

**The School of Science and Technology**

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**Public School 152**

**725 East 23<sup>rd</sup> Street**

**Brooklyn**

**NY 11210**

**Principal: Dr Rhonda D Farkas**

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**Reviewer: Linda Murgatroyd  
Cambridge Education**

# **The School of Science and Technology**

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### Part 1: The School Context

#### Information about the school

The School of Science and Technology (Public School 152) serves an ethnically diverse population in Brooklyn. It has 801 students, from Kindergarten to 5<sup>th</sup> grade. Students come from a range of ethnic backgrounds, although the greatest proportion (69%) comes from African American families. In addition, 14% are Hispanic, 9% Asian American and 5% Caucasian, the remaining small number of students being from other backgrounds. Approximately 6% of students have special educational needs. The school has a higher proportion than city-wide schools of students who are newly arrived in the country, often from the Caribbean, and 11% of students are English language learners. The proportion of students known to be Title 1 eligible is broadly average at 72%.

The school has a very clear vision of commitment to enabling students to become independent, responsible, self-confident lifelong learners equipped with keen problem solving skills.

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## Part 2: Overview

### What the school does well

- This is an exceptionally successful inclusive school, which is highly valued by parents.
- The principal and assistant principal have high aspirations for the school with a relentless focus on improvement, which they have effectively shared with their staff.
- Staff is highly committed to their students' academic and personal development. As a result, students of all abilities make excellent progress.
- Positive and supportive relationships underpin the work of the school. Students and parents appreciate the care and concern of staff, and students respond well to their high expectations.
- The school is harmonious, with a culture based on mutual respect, inclusion and the celebration of diversity. Students behave very well, and they clearly enjoy learning.
- All staff is engaged in constant dialogue about their students, the progress they make, and how to improve this even further.
- The school is reflective, makes effective use of theoretical material, tries out ideas and takes appropriate action to address areas that need to be improved.
- Teaching is student-centered, ensuring student engagement and developing essential thinking and communication skills. Students can talk about their learning and explain what they are doing and why.
- Staff knows their students very well, and shows pleasure in their achievements. They gather an excellent range of information about students, which they use very effectively to help students to maximize their academic achievement.
- The partnership with parents is outstanding. The school is innovative in the range of activities it uses to draw parents in, so that they can support their children's learning.

### Opportunities for further improvement

- Further develop the mathematics curriculum and its teaching, particularly in the upper grades, to bring students' performance up to that in English language arts.
- Continue to share good practice among staff through peer observations, discussion and feedback.
- Ensure that students make daily use of information technology across the curriculum to improve their skills in research and presentation.

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## Part 3: Main Findings

### Overall Evaluation

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

The school is a highly effective one in which student-centered learning and teaching are underpinned by mutual respect and pleasure in students' achievements. The principal is an inspirational leader and is very successful, not only in sharing her vision for the school with staff, but also, ably supported by her enthusiastic assistant principal, in engaging them in a continuing dialogue about teaching and learning. Their high expectations are reflected in positive relationships, excellent presentations of students' work, the purposeful atmosphere throughout the school and the high standards that students achieve, often from relatively low starting points. Staff at all levels assumes responsibility for initiatives to promote students' progress and to develop their professional approach, knowledge and skills, and there is a commitment by all staff to continuous improvement. The involvement of parents in their children's education is an outstanding feature of the school, due to the welcoming environment and the hard work of all staff to engage parents in a wide variety of social and educational activities.

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

**Quality Statement 1: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor and facilitate the student's progress over time.**

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

The school collects a wide range of information relating to individual students' progress and performance. This includes standardized tests, developmental reading tests, continuous assessment while teaching and observations of students' participation and performance. In addition, the principal and assistant principal scrutinize teachers' notebooks, look at and compare work samples from all classes, and use record cards to monitor progress. The school keeps very detailed records for every student receiving additional support in any form. This bank of information is used very effectively to identify students' specific needs, track their progress over time and take swift action when necessary if a student begins to fall behind. School summative data shows year-to-year improvement, particularly in English language arts, although progress in mathematics is not as good as in other subjects of the curriculum.

Senior staff carefully monitors overall performance, ensuring that the needs of ethnic, racial, gender and ability groups are analyzed. They also compare progress of students in each content area, class by class and grade by grade, to ensure that teaching and learning are equally effective for all students. Action is taken when necessary to address individual or group needs. For example, the recognition that lack of phonemic awareness was hindering reading skills in a number of students led to the establishment of the Foundations and Wilson schemes for selected students, and measurable improvement in reading skills.

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School leaders carefully compare the school's performance against that of similar schools, as well as across districts and regions, supported by data from the Department of Education. They also carefully compare their present and past performance, and the relative performance of each cohort of students as they pass through the school. This information is used to calculate the value added by the school and drives all plans for school improvement.

**Quality Statement 2: 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 well developed.**

The wide range of information described above is exceptionally well used to ensure that students make progress. All faculty members know their students extremely well. Each teacher keeps an exceptionally detailed file, which carefully charts the progress of each student, and summarizes this for the class as a whole. This information is based on a range of assessments and observations, and demonstrates very good progress for general and special education students. One of the strengths of the school is the way in which staff is in constant discussion and debate about students' performance across the whole spectrum of academic and personal development. This dialogue takes place formally, in timetabled discussions in teams and with the principal, where she reviews each class, child by child, to ensure that expectations are sufficiently high and that progress is planned for. In addition, there is frequent informal discussion and debate about students, teaching and learning whenever staff gets together, drawing on their accurate knowledge of each student's strengths and weaknesses. Through these discussions, staff supports each other very well in ideas for support and improvement. Any student who is having difficulty triggers an immediate response, resulting if necessary in a referral to the very thorough range of academic support services. Most teachers are becoming increasingly confident in analyzing and interpreting statistical data.

Expectations are high, and these are shared with students and their parents through a number of strategies. Teachers discuss students' work with them as part of the school's workshop teaching style, ensuring that they can talk articulately about what they are doing and why. They use the 'green pen' technique when grading work, so that students know what they need to correct or develop. Students themselves can give good examples of very specific guidance on areas for improvement.

Parents are actively involved in discussion of goals and progress towards them. The school runs an impressive variety of activities for parents, some of which are social, but all with the aim of strengthening the partnership with parents in their children's education. The parent coordinator works very effectively with the school as a whole to engage parents as partners. The school sends out information at the beginning of each unit about what is to be taught, with ideas about how to help at home, and holds meetings to develop this further. As well as formal consultation evenings, teachers keep in contact with parents through telephone calls when they need to give feedback. There are also well attended specific events such as the 'pajama night', where parents, children and staff came to school dressed in nightwear to promote reading bedtime stories. Family nights

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are held during which parents try out some of the tests their children will take, to help them to understand what is required. The parent coordinator makes invitation cards for these events, adding a personal touch that is much appreciated by parents. She has trained a number of parents to access their children's data on the school website. Parent volunteers are also tutors in a simple reading fluency program, helping other children to make progress while developing their own skills in supporting reading.

**Quality Statement 3: The school aligns its instructional activity and resources around its focused plans for accelerating learning for each student.**

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

The school's curriculum is firmly based on high expectations of students and review of their progress. Information from assessment is fed into the overall picture of students' performance, and used to identify curricular areas that need further attention. For example, results of data analysis on performance in mathematics have resulted in a new program for mathematics teaching. All staff is involved in curriculum development as they review and evaluate the impact of their teaching and of new programs and units of study.

The school makes very good provision for a wide range of extension and extra-curricular activities to ensure that students are challenged and experience success. For example, there is a good selection of clubs from which students can choose, including an intergenerational chorus, which brings together students and their families. Very good use is made of the local environment and resources, such as the Brooklyn Botanical Garden to support a science topic on growth and plants. Regular events and competitions such as the Principal's Math Sweepstake keep students motivated to do their best.

The school is designated as a school for science and technology. However, at present the greatest curriculum strengths are in English language arts. The curriculum is under development for both these subjects, and is currently improving. Students learn good skills in information technology, but there is a need for them to practice these skills daily across the curriculum so that they become central to students' learning.

All decision-making in the school is based on considerations of improving student outcomes. The principal is creative in the use of the budget to direct resources towards areas of need, dictated by analysis of data. Staff is allocated to areas of work, which builds on their strengths and develops new skills, to create effective teams, minimize staff turnover and keep expertise in the school. There is a large guidance team, which is effectively mobilized to address the needs of any student not making the expected progress, and partnerships with outside organizations also support learning. Attendance and punctuality are actively pursued, with a positive approach, including thanking students for punctuality during morning announcements and recognizing classes with the best attendance.

There are high levels of trust between students and staff, and students are confident that they are known and cared for. They and their parents appreciate the attention to their personal growth and the fact that members of the staff know every child. Parents responding to the school's questionnaire and those who met with the reviewer express very high satisfaction with the school.

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**Quality Statement 4: 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 well developed.**

Staff is carefully selected using a range of criteria, including their willingness to make a commitment to work collaboratively using a student-centered workshop approach and evidence that they like children. This ensures that all staff is willing to engage with the school's philosophy.

Teaching is good and promotes learning very successfully. The majority of lessons are carefully planned, challenging and interesting. Students are engaged and interested in their work, and are happy to explain what they are doing to staff and visitors. Learning intentions are shared with students so that they know what they are learning and what they must do to succeed. They are challenged by teachers' open-ended questions, which require them to develop and clarify their thinking. As a result, students show enthusiasm for their learning, work hard and progress well. Good teaching is maintained in a culture of high expectation, continual self-evaluation, reflection and improvement.

Professional development opportunities are good. In particular, a close working partnership with Teachers' College provides an outside forum for reflection and sharing practice more widely. However, staff also learns a great deal from each other in school. The school has been recognized for its commitment to working together by New York Department of Education as a Collaborative Community of Practice. Staff enthusiastically talks about developing their skills as teachers by sharing their ideas and reflecting on their work together and with the principal. One staff member exemplified this enthusiasm by describing teachers 'running in to share' a piece of students' work. The principal regularly observes teaching and gives feedback. However, teachers would like more opportunities for peer observations. Any rare example of staff underperformance is supportively but firmly dealt with by the principal, who models her own high expectations in every interaction with students, staff and parents. The principal and assistant principal do a wide range of monitoring of student and teacher performance to closely evaluate the impact of professional development.

**Quality Statement 5: 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 well developed.**

Staff constantly keeps the school under review at all levels. Through distributive leadership, all staff assumes responsibility for assessing and analyzing student progress, and for curriculum design and review. School development and initiatives are carefully planned, based firmly on the needs of students. The school plan is a working document, kept under review during faculty meetings, with monthly reviews of progress towards goals. Partly because of the school culture of dialogue and debate, the effectiveness of programs is reviewed on an ongoing basis, with amendments and changes as necessary. Administration and staff effectively use data to guide these changes and are responsive to

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feedback. For example, a new mathematics program was piloted by two members of staff, and purchased on their recommendation. When it was discovered that grades were not high enough using the program, it was abandoned, and replaced with another. So as to minimize waste, the books are available for students to practice at home.

Despite the school's obvious success, there is no air of complacency, and staff is relentless in their pursuit of further improvement. The involvement of all staff is key to the school's success, and the principal has very effectively inspired and nurtured this commitment to create an exciting, challenging learning environment.

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### Part 4: Evaluation Criteria Grade Summary

<b>Final Evaluation</b>	0	✓	+
<b>Overall Quality of the school</b>			X

<b>Quality Statement 1: School leaders and faculty consistently gather data and use it to understand what each student knows and is able to do and to monitor and facilitate the student's progress over time.</b>	0	✓	+
1.1 The school uses available data (e.g., diagnostic, formative, and summative assessments, students work products, standards-based portfolios, attendance, descriptive review, security data, etc.) and generates its own to provide an objective, constantly updated understanding of how well each student, classroom, grade level, and other important categories of students and the school are: (1) currently performing, and (2) progressing over time, on English Language Arts, mathematics, and other important academic subjects.  Criteria for measuring student progress are "objective" when they are <ul style="list-style-type: none"> <li>• standards-based,</li> <li>• consistent across students,</li> <li>• capable of revealing progress or a lack of it over time and ways to close the gap between current and expected practice,</li> </ul> and when they allow <ul style="list-style-type: none"> <li>• the performance of different students to be compared, and</li> <li>• learning activity to be broken down into component parts so strengths and weaknesses on each sub-activity may be identified.</li> </ul>		X	
1.2 The school makes effective use of the data to assess the performance and progress of students by racial and ethnic groups, English Language Learners and special education students, and all other categories of interest to the school.			X
1.3 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, racial and ethnic groups, and other groupings of interest within the school.			X

<b>Quality Statement 2: 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.</b>	0	✓	+
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 it develops 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 warranting attention.			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. Students and their parents/caregivers are regularly invited to provide information about each student's performance and how to improve. That information is central to setting reasonably 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

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<b>Quality Statement 3: The school aligns its instructional activity and resources around its focused plans for accelerating learning for each student.</b>	0	✓	+
3.1 The school selects the curriculum based on how well it aligns with the school's high expectations and improvement plans and on the curriculum's capacity to generate meaningful interim data about progress towards goals.			X
3.2 Decisions about the use of teacher and student time are based on the organization of the day and week needed to inform teachers about each student's performance and next learning steps, set goals and plans for improved student learning, and implement and continuously improve plans for reaching stated goals.			X
3.3 Staffing decisions are driven by the needs that emerge from examining student data and by the focused plan the school develops to improve student outcomes.			X
3.4 Budgeting decisions are driven by the needs that emerge from examining student data and by the focused plan the school develops to improve student outcomes.			X
3.5 Teachers are accountable for student outcomes. 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
3.6 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
3.7 Student attendance and engagement are high priorities. High rates and patterns of absences trigger immediate intervention.			X
3.8 Instructional programs actively engage students.			X
3.9 The school aligns youth development and support services around stated academic goals. Partnerships with outside bodies are routinely used to achieve academic goals.			X
<b>Quality Statement 4: The development of instructional leadership, staff, and capacity are aligned around the school's collaboratively established goals for accelerating the learning of each student.</b>	0	✓	+
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 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 Leaders, faculty, and staff share the same goals and frequently evaluate themselves, their interventions and each other's plans and interventions, including, when possible, by comparing outcomes across classrooms and schools. The school monitors its performance and tackles weaknesses. Even in areas where the school is successful, leadership is not complacent, but aims to improve further. The goal in all cases is to improve student and school performance and progress.			X
4.4 Planning, evaluation of results and revision of plans takes place in teams.			X
4.5 The principal is respected and has capacity to effect change.			X
4.6 The school runs smoothly. Procedures are clear and are generally followed.			X
<b>Quality Statement 5: 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.</b>	0	✓	+
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 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 interim 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 each successive phase of goal setting and improvement planning, and each successive phase is characterized by agile and flexible realignment of practices and resources to improve students' academic outcomes.			X