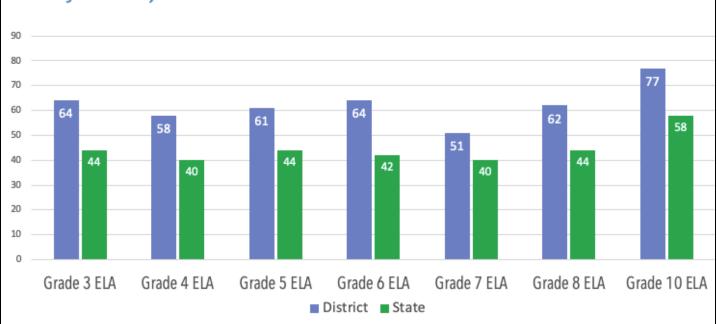
#### 2023 MCAS: District vs. State Comparison Data

As you know, the district has shifted practice to focus on the importance of teaching foundational reading skills in Grades K-6. This data affirms Shrewsbury's emphasis on literacy. Our new K-6 English Language Arts curriculum is better aligned with state standards, the criteria used for success on the MCAS exam.

Amongst students in the upper grades, English Language Arts and Math achievement scores were more similar, an indication that achievement outcomes for students at this level are less tied to curriculum experiences.



# SPS vs State : An Overview of Achievement in ELA



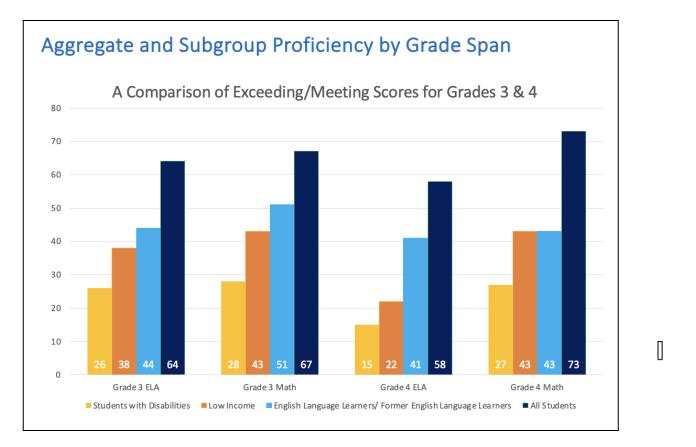
% Proficient By Grade

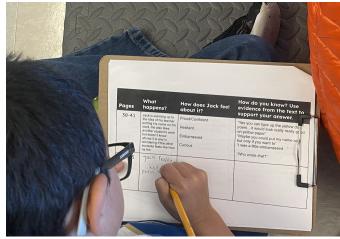
English Language Arts (ELA) achievement scores for all students continue to reflect the impact of lost instructional time on reading and writing, with the most significant differences between preand post-pandemic performance seen in our younger students. The number of students in Grades 3-4 scoring in the "Proficient" range in English Language Arts in 2023 is about 20% percent lower than in 2019. For students in Grades 5-8, the gap between current scores and 2019 scores is closer to 10%. Again, ELA scores are likely to increase with the addition of consistent foundational literacy learning and more opportunities for extended writing.

#### Student Achievement Data: Overall Trends

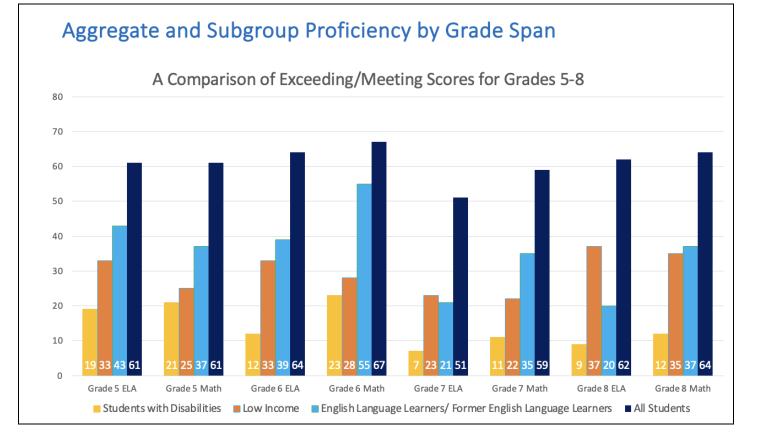
Just as achievement results vary across grade spans, it's evident that there are differences in student scores within grade spans as well. Another important way we can understand assessment data is by monitoring groups of children. These cohorts are called "subgroups." These results make plain that the disruption caused by COVID-19 had a disproportionate impact on students in need. Looking at trends for student subgroups suggests that significant achievement and opportunity gaps remain for students with disabilities, English language learners and economically disadvantaged students in English Language Arts, underscoring the importance of our literacy initiative.

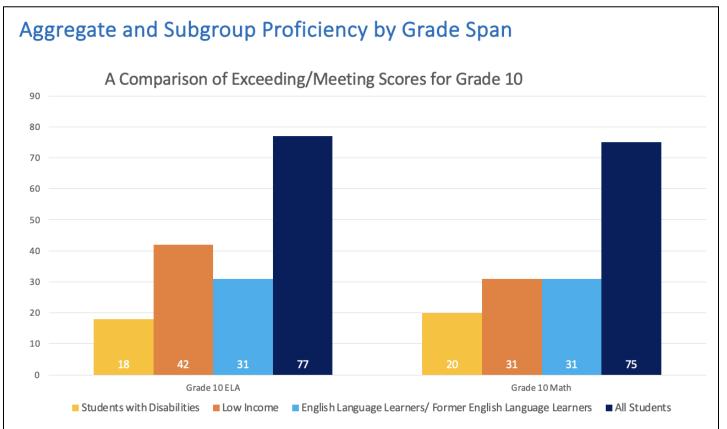
#### SPS Student Subgroup Analysis for English Language Arts & Math





Page 4 of 66





As we review Shrewsbury's MCAS scores, it's important to consider the data in context, and helpful to compare local trends to patterns across the state. For this reason, information about how our results compare with area districts is included for each grade span.

#### SPS English Language Arts Scores By Grade Level

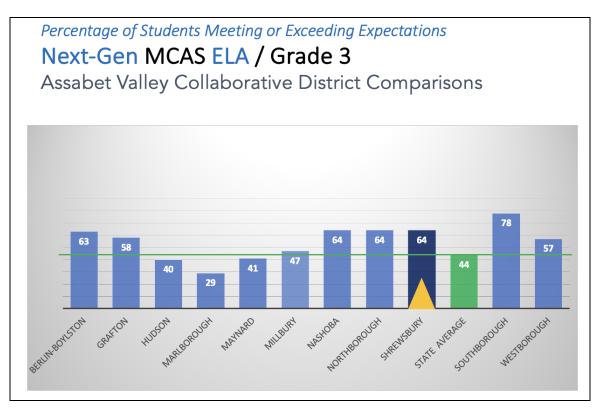
#### Grade 3 Student Achievement Scores in English Language Arts

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	80	74	64	64
Exceeding	28	19	19	15
Meeting	52	55	45	49
Partially Meeting	16	22	31	28
Not Meeting	3	4	5	8

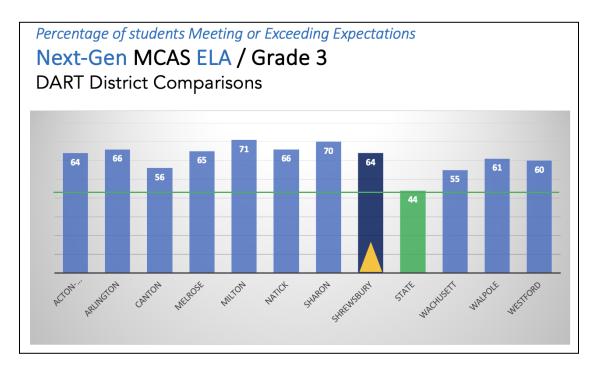


As shown in the table above, English Language Arts scores for third graders dropped by 16% post-pandemic, with fewer students scoring in the "Exceeding" range. In 2023, only 64% of Grade 3 students met the state benchmark for proficiency in English Language Arts. With the addition of new curriculum materials for teaching decoding, educators in Shrewsbury are confident that we can help students accelerate their progress this year.





Comparisons with other districts in our area provide perspective on how our data compares within the region. The chart below depicts results for Grade 3 as compared with area districts. The Department of Secondary and Elementary education (DESE) also provides a wealth of comparative statistics. One helpful resource is District Analysis and Review Tools (DART), a district analysis and review tool that identifies districts most similar in terms of grade spans, total enrollment and special populations. The chart below shows how Shrewsbury's scores for Grade 3 compare to DART districts.



#### SPS ELA Grade 3 Subgroup Achievement Scores

A closer look at scores for third graders in various subgroups illustrates differences in rates of achievement. The Department of Elementary and Secondary Education calculates achievement level percentages for subgroups with ten or more students. Shrewsbury's subrgoups include English Learners (ELs) and Former English Learners (FELs), for example. Only subgroups that have available information are included.

Accountability Subgroups		% Proficient by Category			
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
All Grade 3 Students	64	15	49	28	8
Students w/ Disabilities	26	3	23	41	33
EL and Former EL	44	4	40	37	19
Low Income	38	5	33	46	16
High Needs*	42	6	36	41	18

Note: Per DESE, a student is considered "High Needs" if s/he is designated as either low income (prior to 2015 and from 2022 to the present) economically disadvantaged (from 2015 to 2021) English Learner (EL) or Former English Learner (FEL) or a student with disabilities.

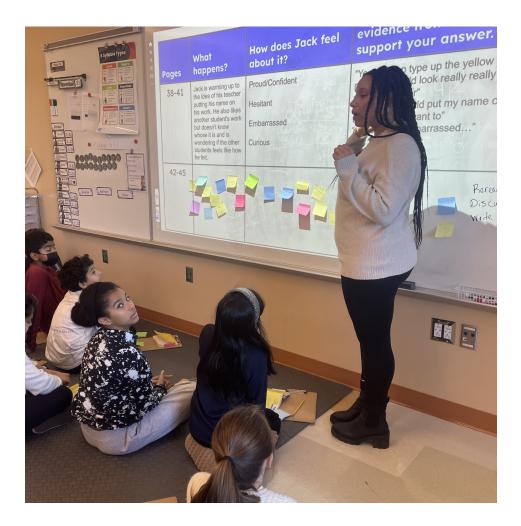
Race & Ethnicity Subgroups	% Proficient by Category				
	E / M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American / Black	57	0	57	36	7
Asian	72	18	54	21	7
Hispanic / Latinx	36	3	33	48	18
Multi-Race, Non-Hispanic / Latinx	58	5	53	32	11
White	65	18	47	29	5



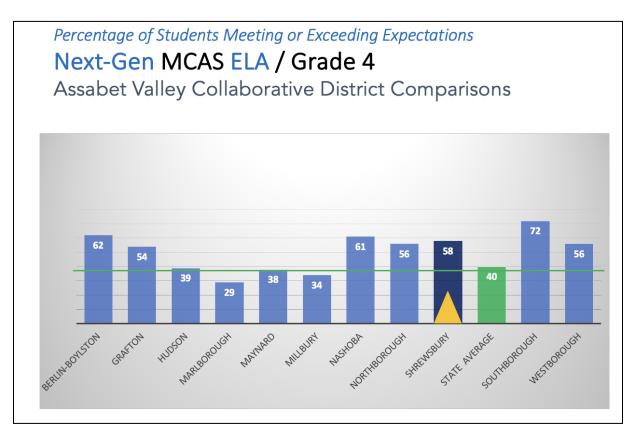
#### Grade 4 Student Achievement Scores in English Language Arts

Student scores for students in Grade 4 dropped slightly in 2023, with 58% of students scoring in the proficient range or better.

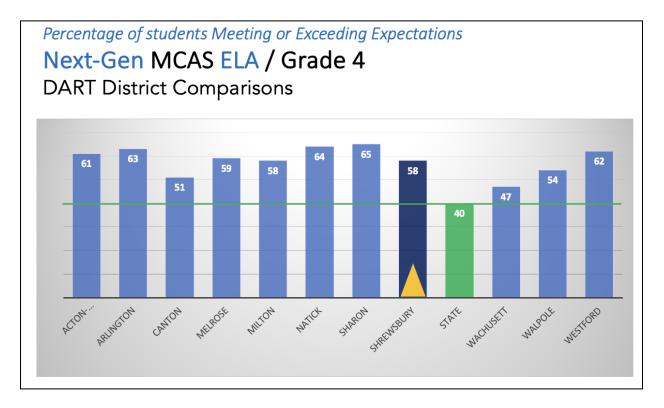
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	75	72	60	58
Exceeding	21	11	11	11
Meeting	54	61	49	47
Partially Meeting	20	25	34	35
Not Meeting	4	4	6	7



This graph shows how our Grade 4 students compare with fourth-grade readers in nearby districts.



Grade 4 student scores in English Language Arts are similar to those in DART districts as well.

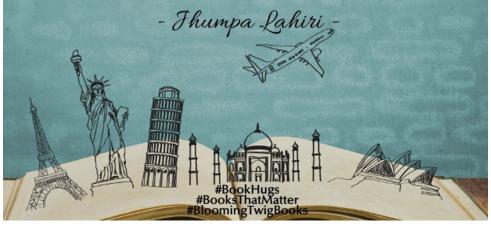


#### SPS ELA Grade 4 Subgroup Achievement Scores

Accountability					
Subgroups		%	Proficient by C	Category	
				Partially	
	E/M	Exceeding	Meeting	Meeting	Not Meeting
All Grade 4 Students	58	11	47	35	7
Students w/ Disabilities	15	3	12	52	34
EL and Former EL	41	6	35	59	0
Low Income	22	2	20	58	19
High Needs	24	3	21	57	19

Race & Ethnicity Subgroups	% Proficient by Category				
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American / Black	22	0	22	67	11
Asian	74	19	55	21	4
Hispanic / Latinx	46	3	43	48	8
Multi-Race, Non-Hispanic / Latinx	52	14	38	34	14
White	51	6	45	41	9

"That's the thing about books. They let you travel without moving your feet."

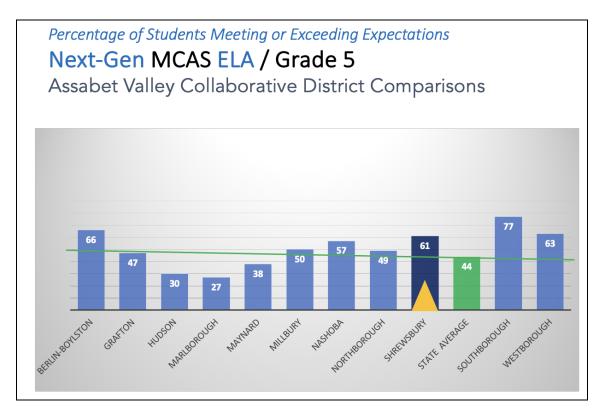


#### Grade 5 Student Achievement Scores in English Language Arts

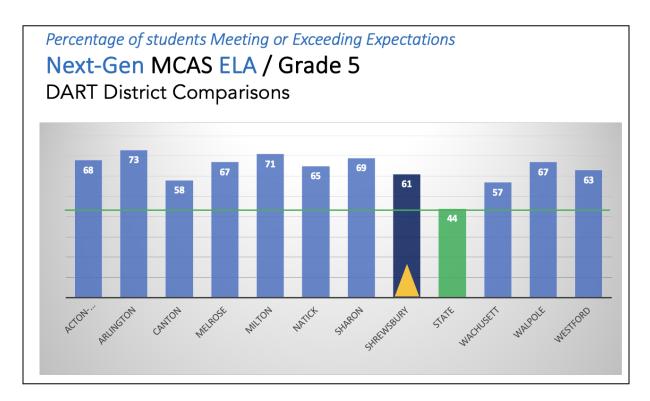
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	70	62	59	61
Exceeding	13	13	7	2
Meeting	57	49	52	59
Partially Meeting	27	34	35	32
Not Meeting	3	5	5	7

In Grade 5, 61% of students reached proficiency benchmarks in 2023, a slight gain over 2022. Since 2021, the percentage of Shrewsbury students meeting or exceeding state benchmarks has remained about 10% below pre-pandemic scores. The decrease in the number of students scoring in the "Exceeding" range over time is concerning. At the same time, the chart below demonstrates that only three districts in the area had a higher number of proficient scores in this grade band.





While Shrewsbury students continued to outperform the state average, the percentage of students in Shrewsbury that met or exceeded achievement goals in English Language Arts in fifth grade remains lower than pre-pandemic scores.



# SPS ELA Grade 5 Subgroup Achievement Scores

Accountability Subgroups	% Proficient by Category				
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
All Grade 5 Students	61	2	59	32	7
Students w/ Disabilities	19	2	17	44	38
EL and Former EL	43	0	43	43	14
Low Income	33	0	33	48	19
High Needs	35	1	34	46	19

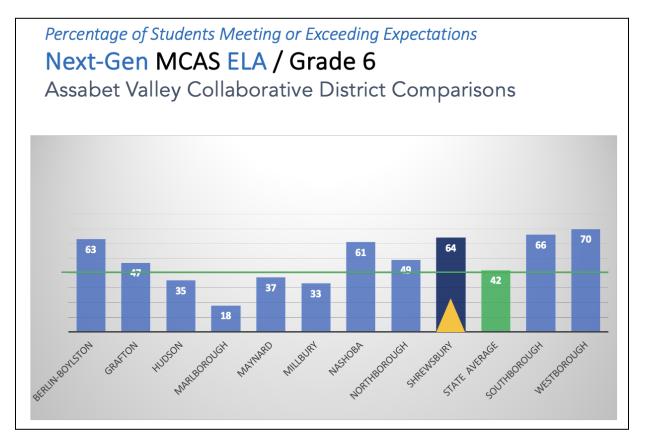
Race & Ethnicity Subgroups	% Proficient by Category				
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American / Black	50	0	50	33	17
Asian	72	3	69	25	3
Hispanic / Latinx	43	0	43	35	22
Multi-Race, Non-Hispanic / Latinx	74	4	74	15	7
White	55	1	54	38	7

#### Grade 6 Student Achievement Scores in English Language Arts

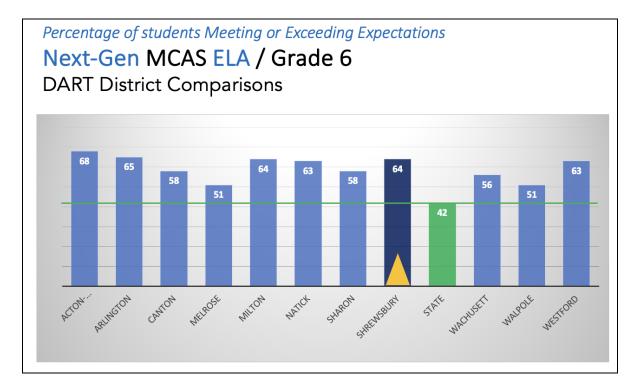
64% of students in Grade 6 met or exceeded state benchmarks in English Language Arts in 2023, up 3% from last year's scores.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	73	67	61	64
Exceeding	27	22	17	14
Meeting	46	45	44	50
Partially Meeting	20	22	32	26
Not Meeting	7	11	8	10

As shown below, students at the middle level scored well above the state average.



Shrewsbury's sixth graders achieved at similar rates to those of their peers in DART districts.



#### SPS Grade 6 ELA Subgroup Achievement Scores

Accountability						
Subgroups		% Proficient by Category				
				Partially	Not	
	E/M	Exceeding	Meeting	Meeting	Meeting	
All Grade 6 Students	64	14	50	26	10	
Students w/ Disabilities	12	0	12	46	43	
EL and Former EL	39	2	37	46	15	
Low Income	32	3	30	39	28	
High Needs	30	2	28	43	27	

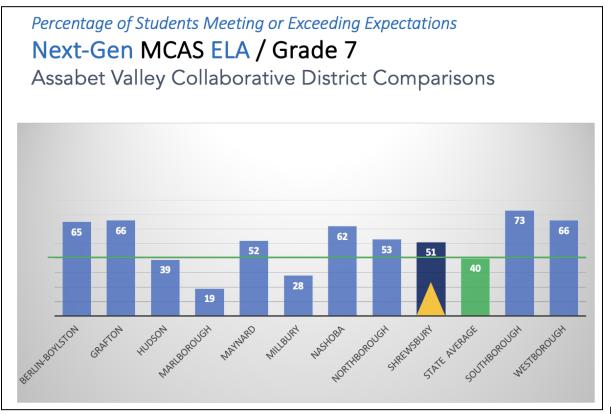
Race & Ethnicity						
Subgroups		% Proficient by Category				
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting	
African American/Black	39	8	31	46	15	
Asian	79	23	56	18	3	
Hispanic/Latinx	45	8	37	35	20	
Multi-Race, Non-Hispanic/Latinx	60	4	56	30	11	
White	58	9	49	29	13	

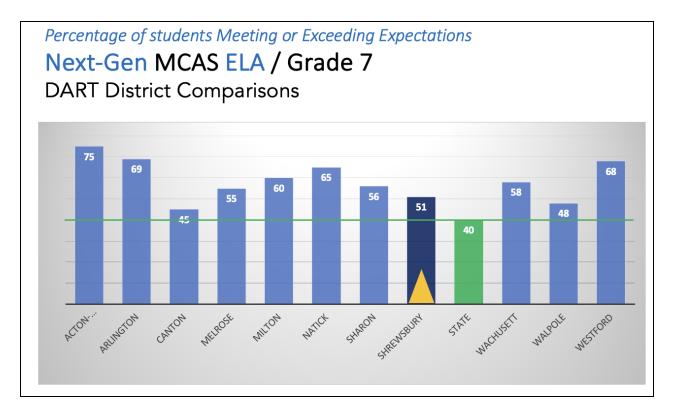
#### Grade 7 Student Achievement Scores in English Language Arts

Only 51% of students in Grade 7 met the state benchmark in English Language Arts in 2023. Scores in ELA continue to decline for this grade, signaling the need for ongoing analysis and action. Fortunately, the new schedule put into place this year at Oak allows for consistent student support. Classroom-based practice can be matched to specific student needs and adjusted over time.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	62	59	59	51*
Exceeding	14	8	6	12
Meeting	48	51	52	40
Partially Meeting	31	32	32	39
Not Meeting	7	9	9	10

\* Please Note: Achievement score percentiles are rounded up, so for some grade spans there is a difference in the number of students reported for each scoring category and the total number of students earning "Exceeding / Meeting". For example, if 7.4% of students earned a score in the "Exceeding" range and 52.4% of students earned a "Meeting" score, those numbers would be rounded to 7 and 52 respectively. However the total number of students scoring "Meeting" or better will total 60 to reflect the additional .8% adjustment by the Department of Elementary and Secondary Education. This is the case for Grade 7 and Grade 10.





#### SPS ELA Grade 7 Subgroup Achievement Scores

Accountability							
Subgroups		% Pro	oficient by Cate	egory			
				Partially			
	E / M	Exceeding	Meeting	Meeting	Not Meeting		
All Grade 7 Students	51*	12	40	39	10		
Students w/ Disabilities	7	1	6	42	51		
EL and Former EL	21	3	18	53	26		
Low Income	23	5	18	54	23		
High Needs	21	5	16	48	31		

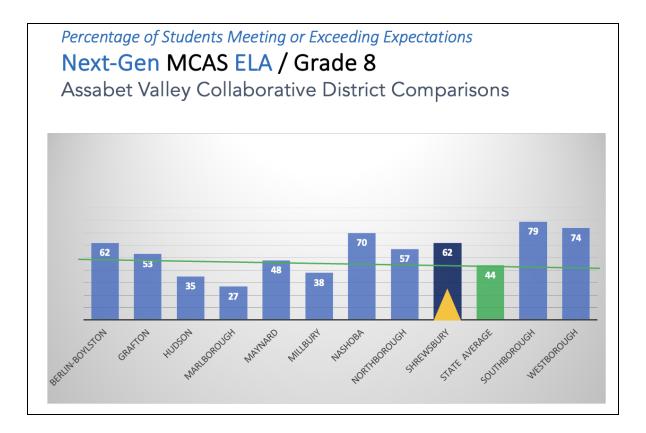
\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.

Race & Ethnicity								
Subgroups		% Pro	oficient by Cate	egory				
	E/M	E / MExceedingMeetingPartiallyMeetingMeetingMeetingNot Meeting						
African American/Black	24	10	14	67	10			
Asian	69	22	47	25	6			
Hispanic/Latinx	33	4	29	44	22			
Multi-Race, Non-Hispanic/Latinx	55	20	35	35	10			
White	44	5	39	45	11			

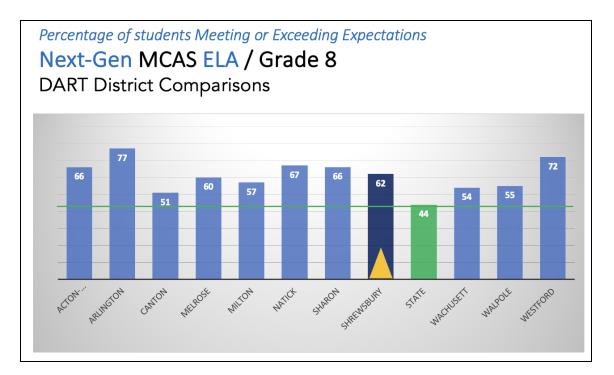
## Grade 8 Student Achievement Scores in English Language Arts

62% of Shrewsbury students in Grade 8 scored in the "Meeting" or "Exceeding" range last spring. As shown below, this result represents a drop in achievement scores from 2022.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	72	62	66	62
Exceeding	26	16	19	16
Meeting	46	46	47	46
Partially Meeting	20	30	27	26
Not Meeting	7	8	7	12



The graph below shows how Shrewsbury's eighth graders compare with students from districts with similar demographics.



# SPS ELA Grade 8 Subgroup Achievement Scores

Accountability Subgroups	% Proficient by Category					
	E/M	E / M Exceeding Meeting Meeting Not				
All Grade 8 Students	62	16	46	26	12	
Students w/ Disabilities	9	4	5	37	54	
EL and Former EL	20	0	20	33	47	
Low Income	37	5	32	33	30	
High Needs	27	5	22	36	36	

Race & Ethnicity Subgroups	% Proficient by Category							
	E/M	Partially						
African American/Black	40	0	40	40	20			
Asian	76	26	50	16	8			
Hispanic/Latinx	34	6	28	34	32			
Multi-Race, Non-Hispanic/Latinx	77	19	58	15	8			
White	58	13	45	31	10			



#### Grade 10 Student Achievement Scores in English Language Arts

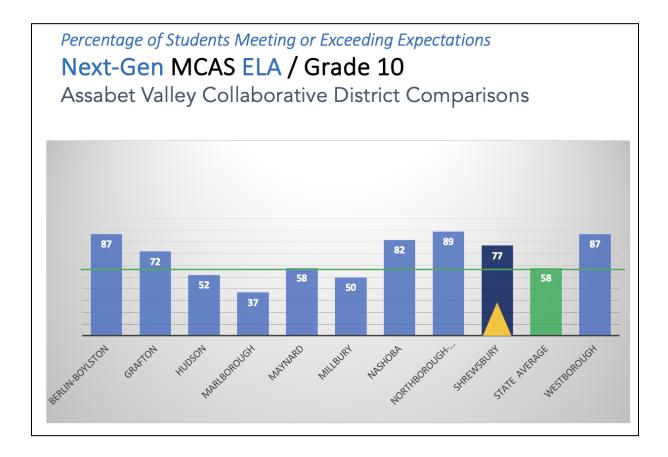
Once again, 77% of students earned a score of "Meeting" or "Exceeding" in Grade 10. While the number of students considered proficient in 2023 is similar to 2019, the significant increase in the number of students scoring in the "Exceeding" range over last year is a positive sign.

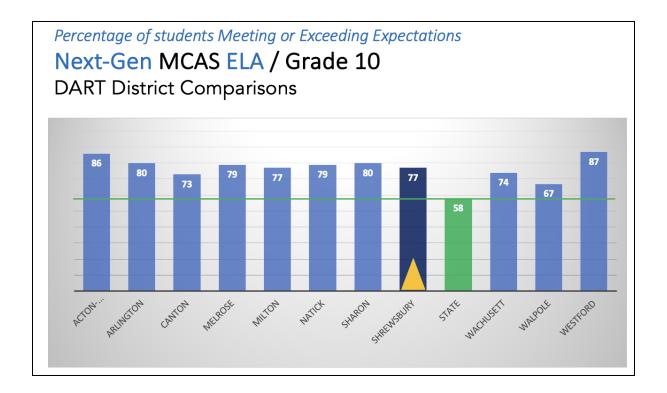
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	79	83	77	77*
Exceeding	25	35	14	30
Meeting	54	48	64	46
Partially Meeting	18	12	19	19
Not Meeting	3	4	3	4

\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.



Looking at assessment information from area districts provides additional perspective on our results.





## SPS ELA Grade 10 Subgroup Achievement Scores

Accountability							
Subgroups		% Proficient by Category					
				Partially			
	E/M	Exceeding	Meeting	Meeting	Not Meeting		
All Grade 10 Students	77*	30	46	19	4		
Students w/ Disabilities	18	0	18	59	22		
EL and Former EL	31	0	31	42	27		
Low Income	42	8	34	45	13		
High Needs	41	6	35	45	14		

Race & Ethnicity Subgroups		% Proficient by Category					
	E/M	E / M Exceeding Meeting Meeting Not					
African American./Black	65	5	60	25	10		
Asian	90	51	39	9	1		
Hispanic/Latinx	51	15	36	35	15		
Multi-Race, Non-Hisp./Latinx	63	21	42	26	11		
White	78	24	54	21	2		

\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.

#### Trends Over Time in English Language Arts

As shown below, it's clear that the disruption caused by the pandemic continues to impact achievement scores in English Language Arts, especially for students in key transition years. At the same time, we see that Shrewsbury's results reflect small gains in Grades 5, 6 and 10, suggesting that many students in the district are beginning to recover lost ground.

Shrewsbury's scores have been consistently higher than state averages, and that trend held true for 2023. Finally, it's important to remember that aggregate scores for most grade spans in Shrewsbury were comparable with other districts that have similar demographics.

Grade and Subject	Gr. 3	Gr. 4	Gr. 5	Gr. 6	Gr. 7	Gr. 8	Gr. 10
Shrewsbury % E / M 2019	81%	76%	71%	73%	62%	72%	79%
State Results 2019	56%	52%	52%	53%	48%	52%	61%
Shrewsbury % E / M 2021	74%	72%	61%	67%	59%	62%	84%
State Results 2021	51%	49%	47%	47%	43%	41%	64%
Shrewsbury % E / M 2022	64%	60%	59%	61%	58%	66%	78%
State Results 2022	44%	38%	41%	41%	41%	42%	58%
Shrewsbury % E / M 2023	64%	58%	61%	64%	51%	62%	77%
State Results 2023	44%	39%	44%	42%	41%	44%	58%

Percentage of Students Meeting or Exceeding Expectations



#### Mathematics Scores By Grade Level

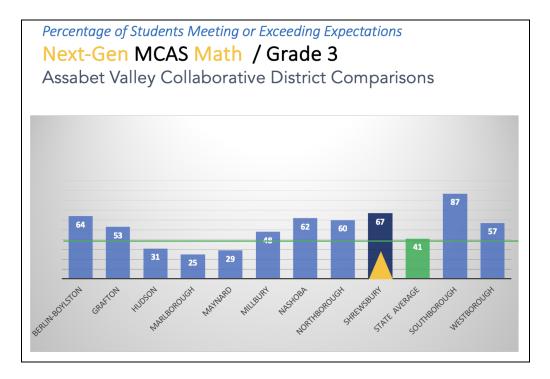
#### Grade 3 Student Achievement Scores in Mathematics

Prior to the pandemic, Shrewsbury's students were making steady gains in Math – especially in the younger grades. In 2023, 67% of third grade students met or exceeded state benchmarks- a very similar result to last year. However, more students scored in the Exceeding range in 2023 than in 2022.

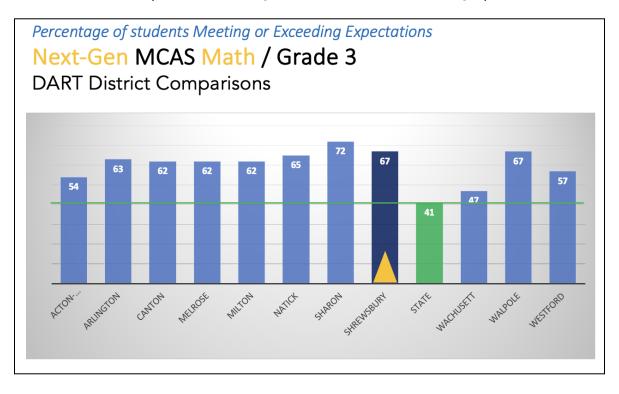
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	75	62	68	67
Exceeding	22	14	16	20
Meeting	53	48	52	47
Partially Meeting	19	31	24	24
Not Meeting	5	7	8	9

Across the Commonwealth, Math achievement scores are recovering faster than English Language Arts. This is true for Shrewsbury's students as well. The graphs that follow illustrate how Shrewsbury's student scores in Grade 3 compare to student achievement scores in nearby districts.





Last spring, Grade 3 student scores were among the highest among area districts. Shrewsbury's scores for Grade 3 also compare well among districts with similar demographics.



#### SPS Math Grade 3 Subgroup Achievement Scores

	% Proficient by Category					
Accountability Subgroups	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting	
All Grade 3 Students	67	20	47	24	9	
Students w/ Disabilities	28	5	23	37	35	
EL and Former EL	51	10	41	30	19	
Low Income	43	5	38	38	18	
High Needs	45	8	37	35	19	

Looking at subgroup trends provides another perspective on Math achievement scores.

	% Proficient by Category				
Race & Ethnicity				Partially	
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting
African American/Black	36	0	36	50	14
Asian	78	28	50	15	7
Hispanic/Latinx	46	3	43	38	18
Multi-Race,	58	11	47	26	16
Non-Hispanic/Latinx					
White	65	18	47	27	7



#### **Grade 4 Student Achievement Scores in Mathematics**

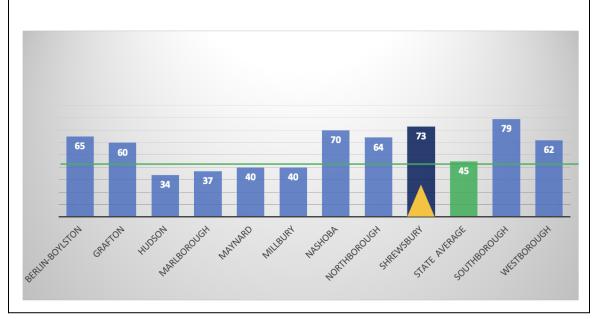
74% of Grade 4 students scored in the "Meeting" or "Exceeding" category in 2023, reflecting incremental gains over last year.

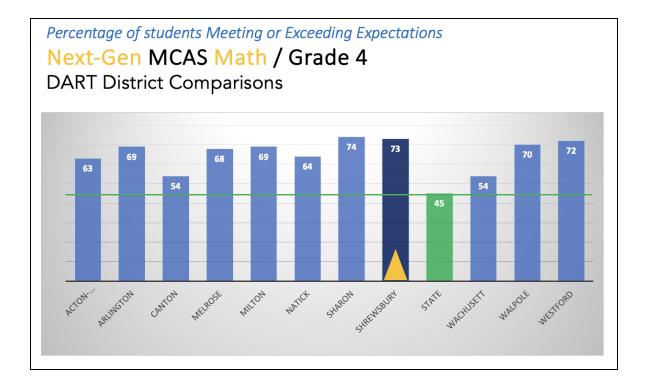
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	79	64	70	73
Exceeding	28	14	21	22
Meeting	51	50	49	51
Partially Meeting	16	29	25	22
Not Meeting	5	7	4	5

Shrewsbury's Grade 4 Math scores are among the highest in the Assabet Valley Collaborative. District scores for Grade 4 compare well with results from DART districts, too.



# Percentage of Students Meeting or Exceeding Expectations Next-Gen MCAS Math / Grade 4 Assabet Valley Collaborative District Comparisons



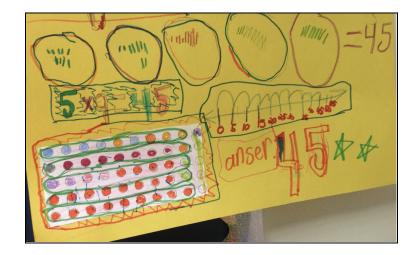


# SPS Math Grade 4 Subgroup Achievement Scores

	% Proficient by Category				
Accountability	- /	- I.		Partially	
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting
All Grade 4 Students	73	22	51	22	5
Students w/ Disabilities	27	4	23	47	26
EL and Former EL	65	18	47	35	0
Low Income	43	2	41	41	16
High Needs	47	7	40	39	14

	% Proficient by Category				
Race & Ethnic				Partially	
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting
African American/Black	50	0	50	39	11
Asian	86	35	51	12	2
Hispanic/Latinx	63	12	51	32	5

Multi-Race,	73	14	59	21	7
Non-Hispanic/Latinx					
White	66	15	51	28	6

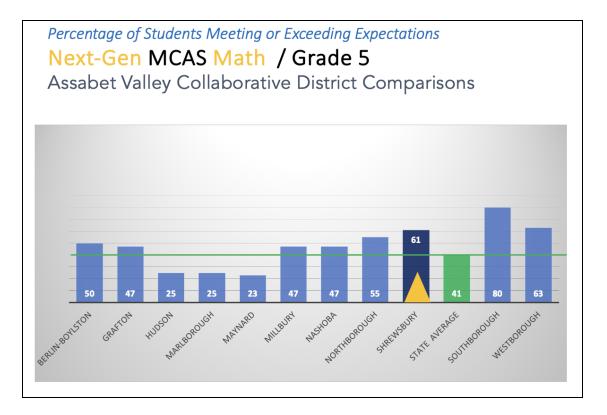


#### **Grade 5 Student Achievement Scores in Mathematics**

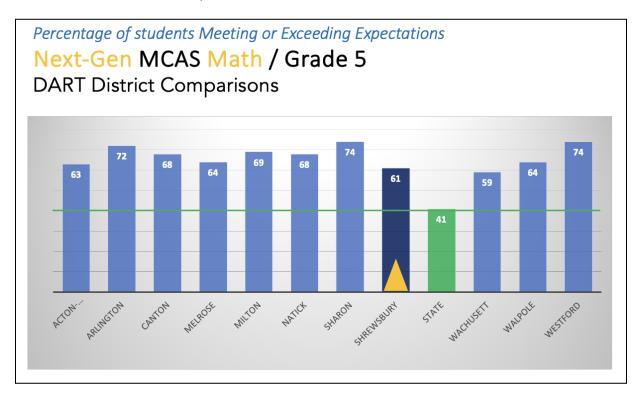
In 2023 61% of students in Grade 5 met grade-level benchmarks in math, up 11 percentage points over last year. However, in 2019, 72% of Grade 5 students met or exceeded the state grade-level benchmark, suggesting that student achievement at this level shows signs of recovery.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	72	54	50	61*
Exceeding	14	10	8	11
Meeting	58	44	42	51
Partially Meeting	25	38	43	32
Not Meeting	2	7	8	6

\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.



Shrewsbury's scores for this grade level rank among the highest among area districts. However, our Grade 5 Math scores do not compare as well with DART districts.



Lower Math scores in the aggregate for Grade 5 students are also reflected in the differences seen between the average achievement scores and subgroup scores for the grade.

#### SPS Math Grade 5 Subgroup Achievement Scores

	% Proficient by Category				
Accountability				Partially	
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting
All Grade 5 Students	61*	11	51	32	6
Students w/ Disabilities	21	5	16	41	39
EL and Former EL	37	0	37	51	12
Low Income	25	0	25	59	16
High Needs	30	2	28	51	18

	% Proficient by Category				
Race & Ethnicity Subgroups	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American/Black	28	0	28	61	11
Asian	83	18	65	15	2
Hispanic/Latinx	27	0	27	51	22
Multi-Race, Non-Hispanic/Latinx	71	15	56	19	11
White	53	7	46	41	6

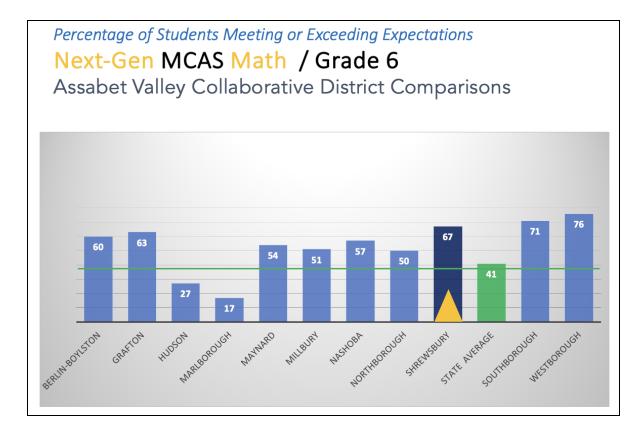
\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.

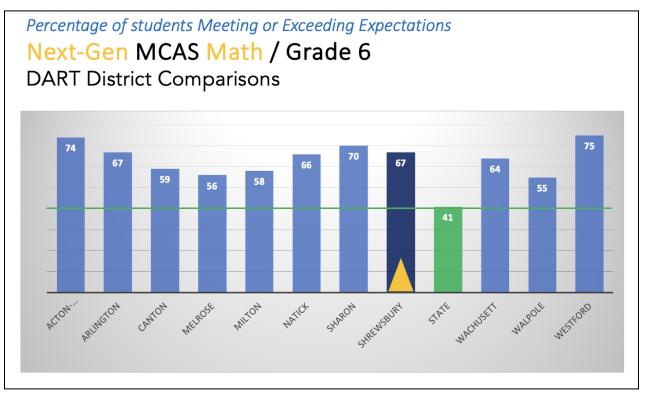
#### Grade 6 Student Achievement Scores in Mathematics

In 2023, 67% of students at this level scored in the "Meeting" or "Exceeding" range, reflecting a slight decrease in the number of students meeting state benchmarks from last year. This result aligns with pre-pandemic scores.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	69	57	70	67
Exceeding	22	12	17	19
Meeting	47	45	53	48
Partially Meeting	24	32	23	27
Not Meeting	7	11	7	6







# SPS Math Grade 6 Subgroup Achievement Scores

	% Proficient by Category						
Accountability				Partially			
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting		
All Grade 6 Students	67	19	48	27	6		
Students w/ Disabilities	23	4	19	49	28		
EL and Former EL	55	6	49	36	9		
Low Income	28	4	24	58	13		
High Needs	36	5	31	47	17		

		% Proficient by Category						
Race & Ethnicity Subgroups	E / M	Exceeding	Meeting	Partially Meeting	Not Meeting			
African American/Black	27	4	23	69	4			
Asian	92	39	53	6	2			
Hispanic/Latinx	35	4	31	54	12			
Multi-Race, Non-Hispanic/Latinx	67	11	56	30	4			
White	57	6	51	34	9			

### Grade 7 Student Achievement Scores in Mathematics

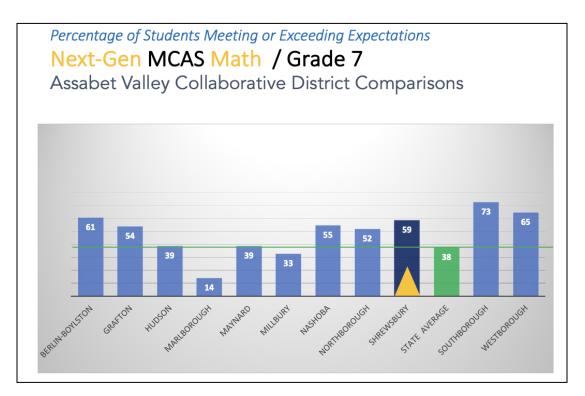
59% of students at this grade span scored in the "Meeting" or "Exceeding" range in 2023, compared to 56% in 2022.

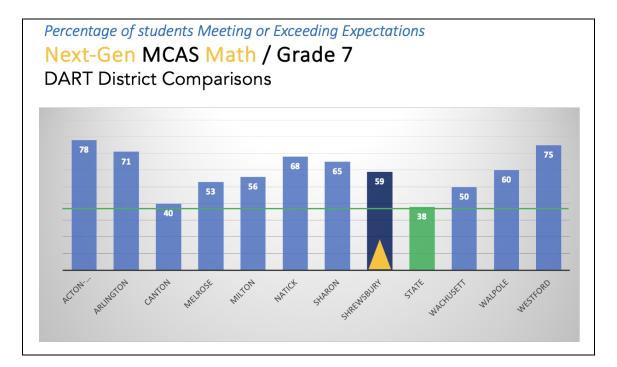
% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	62	59	56	59*
Exceeding	17	17	14	16
Meeting	45	42	42	44
Partially Meeting	32	35	33	32
Not Meeting	6	7	10	9



\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.

Although results for this grade span are lower overall, Shrewsbury's scores remain significantly higher than the state average.





## SPS Math Grade 7 Subgroup Achievement Scores

	% Proficient by Category					
Accountability				Partially		
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting	
All Grade 7 Students	59*	16	44	32	9	
Students w/ Disabilities	11	0	11	44	45	
EL and Former EL	35	3	32	47	18	
Low Income	22	1	21	57	21	
High Needs	25	2	23	48	27	

\* Please Note: As mentioned previously, achievement score percentiles differ due to rounding.

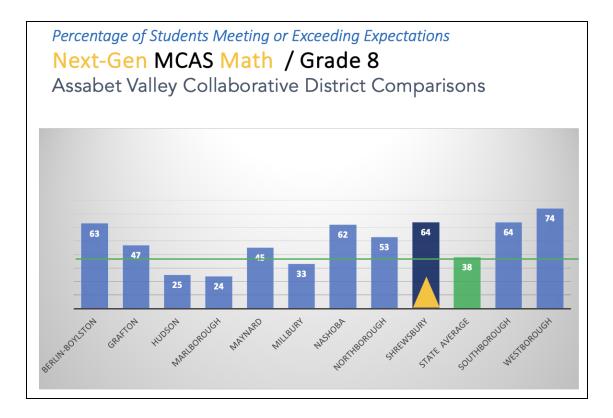
	% Proficient by Category						
Race & Ethnicity Subgroups	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting		
African American/Black	38	14	24	52	10		
Asian	83	34	49	13	5		
Hispanic/Latinx	28	4	24	49	22		
Multi-Race, Non-Hispanic/Latinx	50	20	30	45	5		
White	52	5	47	39	9		

## **Grade 8 Student Achievement Scores in Mathematics**

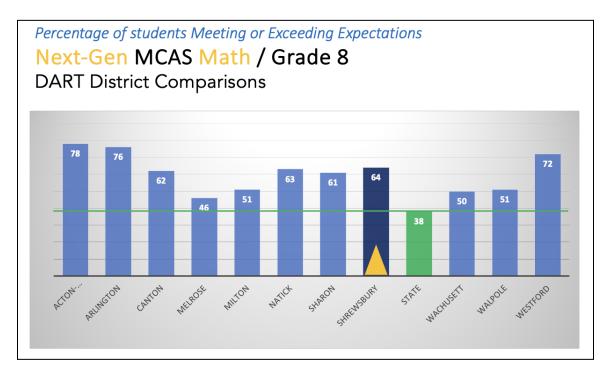
Math scores for students in Grade 8 decreased slightly over last year. 64% of students met state benchmarks in 2023.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	68	61	65	64
Exceeding	26	14	21	21
Meeting	42	47	44	43
Partially Meeting	27	29	28	27
Not Meeting	5	9	7	9





Notably, Shrewsbury's scores for this grade span are among the highest in the area. Our achievement scores compare well to DART districts as well.



# SPS Math Grade 8 Subgroup Achievement Scores

	% Proficient by Category						
Accountability				Partially			
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting		
All Grade 8 Students	64	21	43	27	9		
Students w/ Disabilities	12	0	12	44	45		
EL and Former EL	37	10	27	43	20		
Low Income	35	6	29	38	27		
High Needs	30	5	25	41	29		

	% Proficient by Category						
Race & Ethnicity Subgroups	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting		
African American/Black	47	0	47	40	13		
Asian	86	46	40	7	6		
Hispanic/Latinx	28	2	26	52	20		
Multi-Race, Non-Hispanic/Latinx	89	31	58	12	0		
White	55	8	47	35	10		

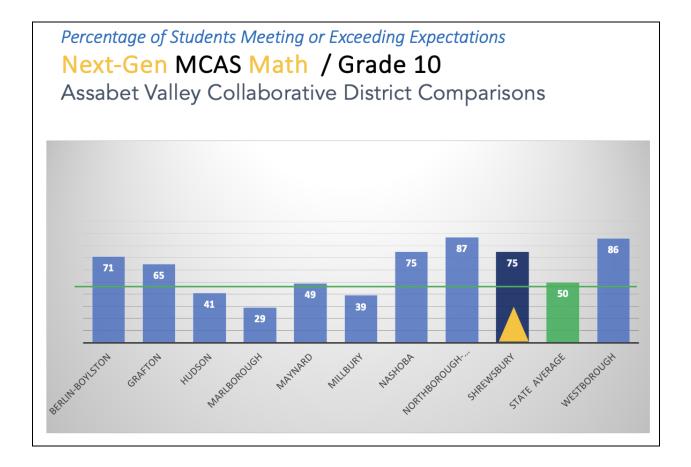
## Grade 10 Student Achievement Scores in Mathematics

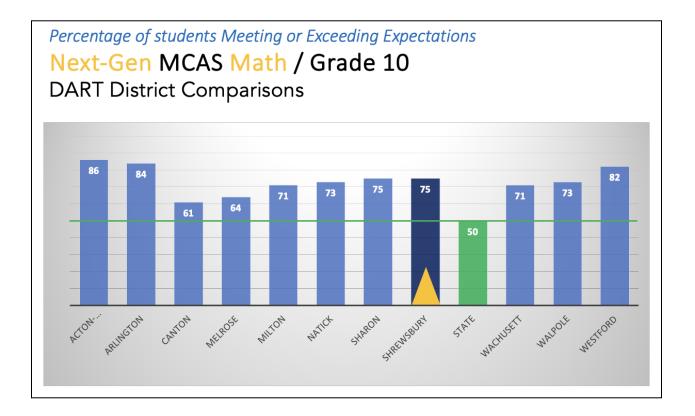
In 2019, high school students across the state took the "next generation" test in Mathematics for the first time. Scores for the old "legacy" test cannot be compared with scores on this exam, so comparisons for this grade span are limited. 75% of students in Grade 10 met or exceeded state benchmarks in 2023.

% by level	2019	2021	2022	2023
Proficient	80	77	74	75
(Exceeding + Meeting)				
Exceeding	29	32	27	31
Meeting	51	45	47	44
Partially Meeting	17	19	22	23
Not Meeting	3	4	4	2









## SPS Math Grade 10 Subgroup Achievement Scores

	% Proficient by Category						
Accountability				Partially			
Subgroups	E/M	Exceeding	Meeting	Meeting	Not Meeting		
All Grade 10 Students	75	31	44	23	2		
Students w/ Disabilities	20	4	16	63	16		
EL and Former EL	31	0	31	58	12		
Low Income	31	7	24	61	8		
High Needs	36	7	29	55	9		

	% Proficient by Category						
Race & Ethnicity Subgroups	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting		
African American/Black	45	0	45	45	10		
Asian	92	62	30	7	0		
Hispanic/Latinx	40	13	27	53	7		
Multi-Race, Non-Hispanic/Latinx	74	32	42	21	5		
White	75	17	58	23	2		



All students should have the opportunity and the support necessary to learn significant mathematics with depth and understanding. There is no conflict between equity and excellence.

National Council of Teachers of Mathematics

### **Trends Over Time in Mathematics**

In Shrewsbury and comparison districts, signs of recovery are best seen in this subject area. For most grade spans, achievement scores in Math for 2023 were similar to last year's results. Scores for students in Grade 5 were up significantly from 2022, representing a bright spot in our overall results.

Percentage of Students Meeting or Exceeding Expectations

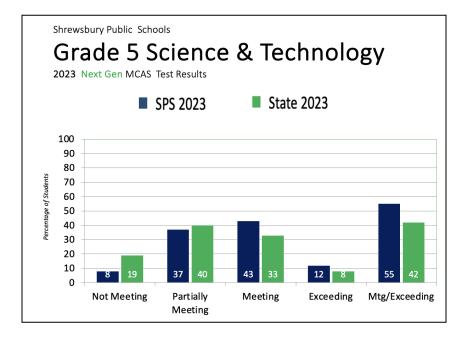
Grade and Subject	Gr 3	Gr 4	Gr 5	Gr 6	Gr 7	Gr 8	Gr. 10
Shrewsbury % E / M 2019	75%	79%	73%	69%	63%	68%	80%
State Results 2019	49%	50%	48%	52%	48%	46%	59%
Shrewsbury % E / M 2021	62%	64%	54%	57%	59%	62%	77%
State Results 2021	33%	33%	33%	33%	35%	32%	52%
Shrewsbury % E / M 2022	68%	70%	50%	70%	56%	65%	74%
State Results 2022	41%	42%	36%	42%	38%	36%	49%
Shrewsbury % E / M 2023	67%	73%	61%	67%	59%	64%	75%
State Results 2023	41%	45%	41%	41%	39%	37%	50%

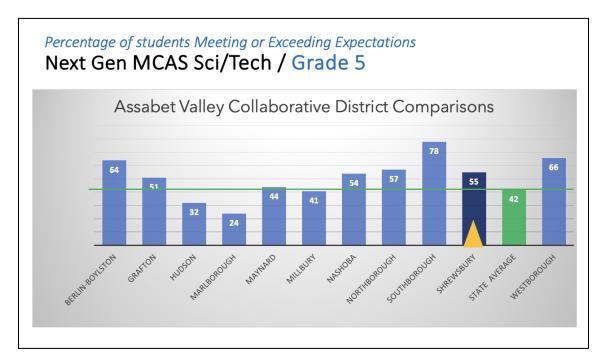
### Science & Technology Scores by Grade Level

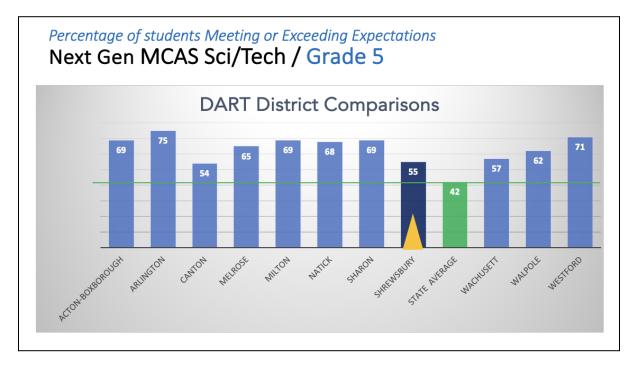
### **Grade 5 Student Achievement Scores in Science**

Students at this level took a new exam in 2019, thereby establishing a new baseline for the grade span. In 2023, only 55% of students in Grade 5 met or exceeded state benchmarks in Science, a drop from 64% of students reaching proficiency in 2022.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	63	59	64	55
Exceeding	12	13	12	12
Meeting	51	46	52	43
Partially Meeting	31	34	30	37
Not Meeting	5	6	6	8







As mentioned in previous reports, the timing of curriculum units in Shrewsbury has an impact on student performance. For example, our Grade 5 students are tested cumulatively on content that is taught in earlier grades. During remote learning, much of the Science content was adjusted for safety and in consideration of curriculum priorities, which means students may need additional time to build prerequisite knowledge in some Science subjects.

# SPS Science Grade 5 Subgroup Achievement Scores

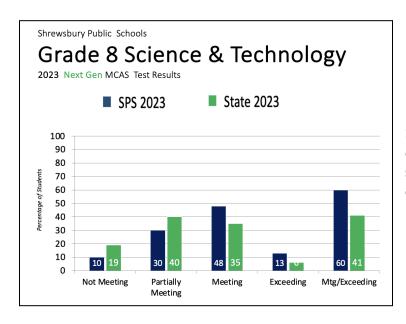
Accountability					
Subgroups			% Proficient k	by Category	
				Partially	
	E/M	Exceeding	Meeting	Meeting	Not Meeting
All Grade 5 Students	55	12	43	37	8
Students w/ Disabilities	13	3	10	44	44
EL and Former EL	40	5	35	42	19
Low Income	33	3	30	48	20
High Needs	31	4	27	45	24

Race & Ethnicity					
Subgroups		% Pro	oficient by Cate	egory	
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American/Black	23	6	17	61	17
Asian	69	15	54	29	2
Hispanic / Latinx	42	3	39	33	25
Multi-Race, Non-Hispanic / Latinx	66	22	44	26	7
White	46	10	36	44	10

### Grade 8 Student Achievement Scores in Science

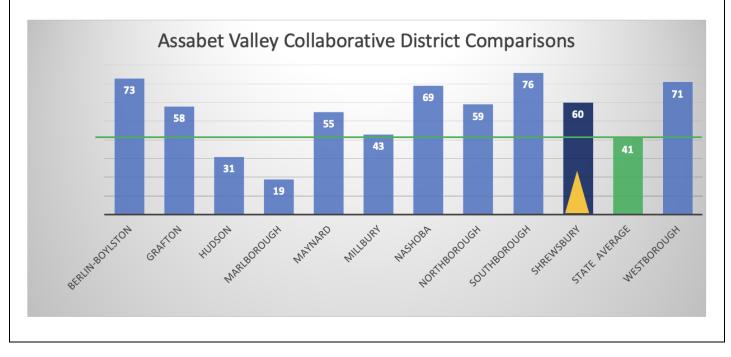
In 2019, students in Grade 8 took the "next generation" Science test for the first time as well. Student scores have remained relatively flat in the time since, with 60% of students scoring in the "Meeting" range or better in 2023.

% by level	2019	2021	2022	2023
Proficient (Exceeding + Meeting)	62	61	62	60
Exceeding	16	17	9	13
Meeting	46	44	53	48
Partially Meeting	33	33	31	30
Not Meeting	5	7	7	10

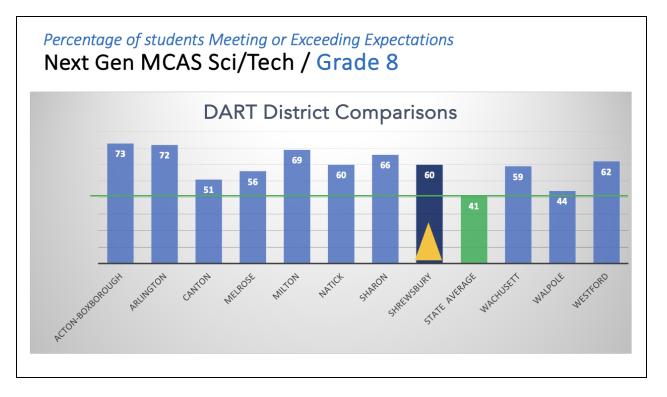


Shrewsbury students continue to outperform state averages. However, scores in Science for this grade band don't compare as favorably as scores in Grade 5.

## Percentage of students Meeting or Exceeding Expectations Next Gen MCAS Sci/Tech / Grade 8







Accountability					
Subgroups			% Proficient l	oy Category	
				Partially	
	E/M	Exceeding	Meeting	Meeting	Not Meeting
All Gr 8 Students	60	13	48	30	10
Students w/ Disabilities	13	3	10	40	47
EL and Former EL	27	0	27	43	30
Low Income	33	2	31	42	25
High Needs	29	3	26	41	30

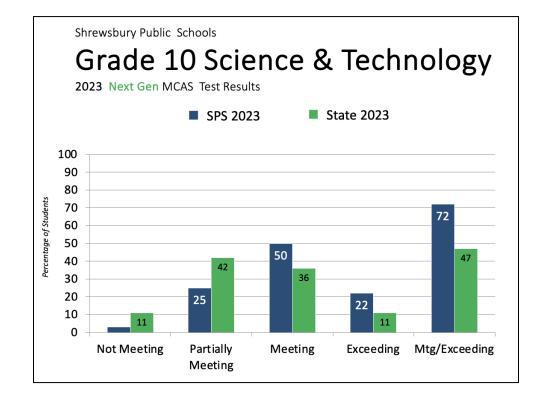
## SPS Science Grade 8 Subgroup Achievement Scores

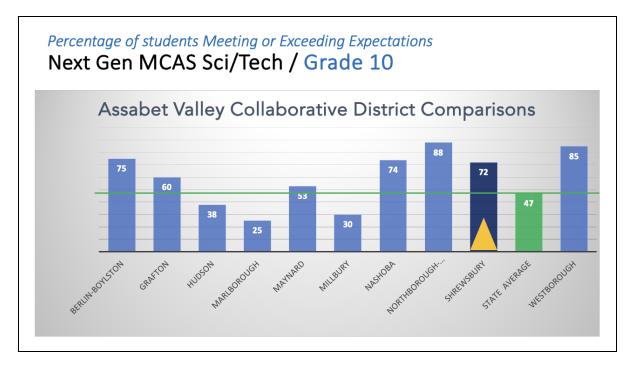
Race & Ethnicity					
Subgroups		% Pro	oficient by Cate	egory	
	E / M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American / Black	40	0	40	47	13
Asian	75	23	52	20	5
Hispanic / Latinx	35	2	33	43	22
Multi-Race, Non-Hispanic / Latinx	84	19	65	12	4
White	55	8	47	34	11

## Grade 10 Student Achievement Scores in Science

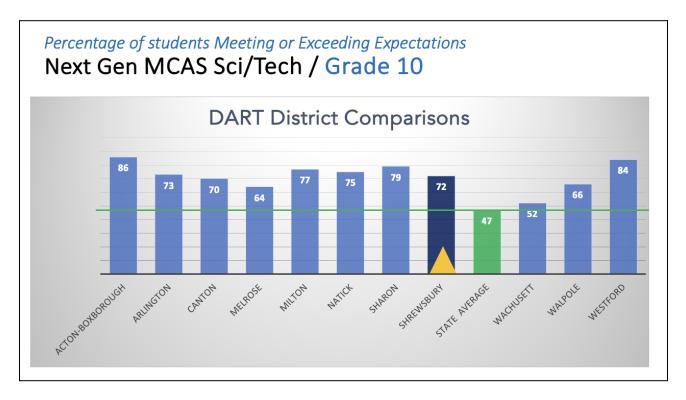
2019 was the last year that students in this grade span took the older ("legacy") version of MCAS Science and Technology exam. As you know, the MCAS test was canceled in 2020. High school students were not required to take the Science exam in 2021. In 2022, 59% of Grade 10 students scored proficient or higher on the "next generation" version of the exam, completing the transition from the "legacy" version for all grade spans and subjects.

% by level	2021	2022	2023
Proficient (Exceeding + Meeting)	NA	59	72
Exceeding	NA	18	22
Meeting	NA	41	50
Partially Meeting	NA	36	25
Not Meeting	NA	4	3





These charts illustrate how Shrewsbury scores on the Science, Technology and Engineering (STE) exam compare to other districts.



# SPS Science Grade 10 Subgroup Achievement Scores

Accountability						
Subgroups			% Proficient k	by Category		
			Partially			
	E/M	Exceeding	Meeting	Meeting	Not Meeting	
All Grade 10 Students	72	22	50	25	3	
Students w/ Disabilities	17	2	15	62	21	
EL and Former EL	30	0	30	60	10	
Low Income	35	6	29	56	8	
High Needs	37	6	31	52	11	

Race & Ethnicity					
Subgroups		% Pro	oficient by Cate	egory	
	E/M	Exceeding	Meeting	Partially Meeting	Not Meeting
African American / Black	44	0	44	50	6
Asian	89	43	46	10	1
Hispanic / Latinx	37	9	28	54	9
Multi-Race, Non-Hispanic / Latinx	65	24	41	29	6
White	72	13	59	26	2

## Trends Over Time in Science, Technology & Engineering (STE)

Science achievement scores for Grades 5 and 8 show signs of recovery for most students. Scores for students in Grade 10 remain well below pre-pandemic achievement scores.

Grade and Subject	Gr 5	Gr 8	Gr. 10
Shrewsbury % E / M 2019	63	62	88
State Results 2019	49	46	74
Shrewsbury % E / M 2021	60	60	N/A*
State Results 2021	42	41	N/A*
Shrewsbury % E / M 2022	63	62	59
State Results 2022	43	42	47
Shrewsbury % E / M 2023	55	60	72
State Results 2023	41	41	47

#### Percentage of Students Meeting or Exceeding Expectations

Note: Grade 10 results for spring 2021 STE are not provided because students in the class of 2023 were not required to take the STE test. Additional information about competency determination requirements is available at <a href="https://www.doe.mass.edu/mcas/graduation.html">https://www.doe.mass.edu/mcas/graduation.html</a>.

### IV. Student Growth Percentile Scores (SGPs)

Assessment levels indicate how each student is achieving, relative to the state standards for that grade level and content area. Growth scores represent change in an individual student's MCAS performance from one exam to the next. By utilizing a growth measure, the state is attempting to answer the question, "How much academic progress did a student or group of students make in one year, as measured by MCAS?"

Massachusetts measures growth for individual students by comparing the change in their achievement on statewide assessments to that of their "academic peers" (all other students in the state who previously had similar historical assessment results). The comparison is expressed as a percentile, and represents how many students showed greater or lesser improvement on this year's test as compared to the performance of the cohort of students with the same achievement score history.

# **Student Growth Percentiles (SGP)**



- Massachusetts measures growth by comparing the change in a student's achievement scores on statewide assessments with all other students with similar test score histories.
- The rate of change is expressed as a percentile.
  - How much did Rishi improve in mathematics from 4<sup>th</sup> and 5<sup>th</sup> grade to 6<sup>th</sup> grade, relative to her academic peers?
  - If Rishi improved more than 65 percent of her academic peers, then her Student Growth Percentile (SGP) would be 65.

The state defines *moderate* (or expected) growth to be between the 40-60<sup>th</sup> percentile, with *low* growth below the 40<sup>th</sup> percentile and *high growth* above the 60<sup>th</sup> percentile. In reviewing an individual student's result, teachers and parents might wonder, "*How much did Rishi improve her math score on MCAS in 6<sup>th</sup> grade, relative to students who had the same math scores on the 4<sup>th</sup> and* 5<sup>th</sup> grade math tests?" SGP scores help to answer that question: if Rishi had a higher score than 65 percent of her academic peers with the same score history, then her Student Growth Percentile (SGP) would be 65.

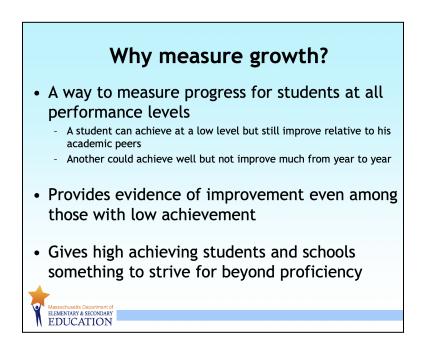
The growth model method operates independently of MCAS performance levels. As a result, all students may demonstrate growth. Growth percentiles are typically calculated in ELA and Mathematics for students in Grades 4 through 8 and 10, because the model requires at least two years of MCAS results to calculate growth percentiles. Therefore, no growth scores are available for Grade 3. This year the Department of Elementary and Secondary Education emphasized that districts should return to a pre-pandemic approach to calibrating student growth percentiles . For this reason, SGP results for 2022 are best compared with statistics from 2019. Finally, because the Science and Technology test is only administered in grades five, eight, and nine/ten, there is no growth data produced for this test.

Analyzing student test scores over time provides us with additional information; this data helps us Page 57 of 66 monitor individual students and subgroups within the district. Importantly, it may also help us identify "bright spots," instructional models, or grade level practices that yield exceptional outcomes for students.

#### Aggregate Growth Percentiles

While student growth percentiles enable educators to chart the growth of an individual student compared to that of academic peers, student growth percentiles may also be aggregated to understand growth at the subgroup, school, or district level.

Initially, the Department of Elementary and Secondary Education reported growth as a median percentile (the middle score if one ranks the individual student growth percentiles from highest to lowest). A typical school or district in the Commonwealth would have a median student growth percentile of 50. Beginning in 2018, the DESE moved to a growth model where the average student growth percentile replaces median SGP for school and district metrics. Although there are areas to target for improvement that will take more time to achieve, our collective goal remains accelerating student growth.



#### Shrewsbury Public Schools Average SGP by Grade Span

Results for the English Language Arts Assessment 2019-2023

Again, ELA growth percentile scores are expected to fall within the 40-60 range. In 2023, growth scores dropped from 2022. However, students in most grade spans met or surpassed the state's benchmark for "moderate growth".

As a reminder, student growth scores for 2023 are best compared with scores in 2019 and/or 2022.

ELA	2019	2021	2022	2023
Gr 4	56	N/A	54	49
Gr 5	47	30	52	39
Gr 6	52	39	53	53
Gr 7	43	34	47	45
Gr 8	55	38	62	53
Gr 10	56	52	55	57

#### Shrewsbury Public Schools Average SGP by Grade:

Results for the Mathematics Assessment 2019-2023

Math	2019	2021	2022	2023
Gr 4	64	N/A	58	58
Gr 5	51	34	37	42
Gr 6	42	28	61	63
Gr 7	43	37	42	48
Gr 8	61	40	57	61
Gr 10	63	53	68	59

At every grade span Shrewsbury's 2023 Math growth percentile scores met or exceeded the 40-60 range for "moderate growth". Note the higher rates of growth for students in Grades 6 and 8.

### V. District Subgroup Performance Trends

Comparing subgroup results to aggregate data helps educators to identify and close achievement opportunity gaps. As we review this data, it's important to keep in mind that students may belong to multiple subgroups and therefore are counted more than once in terms of total numbers. Finally, it should be mentioned that the data we have relies on how families self-report when they register.

The table below was prepared as a helpful summary of "the big picture": it shows how Shrewsbury's results for most students compare to students with disabilities, students that are considered low income, and students that are English learners. Why focus on these specific subgroups? Briefly, while we are resolved to monitor progress for all student subgroups, we see persistent gaps between achievement scores for students in these subgroups and aggregate scores across grade spans and administration years. Moreover, for some subgroups we see lower rates of growth.

Growth scores shaded in red in the chart below highlight places where we see growth at a rate that's lower than 50, the rate of growth that is more typical for students in Shrewsbury.

Grade Level & Subject	SPS All Students		SPS Students with Disabilities		SPS Low Income		SPS English Learners and Former English Learners	
	% E/M	SGP	% E/M	SGP	% E/M	SGP	% E/M	SGP
Gr 3 ELA	64	N/A	26	NA	38	NA	44	NA
Gr 3 Math	67	N/A	28	NA	43	NA	51	NA
Gr 4 ELA	58	49	15	43	22	46	41	49
Gr 4 Math	73	50	27	44	43	46	65	46
Gr 5 ELA	61	50	19	43	33	48	43	52
Gr 5 Math	62	50	21	45	25	48	37	51
Gr 5 Sci	55	N/A	13	NA	33	NA	40	NA
Gr 6 ELA	64	50	12	44	33	47	39	49
Gr 6 Math	67	50	23	44	28	48	55	51
Gr 7 ELA	52	50	7	45	23	47	21	49
Gr 7 Math	60	50	11	47	22	47	35	49
Gr 8 ELA	62	50	9	45	37	47	20	48
Gr 8 Math	64	50	12	45	35	48	37	49
Gr 8 Sci	61	N/A	13	NA	33	NA	27	NA
Gr 10 ELA	76	49	18	40	42	45	31	42
Gr 10 Math	75	50	20	42	31	40	31	40
Gr 10 STE	72	N/A	17	NA	35	NA	30	NA

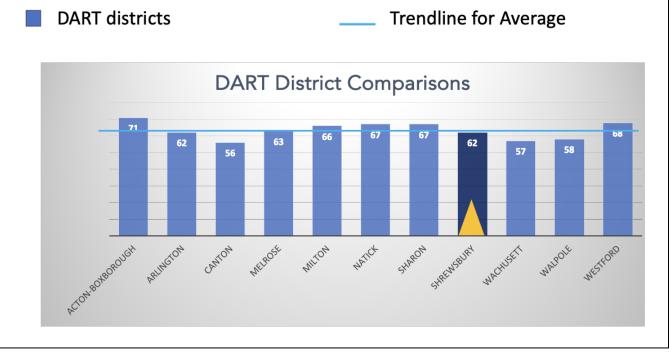
\*Red cells denote growth rates below 50, the mid-moderate range per DESE guidelines.

Internally, Geoffrey Thayer, a district Data Specialist, conducted a more detailed analysis for all subgroups with the goal of identifying how student results in Shrewsbury compare with those of DART districts. His findings show that Shrewsbury is on par with neighboring districts with regards to closing educational opportunity and achievement gaps. However, in some cases the performance of subgroups only compares well because results went down in the aggregate, so it's important to look at trends over time.

Looking across a comparison with DART districts, we can also see opportunities to improve our outcomes by learning from districts with similar enrollments. Scores for English Learners in Shrewsbury drop from Grade 3 to Grade 10, with fewer students receiving passing grades on the MCAS in the upper grades. There are some districts that do not experience this, including Acton-Boxborough and Westborough.

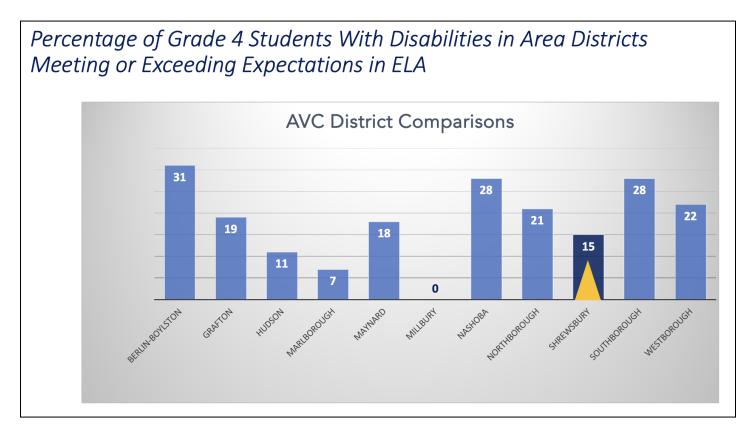
A closer look at Shrewsbury's achievement results across accountability subgroups is warranted. While 58% of Shrewsbury's fourth graders met or exceeded state benchmarks, in 2023, only 15% of Students with Disabilities in Shrewsbury (a portion of our "High Needs" group) met or exceeded expectations for the Grade 4 MCAS test in ELA. In contrast, 30% of Grade 4 Students with Disabilities in Melrose met the state benchmark in English Language Arts in 2023. The comparison data for other DART districts across grade spans is illustrated in the charts below.

### Average Percentage of Students Meeting or Exceeding Expectations in ELA Across Grades & Subgroups



Most districts in the Assabet Valley Collaborative did not have sufficient numbers to compare results for all student subgroups. However, comparing Grade 4 achievement scores in English Language

Page 62 of 66



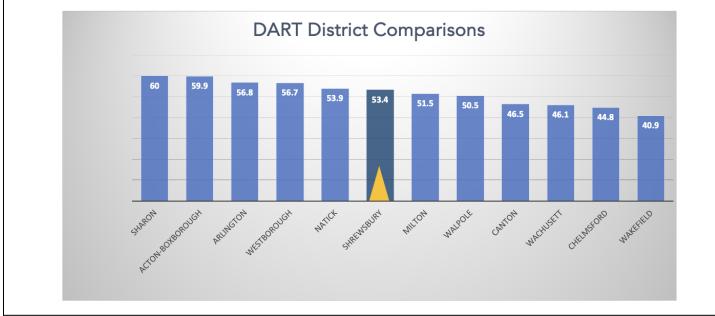
Student data is useful only to the extent that it helps educators reflect on our practice. With the purchase of the Star screener tools, we are better able to triangulate assessment information. Most importantly, we are able to monitor students in Grades K-8 between MCAS administrations.

Staff look closely at the achievement gap between student subgroups as compared to the "All Students" group in various ways. As children work towards content mastery, students that struggle to achieve proficiency may still demonstrate high growth. For example, the growth percentiles in English Language Arts for students within the "High Needs" accountability subgroup is similar to those for most Grade 4 students. This suggests that students in both groups are growing at a similar rate.

Significantly, if students within our subgroups don't exceed typical growth, achievement gaps between students with disabilities and typical students will widen over time. When we analyze the performance of students in subgroups, there is a wide range of performance scores. It's important to consider both achievement and growth percentiles, which signals attention to both content mastery and closing gaps. In Shrewsbury, the rate of achievement among students in this group has increased gradually over time. However, higher rates of growth will be needed for students in subgroups to achieve parity with same-age peers.

Shrewsbury's average percentage of students meeting proficiency benchmarks across subgroups is depicted in comparison to DART districts below.

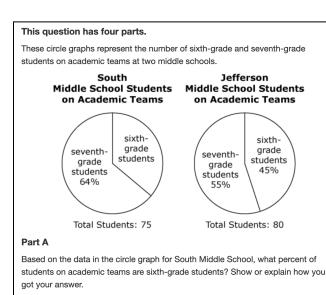
## Average Percentage of Students Meeting or Exceeding Expectations in Math Across Grades & Subgroups



### VI. Data-Informed Decision Making

Staff analyze MCAS data from the DESE portal to review student performance, identify strengths and weaknesses in specific standards, and to examine released questions to determine how instructional planning might shift. The DESE district profile portal allows anyone to access data about standards, question types, and even to compare item scores across districts. Click <u>here</u> to see how it works.

Scrutinizing student results by question helps educators to align their practice with the expectations inherent in the assessment. Educators look at student work related to questions like the one depicted above/right to see which concepts they should revisit in class. Looking at the results in this way allows



Enter your answer and your work or explanation in the space provided.

teacher teams to refine instructional plans together.

### VII. Next Steps

#### Using Data to Adjust Instruction

The achievement our students experience is the result of a number of systems working together. In a typical year, partnerships between home and school, coupled with an engaging and rigorous curriculum, help students to meet rising expectations over time. Yet the past three years have been anything but typical. While educators put a great deal of effort into advancing students' academic proficiency, high rates of student absenteeism and the need to address student behavioral and mental health needs also required significant time and attention. Increasingly, we are using data to focus specifically on academic goals and creating systems to monitor student progress.

#### Monitoring Student Progress

The adoption of a universal screening tool for students in Grades K-8 has made it easier to follow student progress in both English Language Arts and Mathematics in real time. Moreover, in addition to common assessment opportunities, the Star platform provides reports that empower educators to make decisions informed by recent assessment results. For example, classroom teachers can see which skills are most important for mastery, and adjust instruction accordingly. Forecasting reports enable district leaders and teacher teams alike to see which students are at the highest risk for not meeting state benchmarks. In this way we can identify individual students in need of extra support early and intervene accordingly.

For the third year in a row we noted that actual MCAS scores were within 10% of the scores predicted by the Star assessment. As depicted in the charts below, overall projections from last year aligned well with 2023 achievement results in each subject for most grade spans.

Grade	% Predicted to be Proficient in 2023 in Reading	Actual % Met / Exceeding in 2023 in ELA	% Difference
3	55	64	+9
4	57	58	+1
5	56	61	+5
6	62	64	+2
7	54	52	- 2
8	54	62	+8

Grade	% Predicted to be Proficient in 2023 in Math	Actual % Met / Exceeding in 2023 in Math	% Difference
3	73	67	- 6
4	72	73	+1
5	59	62	+3
6	57	67	+10
7	53	60	+7
8	62	64	+2

Results from the first Star assessment screeners, given three times each year, enable us to address student needs in advance of the MCAS administration window. Looking at student data compels us to action. With additional assessment information in hand, we can anticipate and respond to students in need sooner than we were able to do in the past.

### Triangulating Student Data

The next administration of the Star assessment is scheduled to conclude on January 12, 2024. In the interim, students that scored below benchmark in September are being supported individually. At all levels, educators are using the information they gain from common assessments to adjust instruction and to provide tiered support.

### VIII. Conclusion

While state assessment results reveal that student achievement scores are not back to pre-pandemic levels, the district as a whole is better able to respond to student needs because of the data systems and tiered intervention systems we have put in place. Our districtwide commitment to using universal screening software means we need not wait to know how our students are faring. Within our assessment tools, we have the means to measure individual student growth and the performance of accountability subgroups in anticipation of and after receiving MCAS results. Responding effectively to students' academic needs as indicated by assessment data is the key to realizing the aspirations manifested within the Education Reform Act. I'm confident our educators will continue to work tirelessly to close opportunity and performance gaps with the goal of empowering all our children to meet high expectations.