



**Merrick Academy-Queens Public  
Charter School**

**2023-24 ACCOUNTABILITY  
PLAN  
PROGRESS REPORT**

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## 2023-24 ACCOUNTABILITY PLAN PROGRESS REPORT

Adrian Manuel, Executive Director prepared this 2023-24 Accountability Progress Report on behalf of the charter school’s board of trustees:

Trustee’s Name	Board Position	
	Office (e.g., chair, treasurer, secretary)	Committees (e.g., finance, executive)
Cameil Dalgetty Jarvis	Chair	Human Resources, Academics, Finance, and Operations
Gerald Karikari	Trustee	Human Resources, Academics, Finance, and Operations
Paula James	Trustee	Finance and Operations
James Ding	Treasurer	Human Resources, Academics, Finance, and Operations
Tatum Boothe	Secretary	Human Resources and Academics
Linda Johnson	Trustee	Human Resources and Academics

**Adrian Manuel has served as the Executive Director since 2021.**

## SCHOOL OVERVIEW

The State University of New York Board of Trustees approved the Merrick Academy – Queens Public Charter School (Merrick Academy or the School) in June of 2000. Located in Community School District 29 in Queens Village, New York City, the School opened in September 2000, with an enrollment of 121 students in grades K – 2. In the 2023-24 school year, Merrick Academy had an enrollment of 596 kindergarten through fifth grade students.

Our mission at Merrick Academy recognizes that in order to be successful, our children need support from both the home and school. We know a strong partnership with parents will make a great difference in a child’s education. As partners, we at Merrick Academy share the responsibility for our children’s success and want all stakeholders to know that we will do our very best to carry out our responsibilities.

We, at Merrick Academy pursue excellence in our all-inclusive learning community of students, educators, parents and community members. We work towards the common purpose of providing an excellent educational experience for all students. Through our high degree of individualized instruction, increased time on the task of learning and innovative academic curriculum, we will ensure that all of our students are college and career-ready.

Overall, Merrick Academy’s motto “in pursuit of excellence” is a constant reminder of the expectations we set for our learning community.

The focus of the Merrick Academy is on the core skills of reading, language and mathematics. Merrick Academy is organized to provide an extended day, a high degree of individualized instruction and an innovative research-based academic curriculum.

## ENROLLMENT SUMMARY

School Enrollment by Grade Level and School Year

School Year	K	1	2	3	4	5	UG E	Total
2021-22	77	88	88	103	81	75	0	512
2022-23	96	107	112	85	98	81	3	582
2023-24	100	98	104	110	78	104	2	596

## GOAL 1: ENGLISH LANGUAGE ARTS

All students enrolled in the Merrick Academy-Queens Public Charter School will become proficient in reading and writing of the English language.

### BACKGROUND

Merrick Academy has a literacy rich design where reading and writing exists in every subject area. There are authentic texts and opportunities to read. All are reading with purpose and making connections to self, the community, and the world. All are making connections across content areas.

The School's ELA curriculum is rooted in the following principles:

1. Read and Write Critically- summarize, interpret, critique and make connections across all disciplines by reading and writing in response to informational, technical and fictional texts
2. Engage the Writer's Process
3. Construct logical arguments that utilizes evidence from multiple points of views
4. Speak with confidence, clarity and discernment about a wide range of topics demonstrating the use of effective research techniques with various pieces of media and a synthesis of the information
5. Listen to others and be able to break down what is said to either critique, question and/or challenges by providing logical explanation or refutation
6. Identify and convey a strong understanding of the interconnectedness between themes, genres and central ideas
7. Demonstrate knowledge of the difference between writing informally and formally by selecting appropriate styles, expressions, and vocabulary

The ELA curriculum relies on a balanced literacy approach that incorporates authentic texts, guided reading, centers, independent reading, and writing. In grades K-2, students learn handwriting, phonemic awareness, concepts about print, and phonics.

At Merrick Academy, we aim to cultivate proficient, lifelong readers and writers through a dual approach. Our literacy instruction is grounded in the Science of Reading and enhanced by an interdisciplinary framework inspired by the International Baccalaureate (IB). This ensures students not only build a strong foundation in literacy but also make meaningful connections across subjects, fostering critical thinking and global awareness.

### Core Principles of the ELA Program:

1. **Phonemic Awareness and Phonics:** In grades K-2, we follow a structured, sequential approach to teaching the relationship between sounds and letters, enabling students to decode and encode with increasing precision.
2. **Vocabulary and Language Comprehension:** We emphasize direct, contextual vocabulary instruction, helping students master word meanings, structures, and usage. This strengthens comprehension and critical thinking across various text types.
3. **Fluency:** Through guided reading, repeated practice, and read-alouds, we develop fluency, allowing students to read smoothly and accurately while focusing on text meaning and deeper analysis.
4. **Reading Comprehension Strategies:** Students are equipped with key strategies that span content areas, supporting them in making connections between texts, personal experiences, and the broader world.
5. **Critical and Global Thinking:** We encourage students to critically engage with texts, constructing logical, evidence-based arguments. This extends to exploring global issues, making interdisciplinary connections across social studies, science, and the arts.
6. **Data-Driven Instruction:** Regular assessments allow us to diagnose reading challenges and tailor instruction accordingly. Tools such as NWEA-MAP and i-Ready alongside regular and common classroom based assessments inform targeted interventions and personalized learning plans.
7. **Cognitive and Linguistic Development:** Beyond decoding, we engage students in activities that develop oral language, listening comprehension, and critical discussion, fostering deep engagement with complex texts.
8. **Writing Integration:** Writing is seamlessly aligned with reading, reinforcing understanding of text structures, grammar, and argumentation. Students write across genres, crafting evidence-based narratives and arguments with clarity and purpose.
9. **Support for Diverse Learners:** We provide differentiated instruction for struggling readers, students with disabilities, and English Language Learners (ELLs), and other at-risk groups, ensuring equitable access to literacy development.

### Early Literacy (K-2) Specifics:

- **Phonics and Phonemic Awareness:** We focus on explicit, systematic instruction to establish a strong foundation for literacy.
- **Fluency and Comprehension:** Students transition from simple decodable texts to more complex materials, enhancing fluency and understanding through targeted reading practices.
- **Vocabulary:** Vocabulary instruction is embedded in reading, fostering growth in morphological analysis and contextual understanding.

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### Conclusion:

By combining the Science of Reading with a holistic, interdisciplinary framework, Merrick Academy’s ELA program ensures that students not only acquire essential literacy skills but also become critical thinkers capable of navigating and connecting ideas across disciplines. Our approach prepares students to excel in the 21st-century landscape with confidence, curiosity, and a global perspective.

## ELEMENTARY AND MIDDLE ELA

### ELA Measure 1 - Absolute

Each year, 75 percent of all tested students enrolled in at least their second year will perform at or above proficiency on the New York State English language arts examination for grades 3-8.

The tables below summarize the participation information for this year’s test administration as well as the performance of all students and students enrolled for at least two years.

2023-24 State English Language Arts Exam  
Number of Students Tested and Not Tested

Grade	Total Tested	Not Tested						Total Enrolled
		Absent	Refusal	ELL/I EP	Admin error	Medically excused	Other reason	
3	101	0	2	0	0	0	5	108
4	68	0	6	3	0	0	5	82
5	100	0	3	1	0	0	2	106
All	269	0	11	4	0	0	12	296

Performance on 2023-24 State English Language Arts Exam  
By All Students and Students Enrolled in At Least Their Second Year<sup>1</sup>

Grade	All Students			Enrolled in at least their Second Year		
	Number Tested	Number Proficient	Percent Proficient	Number Tested	Number Proficient	Percent Proficient
3	101	31	30.7%	83	26	31.3%
4	68	37	54.4%	54	31	57.4%
5	100	48	48.0%	77	37	48.1%
All	269	116	43.1%	214	94	43.9%

### ELA Measure 2 - Absolute

<sup>1</sup> Students are considered “enrolled in at least their second year” if they were enrolled on BEDS day of the school year prior to the most recent exam administration.

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Each year, the school’s aggregate Performance Index (“PI”) on the State English language arts exam will meet that year’s state Measure of Interim Progress (“MIP”) set forth in the state’s ESSA accountability system.

In New York State, ESSA school performance goals are met by showing that an absolute proportion of a school's students who have taken the English language arts test have scored at the partially proficient, or proficient and advanced performance levels (Levels 2 or 3 & 4). The percentage of students at each of these three levels is used to calculate a PI and determine if the school has met the MIP set each year by the state’s ESSA accountability system. To achieve this measure, all tested students must have a PI value that equals or exceeds the state’s 2023-24 English language arts MIP for all students of **113**. The PI is the sum of the percent of students in all tested grades combined scoring at Level 2, plus two times the percent of students scoring at Level 3, plus two-and-a-half times the percent of students scoring at Level 4. Thus, the highest possible PI is 250.<sup>2</sup>

### English Language Arts 2023-24 Performance Index

Number in Cohort	Percent of Students at Each Performance Level			
	Level 1	Level 2	Level 3	Level 4
	[20]	[36]	[29]	[14]

$$\begin{array}{rclclclcl}
 \text{PI} & = & [36] & + & [29] & + & [14] & = & [79] \\
 & & & & [29] & + & [14] & = & [43] \\
 & & & & & + & (.5) * [14] & = & [7] \\
 & & & & & & \text{PI} & = & [129]
 \end{array}$$

## RESULTS AND EVALUATION

On the 2023-24 English language arts exam, Merrick’s Performance Index score was 129, 16 points above the goal. Additionally, the school exceeded the MIP goal. Merrick’s ability to achieve these goals is attributable to the school’s focus on English language arts instruction and its ability to lower the percentage of students testing at level one on the state assessment.

### ELA Measure 3 - Comparative

Each year, the percent of all tested students who are enrolled in at least their second year and performing at proficiency on the state English language arts exam will be greater than that of all students in the same tested grades in the school district of comparison.

A school compares tested students enrolled in at least their second year to all tested students in the public school district of comparison. Comparisons are between the results for each grade in which the school

<sup>2</sup> You can find the statewide MIP goals for 2022-23 to 2026-27 [here](#)

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had tested students in at least their second year at the school and the total result for all students at the corresponding grades in the school district.<sup>3</sup>

### 2023-24 State English Language Arts Exam Charter School and District Performance by Grade Level

Grade	Percent of Students at or Above Proficiency			
	Charter School Students In At Least 2 <sup>nd</sup> Year		All District Students	
	Percent Proficient	Number Tested	Percent Proficient	Number Tested
3	31.3%	26	41.7%	1559
4	57.4%	31	50.1%	1644
5	48.1%	37	41.8%	1741
All	43.9%	94	44.5%	4944

#### ELA Measure 4 - Comparative

Each year, the school will exceed its predicted level of performance on the state English language arts exam by an effect size of 0.3 or above (performing higher than expected to a meaningful degree) according to a regression analysis controlling for economically disadvantaged students among all public schools in New York State.

The Institute conducts a Comparative Performance Analysis, which compares the school’s performance to that of demographically similar public schools statewide. The Institute uses a regression analysis to control for the percentage of economically disadvantaged students among all public schools in New York State. The difference between the school’s actual and predicted performance, relative to other schools with similar economically disadvantaged statistics, produces an Effect Size. An Effect Size of 0.3, or performing higher than expected to a meaningful degree, is the target for this measure. Given the timing of the state’s release of economically disadvantaged data and the demands of the data analysis, the 2023-24 analysis is not yet available. This report contains 2022-23 results.<sup>4</sup>

### 2022-23 English Language Arts Comparative Performance by Grade Level

Grade	Percent Economically Disadvantaged	Mean Scale Score		Effect Size
		Actual	Predicted	
3	76.5%	446	441.4	.46
4	72.4%	449	445.3	.39
5	72.8%	444	443.7	.04
All	73.8%	444.6	443.6	.3

<sup>3</sup> Schools can access these data when the NYSED releases its database containing grade level ELA and mathematics results for all schools and districts statewide.

<sup>4</sup> These data can be found in the school’s Accountability Summary provided by the Institute in spring 2024.

**ELA Measure 5 - Growth**

Each year, under the state’s Growth Model, the school’s mean unadjusted growth percentile in English language arts for all tested students in grades 4-8 will be above the target of 50.

**METHOD**

Given the timing of the state’s release of Growth Model data, the 2023-24 analysis is not yet available. This report contains 2022-23 results, the most recent Growth Model data available.<sup>5</sup>

This measure examines the change in performance of the same group of students from one year to the next and the progress they are making in comparison to other students with the same score in the previous year. The analysis only includes students who took the state exam in 2022-23 and also have a state exam score from 2021-22 including students who were retained in the same grade. Students with the same 2021-22 score are ranked by their 2022-23 score and assigned a percentile based on their relative growth in performance (student growth percentile). Students’ growth percentiles are aggregated school-wide to yield a school’s mean growth percentile. In order for a school to perform above the target for this measure, it must have a mean growth percentile greater than 50.

2022-23 English Language Arts Mean Growth Percentile by Grade Level

Grade	Mean Growth Percentile	
	School	Target
4	57.1	50.0
5	40.9	50.0
All	50.5	50.0

**ELA INTERNAL EXAM RESULTS**

During 2023-24, in addition to the New York State 3<sup>rd</sup>– 8<sup>th</sup> grade exams, the school primarily used the following assessment to measure student growth and achievement in ELA: **i-Ready**

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<sup>5</sup> These data can be found in the school’s Accountability Summary provided by the Institute in spring 2024.

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### 2023-24 i-Ready [ELA] Assessment End of Year Results

Measure	Subgroup	Target	Tested	Results	Met?
Measure 1: Each year, the school’s median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students will be equal to or greater than 100%.	All students	100%	291	129%	Yes
Measure 2: Each year, the school’s median percent progress to Annual Typical Growth of all 3 <sup>rd</sup> through 8 <sup>th</sup> grade students who were two or more grade levels below grade level in the fall will be equal to or greater than 110% by the spring assessment administration.	Low initial achievers	110%	89	133%	Yes
Measure 3: Each year, the median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students with disabilities at the school will be equal to or greater than the median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade general education students at the school.	Students with disabilities <sup>6</sup>	127%	56	144%	Yes
Measure 4: Each year, 75% of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students enrolled in at least their second year at the school will score at the <i>mid on-grade level</i> or above scale score for the year-end assessment.	2+ students	75%	216	35%	No

### End of Year Performance on 2023-24 i-Ready [ELA] Assessment By All Students and Students Enrolled in At Least Their Second Year

Grades	All Students		Enrolled in at least their Second Year	
	Percent Mid-On Grade Level or Above	Number Tested	Percent Mid-On Grade Level or Above	Number Tested
3	39%	108	43%	83
4	26%	79	33%	55
5	26%	104	28%	78
All	30%	291	35%	216

<sup>6</sup> Schools may elect to report the aggregated data for a different subpopulation of students if the total tested number of students with disabilities is 5 or fewer, or if the school’s mission aligns to serving a different specific subpopulation. For schools that choose a different subpopulation (e.g., English language learners, homeless students, etc.), please explain the rationale in the narrative section

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### End of Year Growth on 2023-24 i-Ready [ELA] Assessment By All Students

Grades	Median Percent of Annual Typical Growth	Number Tested
3	124	108
4	110	79
5	148	104
All	127	291

### SUMMARY OF THE ELA GOAL

On the 2023-24 English language arts exam, Merrick achieved its growth goal, one of its comparative goals, and one of its absolute goals.

Type	Measure	Outcome
Absolute	Each year, 75 percent of all tested students who are enrolled in at least their second year will perform at proficiency on the New York State English language arts exam for grades 3-8.	No
Absolute	Each year, the school's aggregate PI on the state's English language arts exam will meet that year's state MIP as set forth in the state's ESSA accountability system.	Yes
Comparative	Each year, the percent of all tested students who are enrolled in at least their second year and performing at proficiency on the state English language arts exam will be greater than that of students in the same tested grades in the school district of comparison.	No
Comparative	Each year, the school will exceed its predicted level of performance on the state English language arts exam by an effect size of 0.3 or above (performing higher than expected to a meaningful degree) according to a regression analysis controlling for economically disadvantaged students among all public schools in New York State.	Yes
Growth	Each year, under the state's Growth Model the school's mean unadjusted growth percentile in English language arts for all tested students in grades 4-8 will be above the target of 50.	Yes

### EVALUATION OF ELA GOAL

Merrick exceeded its growth goal by half a percentage point, with a particularly impressive outcome by the school's fourth grade.

Merrick met the comparative goal of an effect size of 0.3. The school's third and fourth grades performed particularly well, and the effect size would have been larger, had it not been for the lower-than-expected result of the school's fifth grade. When compared to the district, students enrolled at the Merrick for two or more years had achieved essentially the same percentage of students achieving proficiency on the 2023-24 English language arts exam. Merrick's fourth and fifth grade students enrolled at the school for

two or more years achieved proficiency on the ELA assessment exam at a rate significantly higher than the district average for those grades.

Merrick's aggregate PI exceeded the ESSA goal by 16 points. As stated above, this is largely attributable to the school's ability to move level one students up to levels two and three. Although Merrick did not meet the absolute goal of 75% of students achieving proficiency on the State English language arts exams, few schools in the State meet this goal.

### ADDITIONAL CONTEXT AND EVIDENCE

N/A

### ELA ACTION PLAN

The School will be implementing a number of new initiatives during the 2021-22 school year to improve ELA student achievement. The core beliefs under-pinning our academic planning include, but are not limited to:

- We teach every student grade-level content standards and we meet students where they are;
- Our programs and offerings are responsive to the most current and accurate data;
- We must intentionally plan to “teach and insist.” Teachers and leaders need high-quality, aligned, and consistent training and support in order to deliver on a robust plan for unfinished learning AND grade level learning;
- We believe that the whole community will work together to help our students grow;
- Strengthening and aligning our current resources and building more effective and consistent systems and processes that lead to teacher, leader, and student achievement; and
- We believe that accomplishing our goals requires intentionality in a way that allows us to approach academics in a tiered and purposeful plan that closes gaps and keeps us on track for long term goals.

Our theory of action, which is based on research, case studies, school visits, and interrogations, is simple: If we deliver rigorous on grade-level instruction, And we create the structures necessary to execute on impactful remediation and acceleration And we build teacher and leader content knowledge and capacity to provide effective instruction, Then,

- Students will continue to build content knowledge on grade-level standards while simultaneously receiving academic intervention support to close foundational learning gaps and make up for unfinished learning; and
- Our staff and school community will have the tools, knowledge, experiences, and resources necessary to execute our school's instructional vision (short-term and long term).

In order to address unfinished learning among our students, we will implement the following acceleration, remediation, and enrichment strategies:

- **Deliver Strong Tier I instruction:**

1. Strong instructional delivery of grade level content through effective execution of the new curriculum.
- **Acceleration Blocks**
    1. Daily 40-minute small-group instruction targeted toward accelerating core foundational skills in literacy;
    2. Classrooms and class structures that include daily [Tier 2 strategies](#) to address foundational skills acceleration. (Targeted smaller groups);
    3. Extend and reorganize math and literacy blocks to include time for intentional spiraling of unfinished content into grade level content and delivery;
    4. Internalize and implement Daily Execution Protocol for Humanities Block; and
    5. Reorganizing ELA curriculum scope and sequence charts to ensure the efficacy and efficiency of the delivery of unfinished learning strategies as well as grade level content.
  
  - **Strong Start (Phase I and II)**
    1. “All hands on deck” approach gathering both summative and formative data for students;
    2. Implement new Student Information System(s) to efficiently and effectively house and communicate student data;
    3. Community urgency and celebrations that center progress and excitement instead of “loss” or “being in deficit”; and
    4. Update and beautify hallways, classrooms, and common areas to build excitement and support immersion.
  
  - **Ongoing Implementation and monitoring of [RTI](#)**
    1. Conduct weekly meetings with consistency and fidelity and communicate clear strategies and next steps for all stakeholders;
    2. Alignment of interventions to students’ specific gaps;
    3. RTI/MTSS materials archived: calendar, meeting notes;
    4. Instructional leaders engage in RTI walkthroughs to monitor and Tier 1, 2, and 3 interventions;
    5. Restructuring of our 40-minute academic support block to “Student Learning Lab.” A Student Learning Lab is an intervention block where scholars receive support based on the area of need. AIS providers will also push in during this time; and
    6. Including “High dosage tutoring” for our students who are most academically at-risk. Examples include after school at least 3 times a week 3:30 pm -5:30 pm and Saturday school 9 am-12pm.
  
  - **Data Cycles**

1. Proactively monitor and respond to data:
  - a. Student Individual Learner Profiles and on-going use and ownership of the plans;
  - b. Daily exit tickets and debriefs; and
  - c. Strengthening our data cycle system of reporting to ensure that teachers have a deeper and better view of their students' growth on a dashboard and/or digital binders that teachers can easily access.

- **Building Teacher and Leader Capacity and Accountability**

1. Instructional Leaders engage in RTI walk throughs to monitor Tier 1, 2, and 3 interventions;
2. Time in weekly "Learning Lab" for check-ins on strategies and results of students in Tier 1 and Tier 2; and
3. "Front loading" professional development for teachers on key instructional strategies for Tier 1 and Tier 2 during Pre-Service as they are planning for initial grade-level curricular units. Revamping and archiving observation and feedback protocols and tools, lesson plans, and trackers to specifically monitor progress in this area and provide stronger opportunities for coaching and professional development.

### **Strategic Approach for Content Knowledge Building and Implementation of New Curriculum**

- **Accelerated Implementation of a researched based curriculum**

1. Development of an implementation plan that is designed for effective internalization, delivery, and high-level implementation that garners student growth and achievement. Including immersion, implementation, reshaping to meet needs, etc.;
2. Implementing a curriculum pacing and implementation tracker that is aligned and housed alongside curriculum maps, professional development calendar, assessments. [Flow of the Day](#); and
3. Intentionality with informational and professional development events to get student, teacher and family buy-in, support and feedback.

- **Teacher and Leader Development and Capacity Building**

1. Weekly Learning Labs ([Lesson Learning Lab Model](#)) for teachers that include: check-ins on pacing, understanding, peer and expert feedback, planning and practice for teachers;
2. Bi-weekly professional development in key teacher and leader actions that lead to successful implementation of curriculum while building content knowledge and high leverage teacher/classroom strategies;

3. Bi-weekly one-on-one coaching sessions that ensure that teachers get feedback in aligned areas of instruction. [Coaching and Feedback Cycle AP and Coach Meeting Protocol](#);
4. Regular teacher step-backs and data days where teachers receive professional development in key areas of growth for their students while creating action-plans;
5. Tiered professional development that is responsive to teacher and leader needs. [Arc of the Year \(PD\)](#); and
6. Clearer alignment and coherence of the tools leaders use to provide feedback and support. ([Get Better Faster](#) and Instructional Practice Guide rubrics [IPG](#))

- **Strong Start**

1. “All hands on deck” approach to building routines and rituals that build Socio-emotional learning through strong academic practices; and
2. “Teach and Insist”-after diagnostics jump right into grade level curriculum with clear plans for spiraling in cumulative review.

- **Departmentalization in the testing grades to allow teachers to focus more on content area depth and breathe**

- **Strengthening and streamlining data cycles**

1. Streamlining PD calendar, timely data distribution and support for teachers, assessment calendar and data meetings.

- **Strengthening community investment and knowledge of what is being taught and why.**

1. Develop and implement a Communication Plan that organizes and captures key communication strategies in order to improve transparency about the Teaching and Learning Cycles, communicate progress, celebrate community, and on-going feedback on the impact of the program

While continuing and improving upon some prior initiatives, the school will be implementing a number of new initiatives during the 2024-25 school year to improve ELA student achievement. The core beliefs under-pinning our academic planning include, but are not limited to:

1. Focused Expertise Enhances Learning: Specializing in humanities allows teachers to develop deep content expertise, leading to stronger literacy instruction across ELA, Social Studies, and the Science of Reading.

2. **Data-Driven Instruction Leads to Continuous Improvement:** Using data at the class and item level ensures instruction is responsive to student needs, driving effective remediation, acceleration, and overall improvement in learning outcomes.
3. **Coaching Elevates Teaching Quality:** Ongoing instructional coaching empowers teachers to continuously refine their practice, promoting professional growth and improving instructional quality.
4. **Equitable Literacy is Central to Student Success:** Ensuring equitable access to literacy instruction for all students, regardless of background, supports the success of diverse learners and fosters an inclusive learning environment.
5. **Unified Focus on Equitable Engagement Strategies Strengthens Outcomes:** A schoolwide instructional focus on equitable engagement strategies builds a learning partnership in the classroom and promotes consistent, effective engagement practices, ensuring that every student is actively participating and benefiting from instruction.
6. **Alignment to the Science of Reading Enhances Literacy Development:** By grounding our literacy practices in the Science of Reading, we ensure that our instruction is evidence-based, structured, and explicit, equipping students with the foundational skills necessary for decoding, comprehension, vocabulary development, and fluency.
7. **Global and Interdisciplinary Perspectives Enrich Learning:** Integrating International Baccalaureate (IB) principles ensures students make connections between global issues and their local communities. Through an interdisciplinary approach, students are encouraged to think critically and develop a broader worldview, which enhances their engagement and understanding across content areas.

### Theory of Action:

If we specialize teacher expertise, leverage data-driven instruction, integrate equitable engagement strategies, align our literacy practices with the Science of Reading, and foster global, interdisciplinary perspectives, then students will receive more targeted and effective instruction, resulting in improved literacy skills, increased cognitive engagement, and enhanced critical thinking. By focusing on evidence-based reading instruction and IB principles, and providing continuous coaching and support, we will create a high-quality learning environment where all students—especially those from historically underserved populations—achieve academic success, develop global awareness, and build foundational skills for lifelong learning.

### New Action Steps Supporting Our ELA and Literacy Beliefs:

1. **Partial Departmentalization (K-5):**
  - Implement partial departmentalization to allow teachers to specialize in humanities, focusing on ELA, Social Studies, and the Science of Reading. This enables deeper instructional expertise and targeted teaching strategies.
2. **Data Analysis PLC:**

- Conduct weekly data analysis Professional Learning Communities (PLCs) where teachers bring student work and classroom-level data. This forum allows for in-depth discussions on individual student progress, adjustments to instructional pacing, and targeted remediation or acceleration based on performance.
- 3. Lesson Internalization PLC:
  - Hold separate weekly lesson internalization PLCs where teachers focus on lesson content. These meetings are dedicated to unpacking curriculum standards, developing effective teaching strategies, and ensuring alignment with schoolwide instructional priorities.
- 4. Dedicated Instructional Coaching:
  - Provide each teacher with a dedicated instructional coach to support professional growth, offer real-time feedback, and help implement effective classroom strategies aligned with literacy goals.
- 5. Focus on Equitable Literacy Practices:
  - Implement schoolwide strategies that prioritize equitable literacy practices. This includes targeted support for at-risk students, English Language Learners (ELLs), and students with diverse needs, ensuring all learners have access to high-quality literacy instruction.
- 6. Unified Focus on Equitable Engagement Strategies:
  - Establish a schoolwide priority centered on equitable engagement strategies, particularly Opportunities to Respond (OTRs). This will ensure that all instructional efforts are aligned with the goal of maximizing student participation, promoting shared accountability, and creating an engaging learning environment for every student.
- 7. Integration of IB Principles:
  - Incorporate IB principles across all classrooms to encourage global thinking and interdisciplinary learning. By connecting students' local experiences with broader global issues, we help them develop a critical understanding of their world, fostering curiosity and a deeper engagement in their studies.

By anchoring instruction in culturally responsive practices and fostering equitable engagement, Merrick Academy will amplify students' cognitive engagement, helping them to develop critical thinking, self-regulation, and problem-solving skills in an inclusive and empowering setting.

## GOAL 2: MATHEMATICS

All students enrolled in the Merrick Academy-Queens Public Charter School will become proficient in mathematics.

### BACKGROUND

Merrick Academy's mathematics curriculum is rooted in the following principles:

1. Develop and apply multiple strategies to solve routine problems
2. Apply methods of problem solving to complex problems requiring various methods
3. Ability to increase precision and accuracy through approximating
4. Utilize of inductive and deductive reasoning to solve problems; multi step, abstract and complex real-world problems
5. Represent mathematical problems in multiple formats such as analytic, numerical and geometrical

Merrick Academy's mathematics curriculum is a comprehensive approach to the subject. Students are engaged in math review, problem solving, conceptual understanding, and mastery of math facts. In grades K-5, students participate in guided math instruction and centers, as well as number stories and practice in foundational skills.

Comprehensive Math Instruction at Merrick Academy:

Our approach to mathematics instruction is built on the belief that deep understanding and fluency in math can only be achieved through cognitively engaging tasks, collaborative learning, and research-based instructional practices. In grades K-5, students engage in a comprehensive program that Ensures students:

1. **Develop and Apply Diverse Problem-Solving Strategies for Routine Tasks:** Equip students with a variety of problem-solving approaches that foster flexibility in thinking and enable them to select the most effective method when tackling routine mathematical problems. This cultivates strategic competence and reinforces core mathematical skills essential for long-term proficiency.

2. Utilize Advanced Problem-Solving Techniques for Multi-Step and Complex Challenges: Guide students in applying a blend of advanced problem-solving methods to address multi-step, abstract problems. By doing so, students are better equipped to navigate complex, real-world scenarios, fostering deeper critical thinking and methodical problem-solving abilities.
3. Understand and Apply Both Procedures and Concepts to Refine Precision, Accuracy, and Fluency: Help students build proficiency by ensuring they can both understand and execute mathematical procedures while grasping the underlying concepts. This combination strengthens their ability to make strategic decisions, improving their fluency and precision in solving problems through estimation and approximation, while maintaining a solid conceptual foundation.
4. Leverage Inductive and Deductive Reasoning to Solve Complex, Real-World Problems: Empower students to apply inductive reasoning (identifying patterns) and deductive reasoning (drawing logical conclusions) to multi-step, abstract, and real-world problems. This enhances their ability to connect mathematical concepts to practical applications, promoting strong logical reasoning and problem-solving skills.

We do this through a program that prioritizes the following:

1. Inquiry-Based Instruction:
  - We use inquiry-based instruction to encourage students to explore mathematical concepts through guided discovery. Teachers facilitate learning by posing open-ended questions that prompt students to investigate and uncover mathematical principles on their own. This approach fosters critical thinking and allows students to make meaningful connections between concepts.
2. Mathematical Discourse and Collaborative Learning:
  - Our classrooms foster mathematical discourse, where students explain their reasoning, challenge their peers' solutions, and collaboratively solve problems. This promotes deeper understanding and allows students to engage with math concepts from multiple perspectives, building both confidence and proficiency.
3. Building Conceptual Understanding:
  - We focus on helping students develop a deep conceptual understanding of mathematical principles. This foundation enables them to apply their knowledge flexibly to a wide range of problems, promoting a deeper engagement with the subject.
4. Formative Assessment and Feedback:
  - Teachers continuously gather data on student progress through formative assessments, including exit tickets, student reflections, and peer assessments. This data allows teachers to provide targeted feedback and adjust instruction to meet students' specific needs.
5. Productive Struggle and Growth Mindset:

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- We encourage students to engage in productive struggle, where they work through challenging problems without immediate solutions. This approach fosters resilience and a growth mindset, helping students to view mistakes as learning opportunities and to persist in solving difficult problems.

### ELEMENTARY AND MIDDLE MATHEMATICS

#### Math Measure 1 - Absolute

Each year, 75 percent of all tested students enrolled in at least their second year will perform at or above proficiency on the New York State Mathematics examination for grades 3-8.

The tables below summarize the participation information for this year’s test administration as well as the performance of all students and students enrolled for at least two years.

2023-24 State Mathematics Exam  
Number of Students Tested and Not Tested

Grade	Total Tested	Not Tested							Total Enrolled
		Absent	Refusal	ELL/I EP	Admin error	Medically excused	Other reason	Took Regents	
3	102	0	6	0	0	0	0	0	108
4	64	2	8	5	0	0	0	0	79
5	102	0	3	1	0	0	0	0	106
All	268	2	17	6	0	0	0	0	293

Performance on 2023-24 State Mathematics Exam  
By All Students and Students Enrolled in At Least Their Second Year

Grade	All Students			Enrolled in at least their Second Year		
	Number Tested	Number Proficient	Percent Proficient	Number Tested	Number Proficient	Percent Proficient
3	102	49	48.0%	83	38	45.8%
4	69	43	62.3%	55	34	61.8%
5	102	58	56.9%	79	49	62.0%
All	273	150	54.9%	217	121	55.8%

#### Math Measure 2 - Absolute

Each year, the school’s aggregate Performance Index (“PI”) on the state mathematics exam will meet that year’s state Measure of Interim Progress (“MIP”) set forth in the state’s ESSA accountability system.

**METHOD**

In New York State, ESSA school performance goals are met by showing that an absolute proportion of a school's students who have taken the mathematics test have scored at the partially proficient, or proficient and advanced performance levels (Levels 2 or 3 & 4). The percentage of students at each of these three levels is used to calculate a PI and determine if the school has met the MIP set each year by the state's ESSA accountability system. To achieve this measure, all tested students must have a PI value that equals or exceeds the state's 2023-24 mathematics MIP for all students of **115.3**. The PI is the sum of the percent of students in all tested grades combined scoring at Level 2, plus two times the percent of students scoring at Level 3, plus two-and-a-half times the percent of students scoring at Level 4. Thus, the highest possible PI is 250.

Mathematics 2023-24 Performance Index (PI)									
Number in Cohort	Percent of Students at Each Performance Level								
	Level 1	Level 2	Level 3	Level 4					
	[12]	[33]	[41]	[14]					
	PI	=	[33]	+	[41]	+	[14]	=	[88]
					[41]	+	[14]	=	[55]
						+	(.5) * [14]	=	[7]
							PI	=	[157]

**RESULTS AND EVALUATION**

On the 2023-24 mathematics exam, Merrick's Performance Index score was 157, over 41 points above the MPI goal. Merrick's ability to achieve this goal is attributable to the school's rigorous mathematics instruction and its ability to lower the percentage of students testing at level one on the state assessment.

**Math Measure 3 - Comparative**

Each year, the percent of all tested students who are enrolled in at least their second year and performing at proficiency on the state mathematics exam will be greater than that of all students in the same tested grades in the school district of comparison.

**METHOD**

A school compares tested students enrolled in at least their second year to all tested students in the public school district of comparison. Comparisons are between the results for each grade in which the school had tested students in at least their second year at the school and the total result for all students at the corresponding grades in the school district.

## 2023-24 ACCOUNTABILITY PLAN PROGRESS REPORT

Grade	Percent of Students at or Above Proficiency			
	Charter School Students In At Least 2 <sup>nd</sup> Year		All District Students	
	Percent Proficient	Number Tested	Percent Proficient	Number Tested
3	45.8%	83	51.0%	1631
4	61.8%	55	57.1%	1707
5	62.0%	79	46.0%	1714
All	55.8%	217	51.3%	5052

### Math Measure 4 - Comparative

Each year, the school will exceed its predicted level of performance on the state mathematics exam by an effect size of 0.3 or above (performing higher than expected to a meaningful degree) according to a regression analysis controlling for economically disadvantaged students among all public schools in New York State.

### METHOD

The Institute conducts a Comparative Performance Analysis, which compares the school's performance to that of demographically similar public schools statewide. The Institute uses a regression analysis to control for the percentage of economically disadvantaged students among all public schools in New York State. The difference between the school's actual and predicted performance, relative to other schools with similar economically disadvantaged statistics, produces an Effect Size. An Effect Size of 0.3, or performing higher than expected to a meaningful degree, is the target for this measure. Given the timing of the state's release of economically disadvantaged data and the demands of the data analysis, the 2023-24 analysis is not yet available. This report contains 2022-23 results.<sup>7</sup>

### 2022-23 Mathematics Comparative Performance by Grade Level

Grade	Percent Economically Disadvantaged	Mean Scale Score		Effect Size
		Actual	Predicted	
3	76.5%	444	447.7	-0.28
4	72.4%	458	448.5	.79
5	72.8%	446	446.1	-0.01
All	73.7%	450.2	447.5	.23

### Math Measure 5 - Growth

<sup>7</sup> These data can be found in the school's Accountability Summary provided by the Institute in spring 2024.

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Each year, under the state’s Growth Model, the school’s mean unadjusted growth percentile in mathematics for all tested students in grades 4-8 will be above the target of 50.

### METHOD

Given the timing of the state’s release of Growth Model data, the 2023-24 analysis is not yet available. This report contains 2022-23 results, the most recent Growth Model data available.<sup>8</sup>

This measure examines the change in performance of the same group of students from one year to the next and the progress they are making in comparison to other students with the same score in the previous year. The analysis only includes students who took the state exam in 2022-23 and also have a state exam score in 2021-22 including students who were retained in the same grade. Students with the same 2021-22 scores are ranked by their 2022-23 scores and assigned a percentile based on their relative growth in performance (student growth percentile). Students’ growth percentiles are aggregated school-wide to yield a school’s mean growth percentile. In order for a school to meet the measure, the school would have to achieve a mean growth percentile above the target of 50.

2022-23 Mathematics Mean Growth Percentile by Grade Level

Grade	Mean Growth Percentile	
	School	Target
4	52	50.0
5	35.4	50.0
All	45.4	50.0

### MATHEMATICS INTERNAL EXAM RESULTS

During 2023-24, in addition to the New York State 3<sup>rd</sup>– 8<sup>th</sup> grade exams, the school primarily used the following assessment to measure student growth and achievement in mathematics: **i-Ready**

2023-24 i-Ready [Mathematics] Assessment End of Year Results

Measure	Subgroup	Target	Tested	Results	Met?
Measure 1: Each year, the school’s median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students will be equal to or greater than 100%.	All students	100%	290	117	Yes
Measure 2: Each year, the school’s median percent progress to Annual Typical Growth of all 3 <sup>rd</sup> through 8 <sup>th</sup> grade students who were two or more grade levels below grade level in the fall will be equal to or greater than 110% by the spring assessment administration.	Low initial achievers	110%	150	120%	Yes

<sup>8</sup> These data can be found in the school’s Accountability Summary provided by the Institute in spring 2024.

## 2023-24 ACCOUNTABILITY PLAN PROGRESS REPORT

Measure 3: Each year, the median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students with disabilities at the school will be equal to or greater than the median percent progress to Annual Typical Growth of 3 <sup>rd</sup> through 8 <sup>th</sup> grade general education students at the school.	Students with disabilities <sup>9</sup>	119%	56	107%	No
Measure 4: Each year, 75% of 3 <sup>rd</sup> through 8 <sup>th</sup> grade students enrolled in at least their second year at the school will score at the <i>mid on-grade level</i> or above scale score for the year-end assessment.	2+ students	75%	215	38%	No

### End of Year Performance on 2023-24 i-Ready [Mathematics] Assessment By All Students and Students Enrolled in At Least Their Second Year

Grades	All Students		Enrolled in at least their Second Year	
	Percent Mid-On Grade Level or Above	Number Tested	Percent Mid-On Grade Level or Above	Number Tested
3	27%	108	31%	83
4	32%	79	38%	55
5	40%	103	44%	77
All	33	290	38%	215

### End of Year Growth on 2023-24 i-Ready [Mathematics] Assessment By All Students

Grades	Median Percent of Annual Typical Growth	Number Tested
3	108%	108
4	117%	79
5	139%	103
All	121%	290

<sup>9</sup> Schools may elect to report the aggregated data for a different subpopulation of students if the total tested number of students with disabilities is 5 or fewer, or if the school's mission aligns to serving a different specific subpopulation. For schools that choose a different subpopulation (e.g., English language learners, homeless students, etc.), please explain the rationale in the narrative section

## SUMMARY OF THE MATHEMATICS GOAL

On the 2023-24 state mathematics exam, Merrick met one comparative goal.

Type	Measure	Outcome
Absolute	Each year, 75 percent of all tested students who are enrolled in at least their second year will perform at proficiency on the New York State Mathematics exam for grades 3-8.	No
Absolute	Each year, the school’s aggregate PI on the state’s mathematics exam will meet that year’s state MIP as set forth in the state’s ESSA accountability system.	N/A
Comparative	Each year, the percent of all tested students who are enrolled in at least their second year and performing at proficiency on the state mathematics exam will be greater than that of students in the same tested grades in the school district of comparison.	Yes
Comparative	Each year, the school will exceed its predicted level of performance on the state mathematics exam by an effect size of 0.3 or above (performing higher than expected to a meaningful degree) according to a regression analysis controlling for economically disadvantaged students among all public schools in New York State.	No
Growth	Each year, under the state’s Growth Model the school’s mean unadjusted growth percentile in mathematics for all tested students in grades 4-8 will be above the target of 50.	No

## EVALUATION OF THE MATHEMATICS GOAL

On the 2023-24 mathematics assessment exam, Merrick students enrolled at the school for two or more years achieved proficiency at a rate remarkably higher than the district average for similar grades. Merrick’s fourth and fifth grade results were particularly impressive, as they outperformed the district by 4.7- and 16-percentage points, respectively. While the school did not achieve the absolute goal of 75% of students achieving proficiency on the state mathematics exam, few schools in the state met this goal.

With respect to the goals measuring the growth percentile and effect size, those metrics measure results from the 2022-23 school year and do not reflect the tremendous growth the school achieved in the 2023-24 school year. It is highly likely that Merrick will exceed both of those goals when the 2023-24 scores are analyzed.

## ADDITIONAL CONTEXT AND EVIDENCE

N/A

## MATHEMATICS ACTION PLAN

The School will be implementing the following initiatives during the 2021-22 school year to improve student achievement in math: The core beliefs under-pinning our academic planning for our post-pandemic return include, but are not limited to:

- We teach every student grade-level content standards and we meet students where they are;
- Our programs and offerings are responsive to the most current and accurate data;
- We must intentionally plan to “teach and insist”. Teachers and leaders need high-quality, aligned, and consistent training and support in order to deliver on a robust plan for unfinished learning and grade level learning;
- We believe that the whole community will work together to help our students grow;
- Strengthening and aligning our current resources and building more effective and consistent systems and processes that lead to teacher, leader, and student achievement; and
- We believe that accomplishing our goals requires intentionality in a way that allows us to approach academics in a tiered and purposeful plan that closes gaps and keeps us on track for long term goals.

Our theory of action, which is based on research, case studies, school visits, and interrogations, is simple: If we deliver rigorous on grade-level instruction, And we create the structures necessary to execute on impactful remediation and acceleration And we build teacher and leader content knowledge and capacity to provide effective instruction, Then:

- Students will continue to build content knowledge on grade-level standards while simultaneously receiving academic intervention support to close foundational learning gaps and make up for unfinished learning; and
- Our staff and school community will have the tools, knowledge, experiences, and resources necessary to execute our school’s instructional vision (short-term and long term).

In order to address unfinished learning among our students, we will implement the following acceleration, remediation, and enrichment strategies:

- **Deliver Strong Tier I instruction:**
  1. Strong instructional delivery of grade level content through effective execution of the new curriculum.
- **Acceleration Blocks**

1. Daily 40-minute small-group instruction targeted toward accelerating core foundational skills in literacy and/or Math;
  2. Classrooms and class structures that include daily [Tier 2 strategies](#) to address foundational skills acceleration. (Targeted smaller groups);
  3. Extend and reorganize math and literacy blocks to include time for intentional spiraling of unfinished content into grade level content and delivery;
  4. Internalize and implement Daily Execution Protocol for Math Block; and
  5. Reorganizing Math and ELA curriculum scope and sequence charts to ensure the efficacy and efficiency of the delivery of unfinished learning strategies as well as grade level content.
- **Strong Start (Phase I and II)**
    1. “All hands on deck” approach gathering both summative and formative data for students;
    2. Implement new Student Information System(s) to efficiently and effectively house and communicate student data;
    3. Community urgency and celebrations that center progress and excitement instead of “loss” or “being in deficit”;
    4. Update and beautify hallways, classrooms, and common areas to build excitement and support immersion.
  - **Ongoing Implementation and monitoring of [RTI](#)**
    1. Conduct weekly meetings with consistency and fidelity and communicate clear strategies and next steps for all stakeholders;
    2. Alignment of interventions to students’ specific gaps;
    3. RTI/MTSS materials archived: calendar, meeting notes;
    4. Instructional leaders engage in RTI walkthroughs to monitor and Tier 1, 2, and 3 interventions;
    5. Restructuring of our 40-minute academic support block to “Student Learning Lab.” A Student Learning Lab is an intervention block where scholars receive support based on the area of need. AIS providers will also push in during this time; and
    6. Including “High dosage tutoring” for our students who are most academically at-risk. Examples include after school at least 3 times a week 3:30 pm -5:30 pm and Saturday school 9 am-12pm.
  - **Data Cycles**
    1. Proactively monitor and respond to data:
      - a. Student Individual Learner Profiles and on-going use and ownership of the plans;
      - b. Daily exit tickets and debriefs; and

- c. Strengthening our data cycle system of reporting to ensure that teachers have a deeper and better view of their students' growth on a dashboard and/or digital binders that teachers can easily access.

- **Building Teacher and Leader Capacity and Accountability**

1. Instructional Leaders engage in RTI walk throughs to monitor Tier 1, 2, and 3 interventions.
2. Time in weekly "Learning Lab" for check-ins on strategies and results of students in Tier 1 and Tier 2
3. "Front loading" professional development for teachers on key instructional strategies for Tier 1 and Tier 2 during Pre-Service as they are planning for initial grade-level curricular units. Revamping and archiving observation and feedback protocols and tools, lesson plans, and trackers to specifically monitor progress in this area and provide stronger opportunities for coaching and professional development.

### **Strategic Approach for Content Knowledge Building and Implementation of New Curriculum**

- **Accelerated Implementation of a researched based curriculum**

1. Development of an implementation plan that is designed for effective internalization, delivery, and high-level implementation that garners student growth and achievement. Including immersion, implementation, reshaping to meet needs, etc.;
2. Implementing a curriculum pacing and implementation tracker that is aligned and housed alongside curriculum maps, professional development calendar, assessments. [Flow of the Day](#); and
3. Intentionality with informational and professional development events to get student, teacher and family buy-in, support and feedback.

- **Teacher and Leader Development and Capacity Building**

1. Weekly Learning Labs ([Lesson Learning Lab Model](#)) for teachers that include: check-ins on pacing, understanding, peer and expert feedback, planning and practice for teachers;
2. Bi-weekly professional development in key teacher and leader actions that lead to successful implementation of curriculum while building content knowledge and high leverage teacher/classroom strategies;
3. Bi-weekly one-on-one coaching sessions that ensure that teachers get feedback in aligned areas of instruction. [Coaching and Feedback Cycle AP and Coach Meeting Protocol](#);
4. Regular teacher step-backs and data days where teachers receive professional development in key areas of growth for their students while creating action-plans;

5. Tiered professional development that is responsive to teacher and leader needs. [Arc of the Year \(PD\)](#); and
  6. Clearer alignment and coherence of the tools leaders use to provide feedback and support. ([Get Better Faster](#) and Instructional Practice Guide rubrics [IPG](#)).
- **Strong Start**
    1. “All hands on deck” approach to building routines and rituals that build Socio-emotional learning through strong academic practices; and
    2. “Teach and Insist”-after diagnostics jump right into grade level curriculum with clear plans for spiraling in cumulative review.
  - **Departmentalization in the testing grades to allow teachers to focus more on content area depth and breathe**
  - **Strengthening and streamlining data cycles**
    1. Streamlining PD calendar, timely data distribution and support for teachers, assessment calendar and data meetings.
  - **Strengthening community investment and knowledge of what is being taught and why.**

Develop and implement a Communication Plan that organizes and captures key communication strategies in order to improve transparency about the Teaching and Learning Cycles, communicate progress, celebrate community, and on-going feedback on the impact of the program

The School will be implementing the following initiatives during the 2024-25 school year to improve student achievement in math: The core beliefs under-pinning our academic planning for include, but are not limited to:

1. Inquiry-Based Learning Drives Deeper Understanding
  - Students learn best when they are active participants in the discovery process. Inquiry-based instruction, which encourages students to explore, question, and investigate mathematical concepts, builds deep conceptual understanding and promotes critical thinking.
2. Equity in Engagement is Essential for All Students
  - Every student deserves access to high-quality math instruction, regardless of their background or previous performance. Equitable engagement ensures that all students, particularly those from historically marginalized groups, are provided with consistent opportunities to respond (OTRs), participate.
3. Data-Driven Instruction Leads to Tailored Support

- Instruction must be responsive to student needs. By using formative assessments and data analysis, teachers can identify students' specific areas of strength and need, allowing for targeted interventions that accelerate growth.
- 4. Mathematical Discourse Enhances Critical Thinking
  - Engaging students in mathematical discourse—explaining their thinking, justifying solutions, and challenging their peers' reasoning—enhances their critical thinking skills and promotes deeper learning.
- 5. Growth Mindset and Productive Struggle Build Resilience
  - Students who are encouraged to embrace productive struggle—persisting through challenges and viewing mistakes as learning opportunities—develop a growth mindset. This belief in their ability to improve through effort helps students build resilience and confidence in math.
- 6. Conceptual Understanding is the Foundation of Mathematical Learning
  - Developing conceptual understanding allows students to grasp the deeper meaning of mathematical concepts rather than relying solely on memorization or procedures. A strong conceptual foundation enables students to apply their knowledge flexibly to new and complex problems, making connections between different areas of math.
- 7. Flexible and Differentiated Instruction is Key to Closing Gaps
  - Not all students learn at the same pace or in the same way. Differentiated instruction—adapting teaching strategies to meet the diverse needs of learners—helps to close achievement gaps by offering personalized support.
- 8. Multiple Representations Foster Deeper Connections
  - Students who can express mathematical ideas in multiple ways—whether through numbers, graphs, diagrams, or equations—develop a more comprehensive understanding of concepts and are better equipped to apply them in diverse situations.

### Theory of Action

If we provide students with inquiry-based learning opportunities, mathematical discourse, and equitable engagement practices, while ensuring instruction is data-driven and differentiated and grounded in conceptual understanding, then students will develop deep conceptual mastery, improve their procedural fluency, and approach complex problems with precision, accuracy, and confidence. By fostering a growth mindset and encouraging productive struggle, students will build the resilience needed to tackle multi-step, real-world problems, ultimately closing achievement gaps and improving overall math performance.

### Action Plan to Address Student Math Performance

1. Partial Departmentalization (K-5):

- Implement partial departmentalization to allow teachers to specialize in mathematics and STEM content, enabling deeper instructional expertise. Teachers can focus on delivering high-quality math instruction, improving student engagement and outcomes by becoming content area experts.
2. Data-Driven Instruction through Data Analysis PLC:
    - Conduct weekly data analysis Professional Learning Communities (PLCs) where teachers bring student work and classroom-level data. This allows for focused discussions on student progress, identification of areas for remediation and acceleration, and real-time instructional adjustments based on formative assessment results.
  3. Lesson Internalization PLC:
    - Hold separate weekly lesson internalization PLCs where teachers collaboratively plan and refine lesson content. Teachers will focus on unpacking standards and ensuring math lessons are aligned with school instructional goals, inquiry-based strategies, and responsive to individual student needs.
  4. Inquiry-Based Instruction and Mathematical Discourse:
    - Embed inquiry-based learning into daily lessons by posing open-ended problems that encourage students to explore concepts deeply. Teachers will foster mathematical discourse, where students explain their reasoning, challenge peer solutions, and collaboratively solve problems, leading to deeper understanding and critical thinking.
  5. Focus on Conceptual Understanding:
    - Ensure that students are developing a strong conceptual understanding of mathematical principles, rather than relying on rote procedures. Teachers will use multiple representations of math concepts, such as visual models, manipulatives, and real-world applications, to help students make connections between different mathematical ideas.
  6. Differentiated Instruction and Small Group Support:
    - Provide differentiated instruction through small-group learning, tailored to the specific needs of students. Using formative assessments, teachers will adjust instruction to provide targeted support for students who need remediation or acceleration, ensuring that every student can progress at their own pace.
  7. Growth Mindset and Productive Struggle:
    - Promote a growth mindset in all students by encouraging productive struggle. Teachers will create a classroom culture where mistakes are seen as learning opportunities, and students are guided to persist through challenges, helping them build resilience and confidence in math.
  8. Coaching and Professional Development:
    - Provide each teacher with a dedicated instructional coach to offer ongoing feedback and guidance. Instructional coaching will focus on strengthening

inquiry-based instruction, enhancing conceptual understanding, and improving math discourse in the classroom. Regular professional development will support teachers in implementing data-driven, differentiated instruction that meets the needs of all students.

### GOAL 3: SCIENCE

All students at the school will demonstrate competency in the understanding and application of scientific reasoning.

#### BACKGROUND

Merrick Academy's science curriculum is rooted in the following principles:

1. Inquiry-based
2. STEM Literacy
3. Spiraled and interdisciplinary
4. Developing curiosity through the world around us
5. Using data and evidence to make claims based on relevant learning experiences

The science curriculum provides authentic learning opportunities fueled by scholar curiosity and the scientific method. Students learn about the key scientific principles through inquiry, reading, writing, and mathematical concepts. Students make connections with what they are discovering to other subject areas. The curriculum spirals and builds upon content as the students move on to different grade levels at the school.

Merrick Academy's science curriculum is built on a foundation of inquiry, STEM literacy, interdisciplinary learning, and real-world problem solving, all aligned with the principles of the International Baccalaureate (IB) framework. Our program is designed to foster curiosity, critical thinking, and global awareness in every student. The curriculum is guided by the following key principles:

1. **Inquiry-Based Learning:** Students are encouraged to explore and question the world around them, engaging in hands-on investigations that deepen their understanding of scientific concepts.
2. **STEM Literacy:** We emphasize the development of skills in Science, Technology, Engineering, and Mathematics, ensuring that students are well-prepared to excel in an increasingly STEM-driven world.
3. **Spiraled and Interdisciplinary Learning:** The curriculum is designed to spiral, allowing students to build on their prior knowledge as they progress through grade levels. Science

is integrated with other subjects, including math, reading, and writing, fostering interdisciplinary connections that enhance their overall learning experience.

4. Curiosity about the World Around Us: Our program nurtures students' natural curiosity, encouraging them to explore how scientific principles apply to everyday life and the world around them.
5. Data and Evidence-Based Reasoning: Students learn to gather and analyze data, using evidence to support their claims and engage in the scientific method, developing critical thinking and problem-solving skills.
6. Using Science to Solve Real-World Problems: Aligned with the IB framework, students use scientific principles to tackle real-world challenges. Through global perspectives and inquiry, students connect their learning to issues affecting their communities and the world, fostering a deeper understanding of science's role in creating solutions for modern-day problems.

Our science curriculum provides authentic learning opportunities, driven by student curiosity and the scientific method. Students engage with key scientific principles through inquiry, reading, writing, and mathematical concepts, making connections across disciplines. The spiraled design ensures that students continuously build upon their knowledge, applying it to increasingly complex challenges. Through the IB framework, students are encouraged to view science not just as a subject, but as a tool to solve real-world problems, connecting their learning to global contexts and preparing them for success in STEAM fields.

## ELEMENTARY AND MIDDLE SCIENCE

### Science Measure 1 - Absolute

Each year, 75 percent of all tested students enrolled in at least their second year will perform at or above proficiency on the New York State science examination.

The school administered the New York State Testing Program science assessment to students in 5<sup>th</sup> grade in spring 2024. The table below summarizes the performance of students enrolled for at least two years.

Charter School Performance on 2023-24 State Science Exam  
By Students Enrolled in At Least Their Second Year

Grade	Students in At Least Their 2 <sup>nd</sup> Year		
	Number Tested	Number Proficient	Percent Proficient
5	78	29	37.2%
All	78	29	37.2%

### Science Measure 2 - Comparative

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Each year, the percent of all tested students enrolled in at least their second year and performing at proficiency on the state science exam will be greater than that of all students in the same tested grades in the school district of comparison.

The school compares tested students enrolled in at least their second year to all tested students in the public school district of comparison. Comparisons are between the results for each grade in which the school had tested students in at least their second year and the results for the respective grades in the school district of comparison.

### 2023-24 State Science Exam Charter School and District Performance by Grade Level

Grade	Charter School Students in at Least 2 <sup>nd</sup> Year			All District Students		
	Number Tested	Number Proficient	Percent Proficient	Number Tested	Number Proficient	Percent Proficient
5	78	29	37.2%	Cannot be assessed		
All	78	29	37.2%			

### SUMMARY OF THE ELEMENTARY/MIDDLE SCIENCE GOAL

On the 2023-24 science assessment exam, Merrick did not meet its absolute goal and the comparative goal could not be measured.

Type	Measure	Outcome
Absolute	Each year, 75 percent of all tested students enrolled in at least their second year will perform at proficiency on the New York State examination.	Not achieved
Comparative	Each year, the percent of all tested students enrolled in at least their second year and performing at proficiency on the state exam will be greater than that of all students in the same tested grades in the school district of comparison.	Unable to measure

### EVALUATION OF THE SCIENCE GOAL

On the 2023-24 science assessment exam, Merrick did not achieve its absolute goal and the comparative goal cannot be measured, as the district’s results were not available at the time of this report’s submission. Merrick missed its absolute goal of 75% student proficiency by 37.2. However, because the science assessment exam results from the district and other schools were unavailable, we cannot opine as to where Merrick’s results compare to other schools, specifically schools serving a similar student population.

### ADDITIONAL CONTEXT AND EVIDENCE

N/A

### Performance on a Regents Science Exam

Of 8<sup>th</sup> Grade All Students by Year

Grade	Year	Regents Exam	Number Tested	Number Passing	Percent Passing
8	2021-22	N/A	N/A	N/A	N/A
8	2022-23	N/A	N/A	N/A	N/A
8	2023-24	N/A	N/A	N/A	N/A

## ACTION PLAN

Merrick Academy is committed to student achievement in science, as most recently evidenced by the renewal of the school’s charter in June 2020 and incorporating a STEM focus into its mission for the next five years. In the 2020-21 school year, steps towards this mission will include science infused into mathematics and humanities instruction and the addition of a STEM Coordinator who will oversee the program.

Merrick Academy is committed to fostering student achievement in science, technology, engineering, arts, and mathematics (STEAM) as part of our broader mission. We believe that **STEAM should cut across disciplines** rather than exist as a stand-alone program, integrating seamlessly into all areas of instruction.

To reflect this integrated approach, under the leadership of our newly hired STEAM Director, we are making several key changes:

1. **Transitioning to Enrichment (Lower School) and Seminars (Middle School):** Instead of stand-alone STEAM classes, we are embedding STEAM principles into **multidisciplinary projects** through Enrichment and Seminars. These offerings allow students to engage in **creative, cross-disciplinary problem-solving tasks** that enhance their skills across all subjects.
2. **Developing a Scaffolded STEAM Vision:** We are creating a comprehensive **STEAM vision** that includes **scaffolded best practices** across grade levels. This progression ensures students build their skills in **inquiry-based learning, hands-on experiences, and real-world problem-solving** as they advance through the school.
3. **Expanding Science Instruction into the Classroom:** Science is now integrated directly into classroom instruction, with classroom teachers taking the lead. This ensures **continuous engagement** and deeper connections between science and other subjects.
4. **Partial Departmentalization in Elementary School:** We are introducing partial departmentalization, allowing teachers to specialize in subjects such as science and math, providing students with focused, high-quality instruction from content experts.
5. **Internalization PLCs and Data-Driven Instruction:** Teachers will participate in **Professional Learning Communities (PLCs)** to integrate STEAM practices into their lessons. Additionally, we are using **data-driven instruction** to tailor teaching to student needs, driving targeted interventions and enhanced student growth.

## GOAL 4: ESSA

### ESSA Measure 1

Under the state’s ESSA accountability system, the school is in good standing: the state has not identified the school for comprehensive or targeted improvement.

Because *all* students are expected to meet the state's performance standards, the federal statute stipulates that various sub-populations and demographic categories of students among all tested students must meet the state standard in and of themselves aside from the overall school results. As New York State, like all states, is required to establish a specific system for making these determinations for its public schools, charter schools do not have latitude in establishing their own performance levels or criteria of success for meeting the ESSA accountability requirements. Each year, the state issues School Report Cards that indicate a school’s status under the state accountability system. More information on assigned accountability designations and context can be found [here](#).

#### Accountability Status by Year

Year	Status
2021-22	Good standing
2022-23	Good standing
2023-24	Good standing

## ADDITIONAL CONTEXT AND EVIDENCE

The School has been in good standing for the past three school yea



