



**Department of
Education**
Carmen Fariña, Chancellor

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

Quality Review Report

2015-2016

The Science and Medicine Middle School

Middle School K366

**965 East 107th Street
Brooklyn
NY 11236**

Principal: Dennis Herring, Jr.

**Date of review: November 10, 2015
Lead Reviewer: AJ Hepworth**

The School Context

The Science and Medicine Middle School is a middle school with 499 students from grade 6 through grade 8. In 2015-2016, the school population comprises 1% Asian, 92% Black, 7% Hispanic, and 1% White students. The student body includes 2% English Language Learners and 17% students with disabilities. Boys account for 47% of the students enrolled and girls account for 53%. The average attendance rate for the school year 2014-2015 was 95.3%.

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 Framework for Teaching, 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	Developing
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
---------------------------	------------------------------	----------------	-------------------

Findings

School leaders consistently communicate high expectations to the entire staff and provide training. Staff consistently communicates expectations that are connected to a path of college and career readiness to families.

Impact

Effective communication holds staff accountable for high expectations while ongoing feedback helps families understand student progress toward those expectations.

Supporting Evidence

- Families shared they appreciate the good communication from teachers concerning what is occurring in the school and continuous insight regarding their child's academic and behavioral progress. Additionally, the online grading tool used daily by all staff provides opportunities for families to maintain direct messages with their child's teacher, eliminating the need to call the school frequently. Several parents agreed teachers always get back to them in a timely manner and provide information regarding the student's homework performance, content knowledge strengths, and areas in need of improvement.
- As part of the college and career readiness plan for high school completion, the Parent Teacher Association in collaboration with the building leadership filters information to parents regarding establishing high expectation opportunities through attendance at monthly workshops and trips to the State Capitol and universities. Evening workshops include "How to Successfully Transition from Middle School to High School" and "Dad: Read with Your Child." Parents and their children report that they feel the school fully prepares all students for college and career readiness through attendance at workshops which focus on: the high school application process; the importance of getting good grades; considerations for students and parents when making future decisions; how parents can help their child get involved in reading and discussions of the Common Core Learning Standards.
- Staff regularly receives feedback from observations that consistently communicates high expectations and offer teachers expected priorities for growth within the current academic calendar. An English Language Arts teacher was recommended to, "increase the rigor of instruction by planning even more critical thinking questions that are in line with your objective and look for ways to make the content more relevant to students' lives today." In an English Language Arts class, a teacher was told to "refer to the school-wide highly effective lesson plan memorandum" following an observation.
- The staff received professional development and is using Google Docs to facilitate the development of Curriculum Planning Team documents and improving curricular content aimed at helping students understand the academic expectations they need for success every day. Additionally, weekly extended day professional development sessions are focused on conveying high expectations for teacher practice with staff focusing on the Danielson *Framework for Teaching* elements including 3c: Student Engagement and Learning Styles.

Area of Focus

Quality Indicator:

1.2 Pedagogy

Rating:

Developing

Findings

Across classrooms, teaching strategies and questioning techniques inconsistently provide multiple entry points into the curricula. Evidence of higher order thinking and participation among students varied across the classes.

Impact

All learners are not consistently engaged in appropriately challenging tasks and; therefore, student work products and discussions reflect uneven levels of higher-order thinking skills and participation.

Supporting Evidence

- In some classrooms, students were asked to define and discuss vocabulary words; however, the low level questioning often limited opportunities for students to think critically or engage in deep discussion with their partner(s). In a social studies class, the teacher asked the class “What one word am I looking for that represents a total control of a type of industry or business by one person or one company?” In a math class, the teacher began the lesson by asking, “What term did we speak about yesterday?”
- In several classrooms, students were arranged in small groups to facilitate discussions. In a medical science class, students discussed the steps they would use to help a patient injured from one of three case studies. One group went through the protocol they would follow if they needed to contact emergency medical technicians. Another group discussed the need to consider Maslow’s hierarchy of needs prior to helping the patient with their physiological needs. However, in a math lesson, students arranged in small groups directed their responses to the teacher only when discussing factors that contribute to the addition of fractions. Additionally, in an English Language Arts class, students were told to discuss with their groups how they would characterize the Civil War with only one word. Yet students did not engage in conversation to further their thinking or evaluation of each other’s word selection when prompted to by the teacher.
- Throughout the classes observed, whole group instruction was primarily observed with few examples of scaffolds or multiple entry points for students with disabilities. In a special education math class, the teacher asked all students to explain their thought process to another student and use a rubric when they were finished to check their work. Although in one group, two boys were using a dry erase board to discuss their calculations, another student who finished, was waiting patiently with no apparent further work to do. Many students were capable of explaining how they solved their calculation with no demonstration of higher-order thinking.
- Across classrooms, scaffolds were used inconsistently or not observable. Although in one heterogeneous math class, the teacher gave students different questions on colored paper based on their level of understanding, this method of differentiation or others was not observed in other classrooms. Throughout most classes, students were provided homogenous directions and prompts.

Additional Findings

Quality Indicator:	1.1 Curriculum	Rating:	Proficient
---------------------------	-----------------------	----------------	-------------------

Findings

School leaders and faculty ensure that curricula and academic tasks are aligned to Common Core Learning Standards and integrate the instructional shifts while emphasizing higher order skills across grades and subjects

Impact

Curricula are designed to build coherence and promote college and career readiness and rigorous habits for all students.

Supporting Evidence

- Curricular plans contain tasks aligned to such standards as: the use of a variety of intellectual skills to demonstrate their understanding of major ideas; scientific explanations are built by combining evidence that can be observed; the use of the distributive property to express the sum of two whole numbers; citing several pieces of textual evidence to support analysis of what the text explicitly says.
- Teachers use a common lesson plan as part of a school-wide initiative that focuses on the inclusion of “Essential Questions” intended to engage students in higher-order thinking and address student misconceptions during the instructional period. Several “Essential Questions” noted include: Does every conflict have a winner? How can we solve addition and subtraction problems involving rational numbers? How can you use tables, graphs and equations to represent linear non-proportional situations? How does technology change the way people live and work? How do you determine whether it is safe to help a person in a medical emergency? The school has made it a priority to incorporate real life applications in lessons and curricula.
- Newly adopted, instructional resources were procured to further the push for alignment with the Common Core Learning Standards including: Glencoe Science, Go! Math, Pearson Literature, and McGraw Hill social studies. The teachers reported that the changes to the curriculum have shown increased enthusiasm and a greater level of connection with the themes from the students based on the level of rigor it offers. Students said their classes (English Language Arts, mathematics, and science) are “very interesting” and “fun because I like the activities we do.”
- Lesson plans are structured to build knowledge and deepen thinking through content-rich nonfiction and informational text by providing students with deeply connected text that is intended to anticipate misunderstandings students may experience. In a social studies lesson plan, students were provided various sources of text to compare and contrast how Rockefeller and Carnegie organized the oil and steel industries. The lesson plan states “Anticipated Misunderstandings” may include “the development of Big Business signaled prosperity for all Americans.” Approaches on how to address student misunderstandings include: informing all learners that, “Wages, working conditions and environmental conditions deteriorated as Big Businesses in the manufacturing sector incorporated.”

Quality Indicator:	2.2 Assessment	Rating:	Developing
---------------------------	-----------------------	----------------	-------------------

Findings

The school is developing the use of common assessments and rubrics to measure student progress toward goals across grades and subject areas. Across classrooms, teachers' assessment practices inconsistently reflect the use of checks for understanding.

Impact

Developing common assessments and rubrics are inconsistently used to adjust curricula and instruction and provide limited feedback to students regarding their achievement. Checks for understanding across classrooms are not used consistently to make instructional adjustments to meet students' learning needs.

Supporting Evidence

- The mathematics department created a common assessment data tracking form that identifies student understanding of a specific standard as either "yes" or "no". Understanding of the standard is determined by knowledge on local formative assessments at or above the sixty-five percent level.
- The English Language Arts department has a goal to build stamina when reading and analyzing lengthy, complex texts as a direct response to the prior year's State English Language Arts assessment. Additionally, the School Self-Evaluation Form indicates the school plans "to administer at least two mock standardized exams before the State test administration in the hopes that students will perform well within the time limits of the exam."
- Immediate, real-time checks for understanding have been implemented across classrooms via visual means using red, yellow and green laminated cards. Students are directed to hold up the color card indicating their level of understanding following formative questioning. Observation of the checks for understanding showed various levels of its effectiveness. Few meaningful checks for understanding were observed using the color cards and most often the practice was used for procedural and logistical confirmation of materials and/or resources by the teacher.
- Most assessments provided limited feedback that was actionable for students. Many formal exams noted the student's response as either incorrect or correct with an x or checkmark. Other examples of feedback include post-it notes on student work with brief comments such as "Good job assessing which cereal is healthier," "Great job remembering all of the materials used. Try to expand your conclusion by adding more details." and "You have all of the elements required for a short response. Next time make an effort to use formal academic vocabulary and writing style." Most of the aforementioned comments were not actionable for the students as they shared during student conferences that they did not know what they needed to improve.

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

Findings

The majority of teachers are engaged in structured, inquiry-based professional collaborations that promote the achievement of school goals and the implementation of Common Core Learning Standards. Teacher teams consistently analyze assessment data and student work for students they share or on whom they are focused.

Impact

Inquiry-based collaborations strengthen the instructional capacity of teachers and improve teacher practice and progress toward goals for groups of students.

Supporting Evidence

- Teachers share their lesson plan tasks with colleagues to identify strategies to adjust so they can reteach and re-test. In a math lesson, emphasizing attention to precision and using appropriate tools with the communicative property, a teacher retaught the lesson using a four-square problem solving chart for organization following a teacher team meeting discussion. This strategy helped the students unpack the task better through the provision of a scaffold.
- Math teachers examine Common Core assessments they have administered to their students and discuss general trends they notice in questions that students frequently answered incorrectly. During a grade 6 math teacher team meeting, a new protocol was implemented so teachers could review and identify patterns or trends they see. Teachers noted that “after each unit we have an item analysis to pinpoint students who were able to get it right so we can inform our next steps.” Discussion included noticing “students had trouble identifying the whole numbers that fell between the intervals when the number wasn’t explicitly on the number line.” The math coach facilitating the meeting asked the teacher team “How would they handle that with the class?” Several teachers agreed that it should be effective to give a whole number line to the students and then slowly remove numbers similar to the assessment line.
- A review of Level 1 student work revealed to a teacher team students had difficulty with identifying negative numbers in the correct sequence. Although it was initially suggested by a colleague this problem stems from poor reading skills, a suggestion was to have students underline key words and numbers so they can unpack the problem, then identify one of the seven strategies they have been practicing. For students who performed at a Level 2, it was suggested students need to develop their labeling because often the labels are already provided.