



**Department of
Education**
Carmen Fariña, Chancellor

**Office of School Quality
Division of Teaching and Learning**

Quality Review Report

2014-2015

**Magnet School of Math, Science and Design
Technology**

Elementary School K010

**511 7th Avenue
Brooklyn
NY 11215**

Principal: Laura Scott

**Date of review: March 18, 2015
Lead Reviewer: Anita Skop**

The School Context

P.S. 10 Magnet School of Math, Science and Design Technology is an elementary school with 1,110 students from grade Pre-K through grade 5. The school population comprises 9% Black, 32% Hispanic, 48% White, and 6% Asian students. The student body includes 3% English language learners and 8% special education students. Boys account for 50% of the students enrolled and girls account for 50%. The average attendance rate for the school year 2013-2014 was 95.0%.

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	Well Developed
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	Additional Findings	Well Developed
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	Well Developed
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	Well Developed
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	Focus	Proficient

Area of Celebration

Quality Indicator:	3.4 High Expectations	Rating:	Well Developed
---------------------------	------------------------------	----------------	-----------------------

Findings

School leaders and staff effectively communicate expectations connected to a path to college and career readiness. A culture for learning that systematically communicates a unified set of high expectations for all students exists throughout the school.

Impact

The principal and the administrative team successfully partner with families to support student progress toward defined expectations, so that all students, including high-need subgroups, are provided with clear, focused feedback and guidance support, own their educational experience and are well prepared and eager for the next level of academic challenge.

Supporting Evidence

- School expectations are initially defined during the school's orientation, and expanded upon as the students embrace the culture of the school. To quote the principal, "to be a PS 10 student is a high accolade and students strive to live up to that expectation which is supported by positive peer pressure." Parents are an integral part of this culture and information is shared with families and staff through EBlasts, emails and Twitter accounts as well as memos to staff, flyers and meetings with the Parent Teacher Association, the School Leadership Team and the guidance counselor. The resulting culture is extraordinary. Based on substantive skill development for all students, and a unique family atmosphere that "could not be more open door." Parent communication and college and career readiness is not a mantra but rather a lifestyle. Recent data indicate a 97% pass rate for the school's fifth graders in 6th grade.
- Teacher conferences and meetings with parents on Tuesdays provide families with a clear understanding of their child's specific needs and strengths. Students are heterogeneously grouped so that all classes are subject to the same levels of expectation. Students receive individualized support as they progress towards defined goals. In addition, each child has a school issued "parent information folder that affords teachers the opportunity to communicate individually with parents on a daily basis. This communication is enhanced through the use of Google Docs, curriculum nights, and the school's website.
- Teacher teams and school staff begin conversations with students about middle school early in their school careers. Apprising them of the proficiencies developed at the elementary level will be deepened throughout their middle school years. The importance of being proficient in doing research, writing coherent and well written essays, along with strong math and reading comprehension skills are reinforced and underscored as life skills they will need in order to succeed at the next level and all future levels. Students develop ownership of their learning. They are comfortable explaining their projects, strengths and areas of growth in discussions with other students or with adults. They see themselves as part of a community and are expected to contribute to that community. For example, one fourth grade class ahead of the others worked with small groups of students in each class teaching the lesson. The engagement and student discourse was clearly felt.

Area of Focus

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

Findings

The vast majority of teachers engage in structured, inquiry-based professional collaborations that promote the achievement of school goals and the implementation of the Common Core including the instructional shifts through the consistent analysis of assessment data and student work for students on whom they are focused. Distributed leadership structures are evident school wide.

Impact

Teacher collaborations along with their voice in key decisions that affect student learning strengthen the instructional capacity of teachers and promote progress toward goals for groups of students. However, utilizing inquiry as action research to identify deeply entrenched areas of need at the granular level is not as yet fully embedded.

Supporting Evidence

- Teacher teams meet weekly during scheduled common preps, utilizing the time to evaluate the outcomes of the units of study which are determined by careful analysis of student work. The school is “tech-savvy” and all documents, with the exception of student work are handled digitally through the use of Google Docs. This digital protocol enables all teachers to access information from their team, as well as resources provided. Every member of the team uses a laptop or an iPad. The teams are teacher facilitated and all members comfortably contribute to the discourse.
- Teachers see their collaborative work as an essential component of their professional lives. The work of the teams consistently impacts positively on pedagogy. Teachers are confer with students digitally and students are peer conference using Google. These practices contribute to the consistent growth in student achievement despite the rigor of the assessments. In 2014, 60% of students were proficient on the state English Language Arts assessment while 61% demonstrated proficiency on the state math assessment. However, progress at closing the achievement gap for special needs students does not demonstrate as much success. Therefore, moving to a very intense form of inquiry as action research to identify granular needs of this subgroup is an area that the high functioning school is still working to enhance.
- Teachers have autonomy over their meetings and over the changes they deem necessary to adjust the curriculum to meet the needs of all students. The fifth grade team’s work resulted in changes to the curriculum and improved student growth. The team built and added a literary essay unit into the curriculum after they defined student needs for greater writing support in this area. In addition, the team is building a digital library of student exemplars into the curriculum maps to provide greater insight into student expectations and needs.

Additional Findings

Quality Indicator:	1.1 Curriculum	Rating:	Well Developed
---------------------------	-----------------------	----------------	-----------------------

Findings

School leaders and faculty ensure that curricula are well aligned to the Common Core and content standards and strategically integrate the instructional shifts. Rigorous habits and higher-order skills are emphasized in curricula and academic tasks in a coherent way across grades and subjects.

Impact

Continuous reflection by the administration and teachers has resulted in a standards align curriculum producing coherence across grades. Rich subject area tasks promote college and career readiness and ensure that all learners, including English Language Learners and students with disabilities, demonstrate their thinking.

Supporting Evidence

- The school utilizes the Teachers College Readers and Writers Workshop model for literacy instruction, and judiciously supplemented this model with the addition of Foundations to develop strong decoding skills in grades pre-kindergarten through grade 2. In addition, reflecting on data that indicated students needed deep math conceptual thinking in line with the Common Core, the school initially moved from Everyday Math to TERC. However, this was found to be insufficiently challenging in terms of problem solving. Teacher teams researched a range of math options and determined that a combination of EngageNY and Georgia Math would provide the appropriate level of rigor. Summer training provided teachers with the requisite skills needed to teach this program successfully. Individual binders were created for each child to ensure that all students and teachers had the same materials across grades. Further, the teachers created an entire curriculum unit by unit that was Common Core aligned and followed pacing sequencing for EngageNY and Georgia Math.
- The school provides numerous scaffolds and supports that ensure multiple entry points for all students into the challenging curriculum. Academic Intervention Support personnel were hired to push in and work with small groups on targeted, data-defined needs. Extra planning time was scheduled to provide articulation between special education and general education teachers who share strategies and incorporate them into the curriculum. Moreover, the addition of Foundations has shown a profound impact on levels of fluency, decoding and reading growth. Additionally, paraprofessionals conduct one to one interventions using the Great Leaps program. The strategic use of smart boards, iPads and other forms of technology, as well as the expanded use of graphics also ensure that all students have the tools they need to access rigorous instruction.
- Curriculum maps, unit plans and teacher lesson plans all indicate differentiated supports and modifications to meet student needs. In addition, classroom observations evidence the use of a range of scaffolds. For example, in one first grade integrated co-teaching class, the teacher's lesson plan was dotted with color-coded, annotated post-it's that indicated individualized supports for specific students.

Quality Indicator:	1.2 Pedagogy	Rating:	Well Developed
---------------------------	---------------------	----------------	-----------------------

Findings

Teaching practices in the vast majority of classrooms are aligned to the curricula and reflect a coherent set of beliefs about how students learn best that is informed by the Danielson Framework for Teaching and the instructional shifts. This lays the foundation for student thinking, participation and discussions at the team and school levels.

Impact

High-quality, deeply embedded teaching practices thoroughly aligned to the Common Core, routinely result in high levels of student thinking, extensive student led conversations, effective student groupings and extensive student ownership of learning.

Supporting Evidence

- The school has developed a clearly defined set of non-negotiables that mirror their beliefs as to what students need in order to learn. Classrooms routinely provide a print-rich environment with a focus on student work, functional centers, a flow of the day and reading areas. Classroom instruction is expected to include a wide-range of content area writing with the use of appropriate rubrics, Readers Workshop, and Accountable talk. To quote the principal, “We expect to see happy students who reflect on their own learning, who own their room and use and have access to their learning materials, including all physically challenged students.” This belief system was well evidenced during classroom visits.
- In a third grade integrated mathematics co-teaching classroom students use of accountable talk during a student led discussion facilitated by the teacher on using manipulatives to show equivalent fractions. “I agree with the statement because it leads to a hexagon. The triangles are the smallest so you need more, the trapezoids are bigger so you need less,” was one student’s response to another student’s initial statement. Another student commented by comparing to the fractions to slicing a pizza, while the teacher commented, “I like how you are connecting this to the real world.”
- In a fourth grade class students were deeply engaged in close reading on the third day of a three day close reading cycle. Students had worked in partnerships for the two days previous to the lesson dissecting a set of complex social studies articles and making post-it notes to reference as they developed a written response to a prompt on the third day. One student shared her evidence by referencing both pieces, while another developed a “cause and effect thesis, citing the sequence of events to support her thinking. Further, the teacher circulated and conferenced with each student individually, while making notes on her iPad. She provided a different format for a student who was having difficulty and consistently demonstrated a consistently respectful tone with all students.

Quality Indicator:	2.2 Assessment	Rating:	Well Developed
---------------------------	-----------------------	----------------	-----------------------

Findings

Across the school the vast majority of teachers create and use common assessments, rubrics, and grading policies that are aligned with the school's curricula and offer a clear portrait of student progress toward mastery.

Impact

Assessments and rubrics provide actionable and meaningful feedback to students and teachers. Curricular and instructional decisions so that all students, including English Language Learners and students with disabilities, demonstrate increased mastery of standards-based skills.

Supporting Evidence

- This year the school has moved to a growth (goal setting) model for Measures of Student Learning based on benchmarking assessments. The information is then made available in both hard and electronic copy to all members of the school staff. In addition, end of unit assessment in math has changed to more accurately reflect the change in the curriculum now better aligns to EngageNY and performance tasks from Georgia Math. Flexible rubrics, derived from the Teachers College Writing Continuum rubric are provided to students in all content areas so they can self and peer-assess their written work. Rubrics to guide grading with suggested next steps are employed as well.
- Student results on common assessments are monitored on Google Docs and reviewed by the administration at key times throughout the year. Teacher teams then analyze their students' progress and determine what instructional practices need to be tweaked. For example, reflecting on the need for deeper student understanding of math concepts, the new EngageNY focus was supplemented with Georgia Math to ensure that more real world applications were provided to students. In addition, to promote student ownership of learning, additional research projects were added to the content area in science and social studies.
- Upper grade students are asked to complete self-reflections prior to each marking period with a rationale for their grade. Individual conferences with their teachers then take place. Moreover, students routinely utilize checklists and rubrics to work with a partner and assess each other's writing as early as kindergarten. This work is supported and monitored through teacher conferences in both English language arts and math. Teachers review classwork during small group instruction to ensure that student needs are being met. As a result, students are provided with a broad range of feedback and support and are able to understand their own data. Students consistently exceed standards in math and English Language Arts with 90% - 100% of students at Level 3 or 4 compared to peer schools and citywide.