



The New York City Department of Education



Quality Review Report

**The Mathematics, Science and Technology
Institute**

**Middle School 267
800 Gates Avenue
Brooklyn
NY 11221**

Principal: Patricia King

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Reviewer: Stephanie Krusa

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Part 1: The school context

Information about the school

Middle School 267, which opened in 2000 as the Math, Science and Technology Institute, shares the building with Middle School 143. The school serves 470 students in grades 6 through 8. Of the student body, 81% are Black, 13% are Hispanic, 3% are Asian, 2% are Native American and 1% is White. English language learners make up just over 5% of students, with those newly arrived in the country mostly coming from Trinidad and Tobago, the Dominican Republic and Guyana.

The school is divided into grade level mini-academies designed to provide students and staff with a personalized learning community. The school has one collaborative team teaching class and 5 self-contained special education rooms, serving 13% of students with individual education plans. Student attendance is 92.2%, slightly above that of similar and City schools. The school has 89.8% of students who are Title 1 eligible which is well above the average for City schools.

The principal took up her position very recently. Long term partnerships include The Community Development Corporation, New York Cares, Long Island University and AOL/Time Warner.

Part 2: Overview

What the school does well

- The new principal has quickly established herself with staff, students and parents as the instructional leader of the school.
- The principal understands the importance of data and is building effective data analysis practices with staff.
- The school has recently revamped and strengthened programs for students most at risk of failing to make the grade.
- Members of staff willingly undertake professional development activities and support fellow staff through effective in-house collaboration.
- Teachers have high expectations for all students and are committed to preparing them for high school, college and careers.
- The school effectively integrates technology with interdisciplinary studies to enhance the learning of all students.
- The school climate is warm and inviting, with efficient systems in place to support the focus on academic rigor.
- Students feel supported, valued and challenged by staff and enjoy being in school.

What the school needs to improve

- Refine data analysis so that the school maintains a clear picture of progress for the student body, all groups, and each individual learner.
- Use formal and informal baseline data across disciplines, to establish baselines so that progress is measurable throughout the year.
- Develop longitudinal data for individuals and groups to measure progress from year to year.
- Formalize the process for communication between academic intervention specialists, resource staff and classroom staff to define lines of accountability for student progress.
- Extend the opportunities for professional development to improve differentiated instruction across the school.
- Strengthen parents' understanding of the relationship between curriculum and data and better inform them about their access to online supports.

Part 3: Main findings

Overall Evaluation

This is a proficient school.

The Mathematics, Science and Technology Institute provides students with a nurturing yet rigorous program. Faculty conscientiously implements the school's thematic curriculum which is aligned with City and State standards and mandates. The principal, who has been in place for five months, has a strong mathematics background and has focused staff on the use of data to impact positively on achievement. Thus teachers are developing expertise in gathering and analyzing data though this is not targeted insufficiently well yet. The culture of Middle School 267 is clearly focused on high expectations for all students. Staff work collegially to improve instruction through sharing of best practices, peer mentoring and an effective professional development program.

The school is structured into mini-academies, named for men and women of color who have had distinguished careers in the fields of mathematics, science and technology. Programs are designed to provide students with a highly personalized middle school experience which nurtures them academically, socially and emotionally. The interdisciplinary program has a career-planning component which prepares students for success in high school and encourages them to think beyond and consider colleges that match their career aspirations.

The curriculum focus is grounded in a genuine hands-on application of project-based experiences, through which students represent and defend their learning. All students benefit from extensive work with manipulatives and mathematics and science materials which give them a representational view of the abstract concepts and problems they are mastering. Recently, several teachers traveled to the National Council of Teachers of Mathematics Conference to present students' projects in algebra and geometry which showed graphic and numeric solutions.

The school is one of three schools Citywide to receive a new grant sponsored by the Center for Arts Education, the New York Times Company Foundation and the New York City Department of Education, which immediately increase student access to high quality arts education. The two year grant will support integration of fine arts, music, dance and theater into the core curriculum, with the aim of enhancing mathematics and literacy instruction.

How well the school meets New York City's evaluation criteria

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor student progress over time.

This area of the school's work is proficient.

The new principal understands the importance of data. She is building effective practices in data analysis with staff. This is most apparent in the collection of grade and classroom test results and assessments which are used to inform instruction. Though all available aggregated data is collected and teachers are learning to disaggregate it, they are not yet teasing out all possible strands of information. Analysis of results for specific groups of

students is not yet sufficiently addressed to impact positively on their scores. This is evident for some ethnic groups, special education students at some grades and for grade 8 students.

The staff uses a range of informal classroom and City interim assessments to gauge and track learning. They have a firm grasp on grade level results and the progress of targeted instructional groups. To support staff, the principal has implemented an eight step process for effectively using data. Steps include disaggregating data to understand individual and group performance, aligning instruction and frequent assessment. The staff meet frequently, on and across grades, to compare scores and student work across classrooms, and for groups of students, to compare their results with those of similar schools. This work encompasses all subjects. Their understanding and use of data to measure progress for individuals and groups from year to year is, however, less well developed.

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use available data to understand each student’s next learning step. Through collaborative planning and student and parent engagement, they set high goals for improving teaching practice and accelerating each student’s learning.

This area of the school’s work is proficient.

Using City and State test results, the principal and administrative team set objectively measurable goals for incremental and long-term improvement for students and formulate plans and timeframes for reaching goals. Using incremental student progress as a measure of success, they assess whether these goals have been reached. However, teachers do not consistently gather their own data on student achievement so that baselines against which to measure progress are not readily and accurately identified.

Established goals focus every staff member on student improvement but, because data for some disaggregated groups is not yet being fully unpacked, targets and plans for these groups are not clearly differentiated for each respective need. In addition, data that gives a picture of the students’ progress from year to year is not consistently analyzed. This reduces the school’s capacity to measure students’ progress from year to year and set appropriate goals.

The principal has, since November 2006, revamped and strengthened the academic intervention program, establishing a clear, sequential process for delivering support and services. The school now has an effective program of support for students needing academic interventions. However, communication between academic intervention specialists, resource staff and classroom staff is not sufficiently well developed to enable progress of ongoing interventions, and the perspective of each professional to be shared and recorded.

The positive culture of the school is one of its real strengths. Staff have uniformly high expectations for students and are committed to ensuring that they have access to optimum academic and enrichment experiences. For example, staff raise funds regularly to enable students not able to pay admission fees to attend performances and trips outside of school. In addition, every staff member has selected a student for whom they provide one on one academic support and guidance. Parents are pleased with the high expectations for student progress but are not fully informed about how the school uses data to develop the curriculum nor the access they have to online support. This has an impact on their ability to work in successful partnership with the school.

Quality Statement 3 – Align Instruction: The school aligns its instructional activity and resources, and student engagement around its focused plans for accelerating learning for each student.

This area of the school’s work is well developed.

The school’s curriculum aligns with City and State standards and mandated core curriculum. Curriculum content, scope and sequence for each discipline are reviewed and revised each spring when staff meet to plan for the following year. Revisions align with data on student achievement.

Staff readily accept responsibility for student achievement but differentiation of instruction is not yet sufficiently developed in every classroom to meet needs of some student groups. The administrative team has taken steps to address this through in-house and regional professional development. For example, all teachers receive professional texts, which they study together, to develop innovative strategies to improve techniques. In addition, staff who attend workshops are expected to share best practices and new information with colleagues so that all benefit. The school also partners with similar schools to build best practices, particularly in matters to do with differentiation of instruction.

The principal and administrative team use data to budget effectively. This is most evident in the school’s effective focus on mathematics, science and technology instruction. Every classroom is well supplied with a range of manipulatives. All mathematics and science rooms have Smartboards and computers which are in use throughout the day. The principal has earmarked funds for additional Smartboards for language arts staff. Staffing and scheduling decisions reflect student needs. For example, as the date for a high stakes formal assessment approaches, all staff are marshaled to provide additional support to students who are struggling in that discipline. This includes teachers from all disciplines who are given specific assignments to integrate their content with that of the upcoming test. Teacher assignments are communicated, school-wide, through memo from mathematics and language arts coaches.

Most students are engaged and interested in doing well where the work interests them and is sufficiently well targeted to their needs. Students uniformly agree that teachers are supportive and indicate a number of staff they would speak with if confronted with an issue in or out of school. Attendance is a priority, and is carefully monitored. .

Quality Statement 4 - Build and Align Capacity: The development of instructional leadership, staff, and capacity are aligned around the school’s collaboratively established goals for accelerating the learning of each student.

This area of the school’s work is well developed.

Though the principal has not yet had the opportunity to hire new staff, her expectations for current staff include building strong skills in data analysis, technology and differentiation within instruction. In the future, new candidates will be required to demonstrate these same skills and the belief that the children of the school community can and will achieve.

Teachers set personal and professional goals, aligned with student achievement, which are discussed with the cabinet. These are revisited and revised at the end of the academic year during curriculum planning sessions. Planning is done collegially, informed by ongoing data, from which staff set learning goals for the school, classes and groups. Although this process is appropriate, and based on results for some groups and

individuals, it has not been sufficiently focused to achieve the maximum progress for some students.

Staff willingly attend professional development activities and support one another through effective in-house collaboration. Structures are in place for teachers to learn from each other and build best practices. Professional development goals become the focus of regular learning walks conducted by the cabinet, after which teachers receive immediate feedback. Formal and informal observations are conducted throughout the year, with particular emphasis on new teachers and those requiring extra mentoring. Teachers support each other through peer mentoring and inter-visitations, strategic pairing and during grade level and staff meetings. To further support staff, the principal and coaches have developed extensive mathematics and literacy checklists to define clear expectations about such things as classroom learning environments, presentation of lessons, critical thinking and student interaction.

The new principal has established herself as instructional leader, evidenced by comments by teachers, students and parents who appreciate the smooth transition in leadership this year. They acknowledge that necessary improvements have been effectively implemented. All cite the clear systems in place, resulting in a well run school. The school climate is warm and inviting, with efficient systems to focus on academic rigor, supported by effective student support services and community partnerships. For example, the principal established *Making Connections*, a newsletter for the entire community, in which guidance staff regularly provide information about issues and concerns faced by middle school students. Students feel supported, valued and challenged by staff and enjoy school.

Quality Statement 5 - Monitor and Revise: The school has built-in structures for evaluating each student's progress throughout the year, recognizing weaknesses in its improvement plans and teaching practices, and flexibly adapting plans and practices to meet its goals for accelerated learning.

This area of the school's work is proficient.

Plans and timeframes for reaching goals are in place and progress towards achieving them is assessed throughout the year. However, while staff pays close attention to diagnostic and formal assessments to assess progress toward interim and long-term goals, they are not yet fully involved in the process of setting these goals. Staff work during grade level and faculty conferences to compare and study student assessments and class work, on and across grades, and with similar schools, to determine effective curriculum and instruction, and to strengthen those areas where students are not making anticipated gains. For example, in house inter-visitations are immediately set up for teachers who may need to learn specific strategies for teaching skills or content their students did not master as well as those in another room. Teachers' planning is adjusted in the short term and, in the longer term, the curriculum, resources and materials are revised if adequate progress is not shown. Annually, staff convene as the academic year ends, to assess progress, overall, and to revise curriculum maps, strengthen key lessons and define professional development plans for staff over the summer and for the next academic year.

Part 4: School Quality Criteria Summary

SCHOOL NAME: The Math, Science and Technology Institute MS 267	∅	✓	+
Quality Score		X	

Quality Statement 1 – Gather Data: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor student progress over time.	∅	✓	+
1.1 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> each student, classroom, grade level, 		X	
1.2 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> ethnic groups, English language learners, special education students* 	X		
1.3 The school uses available data and generates its own data to provide an objective, constantly updated understanding of the performance and progress of: <ul style="list-style-type: none"> all other categories of interest to the school* 		X	
1.4 Performance and progress are measured based on comparisons with similar schools, with the school's own past performance, and among students, classrooms, grade levels, academic subject areas, ethnic groups, and other groupings of interest within the school.		X	
Overall score for Quality Statement 1		X	

* These criteria are partially aspirational as of now because schools do not have routine access to all of this data. The NYC DOE plans to provide schools with enhanced access to the necessary data in 2007.

Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use available data to understand each student's next learning step. Through collaborative planning and student and parent engagement, they set high goals for improving teaching practice and accelerating each student's learning.	∅	✓	+
2.1 Using data, school leaders and faculty engage in a collaborative process to set demanding, objectively measurable goals for immediate and long-range improvement, and to develop plans and timeframes for reaching those goals.			X
2.2 Goals and plans focus on the school as a whole and on each student, classroom, grade level, academic subject, and group of students whose performance or progress has been identified by the school as a particular focus area.		X	
2.3 Particular attention is given to improving the performance and progress of students in greatest need of improvement.		X	
2.4 High expectations are conveyed to students and parents/caregivers. Students and their parents/caregivers are regularly invited to provide information about each student's performance and how to improve. This information is central to setting challenging goals and developing, evaluating, and revising plans.		X	
2.5 Goals and plans for improving student performance and progress drive the activity of all members of the school community: leaders, staff, students, parents, and other partners.		X	
Overall score for Quality Statement 2		X	

Quality Statement 3 – Align Instruction: The school aligns its instructional activity, resources, and student engagement around its focused plans for accelerating learning for each student.	∅	✓	+
3.1 The school selects the curriculum based on how well it aligns with or implements the mandated curriculum and on the curriculum's capacity to generate meaningful interim data about progress towards goals and to support the school's high expectations and improvement plans.			X
3.2 Teachers are accountable for improving instruction and student outcomes. They plan and differentiate their instruction based on the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.		X	
3.3 Budgeting decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.			X
3.4 Staffing decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes.			X
3.5 Scheduling decisions about the use of teacher and student time are guided by the needs that emerge from examining student data and by the focused plan the school develops to improve student outcomes.			X
3.6 Instructional programs actively engage students.		X	
3.7 Staff know and respect students and respond to their academic needs, as well as their personal needs that affect academic performance. Each student knows and trusts an adult on the staff who is concerned about him or her.			X
3.8 Student attendance and engagement are high priorities. High rates and patterns of absences trigger immediate intervention.			X
Overall score for Quality Statement 3			X
Quality Statement 4 – Build and Align Capacity: The development of instructional leadership, staff, and capacity are aligned around the school's collaboratively established goals for accelerating the learning of each student.	∅	✓	+
4.1 Leaders, faculty, and staff are selected based on their high expectations for student performance and progress and based on their commitment and capacity to use data, compare outcomes within and across classrooms and schools and develop and revise plans and methods to improve performance and progress.			X
4.2 Professional development decisions are driven by the needs revealed by student data and by the focused plan the school has developed to improve each student's and group of students' outcomes. Professional development is designed to help leaders, faculty, and staff use data, self- and peer-assessments, and collaboration with peers to achieve goals for improved school and student outcomes. Professional development and self- and peer-evaluation are aligned and overlap.		X	
4.3 The principal frequently observes classroom teaching and has a considered strategy for improving the quality of each teacher's instruction. Teachers frequently observe and support each other's classroom instruction with the goal of improving student outcomes.			X
4.4 Planning, evaluation of results, and revision of plans takes place in teams. Leaders and faculty inform each other of their goals and results, candidly evaluate themselves and each other, and use what is learned to drive improvement.			X
4.5 The principal is respected and has capacity to effect change.			X
4.6 The school runs smoothly. Procedures are clear, communicated to all, and are generally followed.			X
4.7 The school aligns youth development and support services around stated academic goals. Partnerships with outside bodies are routinely used to achieve academic goals.			X
Overall score for Quality Statement 4			X
Quality Statement 5 – Monitor and Revise: The school has built-in structures for evaluating each student's progress throughout the year, recognizing weaknesses in its improvement plans and teaching practices, and flexibly adapting plans and practices to meet its goals for accelerating learning.	∅	✓	+
5.1 All school plans and other interventions include frequent interim goals and diagnostic assessments of progress designed to reveal in objectively measurable ways whether the plan is being effectively implemented and reaching stated goals.		X	
5.2 Comparisons of student progress within and across classrooms and schools are used in making interim diagnostic assessments and measuring the progress of plans and interventions.			X
5.3 Information generated by periodic assessments and diagnostic measures of progress and comparisons is used to revise plans immediately in order to reach stated goals. Interim and final goals are modified when data objectively demonstrate that revision is required.			X
5.4 Each plan's interim and final outcomes drive successive phases of goal setting and improvement planning, and each successive phase is characterized by agile and flexible realignment of practices and resources to improve student academic outcomes.		X	
Overall score for Quality Statement 5		X	