

Quality Review Report 2012-2013

Urban Assembly School for Applied Math and Science

Secondary School 09X241

**1595 Bathgate Avenue
Bronx
NY 10457**

Principal: David Krulwich

Dates of review: May 2-3, 2013

Lead Reviewer: Jacqueline Grossman

Part 1: The school context

Information about the school

Urban Assembly School for Applied Math and Science is a secondary school with 606 students from grade 6 through grade 12. The school population comprises 32% Black, 63% Hispanic, 2% White, and 3% Asian students. The student body includes 9% English language learners and 15% special education students. Boys account for 49% of the students enrolled and girls account for 51%. The average attendance rate for the school year 2011 - 2012 was 91.1%.

Overall Evaluation

This school is well-developed.

Part 2: Overview

What the school does well

- The school's long term work in crafting, revising and implementing a rich curriculum and rigorous tasks in all content areas ensures that all students are on a path to genuine college readiness. (1.1)
 - In every subject area and across all grades, teachers jointly design cohesive units of study, each of which consists of simultaneously delivered daily activities that are punctuated by a performance-based culminating task that is engaging and connected to the real world. Classroom visits as well as examination of many units of study demonstrated consistent adherence to the school's curricular expectations. For example, the ninth grade global history course syllabus is driven by a series of highly relevant essential questions through which the content is covered, such as "How does where I live influence how I live?" "How does globalization affect cultural, political, economic and social issues?" In an applied math course, one of many examples of the kind of tasks students routinely complete requires them to create packaging and shipping for a canned beverage, and to do this, they must determine the "best" can design, create a physical prototype of it, research the material for it, detail the cost of manufacturing it and justify, mathematically, why their choices are appropriate. This kind of complex task results in students who are readily able to demonstrate their sophisticated thinking in many subject areas, and many students take high level courses even before entering college.
 - Curriculum across content areas requires that students demonstrate the ongoing ability to craft arguments, engage in real-world problem solving, and cite evidence from primary and secondary source material. All students, including special needs students and English language learners, are presented with the same rigorous curricular expectations, and via their daily team meetings, teachers examine student work to make adjustments for the next day and also note the needs of the students as they begin to plan the next unit. Ample courses exist to ensure that all students, including the highest and lowest performing, have access to the most rigorous classes they are eligible for. Physics, AP calculus and applied math, as examples, support higher achieving students, while additional reading classes, an integrated humanities course and a skill-based math course are designed for middle school students who need extra support, so they are better prepared for the rigors of the high school program. The school, which accepts students who enter with a diverse range of reading levels, has a 94 percent four year graduation rate, which is due in large part to the rich and stimulating curricula that students experience.
- The school's leaders ensure that every system, structure, and resource are used and deployed in coherent ways that both support and define the school's mission and vision. (1.3)
 - The school's use of time for both staff and students is deeply connected, and in many ways indistinguishable, from its pedagogical beliefs and overarching vision. A block scheduling system ensures that class periods are long enough to foster deep, analytical thinking and time for processing, and that teachers have ample time together for collaborating around student achievement goals. Teacher teams meet daily and use student work samples from a cross-section of students to drive their ongoing curricular revisions. This promotes a complete mutual accountability, both for the success of the students as well as to one another as professionals. To ensure that the school is staffed well for the kind of intellectual and professional commitments required of teachers in this

community, a rigorous and multi-step approach is taken when hiring new staff. Demonstration lessons, writing samples, portfolios of previous work and evidence of willingness to be constantly reflecting have resulted in the creation of a staff that is highly consistent in terms of practice and student expectations. The school also has committed to keeping class size low, particularly for lower performing students, students with disabilities, and English language learners, with some math and reading classes having as few as twenty students. The school functions on a six day cycle, ensuring that ample time is spent on each subject area and that state requirements are met. An elective period at the end of each day also provides time for targeted language and remediation supports, as well as enrichment opportunities for higher achieving students. Finally, the school utilizes the summer months to the fullest extent, including the practice of conducting a home visit with every single incoming sixth grader before school begins. This enables student advisors to build relationships with families and students and these relationships are maintained for the duration of the students' stay at the school. As a result of its comprehensive approach to the use of time and staffing, students' needs are met such that the school's post-secondary enrollment rate is at the top of the citywide range, and all students, including those learning English and those with special needs, are outperforming city averages by over 100 percent.

- Effective student assessment practices enable teachers to make ongoing adjustments to units of study and provide both teachers and students with feedback that helps them develop an understanding of their strengths and weaknesses. (2.2)
 - The jointly designed performance tasks, both daily and culminating, serve as constant sources of assessment. During the individual work times, teachers rotate throughout the class, offering one-to-one guidance on that day's task. In all classrooms, teachers cycle back repeatedly to students who are struggling. Grading policies, while differentiated for each specific course and grade level, are uniform enough such that students easily understand what the school, as a whole, values in terms of student work. Each unit and many individual tasks rely on teacher-created rubrics, and students are very articulate about how they impact their goals. For example, one student expressed that he has a tendency to either "over-write," by repeating himself in different ways or "under-write" by remaining too broad. He has used the guidance from his teacher on many drafts of his writing to help him improve in this area. An advanced placement calculus student reported that his notebook, on which he is assessed regularly in terms of content, is now serving as his main study guide as he prepares for the exam. In addition, he reports, his teacher "nudges" him to understanding without telling him precisely what he is doing wrong, so he can internalize his learning. The students treasure this kind of approach, saying that it "makes us thinkers and prepares us for college." All students, including those with special needs and English language learners, demonstrated the ability to express their strengths and weaknesses in their written work. A key venue for gaining deeper understanding is the joint conference that takes place between students, teachers and parents several times a year. During these conferences, students reflect on their work and coordinate continued plans for success with their teachers and parents. In addition, teachers write substantive narratives that are highly detailed for each student, clearly indicating strengths, weaknesses, achievements and gaps in study habits. These reports indicate a level of knowledge of their students that is profound and genuine, and students take them seriously. As a result, an overwhelming majority of students own their accomplishments and strive towards attending the best universities they can.

- School leaders share firm beliefs and practices in developmental, supportive and constant reflection with teachers that empower teachers to take risks, improve their practice, and keep the focus on learning at all times. (4.1)
 - From the moment of hiring, it is made clear to teachers that they are expected to embrace the school's beliefs around how students learn best and demonstrate this in their classrooms. They are given extensive support, not only from content-matched mentors but also from all of the administrators, lead teachers and team leaders as well. New and untenured teachers, which comprise a large portion of the staff, are visited several times a month. These visits are based on elements of the Danielson framework, and are documented both for the teacher as well as for the other administrative staff members, and immediate feedback is given. This feedback then generates a short-term goal for the teacher. When reviewing written feedback to teachers, it was apparent that the feedback was ongoing and highly targeted. For example, it is typical for a teacher to be visited over 15 times in the first semester alone, and to be offered specific feedback on aspects of their teaching such as improving their debriefs, emphasizing accountability structures and ways to increase student participation. The administration relies on this extensive feedback process when determining tenure. By the end of a teacher's second year at the school, both the administration and the teacher are aware of whether or not this teacher is on target to meet the high standards for practice at this school. This enables both the school and the teacher to consider options for the third year of service, prior to a tenure decision. These options may include additional support, intensive coaching, a change of assignment, or a separation from service if necessary. Furthermore, teachers are expected to maintain their professional viability by leading teams, participating in conferences, staying current on educational research, and engaging in peer visitation with one another to keep their skills sharp, as emphasized in the Danielson framework. The strong emphasis on teaching practice as driver of student achievement results in a staff that is highly consistent in practice across the overwhelming majority of classrooms, which in turn provides students with a seamless experience at the school, making expectations predictable and goals reachable for the majority of students.
- Intricate and innovative structures promote constant teacher collaboration that is the central driving force in all of the school's efforts to continually improve practice, enhance student learning and promote shared leadership. (4.2)
 - In tandem with the school's extensive efforts in supervisory feedback, the practices of the many teacher teams at the school are primarily responsible for the level of instructional coherence, the evenness of expectations across all classrooms, and the high levels of rigor evident in the classrooms and in student work. Every single teacher is part of a three to four person team that meets daily. Each team has a team leader whose role is to facilitate the learning for their colleagues. The role of team leader is considered an honor and is granted to teachers who are ready to take on the additional challenge of leadership. Administrators start thinking about elevating individual teachers to the leader role early on in their careers and begin mentoring them towards that role. Teams are comprised of teachers who generally teach the same subject and grade level. They design, implement and revise units together, and each day, they generally teach the same lessons. Following the delivery of the lesson, they come together and analyze the work products, determine the gaps and offer feedback to one another. They then tweak the lessons and re-deliver if necessary, or modify the next day's plan to revisit any areas of struggle as well as to find ways to enrich. Very often - nearly daily - team leaders visit their

team members and are therefore able to provide immediate feedback. In addition, the daily meetings mean that all teachers become familiar with the work of all students, even if the students are not in their classes. This supports the school's belief that every adult in the building is responsible for the learning of all the students, and ensures that teachers are holding one another accountable, in a truly professional and collaborative way. Teachers report tremendous satisfaction with this structure and feel empowered as true professionals, and also can begin to see a career pipeline developing through this structure. Several past team leaders have gone on to school leadership positions within and outside of the school. This approach to teacher teaming resulted in high levels of achievement across many subject areas and both sectors of the school, middle and high school, in part because team leaders often lead more than one team at different grade levels, thereby sharing curricula and data across multiple grades. For example, eighty three percent of 8th graders last year scored at or above grade level in math. Sixty six percent of students who took the English Regents last year scored above grade 75. Both of these statistics are significantly above the averages of the city and the school's peers.

What the school needs to improve

- Enhance the faculty's pedagogical repertoires in deepening classroom discussion and scaffolding to ensure that all teachers are providing the necessary daily supports for all students to achieve. (1.2)
 - The school has a highly consistent belief system about how students learn best that was evident in all of the classrooms visited. There is an emphasis on the role of the teacher as facilitator, primarily ensuring personalized support to students during the individualized work times in each class period and asking questions that are designed to help students construct their own knowledge. Although the school achieves strong results with almost all of the students, there are some students who, while no longer considered English language learners, do come from homes in which English is not the native language. In a few classes, not every student is benefitting from scaffolding around academic language or explicit language support. In addition, the structure of the classes and the emphasis on individual work time, while very valuable, sometimes reduces the opportunities for student-to-student interaction or lively classroom conversation. Some of the novice staff members are still working on increasing their use of debate, accountable conversation, and strengthening opportunities for talk. The school has immersed themselves in understanding the unique needs of special needs learners, which has resulted in high numbers of special education students accelerating at appropriate rates. However, they have not yet done the same with regards to understanding best practice for all of their English learners. As a result, they have yet to strengthen access for some of the students who, while speaking English, may not yet demonstrate sophisticated thinking in English, including the use of increased discussion in class.

Part 3: School Quality Criteria 2012-2013

School name: Urban Assembly School for Applied Math and Science	UD	D	P	WD			
Overall QR Score				X			
Instructional Core							
<i>To what extent does the school regularly...</i>	UD	D	P	WD			
1.1 Design engaging, rigorous, and coherent curricula, including the arts, physical and health education, for a variety of learners and aligned to key State standards?				X			
1.2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best that is informed by a research-based, common teaching framework and is aligned to curricula, engaging and meets the needs of all learners so that all students produce meaningful work products?			X				
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?				X			
School Culture							
<i>To what extent does the school ...</i>	UD	D	P	WD			
1.4 Maintain a culture of mutual trust and positive attitudes that support the academic and personal growth of students and adults?				X			
3.4 Establish a culture for learning that communicates high expectations to staff, students and families, and provide supports to achieve them?				X			
Systems for Improvement							
<i>To what extent does the school ...</i>	UD	D	P	WD			
1.3 Make strategic organizational decisions to support the school's instructional goals and meet students' learning needs as evidenced by meaningful student work products?				X			
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?			X				
4.1 Use the observation of classroom teaching with a research-based, common teaching framework and the analysis of learning outcomes to elevate school-wide instructional practices and implement strategies that promote professional growth and reflection, with a special focus on new teachers?				X			
4.2 Engage in structured professional collaborations on teams using an inquiry approach that promotes shared leadership and focuses on improved student learning?				X			
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?				X			
Quality Review Scoring Key							
UD	Underdeveloped	D	Developing	P	Proficient	WD	Well Developed