MCAS 2019

A Report On Next Generation State Assessment Test Results

by Amy Clouter
Assistant Superintendent for Curriculum, Instruction & Assessment

Background

Massachusetts was one of the first states to implement a comprehensive assessment test. Initiated with the passage of the Education Reform Act[1], the system encouraged districts to adopt and implement common learning outcomes. Just as importantly, the MCAS accountability system raised expectations for student performance. Under this new system, proficiency levels were established, and all students were assessed against state standards. The alignment of curriculum and increased attention to student achievement and growth scores resulted in rising rates of student achievement, particularly for students that had been historically low performing. Our state is leading the nation in educational excellence, and Shrewsbury continues to be a leader in the state.

Nearly 30 years later, districts have become accustomed to using MCAS data to see where students are doing well and where improvements are needed. In addition, test results have helped districts to align curriculum within and across grade spans. The most recent "next generation" MCAS test honors this work. Specifically, the tests were adjusted to remedy the different degrees of rigor that existed in the initial assessment. Recalibration ensured greater consistency in scoring from grade to grade. 2019 marks the third year that most students in Massachusetts have experienced the new assessment, and the first year that students in

[1] *Building on 20 Years of Massachusetts Education Reform* Massachusetts Board of Elementary and Secondary Education Report M. D. Chester, Ed. D. Commissioner November 2014

Grade 10 have taken the "next generation" test in most subject areas. 2019 is also the first year students in Grades 5 and 8 experienced the new Science and Technology exam. As a result, we have more data for students in Grades 3-8 in English Language Arts (ELA) and Math than we do in Science and Engineering, and less data overall for students at the high school level.

This Information is detailed in the chart below:

Year	Legacy MCAS	Next Generation MCAS 2.0
2017	ALL high school tests • English Language Arts, Math, Science/Technology	Baseline for Grades 3-8 • English Language Arts, Math
2018	Grades 5 & 8 • Science, Technology/Engineering test ALL high school tests • English Language Arts, Math, Science/Technology	Year 2 for Grades 3-8 • English Language Arts, Math
2019	Grade 10 • Science, Technology/Engineering test	Baseline for high school tests • English Language Arts, Math

Finally, MCAS 2.0 was designed to be given on a computer. Our ongoing investments in technology meant that for the first time all Shrewsbury students in Grades 3-10 were able to use iPads to take a computer-based version of the test.

Even at its best, the MCAS only provides a 'snapshot' of performance. It is an important signal of student success, but only one indicator. Given the wide number of variables that exist from district to district and the significant changes that happened in the transition, we should be cautious around drawing any conclusions or comparisons about the progress and growth of Shrewsbury students based on this data.

Another development resulting from the transition to a new test was a change in how the Department of Elementary and Secondary Education (DESE) determined accountability levels. Importantly, the DESE determined that, consistent with the Board's November 2015 vote, scores from last year's Next-Generation MCAS administration in grades 3-8 would not negatively impact accountability results.

What did this mean for Shrewsbury Public Schools? Last year districts with participation rates at 90% or higher with satisfactory graduation rates did not receive the rating that was historically used to track progress. Since Shrewsbury's participation and graduation rates remained high, our initial district accountability level was: No Level.

For the second year in a row districts have been given what the Department of Elementary and Secondary Education calls an 'overall classification'. Shrewsbury's classification remains "not requiring assistance or intervention".

2019 Official Accountability Report - Shrewsbury

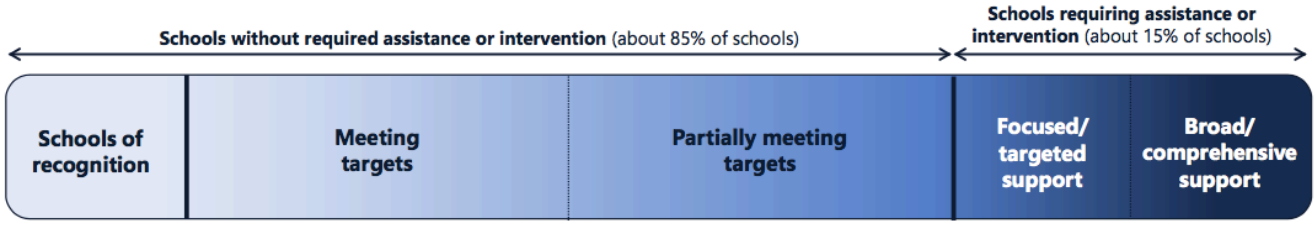
Organization Information	
DISTRICT NAME Shrewsbury (02710000)	**TITLE I STATUS** Title I District
REGION West/Central	**GRADES SERVED** PK,K,01,02,03,04,05,06,07,08,09,10,11,12

Accountability Information

Overall classification	Not requiring assistance or intervention

Reason for classification
Substantial progress toward targets

However, in the rationale section of the classification, Shrewsbury's progress towards meeting student outcome goals has been noted: the district has moved from 'partially meeting targets' to 'substantial progress towards targets.'



More information about the DESE's accountability system can be found at this link.

Although we are justifiably proud of our results, we continue to attend to areas where our students are only partially meeting targets. Accordingly, this report will also detail suggested areas for further study. The link to Shrewsbury's district profile, including detailed information about subgroup performance reports, can be found here.

Shrewsbury Public Schools and State Results

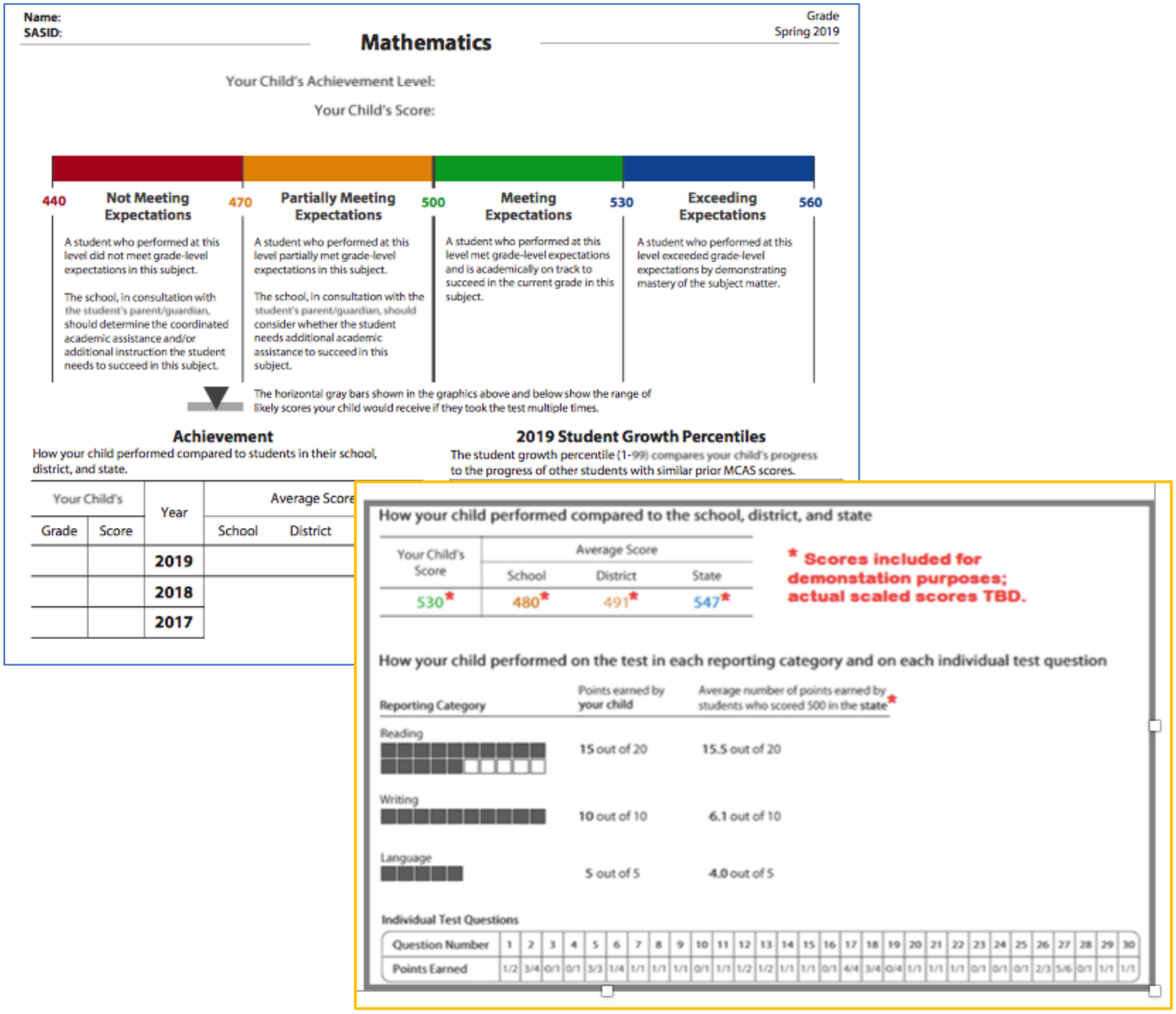
Although the accountability rating system changed in 2018, the format of the state assessment results remains unchanged. As before, this year districts received information about results in two areas, student achievement and student growth percentiles. The remainder of this report will provide information on both areas, in two different sections. The first section focuses on performance results, which is how Shrewsbury students performed in

terms of achievement scores. The second section concerns student growth. Student growth, which was utilized on a full scale for the first time in Massachusetts in 2010, provides a metric for how students 'grow' in comparison to peers with similar testing histories. Taken together, strengths and goals in both areas provide a snapshot of results for the district as a whole.

I. Student Achievement Scores

MCAS 2.0 achievement levels differ from those used with "legacy" MCAS ratings. The next generation MCAS does not use the *Advanced, Proficient, Needs Improvement and Warning* labels. Instead, the new levels are intended to signal a student's mastery of the subject matter for each particular grade level.

This is an example of what a parent score report looks like:



Name:
SASID:

Grade
Spring 2019

Mathematics

Your Child's Achievement Level:

Your Child's Score:

440	Not Meeting Expectations	470	Partially Meeting Expectations	500	Meeting Expectations	530	Exceeding Expectations	560
	A student who performed at this level did not meet grade-level expectations in this subject. The school, in consultation with the student's parent/guardian, should determine the coordinated academic assistance and/or additional instruction the student needs to succeed in this subject.		A student who performed at this level partially met grade-level expectations in this subject. The school, in consultation with the student's parent/guardian, should consider whether the student needs additional academic assistance to succeed in this subject.		A student who performed at this level met grade-level expectations and is academically on track to succeed in the current grade in this subject.		A student who performed at this level exceeded grade-level expectations by demonstrating mastery of the subject matter.	

The horizontal gray bars shown in the graphics above and below show the range of likely scores your child would receive if they took the test multiple times.

Achievement

How your child performed compared to students in their school, district, and state.

Your Child's		Year	Average Score	
Grade	Score		School	District
		2019		
		2018		
		2017		

2019 Student Growth Percentiles

The student growth percentile (1-99) compares your child's progress to the progress of other students with similar prior MCAS scores.

How your child performed compared to the school, district, and state

Your Child's Score	Average Score		
	School	District	State
530*	480*	491*	547*

* Scores included for demonstation purposes; actual scaled scores TBD.

How your child performed on the test in each reporting category and on each individual test question

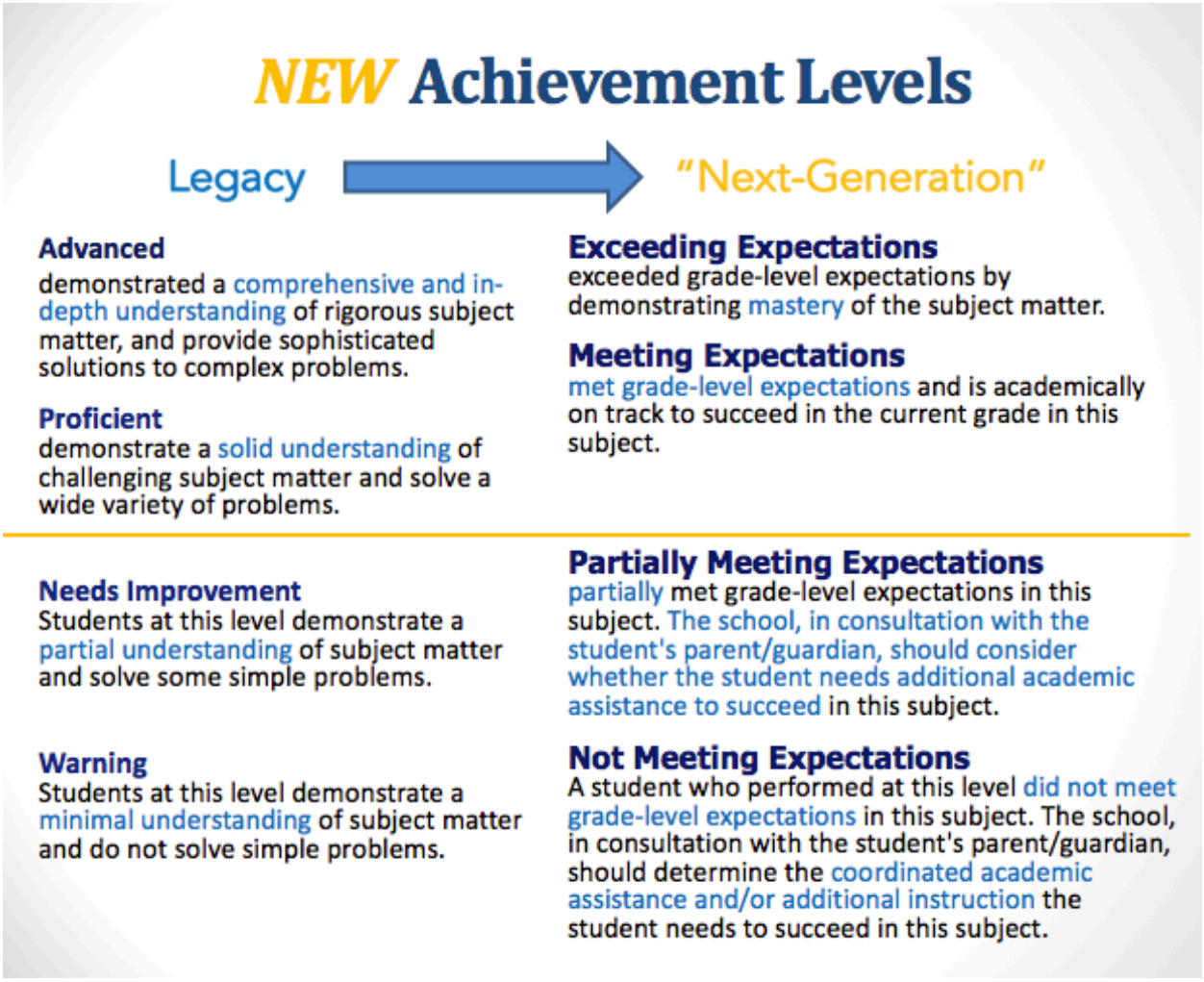
Reporting Category	Points earned by your child	Average number of points earned by students who scored 500 in the state*
Reading	15 out of 20	15.5 out of 20
Writing	10 out of 10	6.1 out of 10
Language	5 out of 5	4.0 out of 5

Individual Test Questions

Question Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Points Earned	1/2	3/4	0/1	0/1	3/3	1/4	1/1	1/1	1/1	0/1	1/1	1/2	1/2	1/1	1/1	0/1	4/4	3/4	0/4	1/1	1/1	1/1	0/1	0/1	0/1	2/3	5/6	0/1	1/1	1/1

The new levels are represented as a continuum so that a student's achievement level and the score within the level can be clearly understood. This provides parents and teachers with a good sense of a child's strengths and needs within the content areas tested.

This year students in high school will only receive "legacy" ratings on the Science and Technology/Engineering test. Understanding the unique proficiency leveling terminology for each test is important.



Groups of Massachusetts educators adjusted the scores to match the new purpose of the MCAS 2.0 assessment. Unlike the legacy ratings, which were developed over time, the ratings for the new assessment were calibrated simultaneously. The roughly equivalent proportion of students in each grade and subject area reflect a clear progression of learning expectations from grade to grade and panelists' consistent application of the standards. It's also important

to note that the new standards for Meeting Expectations were designed to be more rigorous. For this reason, the Department of Education has cautioned against comparing "old" MCAS scores to the new baseline results.

For the first time this year we have a baseline comparison to guide our analysis at the high school level. However, we only have three years of data to serve as a basis of comparison at best. For that reason, it's wise to remain cautious about relying overmuch on any one assessment of student progress to guide us.

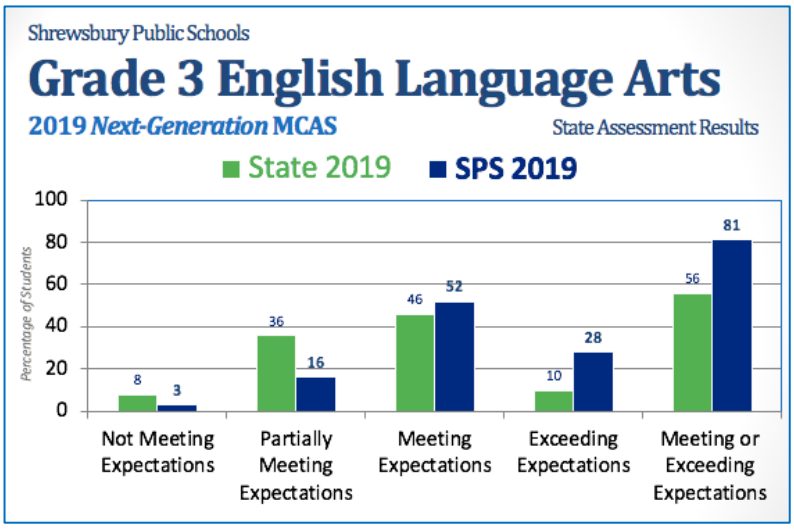
Student Achievement Scores in English Language Arts

by Grade Level

This part of the report details our baseline scores by content area and by grade level. Looking back to last year allows some basis for comparison. As you can see, our Grade 3 results are strong, and steadily improving.

Grade 3

% by level	2017	2018	2019
Exceeding	25	23	28
Meeting	44	51	52
Partially Meeting	27	21	16
Not Meeting	4	5	3

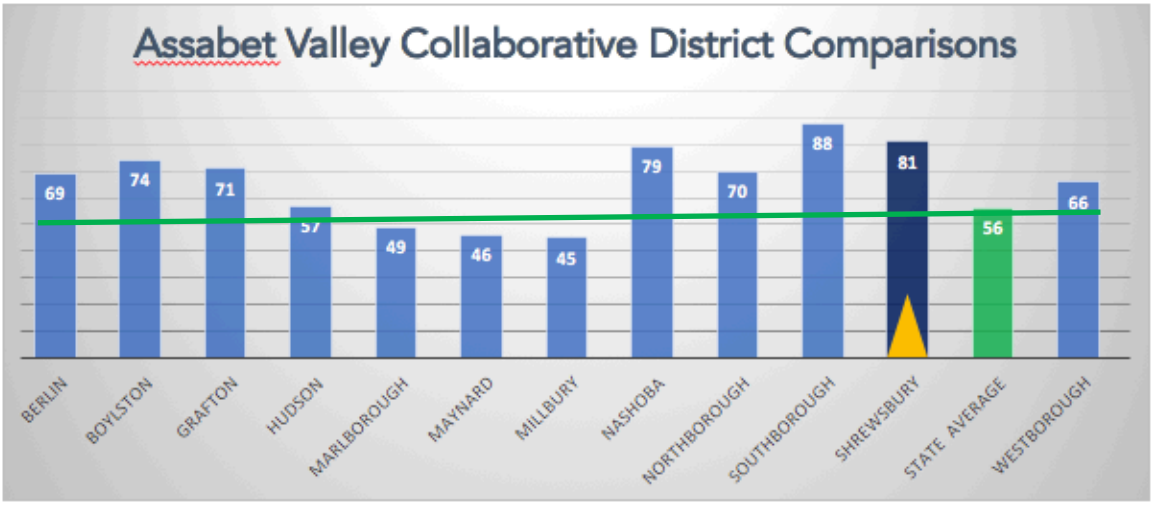


We often think of the Grade 3 test as the measure of teaching and learning at Grade 3. It's important to consider the contributions of concepts learned in Kindergarten through Grade 2 to student success. In the picture above, English Language Learners in Kindergarten are building foundational skills that will help them leverage vocabulary throughout their Elementary years.

Looking at assessment information from area districts provides additional perspective on our results. As you can see from the chart below, Shrewsbury continues to be an educational leader in the area.

Percentage of students Meeting or Exceeding Expectations

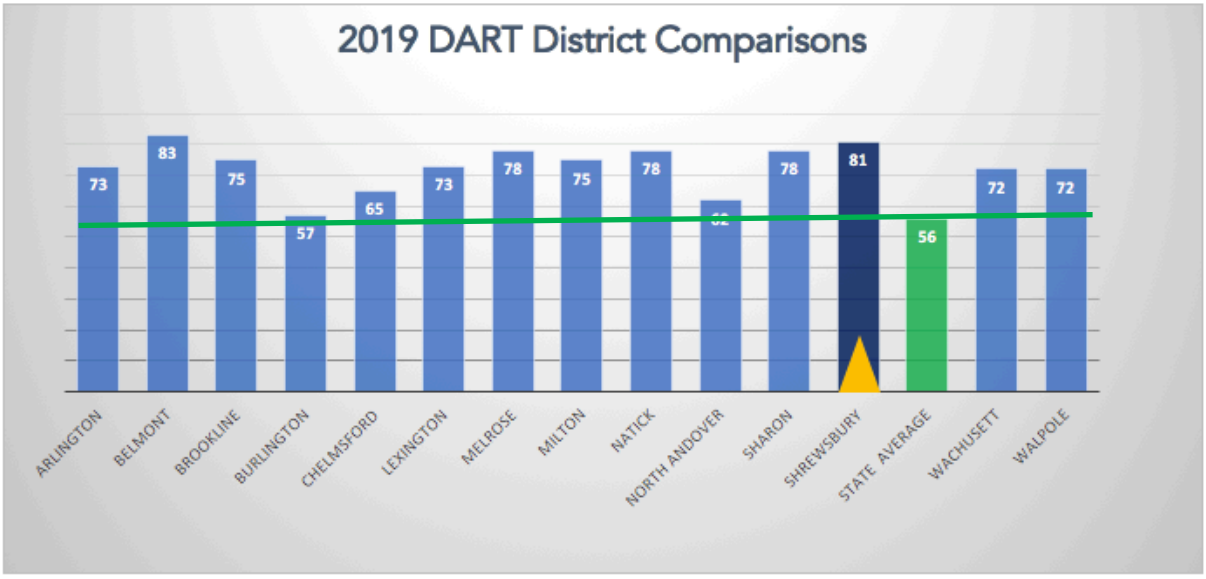
Next-Gen MCAS ELA / Grade 3



The Department of Secondary and Elementary education (DESE) also provides a wealth of comparative statistics. One helpful resource is DART, a district analysis and review tool. Comparisons with DART districts allow us to see how our results compare to school systems with similar enrollment characteristics.

Percentage of students Meeting or Exceeding Expectations

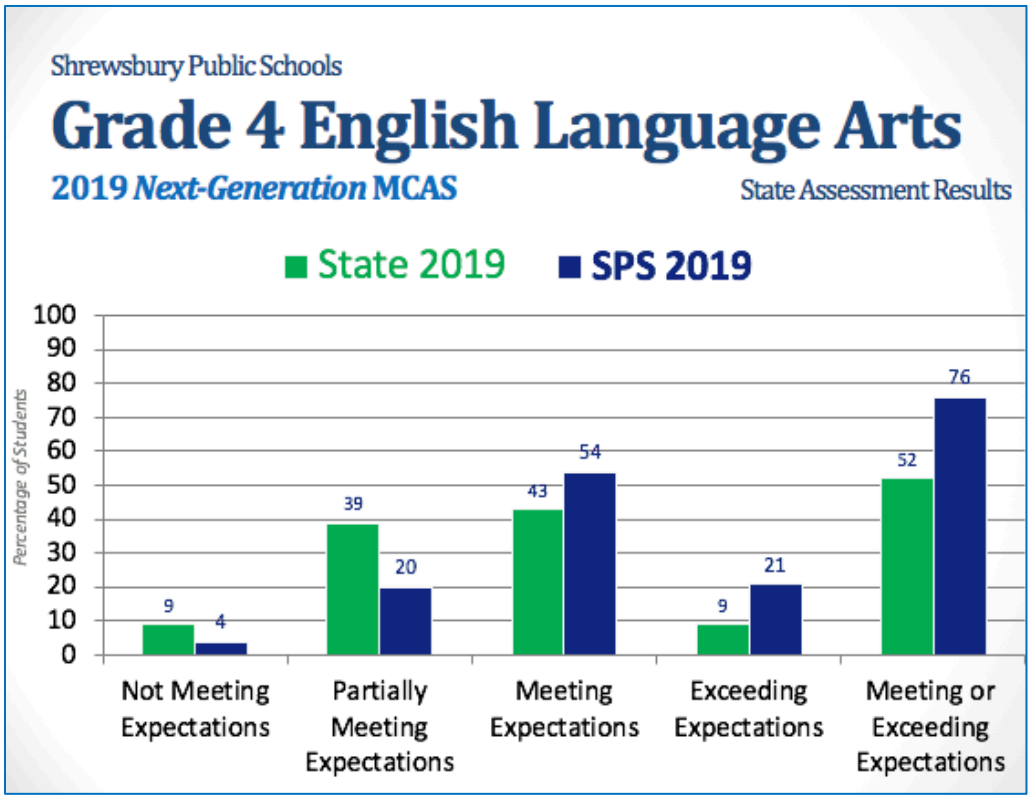
Next-Gen MCAS ELA / Grade 3



Grade 4

% by level	2017	2018	2019
Exceeding	20	23	21
Meeting	51	55	54
Partially Meeting	25	18	20
Not Meeting	3	4	4

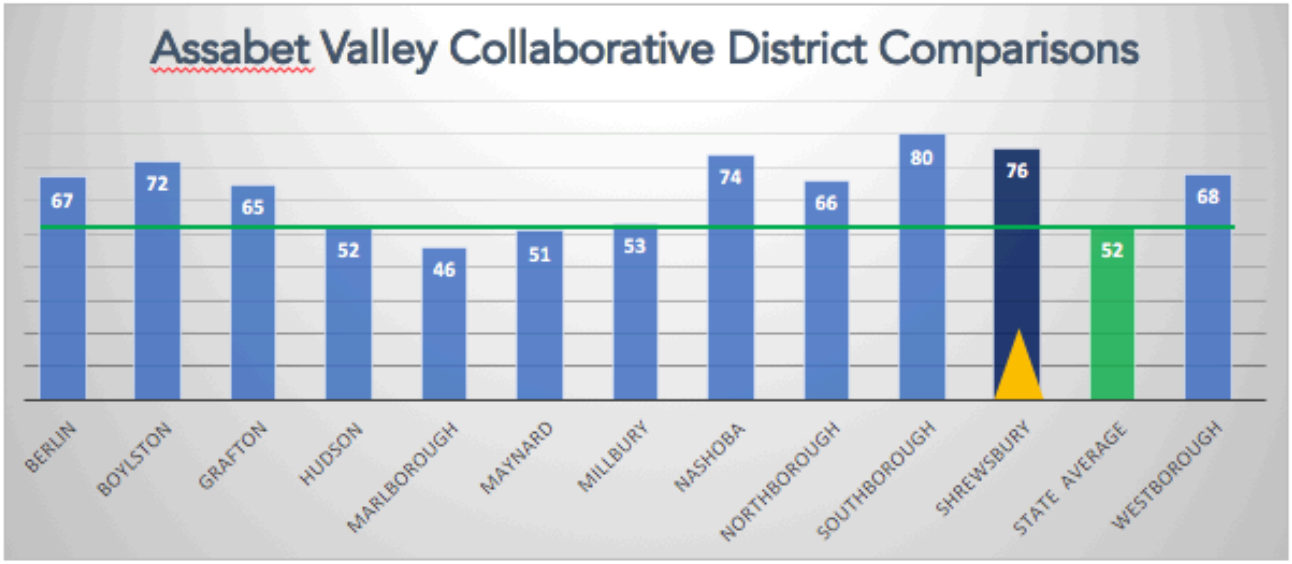
Reading scores in Grade 4 are holding steady, with nearly 80% of our students meeting or exceeding grade level expectations.



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

Percentage of students Meeting or Exceeding Expectations

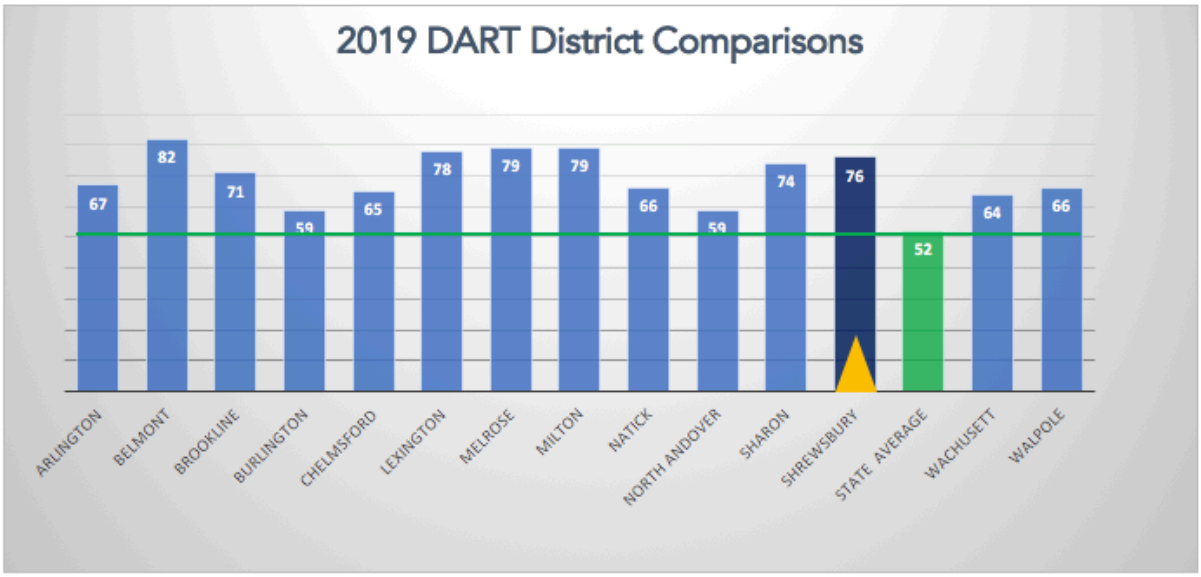
Next-Gen MCAS ELA / Grade 4



Our Grade 4 scores in this subject compare well with results from DART district data as well.

Percentage of students Meeting or Exceeding Expectations

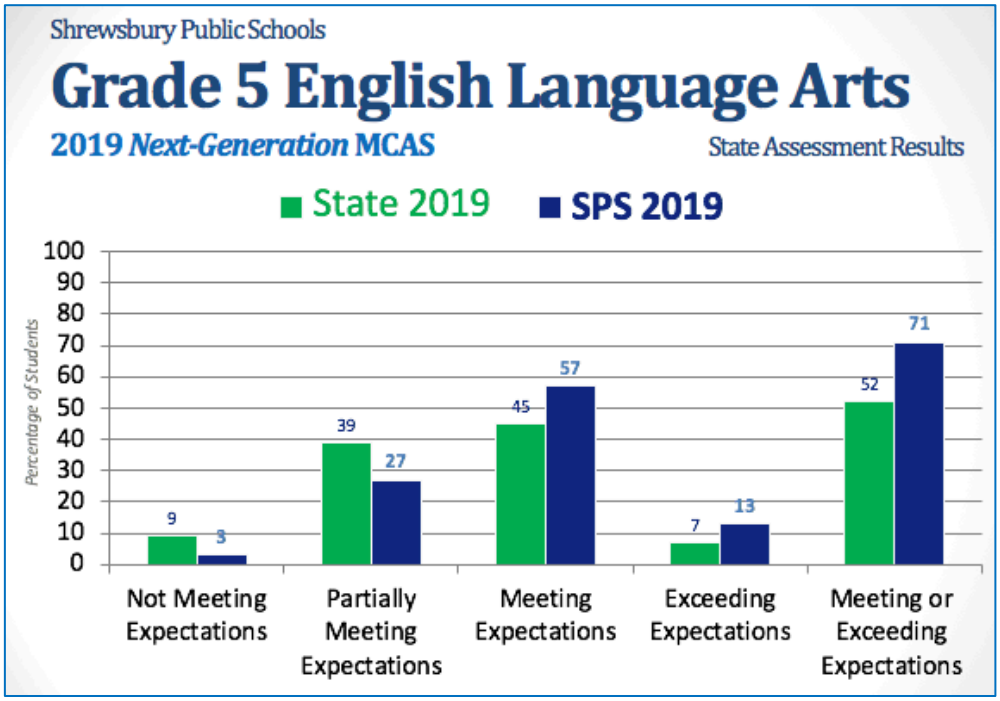
Next-Gen MCAS ELA / Grade 4



Grade 5

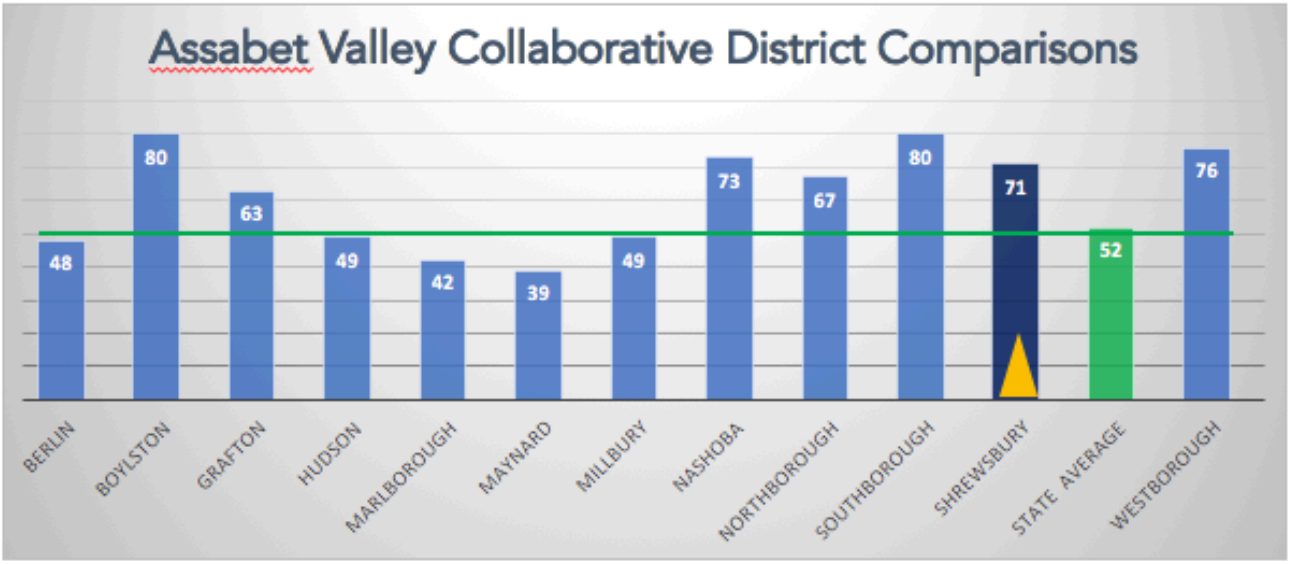
% by level	2017	2018	2019
Exceeding	10	15	13
Meeting	59	59	57
Partially Meeting	27	22	27
Not Meeting	4	3	3

Overall, English Language Arts results for students in Grades 3-5 look similar. In Grade 5, slightly fewer students scored in the Exceeding category this year than in 2018. In terms of the number of students reaching proficiency benchmarks in Reading, however, the trend shows gains over time.



Percentage of students Meeting or Exceeding Expectations

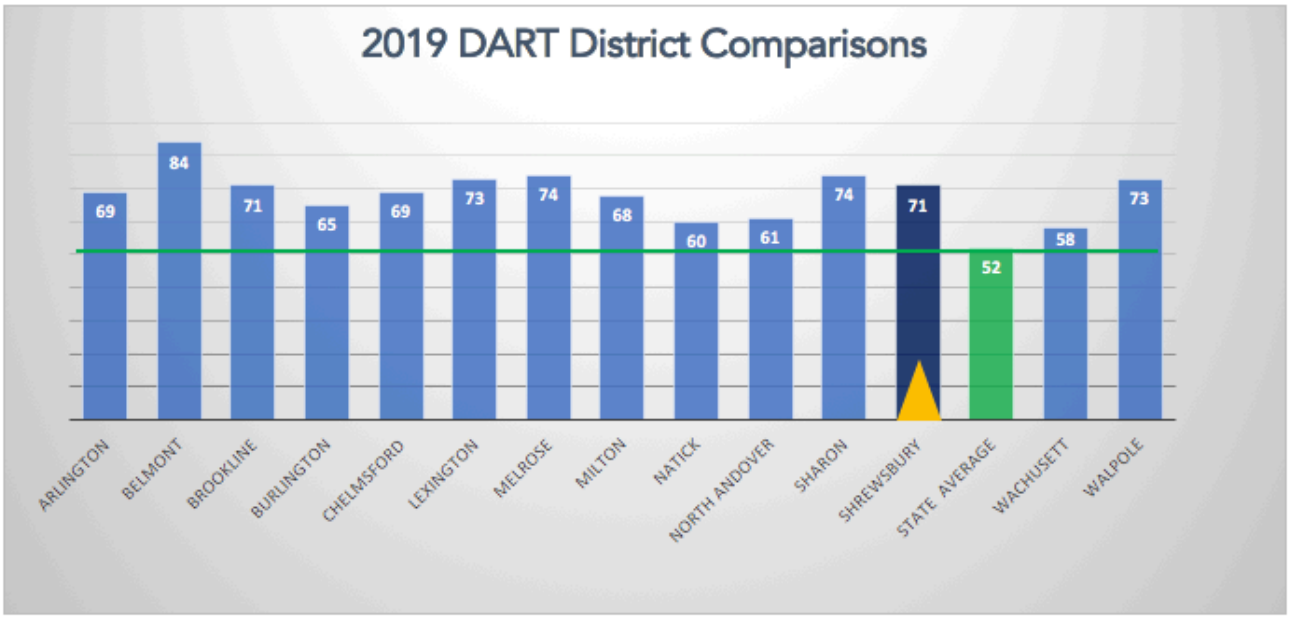
Next-Gen MCAS ELA / Grade 5



Shrewsbury's Grade 5 scores are significantly higher than the state average. Students in our district score among the top five districts in the Assabet Valley.

Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 5

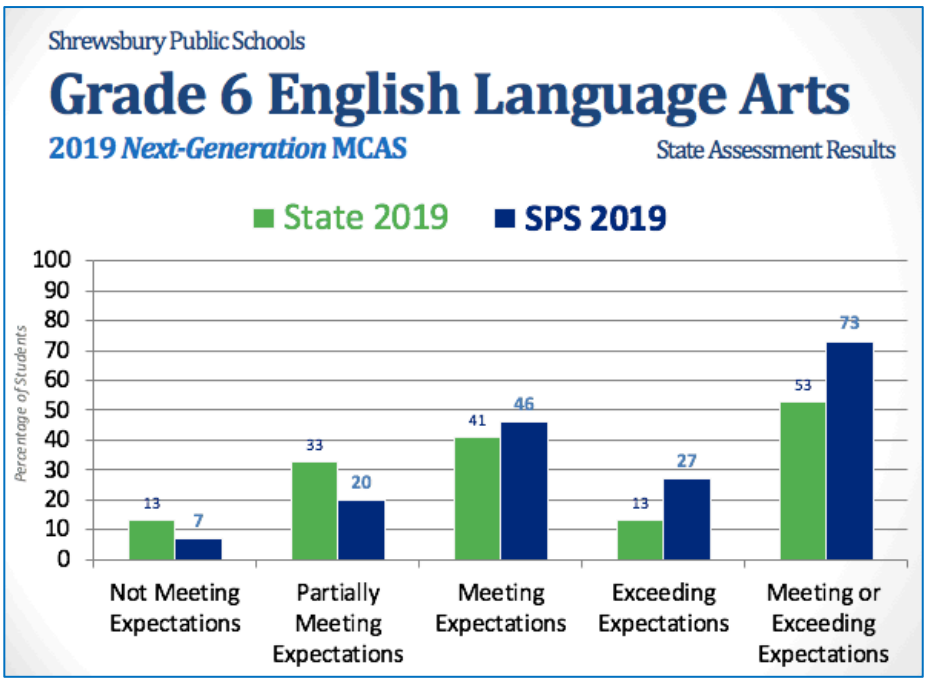


Dart district comparison's also show Shrewsbury's strong performance on the state assessment in English Language Arts.

Grade 6

% by level	2017	2018	2019
Exceeding	14	22	27
Meeting	57	51	46
Partially Meeting	23	23	20
Not Meeting	6	4	7

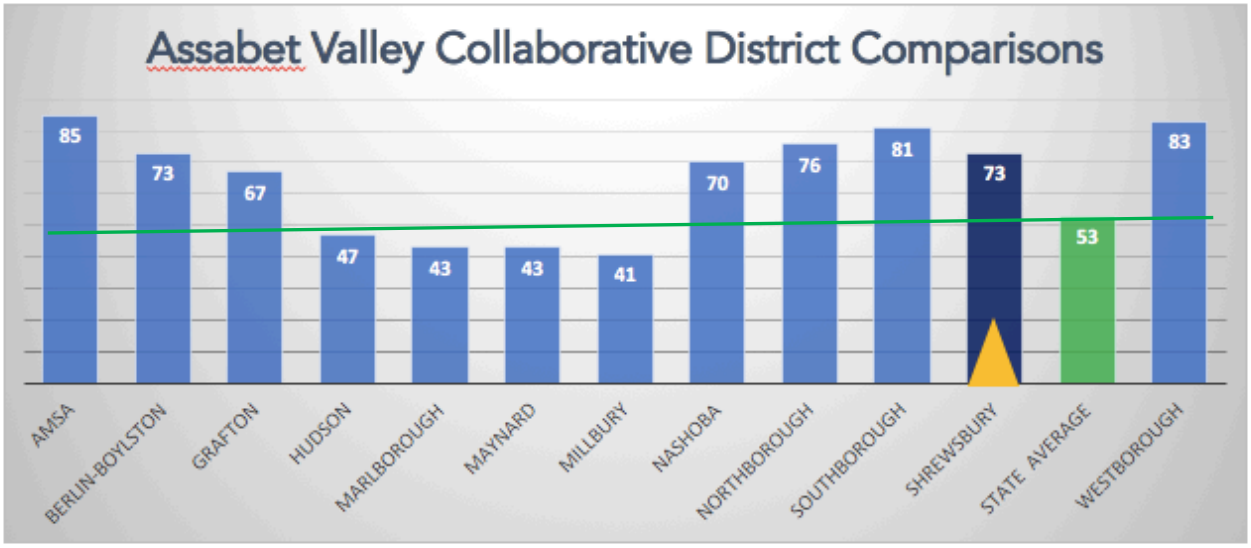
In general our overall performance at this grade level held steady. It should be noted, however, that more students received Exceeding scores for English Language Arts in Grade 6 this year than last year. Finally, Shrewsbury's sixth graders achieve proficiency in English Language Arts at a much higher rate than the state average.



Shrewsbury's results in Grade 6 put us among the highest performing school districts in the Assabet Valley Collaborative group and in our DART district comparison group. These scores are consistent with past performance.

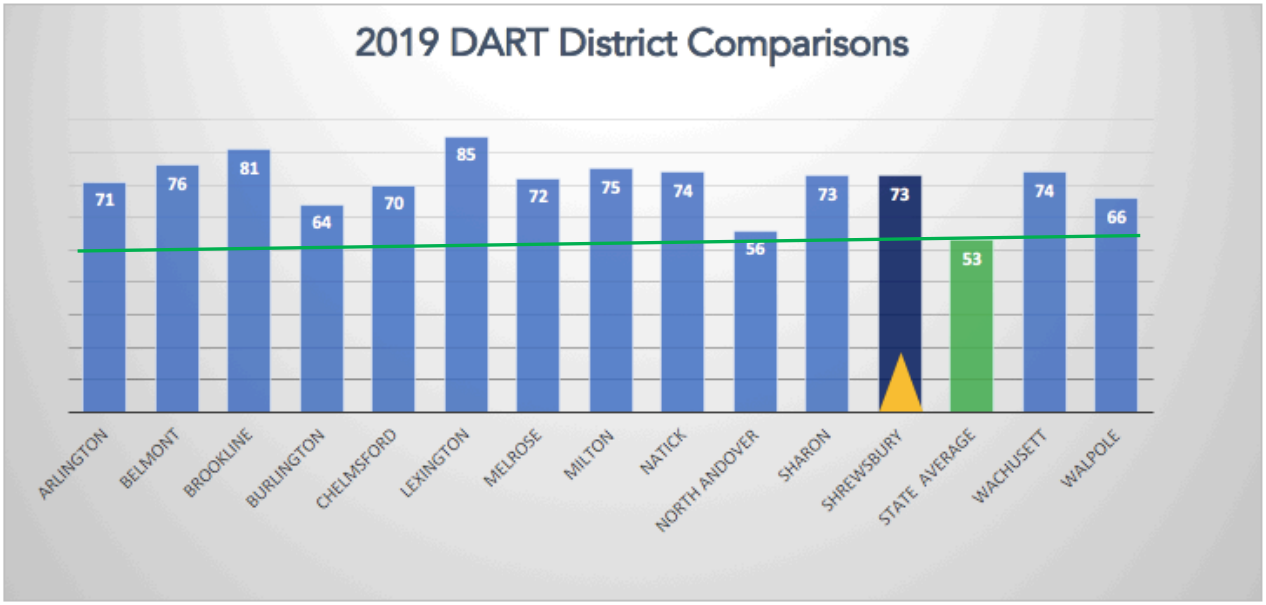
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 6



Percentage of students Meeting or Exceeding Expectations

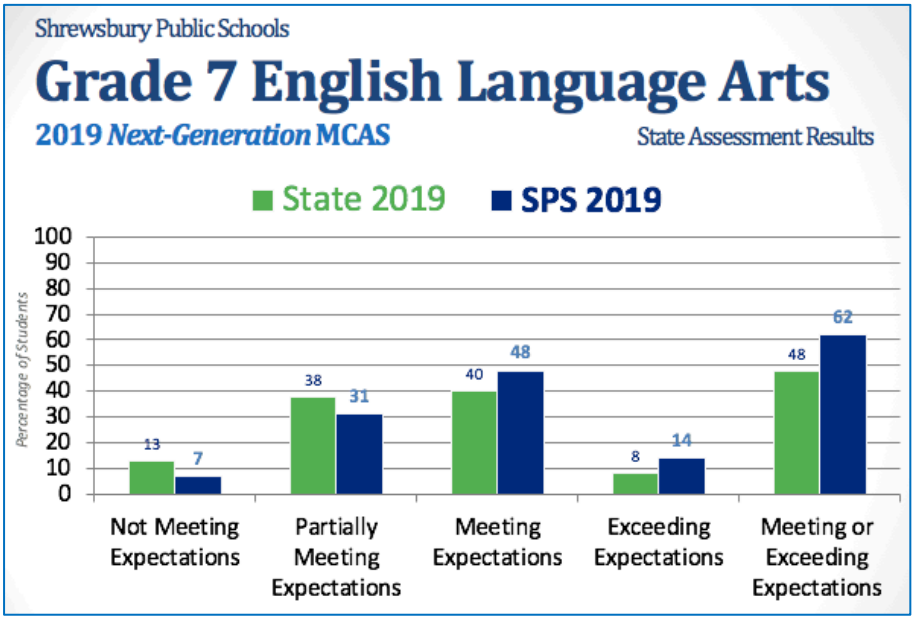
Next-Gen MCAS ELA / Grade 6



Grade 7

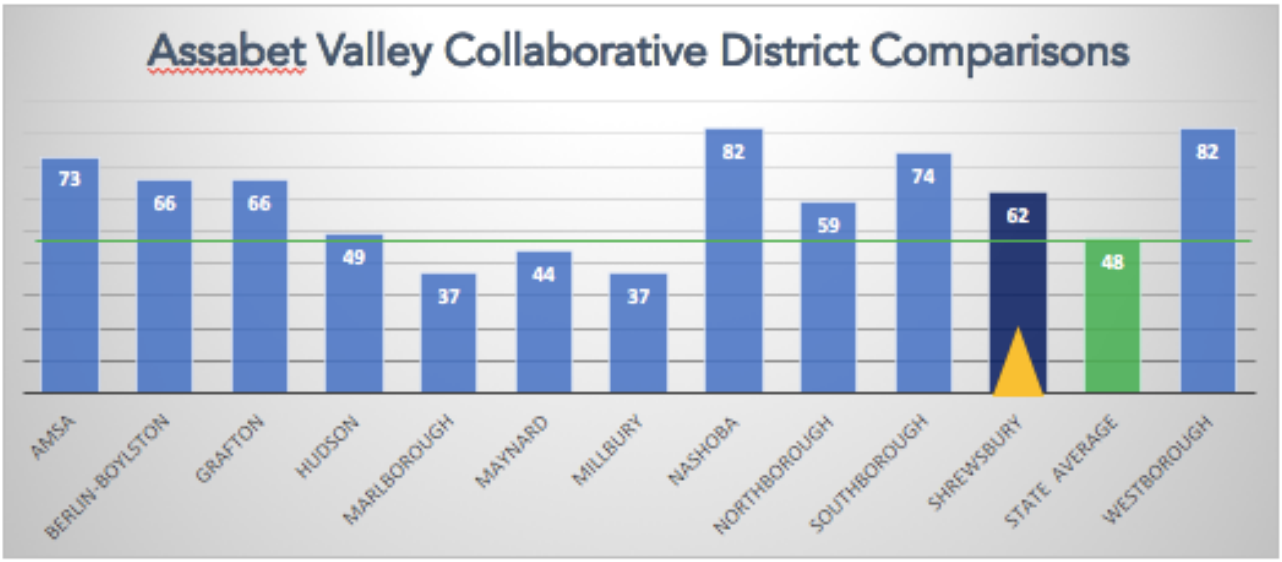
% by level	2017	2018	2019
Exceeding	9	20	14
Meeting	57	48	48
Partially Meeting	28	23	31
Not Meeting	6	9	7

Rates of student performance on the Grade 7 English Language Arts assessment decreased this year. Interestingly, scores for this grade span remain lower across the state and lower at this grade level in Shrewsbury when compared with ELA scores at other grade levels.



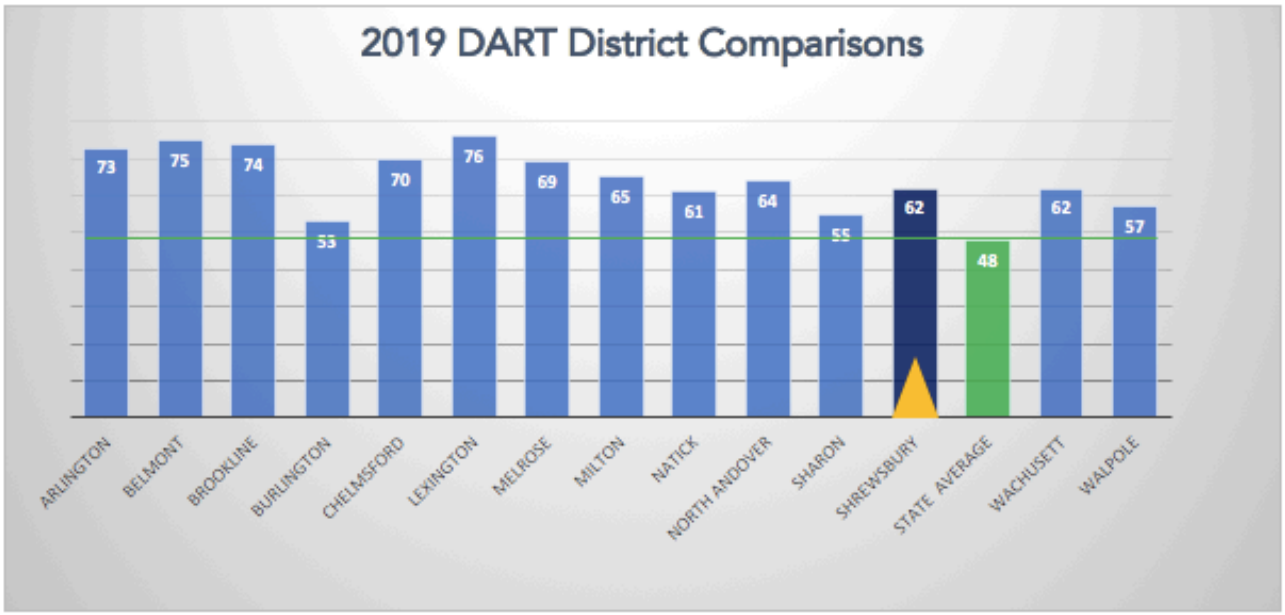
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 7



Percentage of students Meeting or Exceeding Expectations

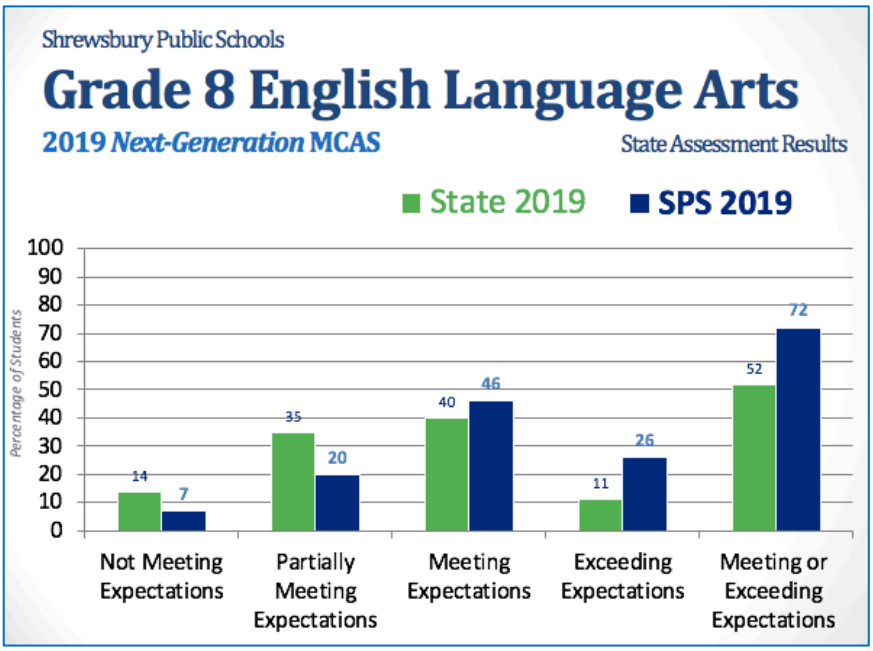
Next-Gen MCAS ELA / Grade 7



Grade 8

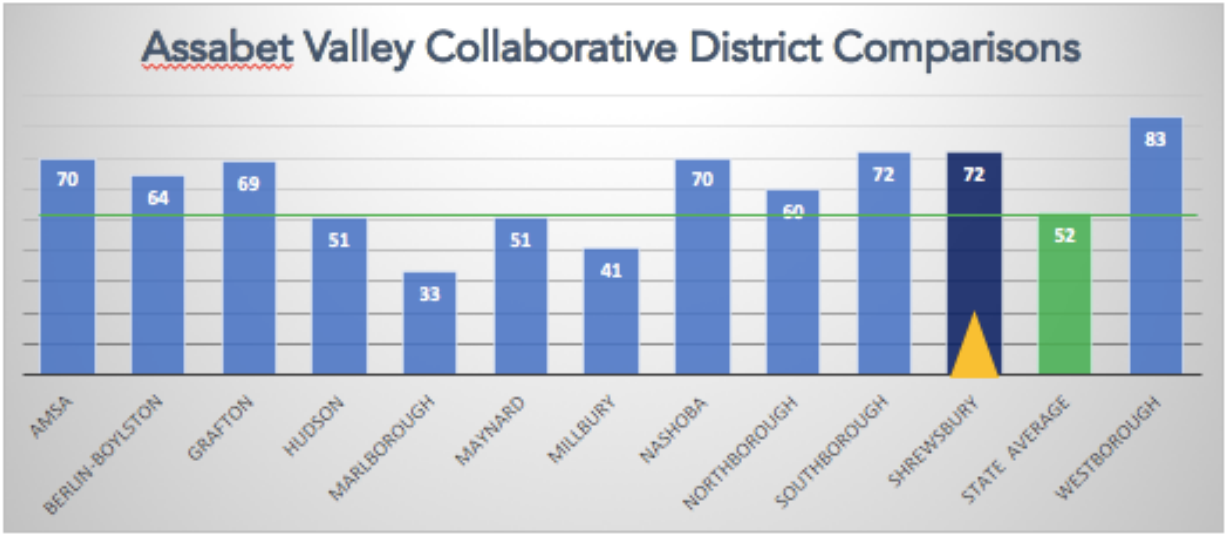
% by level	2017	2018	2019
Exceeding	15	18	26
Meeting	50	52	46
Partially Meeting	31	24	20
Not Meeting	5	6	7

The number of students in Grade 8 meeting proficiency benchmarks in English Language Arts scores continued to rise again this year. This trend suggests that the dip in Grade 7 scores is remedied as students progress to the next grade.



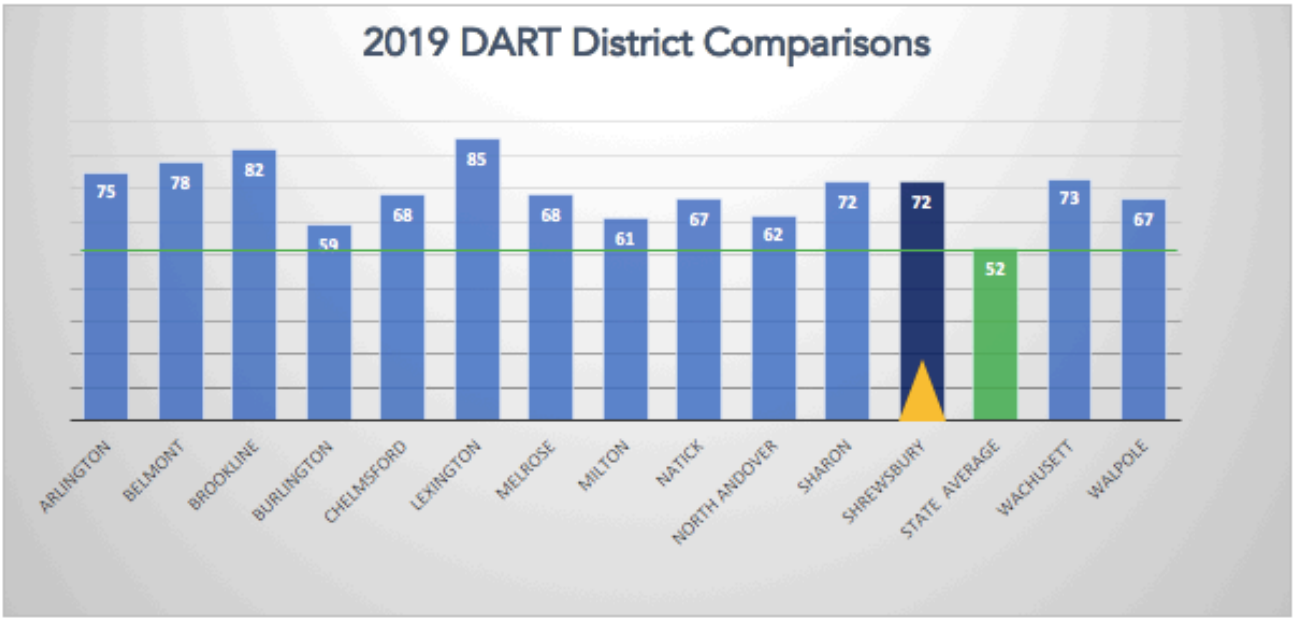
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 8



Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 8



Grade 10

In 2019 High School students across the state took the new test in English Language Arts for the first time. Scores for the old "legacy" test cannot be compared with scores on the "next generation" exam. For this reason, this year's scores should be considered a new baseline.

As depicted below, legacy test results showed that students consistently scored well in English Language Arts over time:

Achievement rates 2015-2018 for the "legacy" MCAS in English Language Arts

	2016	*2017*	*2018*
Advanced	*73*	*67*	*73*
Proficient	*23*	*29*	*24*
Needs Improvement	*2*	*2*	*2*
Failing	*2*	*2*	*2*

Grade 10 English Language Arts Scores: Legacy MCAS 5-year history

Percentage of Students Achieving at the Proficient / Advanced Levels

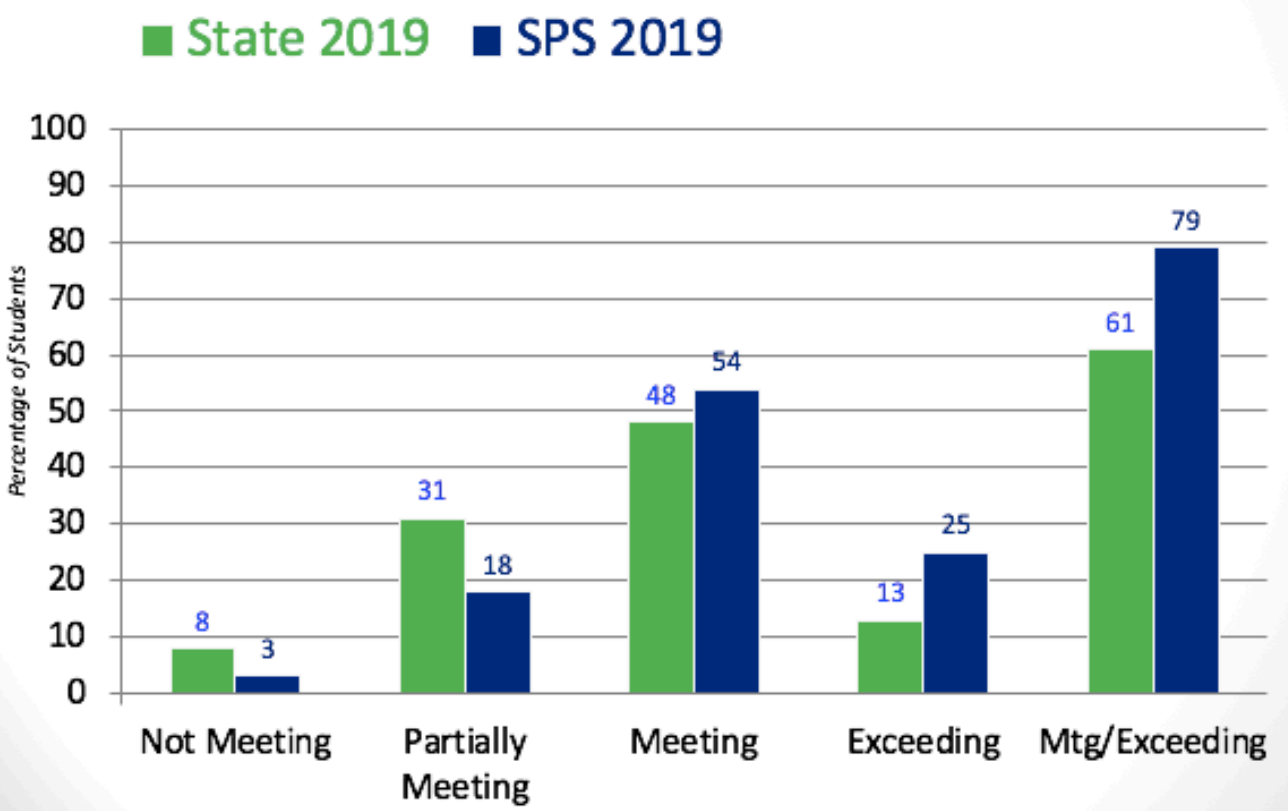
Year	*2014*	*2015*	*2016*	*2017*	*2018*
%	*97*	*96*	*96*	*96*	*97*

Very few districts posted higher English Language Arts scores on the legacy test than Shrewsbury High School. It will be interesting to see patterns of performance emerge over time as the new test becomes standard at every grade.

Shrewsbury Public Schools

SHS English Language Arts

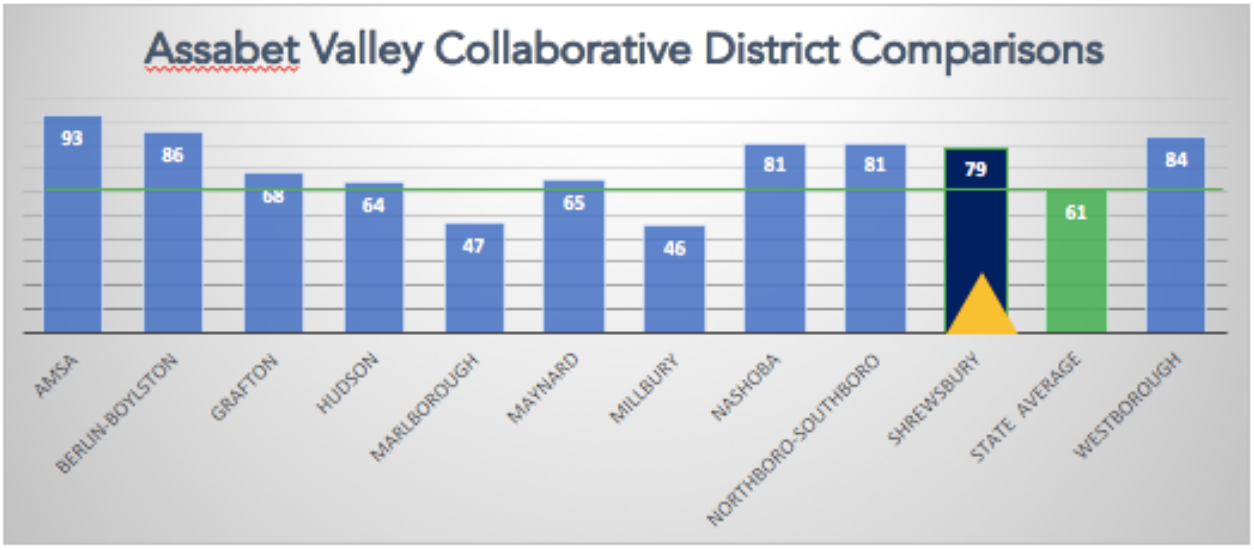
2019 Next Gen MCAS State Assessment Results



The graphs below show how our initial scores compared with those of students in comparative districts last year.

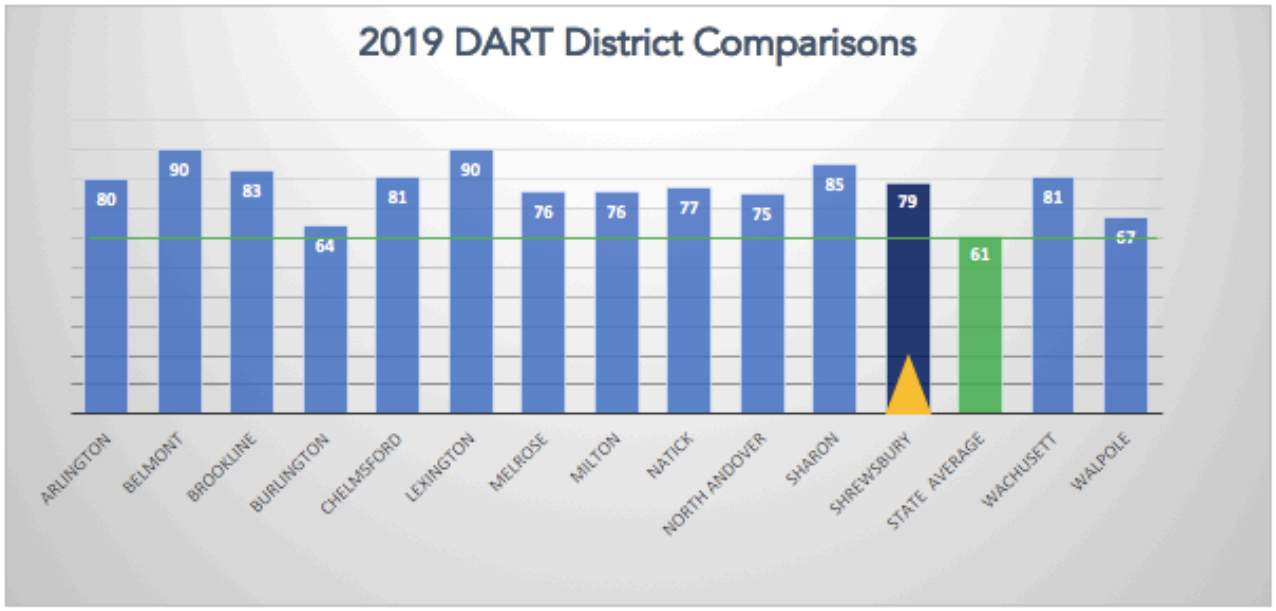
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 10



Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS ELA / Grade 10



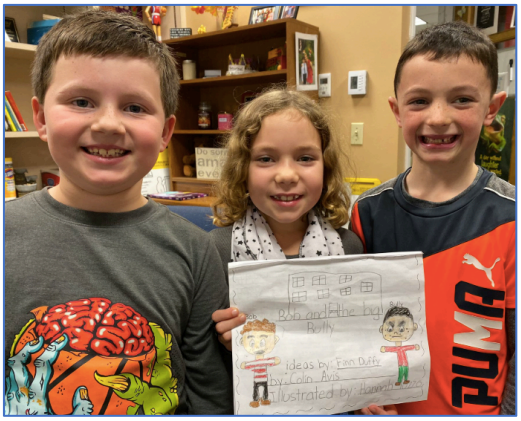
Trends in English Language Arts

As shown below, overall our results are strong.

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 % Level M/E 2018	*74%*	*78%*	*74%*	*73%*	*68%*	*70%*	*N/A**
State Results 2018	*52%*	*53%*	*54%*	*50%*	*46%*	*51%*	*N/A**
Shrewsbury % Level M/E 2019	*81%*	*76%*	*71%*	*73%*	*62%*	*72%*	*79%*
State Results 2019	*56%*	*52%*	*52%*	*53%*	*48%*	*52%*	*61%*

*** Note:** Students at this level did not take the "next generation" test in 2018.

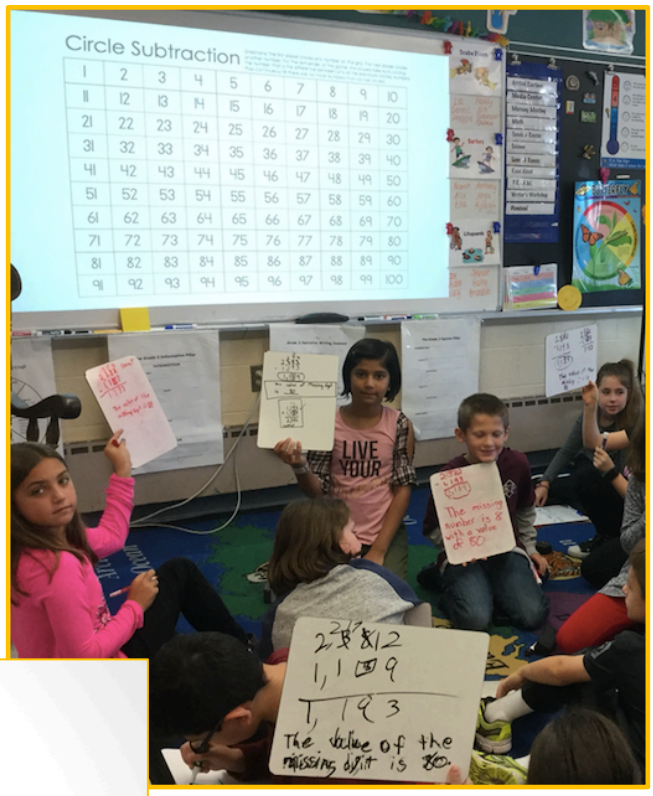


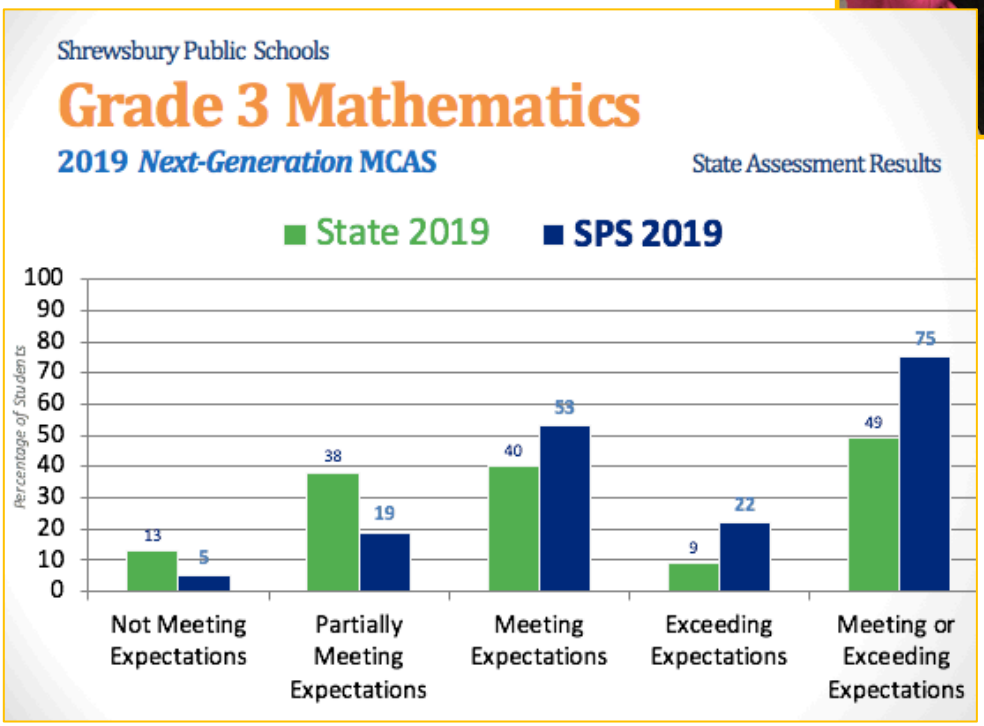
Student Achievement Scores in Mathematics by Grade Level

Grade 3

This year more Grade 3 students met the assessment benchmark on the Mathematics assessment than last year. Moreover, students in Grade 3 posted strong results overall, as evidenced on the charts that follow.

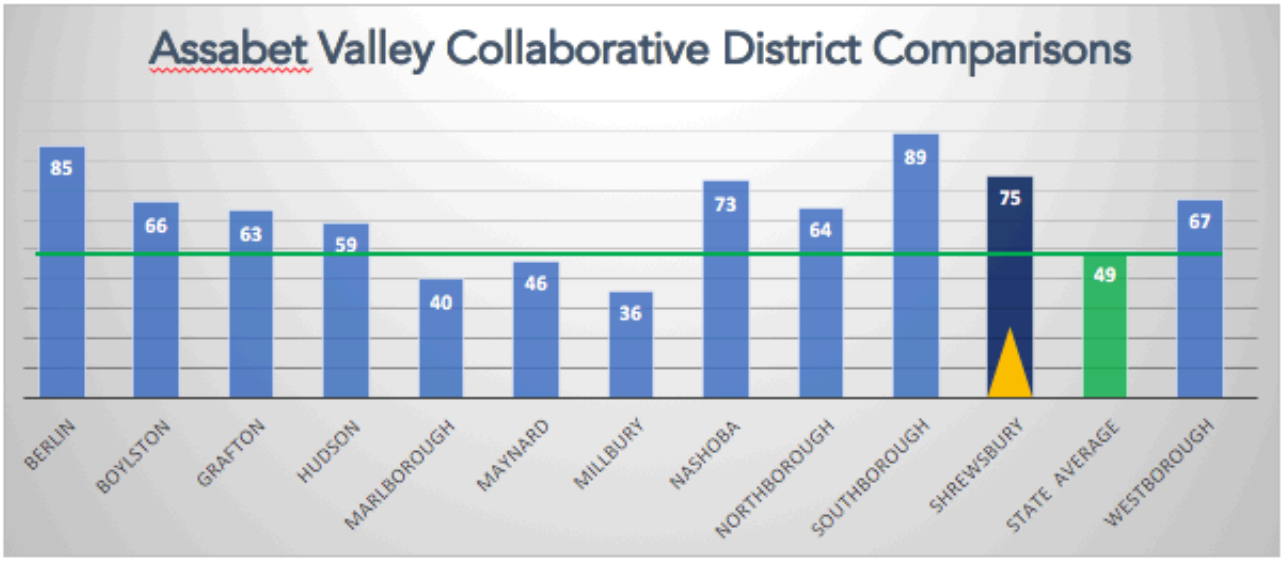
% by level	2017	2018	2019
Exceeding	18	23	22
Meeting	57	50	53
Partially Meeting	22	20	19
Not Meeting	3	8	5





Percentage of students Meeting or Exceeding Expectations

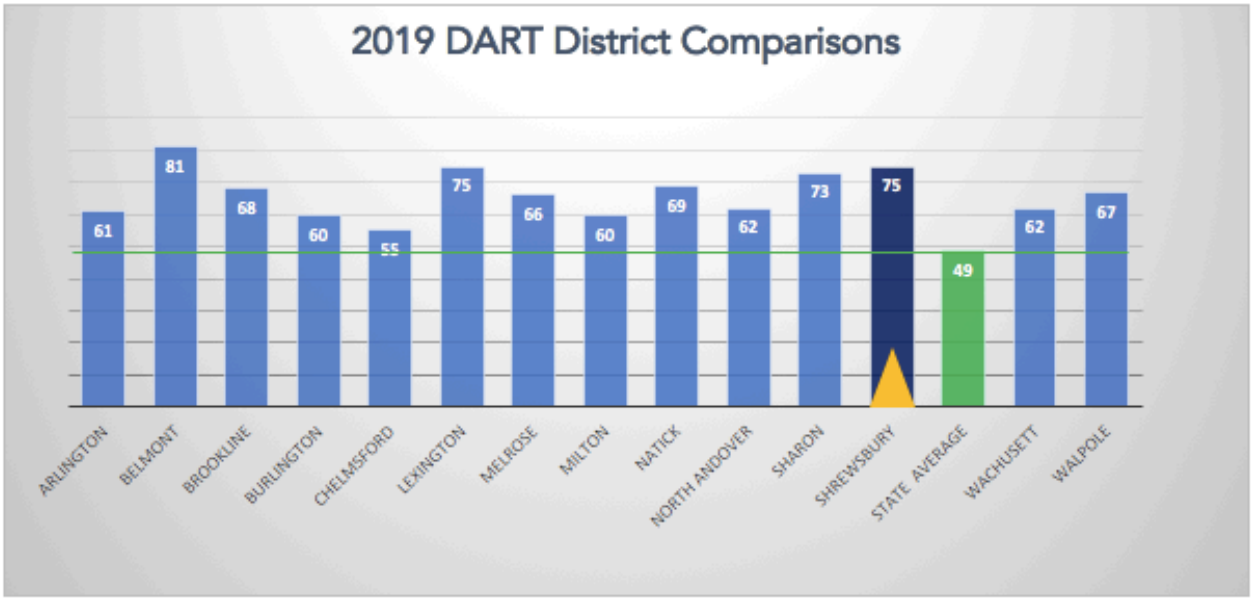
Next-Gen MCAS Math / Grade 3



Shrewsbury's Grade 3 Math scores are among the highest in our area. Significantly, our students' scores at this level compare well to districts with similar demographics beyond central Massachusetts.

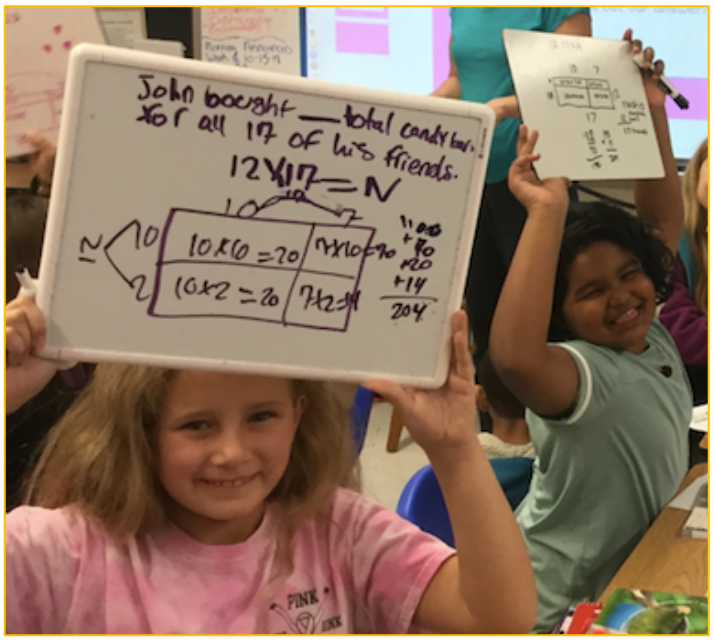
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 3



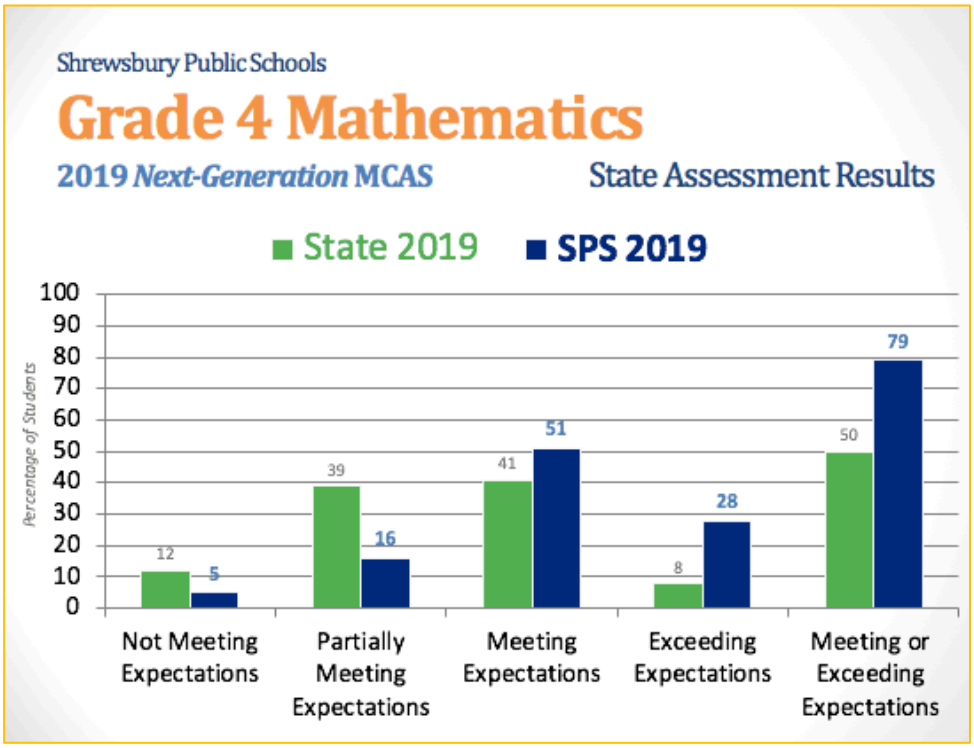
Grade 4

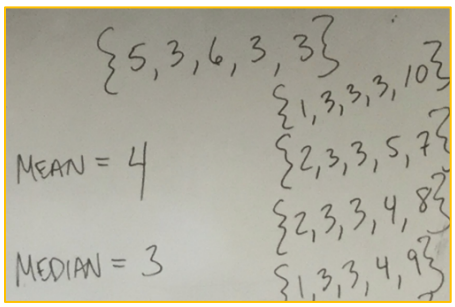
% by level	2017	2018	2019
Exceeding	21	21	28
Meeting	54	51	51
Partially Meeting	20	25	16
Not Meeting	5	3	5



Grade 4 student results in Math are also strong. This year more students at this level achieved a score of Exceeding, the highest proficiency rating.

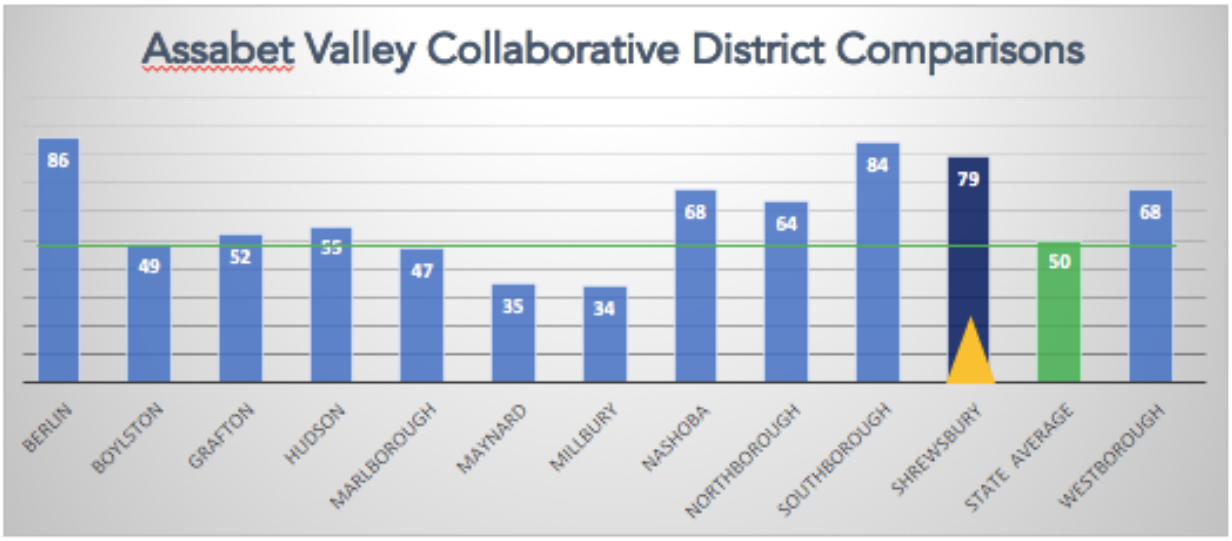
Our students consistently achieve higher scores on the MCAS assessment than most children in the state.





Percentage of students Meeting or Exceeding Expectations

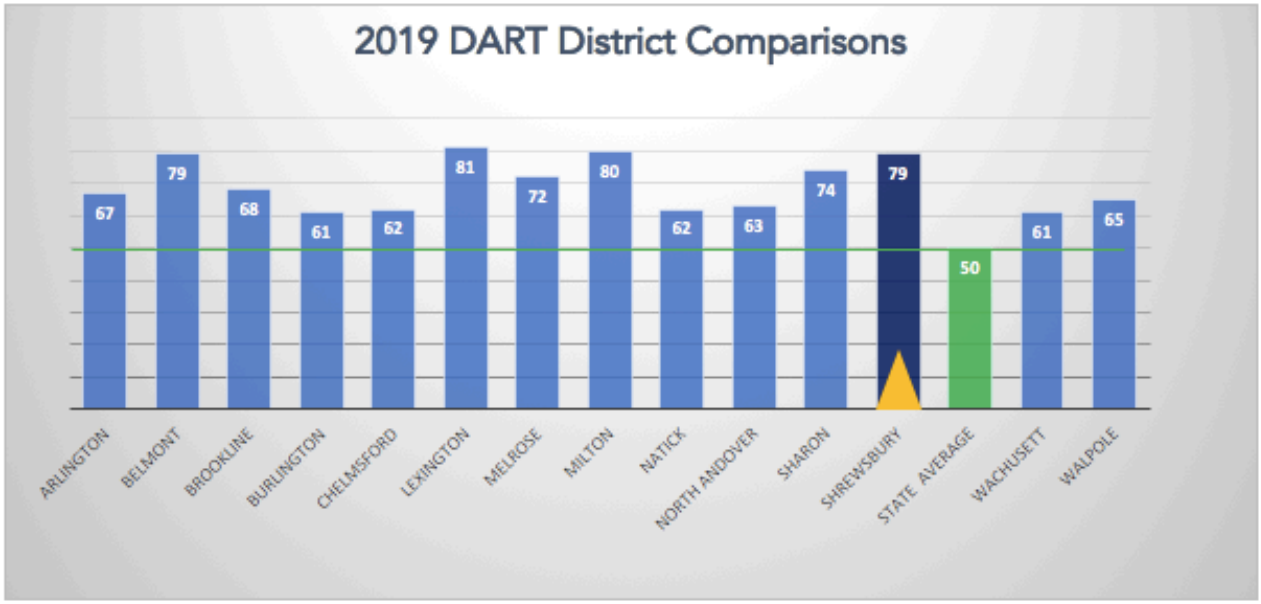
Next-Gen MCAS Math / Grade 4



Again, these graphs speak to high rates of achievement overall. Note our scores as compared to the state average as well as the performance of Grade 4 students in other districts.

Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 4

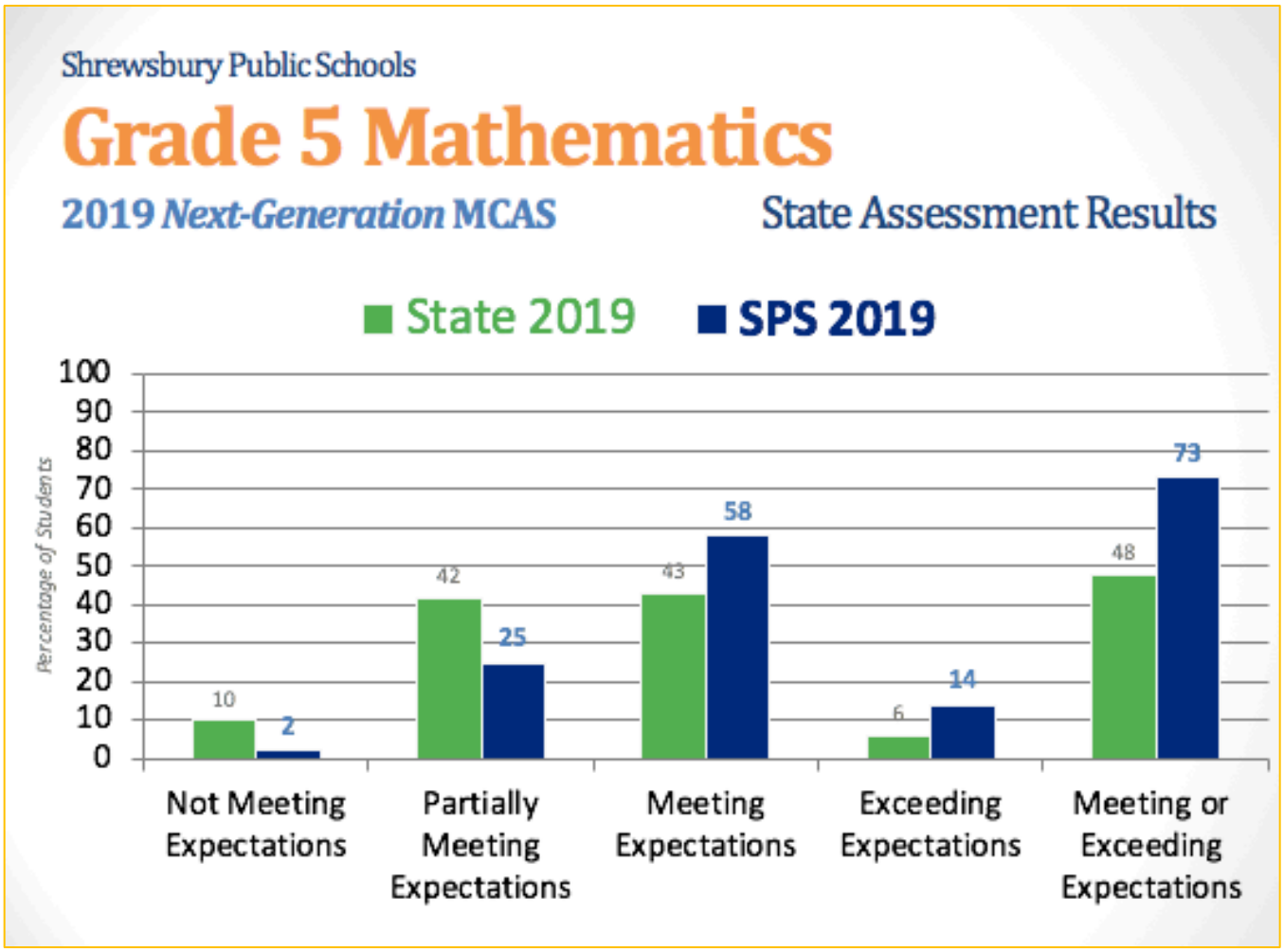


Grade 5

% by level	2017	2018	2019
Exceeding	20	15	14
Meeting	52	55	58
Partially Meeting	24	24	25
Not Meeting	5	6	2

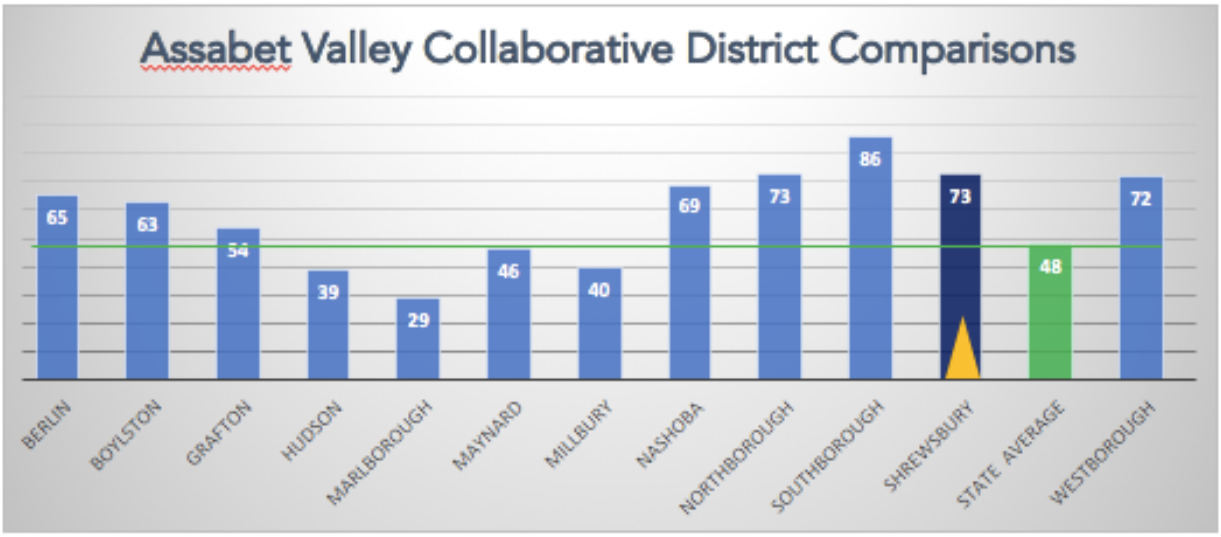
73% of Grade 5 students met or exceeded the grade level benchmark for Math this year, which shows a slight increase from last year.

Note: In both 2018 and 2019, DESE reports show discrepancies worth noting. The total numbers for each category of performance do not match the overall percentage. This table reflects state report data.



Percentage of students Meeting or Exceeding Expectations

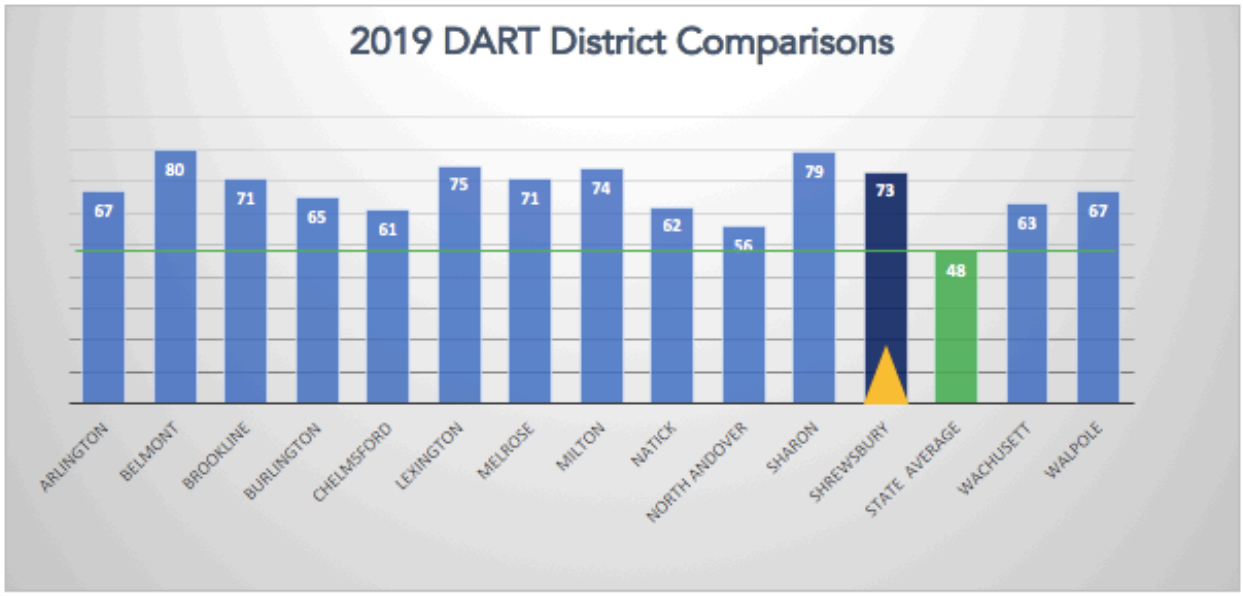
Next-Gen MCAS Math / Grade 5



Among Assabet Valley districts, only Southborough's Grade 5 students scored higher this year. Shrewsbury's scores were among the top 5 within our DART comparison group.

Percentage of students Meeting or Exceeding Expectations

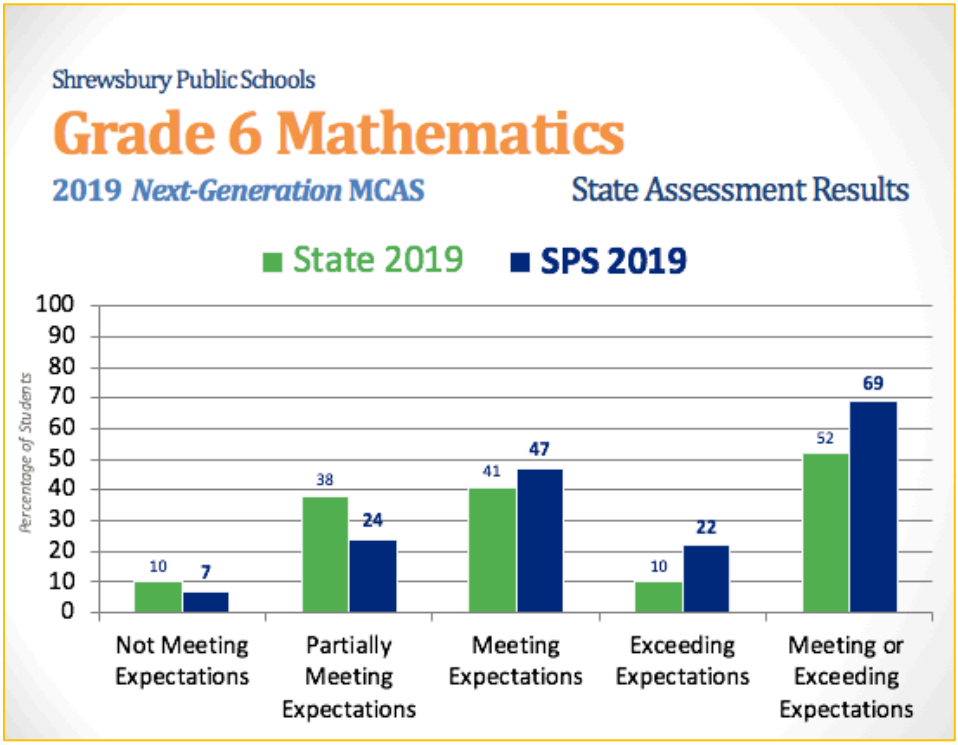
Next-Gen MCAS Math / Grade 5



Grade 6

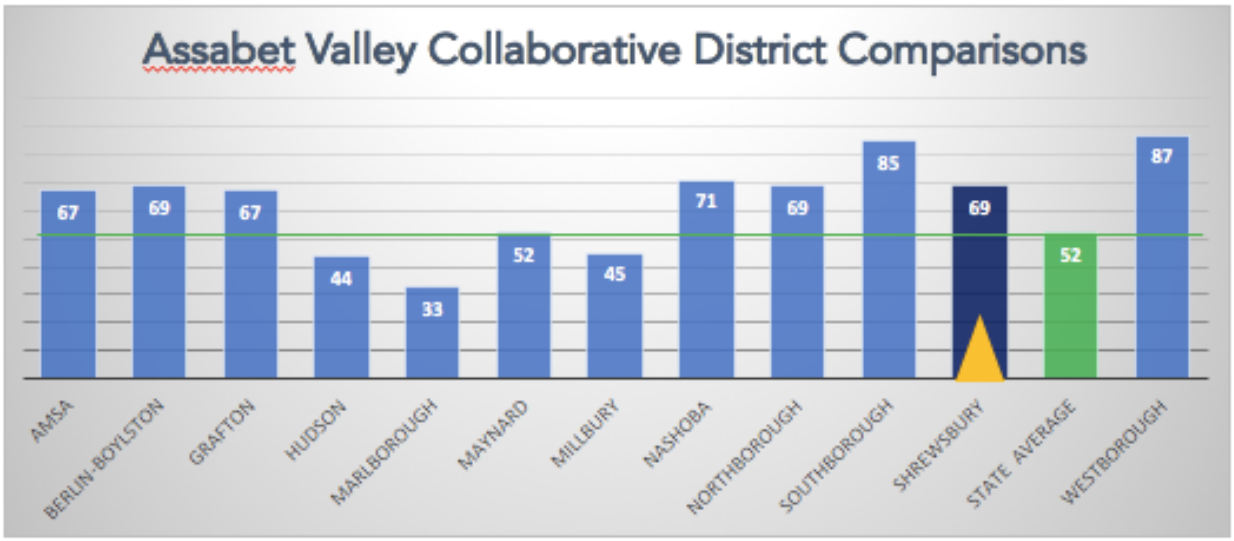
% by level	2017	2018	2019
Exceeding	11	14	22
Meeting	58	56	47
Partially Meeting	26	25	24
Not Meeting	6	5	7

Grade 6 Math scores were similar to 2018 results, with more students achieving at the highest level this year.



Percentage of students Meeting or Exceeding Expectations

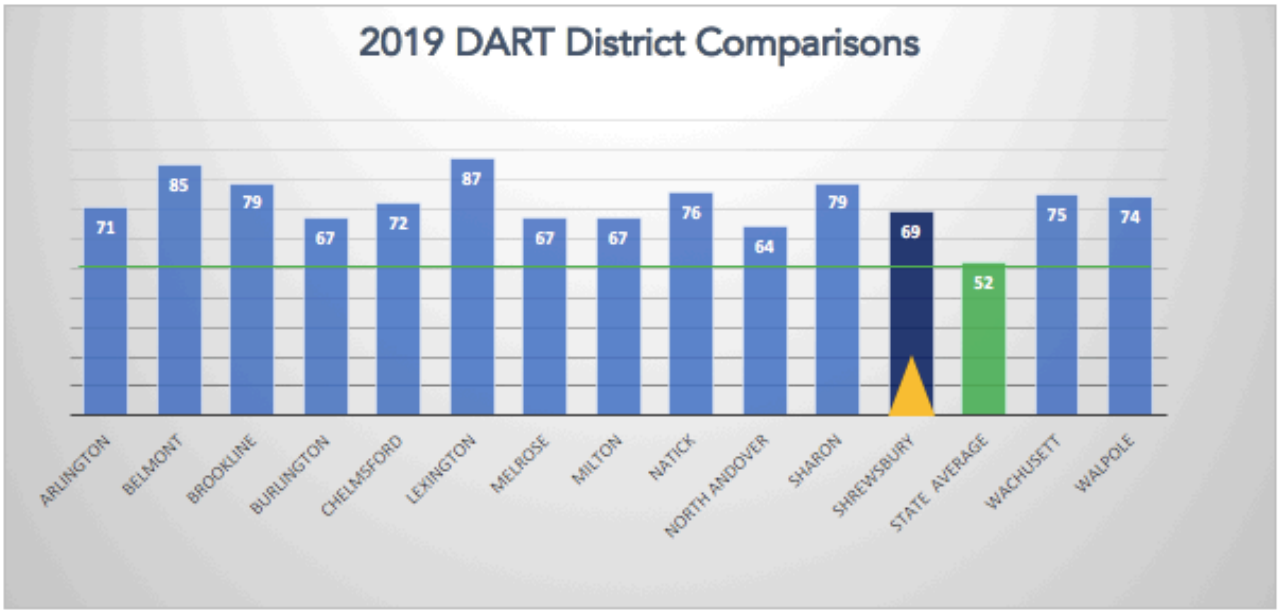
Next-Gen MCAS Math / Grade 6



These charts speak to our ongoing effort to ensure that more students master Math standards and practices. Our numbers compare well with scores from districts in the Assabet Valley. Students in DART cohort districts tended to score higher overall, suggesting this may be an area for further study.

Percentage of students Meeting or Exceeding Expectations

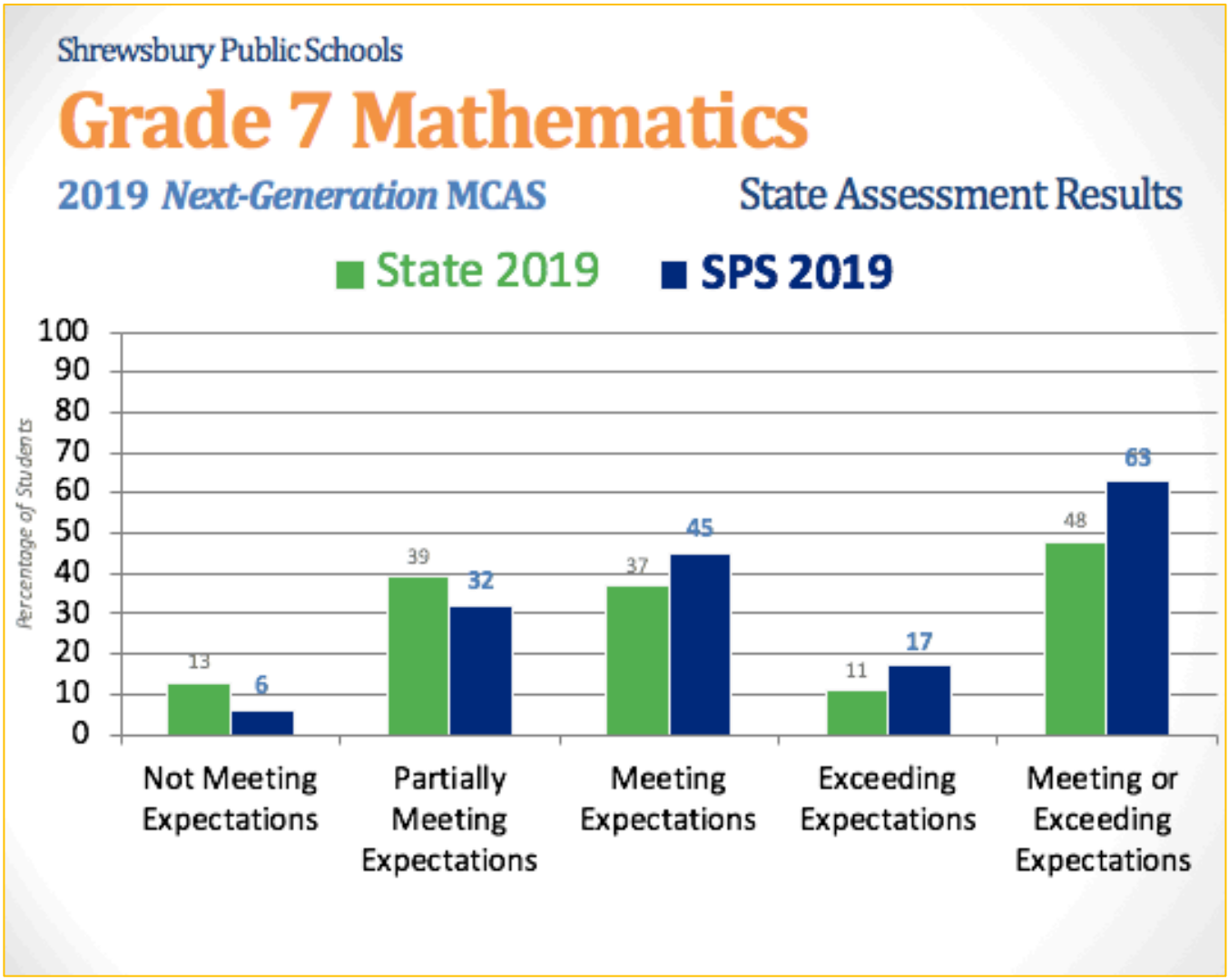
Next-Gen MCAS Math / Grade 6



Grade 7

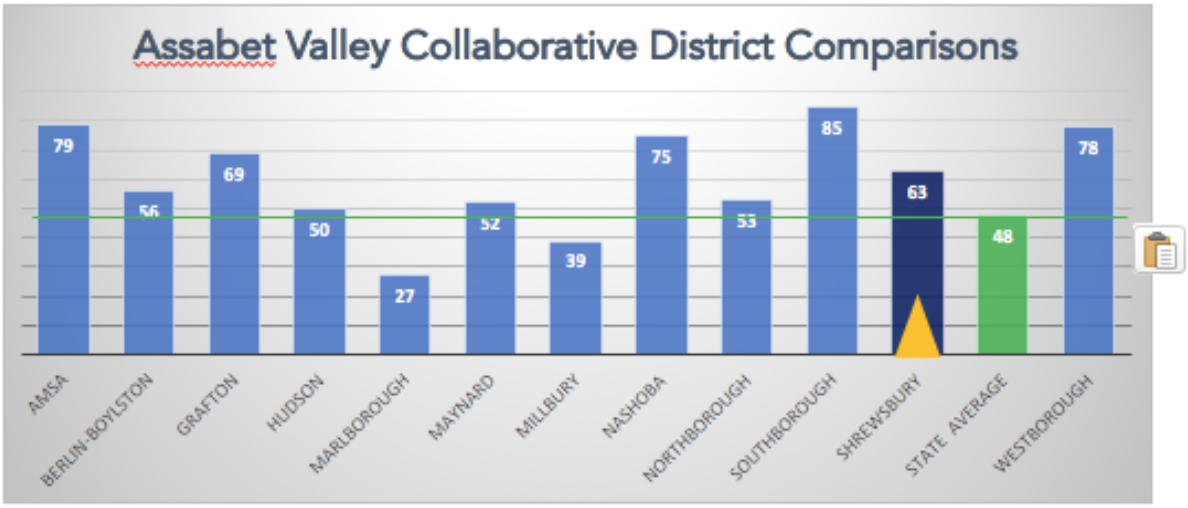
% by level	2017	2018	2019
Exceeding	15	14	17
Meeting	46	51	45
Partially Meeting	34	27	32
Not Meeting	6	8	6

Math scores for Grade 7 remain consistent, with more students scoring in the Exceeding range this year. Although results for this grade span are lower overall, Shrewsbury's scores are significantly higher than the state average.



Percentage of students Meeting or Exceeding Expectations

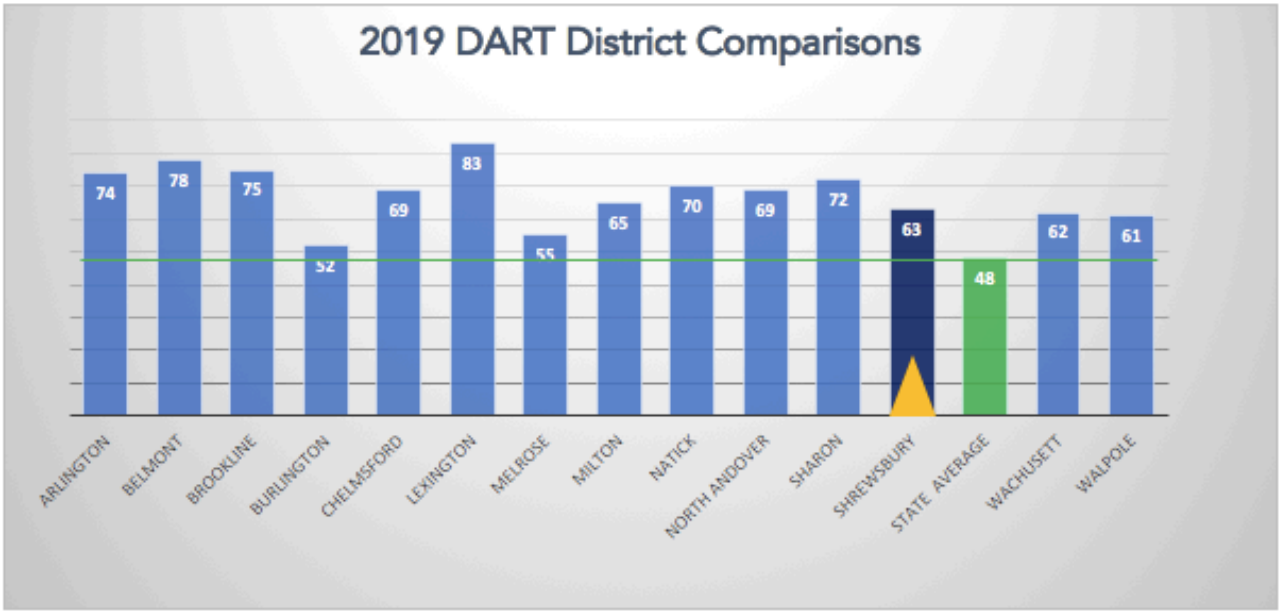
Next-Gen MCAS Math / Grade 7



Our achievement data for this grade is noticeably different from results for the same grade in other districts. Students from several local districts achieved higher scores. Further, only two of the districts in the DART comparison group scored lower than Shrewsbury. Importantly, when we look to the following year, student scores are somewhat higher.

Percentage of students Meeting or Exceeding Expectations

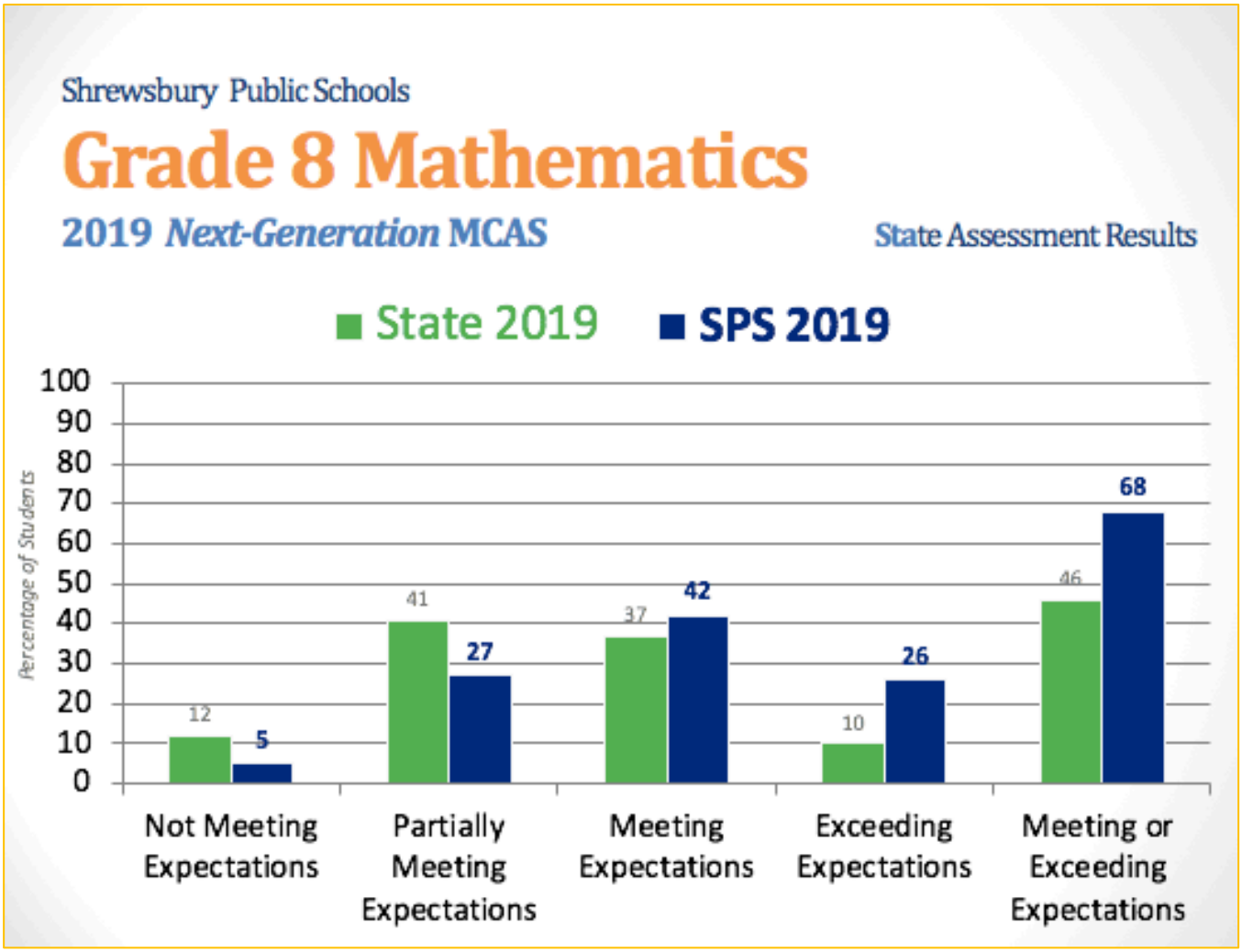
Next-Gen MCAS Math / Grade 7



Grade 8

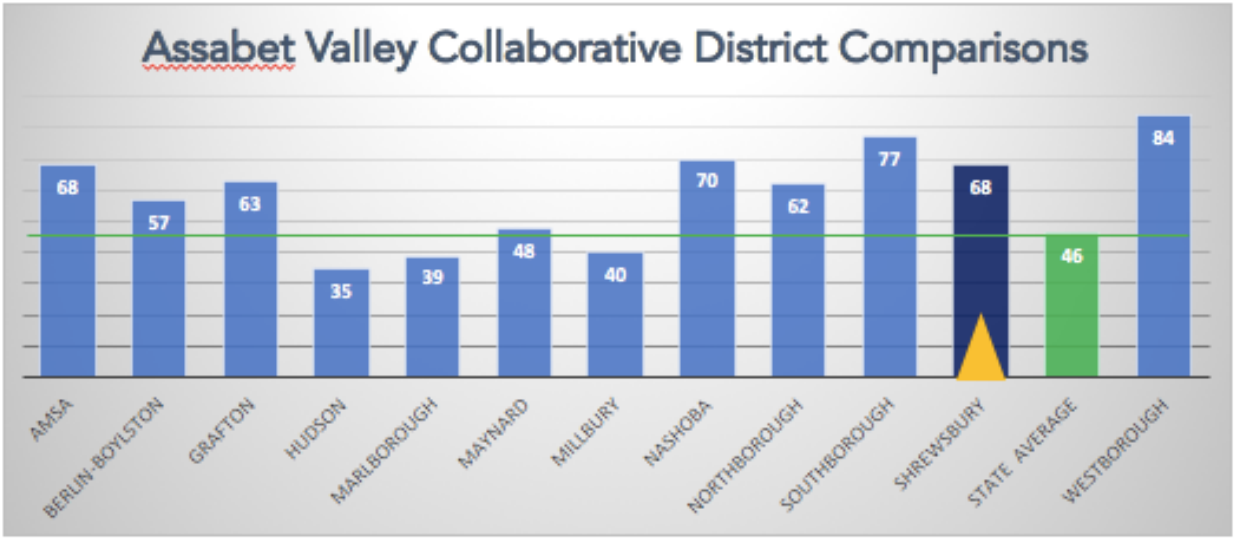
Math scores for students in Grade 8 declined slightly from 2018. However, as compared with the state average and overall results Shrewsbury's scores have been consistent over time. More to the point, scores for this grade span are among the highest in the area, and the performance of Shrewsbury's eighth graders in Math compares well within the state.

% by level	2017	2018	2019
Exceeding	17	17	26
Meeting	45	54	42
Partially Meeting	33	25	27
Not Meeting	4	4	5



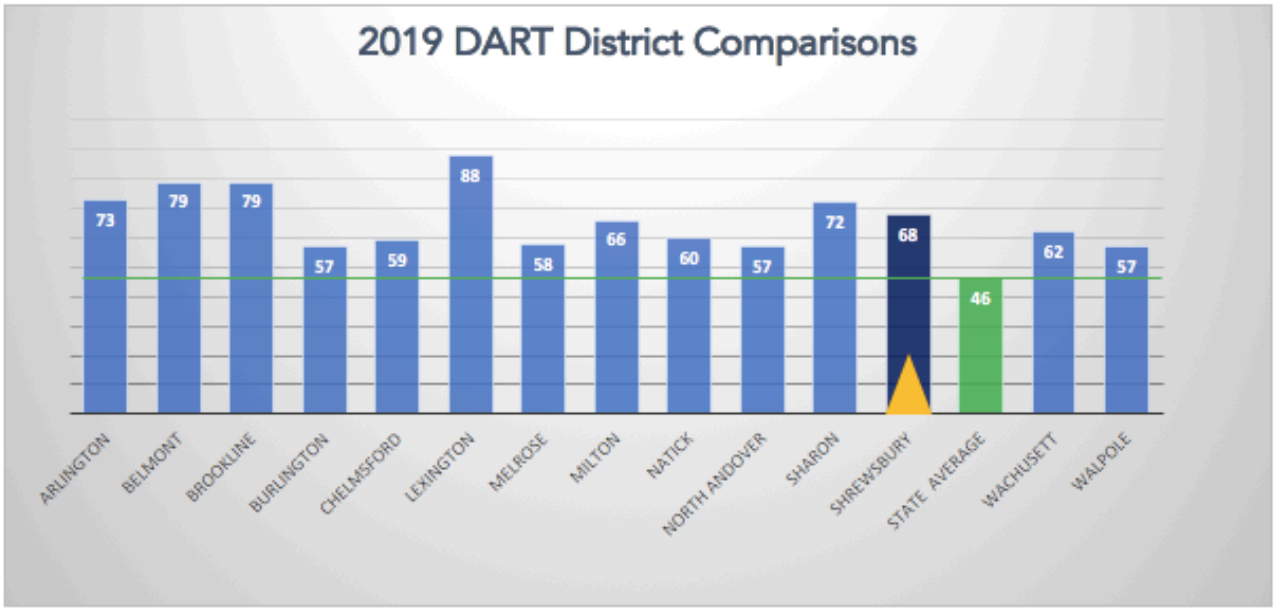
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 8



Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 8



Grade 10

In 2019 High School students across the state took the new test in Mathematics for the first time. Scores for the old "legacy" test cannot be compared with scores on the "next generation" exam. For this reason, this year's scores should be considered a new baseline in this subject area as well.

As depicted below, test results showed that students consistently scored well on the "legacy" test in Math:

Achievement rates 2015-2018 for the "legacy" MCAS in Mathematics

	2015	*2016*	*2017*	*2018*
Advanced	*79*	*76*	*72*	*72*
Proficient	*13*	*17*	*19*	*17*
Needs Improvement	*6*	*4*	*6*	*8*
Failing	*2*	*3*	*3*	*3*

89% of Grade 10 students met the Proficiency benchmark in 2018. For the last three years of the legacy test, Grade 10 scores in Math at the high school level dropped slightly. At the same time, Shrewsbury continued to post strong results overall.

Grade 10 Math Scores: Legacy MCAS 5-year history

Percentage of Students Achieving at the Proficient / Advanced Levels

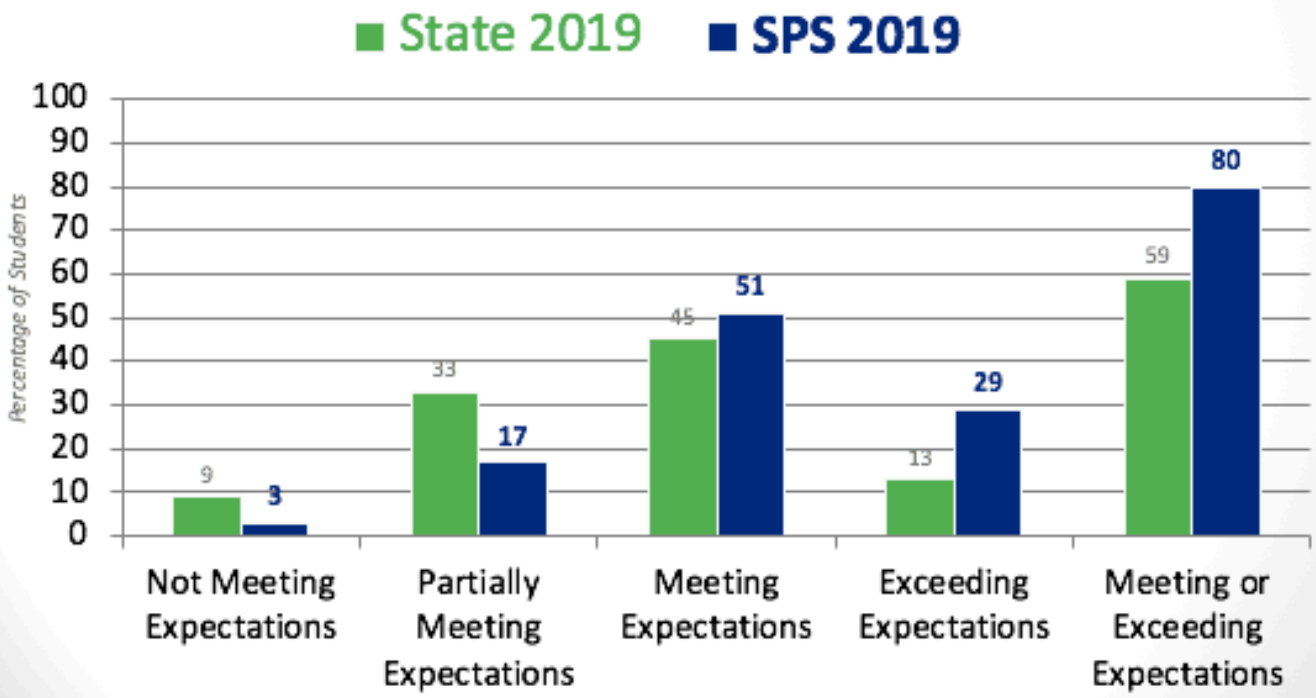
Year	*2014*	*2015*	*2016*	*2017*	*2018*
%	*95*	*92*	*93*	*91*	*89*

Shrewsbury Public Schools

Grade 10 Mathematics

2019 *Next-Generation* MCAS

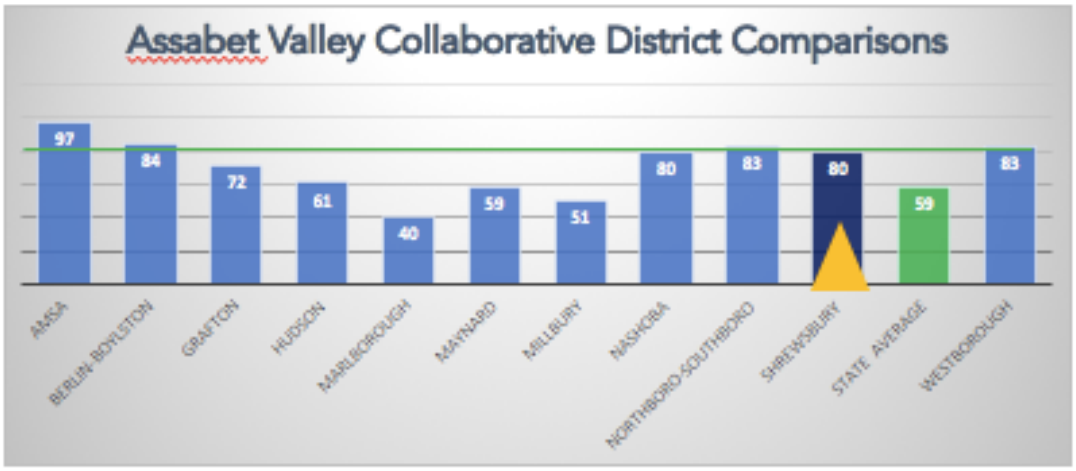
State Assessment Results



The graphs below show how our initial Math scores on the new exam compared with results from students in comparative districts last year.

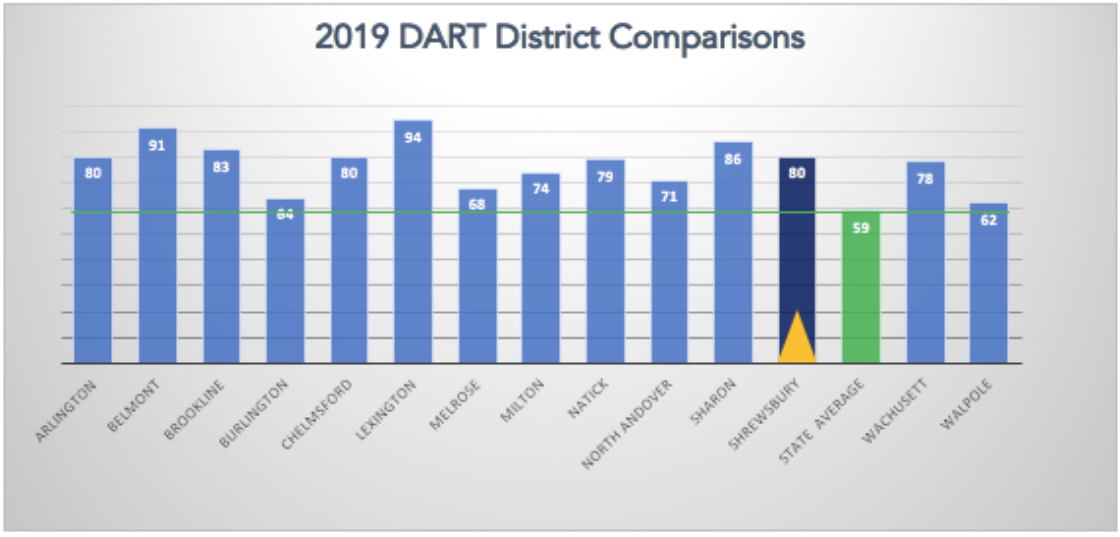
Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 10



Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Math / Grade 10



Trends in Mathematics

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 % Level M/E 2018	*73%*	*72%*	*70%*	*70%*	*65%*	*71%*	*N/A**
State Results 2018	*50%*	*48%*	*46%*	*48%*	*46%*	*49%*	*N/A**
Shrewsbury % Level M/E 2019	*75%*	*79%*	*73%*	*69%*	*63%*	*68%*	*80%*
State Results 2019	*49%*	*50%*	*48%*	*52%*	*48%*	*46%*	*59%*

*** Note:** In 2018 Students at this level did not take the "next generation" test

Student Achievement Scores in Science & Technology Grades 5, 8, & 10

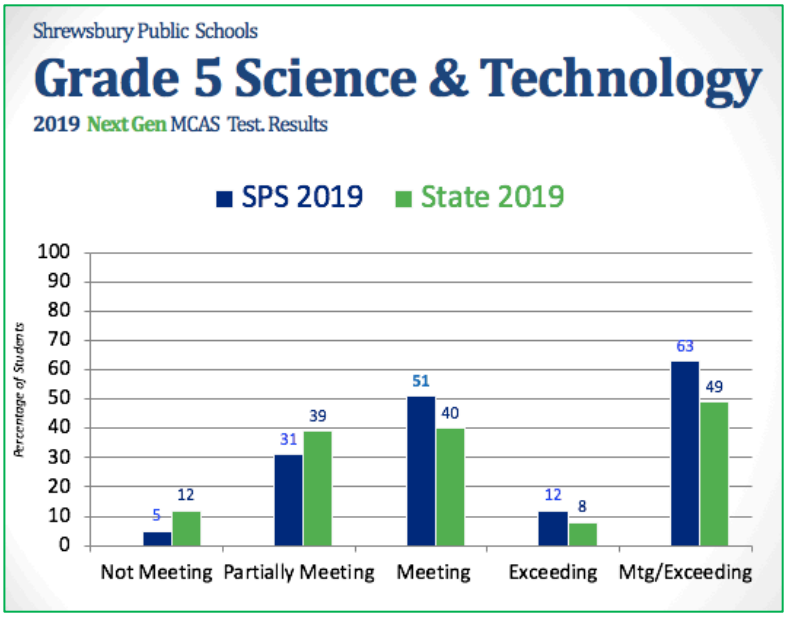
Students in three grades took the Science Technology and Engineering test in 2019. It's important to note, however, that testing formats varied by grade. Grades 5 and 8 students took the "next generation" Science exam for the first time. In contrast Grade 10 students took the "legacy" Science assessment.

Here is a snapshot of how our Grade 5 students performed over time by grade on the legacy test. Scores from different tests cannot be compared; the table below is included as context.

Grade 5

	2014	2015	2016	2017	2018
Advanced	31	31	34	32	33
Proficient	41	40	36	35	36
Needs Improvement	23	25	24	27	26
Warning	4	4	7	7	5

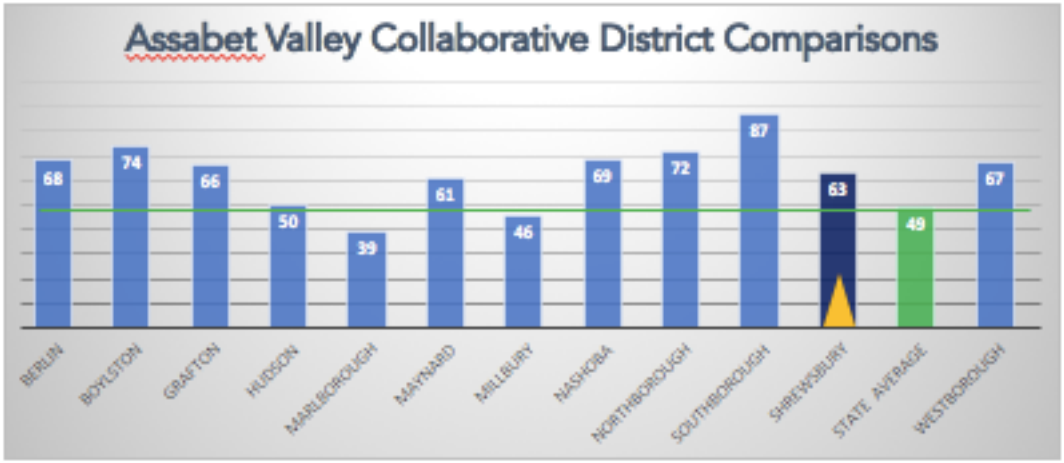
Since students took a new exam this year, we have a new baseline for students in Grade 5 in Science.



Here's how our Grade 5 results compare to scores in area districts:

Percentage of students Meeting or Exceeding Expectations

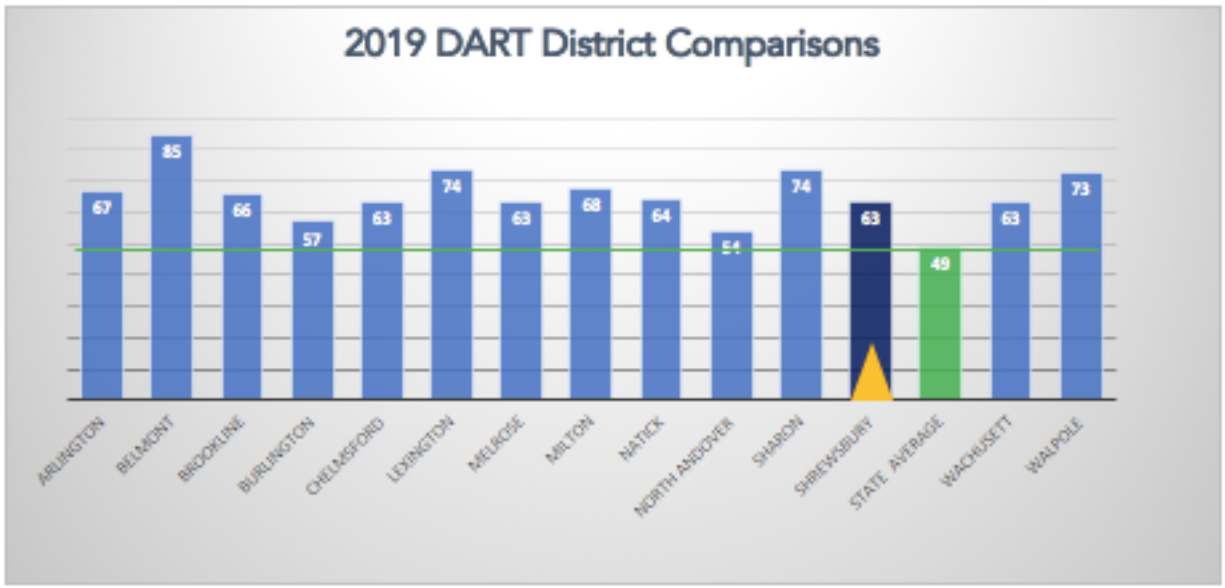
Next-Gen MCAS Sci / Tech Grade 5



This chart shows our scores as compared to districts with similar demographics. As mentioned in prior reports, in Shrewsbury the timing of content delivery has an impact on student performance. For example, our Grade 5 students are tested cumulatively on content that is taught in earlier grades, especially fourth grade.

Percentage of students Meeting or Exceeding Expectations

Next-Gen MCAS Sci/Tech / Grade 5

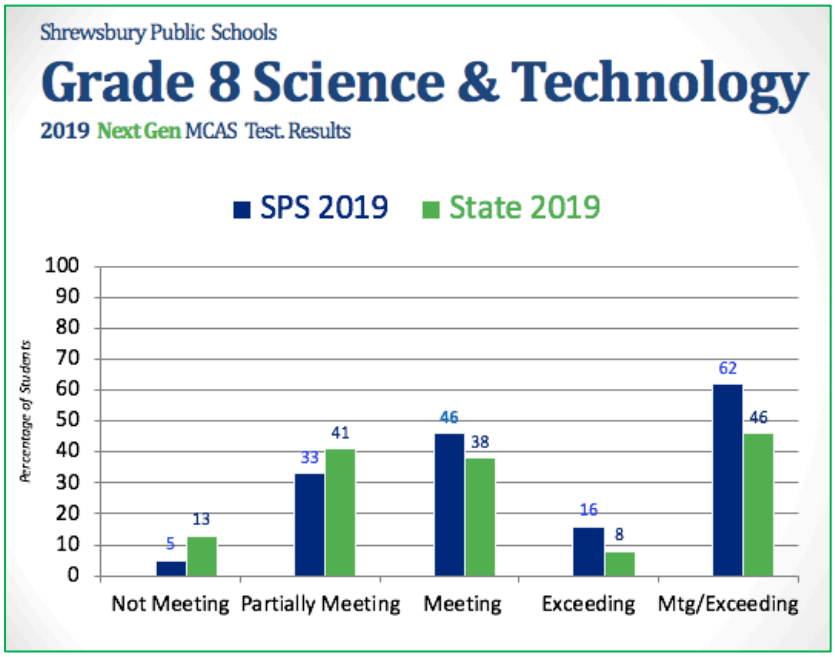


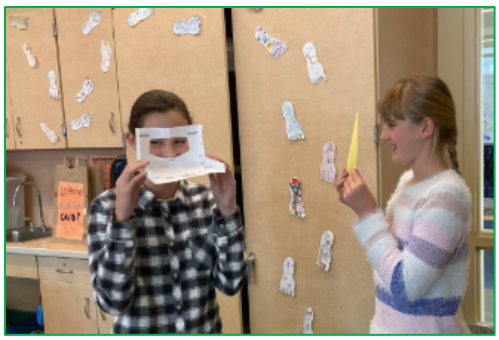
Grade 8

	2014	2015	2016	2017	2018
Advanced	14	9	12	5	8
Proficient	55	53	47	55	46
Needs Improvement	26	33	33	32	37
Warning	5	6	8	8	9

This chart is included as context only. In 2019, students in Grade 8 took the next generation Science test for the first time. Please note that historically the Grade 8 Science & Technology test was the most challenging test in all of the legacy MCAS tests in terms of percentages of students scoring at high levels across the state. While it is appropriate to compare performance of 8th graders over time, it is not valid to compare performance on this test against how students fare on the Grade 5 or High School Science & Technology tests.

Since students took a new exam this year, we have a new baseline for students in Grade 8 in Science as well.

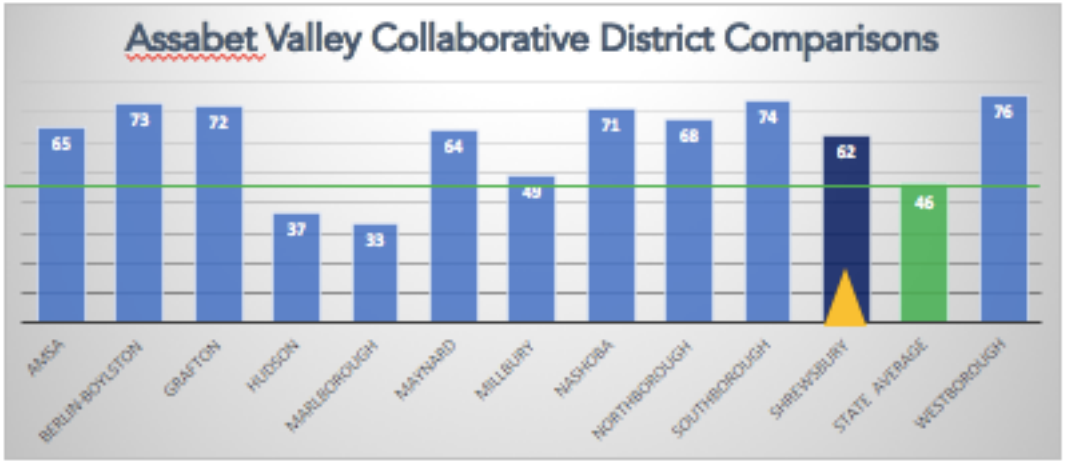




Here's how our Grade 8 results compare to scores in area districts:

Percentage of students Meeting or Exceeding Expectations

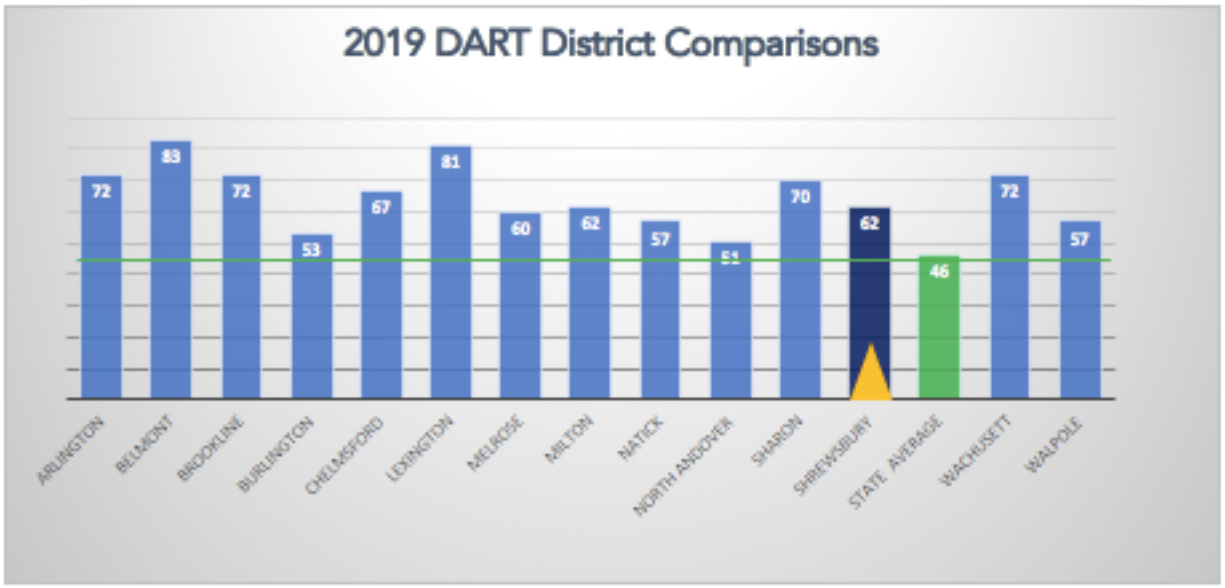
Next-Gen MCAS Sci/Tech Grade 8



It's interesting to see how these initial scores compare to results from DART districts as well. Our current work in Science should help us to align our curriculum to the new Science standards. One question educators have is how well this new assessment aligns with the new Science practices.

Percentage of students Meeting or Exceeding Expectations

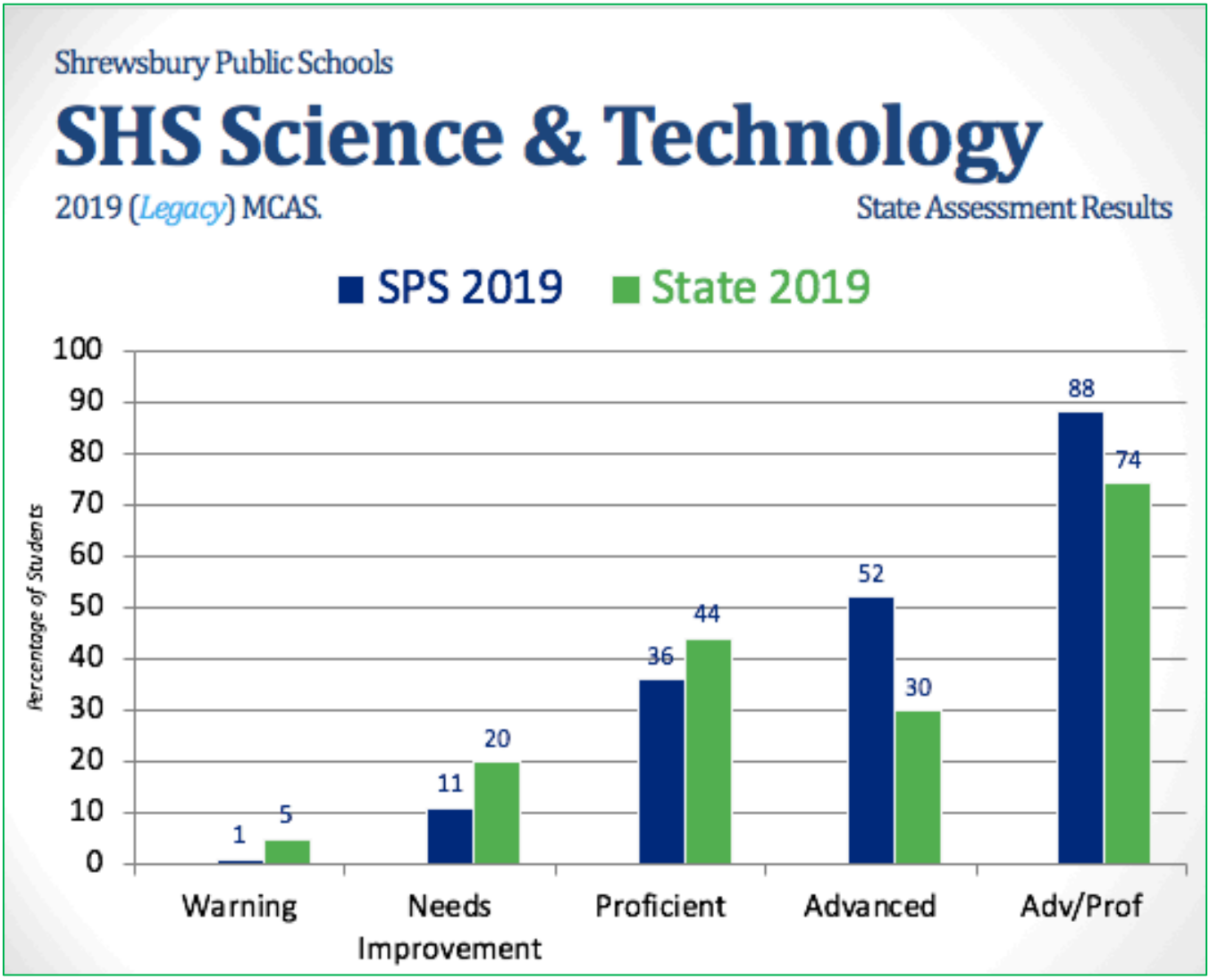
Next-Gen MCAS Sci/Tech / Grade 8



Grade 10

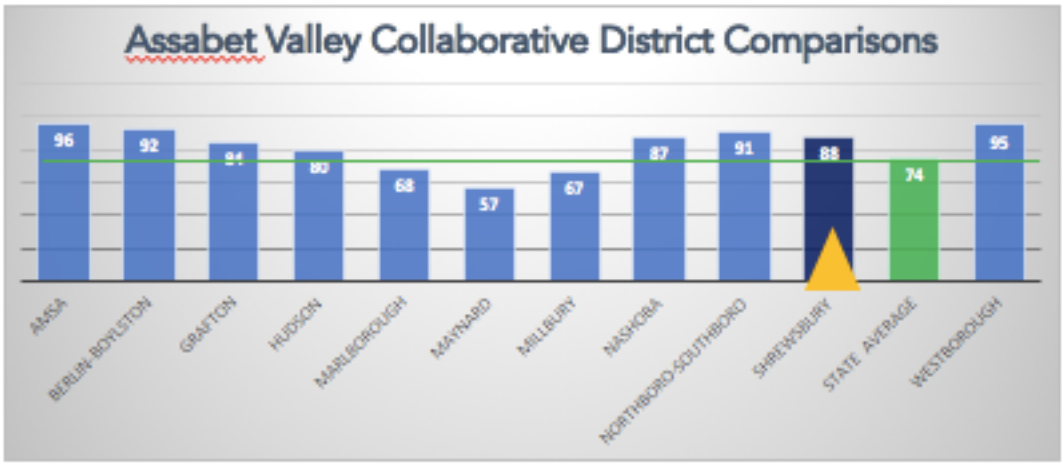
	2015	2016	2017	2018	2019
Advanced	46	54	46	47	30
Proficient	40	36	43	41	44
Needs Improvement	12	8	9	11	20
Warning	1	2	2	2	5

Overall, our results on the Science and Technology exam compare favorably with districts of similar size, demographics and enrollment. As before, our oldest students continue to post the highest scores. However, as mentioned above, because the "legacy" tests were created and calibrated at different times by different groups, the progression of expectations is not well aligned.



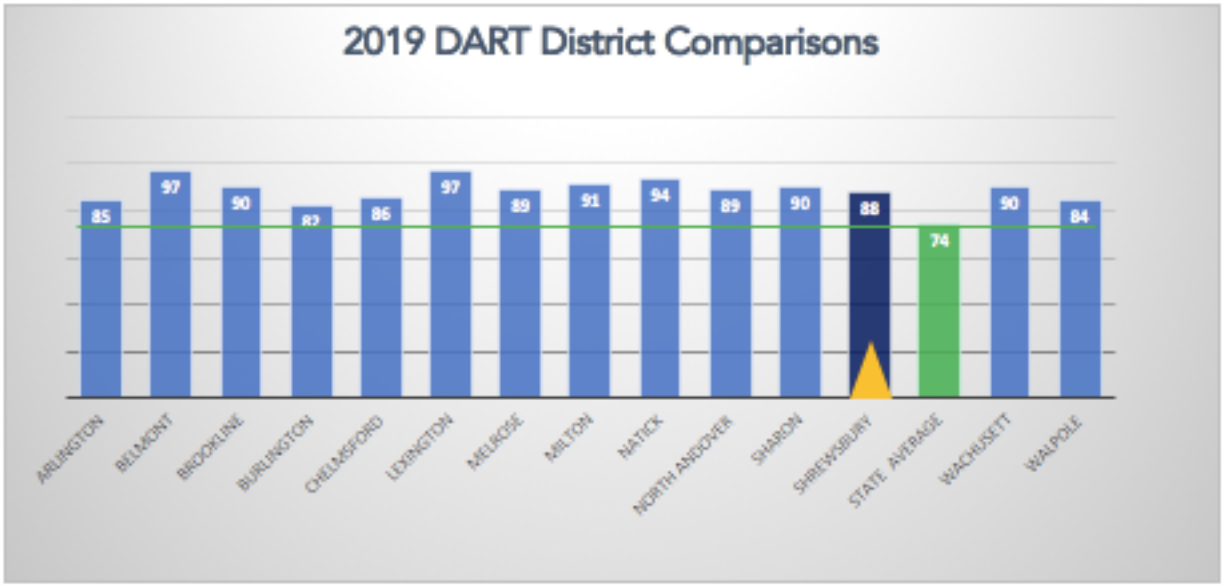
The graphs below depict how our scores on the Grade 10 Science "legacy" test compare with the results from other districts.

Percentage of students Meeting or Exceeding Expectations
Legacy **MCAS Sci/Tech Grade 10**



It's likely that the format of this assessment will change for Grade 10 soon.

Percentage of students Meeting or Exceeding Expectations
Legacy **MCAS Sci/Tech / Grade 10**



II. 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?"

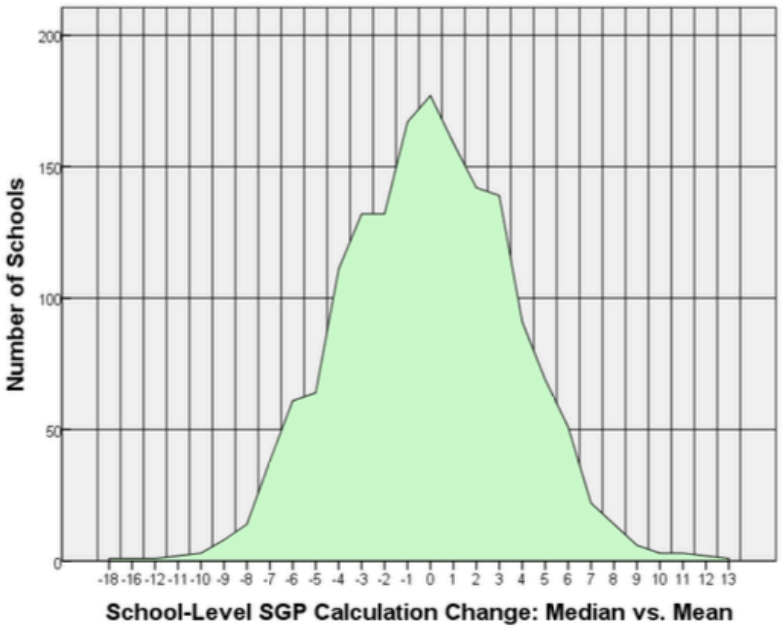
Massachusetts measures growth for individual students by comparing the change in their achievement on statewide assessments to that of their "academic peers" (all other students in the state who previously had similar historical assessment results). The rate of change is expressed as a percentile, and represents how many students had 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.

The state defines *moderate* (or expected) growth to be between the 40-60th percentile, with *low* growth as below the 40th percentile and *high growth* as above the 60th percentile. In reviewing an individual student's result, teachers and parents might wonder, "*How much did Rishi improve her math score on MCAS in 6th grade, relative to students who had the same math scores on the 4th and 5th grade math tests?"* SGP scores help to answer that question: if Rishi had a higher score than more 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, no matter what their scores were on past MCAS tests, have an equal chance to demonstrate growth at any of the 99 percentiles on the next year's test. Growth percentiles are 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; Grade 4 growth percentiles are only in comparison to Grade 3 scores; and Grade 5 and up are in comparison to the two previous years of scores. In addition, 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 monitor individual students and subgroups within the district. Importantly, it may also help us identify "bright spots," 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.

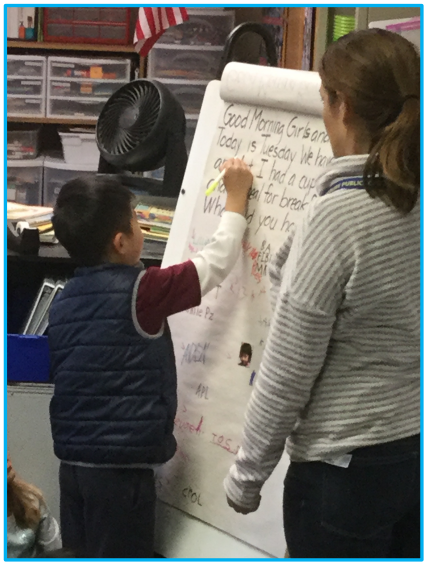
Initially the Department of Elementary and Secondary Education (the DESE) reported growth as a median percentile (the middle score if one ranks the individual student growth percentiles from highest to lowest). A typical school or district in the commonwealth would have a median student growth percentile of 50. Beginning in 2018, the DESE moved to a growth model where the average student growth percentile (SGP) replaces median SGP at the aggregate level for school and district aggregations. Although there are areas to target for improvement in achievement levels at several grade levels, the growth percentiles for each grade level in both subject areas were well within the moderate (or expected) growth range this year.

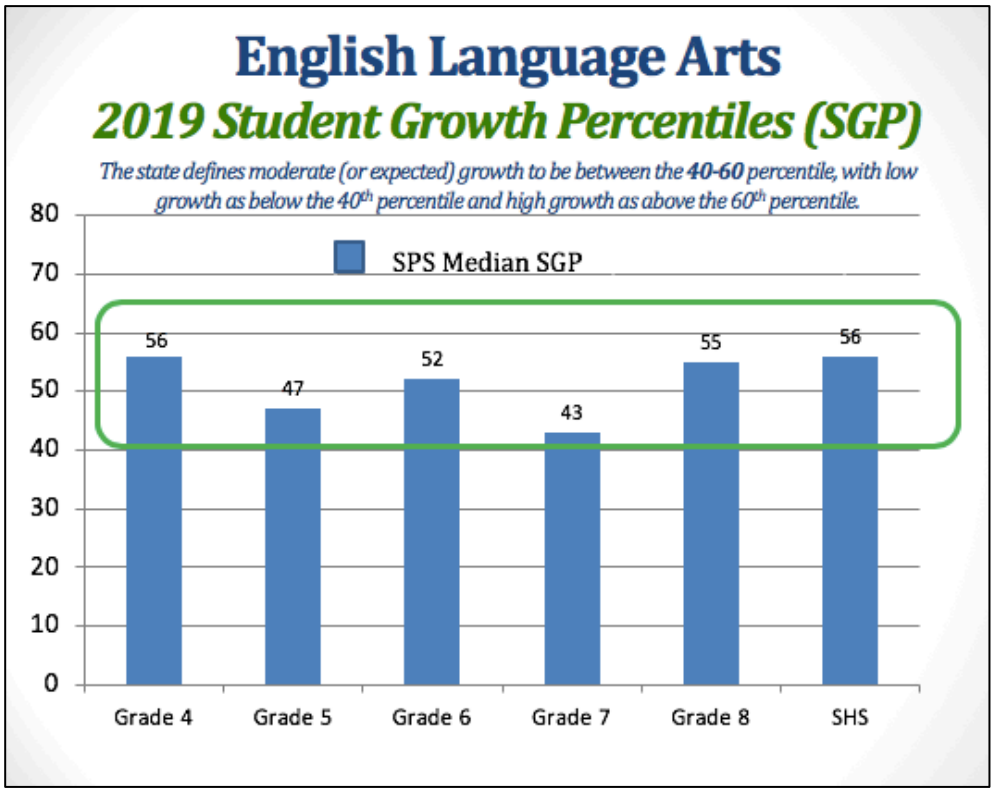
Shrewsbury Public Schools Average SGP by Grade:

English Language Arts 2019

SGP Results for the English Language Arts Assessment, 2014-2019

ELA	2014	2015	2016	2017	2018	2019
Gr 4	65	69	53	58	58	56
Gr 5	45	37	46	49	52	47
Gr 6	50	46	46	51	53	52
Gr 7	42	37	34	39	55	43
Gr 8	51	50	45	52	54	55
Gr 10	54	53	46	48	58	56



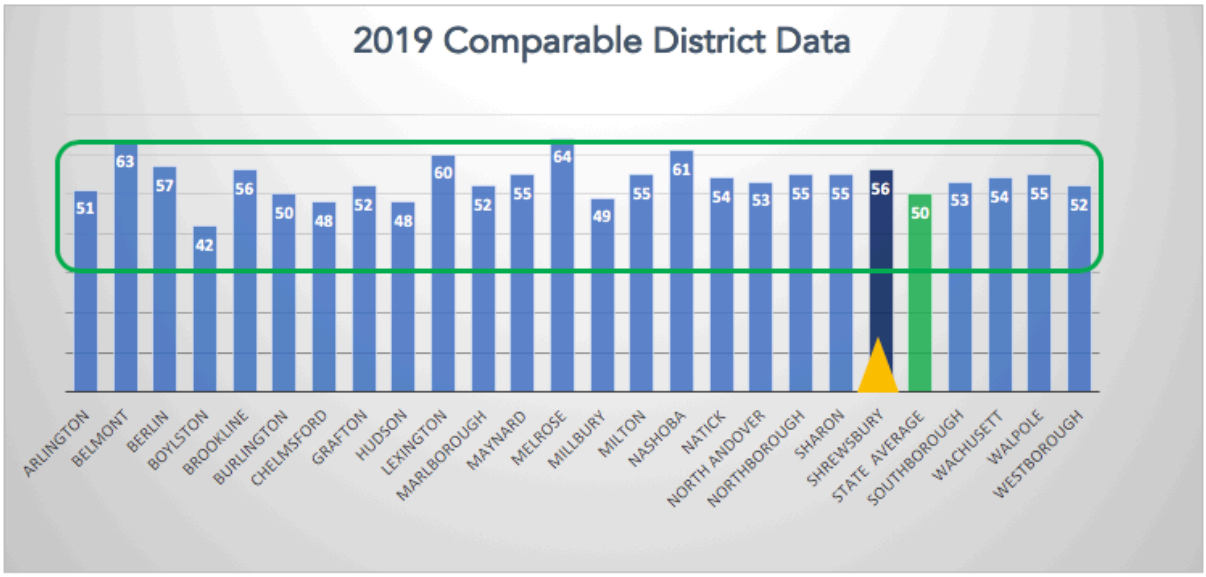


Shrewsbury Public Schools Average SGP by Grade:

Comparison SGP Data in English Language Arts in 2019 for Grades 4 & 8

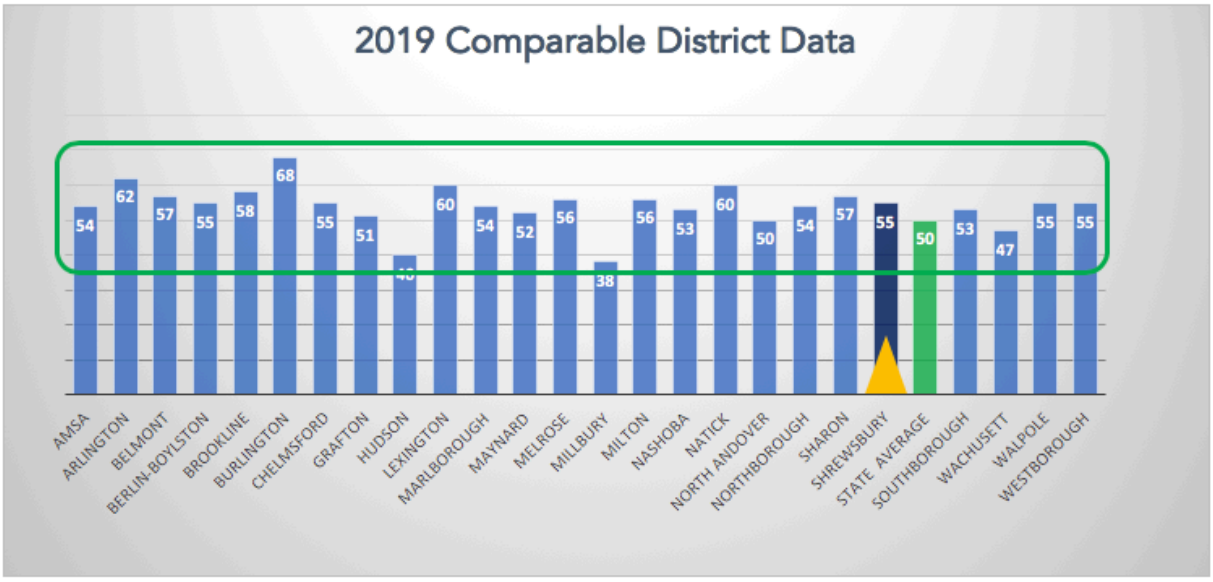
Average Student Growth Percentiles

Next-Gen MCAS ELA / Grade 4



Average Student Growth Percentiles

Next-Gen MCAS ELA / Grade 8

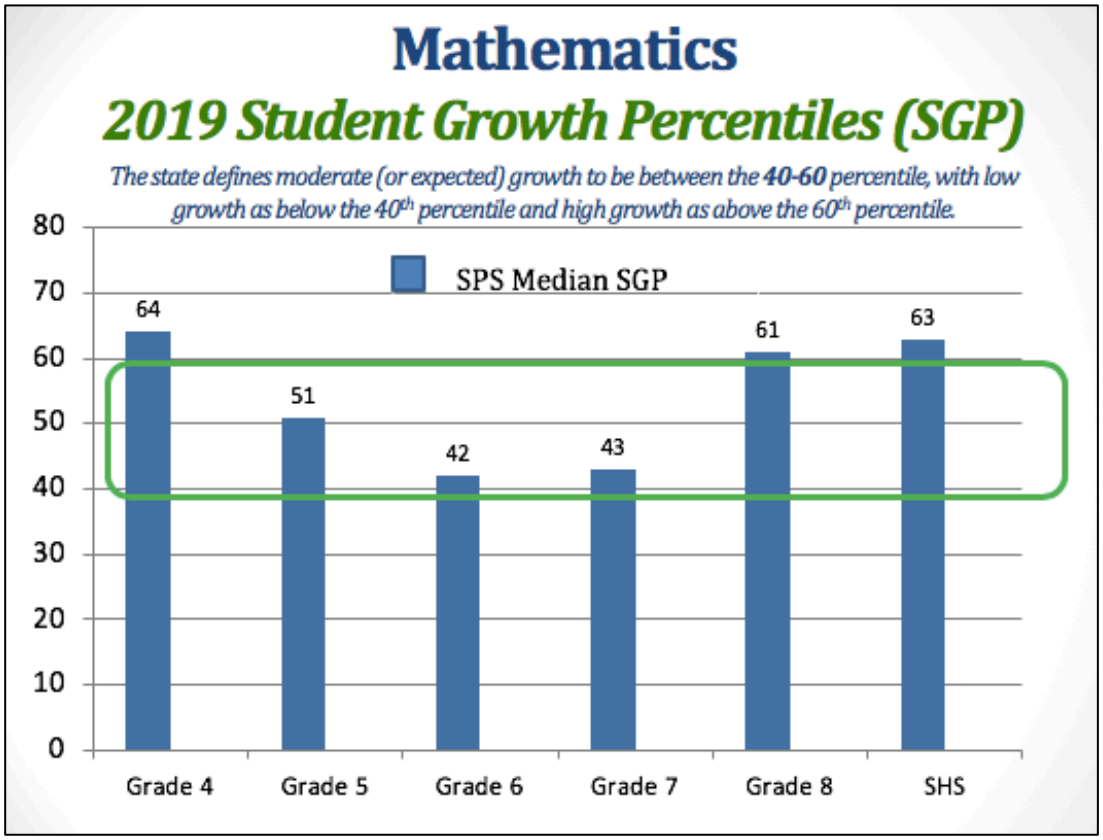


Shrewsbury Public Schools Average SGP by Grade:

SGP Results for the Mathematics Assessment, 2014-2018

Math	2014	2015	2016	2017	2018	2019
Gr 4	67	65	59	58	58	64
Gr 5	45	44	41	47	48	51
Gr 6	54	38	38	44	45	42
Gr 7	36	30	38	40	52	43
Gr 8	45	39	50	54	61	61
Gr 10	62	53	58	57	59	63

Again, growth percentile scores are expected to fall within 40-60. Note the relative higher rate of growth in grades 4, 8 and 10.

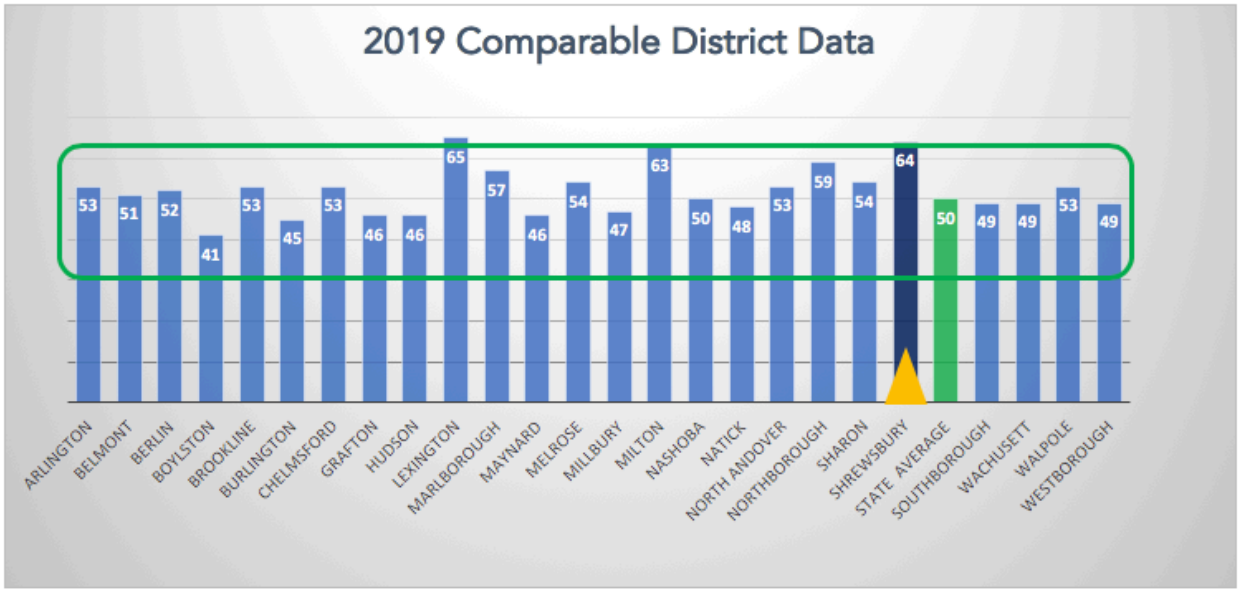


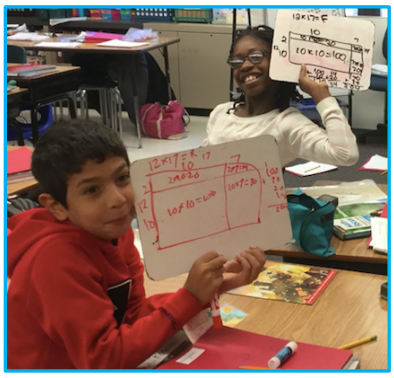
Shrewsbury Public Schools Average SGP by Grade:

Comparison SGP Data in Mathematics 2019 for Grades 4 & 8

Average Student Growth Percentiles

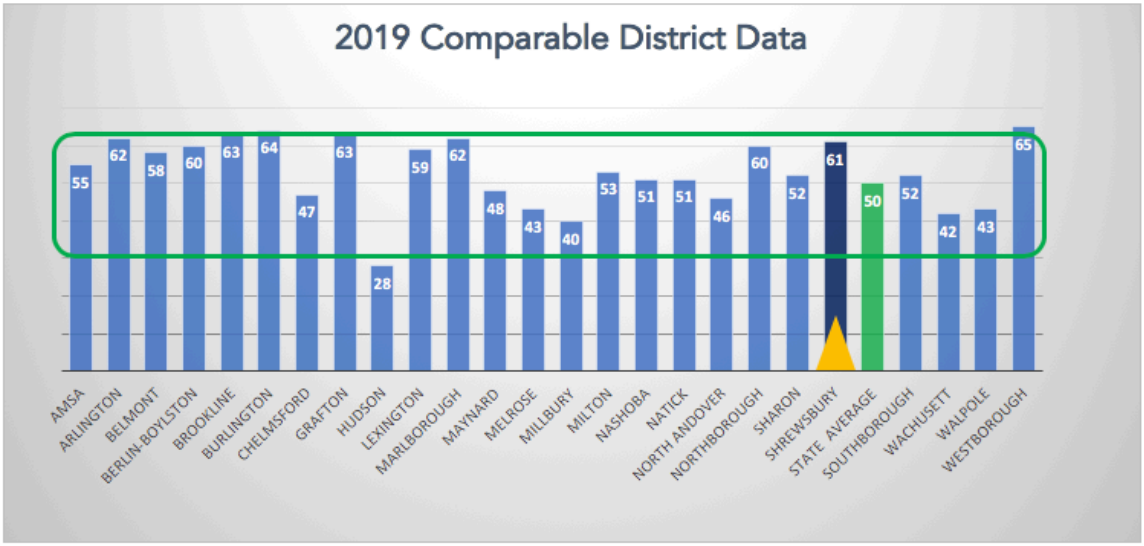
Next-Gen MCAS Math / Grade 4





Average Student Growth Percentiles

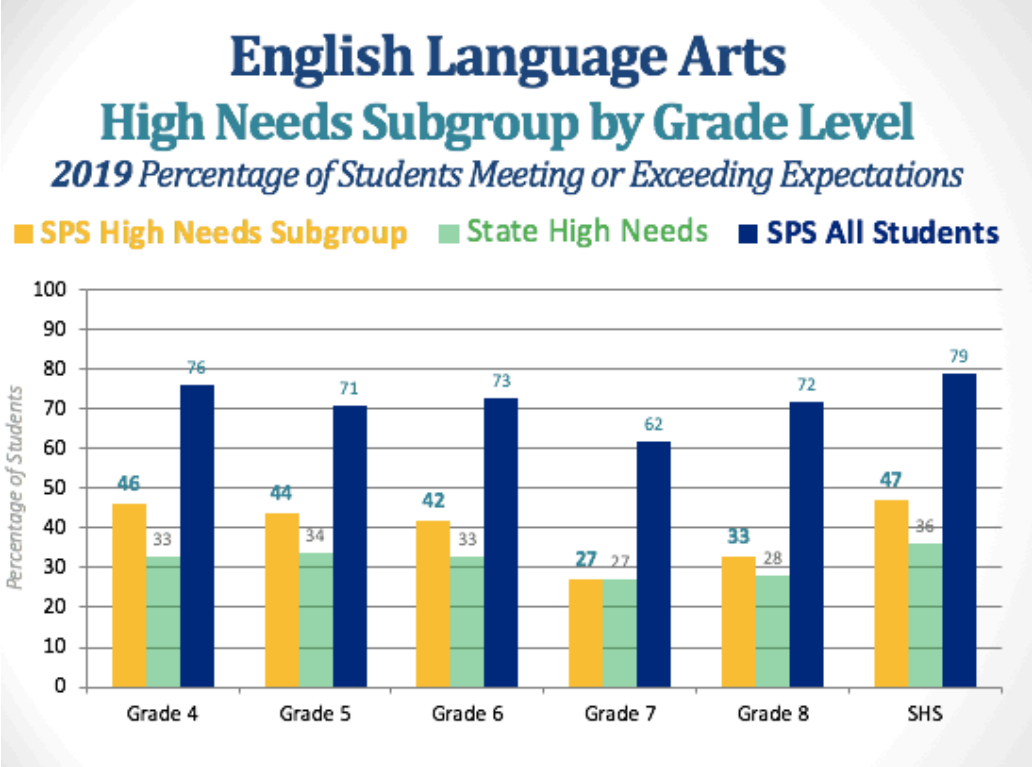
Next-Gen MCAS Math / Grade 8

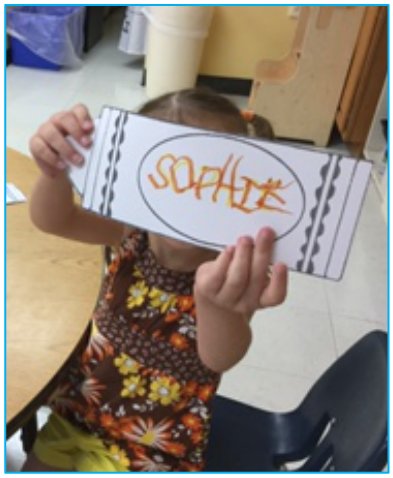


District Subgroup Performance

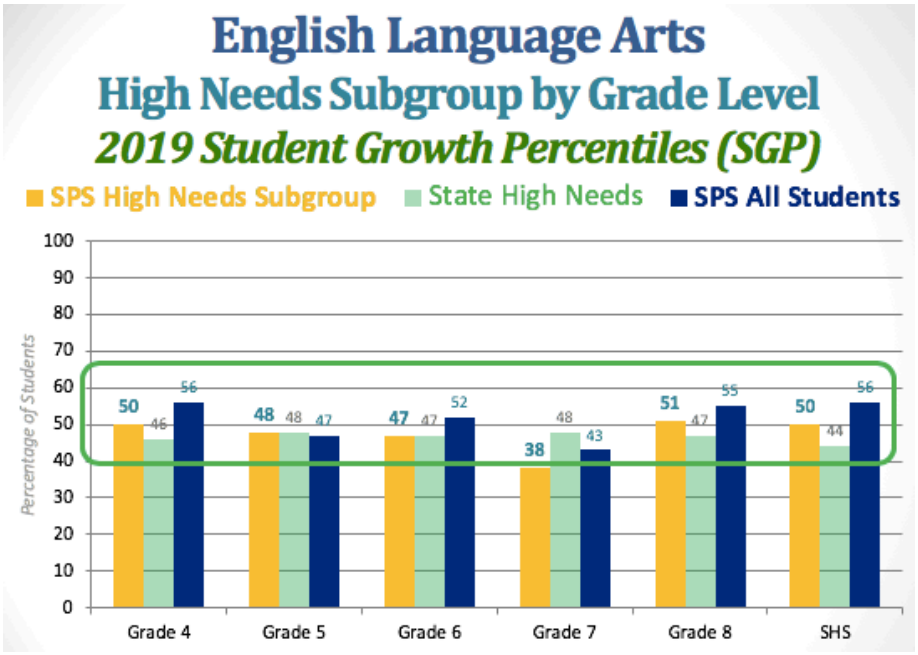
Another important way we demonstrate our commitment to student growth is by monitoring groups of children. These cohorts are called 'subgroups.' Comparing subgroup results to aggregate data helps educators to identify and close achievement opportunity gaps.

ELA Subgroup Achievement Percentiles 2019





Staff look closely at the achievement gap between the high needs subgroup and the "all students" group in various ways. While this chart shows that scores for students in our subgroups typically exceed the scores for similar student subgroups across the state, there is still progress to be made in closing gaps between student subgroups in Shrewsbury.

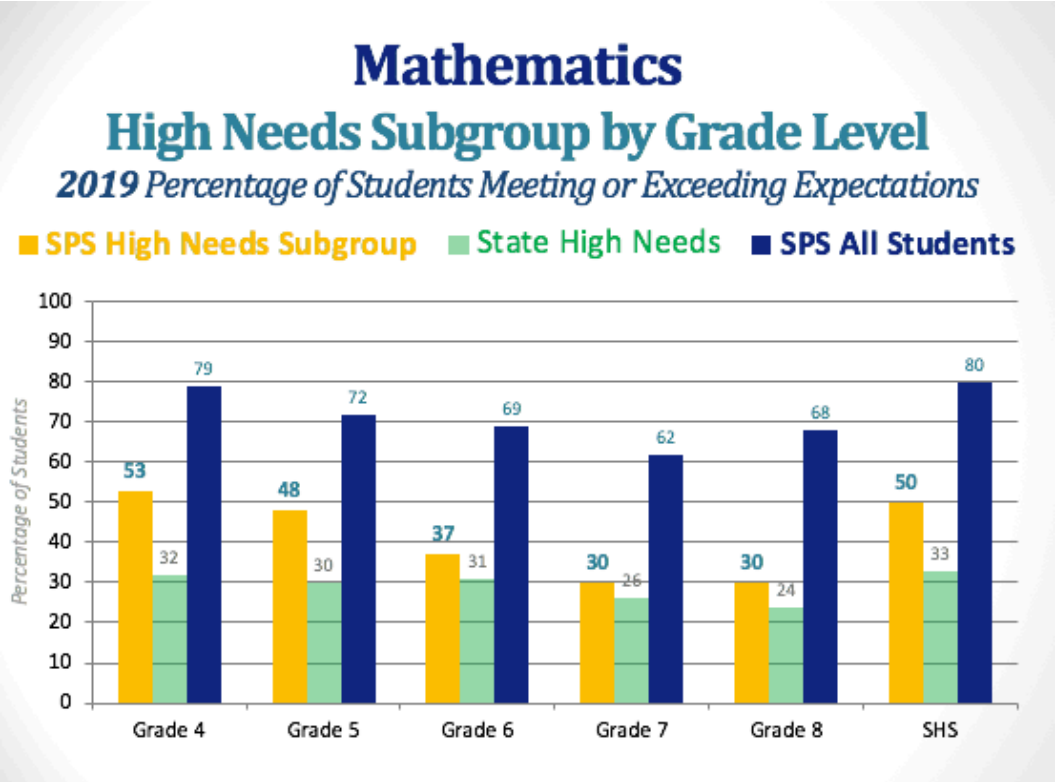


As children address the content standards, students that struggle to achieve proficiency may still demonstrate high growth. For example, the growth percentiles for students with "high needs" in English Language Arts is similar to those for most Grade 4 students. This suggests that students in both groups 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.

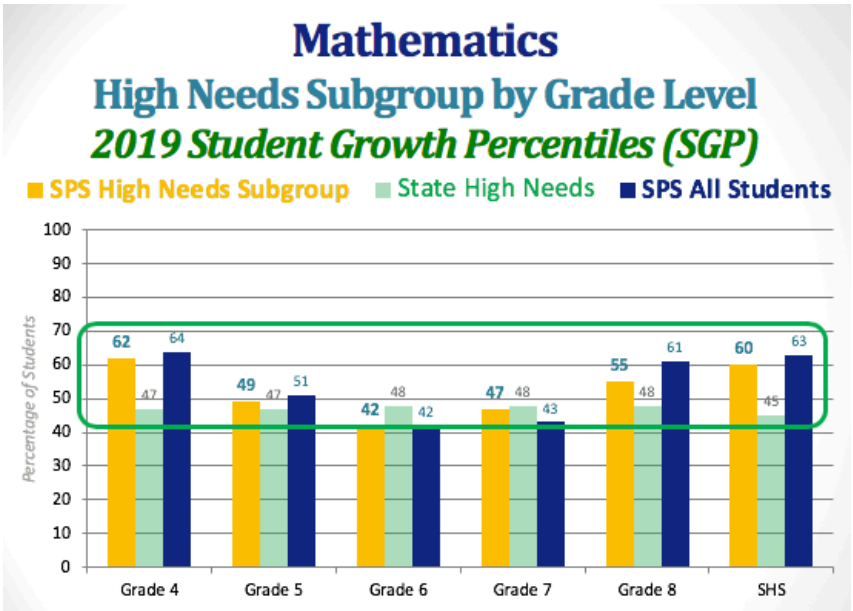
In 2019, only 24% of students with disabilities (a portion of the "high needs" group) met or exceeded expectations for the Grade 4 MCAS test in ELA, as compared to 46% of students with high needs. When we consider achievement, there is a wide range of performance scores among subgroups, in Shrewsbury and across the state.

Math Student Growth Percentiles 2019



Students in the high needs subgroup faced similar achievement challenges in Mathematics. For these students, a higher growth percentile is critical to their ability to "catch up" to their peers.

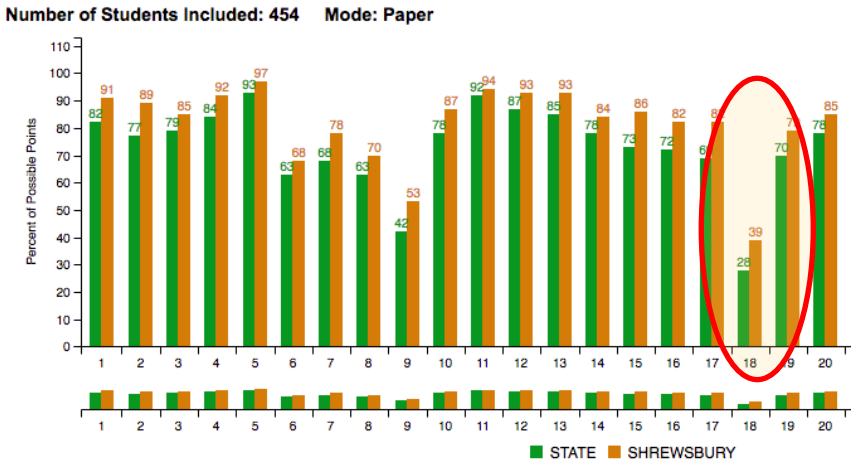
While there is still improvement to make in achievement levels for the high needs subgroups, the rising growth percentiles rates is promising.

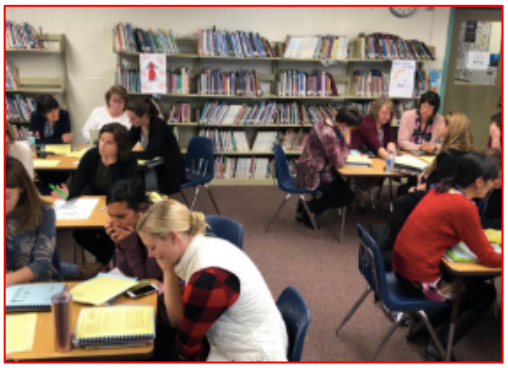


Item Analysis

Staff analyze MCAS data from the DESE portal to review student performance, identify strengths and weaknesses in specific standards, and also to examine released questions to determine how students need to specifically apply their understanding of concepts. The DESE district profile portal allows anyone to access data about standards, question types and even to compare item scores across districts. Click here to see how it works:

Scrutinizing student results by question helps educators to align their practice with the expectations inherent in the assessment. The chart below depicts an item analysis. Looking at the results in this way allows teacher teams to visually spot areas of instruction to target for reteaching.





This graph depicting scores by question allows educators to focus on strengths and needs. Question number 18 (above) is an "open response" question, which presents a greater degree of challenge to most students than multiple choice items.

						SPS score	State average	
				common.				
22	SR	LA	CCSS.ELA-Literacy.CCRA.L.1	Determine the part of speech of two words used in the poem.	1	60%	52%	8
23	SR	LA	CCSS.ELA-Literacy.CCRA.L.1	Determine the part of speech of a word used in the poem.	1	31%	40%	-9
24	SR	LA	CCSS.ELA-Literacy.CCRA.L.2	Determine the purpose of punctuation used in words from the poem.	1	57%	48%	9

In most cases, students in Shrewsbury score higher than the state average. However, where there are discrepant scores that persist over time, item analysis helps educators to pinpoint gaps in core instruction.

Looking Forward

The achievement our students experience is the result of a number of systems working together. Partnerships between home and school, coupled with an engaging and rigorous curriculum help students to meet rising expectations over time. Teams of teachers collaborating to analyze assessment data, to plan and implement interventions and to provide consistent supports as students transition, result in significant growth for some of our most struggling students. While we are justifiably proud of the results Shrewsbury's students achieve on the state assessment test, it's important to acknowledge that these scores are just one measure of our success. Just as importantly, it's worth noting that the format of the current state assessment does not yet capture some of the more important aspects of the curriculum shifts we are navigating.

Change is a dynamic process, and there are several factors that will fuel our progress. As you know, the release of new state frameworks has inspired significant curriculum adjustments. Changes in content have led to changes in practice, and at all levels our district leaders are working with educators to reconsider the role of the teacher in a modern classroom. At the same time, educators are working hard to respond to the diverse needs of today's students.

As we aspire to make our schools more inclusive, we are learning how to translate achievement data into meaningful, timely student supports. Collecting the right information at the right time requires ongoing collaboration and helpful data tools. To that end, we have begun to look at online assessment for the purpose of finding effective and efficient ways to track and support student progress. Technology tools also facilitate connections beyond school. In the coming year, part of our work will be to identify opportunities for students to leverage these tools to apply their learning outside the classroom.

In Shrewsbury, we are fortunate to have so many reasons to celebrate the success of our students and their teachers. While there is work to do, it's good work. Our school communities are supportive of our efforts, and our educators are collaborative professionals. As we respond to this data, we should remember that this information is fuel meant to foster learning experiences that empower and support all our children.