

Quality Review Report 2010-2011

New Explorations into Science Technology and Math

Elementary – High School 539

**111 Columbia Street
New York
NY 10002**

Principal: Dr. Olga Livanis

Dates of review: May 19 – 20, 23, 2011

Lead Reviewer: Daniella Phillips

Part 1: The school context

Information about the school

New Explorations into Science Technology and Math is an elementary-middle-high school with 1,583 students from kindergarten through grade 12. The school population comprises 12% Black, 15% Hispanic, 46% White, and 26% Asian students. The student body includes 1% English language learners and 0% special education students. Boys account for 48% of the students enrolled and girls account for 52%. The average attendance rate for the school year 2009 - 2010 was 95.8%.

The school is a city-wide gifted and talented magnet school. Student admissions to kindergarten through grade 3 are controlled by performance in externally devised entrance exams, while student admissions to grades 6 and 9 and other grades are determined by internal criteria and standardized exam scores.

Overall Evaluation

This school is proficient.

Part 2: Overview

What the school does well

- The principal and her cabinet make informed and highly strategic organizational decisions that elevate coherence of practices.
 - In lieu of principals' suspensions and removals from classroom, the school recently implemented a "Morning to School" program for students in grades 6 to 12. A firm, compassionate teacher meets students before school for successive days to resolve conflicts, do team building exercises, and counsel them into better choices. This organizational change to the structure of suspensions has improved attendance and positive behaviors of students, especially for repeat offenders.
 - All elementary school students receive instruction in Mandarin, chess, and Singapore math program, while all high school students choose among the school's fifteen offered Advanced Placement courses. These rigorous academic opportunities have yielded higher student engagement and greater attainment of college-level credit.
- School leaders, faculty, and parents hold very high expectations for students' academic achievement and personal conduct which reinforces a shared commitment to excellence.
 - Every teacher in the lower school possesses the gifted education extension license and every secondary teacher has significant content expertise, which results in elevated academic standards for students. Moreover, staff convey high expectations for personal conduct which results in many students exceeding community service requirements and low incidence rates of misbehaviors.
 - Parents contribute enormously to the school, including substantial financial resources to upgrade technology in every classroom and production of a monthly newsletter. In spite of some challenges, there is ample evidence of parents engaging productively and frequently via school events, on-line learning tools (such as Renzulli enrichment), end-of-unit class celebrations, and field trips. This active participation leads to a deeper sense of shared community values.
- Students benefit from a broad and rigorous curriculum that produces academic excellence across grades and content strands.
 - This school community considers seriously how best to promote academic excellence and progress for students. Academic tasks and curricula are reviewed by a growing cadre of teachers and school leaders who seek alignment with Common Core standards. All students engage in rich arts offerings, including theater, music, visual arts, and dance, as well as world language studies. There are increasing and high quality examples of performance-based learning with hands-on science activities, Robotics as a new elective, and theater integrated in middle

school literacy. As a result, students achieve at exceptional levels with keen focus on college readiness and varied studies.

- The school's supportive approach to working with students makes them develop high aspirations and pursue new challenges.
 - Despite overcrowded hallways, the school provides a safe and deeply nurturing learning environment for all students. A talented team of assistant principals, guidance and college counselors, and related services staff collaborate with classroom teachers to know each student well. Weekly meetings of a high functioning Pupil Personnel Team ensure that struggling learners—both academic and social emotional—are identified and supported with strategic interventions. Additionally, to help 120 new students adjust, the school hosts a very successful summer bridge program for incoming sixth and ninth graders. As a result, students speak comfortably about feeling “known” and “cared about” by staff and that “teachers help us succeed” in school and well beyond.
- Reflection, monitoring and revising are embedded daily practices of school leaders and staff resulting in very positive school growth.
 - Administrators review thoughtfully student academic data while considering changes to curriculum, organizational structure, and teacher development. For example, student performance in high school physics recently lagged behind other sciences with a passing rate of 43% on the Regents exam in 2008. In order to improve students' mastery, teachers have developed a common curricular map and lab manual, as well as a supplemental “recitation” class where physics principles are applied in real world problems. Consequently, the students' Regents passing rate has risen dramatically to 63% in 2009 and 81% in 2010.
- School leaders have strong teacher hiring, evaluation, and tenure processes in place that raise the bar for instructional consistency.
 - There is good coherence at the school to understanding research and practices around gifted education. This focus extends to professional development, organizational decisions, and teaching practices. While many teachers feel this year's professional development has “missed the mark” with too few sessions and practical applications, the focus on optimizing gifted education is shared deeply by all stakeholders.
 - Administrators maintain rigorous hiring and evaluation practices that include several rounds of interviews and demonstration lessons for teacher hiring and multiple formal and informal observations for supervision. School leaders are unafraid about having difficult conversations about teacher performance which leads to careful attention to student achievement data and instructional consistency.

What the school needs to improve

- Develop further the inquiry approach to teacher collaboration and shared analysis of student work to strengthen professional development at the school.

- The school has one inquiry team that provides and monitors targeted credit recovery opportunities for struggling high school students. While the team's impact on students has been productive, the work has not influenced teaching practices as only one classroom teacher participates on the team. All teachers collaborate monthly on grade level or department teams and teachers are adept at analyzing student assessment data and discussing implications and next steps. Missing from these conversations are protocols and time to review student work together as another powerful indicator of student learning. Because teacher teams have limited opportunities to meet and plan together, the inquiry approach is not firmly in place.
- Enhance teaching practices in differentiation to maximize students' engagement.
 - The school differentiates students' academic programs to great extent by matching cognitive needs and academic interests with appropriate courses. For example, an accelerated fifth grade student takes high school math and all elementary school students take chess lessons at one of two different levels. Across classrooms, however, there is a need for improved differentiation of instruction by varying questions, altering assignments, and planning scaffolds. Students appear highly motivated and sufficiently engaged in class as they learn individually, within small groups, and in whole class settings. However, too many Regents and Advanced Placement-level classes involve teacher-directed formats which limit students' active and meaningful participation.
- Increase consistency of students reflecting on their own learning and progress to deepen ownership of learning.
 - Students reflect on a sampling of their best work in middle school by keeping portfolios. Moreover, across classrooms, students have some experiences assessing their own or peers' work products. However, students need increasing opportunities to evaluate their own learning process and next steps through self-assessments, student-led parent/teacher conferences and other reflective practices in order to foster independence and internalize learning in deeper ways.
 - Staff utilize technology effectively to keep parents apprised of student performance and school news, including School Hub in the lower school, e-Board in the middle school, and electronic grade books and *Daedalus* in the high school. Yet parents believe there is a need to streamline these communication tools, which may explain parents' mediocre response rates on the *School Survey* and ARIS Parent Link.
- Extend opportunities for teacher teams to plan and learn together in meaningful ways and thereby increase instructional and leadership capacity.
 - Faculty collaboration occurs informally to great extent. However, the complex program schedule for this school of thirteen grades does not allow sufficient formal opportunities for teacher teams to meet, thus limiting teacher collaboration and leadership development. The proactive administrative team has taken steps to ensure changes in next year's program with daily common prep periods.

Part 3: School Quality Criteria 2010-2011

School name: New Explorations into Science Technology and Math	UD	D	P	WD
Overall QR Score			X	
Quality Statement 1 – Instructional and Organizational Coherence: The school has a coherent strategy to support student learning that aligns curriculum, instruction and organizational decisions.				
<i>To what extent does the school regularly...</i>	UD	D	P	WD
1.1 Design engaging, rigorous and coherent curricula, including the Arts, for a variety of learners and aligned to key State standards?				X
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?			X	
1.3 Make strategic organizational decisions to support the school's instructional goals and meet student learning needs?				X
1.4 Maintain a culture of mutual trust and positive attitudes toward learning that support the academic and personal growth of students and adults?				X
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.				
<i>To what extent does the school ...</i>	UD	D	P	WD
2.1 Gather and analyze information on student learning outcomes to identify trends, strengths, and areas of need at the school level?			X	
2.2 Align assessments to curriculum and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom level?			X	
2.3 Use or develop tools to enable school leaders and teachers to organize, aggregate, and analyze student performance trends?			X	
2.4 Engage in an open exchange of information with students and families regarding students' learning needs and outcomes?			X	

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.

<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

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.

<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	

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.

<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	

Quality Review Scoring Key							
UD	Underdeveloped	D	Developing	P	Proficient	WD	Well Developed