MASSACHUSETTS
Department of Elementary and Secondary Education

A Guide to MCAS Growth for Educators

Student Growth Percentiles (SGP)

Student Growth Percentiles (SGPs) provide a measure of how much a student learned from one year to the next compared to other students with similar previous MCAS achievement. DESE encourages educators to use SGP along with MCAS achievement measures to reflect on instructional practices and to plan for differentiated instruction.

For more guidance, see the MCAS and Accountability Interpretation and Action Guide.

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Interpreting Growth Reports

Growth reports provide information about how much change or "growth" there has been in MCAS achievement from year to year using SGPs.

SGPs range from 1 to 99, with higher numbers representing more growth and lower numbers representing less growth. All students, no matter their achievement level (e.g., Meeting Expectations, Not Meeting Expectations), can demonstrate any of the 99 growth percentiles.

Numeric values for SGPs translate to one of five growth levels, as shown in the table below:

SGP	Growth Level
1–20	Very Low
21–40	Low
41–60	Moderate
61–80	High
81–99	Very High

SGPs measure how a student scored on the MCAS tests compared to their "academic peers"—i.e., students in the same grade statewide who received similar scores on previous MCAS assessments (up to 2 years prior). Therefore, a student's SGP reflects the percent of their academic peers that scored the same as or lower than the student. For example, a student with an SGP of 58 scored the same as or higher than 58% of their academic peers. Because this is a comparison between students with similar starting scores, SGP can also be interpreted as how much the student *grew*. A student with an SGP of 58 grew as much as or more than 58% of their peers.

At the school or district level, SGP is aggregated as an average of all student SGPs.

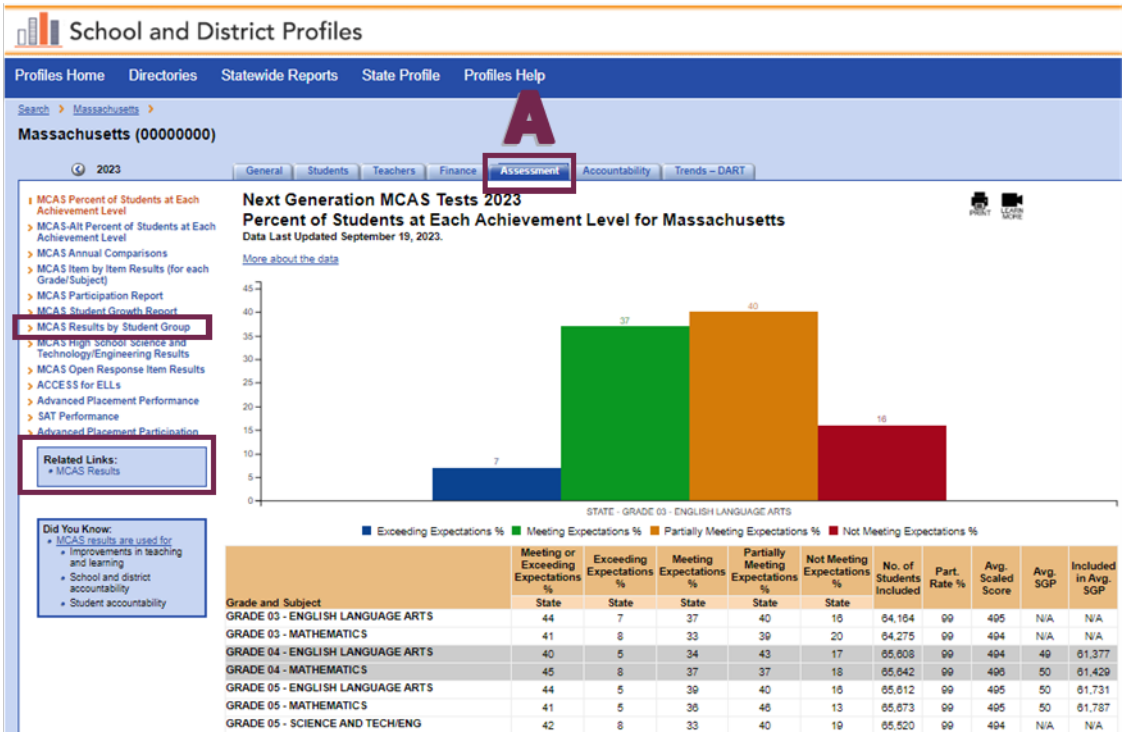
In interpreting SGP reports, it is important to note that differences of fewer than 10 points in growth scores from one year to the next should not be considered meaningful or significant.

The sample reports in this document show the range of information that is provided by DESE's growth reports, each describing a different aspect of student growth. These **reports should be considered together** to get a fuller understanding of student growth in your school and/or district.

General background information on student growth can be found in A Practitioner's Guide to Growth Models by Drs. Castellano and Ho.

How to Access Public Growth Reports on Student and District Profiles

Publicly available information about MCAS achievement levels is available on School and District Profiles under the Assessment Tab. Highlights are shown below.



Grade and Subject	Meeting or Exceeding Expectations %	Exceeding Expectations %	Meeting Expectations %	Partially Meeting Expectations %	Not Meeting Expectations %	No. of Students Included	Part. Rate %	Avg. Scaled Score	Avg. SGP	Included in Avg. SGP
	State	State	State	State	State					
GRADE 03 - ENGLISH LANGUAGE ARTS	44	7	37	40	16	64,164	99	495	N/A	N/A
GRADE 03 - MATHEMATICS	41	8	33	39	20	64,275	99	494	N/A	N/A
GRADE 04 - ENGLISH LANGUAGE ARTS	40	5	34	43	17	65,608	99	494	49	61,377
GRADE 04 - MATHEMATICS	45	8	37	37	18	65,642	99	496	50	61,429
GRADE 05 - ENGLISH LANGUAGE ARTS	44	5	39	40	16	65,612	99	495	50	61,731
GRADE 05 - MATHEMATICS	41	5	36	46	13	65,673	99	495	50	61,787
GRADE 05 - SCIENCE AND TECH/ENG	42	8	33	40	19	65,520	99	494	N/A	N/A

A

Percent of Students at Each Achievement Level

The Assessment page shows a table with student achievement and growth by grade and subject area. An accompanying bar chart shows the percent of students scoring at each achievement level. In Profiles, click on the grade and subject area in the table to change what is displayed in the bar chart.

B

MCAS Results by Student Group

This page provides separate tables for each grade and subject area of MCAS achievement and growth disaggregated by student group. These tables allow users to compare subgroup performance side-by-side within particular grades and subjects.

C

MCAS Results

This page provides a district-level view of the average SGP and percent of students at each achievement level. The drop-down menu at the top allows users to aggregate data by grade, subject, and subgroup.

Sample District Summary on School and District Profiles

To view MCAS achievement level results and SGP data for a specific school or district in School and District Profiles, go to **Directories > Public School Districts**, select a district name, and then select the **Assessment** tab. Users can also enter the name of the school or district in the search bar in the top right corner of the School and District Profiles website. Below is sample 2023 data.

Grade and Subject	Meeting or Exceeding Expectations %		Exceeding Expectations %		Meeting Expectations %		Partially Meeting Expectations %		Not Meeting Expectations %		No. of Students Included	Part. Rate %	Avg. Scaled Score	Avg. SGP	Included in Avg. SGP
	District	State	District	State	District	State	District	State	District	State					
GRADE 03 - ENGLISH LANGUAGE ARTS	61	44	8	7	53	37	29	40	10	16	968	100	515	N/A	N/A
GRADE 03 - MATHEMATICS	65	41	24	8	41	33	18	39	17	20	970	100	513	N/A	N/A
GRADE 04 - ENGLISH LANGUAGE ARTS	67	40	13	5	54	34	24	43	9	17	1,053	100	518	62	950
GRADE 04 - MATHEMATICS	54	45	18	8	36	37	37	37	9	18	1,044	100	510	56	936
GRADE 05 - ENGLISH LANGUAGE ARTS	74	44	28	5	46	39	22	40	4	16	950	100	534	58	852
GRADE 05 - MATHEMATICS	71	41	43	5	28	36	20	46	9	13	946	99	528	57	848
GRADE 05 - SCIENCE AND TECH/ENG	64	42	30	8	34	33	28	40	7	19	941	99	512	N/A	N/A
GRADE 06 - ENGLISH LANGUAGE ARTS	74	42	18	8	56	34	22	34	4	24	882	98	535	36	814
GRADE 06 - MATHEMATICS	57	41	21	7	36	34	27	42	16	17	883	98	504	19	812
GRADE 07 - ENGLISH LANGUAGE ARTS	71	40	12	8	59	33	23	40	6	19	864	98	524	50	770
GRADE 07 - MATHEMATICS	66	38	32	8	34	31	27	40	7	22	859	97	512	78	774
GRADE 08 - ENGLISH LANGUAGE ARTS	83	44	4	10	79	34	11	34	5	22	952	98	541	31	844
GRADE 08 - MATHEMATICS	38	38	5	7	33	30	46	42	16	20	937	97	492	42	844
GRADE 08 - SCIENCE AND TECH/ENG	38	41	4	6	34	35	56	40	6	19	924	95	493	N/A	N/A
GRADE 10 - ENGLISH LANGUAGE ARTS	86	58	48	15	38	43	10	30	5	11	756	96	545	81	478
GRADE 10 - MATHEMATICS	91	50	69	10	22	40	5	42	4	9	728	95	548	67	500
GRADE 10 - SCIENCE AND TECH/ENG	60	47	20	11	40	36	40	42	9	11	615	95	511	N/A	N/A
GRADES 03 - 08 - ENGLISH LANGUAGE ARTS	72	42	14	7	58	35	22	39	6	19	5,669	99	526	52	4,230
GRADE 03 - 08 - MATHEMATICS	58	41	24	7	35	33	29	41	12	18	5,639	99	504	54	4,214
GRADES 05 & 08 - SCIENCE AND TECH/ENG	51	41	17	7	34	34	42	40	7	19	1,865	97	498	N/A	N/A

MCAS Results by Student Group by Grade and Subject

This report can be found in School and District Profiles by clicking on the link in the left side menu (see label B in the diagram on page 3). The report is a series of tables broken out by grade and subject showing data averaged within student subgroups. Here is sample data from the 2023 MCAS.

GRADE LEVEL 06 - MATHEMATICS									
	State								
	Students Included	Part. Rate	% at Each Level				Avg. Scaled Score	SGP	Included in Avg. SGP (#)
Student Group	#	%	E	M	PM	NM			
Accountability Student Groups									
Students w/ Disabilities	14,504	98	1	11	42	46	476	44	13,136
EL and Former EL	12,693	99	3	18	46	33	482	51	11,220
Low Income	29,553	99	2	19	49	30	483	48	27,051
High Needs	38,267	99	2	20	49	29	484	48	35,118
African Amer./Black	6,190	99	2	19	49	30	483	49	5,692
Amer. Ind. or Alaska Nat.	171	99	6	18	53	24	487	47	154
Asian	4,861	100	26	46	21	6	513	60	4,556
Hispanic/Latino	15,840	99	1	17	49	32	481	48	14,424
Multi-Race, Non-Hisp./Lat.	3,003	99	10	36	38	16	498	51	2,811
Nat. Haw. or Pacif. Isl.	70	100	7	33	41	19	493	55	67
White	36,420	99	7	43	40	10	499	49	34,771
Other Student Groups									
Male	34,237	99	7	35	40	18	494	49	31,995
Female	32,285	99	6	34	43	17	494	50	30,441
Title 1	29,057	99	3	23	48	27	485	49	26,935
Non-Title 1	37,498	99	10	44	36	10	501	51	35,540
Non-Disabled	52,053	99	8	41	41	10	499	52	49,339
Non-Low Income	37,022	99	10	47	35	7	503	51	35,424
EL	5,268	99	0	4	37	59	469	44	3,957
Former EL	7,425	100	5	28	53	14	492	54	7,263
Ever EL	14,465	99	4	21	45	30	484	51	12,939
Foster	467	97	0	13	44	43	476	45	414
Homeless	1,376	98	1	11	43	45	475	47	1,079
Migrant	15	96	0	0	47	53	469	51	10
Military	659	98	4	39	43	14	495	49	604
All Students									
2023	66,578	99	7	34	42	17	494	50	62,481

Summarizing Data Patterns

A **data review table** makes it is easy to compare standout performances and growth quickly. The data review table below was created to summarize data on five of the subgroups from the sample 2023 data displayed on the previous page. Subgroup growth and achievement are summarized in the average SGP (Avg. SGP), growth rate, and % meet or exceed (% ME/E) columns. A difference between subgroup averages and averages of all students in the district are then presented in the Avg. SGP and % ME/E columns. Differences between subgroup and all students in the district is a simple difference score (subgroup average – all students average). In difference columns, positive numbers indicate that the subgroup had a higher percentage of students scoring at these levels than the district average; negative numbers indicate that the subgroup had a lower percentage of students scoring at these levels than the district average.

Data Review Table					
	Subgroup Performance			**Difference from All Students**	
Subgroup	**Avg. SGP**	**Growth Rate**	**% ME/E**	**Avg. SGP**	**% ME/E**
Students w/Disabilities	44	Moderate	12	-6	-29
African American/Black	49	Moderate	21	-1	-20
Multi-Race, Non-Hisp./Lat.	51	Moderate	46	+1	5
EL	44	Moderate	4	-6	-37
Ever EL	51	Moderate	25	+1	-16

Interpreting Data Patterns

In this example, all student groups demonstrated moderate growth (SGP: 41–60) compared to their academic peers from previous MCAS administrations. The data review table indicates that, although the subgroups differ in levels of achievement, on average, they show similar academic growth over time.

English learners (EL) and students with disabilities demonstrated the lowest SGP on average out of any subgroup in 6th grade math. On average, students with disabilities scored the same as or better on the 2023 math MCAS as 44% of their academic peers—meaning students with or without disabilities that scored similarly on the 2022 math MCAS.

Multiracial students (non-Hispanic/Latino) and students that were ever English learners (Ever EL) showed the same level of average growth (SGP = 51) but differing levels of academic achievement. Forty-six percent of multiracial students met or exceeded expectations on the 2023 math MCAS and scored the same or higher than 51% of academic peers—meaning students of any racial/ ethnic background that scored similarly on the 2022 math MCAS tests.

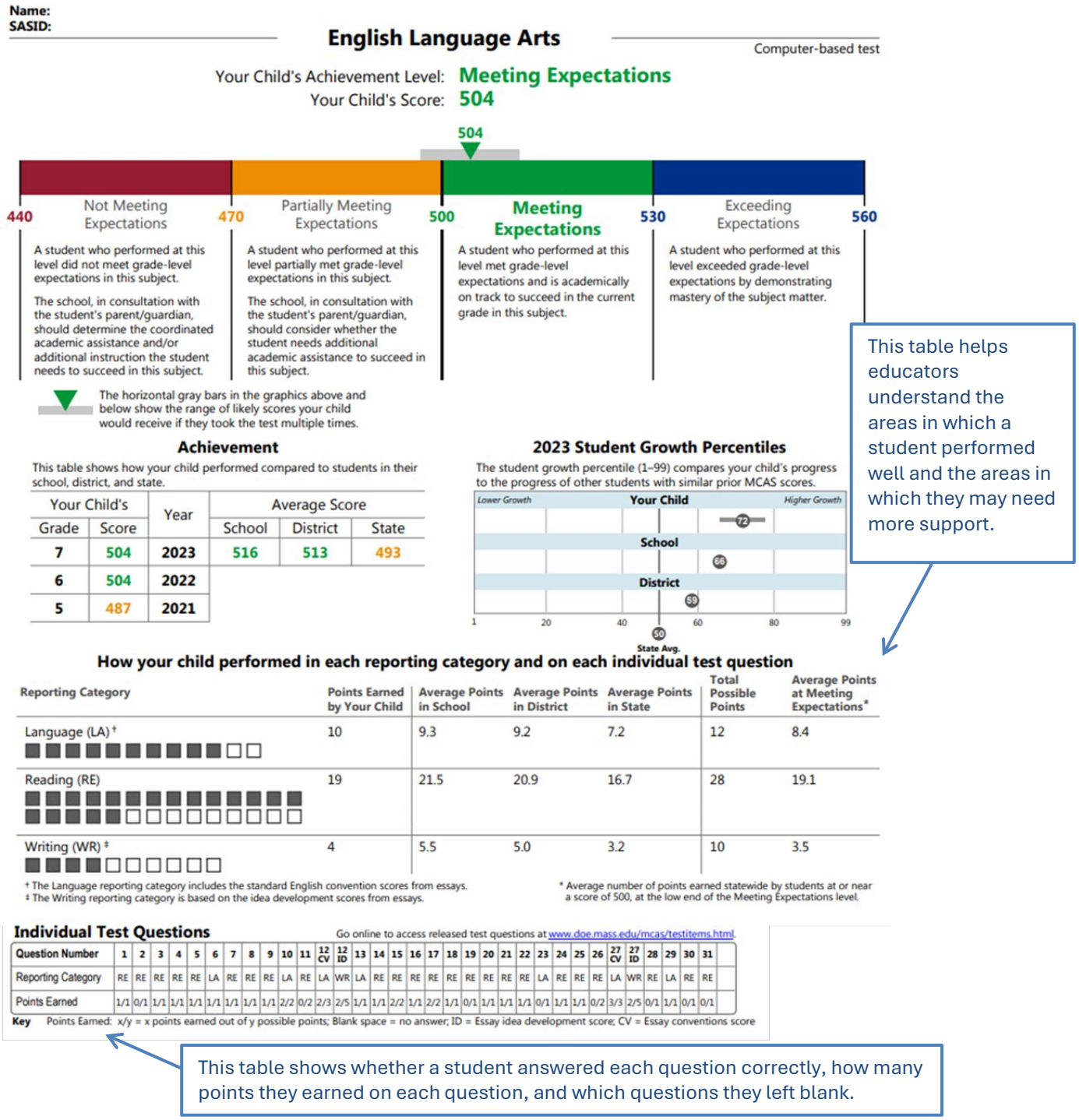
Using Data Patterns for Improvement Planning

Reviewing and understanding trends in individual student data can be helpful to educators, educational specialists, and administrators in curriculum, multilingual learner and special education departments. Below are some guiding questions to use when reviewing MCAS results for your school.

1. How do these data resonate with my experiences in my classroom, school, and district?
2. What initiatives, curriculum, or instructional practices am I, my school, and/or my district currently engaged in to combat any inequities in the data?
3. How do these data inform our supports for specific student groups?

Parent/Guardian Report

The Parent/Guardian Report provides detailed information about a student's performance on each subject test of the MCAS. It includes the student's results and achievement level from this year as well as from the previous two years, when available. This report also provides information on student growth, comparing a student's growth percentile (SGP) to the average growth of their school, district, and state. This information can be helpful in discussing student skills with families and potential academic support teams (specialists, special education staff, etc.). School administrators should be able to provide educators with a copy of the Parent/Guardian Report.



Name:
SASID:

English Language Arts

Computer-based test

Your Child's Achievement Level: **Meeting Expectations**
Your Child's Score: **504**

504

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

Achievement

This table shows how your child performed compared to students in their school, district, and state.

Your Child's Grade	Your Child's Score	Year	Average Score: School	Average Score: District	Average Score: State
7	504	2023	516	513	493
6	504	2022			
5	487	2021			

2023 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.

This table helps educators understand the areas in which a student performed well and the areas in which they may need more support.

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

Reporting Category	Points Earned by Your Child	Average Points in School	Average Points in District	Average Points in State	Total Possible Points	Average Points at Meeting Expectations*
Language (LA)†	10	9.3	9.2	7.2	12	8.4
Reading (RE)	19	21.5	20.9	16.7	28	19.1
Writing (WR)‡	4	5.5	5.0	3.2	10	3.5

† The Language reporting category includes the standard English convention scores from essays.
‡ The Writing reporting category is based on the idea development scores from essays.

* Average number of points earned statewide by students at or near a score of 500, at the low end of the Meeting Expectations level.

Individual Test Questions

Go online to access released test questions at www.doe.mass.edu/mcas/testitems.html.

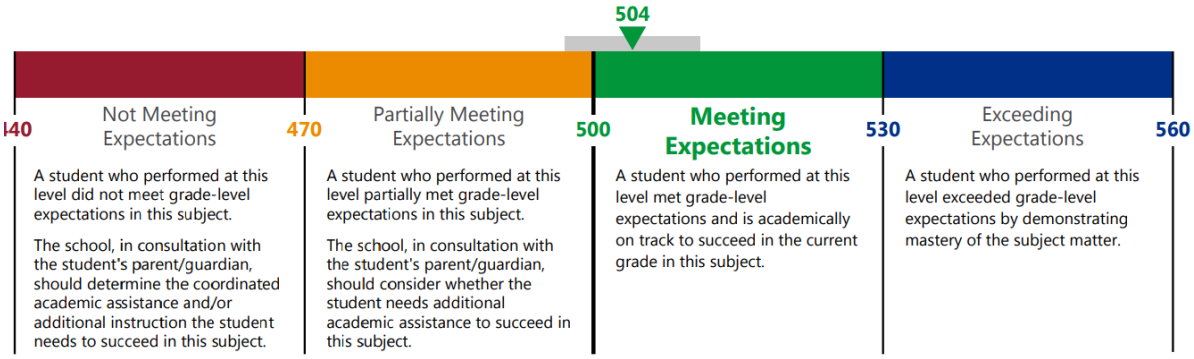
Question Number	1	2	3	4	5	6	7	8	9	10	11	12 CV	12 ID	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27 CV	27 ID	28	29	30	31
Reporting Category	RE	RE	RE	RE	RE	LA	RE	RE	RE	LA	RE	LA	WR	LA	RE	RE	RE	RE	RE	RE	RE	RE	RE	LA	RE	RE	RE	LA	WR	RE	LA	RE	RE
Points Earned	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2	0/2	2/3	2/5	1/1	1/1	2/2	1/1	2/2	1/1	0/1	1/1	1/1	1/1	0/1	1/1	1/1	0/2	3/3	2/5	0/1	1/1	0/1	0/1

Key Points Earned: x/y = x points earned out of y possible points; Blank space = no answer; ID = Essay idea development score; CV = Essay conventions score

This table shows whether a student answered each question correctly, how many points they earned on each question, and which questions they left blank.

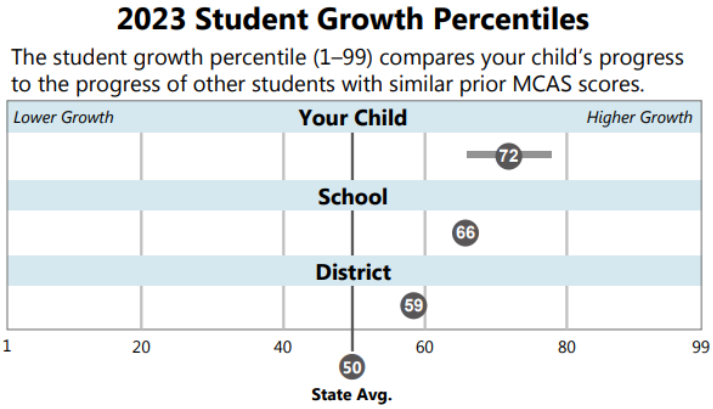
Interpreting Achievement

In this sample Parent/Guardian Report, the student received a scaled score of 504, which corresponds to an achievement level of Meeting Expectations. To acknowledge the range of potential scores this student might achieve, a gray bar indicates how the student is likely to score if they took the test many times. This student's potential range of scores is between approximately 495 and 510, indicating that they likely met grade-level standards in this subject area.



Interpreting Growth

This student scored the same as or better than 72% of their academic peers—students that scored similarly on previous MCAS ELA tests. This is considered **high growth** and is above the school's average SGP of 66, the district average of 59, and the state average of 50.



Interpreting Reporting Category

The Reporting Category table indicates how a student performed in each reporting category in the subject area. The student in this example showed the greatest mastery of the Language category, earning 10 out of 12 points—0.7 points higher than the school average (9.3), 0.8 points higher than the district average (9.2), and 2.8 points higher than the state average (7.2). This table also provides information about students in the state that scored at or around 500—the threshold for the Meeting Expectations achievement level. This student earned more points in the Language reporting category (10) than the average points earned by students in the state that scored at or near 500 (8.4).

Guiding Questions for Reviewing Parent/Guardian Report

Below are some guiding questions to use when reviewing MCAS results for your students.

1. How do these data resonate with my understanding of this student's skills? Do these data reflect how this student has performed in class?
2. What are potential causes of low growth? What are potential causes of high growth?
3. How do these data help inform academic support planning or extension for this student?

G602: MCAS Student Growth Roster

The student growth roster report displays historical data for student achievement and growth side by side. This report captures MCAS performance and growth data for three years for all students in the same grade within each school or district.

The following student roster report depicts sample grade 6 data.

SASID	Last, First, MI	ELA 2021	ELA 2022	ELA 2023	2023 ELA SGP	Math 2021	Math 2022	Math 2023	2023 Math SGP
1234567890	Adams, John	509	495	530	97	499	520	505	20
1234567891	Barzola, Kimberly	520	502	495	24	485	489	492	76
1234567892	Chokalingam, Vera, M	476	481	487	40	487	487	481	62
1234567893	Du Bois, William, E	505	509	523	71	492	492	492	71

Interpreting Data Patterns

Vera's ELA scores have increased from year to year. She scored at the 40th percentile compared to her academic peers with similar MCAS score histories, showing moderate growth (SGP = 40). Although her math scores dropped from 2022 to 2023, she showed high growth (SGP = 62), scoring the same as or better than 62% of her academic peers in math in 2023.

William's scores in ELA have been improving, and his scores in math have remained flat. However, in both ELA and math, William showed high growth (SGP = 71) in 2023 in comparison to his academic peers with similar MCAS score histories. William grew as much as or more than 71% of his academic peers in math and ELA in 2023.

Guiding Questions for Educators

Reviewing and understanding trends in individual student data can be helpful to educators and educational specialists in curriculum, multilingual learner (MLE), and special education departments.

1. What are general trends over time for this student? Have they maintained similar levels of achievement or growth, or is there variation from year to year? What are any potential causes of this data pattern (e.g., child's personal life, particular difficulty with or mastery of certain concepts, attendance, access to academic support)?
2. How does the student's MCAS history align with what you know about the student and their performance in classroom assessments?
3. Using this information with other relevant data (e.g., MCAS item analysis, formative assessment data, any relevant diagnoses), what is an achievable goal for this student? What support plan or extension activities might be appropriate for the student?