



**Department of  
Education**

*Joel I. Klein, Chancellor*

**Quality Review Report  
Division of Performance and Accountability  
2010-2011**

# **Quality Review Report 2010-2011**

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

**High School Q492**

**207-01 116<sup>th</sup> Street  
Queens  
NY 11411**

**Principal: Jose Cruz**

**Dates of review: December 21 & 22, 2010**

**Lead Reviewer: Juan Mendez**

## Part 1: The school context

### Information about the school

Mathematics, Science Research, and Technology Magnet High School is a high school with 418 students from 9 through grade 12. The school population comprises 78% Black, 12% Hispanic, 2% White, and 8% Asian students. The student body includes 4% English language learners and 10% special education students. Boys account for 59% of the students enrolled and girls account for 41%. The average attendance rate for the school year 2009 - 2010 was 89.5%.

### Overall Evaluation

**This school is developing.**

## Part 2: Overview

### What the school does well

- Leaders make informed and effective organizational decisions to support improvements in learning.
  - The school program is organized so that teacher teams could meet regularly. This flexibility permits teams to work by grade level to monitor cohort progress or by content area to support the school's instructional goals. This structure leverages greater student outcomes through interdisciplinary, curricular opportunities for all students.
  - Hiring practices include demonstration lessons and interviews to evaluate pedagogy and content knowledge of candidates. The principal actively engages faculty during the process to ensure that hiring decisions and teacher assignments are aligned to the school's instructional goals. As a result new hires share responsibility with teachers of the same student cohort to improve learning.
- School leaders and faculty gather a wide range of assessment data to identify school-wide and individual student needs in order to improve student progress.
  - School leaders gather summative data in order to create an overview of the school's strengths and areas of need. Scholarship data, regular incident and attendance reports, State report card and Progress Report results all serve to create a clear picture of performance trends for each cohort. In turn, student strengths and needs are determined in order to raise the level of learning.
  - School leaders and faculty gather a variety of data across most content areas to identify the strengths and needs of students and relevant subgroup performance, progress and learning needs. Acuity predictive and interim exams in English Language Arts and mathematics, content areas midterm and final exams, and previous Regents exam item-analysis provide valuable information on subgroup progress, especially for special education students and English language learners to raise the level of learning.
- The school has established effective systems for monitoring teaching practices with a clear focus on improving instructional practices.
  - School leaders engage in proactive and frequent observations to inform faculty tenure, performance and retention decisions inclusive of regular teacher feedback and next steps to improve. Additionally, classroom performance data and posted student work are reviewed to evaluate pedagogy. As a result teacher practice is improving.
  - Professional development opportunities support all faculty members to grow in their pedagogical practice. For example, based on identified needs teachers are assigned to network achievement teams that provide differentiated support to improve practice, especially for new teachers, with an eye towards improving student achievement and success.

- Professional collaboration is a high priority and faculty profit from varied opportunities to share and develop strengths as individual and members of the teaching community
  - Inquiry teams meet on a regular basis to examine student work and performance trends with a focus on improving student outcomes. For example, one team's review of the Regents item analysis revealed student deficits in mastery of content. As a result teachers developed and introduced the use of graphic organizers, strategies on how to make inferences, and improved questioning techniques to further support student learning and raise levels of achievement.
  - Teacher teams meet to share effective strategies to increase student engagement and maximize student performance across the content areas. Teams share findings with each other through a vertical cohort structure and with all subject area teachers in same cohort enabling the development of a shared leadership model.

### **What the school needs to improve**

- Develop coherence and alignment in the school's curriculum with state standards to ensure that students make progress in their learning.
  - In some classrooms, student work consists of copying what is written on the board and tasks are not thought-provoking to lead to a conceptual understanding of content. This lack of sufficient rigor and instruction results in inconsistent student engagement and classroom participation.
  - Some teachers plan academic tasks based on the needs of their diverse learners. For example, in one class students work on-line to research a chosen topic, while others require more time to define their topics. However, not all tasks across classrooms are planned with specific student needs in mind. Hence, at risk as well as higher performers are not always challenged and engaged resulting in a lack of progress for all learners.
- Improve the consistency of the differentiation of classroom learning activities to provide appropriate challenge aligned to the students' achievement levels.
  - Uneven teaching practices across the school are limiting student performance, achievement and success as demonstrated in student work. For example, in some classrooms lessons are teacher-directed and student-to-student discussions are not nurtured. In others, teacher routines do not include engaging comments on student work products to push student thinking. This hampers improvements in student outcomes.
  - In some classrooms students are grouped by independent levels matched to specific tasks that scaffold their writing assignment. However, most teaching strategies are not differentiated and, therefore, provide limited access and do not support the learning of all students in the classroom.
- Develop a cohesive system to ensure that all teachers know their individual students' needs, strengths, achievement and learning styles across the curriculum on an ongoing basis to support targeted instruction and foster engagement.

- Across content areas, teachers create midterm and final assessments that measure student performance. However, these assessments are not calibrated to State exams. Additionally, not all teachers are providing students with multiple opportunities for re-assessment to improve their grades and reach mastery throughout the semester. This limits their effectiveness in evaluating decisions to emphasize key standards and differentiate instructional strategies accordingly to improve student outcomes.
- Develop rigor in setting whole school, subject, grade and classroom goals based on the students' present and projected achievement outcomes.
  - Parents stated that school leaders involve and communicate with them during the development of the Comprehensive Education Plan and other planning documents. However, it is done in a limited way resulting in an inconsistent planning process.
  - Goal setting and action planning occur at the school level, but have a surface connection to data. Progress measures do not always inform goals at the individual and subgroup level with enough specificity to support student progress and performance.
- Integrate youth development, support services and partnerships with families and outside organizations to accelerate academic and personal growth.
  - The school is developing supports for faculty and staff to create a consistently safe, inclusive and respectful culture that promotes social, emotional and academic growth in students. All stakeholders are beginning to actively monitor student behavior. However, not all staff employ strategies that encourage student responsibility and respect hindering the development of an inclusive and respectful culture.
  - The school is creating internal structures to consistently provide youth development support services for students and families including social-emotional and real world learning opportunities. Teamwork provides a structure for professional development as guidance counselors attend meetings to discuss strategies and next steps for teachers to improve students' personal growth.
- Develop the use of data analysis to evaluate and revise as needed, processes and programs within the school that lead to effective professional collaborations.
  - The principal provides the structure and protocols for team work and has a general knowledge of their progress toward school-wide instructional goals. However, precise monitoring and evaluation of the effectiveness of teacher teams is not yet fully developed. This hampers progress toward school-wide goals and gains in student achievement.
  - Systems are being developed to evaluate the effectiveness of teacher hiring and capacity building that are driven by a vision for continually improving student achievement. Nevertheless, the impact of this endeavor is not yet evident in an improvement of teacher pedagogy.

## Part 3: School Quality Criteria 2010-2011

<b>School name: Mathematics, Science Research and Technology Magnet</b>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
<b>Overall QR Score</b>		<b>X</b>		
<b>Quality Statement 1 – Instructional and Organizational Coherence: The school has a coherent strategy to support student learning that aligns curriculum, instruction and organizational decisions.</b>				
<i>To what extent does the school regularly...</i>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
1.1 Design engaging, rigorous and coherent curricula, including the Arts, for a variety of learners and aligned to key State standards?		<b>X</b>		
1.2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best, and ensure that it is: aligned to the curriculum, engaging, and differentiated to enable all students to produce meaningful work products?		<b>X</b>		
1.3 Make strategic organizational decisions to support the school's instructional goals and meet student learning needs?			<b>X</b>	
1.4 Maintain a culture of mutual trust and positive attitudes toward learning that support the academic and personal growth of students and adults?		<b>X</b>		
<b>Quality Statement 2 – Gather and Analyze Data: School leaders and faculty consistently gather, analyze and share information on student learning outcomes to understand school and student progress over time.</b>				
<i>To what extent does the school ...</i>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
2.1 <b>Gather</b> and analyze information on student learning outcomes to identify trends, strengths, and areas of need at the school level?			<b>X</b>	
2.2 Align assessments to curriculum and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom level?		<b>X</b>		
2.3 Use or develop tools to enable school leaders and teachers to organize, aggregate, and analyze student performance trends?		<b>X</b>		
2.4 Engage in an open exchange of information with students and families regarding students' learning needs and outcomes?		<b>X</b>		

<b>Quality Statement 3 – Plan and Set Goals: School leaders and faculty consistently engage the school community and use data to set and track suitably high goals for accelerating student learning.</b>							
<i>To what extent does the school ...</i>	UD	D	P	WD			
3.1 Establish a coherent vision of future development that is reflected in a short list of focused, data-based goals that are understood and supported by the entire school community?		X					
3.2 Use collaborative and data informed processes to set measurable and differentiated learning goals for student subgroups, and students in need of additional support?			X				
3.3 Ensure the achievement of learning goals by tracking progress at the school, teacher team and classroom level?			X				
3.4 Communicate high expectations to students and families, engage them in decision-making, and promote active involvement in the school community?		X					
<b>Quality Statement 4 – Align Capacity Building: The school aligns its leadership development and structured professional collaboration around meeting the school’s goals and student learning and emotional needs.</b>							
<i>To what extent does the school...?</i>	UD	D	P	WD			
4.1 Use the observation of classroom teaching and the analysis of learning outcomes to elevate school-wide instructional practices and implement strategies that promote professional growth and reflection, with a special focus on new teachers?			X				
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning?			X				
4.3 Provide professional development that promotes independent and shared reflection, opportunities for leadership growth, and enables teachers to continuously evaluate and revise their classroom practices to improve learning outcomes?			X				
4.4 Integrate child/youth development, support services and partnerships with families and outside organizations with the school-wide goals to accelerate the academic and personal growth of students?		X					
<b>Quality Statement 5 – Monitor and Revise: The school has structures for monitoring and evaluating progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.</b>							
<i>To what extent does the school...?</i>	UD	D	P	WD			
5.1 Evaluate the quality of curricular, instructional and organizational decisions, making adjustments as needed to increase the coherence of policies and practices across the school?		X					
5.2 Evaluate systems for assessing students, organizing data, and sharing information with student and families, making adjustments as needed to increase the coherence of policies and practices across the school?		X					
5.3 Establish and sustain a transparent, collaborative system for measuring progress towards interim and long term goals and making adjustments during the year and over time?			X				
5.4 Use data to regularly evaluate the effectiveness of structured professional collaboration, capacity building and leadership development strategies?		X					
<b>Quality Review Scoring Key</b>							
UD	Underdeveloped	D	Developing	P	Proficient	WD	Well Developed