

# Quality Review Report 2011-2012

**Archimedes Academy for Math, Science and Technology  
Applications**

**Middle School – High School X367**

**456 WHITE PLAINS ROAD  
BRONX  
NY 10473**

**Principal: MIRIAM LAZAR**

**Dates of review: November 9-10, 2011**

**Lead Reviewer: Timothy Behr**

## Part 1: The school context

### Information about the school

Archimedes Academy for Math, Science and Technology Applications is a Middle – High School with 493 students from grade 6-10. The school population comprises 35% Black, 60% Hispanic, 3% Asian students and 2% White. The student body includes 4% English language learners and 23% special education students. Boys account for 61% of the students enrolled and girls account for 39%. The average attendance rate for the school year 2010 - 2011 was 91.8%.

### Overall Evaluation

**This school is developing.**

## Part 2: Overview

### What the school does well

- Administrators make effective organizational decisions that are aligned to the school's instructional goals to improve instruction. (1.3)
  - o Even though the school has extensive budgetary restrictions, the principal has creatively scheduled numerous opportunities for teachers to meet, including common preps to support increased experience in analyzing data and student work products. Teachers use this information to guide instructional planning. This ensures that the school acts on its goal of monitoring and utilizing data and student work to inform decisions and support school wide initiatives.
  - o This year the school expanded to 10th grade. The principal has assigned one teacher per subject per grade. This procedure is based on previous classroom accomplishments. At collaborative team meetings teachers hold themselves accountable for academic growth since all subject grade teachers are working with the same students in a grade. As a result, there is an increase in student progress as measured by the NYC Progress Report and 85% of ninth graders attaining 10 or more high school credits.
- A cohesive assessment process ensures that teachers know their individual students' needs, strengths and learning styles across content areas and make adjustments as needed to support targeted instruction. (2.2)
  - o All teachers are engaged in structured professional collaborations. Teachers meet regularly to discuss student's strengths and weaknesses. Rubrics are used to analyze student work and lead to the identification of concepts and skills where mastery has not been achieved. Most students use rubrics to self assess and to identify their next learning steps. In addition teachers share formative assessment outcomes to systematically check, plan and then target instruction to meet the unique needs of students. This reciprocal structure enables teachers to adjust action plans for cohorts of students to improve performance. These strategies have led to all sub groups achieving the 75<sup>th</sup> growth percentile on NYS tests.
- The school uses a research based rubric as a formative assessment tool with a clear focus on deepening adult learning in order to improve instructional practices. (4.1)
  - o The administration prioritizes visiting classrooms and engaging teachers in formative and formal observations. Ongoing oral and memorialized feedback informs teachers of the quality of their work and their impact on student performance. Currently the school is prioritizing questioning, discussions and student engagement in classrooms. Consequently, administrators are able to efficiently identify pedagogical trends throughout the school and plan for future staff development. This practice supports teachers in improving the delivery of instruction as well the development of a teacher portfolio for tenure.
- The principal communicates high expectations to students and faculty which positively impacts student learning. (3.4)
  - o Teachers are using Skedula, a web based tool that enables parents to access information regarding their child's progress. The principal also sends out communication to keep parents advised of next learning steps. Parents are informed of student goals and of the resources to support them. The school encourages reciprocal information from them to support student performance.

Parents report their children are applying goals from school to other areas of their lives.

- o Every student participates in an advisory group. The objective is to provide an environment for students that will foster bonding with an adult and peers so that they feel accepted, valued, and respected. Students have an active voice. For example they were instrumental in the implementation of a canned food drive to support families in need. Teamwork, community building, communication, problem solving and leadership which are highlighted in advisories have improved in students as evidenced by improved attendance, class work and a reduction in principal suspensions.
- Goal setting structures ensure that measurable interim and long term instructional goals are set for targeted groups of students to accelerate learning. (5.3)
  - o Modification of curriculum has occurred in science where a physics class is taught in ninth grade to assist in the school wide goal of meeting high school graduation science requirements. Additional accelerated math classes provide more credit opportunities for students. The evaluation of student progress regarding academic and youth development services is ongoing and suited to the evolving needs of the school as evidenced by improved state test results. Most students are earning enough high school credits to graduate on time.
  - o Goal setting meetings with students at the beginning of the year along with the review of rubrics enables teachers to involve students in the learning process. As a result, teachers are providing the short-term steps necessary in order for students to attain their long term goals of success in completion of Common Core Learning Standards (CCLS) projects, passing State tests, and meeting graduation requirements.

### **What the school needs to improve**

- Enhance planning in order to provide a consistently engaging and rigorous curriculum where teachers continually revise content and sequence to meet student's interest and needs. (1.1)
  - o Across classrooms, instructional strategies vary as does the level of questioning. However, there was no reference to differentiation of instruction in some lesson plans. Activities that generate higher order thinking are not embedded in curriculum maps. As a result teachers are not targeting instruction nor are IEP's utilized to meet the unique needs of students. Therefore, student learning is not maximized as evidenced by the school not meeting AYP in English language arts categories on the state report card.
  - o Long-term sequencing of the curriculum is in place and used by all teachers. Pacing calendars are used by most teachers. In most classes student learning is based on the CCLS and some students are able to articulate what they are learning. However, teachers do not routinely refer to learning objectives or check that students have achieved them. Consequently, not all students are profiting from cognitively engaging learning opportunities.
- Promote consistency in differentiating instruction anchored in data, so lesson planning reflects purposeful grouping, various activities, and strategic questioning that maximizes student learning. (1.2)
  - o In the majority of classes observed, teachers do not incorporate flexible grouping based on skill-specific areas based on data. There are inconsistent opportunities for individualized or small group targeted assistance. Teacher's questioning

skills vary considerably among the classes. In most instances, questioning and tasks given do not encourage problem solving or higher order thinking skills. In some classes with IEP students, routines are evident and students are passive learners. Some students do not have the needed text book. Consequently, students are not performing at grade or IEP level as evidenced by the NYS Report Card.

- o Teachers can articulate the general needs of the students in their classes and there is evidence of teachers giving feedback to guide students towards next steps. However, this is not an embedded practice leading to uneven levels of student performance. Some students, especially in the CTT classes are unaware of appropriate classroom routines and are distracted during classroom instruction or tasks. Additionally, most classroom lessons involve whole group instruction and student work products lack rigor. Therefore not all students are aware of the necessary learning goals limiting students' performance gains.
- Engage parents and students in open exchanges of information about academic learning needs and outcomes in order to monitor progress and support students with clear next steps. (2.4)
  - o Although the school shares performance data with students and families through it's online program, Skedula, it does not regularly review its effectiveness. The school knows that families minimally use the site and they have not yet adjusted the process for sharing information. As a result, there is limited understanding of what parents actually know and understand about student progress and next steps. Therefore, parents do not know which targeted areas they should support at home.
- Review current professional structures and develop opportunities for faculty to engage in collaborative inquiry work that influences student learning across the school. (4.2)
  - o Although all team collaborations occur on a regular basis they are not utilizing an inquiry approach. Teachers review student work, identify weaknesses and strengths but this does not lead to identification of specific practices linked to the work of teacher teams. Consequently, students are not receiving the academic support that strategically addresses their learning needs. As a result, student performance and progress are hindered as evident by standardized test scores.
- Establish a coherent and collaborative vision, including action plans in academic and social areas, which is shared by the community in order for students to achieve. (3.1)
  - o There is a short list of school level goals that involve technology, extracurricular activities, and the integration of CCLS. However, there are no focused action plans to implement the objectives. There is minimal evidence of students using technology and limited opportunities to enhance student's social skills. For example, the school is not sanctioned to participate in PSAL sports. Consequently, the school lacks a cohesive instructional and organizational approach to improve student learning experiences and outcomes.
  - o The school relies on an on-line data management and communication system. Parents and students have the opportunity to access information related to student learning. Although the school does share goals and action plans parental involvement is minimal. Thus a united effort towards instructional and organizational objectives is lacking and hinders the collaborative process of attaining school goals.

## Part 3: School Quality Criteria 2011-2012

<b>School name: Archimedes Academy for Math, Science and Technology Applications</b>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
<b>Overall QR Score</b>		<b>X</b>		
<b>Quality Statement 1 – Instructional and Organizational Coherence: The school has a coherent strategy to support student learning that aligns curriculum, instruction and organizational decisions.</b>				
<i>To what extent does the school regularly...</i>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
1.1 Design engaging, rigorous and coherent curricula, including the Arts, for a variety of learners and aligned to key State standards?		<b>X</b>		
1.2 Develop teacher pedagogy from a coherent set of beliefs about how students learn best, and ensure that it is: aligned to the curriculum, engaging, and differentiated to enable all students to produce meaningful work products?		<b>X</b>		
1.3 Make strategic organizational decisions to support the school's instructional goals and meet student learning needs as evidenced by meaningful student work products?			<b>X</b>	
1.4 Maintain a culture of mutual trust and positive attitudes toward learning that support the academic and personal growth of students and adults?			<b>X</b>	
<b>Quality Statement 2 – Gather and Analyze Data: School leaders and faculty consistently gather, analyze and share information on student learning outcomes to understand school and student progress over time.</b>				
<i>To what extent does the school ...</i>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
2.1 Gather and analyze information on student learning outcomes to identify trends, strengths, and areas of need at the school level?			<b>X</b>	
2.2 Align assessments to curriculum, use on-going assessment practices and analyze information on student learning outcomes to adjust instructional decisions at the team and classroom level?			<b>X</b>	
2.3 Use grading policies and tools to enable school leaders and teachers to organize, aggregate, and analyze student performance trends to inform instruction and curriculum?			<b>X</b>	
2.4 Engage families in school decision-making, activities and an open exchange of information regarding students' progress toward school and class expectations?		<b>X</b>		
<b>Quality Statement 3 – Plan and Set Goals: School leaders and faculty consistently engage the school community and use data to set and track suitably high goals for accelerating student learning.</b>				
<i>To what extent does the school ...</i>	<b>UD</b>	<b>D</b>	<b>P</b>	<b>WD</b>
3.1 Establish a coherent vision of future development that is reflected in a short list of focused, data-based goals that are understood and supported by the entire school community?		<b>X</b>		
3.2 Use collaborative and data informed processes to set measurable and differentiated learning goals for student subgroups, and students in need of additional support?		<b>X</b>		
3.3 Ensure the achievement of learning goals by tracking progress at the school, teacher team and classroom level?			<b>X</b>	
3.4 Communicate high expectations to staff, students and families, and support students and families to achieve them?			<b>X</b>	

**Quality Statement 4 – Align Capacity Building: The school aligns its leadership development and structured professional collaboration around meeting the school’s goals and student learning and emotional needs.**

<i>To what extent does the school...</i>	UD	D	P	WD
4.1 Use the observation of classroom teaching 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		
4.3 Provide professional development that promotes independent and shared reflection, opportunities for leadership growth, and enables teachers to continuously evaluate and revise their classroom practices to improve learning outcomes?		X		
4.4 Integrate child/youth development, guidance/advisement support services and partnerships with families and outside organizations with the school-wide goals to accelerate the academic and personal growth of students?			X	

**Quality Statement 5 – Monitor and Revise: The school has structures for monitoring and evaluating progress throughout the year and for flexibly adapting plans and practices to meet its goals for accelerating learning.**

<i>To what extent does the school...</i>	UD	D	P	WD
5.1 Evaluate the quality of curricular, instructional and organizational decisions, making adjustments as needed to increase the coherence of policies and practices across the school, with particular attention to the CCLS?		X		
5.2 Evaluate systems for assessing students, organizing data, and sharing information with student and families, making adjustments as needed to increase the coherence of policies and practices across the school?		X		
5.3 Establish and sustain a transparent, collaborative system for measuring progress towards interim and long term goals and making adjustments during the year and over time?			X	
5.4 Use data to regularly evaluate the effectiveness of structured professional collaboration, capacity building and leadership development strategies?			X	

<b>Quality Review Scoring Key</b>							
<b>UD</b>	<b>Underdeveloped</b>	<b>D</b>	<b>Developing</b>	<b>P</b>	<b>Proficient</b>	<b>WD</b>	<b>Well Developed</b>