Quality Review Report
2018-2019

The Queens College School for Math, Science and Technology
K-8 25Q499
148-20 Reeves Avenue
Queens
NY 11367

Principal: Simi Minhas

Dates of Review:
January 15, 2019 - January 16, 2019

Lead Reviewer: Robin Posner
The Quality Review Report

The Quality Review is a two-day school visit by an experienced educator. During the review, the reviewer visits classrooms, talks with parents, students, teachers, and school leaders and uses a rubric to evaluate how well the school is organized to support student achievement.

The Quality Review Report provides a rating for all ten indicators of the Quality Review Rubric in three categories: Instructional Core, School Culture, and Systems for Improvement. One indicator is identified as the **Area of Celebration** to highlight an area in which the school does well to support student learning and achievement. One indicator is identified as the **Area of Focus** to highlight an area the school should work on to support student learning and achievement. The remaining indicators are identified as **Additional Finding**. This report presents written findings, impact, and site-specific supporting evidence for six indicators.

Information about the School

The Queens College School for Math, Science and Technology serves students in grade PK through grade 8. You will find information about this school, including enrollment, attendance, student demographics, and data regarding academic performance, at http://schools.nyc.gov/Accountability/tools/report/default.htm.

School Quality Ratings

<table>
<thead>
<tr>
<th>Instructional Core</th>
<th>Area</th>
<th>Rating</th>
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<tbody>
<tr>
<td><strong>To what extent does the school...</strong></td>
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<tr>
<td>1.1 Ensure engaging, rigorous, and coherent curricula in all subjects, accessible for a variety of learners and aligned to Common Core Learning Standards and/or content standards</td>
<td>Additional Finding</td>
<td>Well Developed</td>
</tr>
<tr>
<td>1.2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best that is informed by the instructional shifts and Danielson Framework for Teaching, aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products</td>
<td>Area of Focus</td>
<td>Proficient</td>
</tr>
<tr>
<td>2.2 Align assessments to curricula, use on-going assessment and grading practices, and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom levels</td>
<td>Area of Celebration</td>
<td>Well Developed</td>
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</table>
### School Culture

**To what extent does the school...**

<table>
<thead>
<tr>
<th>Area</th>
<th>Rating</th>
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<tbody>
<tr>
<td>1.4 Maintain a culture of mutual trust and positive attitudes that supports the academic and personal growth of students and adults</td>
<td>Additional Finding</td>
</tr>
<tr>
<td>3.4 Establish a culture for learning that communicates high expectations to staff, students and families, and provide supports to achieve those expectations</td>
<td>Additional Finding</td>
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### Systems for Improvement

**To what extent does the school...**

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<thead>
<tr>
<th>Area</th>
<th>Rating</th>
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<tbody>
<tr>
<td>1.3 Make strategic organizational decisions to support the school’s instructional goals and meet student learning needs, as evidenced by meaningful student work products</td>
<td>Additional Finding</td>
</tr>
<tr>
<td>3.1 Establish a coherent vision of school improvement that is reflected in a short list of focused, data-based goals that are tracked for progress and are understood and supported by the entire school community</td>
<td>Additional Finding</td>
</tr>
<tr>
<td>4.1 Observe teachers using the Danielson Framework for Teaching along with the analysis of learning outcomes to elevate school-wide instructional practices and implement strategies that promote professional growth and reflection</td>
<td>Additional Finding</td>
</tr>
<tr>
<td>4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning</td>
<td>Additional Finding</td>
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<tr>
<td>5.1 Evaluate the quality of school-level decisions, making adjustments as needed to increase the coherence of policies and practices across the school, with particular attention to the CCLS</td>
<td>Additional Finding</td>
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</tbody>
</table>
Findings

Across classrooms, teacher-created rubrics and assessments are aligned to the school’s curricula and offer a clear portrait of student mastery. Classroom assessment practices including turn and talks, exit tickets and student-to-student discussions are ongoing, varied and tailored to student needs and goals.

Impact

Teachers and students receive meaningful feedback. Assessment practices result in effective adjustments that meet student learning needs. Students are aware of next learning steps.

Supporting Evidence

- A review of student work and meetings with teachers and students revealed that feedback on student work includes next steps, thus actionable. One English Language Arts (ELA) teacher noted, “I like how you used a good balance of paraphrases and quotes. Next time add in transition phrases so that your paragraphs aren’t repetitive.” Across subjects, feedback is detailed, aligned to the task and curricula and provides students with clear next steps. On a math assignment, the teacher offered the following next steps, “Your answer is correct but your explanation isn’t clear. How can you communicate your process for solving this problem so that others can see your thinking?” A student shared that at their next conference, the teacher worked with her on how to make her thinking visible, “This conference really helped me understand that the more I can show my thinking, the more it helps me understand the process to solve the problem in multiple ways. Since this conference, I always keep this in my mind when I’m working on solving math problems.” Students shared that after conferencing with the teacher, they can resubmit their work to be regraded. Student work reviewed showed evidence of original work, conferencing notes and resubmitted work, with each step indicating teacher feedback.

- Students came to a quick consensus when reporting on the use of assessments, rubrics, and feedback around their attainment of mastery. At the end of each rubric is a section for teacher feedback that gives the student a glow on what was done well, as well as a guidance section that includes a grow with details on how the student can meet that goal. One student reports and all others present agreed that feedback given by their teachers has a direct impact on their work. A grade-five student said, “I am really proud of my mathematical explanations because they have gone from procedural to conceptual.” He went on to share that he received feedback from his teacher to refer back to the math problem in the explanation and to include academic language. Another student shared that she received feedback on supporting her findings with text evidence and a specific strategy that she could use to help her remember how to add in the evidence.

- In all classrooms, teachers consistently check for understanding using varied strategies. Teachers use this data to make changes in grouping and instruction, as well as to focus student conferences for goal setting. Each student meets with the teacher during individual conferencing to work on core-curricular goals and next steps that teachers continually monitor via formal assessments and informal conferences in class. Students are well aware of their goals and shared that their next steps and goals are written down. Students shared that the teachers help them meet their goals by providing them with feedback on their work. One student stated that “We never run out of goals because every time we conference with our teachers we discuss how we can push ourselves further.” Goals shared by students include planning and organizing writing better, using more academic vocabulary, using multiple strategies to solve problems and backing up claims with facts. When students meet goals, they create new goals on their own or with teacher input.
Findings

Across classrooms, teaching practices are aligned to the curricula and reflect an articulated set of beliefs including productive struggle and multiple solution pathways informed by the instructional shifts that foster higher-order thinking. Teaching strategies like small group work and differentiated tasks provide multiple entry points into the curricula for most students.

Impact

Although students are engaged in appropriately challenging tasks and demonstrate higher-order thinking skills in student work products, high-quality supports and extensions into the curricula are not apparent across the vast majority of classrooms leading to a lack of engagement for some students. Teaching practices are aligned to the curricula and reflect an articulated set of beliefs about how students learn best, however this belief is not yet coherent across the vast majority of classrooms.

Supporting Evidence

- The instructional priorities for all classes include a focus on collaborative instructional groups with tiered activities. Additionally, the faculty emphasizes the importance that students are provided with opportunities for productive struggle and solving rigorous problems with multiple solution pathways and the support of multiple entry points. Most of these adopted priorities were coherent throughout classes and provided students with opportunities to produce meaningful work, although, in some classes, a few students were not as engaged as others, limiting their critical thinking and demonstration of content understanding. For example, in an ELA class, there were students who did not participate in the lesson, nor were they engaged by the teacher. In this same class, there were several students finished early and those students were not provided with any extension activities to further their thinking.

- Discussions in some classes reflected an instructional focus on attempts at rich discussions, although, in other classes, groups did not seem purposeful nor meaningful, leading some students to not be engaged in rigorous conversations with peers and missed opportunities to clarify misconceptions. During a math lesson on division with decimals, students were engaged in working in small groups using division to determine how many small bottles of ketchup it would take to fill a jug. Students had to work together to cite the specific steps they would take to solve the problem. Although the task had multiple solutions and there was evidence of misconceptions in some groups, there was no share out of student ideas and the misconceptions were not addressed before students were asked to complete an exit ticket.

- In some classrooms, teachers provided multiple entry points into the curricula via the interactive white board, individual white boards, rubrics, checklists, and other scaffolds. In a kindergarten ELA lesson, the text was projected on the white board and students had it in front of them. Students were asked to do a stop and jot about what the word siren meant in the text. Students were asked to write, draw and label, or just draw their response as well as provide a text-based detail to support their response. However, in a grade-four classroom during a writing lesson on craft techniques, students were given tiered articles based on reading levels and asked to identify the most important craft technique the author used and why it was used. Despite sitting in groups, students were not sitting with students reading the same article, which resulted in missed opportunities for rich student discussion. Additionally, although the students had differentiated goals for the task, and the teacher reminded them to work past their goal, there was evidence of students who were not engaged with the task.
Findings

School leaders and faculty ensure that curricula are aligned to the Common Core Learning Standards and strategically integrate the instructional shifts. Curricula and academic tasks are planned and refined using student work and data.

Impact

Integration of the instructional shifts has ensured that students are reading a balance of texts, using text-based evidence, and demonstrating a deep understanding of math content promoting college and career readiness. Planning documents show evidence that all students have access to the curricula and are provided with opportunities to be cognitively engaged through differentiated groupings and leveled materials.

Supporting Evidence

- Reading a balance of texts and the requirement that students support written arguments with text-based evidence are addressed uniformly across curricula, resulting in coherence and support for the integration of the ELA instructional shifts. A kindergarten unit plan for the book, *This is the Way we go to School* asks students to use text-based evidence to answer inference-based questions like “Why do students have to go to school different ways?” Another group was asked to use text-based evidence to draw a conclusion about why monkeys are like humans. In math unit plans there is evidence of the instructional shifts for fluency, application, and deep understanding. A kindergarten lesson plan has students choosing between subtraction and addition to solve problems. Grade-two unit plans show that students are expected to show fluency in math facts and solve addition and subtraction problems with speed and accuracy. In grade-five unit plans, students are expected to deeply understand concepts like division and multiplication of decimals and can demonstrate their thinking verbally and in written format. Grade-eight unit plans show that students are expected to understand that not all equations have one solution and that students need to provide multiple solutions for a problem.

- Review of the written curricular materials evidence a wide variety of modified tools, as well as extensions. Multiple lesson plans included exit slips and graphic organizers aligned to the specific academic tasks in which students would be engaged. A grade-four lesson plan organized students in groups to meet students’ needs as evidenced by assessment data with one group designed around reteaching. A kindergarten lesson plan organized students in groups with two groups working independently, while a third group met with the teacher for reteaching. All groups had differentiated activities and extensions. A grade-five math plan had students working in small groups, with differentiated activities and hands-on materials for students to use. Each group was to meet with the teacher and complete a differentiated activity and extension activity.

- Unit and lesson plans reviewed evidenced teachers’ planning for the cognitive engagement of all students. Lessons included group practice with differentiated groups, based on data gathered from summative assessments and a review of student work, ensuring that students of all levels had access to meaningful work assignments to promote cognitive engagement. In a grade-seven social studies lesson plan, English as a New Language (ENL) students were given a modified text and graphic organizer to complete. In a grade-two math plan, students with disabilities were given a narrative chart with steps to support solving subtraction problems using the algorithm method.
### Additional Finding

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<thead>
<tr>
<th>Quality Indicator:</th>
<th>3.4 High Expectations</th>
<th>Rating:</th>
<th>Well Developed</th>
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#### Findings

School leaders consistently communicate high expectations to staff through a variety of methods and forums. Teacher teams and staff establish a culture for learning that systematically communicates a unified set of high expectations for all students and provide clear, focused, and effective feedback.

#### Impact

Consistent communication of high expectations has resulted in a culture of mutual accountability for teaching and learning allowing all students to own their educational experiences, thus preparing them for the next level.

#### Supporting Evidence

- School leadership uses the Danielson *Framework for Teaching* to inform classroom instructional practices and communicate expectations around the school's big three initiatives – *Algebra for All*, unpacking the *Next Generation* standards and social-emotional learning. Information is provided regularly to teachers and staff via email, memorandum, individual and group teacher conferences, as well as in the faculty handbook. Professional Development (PD) workshops have included a focus on Domain 1 of the Danielson *Framework for Teaching* and the Common Core Learning Standards, planning and preparation, while other sessions emphasized designing student assessments and using them for planning. Through ongoing PD opportunities on the school's instructional focus, all stakeholders work together to provide rigorous and challenging instruction for all learners, as well as examine ways to support high expectations across grades and subject areas. Across classrooms, the impact of PD was evidenced in lesson plans and in flexible student groupings. School leaders and teachers regularly discuss issues of curricula, instruction, and the identification of classrooms to which teachers are free to visit and learn from colleagues. One teacher noted; “It was at an intervisitation where we visited to see specific practices that I learned how to successfully end a lesson. It was great.”

- Teacher teams have established a culture for learning by designing and delivering engaging classwork, resulting from the inquiry-based analyses conducted by teacher teams as well as in-class checks for understanding. Parents praised the practice of challenging all subgroups of students to prepare them for the next level. Teachers hold all students to the same high standards while individually challenging learners through rigorous curricula. One parent said, “I know that my son is always in a group he should be in. The teacher always knows what he needs. He is always challenged here.” Students feel ownership of their educational experience. They report that they not only are expected to be responsible for themselves, but they are to support each other during partner and group work. A student reported that during group work, “I really have to be sure that when I say I understand something that I really do understand it since I can be called upon to support group members who are struggling.” Another student reported that she needs to really pay attention to the feedback she needs to improve her work to ensure that she is ready for middle school and beyond.

- The school provides numerous activities for students to support their development with the appropriate tools to succeed in college and the workplace. Rigorous coursework including Regents courses in math and science are offered. Parents state the administrators and staff have high expectations for excellence and success beyond high school. Students shared that there is an expectation that they all will go on to college. Students meet with their guidance counselors regularly. Students bring their goals and areas of strengths and weaknesses to the table to help guide conversations around the best high school for each individual student. Guidance counselors also provide workshops and help schedule school visits. To ensure exposure to a variety of colleges and careers, students participate in the College Access for All program.
Additional Finding

| Quality Indicator: | 4.1 Teacher Support and Supervision | Rating:       | Well Developed |

Findings
School leaders support teacher development with effective feedback that accurately captures strengths, challenges, and next steps from the strategic use of frequent formal and informal classroom observation cycles and analysis of student data including student work examples.

Impact
Effective feedback is part of a system that elevates school wide instructional practices and emphasizes continuous professional growth. Teachers are supported in meeting professional goals.

Supporting Evidence

- Classroom observation reports provide meaningful and actionable feedback to teachers. For example, one observation report includes feedback to ensure that the turn-and-talk strategy is used. Another report detailed having the teacher create scaffolded resources and materials that could be helpful for review at home. Other examples of actionable feedback found in observation reports asked teachers to group students based on their skill level as well as formative assessment data such as exit tickets to help identify the scaffolds each group might require. One teacher reported that due to feedback offered by a school leader, she has been working at ensuring that learning outcomes be about complex standards-based learning so that when it is referenced by students, they understand the rigorous task they are being asked to complete. As a result of implementing this practice, student understanding of the expected outcome has increased and there is an improvement in understanding as evidenced on exit tickets. Additionally, teachers and leaders spoke about the support they receive from peers during intervisitations across the school sites. Teachers shared that not only is it wonderful to see and learn from other classes and teachers, but the feedback received helps them make changes to not only how they present curricula but to management strategies needed to support things like station learning. One teacher stated, “It’s really nice to get an unbiased opinion of what is working well and not working so well and to hear how to tweak something to make it work for my students.”

- In addition, there are examples of observation reports that reinforce feedback offered in earlier reports. For example, one observation report includes feedback indicating that the teacher should be providing rich tasks to the high performing students even if it is not directly aligned to the objective for that day. The fact that this specific recommendation was made in a previous observation report was also noted. In a report, a teacher is advised to take notes as she walks around to assess for learning and next steps. A later report compliments the teacher for implementing this feedback and using this data immediately to correct misconceptions noted. Teachers are asked to bring work samples to the post observation and feedback is given around student mastery, task rigor and student engagement.

- Teachers and leaders shared that they meet together at the beginning of the school year to create professional goals for the year. A review of Advance data from the previous year, class data, school data, and schoolwide goals focus conversations and goal setting. Teachers have high expectations for themselves in order to meet school goals and impact student learning. Teacher goals included attending more out of school professional learning to expand their toolbox, promoting activities that generate cognitive challenges and using assessments to drive instruction. Teachers and leaders shared that the goals are revisited throughout the year and progress towards meeting goals are tracked, discussed and adjusted as necessary. Advance reports reviewed evidence alignment of feedback to teacher goals and a review of Advance data indicates teacher growth in areas that match school goals.
**Additional Finding**

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<th>Quality Indicator:</th>
<th>4.2 Teacher Teams and Leadership Development</th>
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<td>Rating:</td>
<td>Well Developed</td>
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**Findings**

All teachers are engaged in inquiry-based, structured professional collaborations both in content areas and at grade levels. Teachers are empowered to positively affect student learning through teacher leadership opportunities.

**Impact**

Collaborations within teams have strengthened teachers' instructional capacity and established a level of schoolwide instructional coherence, as well as increased student achievement for all learners. Teachers have built leadership capacity and have a voice in key decisions regarding PD and resource acquisitions that affect student learning.

**Supporting Evidence**

- Teachers across the school collaborate in professional teams in which they develop and implement schoolwide instructional practices, embedding the Common Core and the instructional shifts to continuously promote improved achievement for all learners. In an observed math vertical team meeting, teachers analyzed student work using a task analysis protocol to identify trends, create groupings, and design scaffolds for targeted students across grades and classes. The task for students involved using multiplication and division within a problem. One teacher shared, “All of my students know where to start, but get stuck.” Another noted, “Students are not showing all of the work.” A third questioned, “Do they know really understand the crux of the task?” Teams have an established protocol for sharing and reflecting on student work and assessment data and track progress of their meeting. Their report showed clear next steps for classroom implementation, which included revising the task, providing more scaffolds for students in completing multistep problems and reassessing the targeted students.

- Teachers collaboratively plan and refine the curriculum throughout the school year in inquiry-based teacher teams that utilize protocols including the reflection protocol and the task analysis protocol. As one teacher noted, this shared protocol, “…creates a shared language and gives us one solid way of talking and thinking about the work.” As part of this process, staff analyzes student work and performance data to inform their instructional practice in order to move toward improving student outcomes. A trend for fifth-grade students not inferring in informational text was noted; teachers designed several different co-teaching strategies and applied it. Data on a later summative assessment shows an increase in all students using text-based evidence to infer successfully. Teams are comprised of content-specific teachers and special education teachers. During team meetings, content teachers examine the curriculum to ensure that tasks are rigorous, and the special education teachers ensure both differentiation and supports for all students are aligned to tasks.

- School leaders and teachers are able to identify distributed leadership practices and structures that are deeply rooted in the school’s day-to-day operations and articulate how these structures foster a culture in which teacher leaders provide continual input into strategic decisions that affect student achievement. Teachers are on the school leadership team, are peer-coaches, mentors, lead instructional committees and provide PD to colleagues. Teacher leaders are part of the instructional cabinet and part of major school-based decisions scheduling and technology purchases. Teachers cited involvement in designing and facilitating curriculum, purchasing of curriculum materials, mentoring, outside professional development resources, and teacher ownership of intervisitations as key areas in which they have had a voice in major school decisions affecting student learning.