



Strategic Metrics Team Update to the School Committee

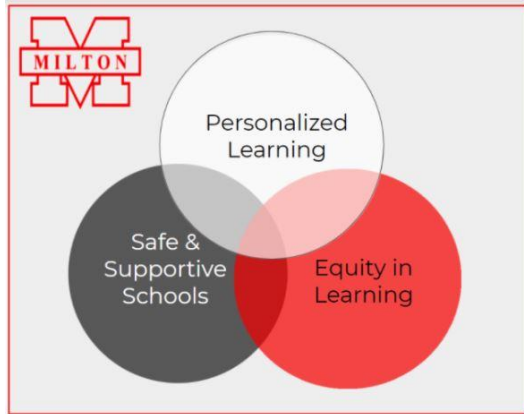
Prepared by Vy Vu, Director of Data & Analytics

October 26, 2022

Purpose and Theory of Action

A diverse and committed team has worked for 5 months to select a series of key metrics so that the School Committee and general stakeholders can get an annual data report of our progress towards strategic goals.

If we implement the Strategic Plan



Then we can improve
**Student and Staff
Experiences**

Increase
Student Performance

And ultimately prepare our students
for success after high school.

**Student Preparedness for
College/Career**

Who's on the Strategic Metrics Team?

- Membership:
 - Janet Sheehan, Acting Superintendent
 - Garth McKinney, Assistant Superintendent for Curriculum and Human Resources
 - AJ Melanson, Director of Educational Technology
 - Sue Maselli, Director of Pupil Personnel Services
 - Brian Selig, Math Director K-12
 - Lauren Vanacore, Literacy Director K-8
 - Christie Chiappetta, Science Director K-8
 - Claire Galloway-Jones, Director of Equity, Inclusion, and Belonging
 - Vy Vu, Director of Data & Analytics
 - Cat Desroche, Tucker Principal
 - Karen McDavitt, Glover Principal
 - Karen Cahill, MHS Principal
 - Spencer Blasdale, Strategic Plan Advisory Group member
- The Metrics Team has had 4 meetings since last spring. Two in June, and two after we received MCAS data in October.

Work Process

- Started with the Strategic Plan
- Researched comparable districts to get an understanding of where Milton is
- Categorized the outcomes we want to show into four broad buckets
 - Student preparedness for college/career
 - Student performance
 - Student experience
 - Staff experience
- Reviewed and discussed historical and most recent data for each proposed metric, including the recently released MCAS data
- Acknowledged that data has shifted and changed in numerous ways during the pandemic, and that we are essentially rebuilding from a new baseline.
 - All our metrics are set for 5 years out, with the hope of building back to at least where we were pre-pandemic.
 - With only one point of baseline data, it's challenging to project what our growth trajectory might look like.

Today's agenda

- ❏ MCAS Overview
- ❏ Comparable districts
- ❏ Recommendations for District Metrics

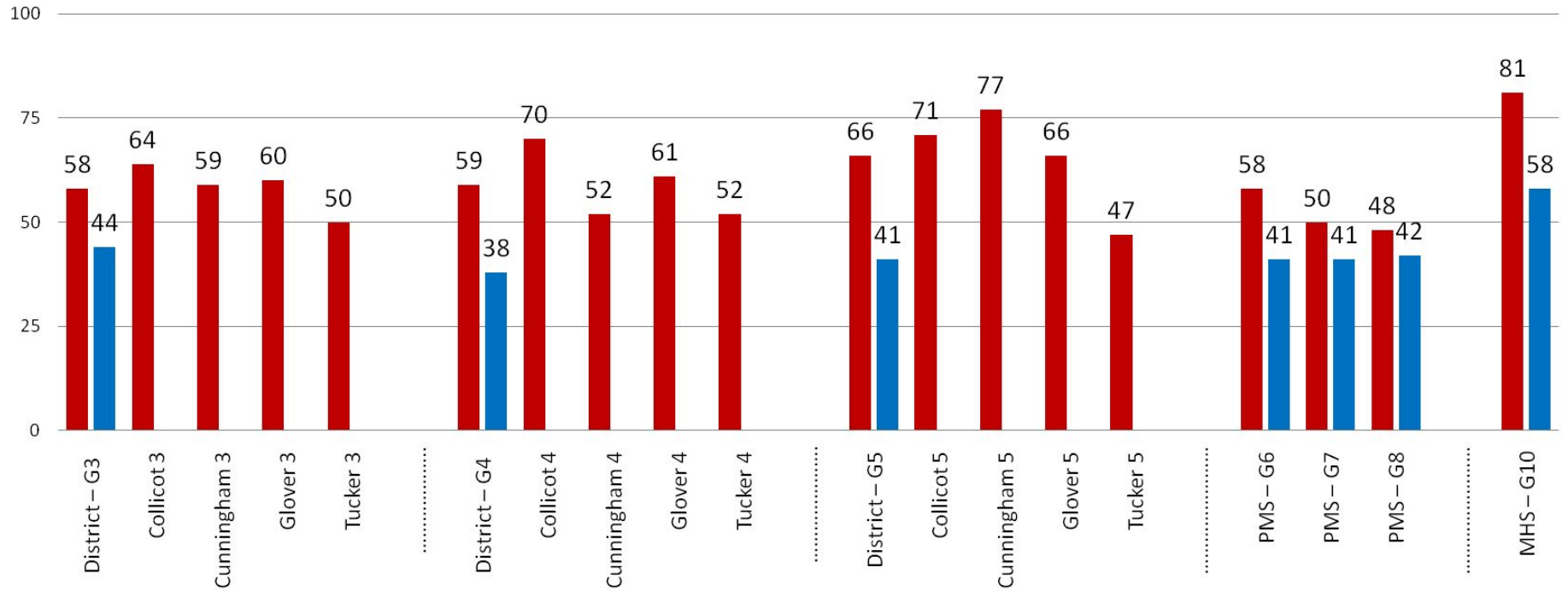
MCAS Context

- Official MCAS results were released publicly by DESE on September 29, 2022. The District has since sent home individual student MCAS reports to families.
- All MCAS testing conducted in 2022 have resumed in person and included the regular two sessions per subject.
 - 2019: Full MCAS testing
 - 2020: No MCAS testing
 - 2021: MCAS testing remote and in-person for hybrid schooling; only half the length for grades 3-8
 - 2022: Full in-person MCAS testing for this “back to normal” school year
- Essentially, DESE is viewing results from 2022 as the new post-pandemic “baseline” for us moving forward. They are keeping an eye on ELA, with the question remaining of whether we have seen the bottom there.
- We are in a period of rebuilding school culture and expectations, and now is the opportunity to innovate toward a vision of what education means for the future.
 - New strategic plan: Personalized Learning, Safe and Support Learning Environments, and Equity in Learning

Milton continues to exceed state performance on the MCAS at every school, every grade level, every subject.

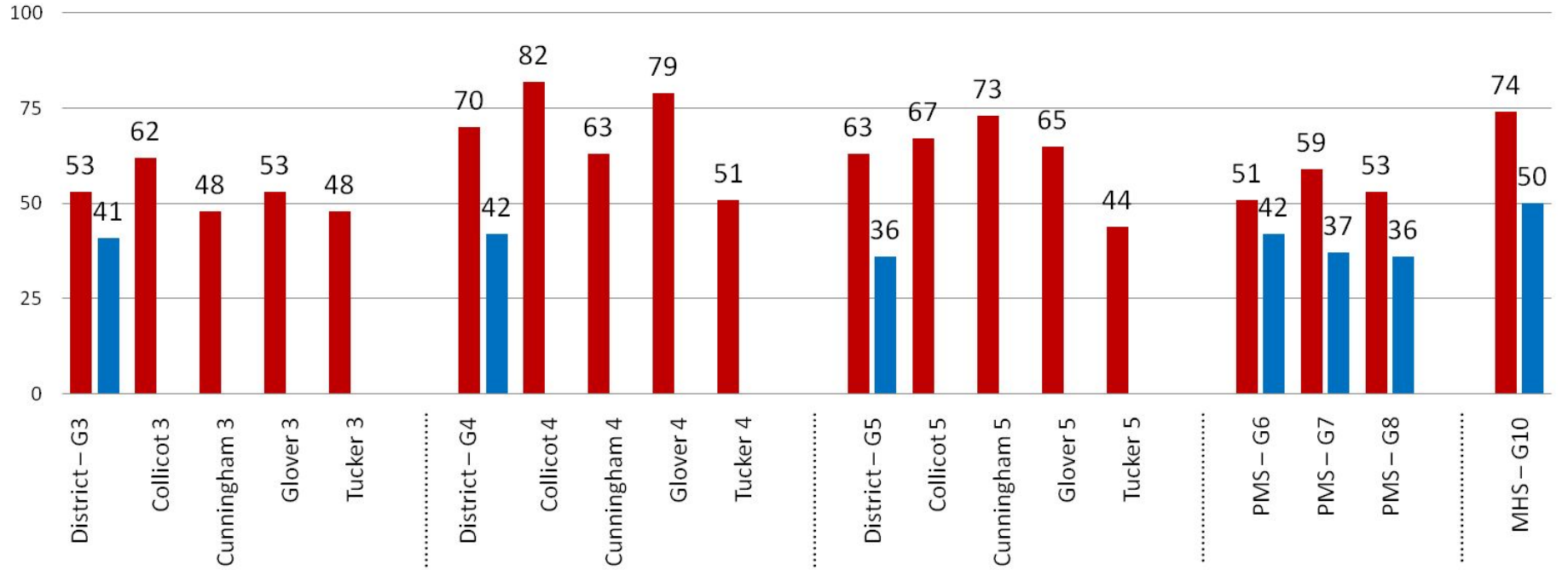
2022: Percentage of MPS Students Meeting/Exceeding Expectations on ELA MCAS G3-10

■ % MPS Meeting/ Exceeding ■ % State Meeting/ Exceeding



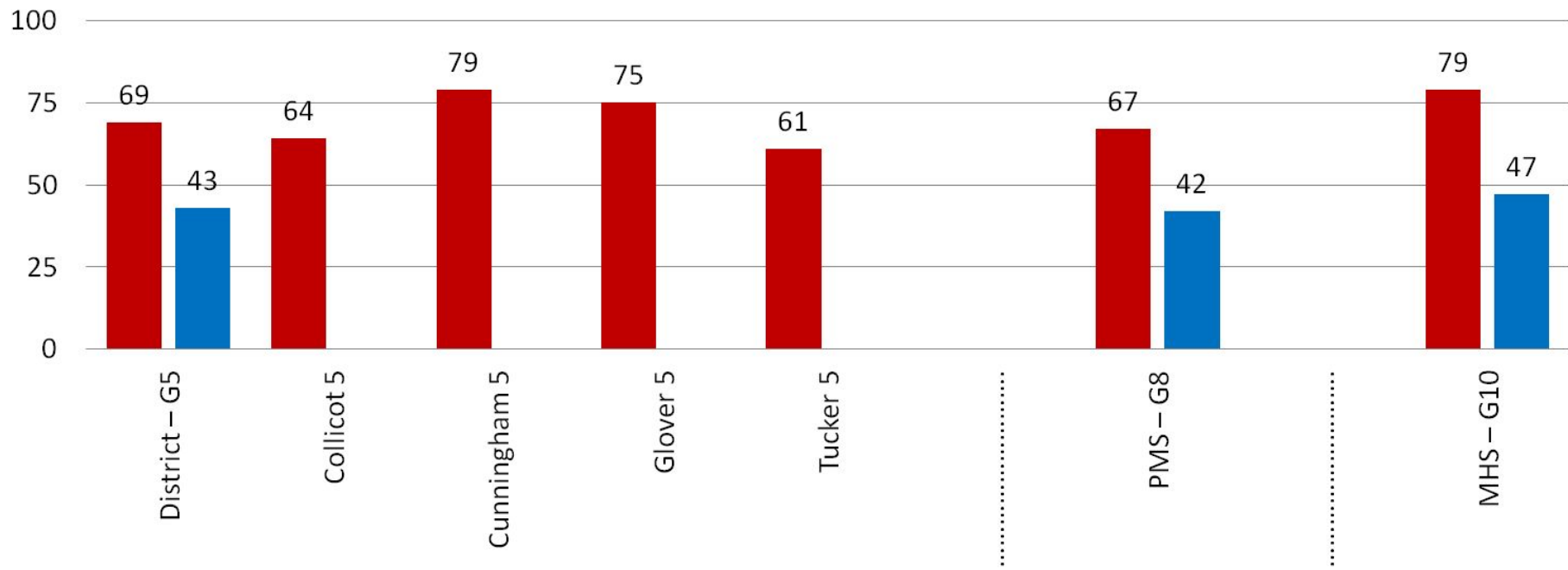
2022: Percentage of MPS Students Meeting/Exceeding Expectations on Math MCAS G3-10

■ % MPS Meeting/ Exceeding
 ■ % State Meeting/ Exceeding



2022: Percentage of Students Meeting/Exceeding Expectations on Science MCAS G5, G8, G10

■ % MPS Meeting/ Exceeding ■ % State Meeting/ Exceeding



Grade 10 ELA is seeing gains from 2019 levels, while ELA results for Grades 3-8 declined, similar to statewide performance.

Milton ELA MCAS Results	2019 % Meeting/ Exceeding	2021% Meeting/ Exceeding	2022 % Meeting/ Exceeding	Change in % Meeting/ Exceeding 2019-21	Change in % Meeting/ Exceeding 2021-22	Change in % Meeting/ Exceeding 2019-22	State Change in % Meeting/ Exceeding 2019-22
G3 ELA	75	65	58	-10	-7	-17	-12
G4 ELA	79	72	59	-7	-13	-20	-14
G5 ELA	68	69	66	1	-3	-2	-11
G6 ELA	75	70	58	-5	-12	-17	-12
G7 ELA	65	53	49	-12	-4	-16	-7
G8 ELA	61	57	47	-4	-10	-14	-10
G3-8 ELA	71	65	57	-6	-8	-14	-11
G10 ELA	76	78	80	+ 2	+ 2	+4	-3

Math results are making a recovery toward 2019 levels, similar to statewide performance.

Milton Math MCAS Results	2019 % Meeting/ Exceeding	2021% Meeting/ Exceeding	2022 % Meeting/ Exceeding	Change in % Meeting/ Exceeding 2019-21	Change in % Meeting/ Exceeding 2021-22	Change in % Meeting/ Exceeding 2019-22	State Change in % Meeting/ Exceeding 2019-22
G3 Math	60	51	53	-9	+2	-7	-8
G4 Math	80	65	70	-15	+5	-10	-8
G5 Math	74	60	63	-14	+3	-11	-12
G6 Math	67	38	51	-29	+13	-16	-10
G7 Math	65	44	58	-21	+14	-7	-11
G8 Math	66	40	51	-26	+11	-15	-10
G3-8 Math	69	51	58	-18	+7	-11	-10
G10 Math	74	72	73	-2	+1	-1	-9

Science results have recovered from and even exceeded 2019 levels in our district, bucking statewide performance.

Milton Science MCAS Results	2019 % Meeting/ Exceeding	2021% Meeting/ Exceeding	2022 % Meeting/ Exceeding	Change in % Meeting/ Exceeding 2019-21	Change in % Meeting/ Exceeding 2021-22	Change in % Meeting/ Exceeding 2019-22	State Change in % Meeting/ Exceeding 2019-22
G5 Science	68	66	69	-2	+3	+1	-6
G8 Science	62	57	65	-5	+8	+3	-4
G10 Science*			78				

* First administration of the Next-Generation Science MCAS in grade 10 Physics and Biology and not comparable to prior years.

Subgroups Performance Change between 2021 and 2022

(change in % of students meeting/exceeding expectations)

	G3-8 ELA	G3-8 Math	G5 & G8 Science	G10 ELA	G10 Math
Students w/ disabilities	-7%	+2%	+2%	+12%	+19%
EL and former EL	-8%	+7%	-10%	n/a	n/a
Low Income	-13%	+10%	+3%	+5%	+3%
African Am/Black	-9%	+4%	+12%	+19%	+18%
Asian	-5%	+12%	-2%	-6%	+11%
Hispanic/Latino	-4%	+11%	+20%	+27%	+10%
Multi-Race	-4%	+2%	+11%	n/a	n/a
White	-10%	+7%	+5%	-4%	-6%
All Students	-8%	+7%	+5%	+2%	+2%

Double-digit gains in highlight

Key Takeaways

- The state of education is in a period of rebuilding coming out of the global pandemic. It may take longer to fully address the impact of unfinished learning and recover back to our pre-pandemic levels of achievement.
 - DESE considers 2022 to be the new “baseline” year.
- Milton is experiencing similar patterns of performance as the state on standardized MCAS testing.
 - Performance in ELA for grades 3-8 has declined by 15 percentage points since 2019. Performance in Math for the same grade band has recovered somewhat from the previous year, but it is still 11 percentage points below the 2019 level.
 - It is still a question - statewide and locally - of whether ELA has seen the bottom and we will start to see a recovery this coming year.
- Bright spots to celebrate!
 - Milton outperforms the state at all grade levels, in all subject areas, at all schools.
 - Our science results have exceeded even 2019 levels, bucking statewide performance.
 - Most of our subgroups have achieved double digit gains since 2021 in the percentage of students meeting/exceeding expectations. Notably, African American/Black, Hispanic/Latino and students with disabilities saw gains in multiple subjects.
 - Grade 10 performance is holding steady or improving while the state declines slightly.

Comparable districts

- We pulled data from 4 districts DESE considers to be our peers based on similar demographic profiles (Mansfield, Natick, Walpole, and Wellesley).
 - Percentage of High Needs learners consisting of English Learners, Low income students, and Students with disabilities
- We also pulled data from 4 geographic neighboring districts (Canton, Needham, Sharon and Braintree).
- Each district has different compositions of racial/ethnic diversity, average class sizes, per pupil expenditures, not to mention programming - all contributing factors to student performance.
 - Milton has the highest percentage of African American/Black students at 13.2%, the second highest average class size at 17.3 students and the lowest per pupil expenditure at \$15,508.
- Milton's student academic performance on the MCAS and other academic indicators is within the range of performance among all these peers - we're not the lowest or the highest.
- One area where we're clearly leading our peer districts is in teacher diversity. Milton has 9.1% teachers of color in the district whereas the second highest is 7.5% in Needham.

Recommendations for District Metrics

- Our goal is to pull together a set of district metrics that can be used to measure the “success” of our students and of our district efforts outlined in the Strategic Plan.
- These represent our best collective thinking to date.
- We acknowledge that there are some new metrics, and some metrics where the data might be evolving in the coming years.
- With only one point of data as the new “baseline”, we tried to balance the reality of where we are and the expectations we have.
- Where appropriate, we have put in a state or local benchmark to give a reference point for our performance.
- As with the Strategic Plan, these metrics are “evergreen” and will be revisited by the District annually.

Summary of Recommended Metrics

Student Preparedness for College / Career	Student Performance	Student and Teacher Experiences
College persistence (into soph yr)	G3-8 ELA, Math MCAS	Disproportionality in Spec Ed - Commun
College graduation (within 6 yrs)	G5 & 8 Science MCAS	Disproportionality in Spec Ed - Discipline
College/career readiness (AP/Dual/internship)	G10 ELA, Math, Science MCAS	French Immersion program diversity
Advanced Placement - achievement	G3-8 ELA, Math MCAS - Subgroups	School Climate - VOCAL Survey
Advanced Placement - access	G5 & 8 Science MCAS - Subgroups	Teacher Retention Rate
Advanced Placement - equity	G10 ELA, Math MCAS - Subgroups	Teacher Hiring and Diversity
	G10 Math MCAS - Subgroups (when available)	Paraprof. Hiring and Diversity

Student Preparedness for College/Career

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
College persistence	% of our high school graduates who are enrolled in college within 16 months after graduating high school.	89.8% (Class of 2020)	67.7% (State, Class of 2020)	90%
College graduation	% of our high school students (who enrolled within 16 months after HS graduation) completed their college degree (Associate's, Bachelor's degree) within 6 years.	79.3% (Class of 2015)	69.3% (State, Class of 2015)	85%
College/ career readiness experience	% of our graduating seniors who will have exposure to a college or career experience through an AP course, a dual-enrollment course with Quincy College, or a spring semester internship.	75% (Class of 2022)	n/a	85%

Student Preparedness for College/Career - AP

Metric	Description	2021-22 Baseline	State/Local Benchmark	Year 5 Target (SY26-27)
Advanced Placement - “All Student” achievement	% of AP exams taken annually will achieve at least one qualifying score of 3, 4 or 5.	<p style="text-align: center;">67% (2021)*</p> <p style="text-align: center;"><small>*DESE has not updated data for 2022</small></p>	<p style="text-align: center;">60.9% (2021)</p>	<p style="text-align: center;">85%</p>
Advanced Placement - access	Eliminate the participation gap for our priority subgroups in the AP program: African American/Black, Hispanic/Latino, students with disabilities, EL, and low income students in our combined Grades 11 and 12.	<p>G11 & 12 demos in AP program:</p> <ul style="list-style-type: none"> AfAm/BI - 7% Hisp/Lat - 4% SWD - 4% EL - 1% Low Inc - 10% 	<p>G11 & 12 demos in MPS:</p> <ul style="list-style-type: none"> AfAm/BI - 17% Hisp/Lat - 6% SWD - 18% EL - 2% Low Inc - 21% 	<p style="text-align: center;">No gaps in access</p>
Advanced Placement - equity	Priority subgroups (AfAm/BI, Hisp/Lat, SWD, EL/FEL, Low inc) will experience the same rate of performance (achievement of qualifying scores) annually as the “All Students” group.	<p style="text-align: center;">(2021)</p> <ul style="list-style-type: none"> EL/FEL - n/a Low inc - 55.6% SWD - 68% AfAm/BI - 36.8% Hisp/Lat - 61.3% 	<p style="text-align: center;">(2021)</p> <ul style="list-style-type: none"> State EL/FEL - 28.2% State Econdis - 36.8% State SWD - 44.1% State AfAm/BI - 24.4% State Hisp/Lat - 37.0% 	<p style="text-align: center;">No gaps in performance</p>

Student Performance - MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G3-8 ELA MCAS	% of students who will meet or exceed expectations on the ELA MCAS in Grades 3-8	57%	41%	75%
G3-8 Math MCAS	% of students who will meet or exceed expectations on the Math MCAS in Grades 3-8	58%	39%	75%
G5 & 8 Science MCAS	% of students who will meet or exceed expectations on the Math MCAS in Grades 5 & 8	67%	42%	75%
G10 ELA MCAS	% of students who will meet or exceed expectations on the Grade 10 ELA MCAS	80%	58%	85%
G10 Math MCAS	% of students who will meet or exceed expectations on the Grade 10 Math MCAS	73%	50%	85%
G10 Science MCAS	% of students who will meet or exceed expectations on the Grade 10 Science MCAS	77%	47%	85%

Student Performance - ELA MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G3-8 ELA MCAS	% of students who will meet or exceed expectations on the ELA MCAS in Grades 3-8	57%	41%	75%
G3-8 ELA MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) districtwide in Grades 3-8 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	SWD -7% EL/FEL -8% Low Inc -13% AfAm/BI -9% Hisp/Lat -4% All Students -8%	n/a	Student subgroups will have higher rates of change than "All Students."

Color key for subgroups performance

Red: performing 2+ percentage points below "All Students"

Yellow: performing 1 percentage below "All Students"

Black: staying the same

Green: performing better than "All Students"

Student Performance – Math MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G3-8 Math MCAS	% of students who will meet or exceed expectations on the ELA MCAS in Grades 3-8	58%	39%	75%
G3-8 Math MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) districtwide in Grades 3-8 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	<p>SWD +2%</p> <p>EL/FEL +7%</p> <p>Low Inc +10%</p> <p>AfAm/BI +4%</p> <p>Hisp/Lat +11%</p> <p>All Students +7%</p>	n/a	Student subgroups will have higher rates of change than “All Students.”

Color key for subgroups performance

Red: performing 2+ percentage points below “All Students”

Yellow: performing 1 percentage below “All Students”

Black: staying the same

Green: performing better than “All Students”

Student Performance – Science MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G5 & 8 Science MCAS	% of students who will meet or exceed expectations on the Science MCAS in Grades 5 & 8	67%	42%	75%
G5 & 8 Science MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) districtwide in Grades 5 and 8 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	SWD +2% EL/FEL -10% Low Inc +3% AfAm/BI +12% Hisp/Lat +20% All Students +5%	n/a	Student subgroups will have higher rates of change than "All Students."

Color key for subgroups performance

Red: performing 2+ percentage points below "All Students"

Yellow: performing 1 percentage below "All Students"

Black: staying the same

Green: performing better than "All Students"

Student Performance - Grade 10 ELA MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G10 ELA MCAS	% of students who will meet or exceed expectations on the Grade 10 ELA MCAS	80%	58%	85%
G10 ELA MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) in Grade 10 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	SWD +12% EL/FEL - n/a Low Inc +5% AfAm/BI +19% Hisp/Lat +27% All Students +2%	n/a	Student subgroups will have higher rates of change than "All Students."

Color key for subgroups performance

Red: performing 2+ percentage points below "All Students"

Yellow: performing 1 percentage below "All Students"

Black: staying the same

Green: performing better than "All Students"

Student Performance - Grade 10 Math MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G10 Math MCAS	% of students who will meet or exceed expectations on the Grade 10 Math MCAS	73%	50%	85%
G10 Math MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) in Grade 10 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	SWD +19% EL/Former EL - n/a Low Inc +3% AfAm/BI +18% Hisp/Lat +10% All Students +2%	n/a	Student subgroups will have higher rates of change than "All Students."

Color key for subgroups performance

Red: performing 2+ percentage points below "All Students"

Yellow: performing 1 percentage below "All Students"

Black: staying the same

Green: performing better than "All Students"

Student Performance - Grade 10 Science MCAS

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
G10 Science MCAS	% of students who will meet or exceed expectations on the Grade 10 Science MCAS	77%	47%	85%
G10 Science MCAS - Subgroups	Students in priority subgroups (SWD, EL/Former EL, Low Inc, AfAm/BI, Hispanic/Latino) n Grades 10 will experience a better rate of performance change (in percentage of students meeting/exceeding expectations) as compared to the preceding year than the "All Students" group.	n/a (first admin of G10 Next-Gen test, so no rate of performance change available)	n/a	Student subgroups will have higher rates of change than "All Students."

Color key for subgroups performance

Red: performing 2+ percentage points below "All Students"

Yellow: performing 1 percentage below "All Students"

Black: staying the same

Green: performing better than "All Students"

Student Experience - Special Education

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
Disproportionality in Special Education - Communication	Reduce the identification of African American/Black students with a Communication Disability to a risk ratio of less than 3 as defined by DESE.	3.76	n/a	3.0
Disproportionality in Special Education - Discipline Removals	Reduce the discipline removals of African American/Black students with special education to a risk ratio of less than 3 as defined by DESE.	New data not yet provided by DESE; 4.57 in 2019-20	n/a	3.0

Student Experience – French Immersion

Metric	Description	2021-22 Baseline	State/Local Benchmark	Year 5 Target (SY26-27)
French Immersion program diversity	Demographics for G1 French Immersion enrollment should mirror the overall demographics of the previous year's Kindergarten population. The goal is to increase the racial and socio-economic diversity in the program so that it reflects the district demographics.	G1 French demos: AfAm/BI 6% Asian 4% Hisp/Lat 3% Multiracial 13% White 74% Low inc 6% Males 31%	20-21 K demos: AfAm/BI 8% Asian 7% Hisp/Lat 4% Multiracial 9% White 72% Low inc 13% Males 44%	Demo- graphics mirroring

Student Experience – School Climate

VOCAL is an annual survey sponsored by the Massachusetts Department of Elementary and Secondary Education. Participating students are asked to share their views on three dimensions and nine topics of school climate:

SCHOOL CLIMATE MEASURE		
ENGAGEMENT	SAFETY	ENVIRONMENT
<p>Cultural Competence The extent students feel adults/students value diversity, manage dynamics of differences, and avoid stereotypes.</p> <p>Relationship The extent students feel there is a social connection and respect between staff/teachers and students, and between students and their peers.</p> <p>Participation The extent students feel engaged intellectually, emotionally, and behaviorally in the classroom, and the extent that students or their parents are engaged in school life.</p>	<p>Emotional safety The extent students feel a bond to the school, and the extent adults/students support the emotional needs of students.</p> <p>Physical safety The extent that students feel physically safe within the school environment.</p> <p>Bullying/Cyber-bullying The extent that students report different types of bullying behaviors occurring in the school and the extent that school/staff/students try to counteract bullying.</p>	<p>Instructional environment The extent that students feel the instructional environment is collaborative, relevant, challenging and supportive of learning.</p> <p>Mental health environment The extent that students have access to support systems that effectively support their social, emotional and mental health well-being.</p> <p>Discipline environment The extent that discipline is fair, applied consistently and evenly, and a shared responsibility among staff, teachers, and students.</p>

Student Experience - School Climate

Metric	Description	2021-22 Baseline	State/Local Benchmark	Year 5 Target (SY26-27)
School Climate - VOCAL Survey	<p>VOCAL is a relatively new student survey developed in 2018 and administered by DESE, alongside the MCAS. It is voluntary and is offered to students in Grades 4, 5, 8, and 10. It evaluates student perceptions of school climate (engagement, safety, and environment).</p> <p>VOCAL provides an overall favorability trend to indicate how students are feeling about school, taking into account feedback from all three dimensions. Student score distributions are divided into 4 categories: least favorable (less than 30), somewhat favorable (31-50), favorable (51-70), and most favorable (greater than 70).</p>	<p>Favorability trend (% students who found the school climate to be favorable or most favorable)</p> <p>G5 - 74% G8 - 25% G10 - 44%</p>	<p>State</p> <p>G5 - 64% G8 - 32% G10 - 32%</p>	<p>Tbd</p>

Staff Experience – Diversity in Membership

Metric	Description	2021-22 Baseline	State/Local Benchmark	Year 5 Target (SY26-27)
Teacher Diversity	We have about 10% teachers of color in the district, and about 30% students of color. Statewide, there are only 9.2% teachers of color in the public education system and 44% students of color. DESE's stated goal is to increase the percentage of teachers of color to 26% by 2030. Our goal is to maintain a percentage that's at least equal to the state's, if not higher.	9.1% (30)	9.6% (State)	Maintain % equal to the State's
Para-professionals Diversity	We see paraprofessionals as a potential pipeline for developing new teachers. Our goal is to attract paraprofessionals of color and maintain a percentage that's at least equal to the state's, if not higher.	16.5% (14)	18.7% (State)	Maintain % equal to the State's

Staff Experience – Diversity in Hiring/Retention

Metric	Description	2021-22 Baseline	State Benchmark	Year 5 Target (SY26-27)
New Teacher Hires	Our goal is 20% of our new teacher hires annually will be teachers of color.	5.3% (1)	15.3% (State)	20%
New Para-Professional Hires	Our goal is 20% of our new paraprofessional hires annually will be staff of color.	25.0% (3)	18.1% (State)	20%
Teacher Retention Rate	Retention rate of teachers of color will be at least the same as the retention rate of white teachers.	84.4% (TOC) 90.7% (White)	80.3% (State, TOC) 87.5% (State, White)	Equal retention rates for teachers of color and white teachers

District Next Steps

- Annual presentation of summative metrics to the School Committee
- Formative tools are used in the district to guide instructional decisions by teachers and are not included in this summative “dashboard” of metrics.
 - Lexia Rapid
 - iReady
 - Intellispark/SEL
 - Other common assessments (Science, French, etc.)
- Feedback/comments?