



**Department of
Education**
Carmen Fariña, Chancellor

Office of School Quality
Division of Teaching and Learning

Quality Review Report

2015-2016

I.S. 349 Math, Science & Tech.

Middle School K349

**35 Starr Street
Brooklyn
NY 11221**

Principal: Michael Loughren

**Date of review: March 15, 2016
Lead Reviewer: Claudette Essor**

The School Context

I.S. 349 Math, Science & Tech. is a middle school with 306 students from grade 6 through grade 8. In 2015-2016, the school population comprises 0% Asian, 4% Black, 96% Hispanic, and 0% White students. The student body includes 29% English Language Learners and 18% students with disabilities. Boys account for 56% of the students enrolled and girls account for 44%. The average attendance rate for the school year 2014-2015 was 93.6%.

School Quality Criteria

Instructional Core		
<i>To what extent does the school...</i>	Area of:	Rating:
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	Additional Findings	Proficient
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 <i>Framework for Teaching</i> , aligned to the curricula, engaging, and meets the needs of all learners so that all students produce meaningful work products	Focus	Developing
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	Additional Findings	Proficient
School Culture		
<i>To what extent does the school...</i>	Area of:	Rating:
3.4 Establish a culture for learning that communicates high expectations to staff, students, and families, and provide supports to achieve those expectations	Celebration	Proficient
Systems for Improvement		
<i>To what extent does the school...</i>	Area of:	Rating:
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning	Additional Findings	Proficient

Area of Celebration

Quality Indicator:	3.4 High Expectations	Rating:	Proficient
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Findings

School leaders communicate high expectations to all staff and provide training to support them in meeting the expectations. All staff members communicate high expectations to families and provide feedback to inform them about their children's progress towards the expectations.

Impact

All staff members collaborate on activities designed to foster accountability for high expectations for teaching and learning across the school. Families understand expectations for their children and work with school staff to help their children meet learning targets.

Supporting Evidence

- Through discussions at faculty conferences, one-on-one meetings, weekly bulletins, memos, and a school handbook, school leaders ensure that all staff members are fully informed about expectations related to instruction, professional development, and many other areas of school operations. School leaders hold teachers accountable for meeting all expectations by meeting regularly with the teachers to provide feedback on lessons and engage them in self-assessment of strengths and gaps in their instructional practice. School leaders also continually analyze data from student work and observation of instruction to assess teacher skill and impact on student outcomes and offer specific guidance via next steps in e-mails and one-on-one conversations.
- Teachers are supported via professional learning activities designed to strengthen their capacity to effectively address the academic and social-emotional needs of students. To that end, school leaders provide opportunities for peer intervisitations, video review of lessons, as well as in-class support and workshops by teacher leaders and partnership personnel. Teachers reported that they all receive ongoing professional development support to improve their mastery of targeted competencies such as effective questioning, fostering high levels of student engagement and using assessment in instruction, as per expectations linked to the Danielson *Framework for Teaching*. Teachers also reported being trained in areas such as sharing data and resources via Google Docs, utilizing web-based resources such as *Mathletics* and *myOn* to enrich instruction, refining tasks from *GO Math!* and infusing Teachers College literacy practices in reading and writing across content areas.
- Communication tools such as letters, flyers, a weekly newsletter, and a monthly calendar keep families up-to-date on school events and extracurricular activities, empowering them to help their children take advantage of activities that support readiness for the next grade. In addition, through weekly staff outreach to families, especially on Tuesdays, as well as quarterly report cards and mid-term progress reports, staff members keep all families informed about their children's performance. Families also receive information about their children's progress and needs via online data portals such as Skedula and Class Dojo. Parents reported that staff members invite them to participate in workshops that demonstrate learning activities and goals for their children. Several added that at a workshop about high schools, guidance counselors met with families to review topics such as graduation requirements and high school application steps. Families also noted that they engage in fundraising to help the staff members acquire needed supplies, and some said that they volunteer as translators for family engagement events.

Area of Focus

Quality Indicator:	1.2 Pedagogy	Rating:	Developing
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Findings

Although some lessons allow for partner discussions, lessons across classrooms do not typically facilitate peer-to-peer questioning and discussion and do not consistently include multiple entry points to rigorous tasks.

Impact

Instructional practices do not consistently result in all students engaging in high-level student-led discussions and demonstrations of higher order thinking in student work products.

Supporting Evidence

- In an English Language Arts (ELA) class, the teacher engaged students in reading and annotating nonfiction selections about bottled versus tap water. They cited textual evidence in examining the author's position and then created their own claims with relevant evidence and reasons to support their opinions about that topic. In several other classrooms, tasks required students to fill in blank spaces on handouts that provided little room for in-depth responses to the task or read short excerpts of texts to answer a few questions. This was the case in an ELA class where the teacher presented a mini-lesson on writing styles and asked students to use a Comparative Writing Style graphic organizer to fill in details as they compared the writing style of two authors based on excerpts by each author. Further, while some student work products on bulletin boards and in student folders demonstrate students' ability to produce high quality work, other work products illustrate frequent use of graphic organizers and templates that do not allow for engagement in rigorous work.
- In a math class, groups of students worked with peers to determine how to combine like terms to create equivalent expressions. With differentiated tasks for each group, students explained steps to be taken and why or challenged a response offered by a peer, leading to participation in a high-level discussion by the entire class. By contrast, other lessons were, for the most part, teacher dominated with students having little time for peer-to-peer interaction via student-centered questioning and discussion. In one ELA class, although students used a brief turn and talk to discuss details they had copied from an article given to them to answer questions on a worksheet, the teacher led a question and answer session that involved only a few students in responding to her questions. Further, the practice of inviting students to comment on responses by peers was not evident across classrooms.
- Most teachers use scaffolds and supports, such as visuals, graphic organizers, and sentence stems, as prompts for task completion. For example, in an English as a New Language (ENL) class for English Language Learners, the teacher used an interactive white board to present a mini-lesson about amendments to the Constitution. Then he engaged groups of monolingual and bilingual students at varied levels of English language proficiency in differentiated tasks such as interpreting political cartoons, making inferences based on a video clip, close reading of portions of texts in both Spanish and English, and reporting on their work by writing a paragraph or adding details to a graphic organizer. Students shared ideas with peers and used a rubric to peer-edit their written work. However, some students in other classrooms did not receive needed supports. In one of those classrooms, several students sat watching peers trying to solve math problems with minimal support from the teacher or manipulatives of any kind. A few closed their books and said they did not know what to do, and others had incorrect responses while waiting for the teacher to get to their group.

Additional Findings

Quality Indicator:	1.1 Curriculum	Rating:	Proficient
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Findings

All staff work collaboratively to refine curricula across content areas in alignment with Common Core and related content standards. Curricula include tasks designed to transmit engaging learning activities to all students, including students with disabilities and English Language Learners.

Impact

Across disciplines, all students consistently have access to cognitively engaging curricula with tasks that promote college and career readiness.

Supporting Evidence

- A review of unit plans and curriculum maps indicate that *Code X* and Teachers College Reading and Writing Project curricula support instruction in ELA, while for math, content from *EngageNY* supplement curricula from *GO Math!*. Web-based resources such as *myON* and *Mathletics* further support literacy and math instruction for all students. New York State scope and sequence resources guide curriculum development for science and social studies classes, with document-based materials providing additional content in social studies and materials from Urban Advantage supplementing text-based curricula in science. Curricula for advisory classes and an Extended Learning Time (ELT) program provide additional intervention and enrichment activities for all students. Supported by a partnership with a community-based organization, the ELT program exposes students to college and career readiness activities, including arts activities with teaching artists and exploratory project-based activities in math, science, and technology.
- Teachers use a common template and shared lesson plan format to craft curriculum maps and units that reflect targeted vocabulary, focus skills, texts, guiding questions, assessments, and tasks that reflect Common Core Learning Standards and related instructional shifts. In addition, a schoolwide instructional focus on “daily written and verbal tasks to deepen comprehension” drives the design of tasks in all content areas. There is a focus on college and career readiness skills in all grades with unit tasks that require students to read and cite evidence from texts to support ideas and arguments, develop writing skills, annotate reading selections, and create summaries based on readings. Unit plans incorporate scaffolds such as leveled texts, visuals, small group structures, thinking maps, and a variety of graphic organizers.
- School leaders and teacher leaders facilitate planning sessions that focus on using student work and data to craft tasks that address student needs in all classes. Using an Analyzing Student Work Protocol, teachers meet during professional learning sessions to examine student work products and engage in an assessment of gaps in student learning as related to the expectations of the Common Core Learning Standards. For example, one teacher noted that analysis of student work samples resulted in the inclusion of guided writing templates, sentence starters, and graphic organizers to improve sentence structure in student writing. Similarly, analysis of data from student baseline assessments and work samples in math informed teachers of needed adjustments to the curricula which led to a deep focus on word problems and use of *Mathletics* to build fluency and accuracy in math problem solving. Supports for ENLs include translated materials, glossaries, and dictionaries.

Quality Indicator:	2.2 Assessment	Rating:	Proficient
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Findings

Formative assessments and ongoing checks for understanding provide teachers with data to identify student learning needs and adjust instruction to meet those needs.

Impact

Students are able to use rubrics to engage in self-assessment, and teachers are able to address their needs in ways that help them to improve their progress towards learning goals.

Supporting Evidence

- Teachers administered a baseline assessment in all core content areas along with New York City benchmarks in math, Performance Series assessments in ELA and math, and unit exams in all disciplines to generate data on student learning needs. Teachers reported that they analyze the results of assessments and use the data to determine next steps including revisions to units and lessons. The principal used spreadsheets to demonstrate how staff members disaggregate assessment data to monitor the performance of individual students as well as subgroups of students. Error Analysis reports and spreadsheets with item skills data, Lexile levels, and class data profiles show annotations about planned intervention and enrichment activities, indicating progress monitoring by staff. One note demonstrated that the teacher would assign problems from *Mathletics* for students to improve problem-solving skills by engaging in online problem solving activities at home.
- Across classrooms visited, most teachers walked around the room monitoring students while they worked individually or in groups. Further, there was evidence of ongoing assessment practices such as peer assessment, use of exit tickets, turn-and-talks, and whole-class share-outs. Some teachers created written records of their observations and used them to drive immediate follow up questioning or clarification of academic vocabulary and teaching points. In one class, after listening to conversations of students in groups, the teacher paused the lesson to point out that students should be careful to note and explain the “difference between freedom of speech and freedom of the press” during their close reading activity. Teachers reported that they routinely use data to reorganize groups and make adjustments such as revising instruction for deeper focus on comprehension of vocabulary to support student comprehension of what a task requires of them and to deepen their understanding of lesson content.
- As demonstrated during the meeting with students, students engage in self-assessment, using rubrics to talk about their work. One student explained how rubrics helped her to know how to complete a report on her trip to the Brooklyn Botanic Garden. In reflecting on his research paper about the American Revolution, another student pulled out a rubric and described how he used it to decide what to include in the report in order to get a good grade. Student portfolios with student-teacher conference notes, student goals for each quarter, and reflections on progress towards goals indicate that students also monitor their own growth in performance across disciplines. Additionally, student folders show that students use checklists for some tasks including cooperative learning activities that require them to use rubrics to rate their peers’ contribution to the group task.

Quality Indicator:	4.2 Teacher teams and leadership development	Rating:	Proficient
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Findings

Teacher team meetings provide all staff members with opportunities to examine student work and data and use their findings to accelerate teacher growth and student achievement. Distributed leadership practices promote teacher voice in decisions about instructional priorities.

Impact

The inclusion of all staff in a variety of teams empowers all teachers to contribute ideas for school improvement as they share content knowledge and strategies for improving teaching and learning across the school.

Supporting Evidence

- The school's professional development calendar and grade team meeting notes show that team meetings cycle through activities that build teacher capacity to engage in data driven-activities linked to learning targets for all students. Staff members engage in activities such as examining data from monthly school-wide assessments and creating data reports that highlight students' strengths and gaps in learning based on the skills assessed. Teachers reported that they use a Data Driven Classroom protocol in analyzing the results of assessments to discern next steps in lesson and unit planning as well as to inform revisions to existing units of instruction across content areas. Additionally, they implement protocols for "kid talk" that identify supports for learners, especially students with disabilities and targeted groups of English Language Learners in each grade. The principal observed that teamwork is yielding significant results and presented a school data summary sheet which showed that students in all subgroups are beginning to make gains in reading and math achievement, as measured by Performance Series assessments.
- During the teacher team meeting observed, teachers used the Analyzing Student Work Protocol to engage in gap analysis to assess the rigor of a task done by English Language Learners and the extent to which the work met applicable learning targets. The task required students to review and explain a set of quotes from informational texts about Derek Jeter and Rocky Balboa. The student work samples showed a T-chart containing one column listing quotes by Jeter and the other column showing a student's interpretation of each quote. A second page of the handout showed a similar T-chart with quotes by Balboa and a student's interpretation of his words. Team members identified strengths and gaps in the responses and shared ideas about how to improve student performance. Suggested next steps included re-framing the task into small steps, using organizers that allow for a part of the task to be done via group work and the other via independent work, and adding more tasks for reading comprehension practice in the next unit.
- There are varied opportunities for teacher input in school-level decision-making, with teachers serving in roles such as grade leaders, dean, data specialist, and peer collaborative teacher. Teacher leaders are also members of a professional learning team. Through these roles, they represent teacher voice in weekly meetings with school leaders and other school support personnel and are empowered to design and facilitate professional learning activities for all staff. They implement professional development surveys and communicate feedback from peers to school leaders to inform school-wide decisions and activities. They also lead all staff in cross-disciplinary collaborations to plan lessons and units, analyze student work and data, identify instructional resources, monitor student progress, and implement strategies for improving teaching and learning school-wide.