



The New York City Department of Education



Quality Review Report

**New Explorations into Science, Technology and
Mathematics**

Elementary, Middle and High School 539

**111 Columbia Street
New York
NY 10002**

Principal: Dr Olga Livanis

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Reviewer: Georgie Beasley

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Part 1: The school context

Information about the school

New Explorations into Science, Technology and Math is a school for gifted and talented students. Eight hundred and seventy seven students are enrolled in this all-through kindergarten to grade 12 school. New Explorations is organized into three smaller schools, a lower school for grade K through 5, a middle school for grade 6 through 8 and an upper school for grades 8 through 12.

The majority of students, at 56.6%, are White. This is a much higher proportion than typically found in similar and City schools. The rest of the school's population comprises 20.9% Asian students, 15% Hispanic, 7.3% Black and 0.11% Native American. All students are proficient in English although 34 different languages are spoken by students. There are 5% special education students which is a much smaller proportion than other similar and City schools. At 97%, attendance is far above that of other schools.

The principal has only recently been appointed following an unsettled period of leadership. Many teachers are new to the school and are only just settling in. The number of students is growing and each year the school takes more students into its middle and upper grades.

Part 2: Overview

What the school does well

- The principal has a clear vision for the development of the school and is slowly and surely bringing about a change in its culture.
- The lower and middle schools have a secure working structure and a developing vision for learning.
- Teachers demonstrate good commitment to students' academic and personal development.
- Relationships between students and adults are mostly positive.
- Teachers plan lessons to engage students' interests.
- There are clear signs of improvement in the breadth of the curriculum which is now ensuring that students have what they need to graduate.
- Students generally show respect for each other and have positive attitudes to school.
- Partnerships with outside agencies and other organizations help the school to give effective extension work and facilitate students' projects.
- Parents give active support to the school.
- Attendance is excellent.

What the school needs to improve

- Develop and establish structured and formal systems that include student, teacher, support staff, and parent voices, to monitor, evaluate and review all aspects of the school's work as measured by data.
- Extend teachers' use of data to set goals for individual student performance, to track progress, differentiate instruction and plan a seamless curriculum across the school.
- Develop and implement systems for analyzing data for all groups, use the information to set class, grade, subject and school goals, and develop timed action plans for reaching those goals.
- Establish consistency in instruction across the school to ensure lessons focus on learning and engage students fully.
- Implement a structured plan for teachers to formally and regularly share good practice and to meet together as teams to plan and evaluate their work.
- Implement effective communication systems for sharing the vision, and giving and receiving information and feedback from all members of the school community.

Part 3: Main findings

Overall Evaluation

This is an undeveloped school.

There is no doubt that this is a school that wants to do its best for its students. There is a commitment to the school's improvement which is beginning to drive its work. However, the use of data to evaluate the school's performance has not routinely underpinned its work and so, in the past, the school has too readily accepted that it is doing enough because test results are high. A change in culture is slowly but surely beginning to occur with higher expectations of student progress and improved programs for curriculum enrichment.

The newly appointed principal is herself clear about her vision for the future and has shared this with staff, students and parents. As yet, not all students, parents and staff are convinced because the reasons for the need for change have not always been explained clearly. Whole school systems are not yet in place because there has been a need to act quickly to immediately improve some aspects of the school's work. This has now largely been achieved and so the school is beginning to think more strategically about its future. Teams are starting to be established to evaluate and review all aspects of the school's work and decide how positive change will be effected. Plans to involve all members of the school community in this process are ready to be put into place.

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 undeveloped.

The school collects test scores to help check how well it is performing from year to year compared to its own previous results and those of similar schools. In addition, teachers carry out their own assessments to see whether students are on track to meet grade expectations and plan intervention if they are not. The range of data collected is more varied in the lower school because it focuses on skills as well as the students' knowledge and understanding in reading, writing and mathematics. However, until recently, the range and quality of assessment data across the school have been insufficient to build a detailed and secure understanding of each student's performance and progress. The school has not looked in enough detail until this year at how well different classes, grades and subjects are performing year on year.

Analysis of State and City test results has only just started to be used to group students into classes. This has enabled the school to introduce advanced placement classes and to identify additional interventions for special education students and those at risk of not meeting grade levels. New systems have been introduced and a larger amount and range of assessment data has started to be collected to help the school gain a clear understanding of how well different groups of students are performing and making progress. Up until now there is no evidence to indicate that the school analyzed how much progress special education students, ethnic groupings and boys and girls were making and

how well classes, grades and subjects were doing in comparison with each other. The school has relied too heavily on students performing well because they are smart rather than looking to see whether they can make even better progress. This is beginning to change with the administration and teachers are focused on using data more effectively to track progress and plan instruction that challenges students even more.

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 undeveloped.

The school has set goals for itself that ensure programs are in place and the school runs smoothly. However, because there has been no systematic use of data to monitor the school and students’ progress and performance, goals are not linked sufficiently well to whether performance could be even higher for all groupings of students. The goals the school does have drive the work of all members of staff. Teachers have goals for individual students to reach at the end of each year and this ensures that most reach the grade expectations. However, these are not reviewed systematically enough in all classes and so there is inconsistent practice across the schools. Again goals are more consistently set and reviewed by teachers in lower school grade meetings. Difficulties in scheduling in middle and upper schools have prevented teachers from carrying out this work consistently.

The new administration team has implemented some strategies to set goals for special education students and those at risk of not making the grade. The progress of these groups of students is checked regularly in the academic intervention and pupil progress team meetings. As a result, programs are implemented to help the students to acquire the skills they need to make faster progress. Current goals and programs are reviewed and revised as necessary to ensure that they continue to meet the needs of individual students.

Parents are clear about the curriculum their children will receive during each year through initial conferences with class teachers. They and their children are less clear about their individual goals and whether they are capable of exceeding their targets. Termly updates give an overview of whether their children are meeting the grade expectations. Parents value the fact that teachers are open to talking to them at other times especially in supporting them to help their children at home with homework. Parents who give information to teachers about their children’s concerns or special educational needs are confident that these will be acted upon straightaway.

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 undeveloped.

The current administration and team of teachers have strengthened curriculum planning and this now meets mandated requirements and generates data about subject effectiveness. However, there is not a seamless transition across the schools because each school still plans the curriculum separately. The school has worked quickly to extend the range of programs in the upper school so that students can meet graduation

requirements. The enrichment clusters in lower school add interest and extension to learning. Themes link work effectively across subjects and add relevance and purpose to learning. For example, a grade 1 students' topic about bread incorporates learning in science, math and English effectively. However, lower school students do not have regular lessons in technology, which is a concern.

New systems are in place to check that all students are making progress through grade, academic intervention and pupil progress team meetings, although this is better established in the lower school. Some teachers use questions well to differentiate instruction, probe and take forward students' thinking and understanding, and draw everyone into discussions. However, too often, students are expected to do the same work in lessons regardless of individual capabilities. Individual student and group conferencing takes place in many classes but as yet teachers follow different formats across the schools because there is no whole school policy for the purpose and outcomes of this activity. The extended day and 'push in' and 'pull out' activities ensure students who need extra help receive one to one and small group tutoring.

Throughout the schools many teachers use real contexts to try to engage students and this is largely effective. For example, students in grade 2 are making a model of a park to gain an understanding of its various uses and the importance of open space to local communities. There are still too many classes where students are not challenged or sufficiently engaged. Aims of lessons are usually shared with students. However, in the upper school, these are often written on the board at the start of the day for all classes, and sometimes interspersed with notes from different lessons, so some students find it difficult to pick out one piece of information from another. Relationships with adults are good and so most students are comfortable about asking for advice about personal or academic concerns.

Schedules have been reorganized to meet learning requirements, although difficulties in the new schedules still need to be ironed out so that teachers can work collaboratively to plan learning and evaluate the effectiveness of their instruction and the curriculum. Budget and staffing decisions are not yet driven by data or goals in action planning.

Parents make sure their children attend school on time every day and, alongside the school's rigorous procedures, ensure attendance has been far above the average for several years.

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 undeveloped.

The school has successfully selected teachers and leaders who are beginning to make a difference in the school's drive for improvement and use of data. However, there is still work to do in organizing teams to put additional and necessary improvements in place more quickly. The administration and teachers are dedicated to do the best for all students. Teachers in the lower school regularly plan together as a team. Middle and upper school staff do this as often as they can to ensure lesson content is consistent across grades and to ensure the curriculum is covered. With the exception of technology in the lower school, this has been largely successful. New programs and systems are being put into place as a result of the commitment and hard work of all staff. Professional development opportunities are relevant and result in improved practice and programs in

classes. While teachers talk openly with each other about their practices, share ideas and invite critical feedback about their work, there are still too few opportunities for teachers to visit each others' classes to see at first-hand how some teachers always manage to make learning interesting and engaging for students.

The principal and assistant principals are respected and visit classrooms and give effective feedback on how instruction can be improved. The focus and purpose of current, more positive systems are new and so are not well-established into the school's practice. The school generally runs smoothly. However, communication systems are not yet making sure all students, parents and staff are clear about why change is necessary.

Partnerships with outside organizations and other schools effectively helps the school provide programs that extend students' skills and learning, especially for higher achievers in the upper school.

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 undeveloped.

The current principal has not yet put together a whole school plan for improvement. This is still in her head and not written down and so goals have not yet been identified nor communicated fully to all members of the school community. There is no working Comprehensive Education Plan document because it was written before the current principal was appointed and goals are not based on data and so are only partly relevant. As a result, there are few action plans in place to drive through school improvement and those that exist do not align nor focus objectively enough on improving student progress and thus the school's overall performance. In addition, plans do not identify clearly who will lead and drive through improvements or when goals are expected to be achieved. The principal has now started to build her teams and to decide who will be involved, when and how.

There are few systems in place to monitor, evaluate and review the school's performance routinely and so the process lacks rigor. Now that it has tackled the school's most urgent matters, the school is ready to use the strengths of other staff to monitor progress towards its goals and spread the leadership load. Teams are in their very early stages of introduction. The focus has been on successfully inducting new staff and establishing a shared way of working.

Part 4: School Quality Criteria Summary

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| SCHOOL NAME: New Explorations for Science Technology & Math (PS/MS/HS 539) | ∅ | ✓ | + |
| 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.

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| 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 | | |

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| 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 | | |