



The New York City Department of Education



Quality Review Report

**Mathematics, Science Research and Technology
Magnet School**

**High School 492
207- 01 116th Avenue
Queens
NY 11411**

Principal: Andrea Holt

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Reviewer: Richard Woolf

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Part 1: The school context

Information about the school

The Mathematics, Science Research and Technology Magnet High School is one of four theme schools housed in what was, until 1994, the large Andrew Jackson High School. The school emphasizes the academic subjects listed in its name. Its students enter with stronger skills in mathematics and science than their peers in the other schools in the building.

There are approximately 497 students enrolled in the school and its ethnic population is made up of 77% Black, 10% Asian and other, 9% Hispanic and 4% White. There are 3% English language learners and 4% special education students, both figures are low when compared to other City and similar schools. Female students are outnumbered by male students at approximately two to one. The school is not entitled to Title 1 monies.

The building in which the school is situated has impact status allowing for extra security from the police department. The school administration feels their children do not warrant such a status and incident reports and data supports this.

Part 2: Overview

What the school does well

- The principal demonstrates strong leadership qualities that are appreciated by the entire school community.
- The staff and students are very respectful of each other.
- The school is supported by a parent body, eager to help improve the school, and which is actively engaged in meeting those ends.
- The students articulate openly about the strengths of their school and the importance of education to them.
- Staff are using data in a way to further help their instruction.
- Student achievements have continued to grow year on year over the last eight years.
- The offer of excellent sporting facilities is much appreciated by the students.

What the school needs to improve

- Develop ways of making the Comprehensive Education Plan goals more manageable and accountable.
- Look at ways to develop professional development so it is more focused on instruction.
- Develop more effective ways of monitoring the work of teachers across subjects and grades.
- Find ways of continuing to improve attendance rates.
- Explore ways of using data more effectively to further differentiate instruction.

Part 3: Main findings

Overall Evaluation

This is a proficient school.

The principal is an experienced educator in her ninth year as leader of the Mathematics, Science Research and Technology Magnet school and provides strong leadership, which is valued by staff, parents and students. She is determined that the school continues to deliver an academic program which enhances the opportunities of all the students in her care. The improvements seen over the last few years are appreciated and valued by the entire school community. Through the more effective use of data, the staff members are being challenged to rethink their approach to differentiation and other instructional activities. This approach is starting to provide the information teachers need to help them raise academic achievements. Senior colleagues are acting as change agents alongside the principal to ensure students achieve their full potential.

Parents are increasingly aware of the efforts being made by the staff to raise their children's expectations. The school has good links with supportive outside agencies and this is beginning to impact positively upon the school.

This is a small high school that despite the ergonomic difficulties of the building has a very intimate feel about it where staff and students know and respect each other.

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 school continues to build on the work undertaken over the last eight years in its use of data. It uses all data as accorded by the State and City tests as a basis to plan teaching groups and to identify students in need of extra support and guidance, especially on entry at grade 9. The school is achieving its benchmark targets as accorded by the Chancellor's office in Regents examinations and other tests.

This year, more detailed data is being generated in house to inform instruction and to take into account performance of ethnic groups, English language learners and students with special education needs. The increasing use of data over the last few years has had an impact upon outcomes and the school is making good progress in identifying higher achieving students who benefit from their advanced programs to facilitate earlier graduation. Similarly, the identification of those students entering at levels 1 and 2 has assisted teachers to adopt learning strategies to assist in raising the school's global achievements greatly. A variety of teacher assessments are used to monitor specific skills as well as observations and conferencing activities with the students.

Staff members have detailed data on their students, which allows for an immediate response to any identified or perceived concerns. They meet informally on many

occasions to review and share practice based upon the data. However, the administration does not currently have a formalized mechanism of facilitating staff to meet regularly, within subject areas, to discuss and evaluate their work. Likewise any percentage increase for subject improvement is not always realistic as the administration does not analyze cohort data sufficiently well to inform further planning. As a result of more detailed data analysis strategies are being considered for the introduction of ways to further differentiate work.

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.

The Comprehensive Education Plan is written annually by the senior leadership team, which includes both students and parents. Goals, for subjects and grade levels are based upon the data from the previous year and semesters and are usually set to meet or improve upon graduation rates year on year. These goals are shared with the staff at the beginning of the school year and each teacher is set a yearly target to contribute to overall improvement.

It is apparent that the school adopts an approach of goal setting with annual targets in mind but the rigor to follow this up by regular monitoring throughout the course of the year is not systematic. The attention is firmly on graduation rates and targets that relate to assisting the improvement of all students and staff to meet these ends. The needs of Black males are acknowledged as of particular concern and the school pays close attention to this by continuously seeking ways of improving their achievements. The numbers of English language learners and special education students within the school is comparatively low but a full range of effective academic intervention services are used to support them in meeting their particular needs and reaching their individual targets. The same identification and support is given to those students identifies as working at levels 1 and 2.

The school’s high expectations are regularly conveyed to students and parents through assemblies and newsletters. Parents, being part of the senior leadership team, feel they have an input into the school’s goals and they are regularly informed about student performance. To assist in this, workshops are held to demonstrate how parents can participate and impact upon their children’s learning. The principal is happy the goals of the school are being shared and impacting via meetings of a large cross section of influential community members and leaders who provide the school with regular feedback.

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 proficient.

The school follows the mandatory curriculum framework for achieving the Regents examinations. In order to provide a rounded education, students are exposed to lessons in art, music and physical education with Spanish as a foreign language taught in grades 10 through 12, The entire campus is aided by a fully staffed health center to provide

students with information and assistance on health related matters. The school is proficient in generating in house data from the curriculum to support development toward achieving their goals.

Teachers are held accountable for instruction and are being encouraged to use data more effectively to allow for rigorous differentiation to take place. Data folders held by the teachers show how progress is being made by individual students. Class instruction actively engaged the students in their learning and they worked well together in groups, pairs or as a whole class. The organization of an extra curricular program after school is proving to be beneficial to improving student attainment. They felt confident that the teachers planned instruction to get the best out of them. The small size of the school helps both staff and students to get on well and students feel there is always an adult on hand to help and support them and encourage them to strive to achieve their full potential.

The principal bases her staffing and budgetary decisions on all available data and has clearly identified where deficiencies have occurred in the past and this has prompted her to hire new teachers. The use of data has led her to make scheduling decisions as a means of assisting weaker staff. Assistant principals and counselors are used effectively in supporting the staff in the development of instruction and the achievement of their goals.

The school has a priority of raising its rate of attendance, which currently stands at 86.4% but this is an increase on previous years. The school feel better attendance will expose the students to more educational opportunities. Parents endorse the efforts made to increase attendance and feel the school is making great strides to improve overall rates. The administration has bi-monthly meetings with an outreach attendance team to support its work in order to reach its targets.

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 proficient.

The principal's staff selection policy is very clear in that new staff have to be personable, knowledgeable but above all intrinsic learners themselves. The school is fortunate to have a very stable staff and this has helped in developing continuity. The principal has a team who appreciates and understands that their students can succeed in life by being given a positive and encouraging atmosphere in which to learn. Teachers accept that her management style allows them a good degree of professional freedom. This has the effect of making the staff feel trusted and valued. There are good opportunities for professional development, both from within the school and from outside sources. The school training and the input from external consultants on literacy development is greatly valued. The data and professional development generated from these ventures are having a positively impact upon instruction and understanding of student need. The school does not currently align professional development programs to the learning of each student within subject departments.

The principal sets high standards and demonstrates these to the whole school community on a daily basis. She is respected for being approachable and is a constant presence in the school. She and her assistant principals visit staff informally as well as conducting formal classroom observations, where feedback is constructive and developmental. She has a detailed knowledge and understanding of her staff. The school is well managed and organized, which encourages learning to take place. The parent body responds very

favorably to the administration. The principal is cognizant of this and realizes the vital role parents play in working in partnership with the school.

The school has developed many links with a wide variety of outside organizations including academic, sporting and professional groups. They have been put in place to further the learning opportunities of the students and the programs, to encourage college applications and are much appreciated by the student body as well as proving effective.

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.

The monitoring of goals and targets takes place at a number of levels during the school year. However, the school's current system is not sufficiently rigorous to demonstrate that across all subjects and grades sufficient progress is being made. At present there is not enough up to date information available to set new and more challenging short-term and long-term goals.

The principal has a clear vision of how goals should be set and the measures necessary to demonstrate success in achieving them. However, her understanding of the way effective monitoring takes place is not yet sufficiently disseminated throughout the whole school to impact upon further goal setting to further instruction. The school does not make checks against the Comprehensive Education Plan during the year with systematic rigor to allow for any variances to be addressed. This is particularly prevalent to the revision of individual student or teacher goals to show progress towards overall targets.

This is a school that cares for its students and is creating rich learning experiences for them. It is in a position to consolidate and move to another phase by comparing student progress across the school and within subject specific areas.

Part 4: School Quality Criteria Summary

SCHOOL NAME: Mathematics, Science Research and Technology Magnet (HS 492)	∅	✓	+
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	