

# Achievement Report Pembroke Public Schools

October 4, 2022

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Mark Duffy, Mathematics Content Supervisor  
Mark Galligan, Humanities Content Supervisor  
Saviz Safizadeh, World Language Content Supervisor  
Jonathan Shapiro, Science Content Supervisor

## **OUR MISSION:**

To ensure student achievement through  
excellence in teaching and learning.

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## **2022 Mass Comprehensive Assessment System**

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## **2022 Advanced Placement Exams**

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## **2022 Scholastic Aptitude Exams**

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## **2022 American College Testing**



MASSACHUSETTS DEPARTMENT OF  
ELEMENTARY AND SECONDARY  
**EDUCATION**

# 2022 MCAS Reminders

Year	Grades 3-8	Grade 10
2019	Full test administration	Full test administration
2020	<b>No tests administered</b>	<b>No tests administered</b>
2021	<b>Half-test administered</b>	Full test administered
2022	Full test administered	Full test administered

# 2022 MCAS Reporting

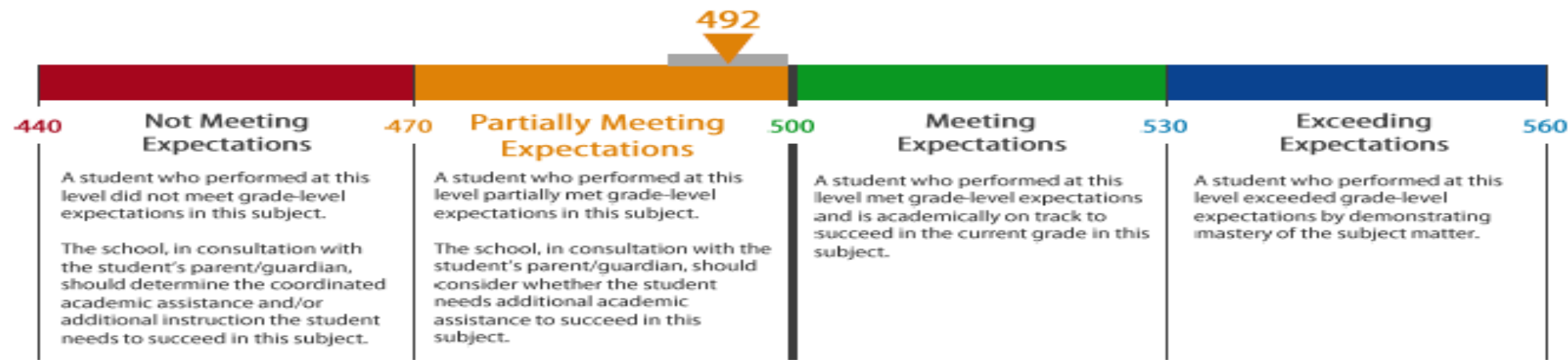
Name: Doe, Jonathan H.  
SASID: 1234567890


Grade 8  
Spring 2017

## English Language Arts Results

Computer-based test

Your Child's Achievement Level: **Partially Meeting Expectations**  
Your Child's Score: **492**



 In the figure above, the triangle indicates your child's score on the test. The gray bar shows the range of likely scores your child would receive if he or she took the test multiple times.

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

Your Child's Score	Average Score		
	School	District	State
<b>492</b>	<b>468</b>	<b>491</b>	<b>512</b>

# 2022 MA MCAS: ELA

**Variable losses across grades 3-7 while grade 8 showed signs of recovery in 2022.  
Total impact of 20% loss in grades 3-8 students meeting expectations since 2019.**

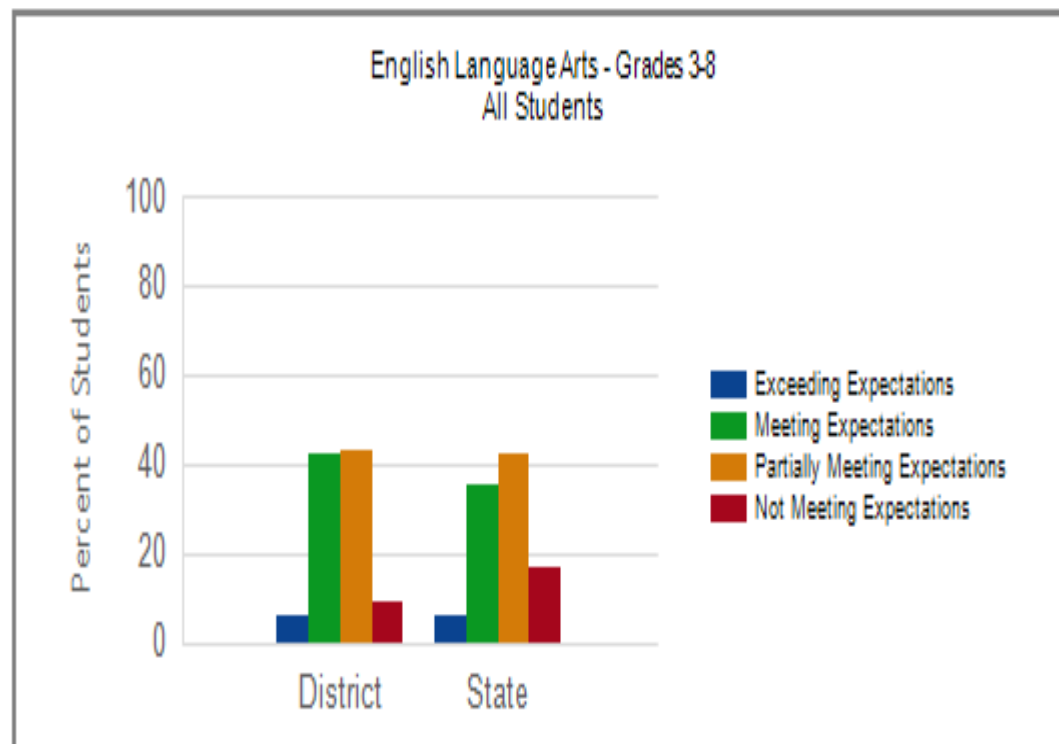
<b>Grade</b>	<b>2019 % M/E</b>	<b>2021 % M/E</b>	<b>2022 % M/E</b>	<b>Change M/E 19-21</b>	<b>Change M/E 21-22</b>	<b>Change M/E 19-22</b>
03	56	51	44	-5	-7	-12
04	52	49	38	-3	-11	-14
05	52	47	41	-5	-6	-11
06	53	47	41	-6	-6	-12
07	48	43	41	-5	-2	-7
08	52	41	42	-11	1	-10
<b>3-8</b>	<b>52</b>	<b>46</b>	<b>41</b>	<b>-6</b>	<b>-5</b>	<b>-11</b>
<b>10</b>	<b>61</b>	<b>64</b>	<b>58</b>	<b>+3</b>	<b>-6</b>	<b>-3</b>

# 2022 MA MCAS: Mathematics

Recovery across all grades 3-8 in 2022. About 50% of “loss” from 2021 recovered in grades 3 and 4. Additional loss in grade 10 but slowing as compared to 2021.

Grade	2019 % M/E	2021 % M/E	2022 % M/E	Change M/E 19-21	Change M/E 21-22	Change M/E 19-22
03	49	33	41	-16	+8	-8
04	50	33	42	-17	+9	-8
05	48	33	36	-15	+3	-12
06	52	33	42	-19	+9	-10
07	48	35	37	-13	+2	-11
08	46	32	36	-14	+4	-10
<b>3-8</b>	<b>49</b>	<b>33</b>	<b>39</b>	<b>-16</b>	<b>+6</b>	<b>-10</b>
<b>10</b>	<b>59</b>	<b>52</b>	<b>50</b>	<b>-7</b>	<b>-2</b>	<b>-9</b>

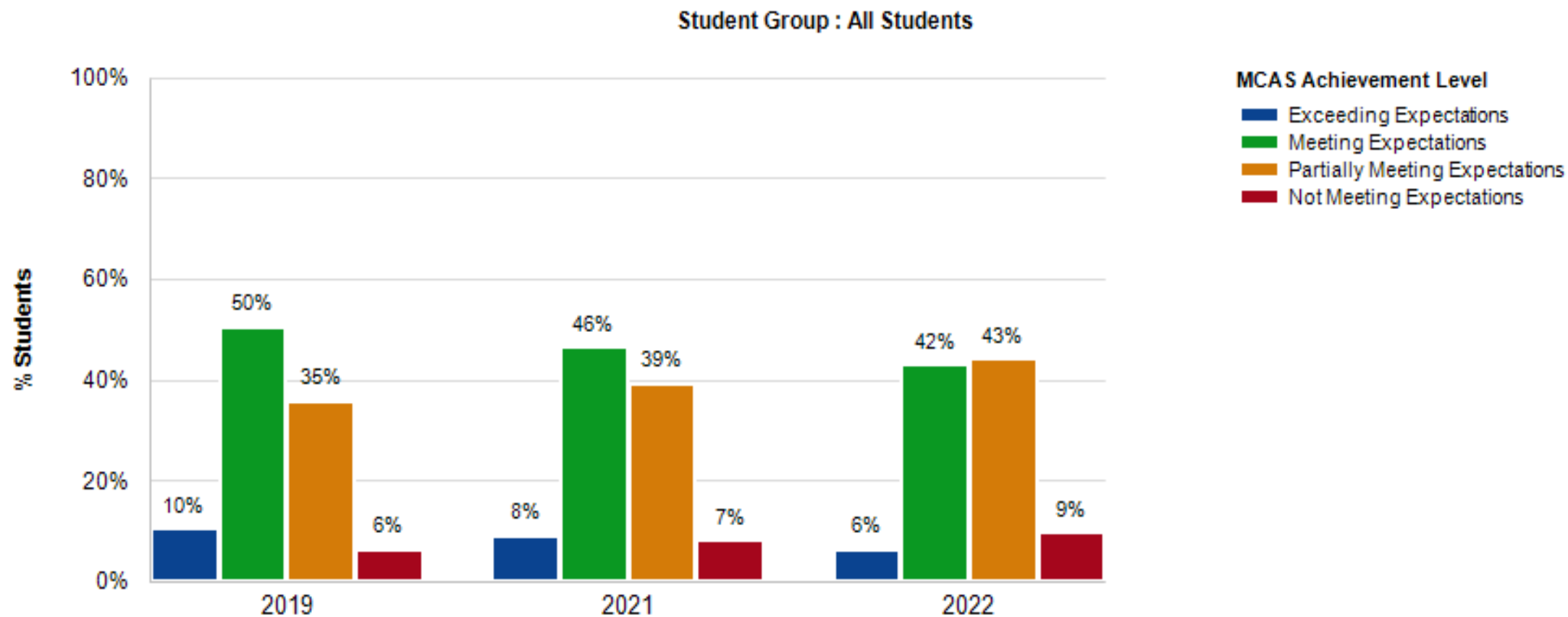
# 2022 MCAS Grades 3-8 English Language Arts



Participation Rate: 99%

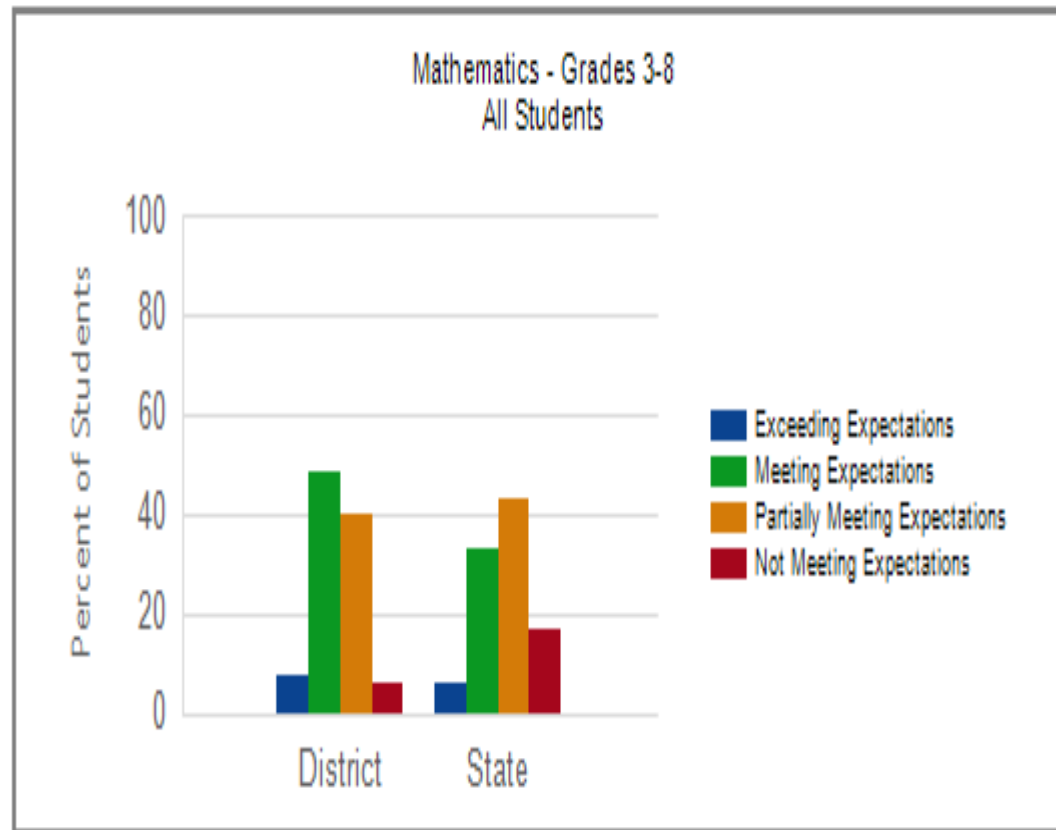
English Language Arts	N Students Included	% District	% State
Exceeding Expectations	66	6	6
Meeting Expectations	493	42	35
Partially Meeting Expectations	507	43	42
Not Meeting Expectations	103	9	17
Total Included	1,169		

# 2022 MCAS Grades 3-8 English Language Arts





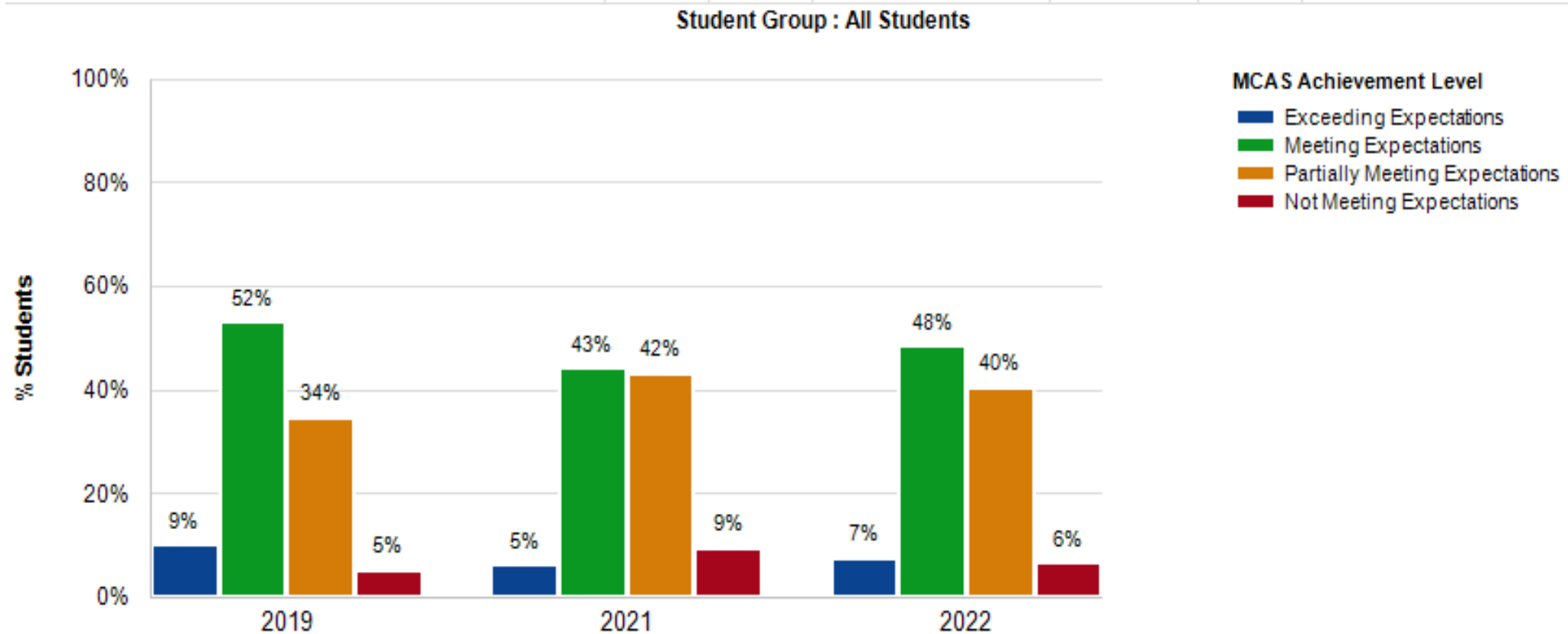
# 2022 MCAS Grades 3-8 Mathematics



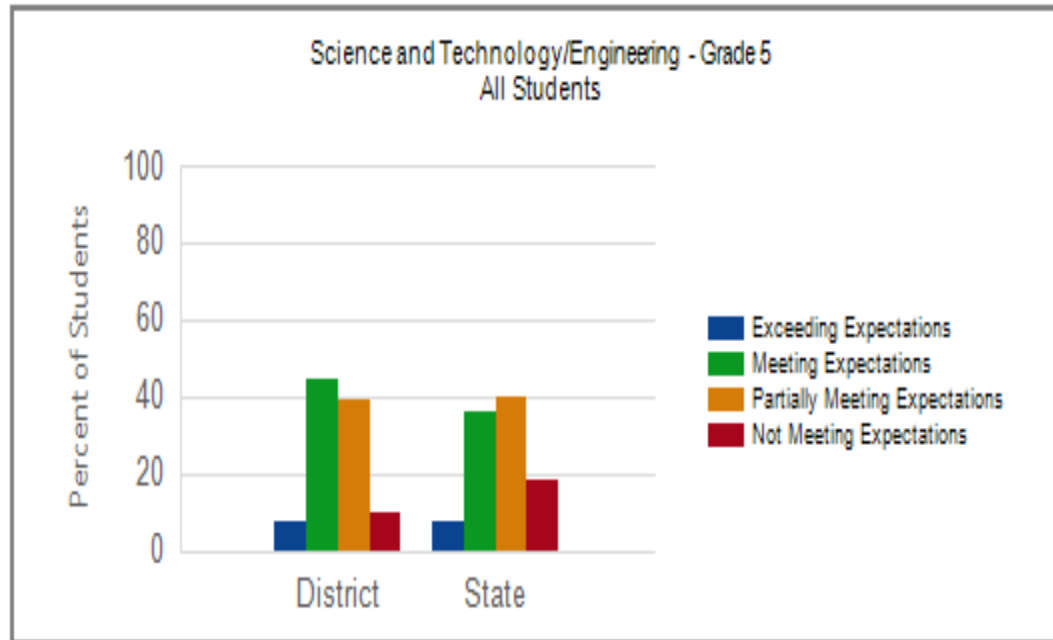
Participation Rate: 99%

Mathematics	N Students Included	% District	% State
Exceeding Expectations	79	7	6
Meeting Expectations	559	48	33
Partially Meeting Expectations	466	40	43
Not Meeting Expectations	68	6	17
Total Included	1,172		

# 2022 MCAS Grades 3-8 Mathematics



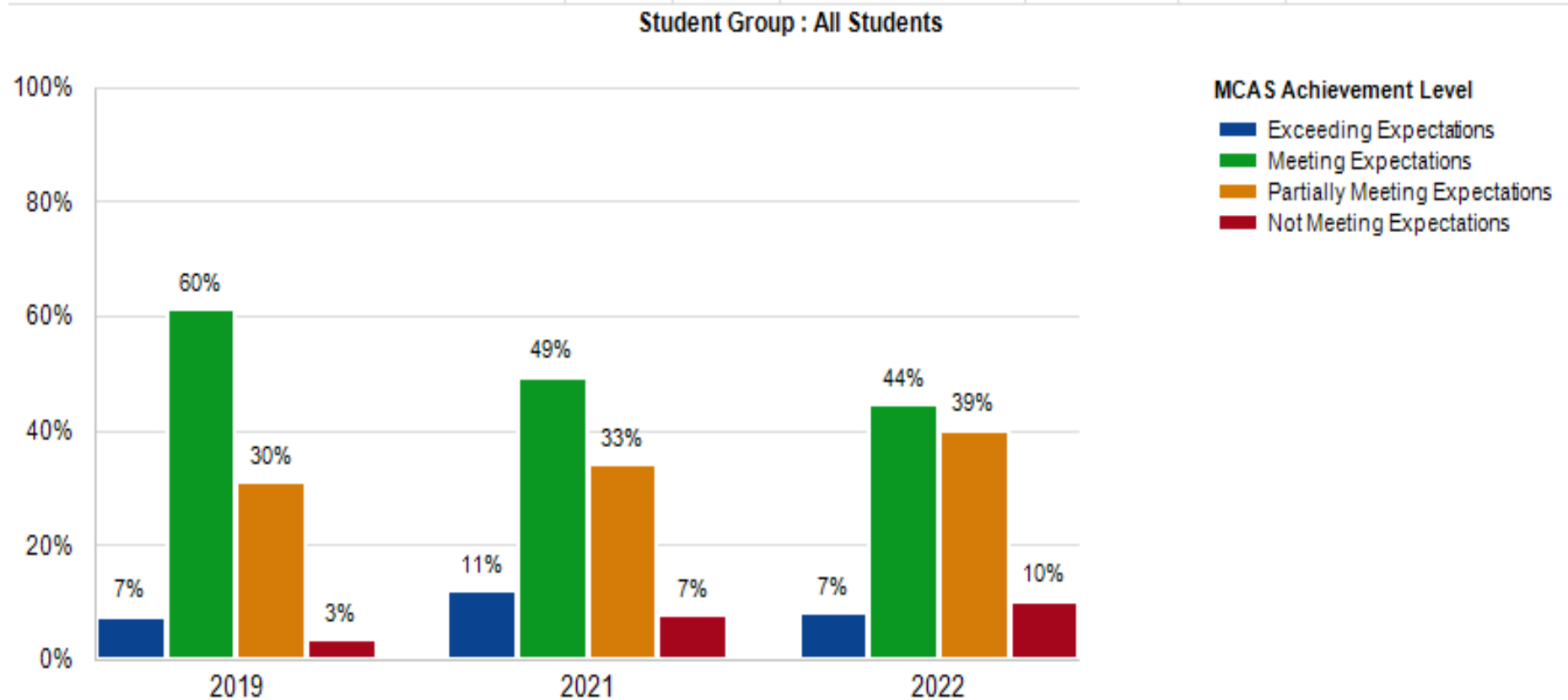
# MCAS Grades 5 Science Technology/Engineering



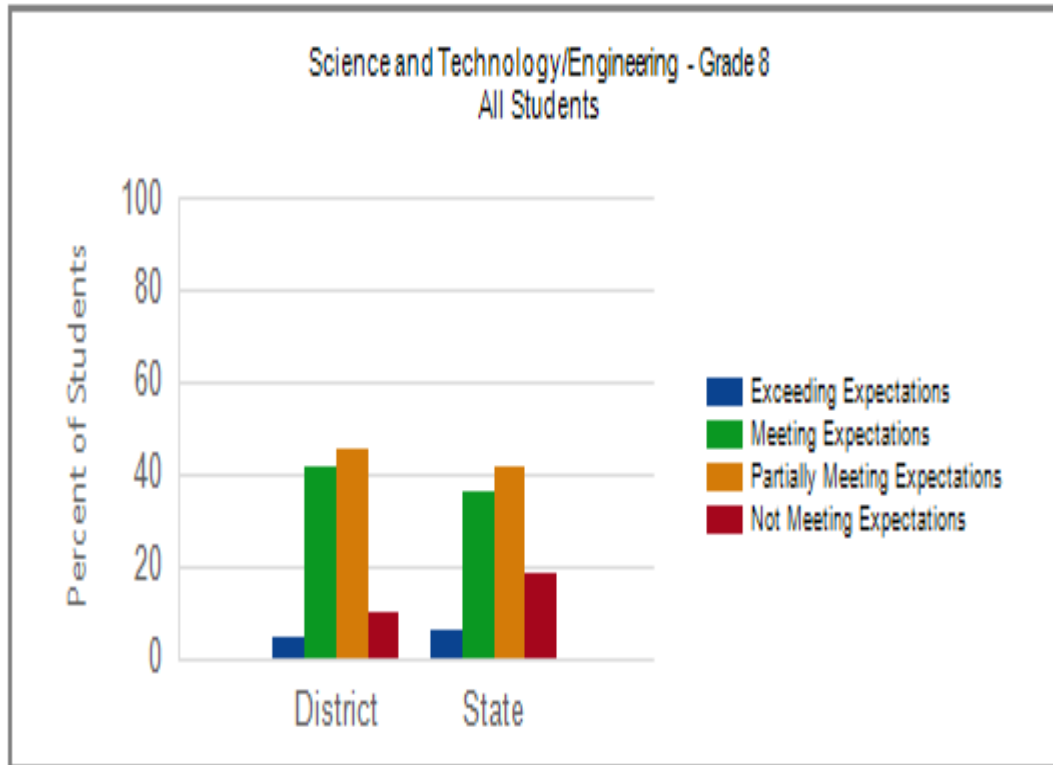
Participation Rate: 99%

Science and Technology/Engineering	N Students Included	% District	% State
Exceeding Expectations	13	7	7
Meeting Expectations	78	44	36
Partially Meeting Expectations	70	39	40
Not Meeting Expectations	17	10	18
Total Included	178		

# MCAS Grades 5 Science Technology/Engineering



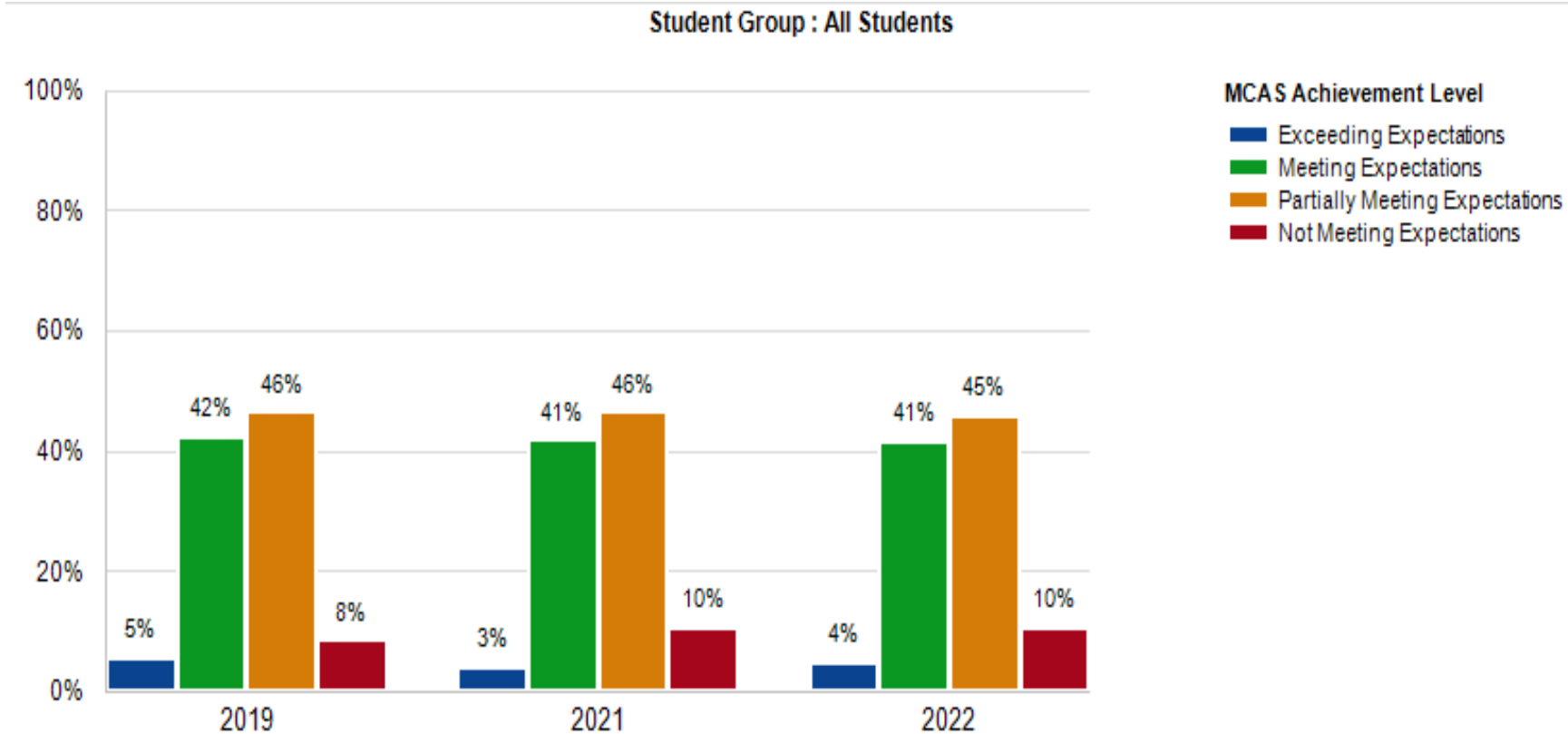
# 2022 MCAS Science and Technology/Engineering Grades 8



Participation Rate: 98%

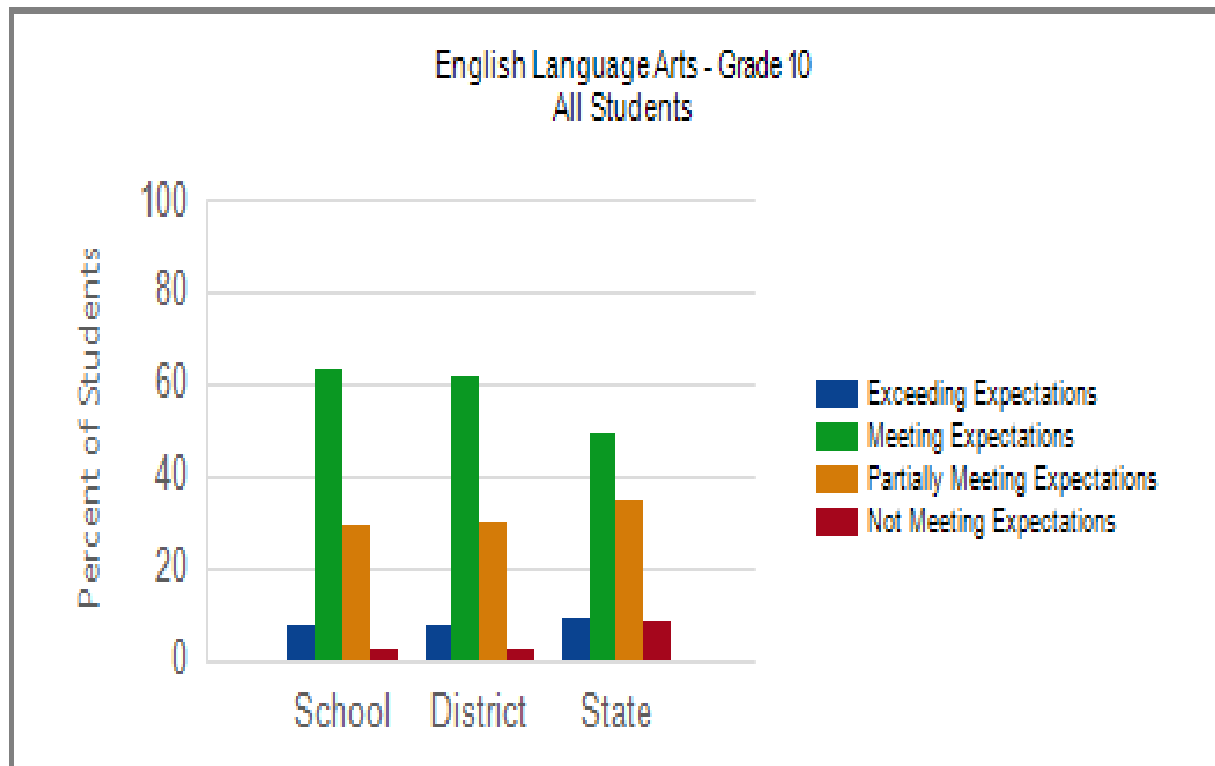
Science and Technology/Engineering	N Students Included	% District	% State
Exceeding Expectations	8	4	6
Meeting Expectations	79	41	36
Partially Meeting Expectations	87	45	41
Not Meeting Expectations	19	10	18
Total Included	193		

# 2022 MCAS Science and Technology/Engineering Grades 8



# 2022 MCAS Grade 10 ELA

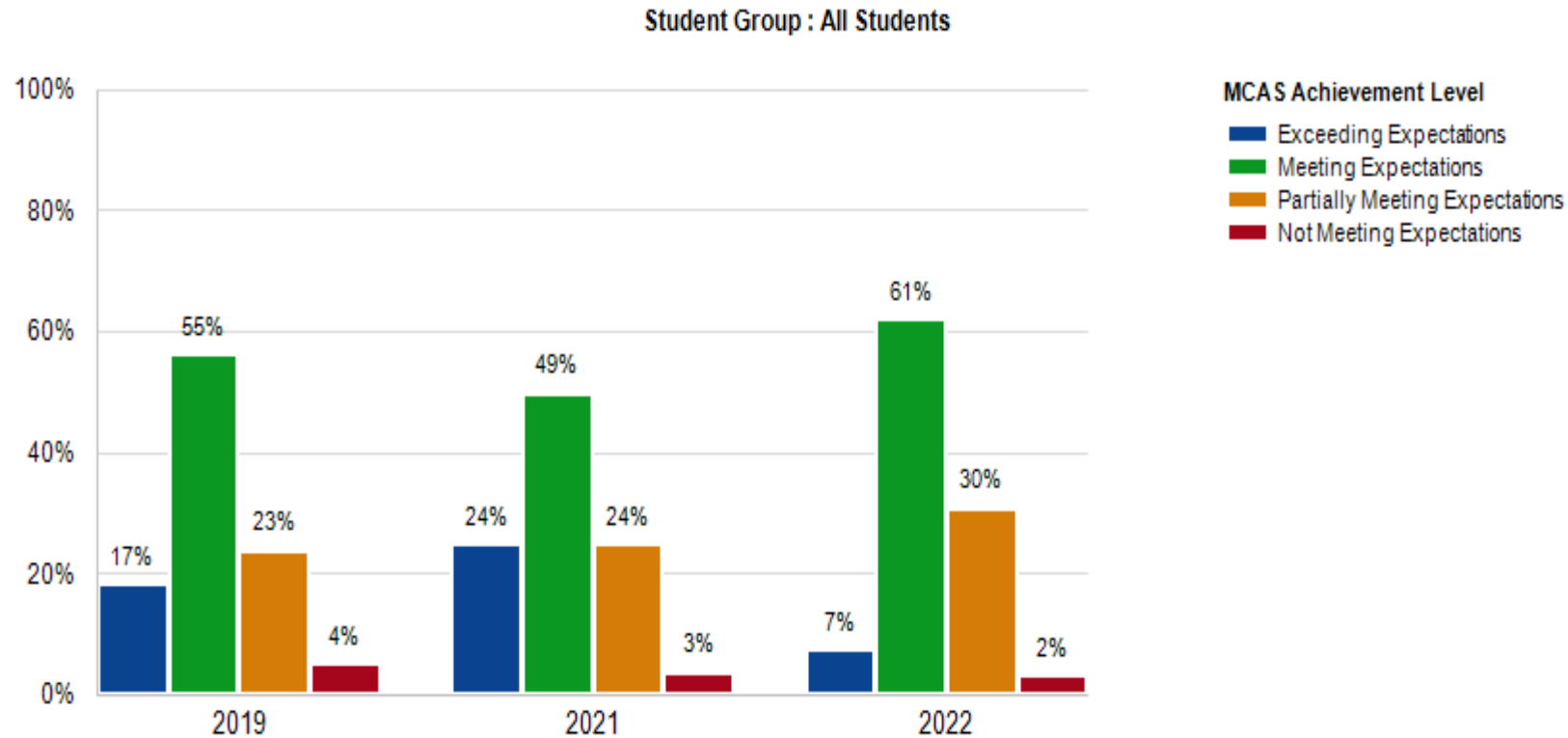
\*69% ME+



Participation Rate: 98%

English Language Arts	N Students Included	% School	% District	% State
Exceeding Expectations	12	7	7	9
Meeting Expectations	110	63	61	49
Partially Meeting Expectations	51	29	30	34
Not Meeting Expectations	3	2	2	8
Total Included	176			

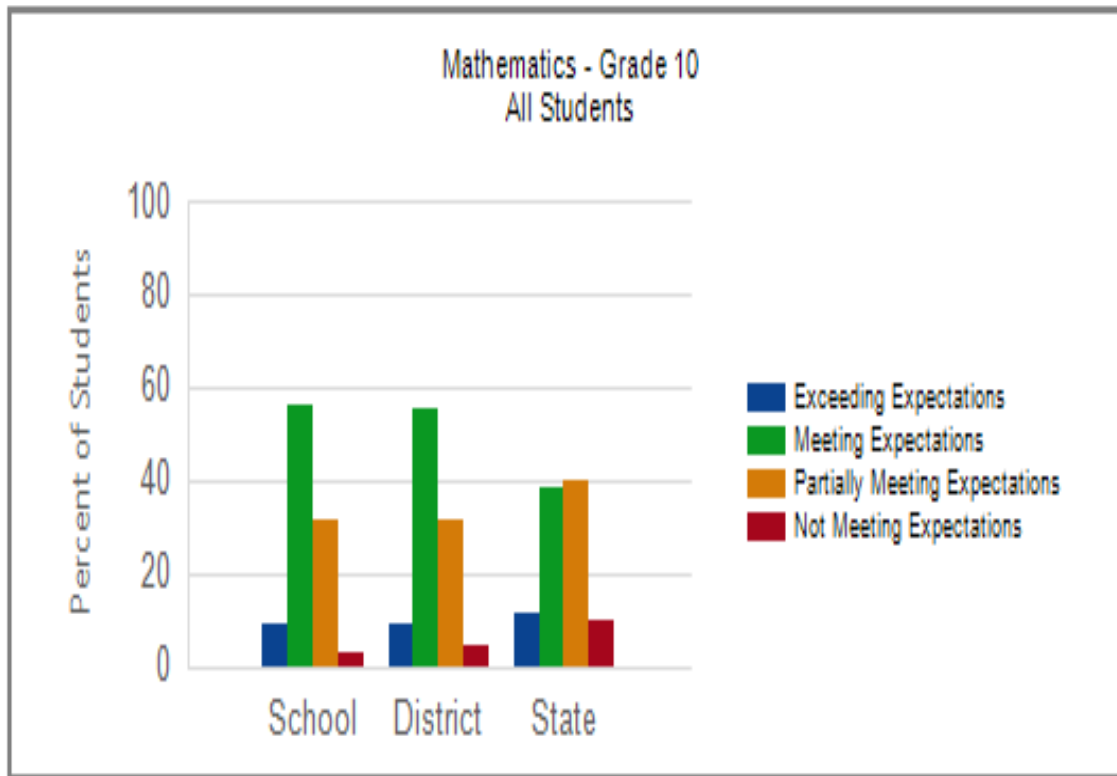
# 2022 MCAS Grade 10 ELA





# 2022 MCAS Grade 10 Mathematics

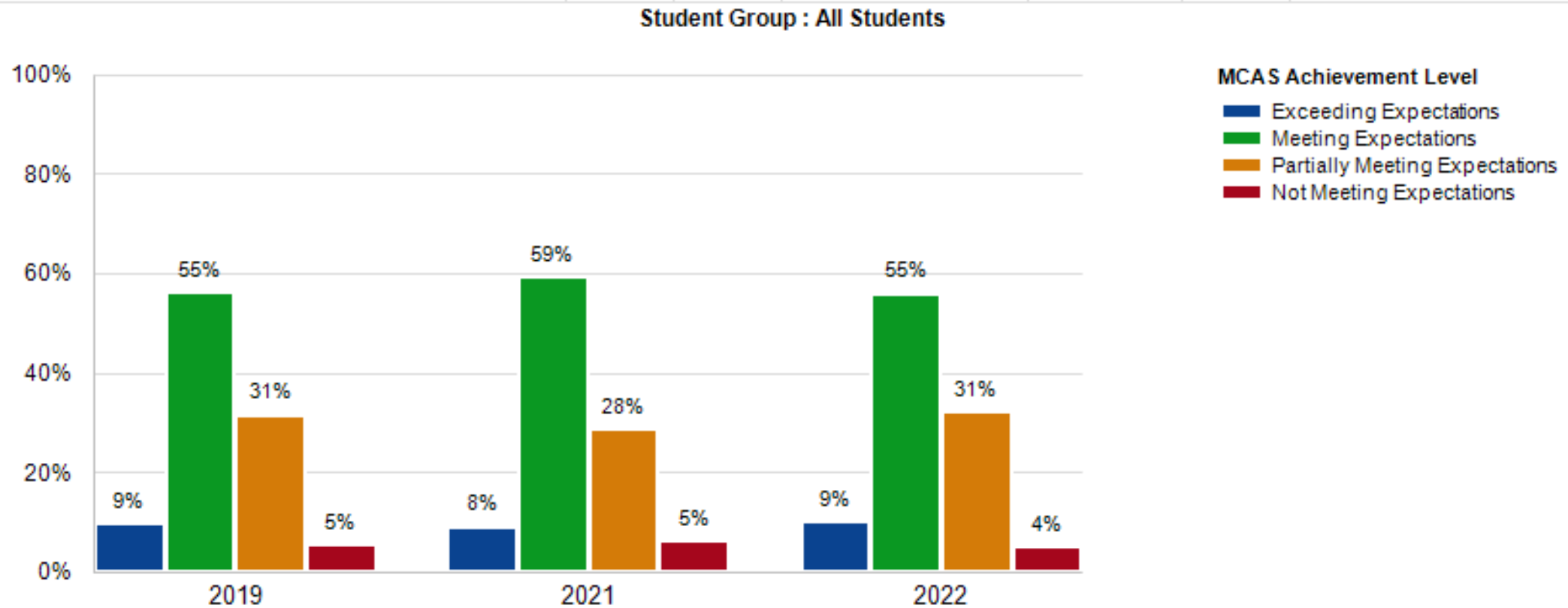
## 66% ME+



Participation Rate: 100%

Mathematics	N Students Included	% School	% District	% State
Exceeding Expectations	17	9	9	11
Meeting Expectations	101	56	55	38
Partially Meeting Expectations	55	31	31	40
Not Meeting Expectations	6	3	4	10
Total Included	179			

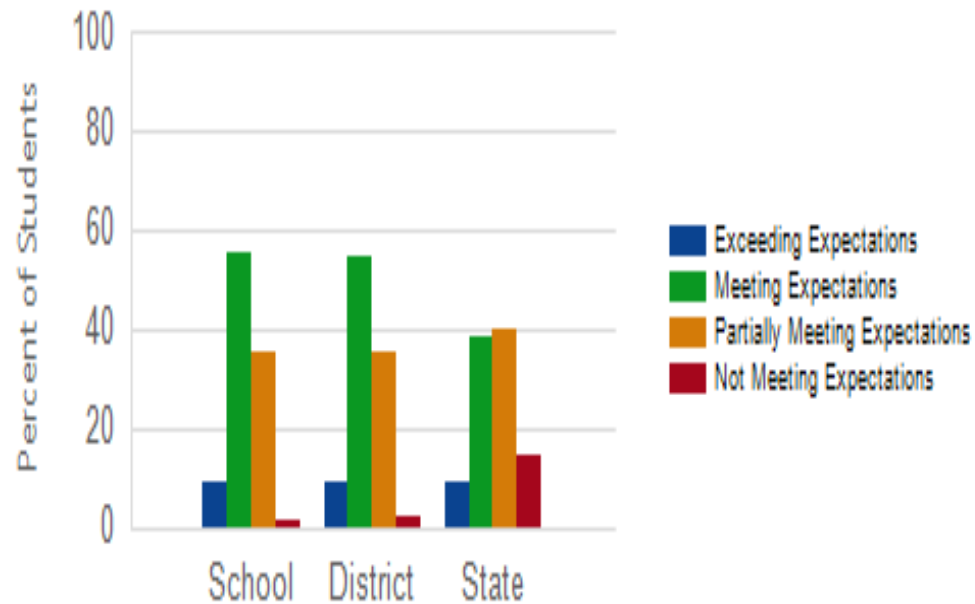
# 2022 MCAS Grade 10 Mathematics



# 2022 MCAS Grade 9 Biology

First Year New Generation Test-64% ME+

Science and Technology/Engineering - Grade 10\* On NextGen Scale  
All Students



Participation Rate: 99%

Science and Technology/Engineering	N Students Included	% School	% District	% State
Exceeding Expectations	16	9	9	9
Meeting Expectations	94	55	54	38
Partially Meeting Expectations	59	35	35	40
Not Meeting Expectations	2	1	2	14
Total Included	171			

# 2022 MCAS Grade 9 Biology

## Next Generation v. Legacy

Participation Rate: 99%

Science and Technology/Engineering	N Students Included	% School	% District	% State
Exceeding Expectations	16	9	9	9
Meeting Expectations	94	55	54	38
Partially Meeting Expectations	59	35	35	40
Not Meeting Expectations	2	1	2	14
Total Included	171			

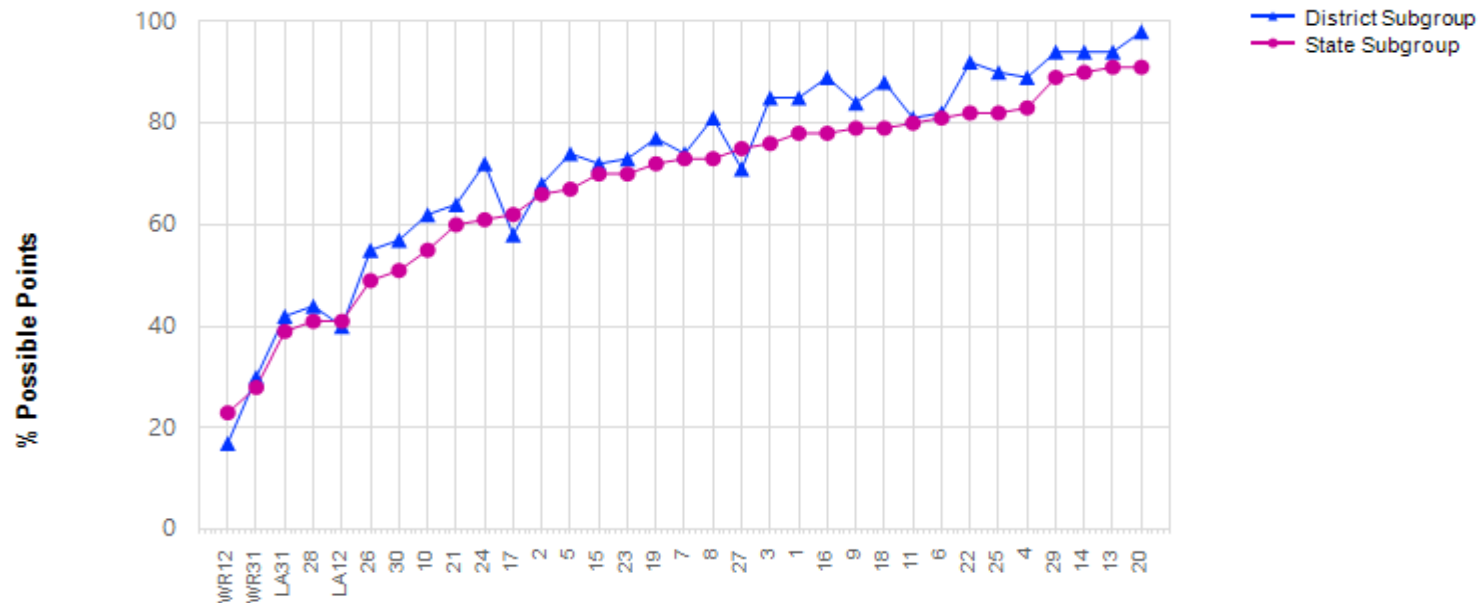
Participation Rate: 99%

Science and Technology/Engineering	N Students Included	% School	% District	% State
Advanced	47	27	27	21
Proficient	95	56	55	41
Needs Improvement	29	17	17	28
Warning/Failing	0	0	1	10
Total Included	171			

# How do we use data?

## Sample: Item Analysis: Grade 5 ELA

- This slide shows Pembroke Grade 5 performance v. the state on every MCAS question.
- Teachers, content supervisors and administrators review this data in summer work sessions and in grade level teams through out the year in order to adjust curriculum and instruction to meet student learning needs.



Sort By State Score	Item No.	% Possible Points	
		District	State
23	<a href="#">WR12</a>	17	23
28	<a href="#">WR31</a>	30	28
39	<a href="#">LA31</a>	42	39
41	<a href="#">28</a>	44	41
41	<a href="#">LA12</a>	40	41
49	<a href="#">26</a>	55	49
51	<a href="#">30</a>	57	51
55	<a href="#">10</a>	62	55

# How do we use data?

## Sample –Demographic Analysis Low Income Students- Grade 10

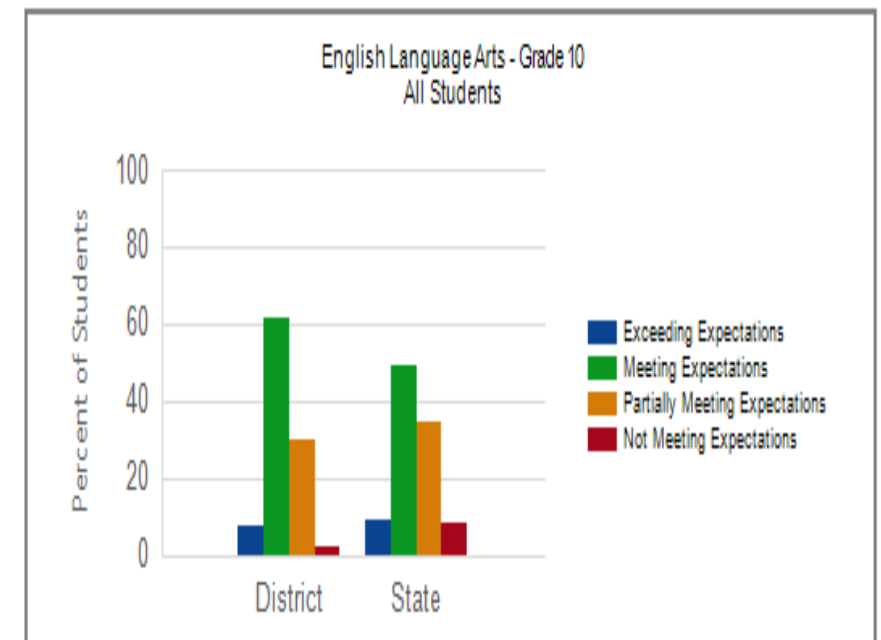
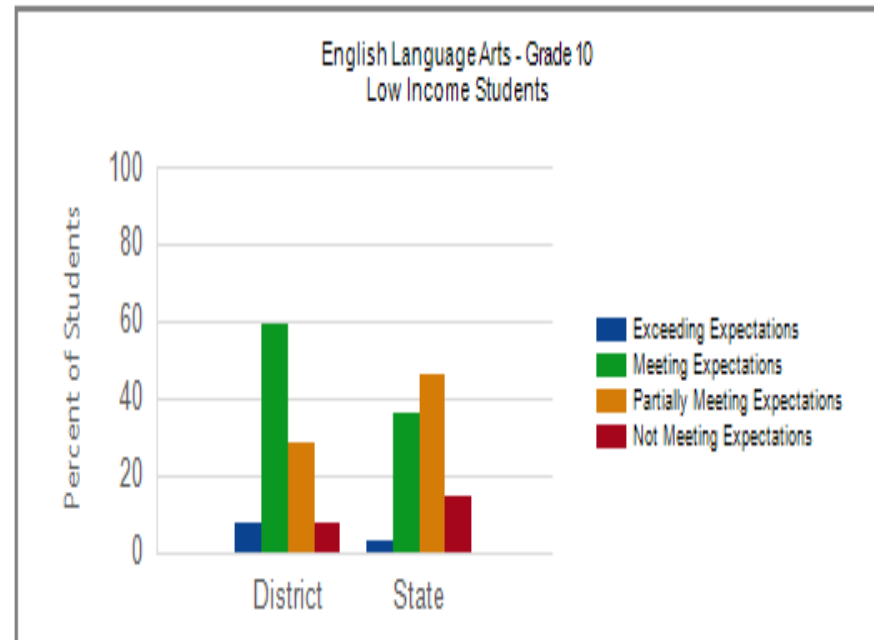
Although data is not released for populations with less than 10 students, we review each population to compare achievement levels versus the state and district.

Populations: High Needs, Students with Disability, Low-Income, English Language Learners, Former ELL, African American/Black, Asian, Pacific Islander, Hispanic/Latino, White, More than One Race

### Low Income Students

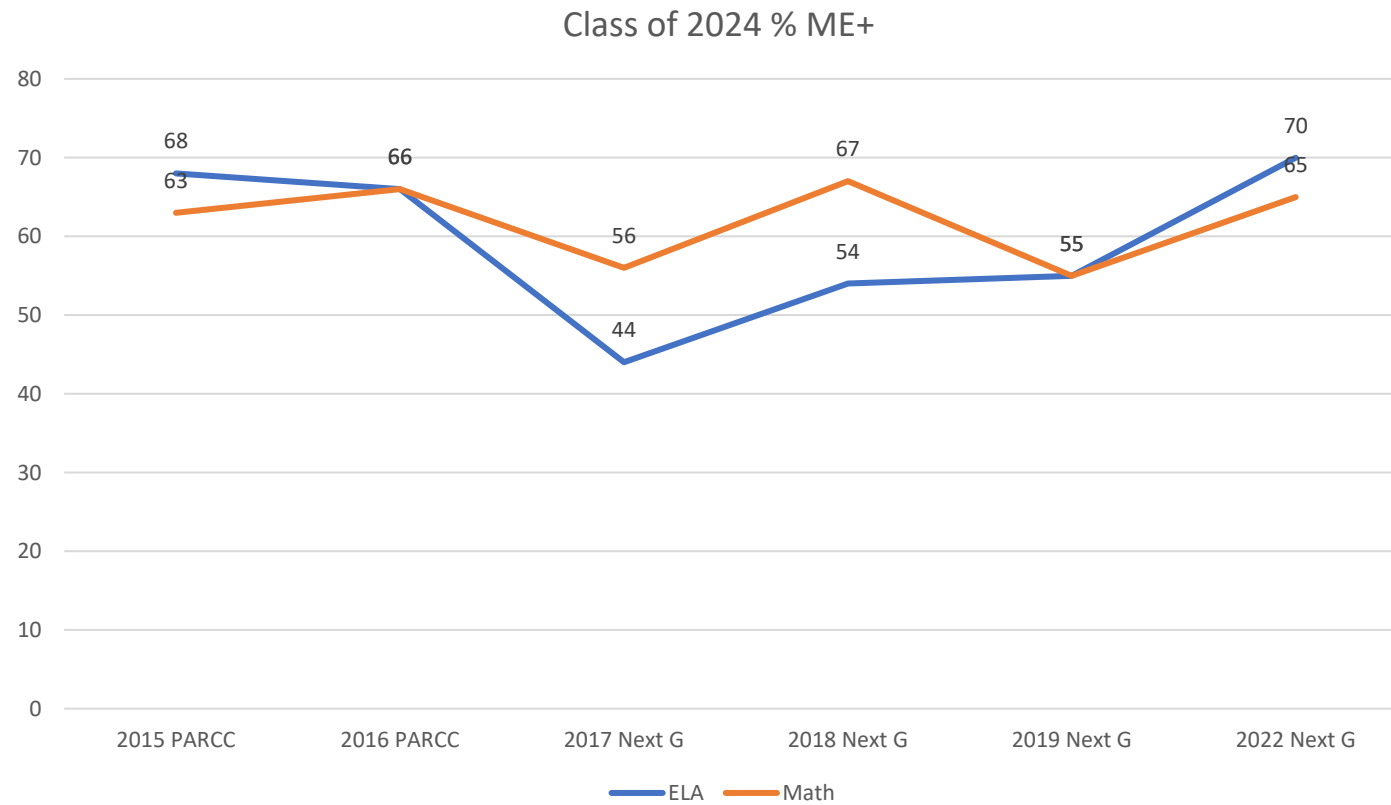
Participation Rate: 94%

English Language Arts	N Students Included	% District	% State
Exceeding Expectations	2	7	3
Meeting Expectations	17	59	36
Partially Meeting Expectations	8	28	46
Not Meeting Expectations	2	7	14
Total Included	29		



# How do we use data:

## Sample: Grade Cohorts- Class of 2024



# How do we use data?

Comparisons with other towns: Patriot League, DART\* Schools  
District Analysis and Review Tools

Town	Math M + E %	ELA M + E %
Duxbury	74	75
Hanover	67	78
Hingham	82	91
MA	50	58
Marshfield	64	71
N Quincy	64	70
P North	45	68
P South	53	64
Pembroke	5 <sup>th</sup> 66	7 <sup>th</sup> 69
Quincy	48	59
Scituate	72	81
Silver Lake	61	60
Whit Hanson	48	51



# Accountability

## No classification in 2022

Schools without required assistance or intervention  
(approx. 85%)

Schools requiring assistance or intervention (approx. 15%)

Schools of recognition	<b>Meeting targets</b> Criterion-referenced target percentage 75-100	<b>Partially meeting targets</b> Criterion-referenced target percentage 0-74	<b>Focused/targeted support</b> <ul style="list-style-type: none"><li>•Non-comprehensive support schools with percentiles 1-10</li><li>•Schools with low graduation rate</li><li>•<b>Schools with low performing subgroups</b></li><li>•Schools with low participation</li></ul>	<b>Broad/comprehensive support</b> <ul style="list-style-type: none"><li>•Underperforming schools</li><li>•Chronically underperforming schools</li></ul>
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# John and Abigail Adams Scholarship

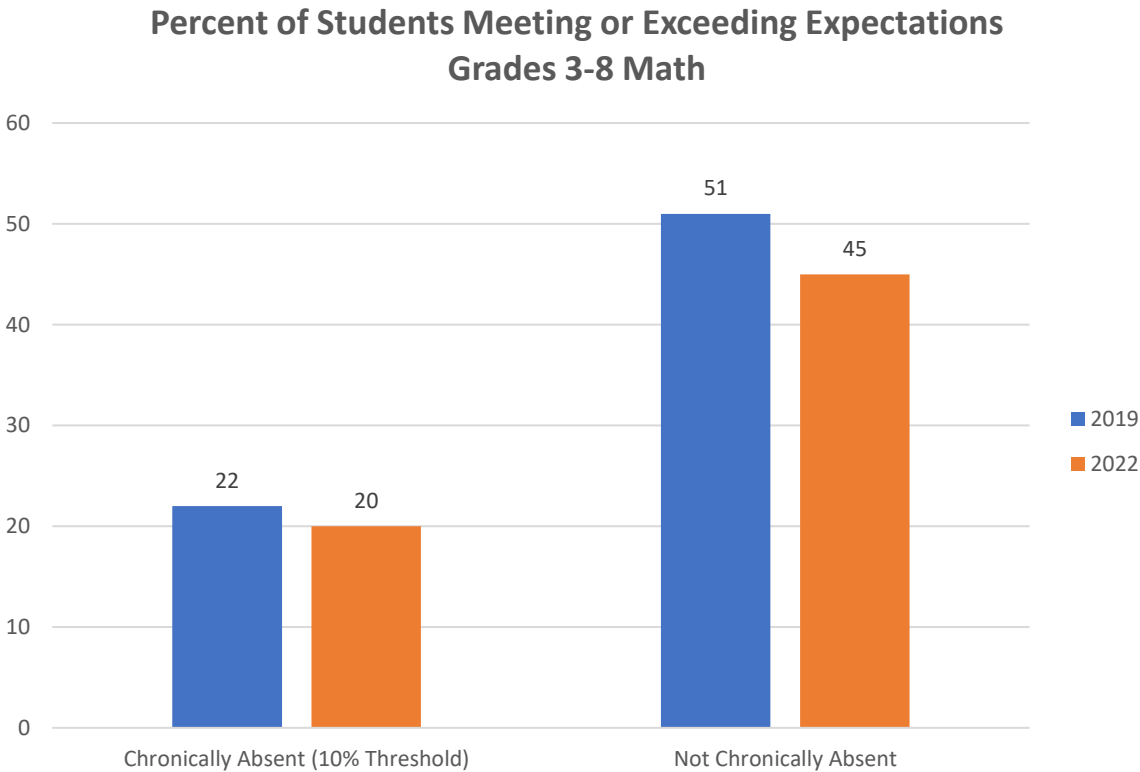
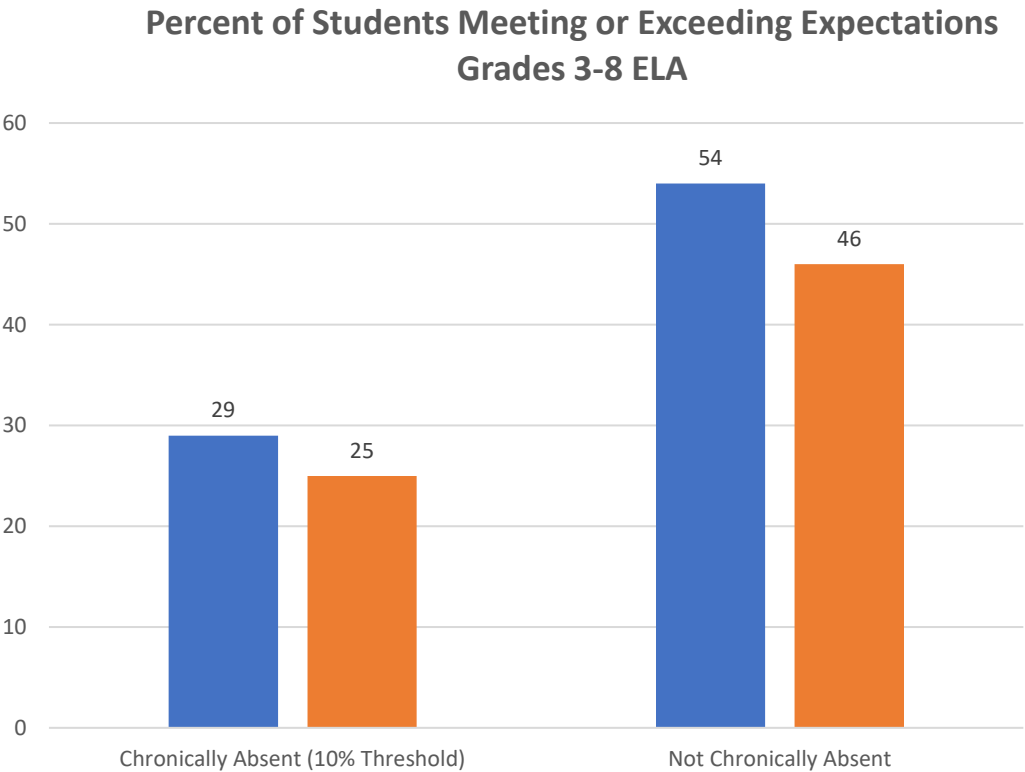
- Score in the Advanced category on one of three high school state assessment tests in English Language Arts, Mathematics, or STE (Biology, Chemistry, Introductory Physics or Technology/Engineering)
- Score in the Proficient or Advanced category on the remaining two high school state assessment tests
- Have a combined MCAS score on these assessments that ranks in the top 25% in their school district.

# Absenteeism

	2021 10% of Days Absent	2022 20% of Days Absent	# of Days Absent
Bryantville	6.2	1.9	374
Hobomock	6.4	2.0	354
North	7.0	1.5	395
PCMS	9.4	5.3	417
PHS	13.4	7.0	785

# Chronic Absenteeism: MA Grades 3-8

**Chronic absenteeism for students in grades 3-8 increased in 2022 by 138% (41K vs 98K students) as compared to 2019 and those students were lower performing as compared to 2019.**



# MCAS Next Steps

## Disaggregation of data to inform curriculum & instruction:

- Test Item Analysis by School/grade-Summer
- Analysis by population
- Absenteeism
  - Continued communication and education around time on learning
- Literacy
  - Reading Specialists: one per school
  - Crafting Minds: two- year professional development emphasis on the science of reading, PreK-6
  - Science of Reading- pedagogical shift
  - Routine screening K-3
- Interrupted Learning Tutors
  - ELA & Math K-6
  - ELA & Math PCMS
  - ELA & Biology PHS

The logo consists of the letters 'A' and 'P' in a large, bold, sans-serif font. The 'A' is dark blue, and the 'P' is green. A registered trademark symbol (®) is located to the upper right of the 'P'.

AP<sup>®</sup>



CollegeBoard

# AP Participation



## SCHOOL SUMMARY

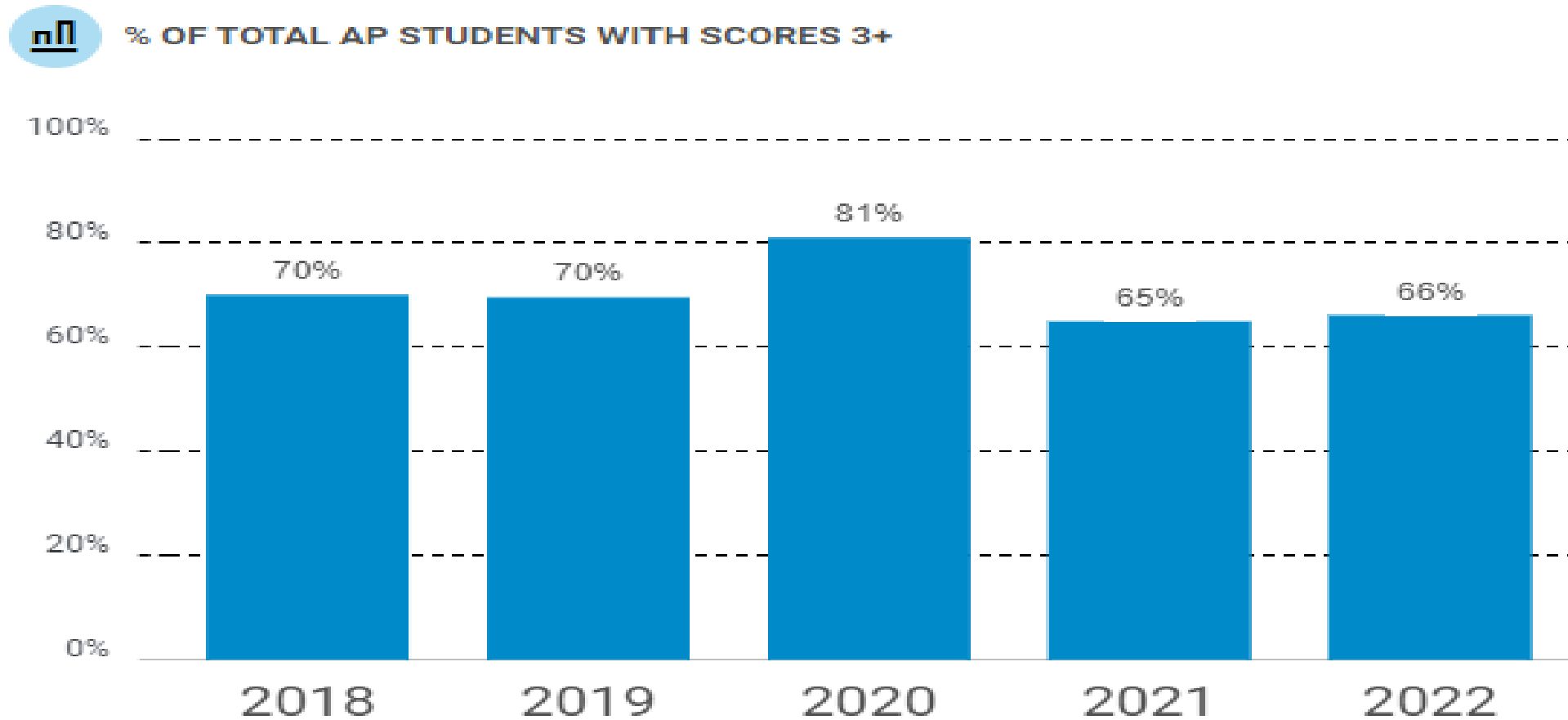
	2018	2019	2020	2021	2022
Total AP Students	263	197	189	211	239
Number of Exams	476	339	358	391	461
AP Students with Scores 3+	184	137	153	137	158
% of Total AP Students with Scores 3+	69.96	69.54	80.95	64.93	66.11

# AP Participation by Class

	Sophs as a %	Juniors as a %	Seniors as a %
2018	5	39	58
2019	2.4	39	49
2020	5.8	37	52
2021	9.1	42	52
2022	7	53	63



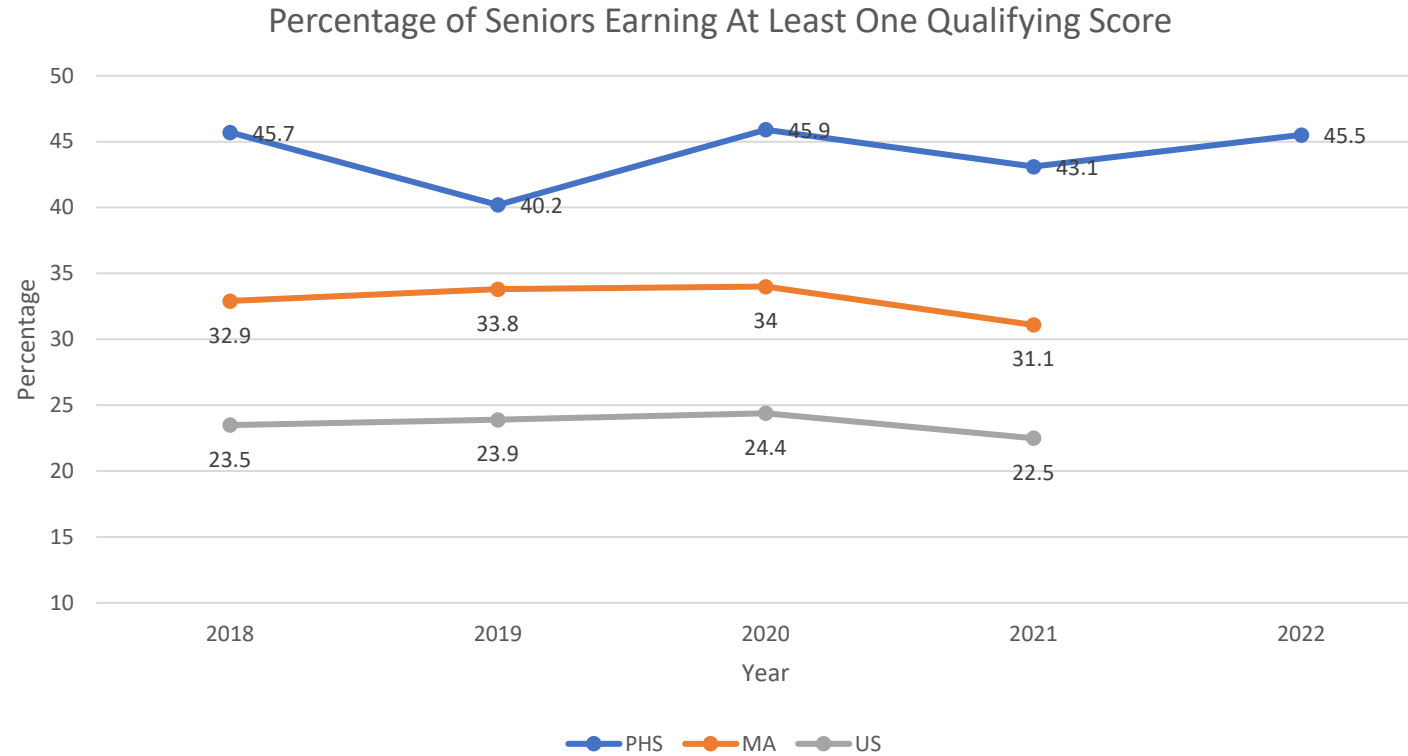
# AP 5 Year Report



# AP Scholars

	<b>AP Scholar</b> Granted to students who receive scores of 3 or higher on three or more AP Exams	<b>AP Scholar with Honor</b> Granted to students who receive an average score of at least 3.25 on all AP Exams taken, <b>and</b> scores of 3 or higher on four or more of these exams	<b>AP Scholar with Distinction</b> Granted to students who receive an average score of at least 3.5 on all AP Exams taken, <b>and</b> scores of 3 or higher on five or more of these exams.
Number of Scholars	34	9	17
Average Score	3.20	3.51	4.23

# AP Equity and Excellence



The percentages displayed above show the proportion of PHS' entire senior class who earned a qualifying score on an AP Exam at any point during his/her high school career. This percentage is calculated by taking the number of PHS seniors who scored a 3 or higher on at least one exam at any point during high school divided by the total number of seniors in the graduating class.

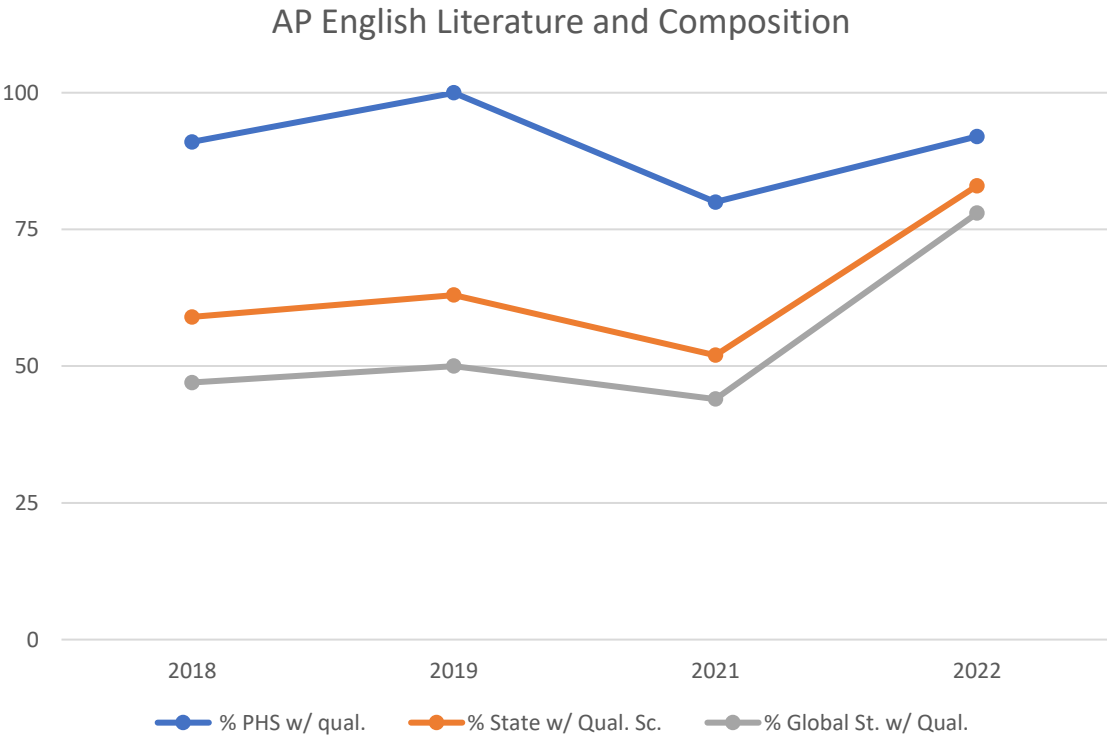
# What is AP Potential?

AP Potential is a free, Web-based tool that allows schools to generate rosters of students who are likely to score a 3 or higher on a given AP<sup>®</sup> Exam based on their performance on the PSAT/NMSQT<sup>®</sup>, PSAT<sup>™</sup> 8/9, PSAT<sup>™</sup> 10, or SAT<sup>®</sup>.

AP Potential is rooted in a long line of research showing moderate to strong correlations between PSAT/NMSQT<sup>®</sup> scores and AP Exam results, and that PSAT/NMSQT scores are stronger predictors of students' AP Exam scores than the more traditional factors such as high school grades and grades in same-discipline course work.

**AP Potential is designed to help you increase access to AP and to ensure that no student who has the chance of succeeding in AP is overlooked.**

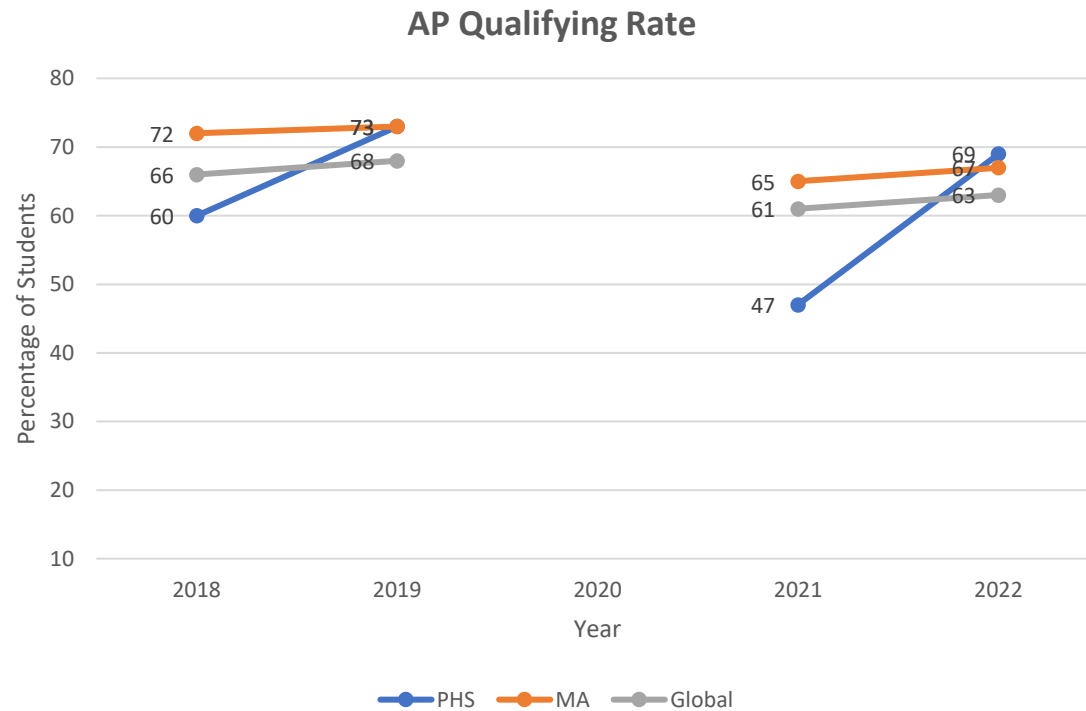
# AP English Literature & Composition



2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	7	0
Not Identified AP Potential	5	1

Total Number of students sitting for AP Lit and Comp was 13

# AP Calculus AB

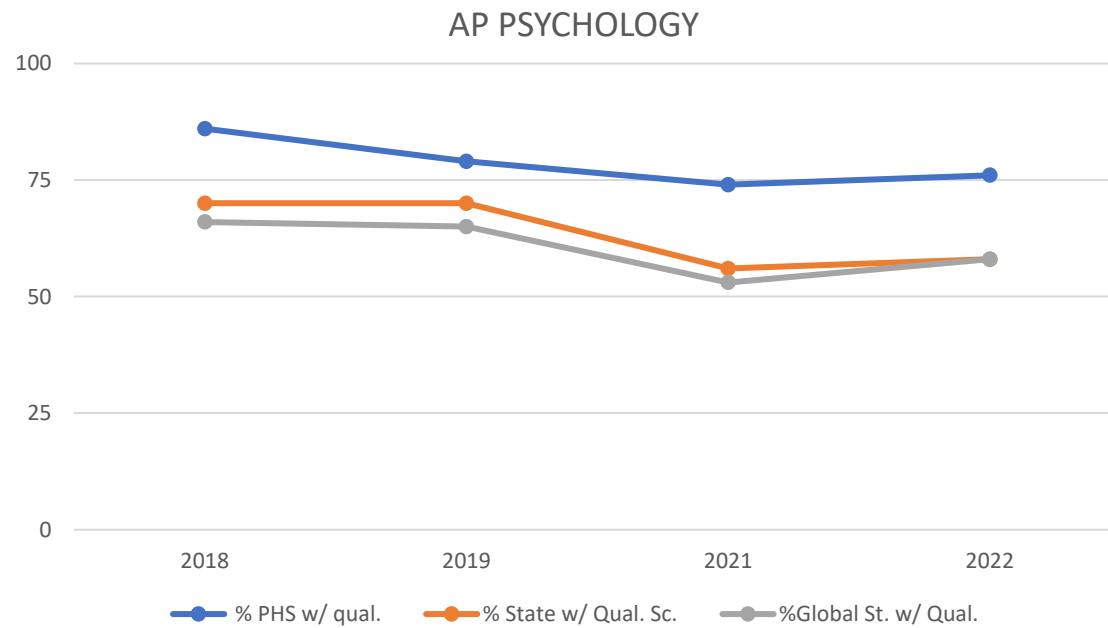


	Qualified	Did not qualify	Total
Identified and sat for AP exam	27	5	32
NOT identified and sat for AP exam	6	9	15
Total	33	14	47

The graph above displays the percentage of students who earned a qualifying score on the AP Calculus AB exam by academic year. Please note that this data also includes students who sat for the AP Calculus BC exam who also receive an AB Subscore.

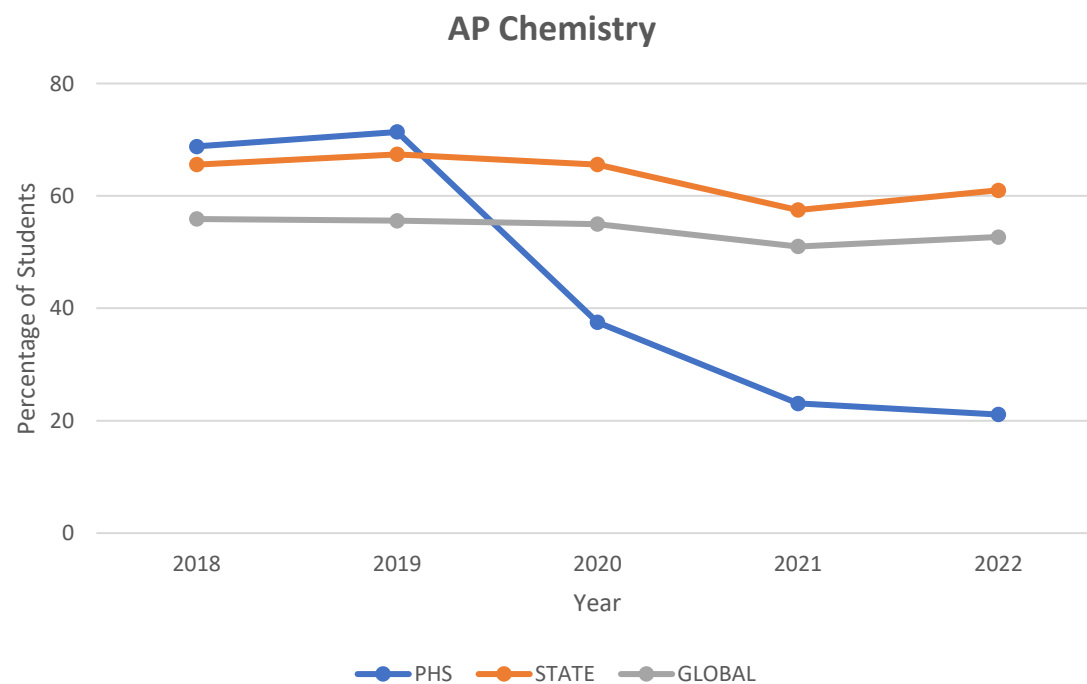
\*The May 2020 BC exam did not include an AB Subscore\*

# AP Psychology



2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	29	3
Not Identified AP Potential	9	9

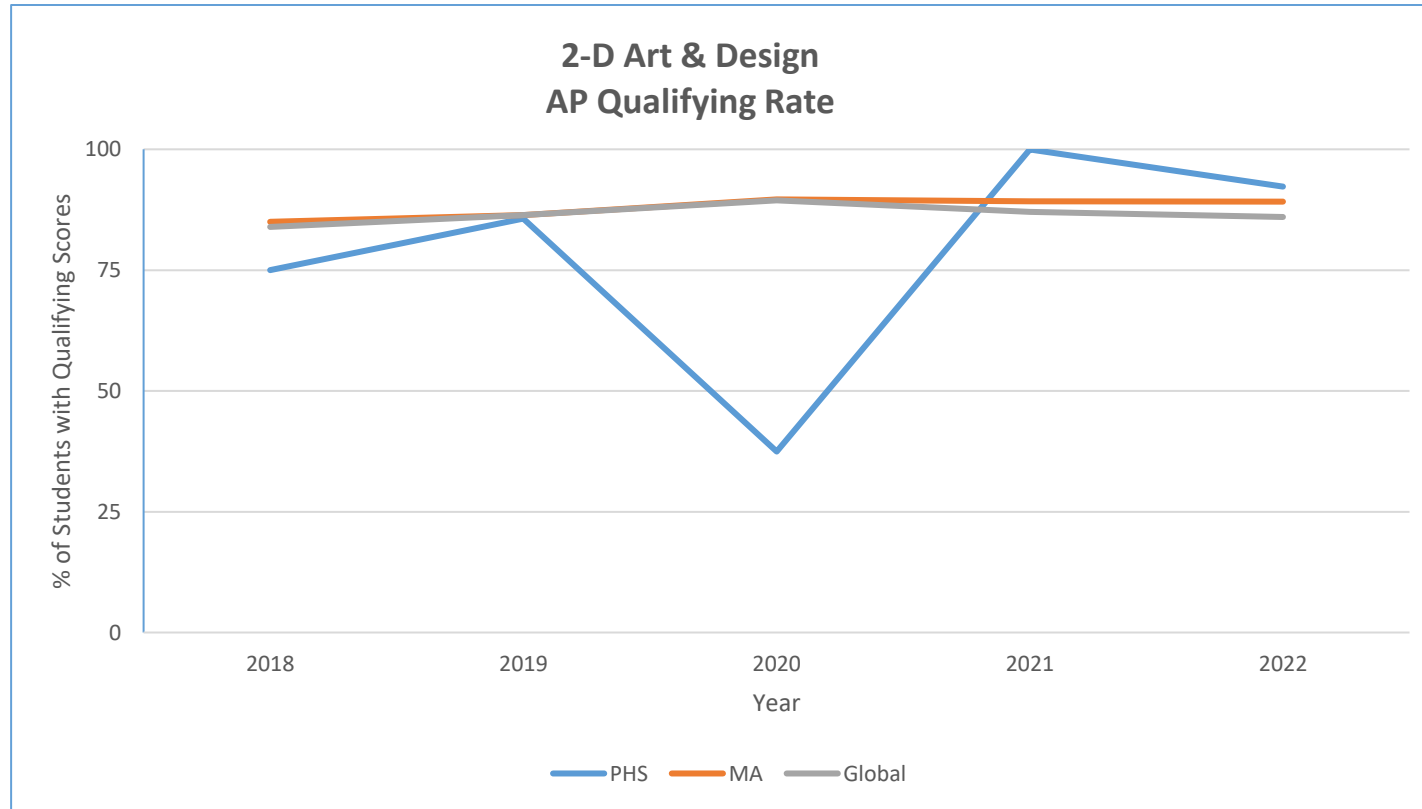
# AP Chemistry



2022	Students Who Qualified	Students Not Qualifying
Identified AP Potential	3	4
Not Identified AP Potential	5	27



# AP 2-D Art & Design



AP Potential data is not available for AP 2-D Art & Design

# College Board Next Steps

- Exploration of AP Pre-Calculus: Pros and Cons
- Expansion of World Language to Grades 5 & 6
- Preparing students for digital assessments
  - AP Exams
  - PSATs –Fall 2023
  - SATs- Spring 2024

**SAT<sup>®</sup>**



# SAT 2021 & 2022 Cohort

## 2022

	# of Tests	Class #	% Takers	Mean ERW	Mean Math	Mean Combo Score
PHS	144	194	74%	570	546	1116
Took Essay	16			591	559	1151

## 2021

	# of Tests	Class #	% Takers	Mean ERW	Mean Math	Mean Combo Score
PHS	65	208	31%	570	568	1138
Took Essay	24			584	570	1155

# 2022 SAT Scores

## Total and Section Scores

Total Score			ERW			Math		
1400–1600	7	5%	700–800	15	10%	7	5%	
1200–1390	35	24%	600–690	41	28%	30	21%	
1000–1190	66	46%	500–590	58	40%	65	45%	
800–990	34	24%	400–490	29	20%	40	28%	
600–790	2		300–390	1		2		
400–590	0		200–290	0		0		
Mean	1116		Mean	570		546		

# 2021 SAT Scores

## Total and Section Scores

Total Score		
1400–1600	2	
1200–1390	23	35%
1000–1190	28	43%
800–990	12	18%
600–790	0	
400–590	0	
Mean	1138	

ERW			Math		
700–800	4	6%	1		
600–690	20	31%	24	37%	
500–590	28	43%	28	43%	
400–490	12	18%	11	17%	
300–390	1		1		
200–290	0		0		
Mean	570		568		

The ACT<sup>®</sup>



# ACT Participation Rates

Grad Year	District	State
2014	54	16, 651
2015	84	19, 617
2016	83	20, 298
2017	80	20, 935
2018	82	18,219
2019	47	15,713
2020	15	N/A
2021	15	5,676
2022	43	N/A



# 2022 ACT Scores

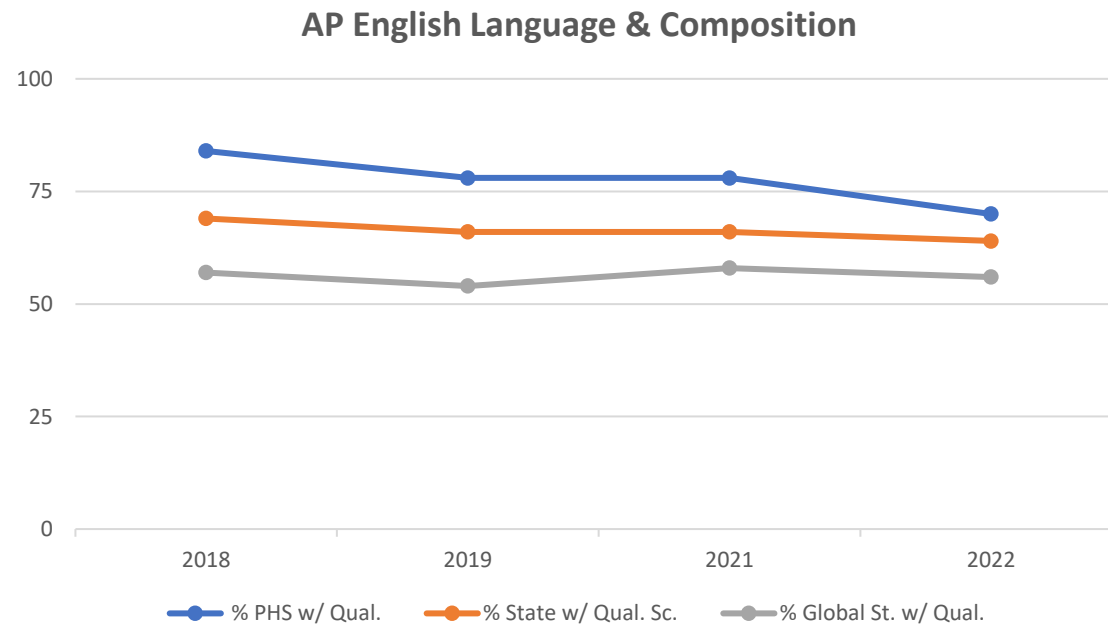
Composite		Math	Science	STEM	English	Reading	Writing	ELA
Valid Number	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score
43	25.6	25.3	25.5	25.6	24.4	26.4	7.1	23.1

# 2021 ACT Scores

Composite		Math	Science	STEM	English	Reading	Writing	ELA
Valid Number	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score	Mean Score
15	26.2	25.7	26.4	26.2	25.4	26.9	7.8	26.0

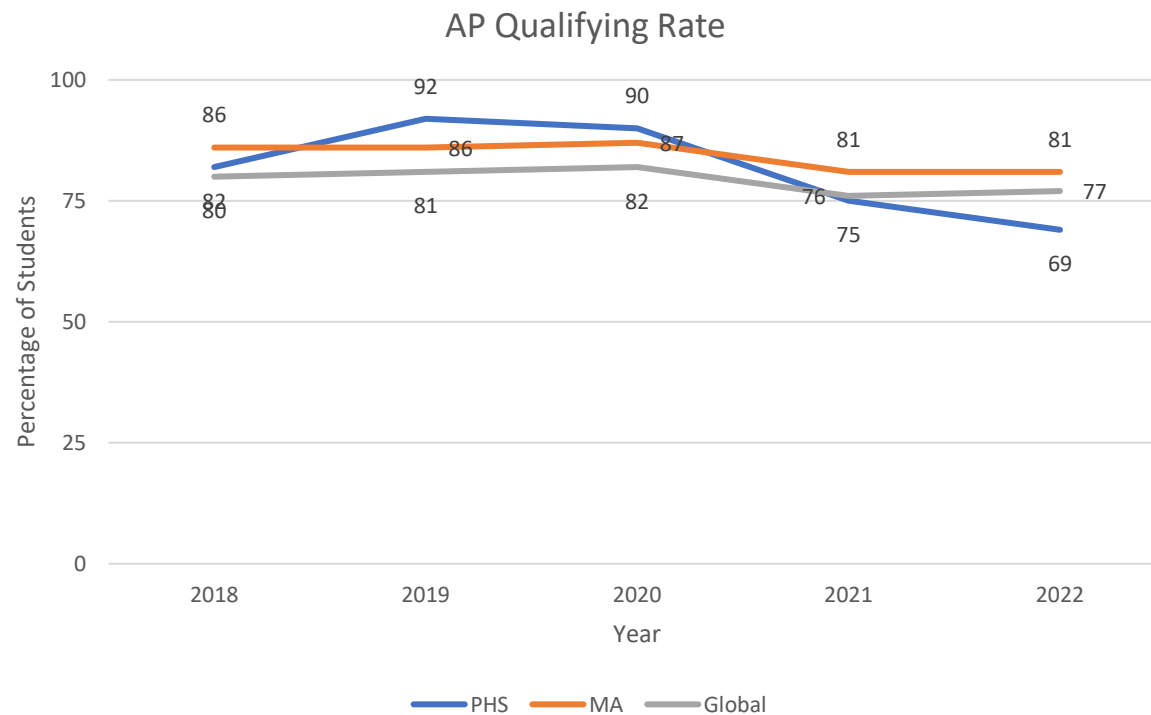
# Appendix

# AP Language and Literature



2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	33	5
Not Identified AP Potential	4	11

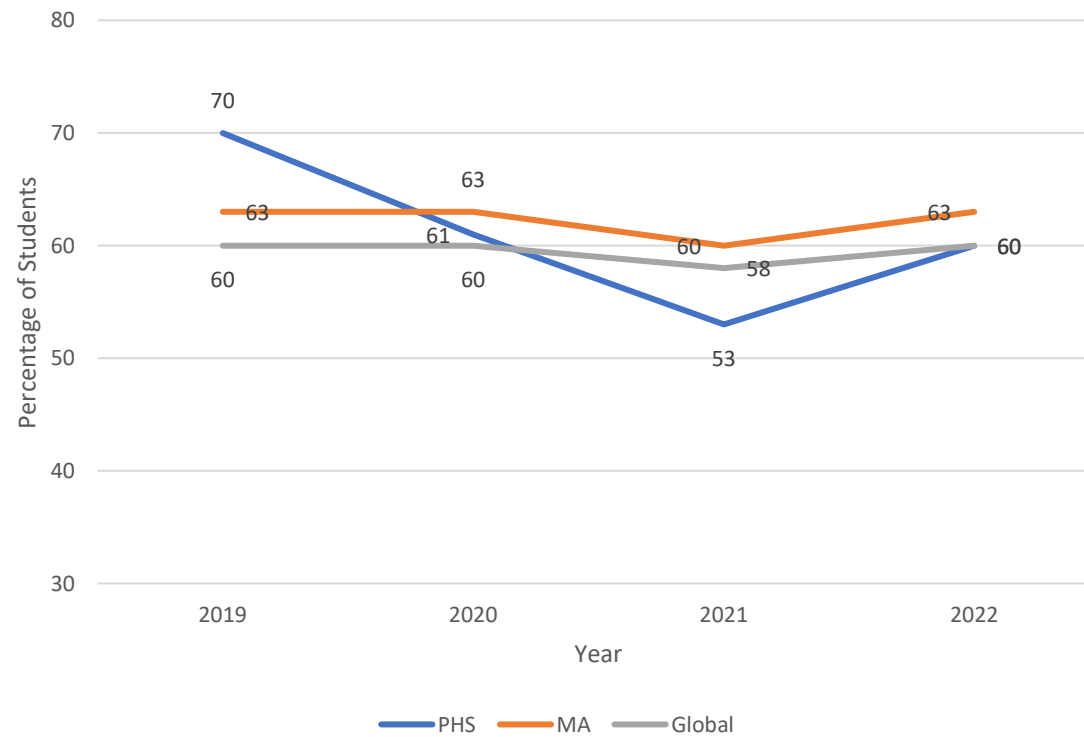
# AP Calculus BC



\*Please note that AP Potential data exists for AP Calculus AB but not AP Calculus BC. Further, all students enrolled at PHS in BC Calculus have met the 60% AP Potential level for AB Calculus.

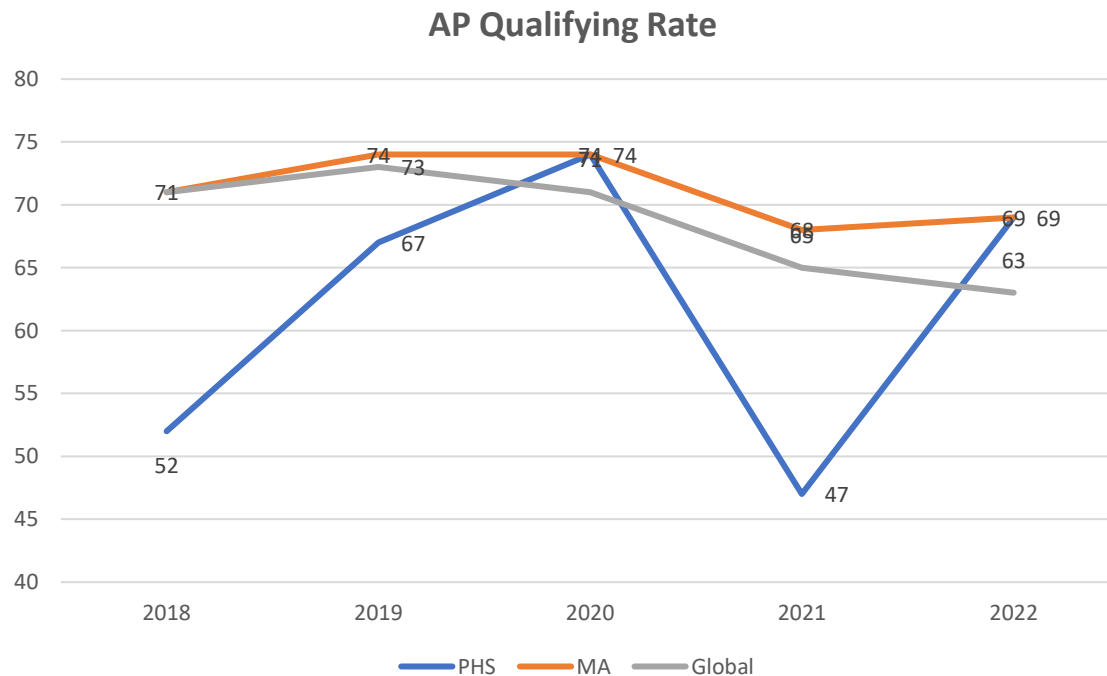
# AP Statistics

AP Qualifying Rate



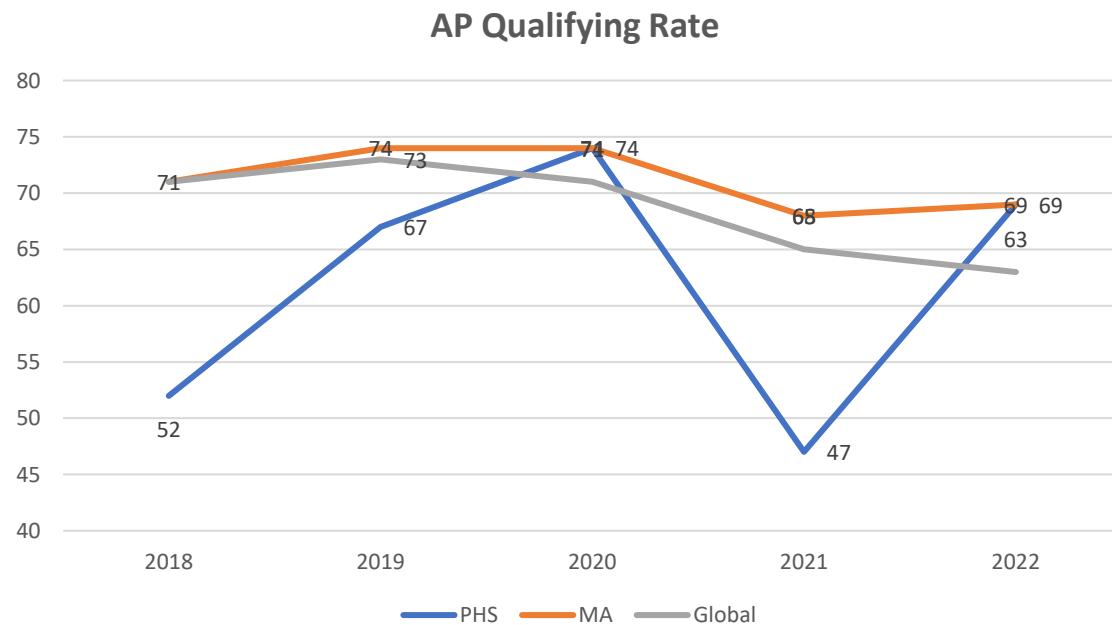
	Qualified	Did not qualify	Total
Identified and sat for AP exam	18	3	21
NOT identified and sat for AP exam	8	10	18
Total	26	13	39

# AP Computer Science Principles



	Qualified	Did not qualify	Total
Identified and sat for AP exam	10	3	13
NOT identified and sat for AP exam	2	3	5
Total	12	6	18

# AP Computer Science A

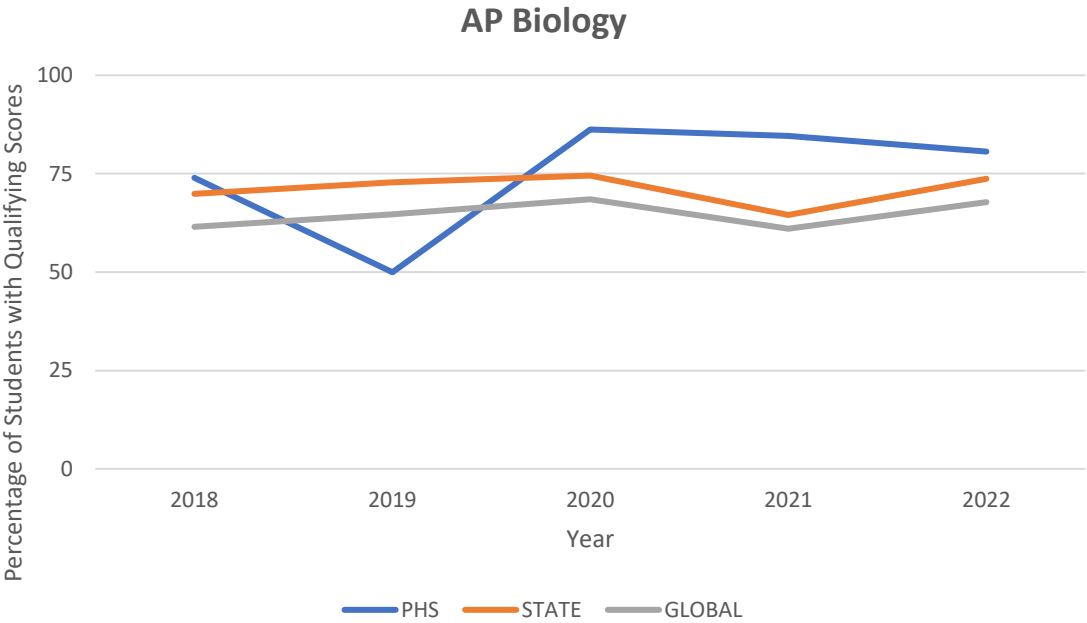


	Qualified	Did not qualify	Total
Identified and sat for AP exam	10	3	13
NOT identified and sat for AP exam	2	3	5
Total	12	6	18

One student did not sit for the PSAT.



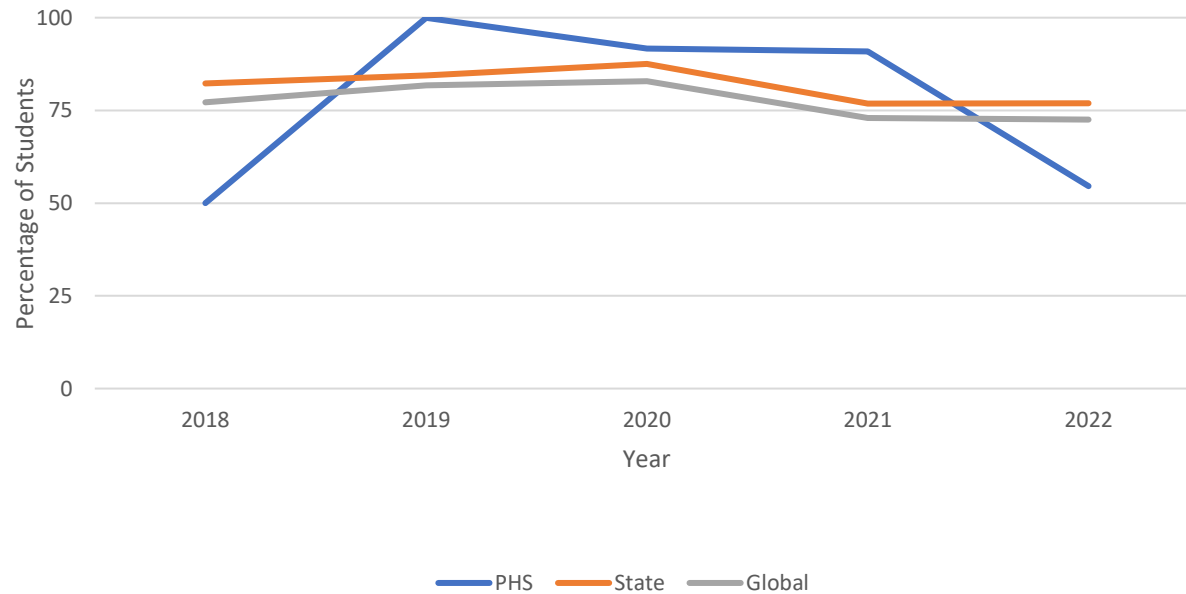
# AP Biology



2022	Students Who Qualified	Students Not Qualifying
Identified AP Potential	21	2
Not Identified AP Potential	8	6

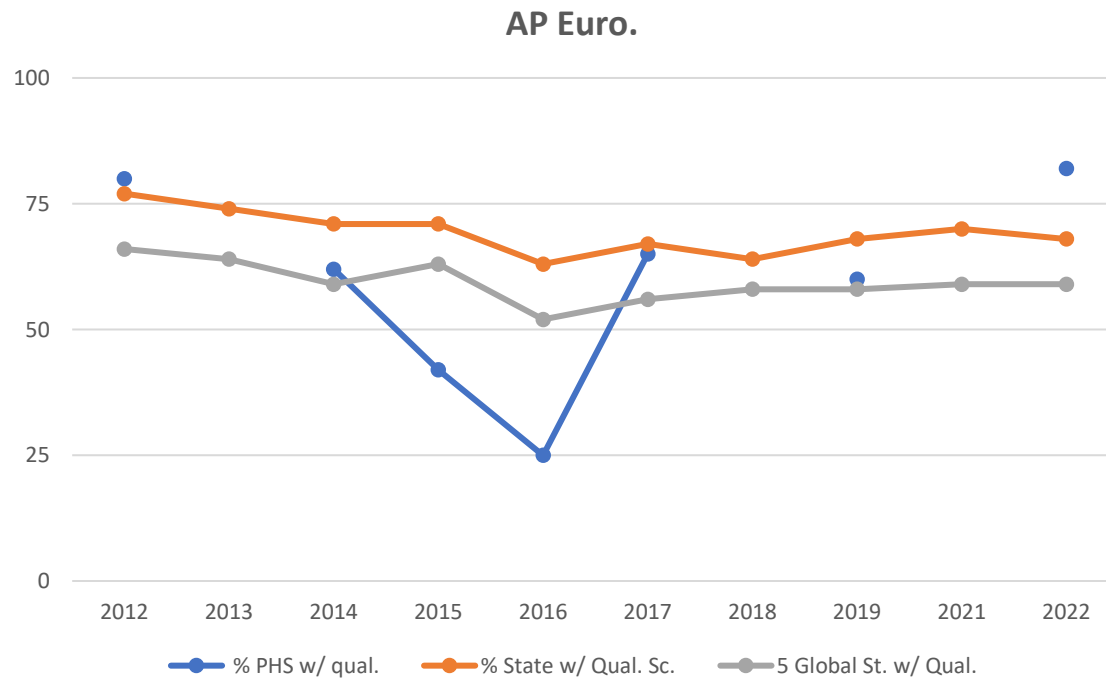
# AP Physics C: Mechanics

AP Physics-C: Mechanics



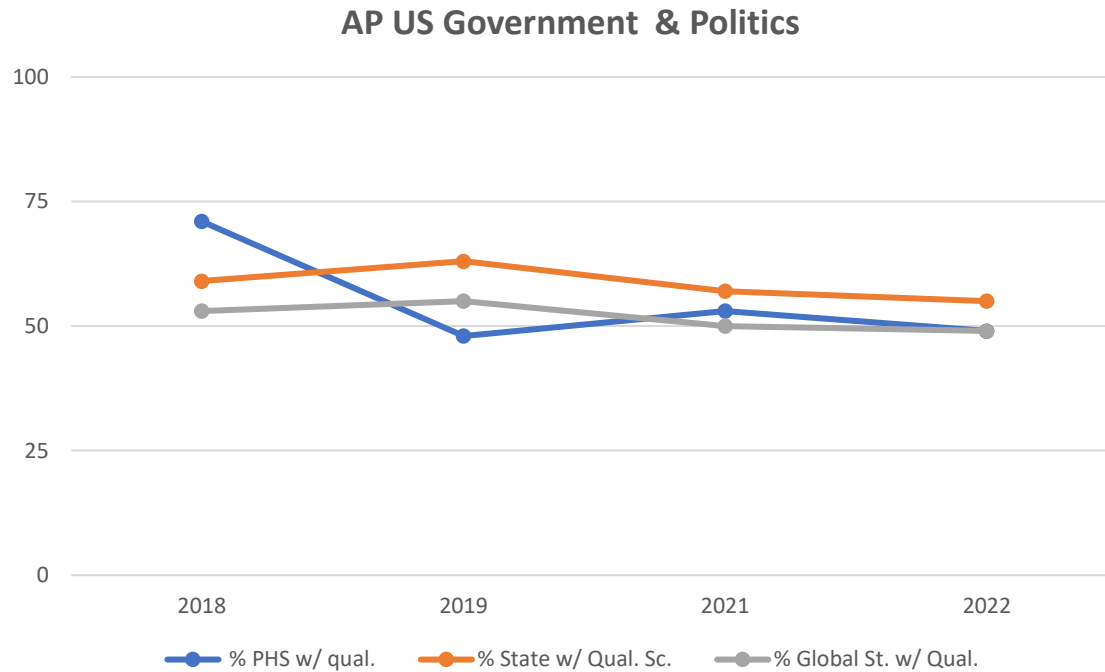
2022	Students Who Qualified	Students Not Qualifying
Identified AP Potential	5	1
Not Identified AP Potential	5	0

# AP European History



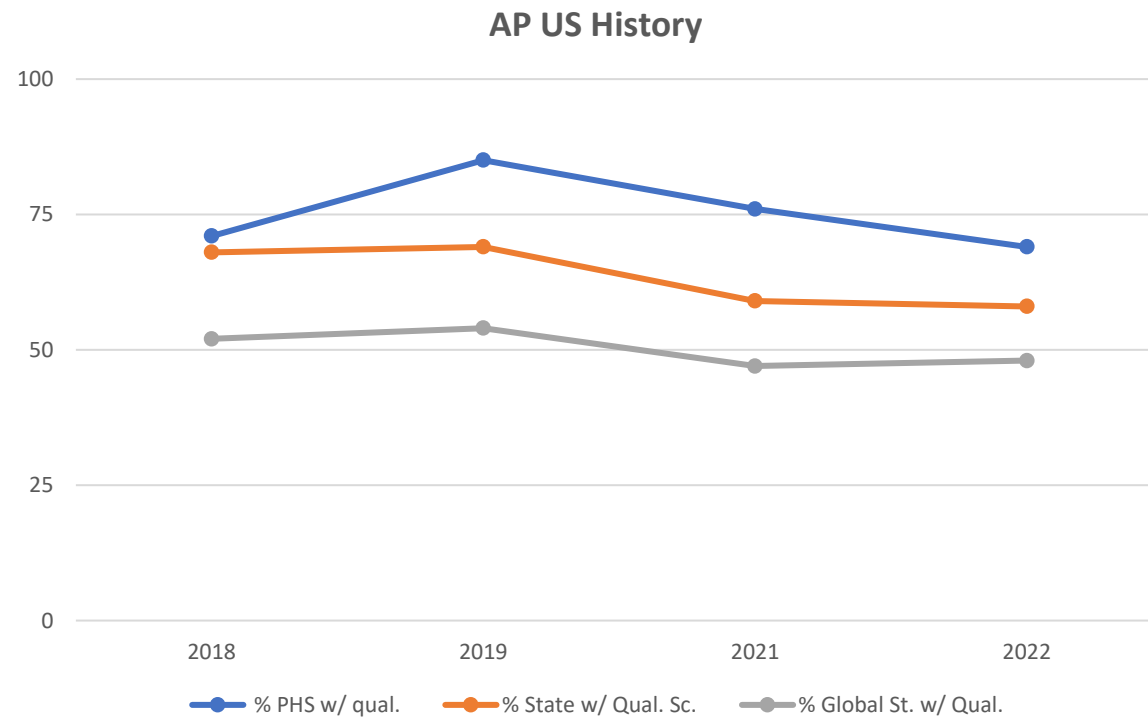
2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	2	0
Not Identified AP Potential	7	2

# AP US Government & Politics



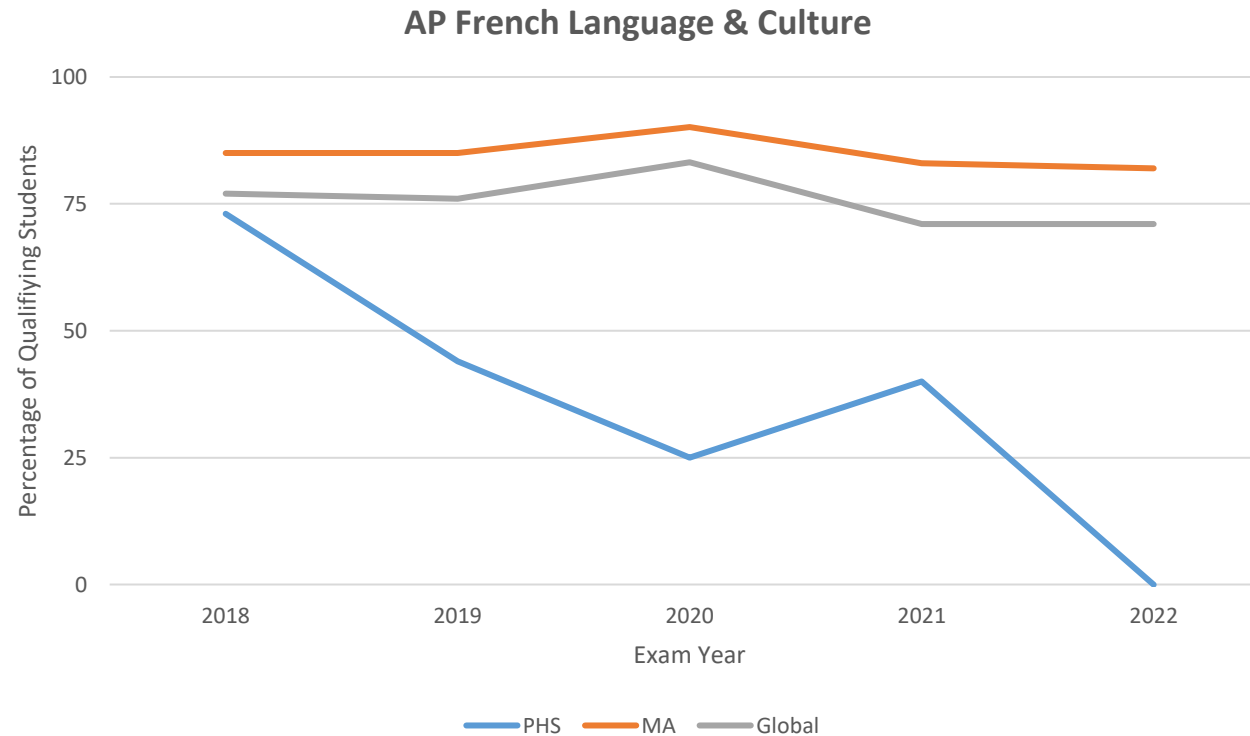
2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	19	2
Not Identified AP Potential	8	26

# AP US History



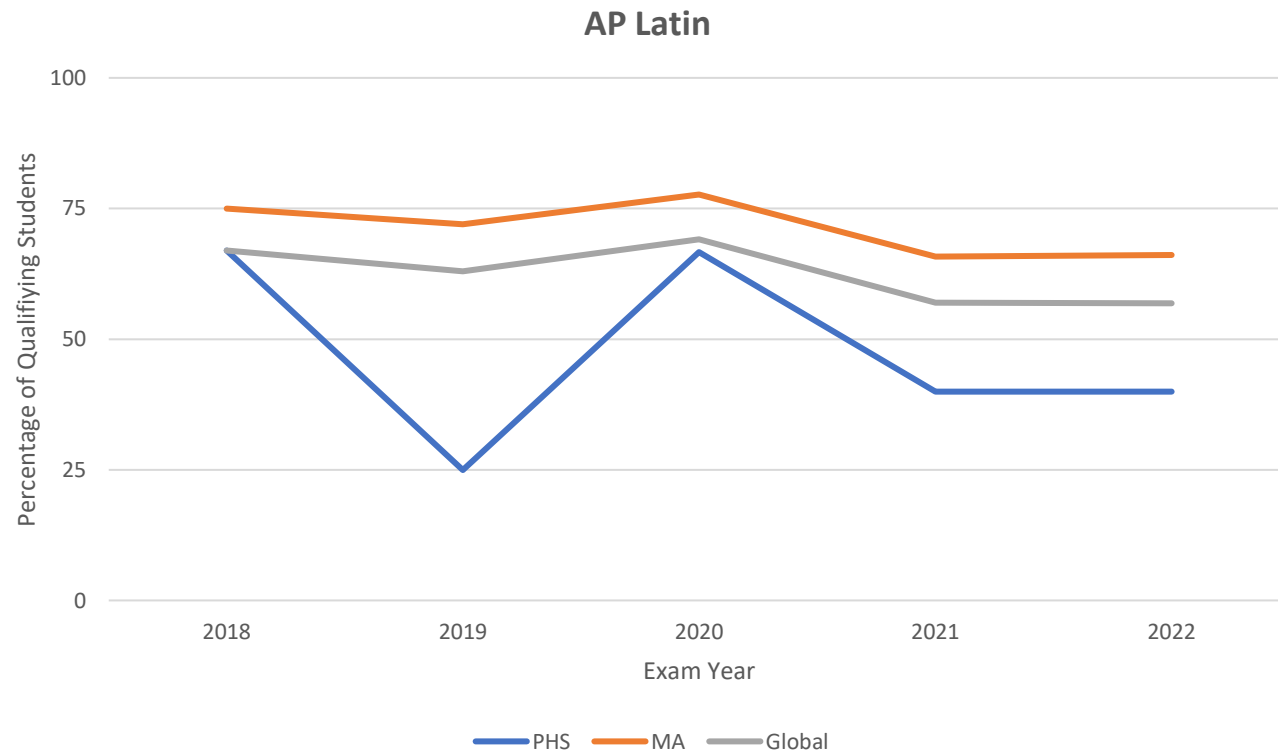
2022	Number Students Qualified	Number Students Not Qualifying
Identified AP Potential	18	6
Not Identified AP Potential	9	6

# AP French Language & Culture



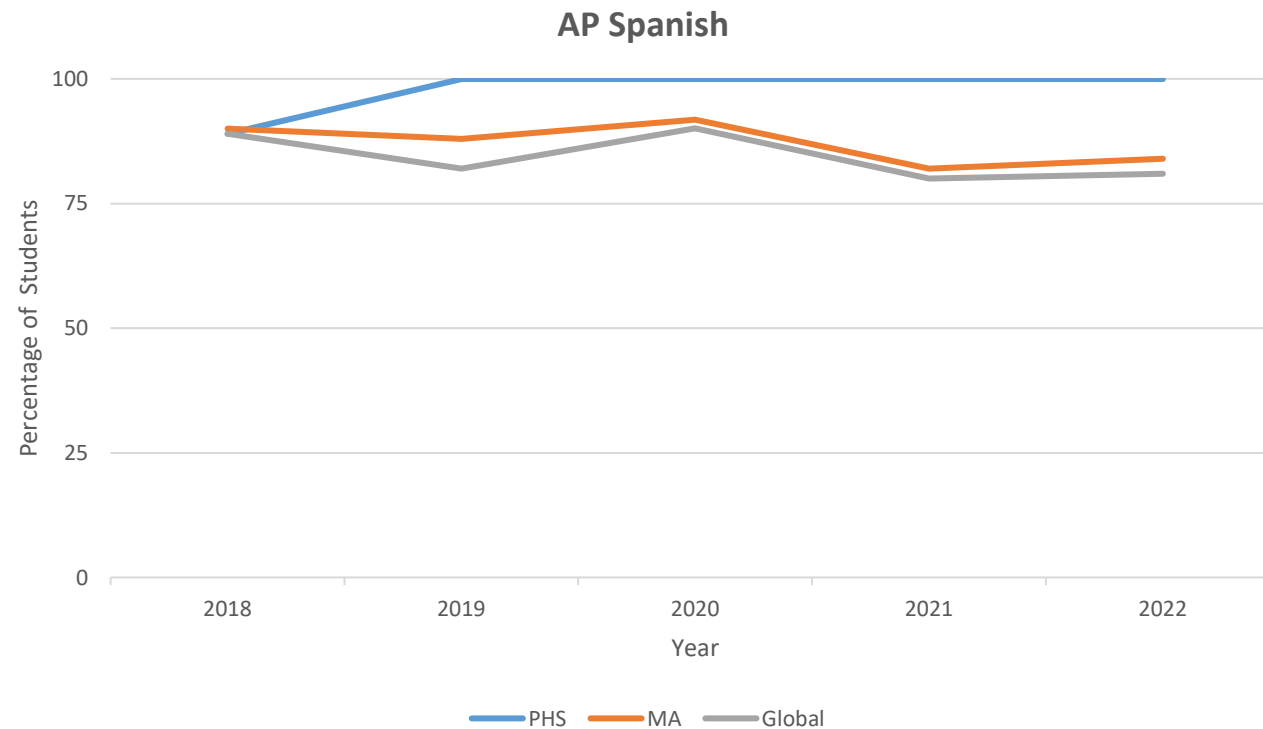
AP Potential data is not available for AP French

# AP Latin



AP Potential data is not available for AP Latin

# AP Spanish Language & Culture



AP Potential data is not available for AP Spanish