

# **Quality Review Report 2008-2009**

**Bronx Center for Science and Mathematics**

**High School 260**

**1363 Fulton Street  
Bronx  
NY 10456**

**Principal: Edward Tom**

**Dates of review: December 10 – 11, 2008**

**Lead Reviewer: Andy McClean**

## Part 1: The school context

### Information about the school

The Bronx Center for Science and Mathematics is a high school with 419 students from grade 9 through grade 12. The school population comprises 29% Black, 64% Hispanic, 1% White, and 6% Asian students. The student body includes 3% English language learners and 9% special education students. Boys account for 46% of the students enrolled and girls account for 54%. The average attendance rate for the school year 2007 - 2008 was 90.1%. The school is in receipt of Title 1 funding with 79% eligibility. The school now provides a full program for grades 9-12 and is over-subscribed.

### Overall Evaluation

#### **This school is well developed.**

The principal communicates a powerful message to teachers, parents and, above all, students at this vastly over-subscribed center, that the school will work in partnership with them to achieve the highest academic success. Excellent lines of communication inform every one of the school's seven core values, which are tangible in all aspects of school life. This is evident in the fervor and enthusiasm seen from the girls' basketball team to a grade 12 calculus class that one teacher has instructed through all grades. Students want to learn. Teachers motivate all their students in all content areas through innovative teaching and demonstration that tells them, although the work is challenging, that it is also fun to succeed. All parties in the school combine to create a deeply collegial learning community, which is a beacon of high academic success. The principal, very well supported by the administration and content coordinators, bases all individual tracking and goal setting for students in real-time data. Many data sources contribute to a daily upgrade of every student's progress in all subjects. Regular weekly conferences, tutorials and advisories ensure individual students are well aware of their current successes and areas for improvement. Parents receive the same information online and through letters and e-mail. The school ensures parents without access to such information by these means receive progress reports weekly by other avenues.

Parents and students testify to the academic demands placed on them by teachers. In return, all adults work long hours, many outside of regular school time, to ensure no child will be left unsupported. Such is the demand for participation, that parents and students sign contracts that commit them to achieve almost daily learning goals to ensure their participation in sports, music and drama activities. If no work, then no play ensues until standards improve. The principal, with guidance from his colleagues, shows an honest appraisal of the need to improve the depth of students' writing skills in all subjects. A key goal, recognized in a wholly accurate and professional self-evaluation, is to improve the use of technology by both students and teachers to increase sophistication in students' independent research. Special education students and English language learners receive very good support from the moment of their acceptance into school, through use of data from previous schools and orientations for themselves and parents. The same processes exist for all students. This results in no new student arriving in school unaware of the vibrant learning community they join, where acceptance for college education is the pinnacle of their time in school. Teachers communicate a love of learning to their students and they do whatever it takes to ensure the success of all.

## Part 2: Overview

### What the school does well

- The principal, determined to realize the full potential of all students, identified from a wide range of data, communicates a powerful and perceptive vision of success for all.
- Profound core values, linked to challenging school goals, result from rigorous scrutiny of many indicators of performance and progress.
- A deeply reflective and collaborative faculty demonstrates a fervent commitment to student achievement, with an appropriate emphasis on special education students and English language learners.
- Students understand their current levels of achievement in all content areas and receive very effective direction from teachers to attain their individual goals.
- Professional development, linked to regular assessment of performance by the administration, makes a significant impact on instruction and the advancement of a reflective pedagogical dialogue.
- A tangible culture of mutual trust and co-operation between all members of the school community motivates and drives students' aspirations and dreams.
- A wide curriculum, with a great variety of out-of-school activities and trips, enables all students to become life-long learners in an environment where learning is respected and fun.

### What the school needs to improve

- Continue the appropriate focus on development of students' greater sophistication of writing skills in all content areas.
- Further develop opportunities in instruction to ensure greater differentiation and academic rigor for all students.
- Enhance the use of technology by teachers across the curriculum and by students to support their independent learning.

## Part 3: Main Findings

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

**Quality Statement 1 – Gather Data: School leaders and faculty consistently gather, generate and analyze information on student learning outcomes and use it to understand what each student knows and can do and to monitor the student's progress over time.**

**This area of the school's work is well developed.**

All students understand their current rates of progress in all content areas, which are subject to rigorous scrutiny by their teachers on an almost daily basis. This results from the use of a wide variety of data sources, particularly a well-established on-line assessment program that produces real-time information on areas of success and weakness for all students.

Such is the level of sophistication of data collection and use that, even before students arrive at school in grade 9, the process of selection for this heavily over-subscribed school is helped by a variety of hard and soft data to conclude which students will be accepted. Acceptance to attend is open to all achievers, with the school's mission evident in the selection of special education students, high achievers and English language learners, based to the greatest extent on whether they, and their parents, have studied school data available to them and will commit themselves to such a demanding learning climate. Data in many forms provides school leaders with daily measures of performance for all students, subgroups and across all subject areas. Attendance figures for individuals and the whole school receive daily interrogation. A customized data processing system is used to identify and support special education students with a special reading program to give them the tools to access all written matter in their classes. Equally focused is the use of data obtained within the first six weeks of entry to grade 9. A high achievement math group, now in grade 12, was selected for special support and has been tracked and taught by the same teacher for four years to ensure their success in an advanced placement calculus class.

**Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use data to understand each student's next learning steps and to set suitably high goals for accelerating each student's learning.**

**This area of the school's work is well developed.**

Teachers show great depth in their planning to ensure the school's key goal to fulfill the identified academic and social potential of all its students is met. Every six weeks, goals are reviewed by individual teachers, at grade meetings, cabinet meetings and whole faculty meetings. Analysis of patterns and trends, particularly those which show failure against challenging goals, results in immediate changes to courses of action. Students and parents receive feedback in a variety of ways to ensure neither party is unaware for any length of time that their progress is unacceptable. This is evident in all subjects and for such areas as behavior and attendance. The principal, aided by caring and knowledgeable support staff, rejects complacency and poor performance from teachers

and students alike. The daily collection of data and its detailed analysis by teachers and administrators, in school on a week-by-week basis, leads to the principal's very lucid comprehension of what challenges and successes occur. This results in structured and informed debate at regular intervals to refine and adjust school and individual student goals. Students and families have many opportunities, through weekly and sometimes daily advisories, to understand the school's demand for academic rigor and success. They also understand the importance of full attendance and, not least, every teacher's demand that students actively participate in their learning in all classes. Levels of challenge are high for students and their families. Equally high is teachers' devotion of time and energy to each and every family so that no student could ever say that they are ignored when problems occur.

**Quality Statement 3 – Develop Coherent Instructional and Organizational Strategies: The school uses rigorous curricula, teaching and organizational decision making to engage students and faculty in meeting all students' learning goals.**

**This area of the school's work is proficient.**

Data scrutiny ensures that a challenging and broad curriculum is aligned to State standards. Teachers do not merely plan and teach to achieve minimum levels of progress. The school culture exudes the necessity to celebrate what students have achieved and then demand that they make even greater progress. An invigorating grade 9 English class began with a "rap" competition where the teacher ensured all students' comprehension of Shakespearean language. Greater challenge and focus was then placed on students' grasp of the actual text from *Romeo and Juliet*. This energy is evident in all subjects with teachers' constant reflection and debate with coaches and colleagues as they strive to provide their students with the tools to achieve even more. Trips to other countries such as Mali and Vietnam enhance students' understanding and empathy with their peers in communities across the world.

The school is correct in its assessment that differentiation of learning now needs to improve on a class-by-class basis to ensure that consistency of challenge is present in all content areas. This is linked with the principal's clear understanding of a need for greater use of technology both by teachers and students. The school embraces a vigorous attitude to ensure success in dual aims of an improvement in the depth of written work by all students in core subjects, as well as more opportunity for them to carry out independent research through technology. Teachers in all content areas support students through regular feedback in classes to encourage greater quality of writing, rather than quantity. The ambiance of every facet of school life is one of mutual trust and support. This is evident in the number of students and parents who testify to the school as being their "family". The principal sets high standards. Teachers follow his very strong work ethic and show great disappointment at the failure of any of their students.

**Quality Statement 4 - Align Capacity Building to Goals: The school aligns its leadership development and structured professional collaboration around meeting the school's goals for accelerating student learning.**

**This area of the school's work is well developed.**

Well-established systems to identify necessary areas of support through professional development exist in the school. School leaders and department coordinators maintain a close audit on school goals and those of individual colleagues to ensure such training matches school needs. A concentration on the improvement of all students' written responses across the curriculum pays dividends and is set to continue as a major focus. The administration, with evidence from student results, teacher mentoring and class observations, accepts the need to enhance the already effective uses of technology by both teachers and students through focused professional development, to increase current very effective usage in all core subjects. New teachers receive mentoring that has an impact, from a very early stage, on their school role. Indeed, such new staff enthuses about their support from the principal even before they have taken up their post.

A true collegial spirit is tangible in all professional relationships. Formal intervisitations take place on a regular basis, but the most effective sharing of best practice is evident in teachers' daily informal visits and conversations about their students and instructional practices. Work by the inquiry team expands the very effective support given to special education students and English language learners with many opportunities for the faculty to discuss and question lessons learned from their work. The principal empowers all staff to take responsibility and be accountable for their actions. Students and teachers blossom in a climate where there is no fear of failure. Daily analysis of misconceptions and problems is an accepted part of school life, with the principal's door always open for discussion. However, parents, teachers and students understand that communication of a problem to administration must come with outlined solutions as well. Support for students to attain the goal of college placement is exemplary with a wide array of visits to colleges throughout grades 9 to 12, with the result that students possess the necessary tools and skills to apply to college with quiet confidence.

**Quality Statement 5 - Monitor and Revise: The school has structures for monitoring and evaluating each student's progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.**

**This area of the school's work is well developed.**

As a result of the determined and inspirational leadership of the principal, where very honest self-evaluation is based in very regular and thorough scrutiny of data, the whole school radiates in an atmosphere of positivity. Daily scrutiny of data enables faculty members to keep a finger on the pulse of student success. Students and parents alike accept responsibility for their attendance and progress due to the immediacy of feedback on progress toward individual targets across all subjects. Teachers identify a current need to extend differentiation in classes to raise progress to even higher levels. A telling example of the school's demands for success was a recent postponement by the principal of rehearsals for a major drama production by students when academic targets were not met in a given marking period. Administration and coordinators effectively measure steps on the journey to success at regular intervals throughout the year. Where progress does not match the school's very high academic expectations, systems exist to rectify the situation immediately in all core subjects. A robust and effective climate of two-way feedback powers all aspects of school activity. The administration provides regular constructive, professional criticism to all teachers based on formal and informal class observations and scrutiny of student work. Teachers appreciate many opportunities to discuss successes and challenges in their work, knowing that they will receive both support and recognition. Students enthuse about their open lines of communication with the principal and their teachers enabling them to engage in frank

discussions about such issues as uniforms, trips out of school and their futures. Students show great motivation to learn, within a school culture where maturity of relationships between their peers and with their teachers, results from honesty. This honesty begins on a students' acceptance into school, is based on data collected during their time in school and flows from an almost daily appraisal of success against rigorous academic and personal targets.

# School Quality Criteria 2008-2009

<b>School name: Bronx Center for Science and Mathematics</b>	△	➤	✓	+
<b>Overall QR Score</b>				<b>X</b>
<b>Quality Statement 1 – Gather Data: School leaders and faculty consistently gather, generate and analyze information on student learning outcomes and use it to understand what each student knows and can do, and to monitor the student’s progress over time.</b>				
<i>To what extent do school leaders and faculty regularly...</i>				
	△	➤	✓	+
1.1 collect and analyze actionable information, including assessment results and attendance data, to provide a complete view of the learning outcomes and needs of individual students and groupings of students?				<b>X</b>
1.2 focus analysis on the learning outcomes and needs of all sub-groups of students?				<b>X</b>
1.3 engage in an open exchange of information with students and families about students’ learning needs and outcomes, including assessment results and attendance data?				<b>X</b>
1.4 design or adapt tools to enable school leaders and teachers to organize and analyze student performance, identify trends and inform instructional and organizational decisions, and to enable students and their families to assess and track each student’s progress?				<b>X</b>
<b>Overall score for Quality Statement 1</b>				<b>X</b>
<b>Quality Statement 2 – Plan and Set Goals: School leaders and faculty consistently use data to understand each student’s next learning steps and to set suitably high goals for accelerating each student’s learning.</b>				
<i>To what extent do school leaders and faculty...</i>				
	△	➤	✓	+
2.1 use collaborative and data-informed processes to set measurable, actionable and differentiated learning goals in core subjects for individual students and groupings of students and develop differentiated plans and timeframes for reaching these goals?				<b>X</b>
2.2 use collaborative and data-informed processes to develop the school’s Comprehensive Educational Plan (CEP)?				<b>X</b>
2.3 ensure that the achievement of learning goals, and the implementation of plans and timeframes for reaching these goals, is the central focus of school leaders, faculty, students and families?				<b>X</b>
2.4 communicate high expectations to all students and families, and involve students in developing their learning goals and plans and in taking their next learning steps?				<b>X</b>
<b>Overall score for Quality Statement 2</b>				<b>X</b>

## DEFINITIONS

“**Analyze**” or “**analysis**” includes, but is not limited to, comparisons of:

- the current and past outcomes of . . . individual students, administrative groupings and sub-groups of students and the school itself in core subjects;
- the outcomes of different classrooms and sub-groups in the same grades and core subjects; and
- the school’s Progress Report and other outcomes to those of peer/other schools

“**Assessment results**” include student outcomes on summative assessments (e.g., state ELA, math, science and social studies tests, NYSESLAT, Regents Exams, and Performance Based Assessment Tasks) and formative assessments aligned to the school’s curriculum (including Periodic, DYQ, and teacher-developed Classroom Assessments).

“**Core subjects**” are ELA, math, science, social studies/history, the arts, foreign language, and physical education/health.

“**Data-informed processes**” include analysis of Progress Report, Quality Review, Learning Environment Survey, Inquiry Team findings, assessment results and attendance data

“**Groupings of students**” include classrooms, grade levels and high school cohorts.

“**Organizational decisions or strategies**” refer to a school’s use of budget and resources, staffing, planning, scheduling, grade structure, departments and teacher teams and other aspects of the school’s structure and organization that can affect student outcomes.

“**Sub-groups of students**” include special education students, English Language Learners, the other NCLB sub-groups, boys, girls, and other groups significant to the school.

**Quality Statement 3 – Develop Coherent Instructional and Organizational Strategies: The school uses rigorous curricula, teaching and organizational decision making to engage students and faculty in meeting all students’ learning goals.**

<i>To what extent do ...</i>	Δ	➤	✓	+
3.1 school leaders and faculty deliver challenging and engaging curricula in core subjects, including the arts, that are aligned to state standards?				X
3.2 teachers plan and teach lessons that are differentiated to meet the needs of individual students and student groupings and are designed to enable all students to reach their learning goals?			X	
3.3 school leaders make strategic organizational decisions to support a coherent and rigorous instructional approach that enables students to reach their learning goals?			X	
3.4 school leaders maintain a culture of mutual trust and respect and positive attitudes toward learning that support the academic and personal growth of students and adults?				X
<b>Overall score for Quality Statement 3</b>			X	

**Quality Statement 4 – Align Capacity Building to Goals: The school aligns its leadership development and structured professional collaboration around meeting the school’s goals for accelerating student learning.**

<i>To what extent do school leaders...</i>	Δ	➤	✓	+
4.1 use their own observation of classroom teaching and the analysis of student outcomes to implement an explicit, differentiated strategy to improve each teacher’s instruction, with a special focus on new teachers?				X
4.2 encourage teachers to take part in Inquiry Teams and other structured professional collaborations (informed by the examination of student work, assessment outcomes and their own peer observations) and share in the instructional leadership of the school with the goal of improved student learning?				X
4.3 provide professional development that encourages teachers to continuously evaluate and revise their classroom practices to improve student outcomes?				X
4.4 utilize youth development, support services and partnerships with families and outside organizations to accelerate the academic and personal growth of students?				X
<b>Overall score for Quality Statement 4</b>				X

**Quality Statement 5 – Monitor and Revise: The school has structures for monitoring and evaluating each student’s progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.**

<i>To what extent do...</i>	Δ	➤	✓	+
5.1 the school’s plans for improving student outcomes and its strategies for improving each teacher’s instructional practices include measurable interim goals and suitable time frames for evaluating success and making adjustments during the year?				X
5.2 school leaders and faculty use interim checkpoints and data to inform lessons, improve curriculum, differentiate instruction and revise student learning plans throughout the year?				X
5.3 school leaders use data to regularly evaluate the effectiveness of and modify organizational decisions, structured professional collaborations and teacher improvement strategies?				X
5.4 school leaders and the school community have a clear vision for the future development of the school and implement procedures and systems to support academic, personal and professional growth?				X
<b>Overall score for Quality Statement 5</b>				X

<b>Quality Review Scoring Key</b>							
Δ	Underdeveloped	➤	Underdeveloped with Proficient Features	✓	Proficient	+	Well Developed