



**Department of  
Education**  
*Carmen Fariña, Chancellor*

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

# **Quality Review Report**

## **2014-2015**

**Brooklyn Academy of Science and the Environment**

**High School K547**

**883 Classon Avenue  
Brooklyn  
NY 11225**

**Principal: Veronica Peterson**

**Date of review: May 14, 2015  
Lead Reviewer: Miatheresa Pate**

## The School Context

Brooklyn Academy of Science and the Environment is a high school with 453 students from grade 9 through grade 12. The school population comprises 80% Black, 13% Hispanic, 1% White, and 5% Asian students. The student body includes 16% English language learners and 8% special education students. Boys account for 60% of the students enrolled and girls account for 40%. The average attendance rate for the school year 2013-2014 was 90.8%.

## School Quality Criteria

<b>Instructional Core</b>		
<i>To what extent does the school...</i>	<b>Area of:</b>	<b>Rating:</b>
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	<b>Celebration</b>	<b>Well Developed</b>
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	<b>Focus</b>	<b>Proficient</b>
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	<b>Additional Findings</b>	<b>Proficient</b>
<b>School Culture</b>		
<i>To what extent does the school...</i>	<b>Area of:</b>	<b>Rating:</b>
3.4 Establish a culture for learning that communicates high expectations to staff, students, and families, and provide supports to achieve those expectations	<b>Additional Findings</b>	<b>Proficient</b>
<b>Systems for Improvement</b>		
<i>To what extent does the school...</i>	<b>Area of:</b>	<b>Rating:</b>
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning	<b>Additional Findings</b>	<b>Proficient</b>

## Area of Celebration

**Quality Indicator:**

**1.1 Curriculum**

**Rating:**

**Well Developed**

### Findings

School leaders and faculty ensure that the curricula are aligned to Common Core Learning Standards and strategically integrate the instructional shifts. Academic tasks are planned and refined using data for individual and subgroups of students.

### Impact

Curricula decisions at the school level have resulted in coherence across grades and subjects, promote college and career readiness, and provide all students with access to tasks that are cognitively engaging.

### Supporting Evidence

- The school's instructional focus is close reading, which reflects the Common Core Learning Standards in English Language Arts (ELA) instructional shifts such as shift two on knowledge of disciplines, shift three on text complexity, and shift six, academic vocabulary. The review of unit plans and professional development agendas with administration revealed other shifts such as shift four on text-based answers. Unit plans and professional development agendas reflect that the use of Socratic seminars in a variety of lesson plans such as in economics. Also shift five, writing from sources, was evident within the Earth Science unit that require students to prove their argument during essay writing.
- The administration revealed that, "The ELA and social studies curricula are closely aligned. Students read texts in their ELA classes that correspond to the content in their Social Studies classes. For example, in the eleventh grade, students write a five to seven page argument-based paper using at least four historical non-fiction texts and the play *Fences* by August Wilson." Documents including lesson plans, revealed a cross-curricular emphasis in US history and ELA tasks on argument essays, which require students to write a ten-page paper in order to graduate.
- The administration and teachers revealed that they use the data obtained from interim assessments and the school leaders noted that teachers use "Analysis Instructional Planning documents to identify the standards, skills, and content that warrant additional whole class instruction, re-teaching, and review." Documents shared during the teacher team meeting showed students grouped by lowest third and other sub-groups. When questioning the administration and teachers about the use of the template, they revealed that, "teachers use the template to plan whole class and small group strategies that they will use to close the student achievement gap evidenced by data for individual and groups including low, mid, and high students, English language learners (ELLs) and students with disabilities (SwDs)."

## Area of Focus

Quality Indicator:

1.2 Pedagogy

Rating:

Proficient

### Findings

Across classrooms, teaching practices reflect an articulated set of beliefs about how students learn best aligned to the Danielson Framework for Teaching and instructional shifts. Teaching strategies consistently provide multiple entry points, to engage all learners.

### Impact

Across classes, a shared belief around how students learn varies in their use of high-quality supports resulting in shared teaching strategies and tasks that require students to demonstrate their thinking.

### Supporting Evidence

- The administration revealed and the review of student work confirmed a paragraph writing structure across grades called T- Topic Sentence, I-Introduce Evidence, E- Evidence, and D- Discuss Evidence (TIED). The social studies department uses a paragraph structure, W-Who? What? Where? When?, O-Outside Evidence, D-Document/Discuss, I-Impact (WODI). The administration noted that, “these paragraph structures promote analysis and encourage students to demonstrate their thinking. In addition, TIED allows teachers to scaffold the task for ELLs and students with disabilities in a coherent way across disciplines.” Students reported that they used these graphic organizers and templates across content areas.
- The administration revealed that students’ learn best when they are collaborating with their peers. For instance, in a ninth grade English class, using a rubric in pairs and as a whole group, students discussed how to write open-ended questions in order to gather primary source information for their research papers. During this lesson, the teacher also modelled an interview question and in groups, students determined if it was an open or closed question. The question modelled was “Is eating too much sugar bad for you?” Students responded that the question was “closed-ended” and pointed out how to strengthen the question using the rubric, which noted, “The question could add how and why...” However, students did not demonstrate higher order thinking skills when applying the rubric to the teacher-generated sample question to determine how to improve the closed-ended question to recreate an open-ended question. Students gave suggestions such as, “Add the word *How? or Why?*”.
- During the observation of an abridged grade ten to twelve 10-12 Integrated Collaborative Teaching (ICT) class, students responded to a *Do Now* question in peers, “What is the slope of the equation  $2x+4y=8$ ?” Students in ability-grouped pairs also responded to mock Geometry Regents exam questions. During this lesson, students shared their group answers via the use of “Qwizdom” clickers. Student understanding was demonstrated when only two of the five groups answered incorrectly. However, the teacher did not provide an extension activity that would support the students who responded incorrectly.
- The administration revealed that, “School-wide instructional practices provide multiple entry points and promote high levels of student thinking and participation which include some of the following: Socratic seminars, annotation, collaborative annotation, concept mapping, Cornell notes, and guided note-taking.” In a tenth grade Global History class, students annotated and highlighted important data from their text on Ancient Rome. Students used a guided note taking document that grouped content covered by themes and the teacher provided a pre-annotated map to support students with disabilities and English language learners.

## Additional Findings

<b>Quality Indicator:</b>	<b>2.2 Assessment</b>	<b>Rating:</b>	<b>Proficient</b>
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### Findings

Across classrooms, teachers use common assessments, rubrics, and grading policies aligned to the curricula to determine student progress towards goals across grades and subjects.

### Impact

School-wide assessment practices result in actionable feedback to students and adjustments to curricula and instruction.

### Supporting Evidence

- The administration revealed, “Teachers develop and implement four interim assessments, over the course of the year that are standards-based and aligned to New York State Regents and Common Core Learning Standards. All courses culminate in either a Regents or final exam.” Additionally, teachers revealed, “the principal meets with each teacher individually to discuss interim results and plan next steps based on student data.” Teachers reported that they use the data obtained from this process to create interim-analysis instructional planning documents to identify the standards, skills, and content that warrant additional whole class instruction, re-teaching, and review. The teachers use the template to plan whole class and small group strategies that they will use to meet students learning needs based on the data review. Additionally, to support literacy readiness based on data the principal indicated that the school is piloting the Southern Regional Education Board (SREB) Literacy Readiness curriculum in one section of eleventh grade ELA classes to prepare students for college-level literacy demands.
- The administration and teachers revealed that in order to stay informed about needed adjustments to the curricula and in their instruction, teachers conduct error-coding analysis for each class to determine where gaps between students’ performance and the standards exist. The teachers use the template to plan whole class and small group strategies based on data. These action plans are created in collaboration with administrators and department members to address gaps in student learning. For instance, teachers determined that the data reflected a need to strengthen math content vocabulary. The principal revealed, “To deepen students’ understanding of applications, real-world problems and higher order tasks, teachers have focused on vocabulary and writing in mathematics so that students can write and speak about their understanding in math. By revising the curriculum to embed the *Agile Mind Algebra* curriculum in the ninth grade, it provides the foundational knowledge necessary for higher level mathematics.”
- Students revealed that they receive feedback on their work and through PupilPath. Charts across the school reveal grading policies while bulletin boards reflected rubrics. Furthermore, math bulletin boards displayed actionable feedback that read “Thank you for boxing your answer, did you enter this in the calculator correctly? Your integral is correct but your answer does not match...”

<b>Quality Indicator:</b>	<b>3.4 High Expectations</b>	<b>Rating:</b>	<b>Proficient</b>
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### Findings

The school leader has structures to consistently communicate high expectations to staff. The school offers ongoing feedback to help families and students understand these expectations.

### Impact

Accountability structures exist at the school to ensure that expectations are met. Families understand what is needed for their child to progress towards those expectations.

### Supporting Evidence

- The administration revealed that the use of “weekly blasts with announcements, reminders, and shout-outs to reinforce our expectations, is sent to teachers.” A review of documents revealed a staff and student handbook are distributed to communicate school wide expectations. The administration revealed that annually “new teacher workshops are conducted to orient staff to the expectations including the Danielson Framework for Teaching, professionalism, and school policies.” This was confirmed via the review of the handbook chapters seven, 10, and 11 and in the September 2 staff development day agenda.
- Parents revealed that teachers email, meet in person with them, and make phone calls discussing the progress of their children. Parents revealed that they know the expectations of the school via PupilPath and an App titled, *Remind-Me* that updates them on school expectations.
- The administration revealed, “Targeted parent workshops are held. Such workshops include support for parents of children failing one or more courses, information sessions for parents of juniors to support them in developing a college readiness culture at home, and individual Free Application for Federal Student Aid (FAFSA) completion assistance.” Parents stated that during one workshop, “The class really helped me understand why my child was failing...I was given suggestions around what my child needed to do.”
- A review of documents revealed that teachers are held accountable via observations and based on the feedback they receive. For instance, feedback stated “ You attended one of Brooklyn Academy of Science and the Environment’s (BASE) Wednesday professional development workshops that focused on the definition of close reading along with the steps involved in implementing ... I am impressed by the fact that you immediately implemented what you learned in an effective way. As a next step, consider having students engage in a Socratic seminar using their annotated text following a close reading session.”

<b>Quality Indicator:</b>	<b>4.2 Teacher teams and leadership development</b>	<b>Rating:</b>	<b>Proficient</b>
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### Findings

The majority of teachers are engaged in structured, inquiry-based professional collaborations aligned to the school goals and Common Core Learning Standards. Distributive leadership structures are in place to build teacher leadership capacity.

### Impact

Teachers have strengthened their instructional capacity resulting in adjustments in practices and ensuring that teachers have a voice in decisions made at the school to meet students' learning needs.

### Supporting Evidence

- The math inquiry team was observed reviewing student assessment data and curriculum. Teachers used an interim-analysis template plan, which assisted them in determining that only 17 percent of students were able to answer questions on parallel lines and coordinate planes correctly on the most recent assessment. As a next step, teachers reviewed the lesson plan that taught these skills to determine challenges with teaching and learning and made adjustments as needed. Teachers discussed challenges during instruction, and next steps to remedy the issue such as an inter-visitation and professional development from the lead teacher. Outcomes are shared with the administration and the assistant principal noted that school leaders participate in department meetings.
- The administration revealed and teachers confirmed that teacher teams meet weekly. The School leaders revealed that, "Each department has common planning time embedded into their schedule. Science meets fourth period, math meets eighth period, social studies meets ninth period, English meets third period, and foreign language meets fifth period. Each department meets three times per week for common planning and two times per week for department meetings in which inquiry takes place." The teams have developed structures including agendas, protocols, minutes, and other supplemental materials, to support inquiry aimed at increasing students' progress. The focus of these meetings encompasses an integration of the school goals around engaging students in complex text, citation of evidence, and the use of academic vocabulary.
- Teachers stated that, "There is a heavy emphasis on teacher-led professional development which share best practices aligned to our instructional focus and meeting student needs." The administration revealed that, "The Professional Development committees collaborate to create a professional development sequence that aligns to supporting students and staff via a needs-assessment which is administered using a feedback form after each workshop." For instance, the committee delivered two professional development sessions, one on annotation, and another on the integration of technology to support student learners. The implementation of both strategies was observed in classrooms and in lesson plans. In a tenth grade Global History classroom, students annotated text and highlighted important evidence. In a ninth grade Living Environment class, the teacher used a PowerPoint to demonstrate the sequence of events in making bacteria produce a human protein.