



The New York City Department of Education



Quality Review Report

**The Brooklyn Academy of Science and the
Environment**

**Public School 547
883 Classon Avenue
Brooklyn
NY 11225**

Principal: Veronica Peterson

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Reviewer: Paul Cosway

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Part 1: The school context

Information about the school

The Brooklyn Academy of Science and the Environment is a recently established school, in its fourth year, with 447 grade 9 through grade 12 students. The school's intake is ethnically diverse, including 84% Black, 10% Hispanic, 1.5% Asian and 1% White students. There are slightly more special education students than in similar and City schools. The proportion of students entitled to Title 1 funding, at 83.6%, is much higher than in City schools and above the average for similar schools. Approximately 2.5% of students are English language learners and this is below the average for similar and City schools. Pupil attendance, at 84.6%, is close to that in City schools. It shares a building with three other schools.

The school aims to develop in its students knowledge and understanding of the living environment and a proficiency and interest in scientific enquiry, as well as giving them an all round education. It has strong links with partner organizations, including Brooklyn Museum and Brooklyn Park and Botanic Garden, which help it to carry out its programs and so works across three campuses.

This is an Empowerment School. Empowerment Schools have more flexibility to make key decisions and control the resources for their school community. Empowerment Schools are free to develop or purchase professional development services, choose which schools to affiliate with, and benefit from reduced reporting and paperwork requirements.

Part 2: Overview

What the school does well

- The school uses data well to monitor its work and students' progress.
- Overall, the data is used effectively to review teaching and learning and to set future targets.
- The curriculum, student guidance and intervention, and teaching groups are modified to make them more effective in the light of information from student progress data,
- The Living Environment course and many of the other science courses are very successful and students achieve well.
- Overall, staff are committed to improving students' performance and understand how to use data to help them compare student progress across classes and grades.
- Teachers are always available to help students to improve their work during and after school.
- The three campus model gives students good opportunities for practical study.
- Data is used well to identify which students need additional support and there is an effective range of intervention programs to provide it.
- Students feel safe and feel that there is always an adult they can turn to for help.
- Technology is used well as a teaching and learning tool.

What the school needs to improve

- Teachers do not use data enough to match work to students' needs.
- There are too few interim reviews to monitor the work of the school and make timely interventions, based on on-going data.
- Communication is inconsistent so that data and information do not reach everyone.
- There are insufficient short-term targets for students, driven by data, to help them to improve their work.
- There is a need for more consistent teaching strategies, backed up by consistent approaches to discipline, to ensure that students are always engaged.

Part 3: Main findings

Overall Evaluation

This is a proficient school.

This is a school with some significant strengths, especially in the work it is doing to generate interest and enthusiasm for the sciences in its students. They gain greatly from the school's partnerships with Brooklyn Botanic Garden and Prospect Park Alliance. The expertise that is freely shared by these institutions stimulates and educates the students. It also gives them excellent opportunities for practical work. The many students whose literacy skills are not strong benefit particularly from being actively involved and from being able to see and touch the objects of their study. An example of the school's success is the fact that the pass rate in the Regents examination on the Living Environment is currently 96%. Although this is not a selective school and many students come from deprived areas, students have been overall winners in national science competitions.

There are some significant areas for development. In particular, the rate at which students learn is adversely affected by their lateness to class and the reluctance of some of them to work hard. A more consistent approach to discipline is needed to ensure that the school's expectations are clear to all students and that all staff expect the same levels of commitment and conduct.

The school is making use of data and realizes its importance in all aspects of its work. It makes adequate use of the designated Periodic Assessment materials to generate data and this is having a positive impact on students' progress. The principal uses the data well to lead the monitoring and review of the school's effectiveness. It is shared with teachers so that they are aware of the progress that their students are making and can compare it with other classes in the same faculty, across faculties and grades. This analysis showed recently that students were making insufficient progress in social studies and this led to the creation of new courses and teaching groups. These revisions of the schedule and the curriculum have had some success and performance has improved in American history and in global history. However, teachers make little use of the data to analyze individual student's strengths and weaknesses, to differentiate their teaching accordingly, or to set them short term targets for improvement. There are good systems for monitoring and supporting special education students. The progress they make is of particular concern to the school and it uses a range of interventions to support them, based on assessment data as well as staff's knowledge of the students and their home circumstances.

As an institution, the school depends more on annual reviews of data than on interim ones. Interim reviews do occur and they are valuable, but they are informal and are not a regular part of everyone's practice. Another problem affecting the school's effectiveness is inconsistent communication. Students, parents and staff recognize that communication within the school sometimes breaks down so that information does not always reach the people who need it.

Students value the ways that teachers will help and guide them during and after school. They recognize how much their teachers care about the progress they make and that if they have personal or relationship problems, there is someone to whom they can turn. There are good opportunities for students to use technology and some teachers use it well to make their instruction more effective.

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 principal, the school board and administration meet regularly to discuss the performance of classrooms and grade levels. A good range of formal and informal systems is used to gather data on individual students' academic and personal development. The school uses its own, regular tests as well as state tests. The principal analyzes assessment data by ethnic groupings. However, there are too few students in most of the categories to make this data statistically valid. It is possible to make a meaningful analysis of the results from special education students and the school does this well. It tracks carefully the progress of special education students and English language learners, and uses this data well to support their learning.

A group of special interest to the school is the lower ability students who have literacy problems. These difficulties are affecting their results in both English language arts and social studies. As a result of the school's thorough research into the areas in which these students are making errors, using gap analysis and error coding, a remedial program is in place. Similar schools have been identified for comparison and results are compared to give the school an objective view of its performance. The outcomes of this are generally favorable. The results in science in particular are above those in similar schools.

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.

School leaders meet regularly to set goals both for the coming year and shorter-term goals where necessary and monitor progress towards them. The staff and principal meet in subject teams to review their work and to set goals, when necessary, based on available data. For example, information on the progress being made by students in math led to changed expectations. The higher performing students were entered for math A after only two terms to challenge and extend them. Less capable students are reprogrammed to give them longer an additional help. The Comprehensive Education Plan has recently been revised to provide more demanding targets for English language arts and social studies. An increase of 10% in their pass rate has been called for.

Where particular students are causing concern because the assessment information, as well as the staff's informal monitoring, is showing that there is underperformance, staff who know the students best meet. They discuss the possible reasons for the problems, considering academic data as well as all they know of the students' personalities and social backgrounds, and draw up a plan of action, with clear responsibilities. This often involves the teachers, guidance counselor and parents. This is reviewed and revised if necessary. However, parents and students are not clear that the school has high expectations of them and not all information on students' conduct and academic targets is reaching them. Parents and students need more information on how to raise

standards. Communication problems are preventing all staff, parents and partners from taking a full role in improving student performance.

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 curriculum takes full account of the need to prepare the students for the mandatory tests that they take. Data from interim and mock tests is used well to monitor the performance of each class and each teacher. Progress reports are sent to parents regularly and the data from these tests drives the school’s plans for improvement. Any concerns that arise from the analysis of the data lead to professional development discussions with the teacher or faculty concerned and a plan for improvement. All teachers understand that they are accountable for their students’ progress, but few are modifying their teaching to ensure that groups of students are given appropriately challenging work. The result is that in class, the more able students finish the work that is set quickly, the students with literacy problems struggle to complete the work and the unmotivated do little. Too many students in some classrooms show little or no interest.

Budget decisions relate to the priorities that arise from the study of data and staff are appointed and deployed to meet the identified needs of students. For example, two new classes were put into social studies, covering topics in world history and democracy in America to help students who needed additional tuition and these helped many to meet the required grade. Additional literacy classes after school and on Saturdays are run for similar reasons. Any absences are followed up swiftly, although the school does not always get the support it needs from parents.

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 has chosen her staff, using rigorous selection procedures, to ensure that they are in tune with its aims and have high expectations, based on a clear understanding of the value of assessment data. Student, class, grade and teacher performance are monitored carefully and compared. Any discrepancies are followed up and this results in appropriate professional development or the hiring of additional staff with the necessary expertise to help students to meet their goals. The principal meets regularly with key members of staff. They discuss the data on student progress as well as their monitoring of classrooms. These discussions are useful in helping to raise standards of teaching. There are opportunities for teachers to meet once a month when students are out of school for an afternoon on the learning passport program, visiting museums or colleges. These are opportunities for them to discuss their work in grade and subject teams, learning from each other and from assessment data. The principal visits classes to monitor teaching and learning and is now going to structure these visits around agreed criteria, linked to the outcomes of this review. She is respected and has the capacity to improve the school. Outside agencies are used to support students who are falling behind or showing a lack of motivation and the school has a good program to teach parenting skills to those who would benefit. In general the school runs smoothly, but there are times when a lack of communication, or noise from students late for class, disrupts learning.

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.

School planning, including the Comprehensive Education Plan, has clear long-term goals and these are reviewed annually by the principal and the leadership team to measure the school's performance. There is not a regular, structured program of interim reviews built into school and department planning. This means that the school tends to be reactive rather than proactive at times in its development program. Interim results are analyzed centrally to detect trends and where there is evidence of underperformance, action is taken. This has resulted in additional support and new courses in a number of areas, including social studies and English language arts. These interventions are succeeding and the data shows that students' performance is improving.

Comparisons are made of the relative effectiveness of class teachers. The results of their students are analyzed by class and low performance is investigated and remedial action taken. The principal and assistant principal meet with staff and uses data as a central focus in these professional dialogues. The information that comes out of these interviews, along with the data, results in plans being revised to try to ensure that teaching is as effective as possible. The disappointing pass rates in the social studies Regents examinations led to a close analysis of the reasons for underperformance. The data revealed that students were failing on their knowledge of the Ottoman Empire and an inability to make comparative studies in essays. This led to a revision of the curriculum, professional development for teachers and coaching in examination technique for students. Results have improved and goals have been raised. This is clear evidence that goals are set and reset in order to drive the school forward and that monitoring and review lead to flexible and well-planned redeployment of resources to meet identified needs.

At this stage in its growth, the school has limited similar school data to enable it to compare its performance against other schools, but makes use of what it has.

Part 4: School Quality Criteria Summary

SCHOOL NAME: Name of School (PS/MS/HS 000)	∅	✓	+
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	